Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

INTRODUCTION

How to Use This Manual

This supplement contains information for the '08-09 Accord V6. Refer to the 2008-2009 Accord Service Manual, for service procedures and data not included in this supplement.

The first page of each section is marked with a black tab that lines up with one of the thumb index tabs on this page and the back cover. You can quickly find the first page of each section without looking through a full table of contents. The symbols printed at the top corner of each page can also be used as a quick reference system.

Safety Messages

Your safety, and the safety of others, is very important. To help you make informed decisions we have provided safety messages and other safety information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing this vehicle. You must use your own good judgment.
You will find important safety information in a variety of forms including:

- **Safety Labels** — on the vehicle.
- **Safety Messages** — preceded by a safety alert symbol ⚠ and one of three signal words, DANGER, WARNING, or CAUTION. These signal words mean:

⚠ DANGER	You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.
⚠ WARNING	You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.
⚠ CAUTION	You CAN be HURT if you don't follow instructions.

- **Instructions** — how to service this vehicle correctly and safely.

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at anytime without notice. No part of this publication may be reproduced, or stored in a retrieval system, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. This includes text, figures, and tables.

As you read this manual, you will find information that is preceded by a NOTICE symbol. The purpose of this message is to help prevent damage to your vehicle, other property, or the environment.

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Specifications apply to USA and Canada

HONDA MOTOR CO., LTD.
Service Publication Office

As sections with * include SRS components; special precautions are required when servicing.

marked sections are not included in this manual.

General Information
Specifications
Maintenance
*Engine Electrical
Engine Mechanical
Engine Cooling
Fuel and Emissions
*Transaxle
*Steering
Suspension (Including TPMS)
Brakes (Including VSA)
*Body
*Heating, Ventilation, and Air Conditioning
*Body Electrical
*Audio, Navigation, and Telematics
*Restraints

2008-09 Accord V-6 Supp.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

General Information

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NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

Outline of Model Change

V6 engine model has been added.

Chassis and Paint Codes

'08 4-door Model

Vehicle Identification Number

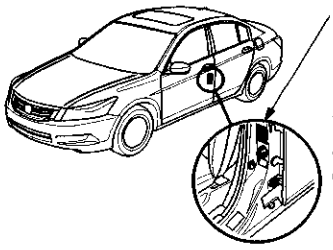
1HG CP3 6 7 * 8 A 000001

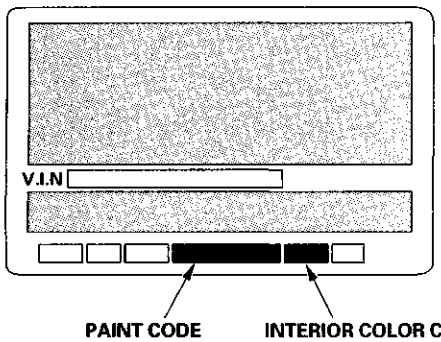
a b c d e f g h

a. Manufacturer, Make, and Type of Vehicle
1HG: Honda of America Mfg. Inc., U.S.A.
Honda Passenger vehicle
b. Line, Body, and Engine Type
CP3: Accord V6/J35Z2
c. Body Type and Transmission Type
6: 4-door Sedan/5-speed Automatic
d. Vehicle Grade (Series)

USA models	Canada models
7: EX V6, EX V6 PZEV	7: EX V6
8: EX-L V6, EX-L V6 PZEV	8: EX-L V6

e. Check Digit
f. Model Year
8: '08
g. Factory Code
A: Marysville, Ohio Factory in U.S.A.
h. Serial Number
000001—: USA models
800001—: Canada models





Engine Number

J35Z2 - 1000001

a b

a. Engine Type
J35Z2: 3.5 L SOHC i-VTEC Variable Cylinder Management Sequential Multiport Fuel-injected engine
b. Serial Number
1000001—: All models except PZEV
1500001—: PZEV

Transmission Number

B97A - 1000001

a b

a. Transmission Type
B97A: 5-speed Automatic
b. Serial Number

Paint Code

Code	Color	USA models	Canada models
B-92P	Nighthawk Black Pearl	○	○
B-536P	Royal Blue Pearl	○	○
G-530M	Mystic Green Metallic	○	○
NH-603P	White Diamond Pearl	○	○
NH-700M	Alabaster Silver Metallic	○	○
NH-737M	Polished Metal Metallic	○	○
R-530P	Basque Red Pearl	○	○
YR-574M	Bold Beige Metallic	○	○

'08 2-door Model

Vehicle Identification Number

1HG CS2 1 8 * 8 A 000001

a b c d e f g h

a. Manufacturer, Make, and Type of Vehicle
1HG: Honda of America Mfg. Inc., U.S.A. Honda Passenger vehicle

b. Line, Body, and Engine Type
CS2: Accord Coupe V6/J35Z2, J35Z3

c. Body Type and Transmission Type
1: 2-door Coupe/6-speed Manual
2: 2-door Coupe/5-speed Automatic

d. Vehicle Grade (Series)

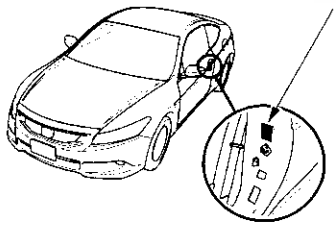
USA models	Canada models
8: EX-L V6, EX-L V6 PZEV	8: EX-L V6

e. Check Digit

f. Model Year
8: '08

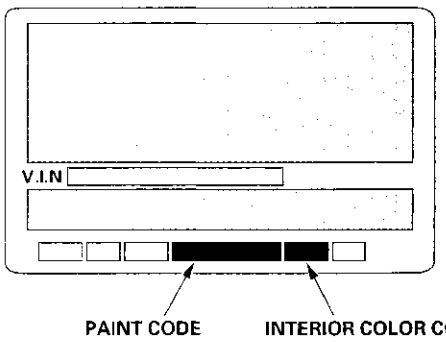
g. Factory Code
A: Marysville, Ohio Factory in U.S.A.

h. Serial Number
000001—: USA models
800001—: Canada models



Vehicle Identification Number, Federal Motor Vehicle Safety Standard Certification, and Paint Code Label.

Vehicle Identification Number, Canadian Motor Vehicle Safety Standard Certification, and Paint Code Label.



Engine Number

J35Z2 - 1000001

a b

a. Engine Type
J35Z2: 3.5 L SOHC i-VTEC Variable Cylinder Management Sequential Multiport Fuel-injected engine
J35Z3: 3.5 L SOHC VTEC Sequential Multiport Fuel-injected engine

b. Serial Number
1000001—: All models except PZEV
1500001—: PZEV

Transmission Number

89C7 - 1000001

a b

a. Transmission Type
89C7: 6-speed Manual
B97A: 5-speed Automatic

b. Serial Number

Paint Code

Code	Color	USA models	Canada models
B-92P	Nighthawk Black Pearl	○	○
B-551P	Belize Blue Pearl	○	○
NH-578	Taffeta White	○	○
NH-700M	Alabaster Silver Metallic	○	○
NH-737M	Polished Metal Metallic	○	○
R-94	San Marino Red	○	○

Chassis and Paint Codes (cont'd)

'09 4-door Model

Vehicle Identification Number

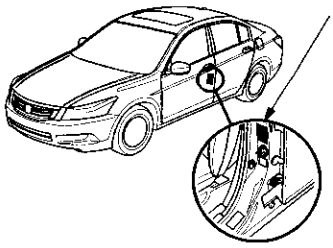
1HG CP3 6 7 * 9 A 000001

a b c d e f g h

a. Manufacturer, Make, and Type of Vehicle
1HG: Honda of America Mfg. Inc., U.S.A.
Honda Passenger vehicle
b. Line, Body, and Engine Type
CP3: Accord V6/J35Z2
c. Body Type and Transmission Type
6: 4-door Sedan/5-speed Automatic
d. Vehicle Grade (Series)

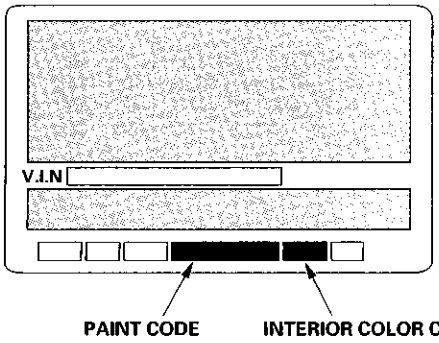
USA models	Canada models
7: EX V6, EX V6 PZEV	7: EX V6
8: EX-L V6, EX-L V6 PZEV	8: EX-L V6

e. Check Digit
f. Model Year
9: '09
g. Factory Code
A: Marysville, Ohio Factory in U.S.A.
h. Serial Number
000001—: USA models
800001—: Canada models



Vehicle Identification Number, Federal Motor Vehicle Safety Standard Certification, and Paint Code Label.

Vehicle Identification Number, Canadian Motor Vehicle Safety Standard Certification, and Paint Code Label.



Engine Number

J35Z2 - 1000001

a b

a. Engine Type
J35Z2: 3.5 L SOHC i-VTEC Variable Cylinder Management Sequential Multiport Fuel-injected engine
b. Serial Number
1000001—: All models except PZEV
1500001—: PZEV

Transmission Number

B97A - 1000001

a b

a. Transmission Type
B97A: 5-speed Automatic
b. Serial Number

Paint Code

Code	Color	USA models	Canada models
NH-731P	Crystal Black Pearl	○	○
B-536P	Royal Blue Pearl	○	○
G-530M	Mystic Green Metallic	○	○
NH-603P	White Diamond Pearl	○	○
NH-700M	Alabaster Silver Metallic	○	○
NH-737M	Polished Metal Metallic	○	○
R-530P	Basque Red Pearl	○	○
YR-574M	Bold Beige Metallic	○	○
NH-578	Taffeta White	○	○

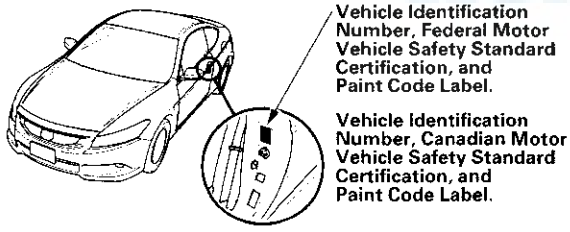
'09 2-door Model

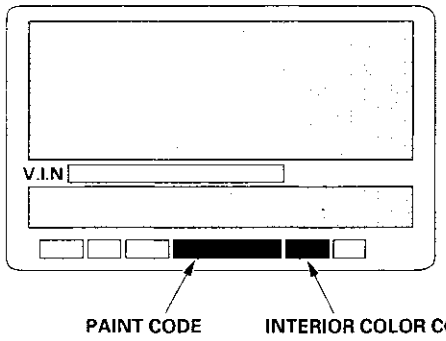
Vehicle Identification Number

1HG CS2 1 8 * 9 A 000001

a b c d e f g h

a. **Manufacturer, Make, and Type of Vehicle**
   1HG: Honda of America Mfg. Inc., U.S.A.
   Honda Passenger vehicle
b. **Line, Body, and Engine Type**
   CS2: Accord Coupe V6/J35Z2, J35Z3
c. **Body Type and Transmission Type**
   1: 2-door Coupe/6-speed Manual
   2: 2-door Coupe/5-speed Automatic
d. **Vehicle Grade (Series)**
   8: EX-L V6
e. **Check Digit**
f. **Model Year**
   9: '09
g. **Factory Code**
   A: Marysville, Ohio Factory in U.S.A.
h. **Serial Number**
   000001—: USA models
   800001—: Canada models





Engine Number

J35Z2 - 1000001

a b

a. **Engine Type**
   J35Z2: 3.5 L SOHC i-VTEC Variable Cylinder Management Sequential Multiport Fuel-injected engine
   J35Z3: 3.5 L SOHC VTEC Sequential Multiport Fuel-injected engine
b. **Serial Number**
   1000001—: All models except PZEV
   1500001—: PZEV

Transmission Number

89C7 - 1000001

a b

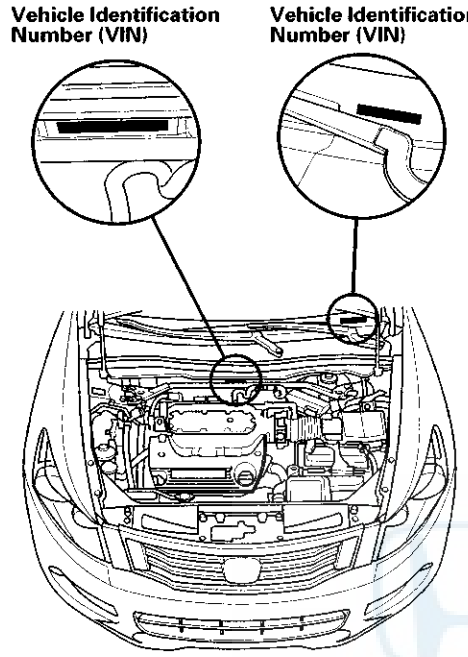
a. **Transmission Type**
   89C7: 6-speed Manual
   B97A: 5-speed Automatic
b. **Serial Number**

Paint Code

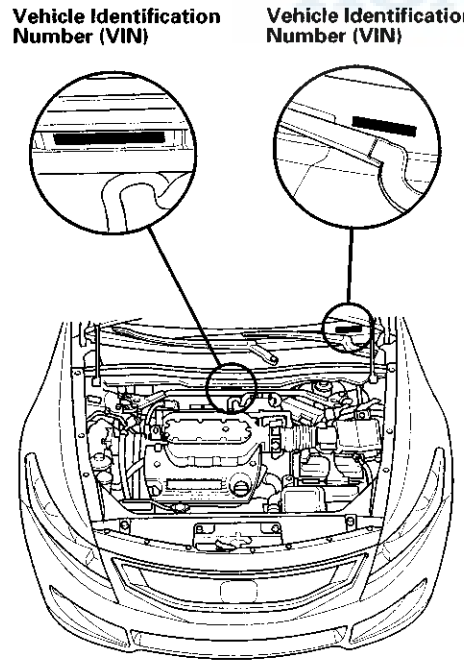
Code	Color	USA models	Canada models
NH-731P	Crystal Black Pearl	○	○
B-551P	Belize Blue Pearl	○	○
NH-578	Taffeta White	○	○
NH-700M	Alabaster Silver Metallic	○	○
NH-737M	Polished Metal Metallic	○	○
R-94	San Marino Red	○	○

Identification Number Locations

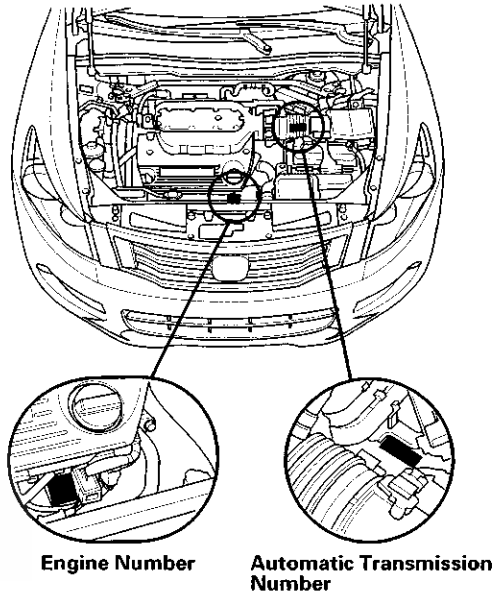
4-door:



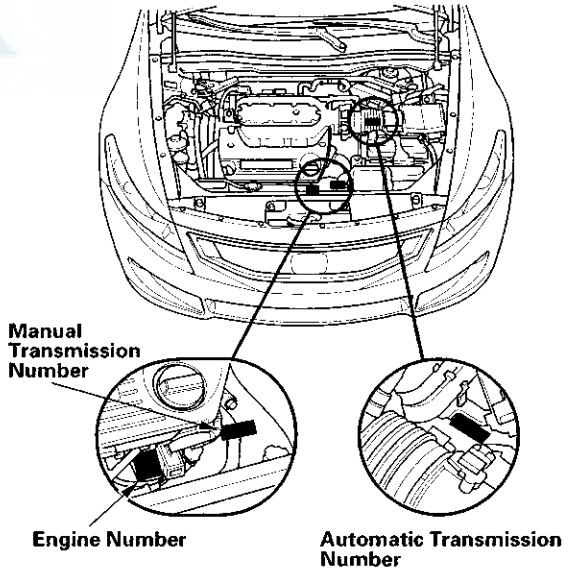
2-door:



4-door:

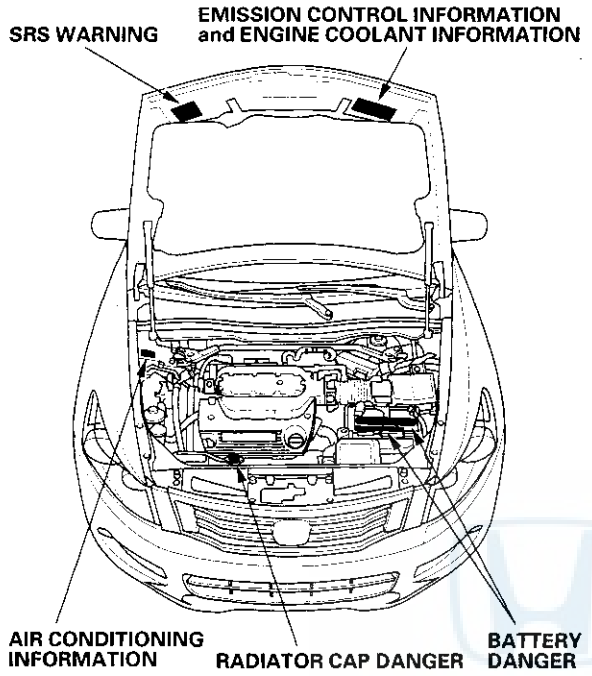


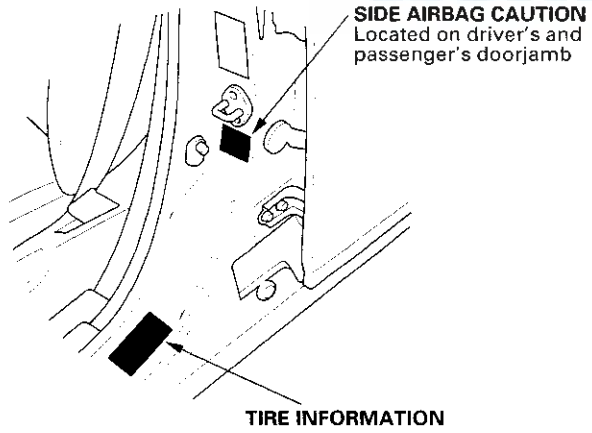
2-door:



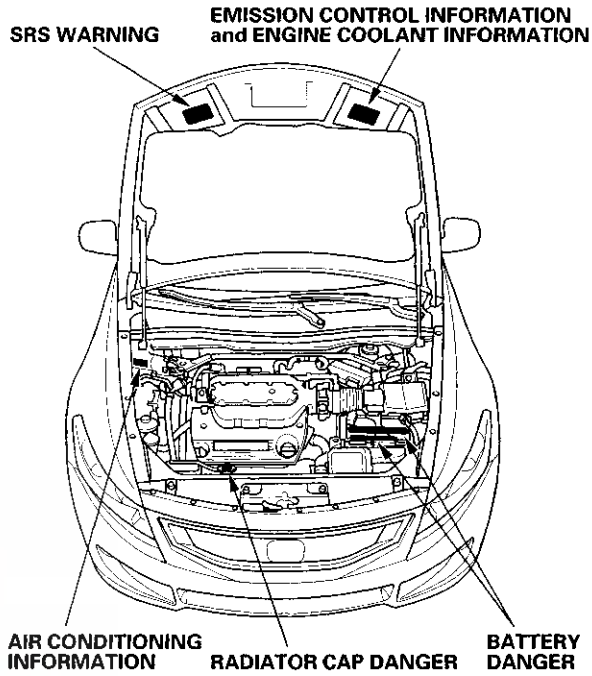
Danger/Warning/Caution Label Locations

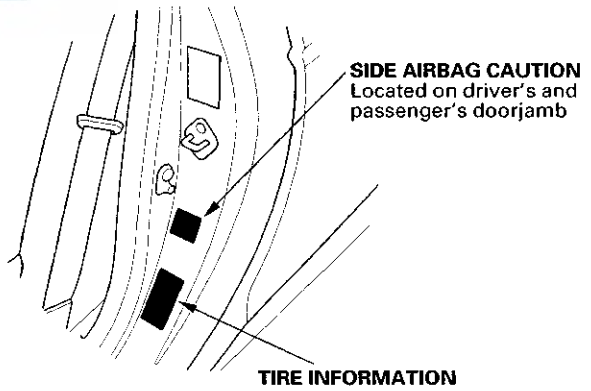
4-door Model:





2-door Model:

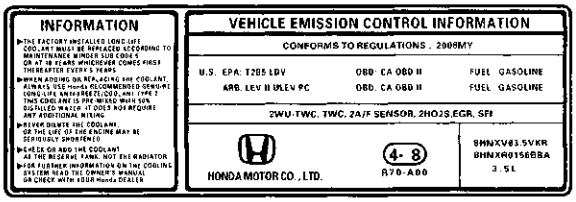




Under-hood Emission Control Label

Emission Group Identification

Example:

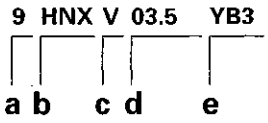


'08 Model:
CONFORMS TO REGULATIONS:2008MY

'09 Model:
CONFORMS TO REGULATIONS:2009MY

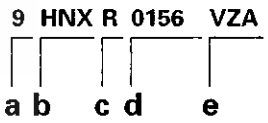
Test Group and Evaporative Family

Test Group:



- **a. Model Year**
  8: '08
  9: '09
- **b. Manufacturer Subcode**
  HNX: HONDA
- **c. Family Type**
  T: LDV
- **d. Displacement Group**
- **e. Sequence Characters**
  TKR: '08 model (ULEV)
  EMC: '08 model (SULEV/PZEV)
  YB3: '09 model (ULEV)
  TC3: '09 model (SULEV/PZEV)

Evaporative Family:



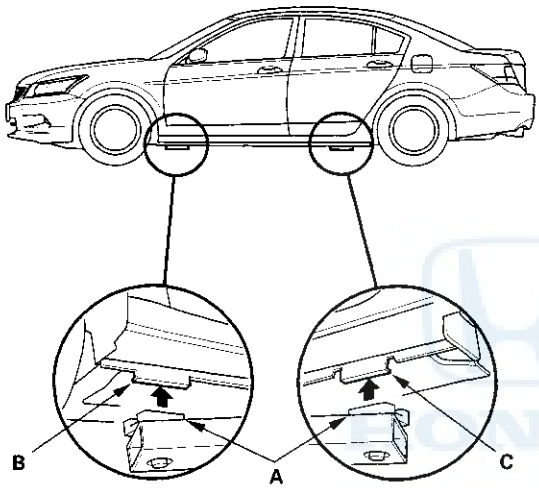
- **a. Model Year**
  8: '08
  9: '09
- **b. Manufacturer Subcode**
  HNX: HONDA
- **c. Family Type**
  R: Refueling
- **d. Canister Working Capacity Group**
- **e. Sequence Characters**
  BCA, BBA: '08 model
  VEA, VZA: '09 model

Lift and Support Points

NOTE: If you are going to remove heavy components such as suspension or the fuel tank from the rear of the vehicle, first support the front of the vehicle with tall safety stands. When substantial weight is removed from the rear of the vehicle, the center of gravity can change, causing the vehicle to tip forward on the lift.

Vehicle Lift

1. Position the lift blocks (A), under the vehicle's front support points (B) and rear support points (C).



2. Raise the lift a few inches, and rock the vehicle gently to be sure it is firmly supported.

3. Raise the lift to its full height, and inspect the vehicle support points for solid contact with the lift blocks.

Safety Stands

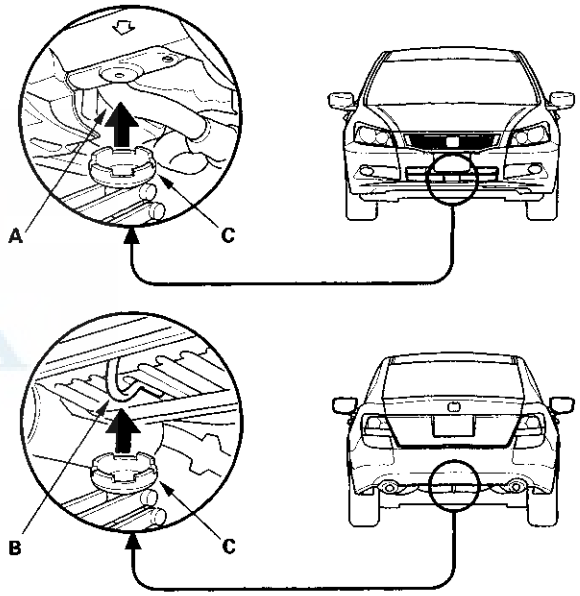
To support the vehicle on safety stands, use the same support points (B and C) as for a vehicle lift. Always use safety stands when working on or under any vehicle that is supported only by a jack.

Floor Jack

1. When lifting the front of the vehicle, set the parking brake. When lifting the rear of the vehicle, put the shift lever in reverse for manual transmission, or in the P position for automatic transmission,

2. Block the wheels that are not being lifted.

3. Position the floor jack under the front jacking bracket (A) or the rear jacking bracket (B). Center the jacking bracket on the jack lift platform (C), and jack up the vehicle high enough to fit the safety stands under it.



4. Position the safety stands under the support points, and adjust them so the vehicle is level.

5. Lower the vehicle onto the stands.

General Information

Towing

If the vehicle needs to be towed, call a professional towing service. Never tow the vehicle behind another vehicle with just a rope or chain. It is very dangerous.

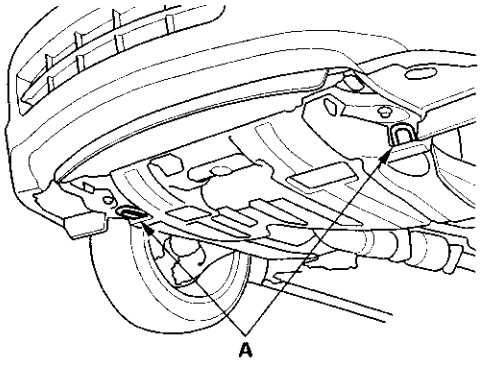
Emergency Towing
There are three popular methods of towing a vehicle.

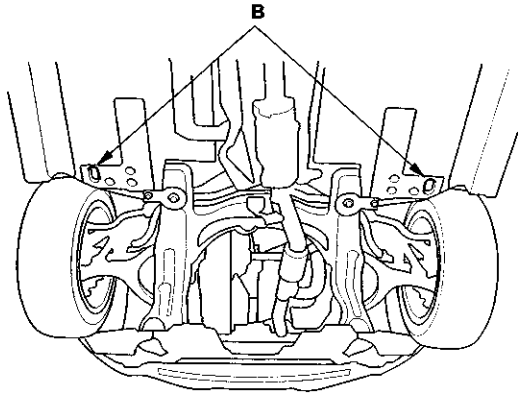
Flat-bed Equipment — The operator loads the vehicle on the back of a truck. **This is the best way of transporting the vehicle.**

To accommodate flat-bed equipment, the vehicle is equipped with front towing hooks (A), front tie down hook slots (B), rear towing hook (C), and the rear tie down hook slots (D).

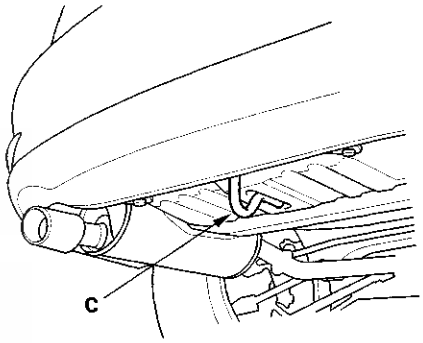
The towing hooks can be used with a winch to pull the vehicle onto the truck, and the tie down hook slots can be used to secure the vehicle to the truck.

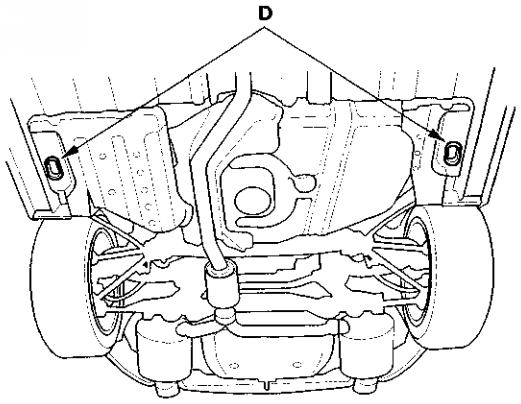
Front:





Rear:





Wheel Lift Equipment — The tow truck uses two pivoting arms that go under the tires (front or rear) and lifts them off the ground. The other two wheels remain on the ground. **This is an acceptable way of towing the vehicle.**

Sling-type Equipment — The tow truck uses metal cables with hooks on the ends. These hooks go around parts of the frame or suspension, and the cables lift that end of the vehicle off the ground. The vehicle's suspension and body can be seriously damaged if this method of towing is attempted. **This method of towing the vehicle is unacceptable.**

If the vehicle cannot be transported by a flat-bed, it should be towed with the front wheels off the ground. If the vehicle is damaged, and must be towed with the front wheels on the ground, or with all four wheels on the ground, do this:

Manual Transmission
- Release the parking brake.
- Shift the transmission in neutral.
- Leave the ignition switch in ACCESSORY (I) so the steering wheel does not lock.
- Make sure all accessories are turned off to minimize battery current draw.

Automatic Transmission
- Release the parking brake.
- Start the engine.
- Shift to D, then to N.
- Turn off the engine.
- Leave the ignition switch in ACCESSORY (I) so the steering wheel does not lock.
- Make sure all accessories are turned off to minimize battery current draw.

It is best to tow the vehicle no farther than 50 miles (80 km), and keep the vehicle speed below 35 mph (55km/h).

NOTICE
- Improper towing preparation will damage the transmission. Follow the above procedure exactly. If you cannot shift transmission or start the engine (automatic transmission), the vehicle must be transported on a flat-bed.
- Trying to lift or tow the vehicle by the bumpers will cause serious damage. The bumpers are not designed to support the vehicle's weight.

HONDA

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Outline of Model Change

V6 engine model has been added.

Standards and Service Limits

Engine Electrical

Item	Measurement	Qualification	Standard or New	Service Limit
Ignition coil	Rated voltage		12 V	
	Firing order		1—4—2—5—3—6	
Spark plug	Type	All models except PZEV	NGK: ILZKR7B-11	
		PZEV	NGK: DILZKR7A11G	
	Gap		1.0—1.1 mm (0.039—0.043 in.)	1.3 mm (0.051 in.)
Ignition timing	At idle	A/T (in N or P)	10±2 °BTDC	
	Check the *red* mark	M/T (in neutral)	5±2 °BTDC	
Drive belt	Tension		Auto-tensioner	
Alternator	Output at 13.5 V and normal engine temperature			
	Coil (rotor) resistance	At 68 °F (20 °C)	2.5 k Ω	
	Slip ring O.D.		14.4 mm (0.57 in.)	14.0 mm (0.55 in.)
	Brush length		10.5 mm (0.41 in.)	1.5 mm (0.06 in.)
	Brush spring tension		3.2 N (0.33 kgf, 0.73 lbf)	
Starter (J35Z2)	Output		1.8 kW	
	Commutator mica depth		0.50—0.90 mm (0.020—0.035 in.)	0.20 mm (0.008 in.)
	Commutator runout		0.02 mm (0.0008 in.) max.	0.05 mm (0.002 in.)
	Commutator O.D.		28.9—29.0 mm (1.138—1.142 in.)	28.0 mm (1.102 in.)
	Brush length		15.0—16.0 mm (0.59—0.63 in.)	9.0 mm (0.35 in.)
	Brush spring tension (new)		22.3—27.3 N (2.27—2.78 kgf, 5.00—6.13 lbf)	
Starter (J35Z3)	Output		1.6 kW	
	Commutator mica depth		0.40—0.50 mm (0.016—0.020 in.)	0.15 mm (0.006 in.)
	Commutator runout		0.02 mm (0.0008 in.) max.	0.05 mm (0.002 in.)
	Commutator O.D.		28.0—28.1 mm (1.102—1.106 in.)	27.5 mm (1.083 in.)
	Brush length		15.8—16.2 mm (0.62—0.64 in.)	11.0 mm (0.43 in.)
	Brush spring tension (new)		15.7—17.7 N (1.60—1.80 kgf, 3.53—3.97 lbf)	

Engine Assembly

Item	Measurement	Qualification	Standard or New
Compression	Pressure	Minimum	930 kPa (9.5 kgf/cm², 135 psi)
	Check the engine with the starter cranking	Maximum variation	200 kPa (2.0 kgf/cm², 28 psi)

Cylinder Head

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage		——	0.05 mm (0.002 in.)
	Height		120.95—121.05 mm (4.762—4.766 in.)	——
Camshaft	End play		0.05—0.20 mm (0.002—0.008 in.)	0.20 mm (0.008 in.)
	Camshaft-to-holder oil clearance		0.050—0.089 mm (0.0020—0.0035 in.)	0.15 mm (0.006 in.)
	Total runout		0.03 mm (0.0012 in.) max.	0.04 mm (0.002 in.)
	Cam lobe height (J35Z2)	Intake, (No. 1, 2, 3, 4 cylinders)	35.472 mm (1.3965 in.)	——
		Intake, (No. 5, 6 cylinders)	35.469 mm (1.3964 in.)	——
		Exhaust, (No. 1, 2, 3, 4 cylinders)	36.783 mm (1.4481 in.)	——
		Exhaust, (No. 5, 6 cylinders)	36.760 mm (1.4472 in.)	——
	Cam lobe height (J35Z3)	Intake, primary	35.621 mm (1.4024 in.)	——
		Intake, secondary	34.299 mm (1.3504 in.)	——
		Exhaust	36.760 mm (1.4472 in.)	——
Valve	Clearance (cold)	Intake	0.20—0.24 mm (0.008—0.009 in.)	——
		Exhaust	0.28—0.32 mm (0.011—0.013 in.)	——
	Stem O.D.	Intake	5.485—5.495 mm (0.2159—0.2163 in.)	5.455 mm (0.2148 in.)
		Exhaust	5.450—5.460 mm (0.2146—0.2150 in.)	5.420 mm (0.2134 in.)
	Stem-to-guide clearance	Intake	0.020—0.045 mm (0.0008—0.0018 in.)	0.08 mm (0.003 in.)
		Exhaust	0.055—0.080 mm (0.0022—0.0031 in.)	0.11 mm (0.004 in.)
Valve seat	Width	Intake	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
		Exhaust	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
	Stem installed height	Intake	46.75—47.55 mm (1.841—1.872 in.)	47.80 mm (1.882 in.)
		Exhaust	46.68—47.48 mm (1.838—1.869 in.)	47.73 mm (1.879 in.)
Valve spring	Free length	Intake	51.54 mm (2.029 in.)	——
		Exhaust	51.06 mm (2.010 in.)	——
Valve guide	I.D.	Intake	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
		Exhaust	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
	Installed height	Intake	21.20—22.20 mm (0.835—0.874 in.)	——
		Exhaust	20.60—21.60 mm (0.811—0.850 in.)	——
Rocker arm	Arm-to-shaft clearance (J35Z2)	Intake, (No. 1, 2, 3, 4 cylinders)	0.015—0.046 mm (0.0006—0.0018 in.)	0.046 mm (0.0018 in.)
		Intake, (No. 5, 6 cylinders)	0.018—0.056 mm (0.0007—0.0022 in.)	0.056 mm (0.0022 in.)
		Exhaust, (No. 1, 2, 3, 4 cylinders)	0.015—0.046 mm (0.0006—0.0018 in.)	0.046 mm (0.0018 in.)
		Exhaust, (No. 5, 6 cylinders)	0.018—0.047 mm (0.0007—0.0019 in.)	0.047 mm (0.0019 in.)
	Arm-to-shaft clearance (J35Z3)	Intake	0.015—0.046 mm (0.0006—0.0018 in.)	0.046 mm (0.0018 in.)
		Exhaust	0.019—0.050 mm (0.0007—0.0020 in.)	0.050 mm (0.0020 in.)

Standards and Service Limits

Engine Block

Item	Measurement	Qualification	Standard or New	Service Limit
Block	Warpage of deck		0.07 mm (0.003 in.) max.	0.10 mm (0.004 in.)
	Bore diameter		89.000—89.015 mm (3.5039—3.5045 in.)	89.065 mm (3.5065 in.)
	Bore taper		———	0.05 mm (0.002 in.)
	Reboring limit		———	0.25 mm (0.01 in.)
Piston	Skirt O.D. at 16.0 mm (0.63 in.) from bottom of skirt		88.975—88.985 mm (3.5029—3.5033 in.)	88.965 mm (3.5026 in.)
	Clearance in cylinder		0.015—0.040 mm (0.0006—0.0016 in.)	0.08 mm (0.003 in.)
	Ring groove width	Top	1.240—1.250 mm (0.0488—0.0492 in.)	1.27 mm (0.050 in.)
		Second	1.220—1.230 mm (0.0480—0.0484 in.)	1.25 mm (0.049 in.)
		Oil	2.805—2.825 mm (0.1104—0.1112 in.)	2.85 mm (0.112 in.)
Piston ring	Ring-to-groove clearance	Top	0.055—0.080 mm (0.0022—0.0031 in.)	0.15 mm (0.006 in.)
		Second	0.030—0.055 mm (0.0012—0.0022 in.)	0.13 mm (0.005 in.)
	Ring end gap	Top	0.20—0.35 mm (0.008—0.014 in.)	0.60 mm (0.024 in.)
		Second	0.40—0.55 mm (0.016—0.022 in.)	0.70 mm (0.028 in.)
		Oil	0.20—0.70 mm (0.008—0.028 in.)	0.80 mm (0.031 in.)
Piston pin	O.D.		21.962—21.965 mm (0.8646—0.8648 in.)	21.954 mm (0.8643 in.)
	Pin-to-piston clearance		−0.0050 to +0.0010 mm (−0.00020 to +0.00004 in.)	0.004 mm (0.0002 in.)
Connecting rod	Pin-to-rod clearance		0.005—0.014 mm (0.0002—0.0006 in.)	0.019 mm (0.0007 in.)
	Small-end bore diameter		21.970—21.976 mm (0.8650—0.8652 in.)	———
	Large-end bore diameter (nominal)		58.0 mm (2.28 in.)	———
	End play installed on crankshaft		0.15—0.35 mm (0.006—0.014 in.)	0.45 mm (0.018 in.)
Crankshaft	Main journal diameter		71.976—72.000 mm (2.8337—2.8346 in.)	———
	Rod journal diameter		54.976—55.000 mm (2.1644—2.1654 in.)	———
	Rod/main journal taper		0.005 mm (0.0002 in.) max.	0.010 mm (0.0004 in.)
	Rod/main journal out-of-round		0.005 mm (0.0002 in.) max.	0.010 mm (0.0004 in.)
	End play		0.10—0.35 mm (0.004—0.014 in.)	0.45 mm (0.018 in.)
	Runout		0.025 mm (0.0010 in.) max.	0.03 mm (0.0012 in.)
Crankshaft bearing	Main bearing-to-journal oil clearance		0.019—0.045 mm (0.0007—0.0018 in.)	0.050 mm (0.0020 in.)
	Rod bearing clearance		0.020—0.044 mm (0.0008—0.0017 in.)	0.050 mm (0.0020 in.)

Engine Lubrication

Item	Measurement	Qualification	Standard or New	Service Limit
Engine oil	Capacity	Engine overhaul	5.0 L (5.3 US qt)	
		Oil change including filter	4.3 L (4.5 US qt)	
		Oil change without filter	4.0 L (4.2 US qt)	
Oil pump	Inner-to-outer rotor clearance		0.04—0.16 mm (0.002—0.006 in.)	0.20 mm (0.008 in.)
	Pump housing-to-outer rotor radial clearance		0.10—0.19 mm (0.004—0.007 in.)	0.20 mm (0.008 in.)
	Pump housing-to-outer rotor axial clearance		0.02—0.07 mm (0.0008—0.003 in.)	0.12 mm (0.005 in.)
	Oil pressure with oil temperature at 176 °F (80 °C)	At idle	70 kPa (0.7 kgf/cm², 10 psi)	
		At 3,000 rpm	490 kPa (5.0 kgf/cm², 71 psi)	

Cooling System

Item	Measurement	Qualification	Standard or New
Radiator	Coolant capacities (including engine, heater, hoses, and reservoir) Use Honda Long Life Antifreeze/ Coolant Type 2	Engine overhaul	8.6 L (2.27 US gal)
		Coolant change	6.6 L (1.74 US gal)
Coolant reservoir	Coolant capacity		0.68 L (0.18 US gal)
Radiator cap	Opening pressure		93—123 kPa (0.95—1.25 kgf/cm², 14—18 psi)
Thermostat	Opening temperature	Begins to open	169—176 °F (76—80 °C)
		Fully open	194 °F (90 °C)
	Valve lift at fully open		10.0 mm (0.39 in.) min.

Fuel and Emissions

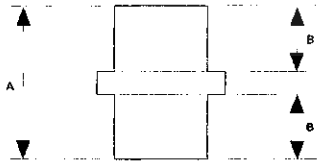
Item	Measurement	Qualification	Standard or New
Fuel pressure regulator	Pressure with fuel pressure gauge connected		390—440 kPa (4.0—4.5 kgf/cm², 57—64 psi)
Fuel tank	Capacity		70.0 L (18.5 US gal)
Engine idle	Idle speed without load	J35Z2	650±50 rpm
		J35Z3	750±50 rpm
	Idle speed with high electrical load (A/C switch ON, temperature set to max cool, blower fan on High, rear window defogger ON, and headlights on high beams)	J35Z2	700±50 rpm
		J35Z3	750±50 rpm

Clutch

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch pedal	Height from floor		179 mm (7.05 in.)	——
	Stroke		135—145 mm (5.31—5.71 in.)	——
Flywheel	Runout on clutch mating surface		0.05—0.45 mm (0.002—0.018 in.)	——
Clutch disc	Rivet head depth		1.0 mm (0.039 in.) min.	0.2 mm (0.008 in.)
	Thickness		8.68—9.53 mm (0.342—0.375 in.)	7.2 mm (0.283 in.)
Pressure plate	Warpage		0.03 mm (0.001 in.) max.	0.15 mm (0.006 in.)
	Evenness of the height of the diaphragm spring fingers		0.6 mm (0.02 in.) max.	0.8 mm (0.03 in.)

Standards and Service Limits

Manual Transmission and M/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Manual transmission fluid	Capacity Use Honda MTF	Fluid change	2.1 L (2.2 US qt)	
		Overhaul	2.5 L (2.6 US qt)	
Mainshaft	End play		0.14—0.21 mm (0.006—0.008 in.)	Adjust
	Diameter of ball bearing contact area (transmission housing side)		30.987—31.000 mm (1.2200—1.2205 in.)	30.93 mm (1.218 in.)
	Diameter of 6th gear distance collar contact area		32.987—33.000 mm (1.2987—1.2992 in.)	32.93 mm (1.296 in.)
	Diameter of 4th/5th gear distance collar contact area		35.987—36.000 mm (1.4168—1.4173 in.)	35.93 mm (1.415 in.)
	Diameter of needle bearing contact area		41.984—42.000 mm (1.6529—1.6535 in.)	41.93 mm (1.651 in.)
	Diameter of ball bearing contact area (clutch housing side)		28.002—28.015 mm (1.1024—1.1030 in.)	27.95 mm (1.100 in.)
	Diameter of pilot bearing contact area		19.967—19.980 mm (0.7861—0.7866 in.)	19.91 mm (0.784 in.)
	Runout		0.02 mm (0.001 in.) max.	0.05 mm (0.002 in.)
Mainshaft 3rd gear	I.D.		47.009—47.025 mm (1.8507—1.8514 in.)	47.08 mm (1.854 in.)
	Clearance	2nd—3rd	0.06—0.19 mm (0.002—0.007 in.)	0.3 mm (0.01 in.)
	Thickness		23.89—23.97 mm (0.941—0.944 in.)	23.8 mm (0.94 in.)
Mainshaft 4th and 5th gear	I.D.		47.009—47.025 mm (1.8507—1.8514 in.)	47.08 mm (1.854 in.)
	End play (distance collar side)		0.06—0.19 mm (0.002—0.007 in.)	0.3 mm (0.01 in.)
	Thickness		22.39—22.47 mm (0.881—0.885 in.)	22.3 mm (0.88 in.)
Mainshaft 6th gear	I.D.		47.009—47.025 mm (1.8507—1.8514 in.)	47.08 mm (1.854 in.)
	End play		0.13—0.26 mm (0.005—0.010 in.)	0.35 mm (0.01 in.)
	Thickness		23.82—23.90 mm (0.938—0.941 in.)	23.75 mm (0.94 in.)
Mainshaft 4th/5th gear distance collar	I.D.		36.002—36.012 mm (1.4174—1.4178 in.)	36.06 mm (1.420 in.)
	O.D.		41.989—42.000 mm (1.6531—1.6535 in.)	41.94 mm (1.651 in.)
	Length	A	49.95—50.05 mm (1.967—1.970 in.)	———
		B	22.53—22.58 mm (0.887—0.889 in.)	———
Mainshaft 6th gear distance collar	I.D.		33.002—33.012 mm (1.2993—1.2997 in.)	33.06 mm (1.302 in.)
	O.D.		41.989—42.000 mm (1.6531—1.6535 in.)	41.94 mm (1.651 in.)
	Length		24.03—24.08 mm (0.946—0.948 in.)	———
Countershaft	Diameter of ball bearing contact area (transmission housing side)		30.002—30.015 mm (1.1812—1.1817 in.)	29.95 mm (1.179 in.)
	Diameter of 2nd gear distance collar contact area		42.975—42.991 mm (1.6919—1.6926 in.)	42.92 mm (1.690 in.)
	Diameter of countershaft reverse gear contact area		45.934—45.950 mm (1.8084—1.8091 in.)	45.88 mm (1.806 in.)
	Diameter of needle bearing contact area (clutch housing side)		43.974—43.990 mm (1.7313—1.7319 in.)	43.92 mm (1.729 in.)
	Runout		0.02 mm (0.001 in.) max.	0.05 mm (0.002 in.)
	35 mm shim-to-bearing inner race clearance		0.04—0.10 mm (0.0016—0.0039 in.)	Adjust

Item	Measurement	Qualification	Standard or New	Service Limit
Countershaft 1st gear	I.D.		59.010—59.029 mm (2.323—2.324 in.)	59.08 mm (2.326 in.)
	End play (reverse gear side)		0.04—0.17 mm (0.002—0.007 in.)	0.28 mm (0.011 in.)
	Thickness		22.91—22.99 mm (0.902—0.905 in.)	22.86 mm (0.900 in.)
Countershaft 2nd gear	I.D.		57.010—57.029 mm (2.2445—2.2452 in.)	57.08 mm (2.247 in.)
	Clearance	2nd—3rd	0.04—0.17 mm (0.002—0.007 in.)	0.28 mm (0.011 in.)
	Thickness		22.91—22.99 mm (0.902—0.905 in.)	22.86 mm (0.900 in.)
Countershaft reverse gear	I.D.		45.970—45.988 mm (1.8098—1.8106 in.)	46.04 mm (1.813 in.)
	O.D.		53.987—54.000 mm (2.125—2.126 in.)	53.93 mm (2.123 in.)
	Length		23.03—23.08 mm (0.907—0.909 in.)	———
Countershaft 2nd gear distance collar	I.D.		42.990—43.000 mm (1.6925—1.6929 in.)	43.05 mm (1.695 in.)
	O.D.		51.989—52.000 mm (2.0468—2.0472 in.)	51.94 mm (2.045 in.)
	Length		23.03—23.08 mm (0.907—0.909 in.)	———
Reverse idler gear	O.D.		19.989—20.000 mm (0.7870—0.7874 in.)	19.93 mm (0.785 in.)
Reverse drive/ driven gear	I.D.		25.007—25.020 mm (0.9845—0.9850 in.)	25.07 mm (0.987 in.)
1st triple cone synchro	Outer synchro ring-to-synchro cone clearance	Ring pushed against gear	0.70—1.19 mm (0.028—0.047 in.)	0.3 mm (0.012 in.)
	Synchro cone-to-gear clearance	Ring pushed against gear	0.45—1.14 mm (0.018—0.045 in.)	0.3 mm (0.012 in.)
	Outer synchro ring-to-gear clearance	Ring pushed against gear	1.12—1.68 mm (0.044—0.066 in.)	0.6 mm (0.024 in.)
2nd triple cone synchro	Outer synchro ring-to-synchro cone clearance	Ring pushed against gear	0.70—1.19 mm (0.028—0.047 in.)	0.3 mm (0.012 in.)
	Synchro cone-to-gear clearance	Ring pushed against gear	0.60—1.88 mm (0.024—0.074 in.)	0.3 mm (0.012 in.)
	Outer synchro ring-to-gear clearance	Ring pushed against gear	1.12—1.68 mm (0.044—0.066 in.)	0.6 mm (0.024 in.)
3rd triple cone synchro	Outer synchro ring-to-synchro cone clearance	Ring pushed against gear	0.68—1.19 mm (0.027—0.047 in.)	0.3 mm (0.012 in.)
	Synchro cone-to-gear clearance	Ring pushed against gear	0.48—1.04 mm (0.019—0.041 in.)	0.3 mm (0.012 in.)
	Outer synchro ring-to-gear clearance	Ring pushed against gear	0.95—1.68 mm (0.037—0.066 in.)	0.6 mm (0.024 in.)
4th double cone synchro	Outer synchro ring-to-synchro cone clearance	Ring pushed against gear	0.70—1.19 mm (0.028—0.047 in.)	0.3 mm (0.012 in.)
	Synchro cone-to-gear clearance	Ring pushed against gear	0.50—1.04 mm (0.020—0.041 in.)	0.3 mm (0.012 in.)
	Outer synchro ring-to-gear clearance	Ring pushed against gear	0.95—1.68 mm (0.037—0.066 in.)	0.6 mm (0.024 in.)
5th synchro ring	Ring-to-gear clearance	Ring pushed against gear	0.70—1.49 mm (0.028—0.059 in.)	0.4 mm (0.016 in.)
6th synchro ring	Ring-to-gear clearance	Ring pushed against gear	0.73—1.44 mm (0.029—0.057 in.)	0.4 mm (0.016 in.)
Shift fork	Finger thickness	1st/2nd, 3rd/4th, 5th/6th	7.4—7.6 mm (0.29—0.30 in.)	———
		Reverse	6.2—6.4 mm (0.24—0.25 in.)	———
	Fork-to-synchro sleeve clearance		0.35—0.65 mm (0.014—0.026 in.)	1.0 mm (0.039 in.)

(cont'd)

Standards and Service Limits

Manual Transmission and M/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Reverse shift lever	Finger width		6.40—6.65 mm (0.252—0.262 in.)	———
	Shift lever-to-shift fork clearance		0.05—0.50 mm (0.002—0.020 in.)	0.6 mm (0.024 in.)
	Shift lever width at contact area (reverse shift piece side)		13.0—13.2 mm (0.51—0.52 in.)	———
	Shift lever-to-reverse shift piece clearance		0—0.4 mm (0—0.016 in.)	0.5 mm (0.020 in.)
Shift piece	I.D.		14.000—14.068 mm (0.5512—0.5539 in.)	———
	Shift fork width at contact area		12.8—13.0 mm (0.504—0.512 in.)	———
	Shift piece-to-shift fork clearance		0.2—0.6 mm (0.008—0.024 in.)	0.7 mm (0.028 in.)
Shift arm	I.D.		15.973—16.005 mm (0.6289—0.6301 in.)	———
	Shift piece width at contact area		13.6—13.8 mm (0.535—0.543 in.)	———
	Shift arm-to-shift piece clearance		0.26—0.57 mm (0.01—0.02 in.)	0.75 mm (0.030 in.)
Select arm	I.D.		11.01—11.05 mm (0.433—0.435 in.)	———
	Shift piece width at contact area		12.9—13.0 mm (0.508—0.512 in.)	———
	Select arm-to-interlock clearance		0.05—0.25 mm (0.002—0.010 in.)	0.5 mm (0.020 in.)
Oil pump	Oil pump thrust clearance		0.03—0.13 mm (0.001—0.005 in.)	0.15 mm (0.006 in.)
	Outer rotor-to-clutch housing clearance		0.1—0.2 mm (0.004—0.008 in.)	0.22 mm (0.009 in.)
	Inner rotor-to-outer rotor clearance		0.14 mm (0.006 in.) max.	0.2 mm (0.008 in.)
	Oil pump inner rotor I.D.		17.1—17.2 mm (0.67—0.68 in.)	———
	Oil pump shaft O.D.		16.8—17.0 mm (0.66—0.67 in.)	———
M/T differential carrier	Backlash (measured with final driven gear)		0.6—1.1 mm (0.024—0.043 in.)	———
	Carrier bearing starting torque (preload)		3.43—4.51 N·m (35—46 kgf·cm, 30—40 lbf·in.)	Adjust

HONDA

Automatic Transmission and A/T Differential

Item	Measurement	Qualification	Standard or New	Service Limit
Automatic transmission fluid	Capacity Use Honda ATF-Z1	Fluid change	3.3 L (3.5 US qt)	
		Overhaul	7.5 L (7.9 US qt)	
ATF pressure	Line pressure	At 2,000 rpm in N or P	950—1,010 kPa (9.7—10.3 kgf/cm², 140—146 psi)	900 kPa (9.2 kgf/cm², 130 psi)
	5th clutch pressure	At 2,000 rpm in 5th gear in D	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)
	4th clutch pressure	At 2,000 rpm in 4th gear in D	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)
	3rd clutch pressure	At 2,000 rpm in 3rd gear in D	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)
	2nd clutch pressure	At 2,000 rpm in 2	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)
	1st clutch pressure	At 2,000 rpm in 1	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)
	1st-hold clutch pressure	At 2,000 rpm in 1	680—760 kPa (6.9—7.7 kgf/cm², 100—110 psi)	630 kPa (6.4 kgf/cm², 91 psi)
Torque converter	Stall speed Check with vehicle on level ground		1,850 rpm	1,700—2,000 rpm
Clutch	Clearance between clutch end-plate and top disc	1st	1.15—1.35 mm (0.045—0.053 in.)	———
		2nd	1.05—1.25 mm (0.041—0.049 in.)	———
		3rd	0.8—1.0 mm (0.031—0.039 in.)	———
		4th, 5th	0.75—0.95 mm (0.030—0.037 in.)	———
		1st-hold	0.6—1.0 mm (0.024—0.039 in.)	———
	Clutch return spring free length	1st	68.3 mm (2.69 in.)	66.3 mm (2.61 in.)
		2nd	48.3 mm (1.90 in.)	46.3 mm (1.82 in.)
		3rd	52.0 mm (2.05 in.)	50.0 mm (1.97 in.)
		4th	37.4 mm (1.47 in.)	35.4 mm (1.39 in.)
		5th	47.9 mm (1.89 in.)	45.9 mm (1.81 in.)
	Clutch disc thickness		1.94 mm (0.076 in.)	———
	Clutch plate thickness	1st	1.6 mm (0.063 in.)	When discolored
		2nd	1.8 mm (0.071 in.)	When discolored
		3rd	2.0 mm (0.079 in.)	When discolored
		4th, 5th	1.6 mm (0.063 in.)	When discolored
		1st-hold	1.8 mm (0.071 in.)	When discolored
	1st clutch end-plate thickness	Mark 1	3.1 mm (0.122 in.)	When discolored
		Mark 2	3.2 mm (0.126 in.)	When discolored
		Mark 3	3.3 mm (0.130 in.)	When discolored
		Mark 4	3.4 mm (0.134 in.)	When discolored
		Mark 5	3.5 mm (0.138 in.)	When discolored
		Mark 6	3.6 mm (0.142 in.)	When discolored
		Mark 7	3.7 mm (0.146 in.)	When discolored
		Mark 8	3.8 mm (0.150 in.)	When discolored
		Mark 9	3.9 mm (0.154 in.)	When discolored
	1st-hold clutch plate B thickness		5.0 mm (0.197 in.)	When discolored

(cont'd)

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Clutch (cont'd)	2nd, 3rd, 4th, 5th clutch end-plate thickness	Mark 1	2.1 mm (0.083 in.)	When discolored
		Mark 2	2.2 mm (0.087 in.)	When discolored
		Mark 3	2.3 mm (0.091 in.)	When discolored
		Mark 4	2.4 mm (0.094 in.)	When discolored
		Mark 5	2.5 mm (0.098 in.)	When discolored
		Mark 6	2.6 mm (0.102 in.)	When discolored
		Mark 7	2.7 mm (0.106 in.)	When discolored
		Mark 8	2.8 mm (0.110 in.)	When discolored
		Mark 9	2.9 mm (0.114 in.)	When discolored
Stator shaft	I.D. at needle bearing contact area	Torque converter side	27.000—27.021 mm (1.063—1.064 in.)	When worn or damaged
		ATF pump side	31.000—31.025 mm (1.220—1.221 in.)	———
	I.D. at mainshaft sealing ring contact area		31.000—31.025 mm (1.220—1.221 in.)	31.05 mm (1.222 in.)
ATF pump	ATF pump thrust clearance		0.03—0.06 mm (0.001—0.002 in.)	0.07 mm (0.003 in.)
	Clearance between ATF pump gear and body	Drive gear	0.210—0.265 mm (0.008—0.010 in.)	———
		Driven gear	0.070—0.125 mm (0.003—0.005 in.)	———
	ATF pump driven gear I.D.		14.016—14.034 mm (0.5518—0.5525 in.)	When worn or damaged
	ATF pump driven gear shaft O.D.		13.980—13.990 mm (0.5504—0.5508 in.)	When worn or damaged
Reverse shift fork	Fork finger thickness		5.90—6.00 mm (0.232—0.236 in.)	5.4 mm (0.213 in.)
Park gear and pawl	———		———	When worn or damaged
Regulator valve body	Shift fork shaft bore I.D.		14.000—14.010 mm (0.5512—0.5516 in.)	———
	Shift fork shaft/servo valve bore I.D.		37.000—37.039 mm (1.4567—1.4582 in.)	37.045 mm (1.4585 in.)
	Mainshaft sealing ring contact I.D.		31.000—31.025 mm (1.220—1.221 in.)	31.05 mm (1.222 in.)
Main valve body	Intermediary shaft sealing ring contact I.D.		35.000—35.025 mm (1.3780—1.3789 in.)	35.05 mm (1.3799 in.)
ATF guide collar	Secondary shaft sealing ring contact I.D.		29.000—29.021 mm (1.1417—1.1426 in.)	29.05 mm (1.1437 in.)
Mainshaft	Diameter at stator shaft needle bearing contact area		22.984—23.000 mm (0.9049—0.9055 in.)	When worn or damaged
	5th gear collar diameter at needle bearing contact area		39.981—39.991 mm (1.5741—1.5744 in.)	When worn or damaged
	5th gear collar length		48.7—48.8 mm (1.917—1.921 in.)	———
	5th gear collar flange thickness		4.5—4.7 mm (0.18—0.19 in.)	When worn or damaged
	5th gear I.D.		46.000—46.016 mm (1.8110—1.8116 in.)	When worn or damaged
	5th gear axial clearance		0.10—0.22 mm (0.004—0.009 in.)	———
	Sealing ring thickness		1.90—1.96 mm (0.075—0.077 in.)	1.85 mm (0.073 in.)
	Sealing ring groove width		2.025—2.060 mm (0.080—0.081 in.)	2.08 mm (0.082 in.)

Item	Measurement	Qualification	Standard or New	Service Limit
Countershaft	Diameter at bearing contact area	Torque converter housing bearing	40.505—40.515 mm (1.5947—1.5951 in.)	When worn or damaged
		5th gear	34.975—34.991 mm (1.3770—1.3776 in.)	When worn or damaged
	Diameter of 2nd gear at needle bearing contact area		61.975—61.991 mm (2.4400—2.4406 in.)	When worn or damaged
	Reverse gear collar O.D.		39.979—40.000 mm (1.5740—1.5748 in.)	When worn or damaged
	Reverse selector hub O.D.		55.885—55.900 mm (2.200—2.201 in.)	When worn or damaged
	Cotter thickness	4th gear	1.99—2.02 mm (0.078—0.080 in.)	———
		2nd gear	7.49—7.52 mm (0.295—0.296 in.)	———
	I.D. of gears	5th gear	41.000—41.016 mm (1.6142—1.6148 in.)	When worn or damaged
		Idler gear	70.000—70.019 mm (2.7559—2.7567 in.)	When worn or damaged
		Reverse gear	46.000—46.016 mm (1.8110—1.8116 in.)	When worn or damaged
	Axial clearance of gears	2nd gear	0.005—0.040 mm (0.0002—0.0016 in.)	———
		5th gear	0.12—0.27 mm (0.0047—0.0106 in.)	———
		Idler gear	0.005—0.040 mm (0.0002—0.0016 in.)	———
		Reverse gear	0.10—0.25 mm (0.0039—0.0098 in.)	———
	61 mm washer thickness	A	1.525 mm (0.0600 in.)	When worn or damaged
		B	1.505 mm (0.0593 in.)	When worn or damaged
		C	1.485 mm (0.0585 in.)	When worn or damaged
		D	1.465 mm (0.0577 in.)	When worn or damaged
		E	1.445 mm (0.0569 in.)	When worn or damaged
		F	1.425 mm (0.0561 in.)	When worn or damaged
		G	1.405 mm (0.0553 in.)	When worn or damaged
	50.8 mm washer thickness	A	1.91 mm (0.0752 in.)	When worn or damaged
		B	1.93 mm (0.0760 in.)	When worn or damaged
		C	1.95 mm (0.0768 in.)	When worn or damaged
		D	1.97 mm (0.0776 in.)	When worn or damaged
		E	1.99 mm (0.0783 in.)	When worn or damaged
		F	2.01 mm (0.0791 in.)	When worn or damaged
		G	2.03 mm (0.0799 in.)	When worn or damaged
		H	2.05 mm (0.0807 in.)	When worn or damaged
		I	2.07 mm (0.0815 in.)	When worn or damaged
		J	2.09 mm (0.0823 in.)	When worn or damaged
		K	2.11 mm (0.0831 in.)	When worn or damaged
		L	2.13 mm (0.0839 in.)	When worn or damaged
		M	2.15 mm (0.0846 in.)	When worn or damaged
		N	2.17 mm (0.0854 in.)	When worn or damaged
		O	2.19 mm (0.0862 in.)	When worn or damaged
		P	2.21 mm (0.0870 in.)	When worn or damaged
		Q	2.23 mm (0.0878 in.)	When worn or damaged
		R	2.25 mm (0.0886 in.)	When worn or damaged
		S	2.27 mm (0.0894 in.)	When worn or damaged
		T	2.29 mm (0.0902 in.)	When worn or damaged
		U	2.31 mm (0.0909 in.)	When worn or damaged
		V	2.33 mm (0.0917 in.)	When worn or damaged
		W	2.35 mm (0.0925 in.)	When worn or damaged
		X	2.37 mm (0.0933 in.)	When worn or damaged
		Y	2.39 mm (0.0941 in.)	When worn or damaged
		Z	2.41 mm (0.0949 in.)	When worn or damaged
		AA	2.43 mm (0.0957 in.)	When worn or damaged
		AB	2.45 mm (0.0965 in.)	When worn or damaged
	Thrust washer thickness		3.00 mm (0.118 in.)	When worn or damaged

(cont'd)

Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft	Diameter at bearing contact area	2nd gear	43.986—43.999 mm (1.7317—1.7322 in.)	When worn or damaged
		Torque converter housing bearing	32.002—32.015 mm (1.2599—1.2604 in.)	When worn or damaged
		Torque converter housing bearing (shaft end side)	28.592—28.608 mm (1.1257—1.1263 in.)	When worn or damaged
	Diameter of 1st gear collar at needle bearing contact area		38.981—38.991 mm (1.5347—1.5351 in.)	When worn or damaged
	I.D. of gears	1st gear	44.000—44.013 mm (1.7323—1.7328 in.)	When worn or damaged
		2nd gear	50.00—50.02 mm (1.9685—1.9693 in.)	When worn or damaged
	Axial clearance of gears	1st gear	0.100—0.145 mm (0.004—0.006 in.)	———
		2nd gear	0.060—0.488 mm (0.0024—0.0192 in.)	———
	52 mm thrust washer thickness	A	2.705 mm (0.106 in.)	When worn or damaged
		B	2.680 mm (0.106 in.)	When worn or damaged
		C	2.655 mm (0.105 in.)	When worn or damaged
		D	2.630 mm (0.104 in.)	When worn or damaged
		E	2.605 mm (0.103 in.)	When worn or damaged
		F	2.580 mm (0.102 in.)	When worn or damaged
		G	2.555 mm (0.101 in.)	When worn or damaged
		H	2.530 mm (0.100 in.)	When worn or damaged
		I	2.505 mm (0.099 in.)	When worn or damaged
		J	2.480 mm (0.098 in.)	When worn or damaged
		K	2.455 mm (0.097 in.)	When worn or damaged
		L	2.430 mm (0.096 in.)	When worn or damaged
		M	2.405 mm (0.095 in.)	When worn or damaged
	1st gear collar length		63.3—63.4 mm (2.4921—2.4961 in.)	———
	Sealing ring thickness		1.91—1.97 mm (0.075—0.078 in.)	1.86 mm (0.073 in.)
	Sealing ring groove width		2.025—2.060 mm (0.080—0.081 in.)	2.08 mm (0.082 in.)
	ATF feed pipe O.D.	1st clutch	11.47—11.48 mm (0.4516—0.4520 in.)	11.45 mm (0.4508 in.)
		1st-hold clutch	5.97—5.98 mm (0.2350—0.2354 in.)	5.95 mm (0.2343 in.)
	Feed pipe bushing I.D.	1st clutch	11.518—11.530 mm (0.4535—0.4539 in.)	11.545 mm (0.4545 in.)
		1st-hold clutch	6.018—6.030 mm (0.2369—0.2374 in.)	6.045 mm (0.2380 in.)

Item	Measurement	Qualification	Standard or New	Service Limit
Secondary shaft (cont'd)	65 mm thrust shim thickness	0A	0.80 mm (0.031 in.)	When worn or damaged
		A	0.84 mm (0.033 in.)	When worn or damaged
		B	0.88 mm (0.035 in.)	When worn or damaged
		C	0.92 mm (0.036 in.)	When worn or damaged
		D	0.96 mm (0.038 in.)	When worn or damaged
		E	1.00 mm (0.039 in.)	When worn or damaged
		F	1.04 mm (0.041 in.)	When worn or damaged
		G	1.08 mm (0.043 in.)	When worn or damaged
		H	1.12 mm (0.044 in.)	When worn or damaged
		I	1.16 mm (0.046 in.)	When worn or damaged
		J	1.20 mm (0.047 in.)	When worn or damaged
		K	1.24 mm (0.049 in.)	When worn or damaged
		L	1.28 mm (0.050 in.)	When worn or damaged
		M	1.32 mm (0.052 in.)	When worn or damaged
		N	1.36 mm (0.054 in.)	When worn or damaged
		O	1.40 mm (0.055 in.)	When worn or damaged
		P	1.44 mm (0.057 in.)	When worn or damaged
		Q	1.48 mm (0.058 in.)	When worn or damaged
		R	1.52 mm (0.060 in.)	When worn or damaged
		S	1.56 mm (0.061 in.)	When worn or damaged
		T	1.60 mm (0.063 in.)	When worn or damaged
		U	1.64 mm (0.065 in.)	When worn or damaged
		V	1.68 mm (0.066 in.)	When worn or damaged
		W	1.72 mm (0.068 in.)	When worn or damaged
		X	1.76 mm (0.069 in.)	When worn or damaged
		Y	1.80 mm (0.071 in.)	When worn or damaged
		Z	1.84 mm (0.072 in.)	When worn or damaged
		AA	1.88 mm (0.074 in.)	When worn or damaged
		AB	1.92 mm (0.076 in.)	When worn or damaged
		AC	1.96 mm (0.077 in.)	When worn or damaged
		AD	2.00 mm (0.079 in.)	When worn or damaged
		AE	2.04 mm (0.080 in.)	When worn or damaged
		AF	2.08 mm (0.082 in.)	When worn or damaged
		AG	2.12 mm (0.083 in.)	When worn or damaged
		AH	2.16 mm (0.085 in.)	When worn or damaged
		AI	2.20 mm (0.087 in.)	When worn or damaged
		AJ	2.24 mm (0.088 in.)	When worn or damaged
		AK	2.28 mm (0.090 in.)	When worn or damaged
		AL	2.32 mm (0.091 in.)	When worn or damaged
		AM	0.76 mm (0.030 in.)	When worn or damaged

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Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New	Service Limit
Intermediary shaft	I.D. of 3rd gear		36.000—36.016 mm (1.4173—1.4179 in.)	When worn or damaged
	Axial clearance of 3rd gear		0.005—0.045 mm (0.0002—0.0018 in.)	———
	Cotter thickness		2.99—3.02 mm (0.1177—0.1189 in.)	———
	Sealing ring thickness		1.89—1.95 mm (0.0744—0.0768 in.)	1.84 mm (0.0724 in.)
	Sealing ring groove width		2.025—2.060 mm (0.080—0.081 in.)	2.08 mm (0.082 in.)
	53 mm splined washer thickness	A	3.995 mm (0.1573 in.)	When worn or damaged
		B	4.015 mm (0.1581 in.)	When worn or damaged
		C	4.035 mm (0.1589 in.)	When worn or damaged
		D	4.055 mm (0.1596 in.)	When worn or damaged
		E	4.075 mm (0.1604 in.)	When worn or damaged
		F	4.095 mm (0.1612 in.)	When worn or damaged
		G	4.115 mm (0.1620 in.)	When worn or damaged
		H	4.135 mm (0.1628 in.)	When worn or damaged
		I	4.155 mm (0.1636 in.)	When worn or damaged
		J	4.175 mm (0.1644 in.)	When worn or damaged
		K	4.195 mm (0.1652 in.)	When worn or damaged
		L	4.215 mm (0.1659 in.)	When worn or damaged
		M	4.235 mm (0.1667 in.)	When worn or damaged
		N	4.255 mm (0.1675 in.)	When worn or damaged
	26.5 mm washer thickness	A	1.05 mm (0.041 in.)	When worn or damaged
		B	1.13 mm (0.044 in.)	When worn or damaged
		C	1.21 mm (0.048 in.)	When worn or damaged
		D	1.29 mm (0.051 in.)	When worn or damaged
		E	1.37 mm (0.054 in.)	When worn or damaged
		F	1.45 mm (0.057 in.)	When worn or damaged
		G	1.53 mm (0.060 in.)	When worn or damaged
		H	1.61 mm (0.063 in.)	When worn or damaged
		I	1.69 mm (0.067 in.)	When worn or damaged
		J	1.77 mm (0.070 in.)	When worn or damaged
		K	1.85 mm (0.073 in.)	When worn or damaged
		L	1.93 mm (0.076 in.)	When worn or damaged
		M	2.01 mm (0.079 in.)	When worn or damaged
		N	2.09 mm (0.082 in.)	When worn or damaged
		O	0.97 mm (0.038 in.)	When worn or damaged
Reverse idler gear	Gear shaft O.D.		13.99—14.00 mm (0.5508—0.5512 in.)	When worn or damaged
	I.D. of transmission housing of gear shaft contact area		14.006—14.024 mm (0.5514—0.5521 in.)	———
	I.D.		18.007—18.020 mm (0.7089—0.7094 in.)	When worn or damaged
	Axial clearance		0.07—0.38 mm (0.003—0.015 in.)	———
	Thrust washer thickness	Transmission housing	1.00—1.05 mm (0.039—0.041 in.)	———
		Holder side	1.00—1.05 mm (0.039—0.041 in.)	———

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coils
Main valve body spring (see page 14-290)	Torque converter check valve spring		1.1 mm (0.043 in.)	8.6 mm (0.339 in.)	35.0 mm (1.378 in.)	12.6
	Lock-up shift valve spring		1.0 mm (0.039 in.)	6.6 mm (0.260 in.)	35.5 mm (1.398 in.)	18.2
	Shift valve E spring		0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	42.4 mm (1.669 in.)	17.6
	Shift valve A spring		0.9 mm (0.035 in.)	6.6 mm (0.260 in.)	50.5 mm (1.988 in.)	23.3
	Shift valve B spring		0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	49.1 mm (1.933 in.)	21.7
	Modulator valve spring		1.6 mm (0.063 in.)	10.4 mm (0.409 in.)	33.5 mm (1.319 in.)	9.8
	CPC valve A spring		0.7 mm (0.028 in.)	6.1 mm (0.240 in.)	17.8 mm (0.701 in.)	7.9
	Servo control valve spring		0.9 mm (0.035 in.)	9.6 mm (0.378 in.)	30.2 mm (1.189 in.)	8.4
	Lubrication control valve spring		0.9 mm (0.035 in.)	8.7 mm (0.343 in.)	25.0 mm (0.984 in.)	7.2
	Lock-up timing valve spring		0.6 mm (0.024 in.)	6.6 mm (0.260 in.)	30.9 mm (1.217 in.)	11.1
	Relief valve spring		1.0 mm (0.039 in.)	9.6 mm (0.378 in.)	28.1 mm (1.106 in.)	7.7
Secondary valve body spring (see page 14-292)	CPC valve C spring		0.7 mm (0.028 in.)	6.1 mm (0.240 in.)	17.8 mm (0.701 in.)	7.9
	Shift valve D spring		0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	42.4 mm (1.669 in.)	17.6
	Reverse CPC valve spring		0.8 mm (0.031 in.)	6.1 mm (0.240 in.)	24.4 mm (0.961 in.)	14.6
	Shift valve C spring		0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	49.1 mm (1.933 in.)	21.7
	CPC valve B spring		0.7 mm (0.028 in.)	6.1 mm (0.240 in.)	17.8 mm (0.701 in.)	7.9
	Reverse control valve spring		0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	49.1 mm (1.933 in.)	21.7
Regulator valve body spring (see page 14-293)	3rd accumulator spring		3.1 mm (0.122 in.)	19.6 mm (0.772 in.)	41.4 mm (1.630 in.)	5.5
	Cooler check valve spring		0.9 mm (0.035 in.)	6.7 mm (0.264 in.)	31.5 mm (1.240 in.)	14.2
	Lock-up control valve spring	Type A	0.7 mm (0.028 in.)	6.6 mm (0.260 in.)	42.9 mm (1.689 in.)	14.2
		Type B	0.8 mm (0.031 in.)	6.6 mm (0.260 in.)	44.3 mm (1.744 in.)	25.5
	Regulator valve spring B		1.4 mm (0.055 in.)	8.8 mm (0.346 in.)	44.0 mm (1.732 in.)	12.0
	Regulator valve spring A		1.85 mm (0.073 in.)	14.7 mm (0.579 in.)	86.9 mm (3.421 in.)	16.2
	Stator reaction spring		5.5 mm (0.217 in.)	37.4 mm (1.472 in.)	30.3 mm (1.193 in.)	2.1

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Standards and Service Limits

Automatic Transmission and A/T Differential (cont'd)

Item	Measurement	Qualification	Standard or New			
			Wire Diameter	O.D.	Free Length	No. of Coils
Accumulator body spring (see page 14-294)	4th accumulator spring		3.3 mm (0.130 in.)	19.6 mm (0.772 in.)	39.1 mm (1.539 in.)	5.8
	2nd accumulator spring		3.1 mm (0.122 in.)	19.6 mm (0.772 in.)	53.4 mm (2.102 in.)	7.5
	1st accumulator spring A		2.3 mm (0.091 in.)	19.6 mm (0.772 in.)	60.8 mm (2.394 in.)	9.5
	1st accumulator spring B		2.5 mm (0.098 in.)	12.8 mm (0.504 in.)	46.0 mm (1.811 in.)	9.5
	5th accumulator spring A		2.4 mm (0.094 in.)	19.6 mm (0.772 in.)	65.5 mm (2.579 in.)	12.0
	5th accumulator spring B		2.6 mm (0.102 in.)	13.2 mm (0.520 in.)	50.5 mm (1.988 in.)	10.1
	1st-hold accumulator spring		2.0 mm (0.079 in.)	13.1 mm (0.516 in.)	42.9 mm (1.689 in.)	9.8

Item	Measurement	Qualification	Standard or New	Service Limit
A/T differential carrier	Pinion shaft contact area I.D.		18.000—18.025 mm (0.7087—0.7096 in.)	———
	Clearance between carrier and pinion shaft		0.013—0.054 mm (0.0005—0.0021 in.)	0.1 mm (0.004 in.)
	Driveshaft contact area I.D.		30.025—30.055 mm (1.182—1.183 in.)	———
	Clearance between carrier and driveshaft		0.045—0.096 mm (0.002—0.004 in.)	0.13 mm (0.005 in.)
	Clearance between carrier and intermediate shaft		0.080—0.126 mm (0.003—0.005 in.)	———
	Tapered roller bearing starting torque (preload)	For new bearing	3.9—5.1 N·m (40—52 kgf·cm, 35—45 lbf·in.)	Adjust
		For used bearing	3.6—4.8 N·m (37—49 kgf·cm, 32—43 lbf·in.)	Adjust
A/T differential pinion gear	Backlash		0.05—0.15 mm (0.002—0.006 in.)	———
	I.D.		18.042—18.066 mm (0.7103—0.7113 in.)	———
	Clearance between pinion gear and pinion shaft		0.055—0.095 mm (0.0022—0.0037 in.)	0.12 mm (0.005 in.)

Steering

Item	Measurement	Qualification	Standard or New
Steering wheel	Rotational play measured at outside edge with engine running		0—10 mm (0—0.39 in.)
	Initial turning load measured at outside edge with engine running		29 N (3.0 kgf, 6.6 lbf)
Gearbox	Angle of rack guide screw loosened from locked position		15±5 °
Pump	Output pressure with shut-off valve closed		8,830—9,310 kPa (90—95 kgf/cm², 1,280—1,350 psi)
Power steering fluid	Capacity Use Honda Power Steering Fluid	Reservoir capacity	0.32 L (0.33 US qt)
		System capacity	1.09 L (1.15 US qt)

Suspension

Item	Measurement	Qualification	Standard or New	Service Limit
Wheel alignment	Camber (17 inch wheels)	Front	0 °00 ′ $^{+30}_{-45}$ ′	
		Rear	−1 °00 ′ $^{-30}_{-45}$ ′	
	Camber (18 inch wheels)	Front	−0 °05 ′ $^{-30}_{-45}$ ′	
		Rear	−1 °19 ′ $^{-30}_{-45}$ ′	
	Caster	Front (4-door)	3 °48 ′ $^{+0°25}_{-1°05}$ ′	
		Front (2-door)	3 °47 ′ $^{+0°25}_{-1°05}$ ′	
	Total toe-in	Front	0±2 mm (0±0.08 in.)	
		Rear	2±2 mm (0.08±0.08 in.)	
	Front wheel turning angle (17 inch wheels)	Inward	39 °00 ′ ±2 °	
		Outward (reference)	31 °50 ′	
	Front wheel turning angle (18 inch wheels)	Inward	37 °00 ′ ±2 °	
		Outward (reference)	30 °20 ′	
Wheel	Wheel runout	Axial	0—0.7 mm (0—0.03 in.)	2.0 mm (0.08 in.)
		Radial	0—0.7 mm (0—0.03 in.)	1.5 mm (0.06 in.)
Wheel bearing	End play	Front	0—0.05 mm (0—0.002 in.)	
		Rear	0—0.05 mm (0—0.002 in.)	

Standards and Service Limits

Brakes

Item	Measurement	Qualification	Standard or New	Service Limit
Parking brake	Distance traveled when lever pulled with 196 N (20 kgf, 44 lbf) of force		7 to 9 clicks	
Brake pedal	Pedal height (carpet moved aside)	M/T	156 mm (6 1/8 in.)	
		A/T	160 mm (6 5/16 in.)	
	Free play		1—5 mm (1/16—3/16 in.)	
Brake disc	Thickness	Front	27.9—28.1 mm (1.10—1.11 in.)	26.0 mm (1.02 in.)
		Rear	8.9—9.1 mm (0.35—0.36 in.)	8.0 mm (0.31 in.)
	Runout		—	0.04 mm (0.0016 in.)
	Parallelism		—	0.015 mm (0.0006 in.)
Brake pad	Thickness	Front	10.5—11.2 mm (0.41—0.44 in.)	1.6 mm (0.06 in.)
		Rear	8.3—9.0 mm (0.33—0.35 in.)	1.0 mm (0.04 in.)

Air Conditioning

Item	Measurement	Qualification	Standard or New
Refrigerant	Type		HFC-134a (R-134a)
	Capacity of system		400—450 g (14.1—15.9 oz)
Refrigerant oil	Type		DENSO ND-OIL 8 (P/N 38897-PR7-A01AH or 38997-PR7-A01)
	Capacity of components	Condenser	25 mL (5/6 fl·oz)
		Evaporator	35 mL (1 1/5 fl·oz)
		Each line and hose	10 mL (1/3 fl·oz)
		Receiver/Dryer	10 mL (1/3 fl·oz)
		Compressor	70—82 mL (2 3/8—2 7/9 fl·oz)
Compressor	Field coil resistance	At 68°F (20°C)	3.9 —4.3 Ω
	Pulley-to-armature-plate clearance		0.35—0.60 mm (0.014—0.024 in.)

HONDA

Design Specifications

specs

Item	Measurement	Qualification	Specification
DIMENSIONS (4-door)	Overall length		4,930 mm (194.1 in.)
	Overall width		1,847 mm (72.7 in.)
	Overall height		1,475 mm (58.1 in.)
	Wheelbase		2,800 mm (110.2 in.)
	Track	Front	1,580 mm (62.2 in.)
		Rear	1,580 mm (62.2 in.)
	Seating capacity		five (5)
DIMENSIONS (2-door)	Overall length		4,849 mm (190.9 in.)
	Overall width		1,848 mm (72.7 in.)
	Overall height		1,432 mm (56.3 in.)
	Wheelbase		2,740 mm (107.9 in.)
	Track	Front	1,580 mm (62.2 in.)
		Rear	1,580 mm (62.2 in.)
	Seating capacity		five (5)
WEIGHT (4-door)	Gross Vehicle Weight Rating (GVWR) USA models		2,075 kg (4,575 lbs)
	Gross Vehicle Weight Rating (GVWR) Canada models		2,090 kg (4,608 lbs)
WEIGHT (2-door)	Gross Vehicle Weight Rating (GVWR) USA models	A/T	2,060 kg (4,541 lbs)
		M/T	2,030 kg (4,475 lbs)
	Gross Vehicle Weight Rating (GVWR) Canada models	A/T	2,075 kg (4,575 lbs)
		M/T	2,040 kg (4,497 lbs)
ENGINE	Type	J35Z2	Water cooled, 4-stroke SOHC i-VTEC V6 Variable Cylinder Management gasoline engine
		J35Z3	Water cooled, 4-stroke SOHC VTEC V6 gasoline engine
	Cylinder arrangement		60° V6-cylinder, transverse
	Bore and stroke	J35Z2	89.0 x 93.0 mm (3.50 x 3.66 in.)
		J35Z3	89.0 x 93.0 mm (3.50 x 3.66 in.)
	Displacement	J35Z2	3,471 cm³ (212 cu in.)
		J35Z3	3,471 cm³ (212 cu in.)
	Compression ratio	J35Z2	10.5
		J35Z3	10.0
	Valve train		Belt driven, SOHC VTEC 4 valves per cylinder
	Lubrication system		Forced, wet sump, with trochoid pump
	Oil pump displacement	At 6,300 rpm	52.8 L (55.8 US qt)/minute
	Water pump displacement	At 6,000 rpm	92 L (97 US qt)/minute
	Fuel required		Regular UNLEADED gasoline with 87 Pump Octane Number or higher
STARTER	Type		Gear reduction
	Normal output	J35Z2	1.8 kW
		J35Z3	1.6 kW
	Nominal voltage		12 V
	Hour rating		30 seconds
	Rotation of direction		Counterclockwise as viewed from drive end

(cont'd)

Design Specifications

Item	Measurement	Qualification	Specification
CLUTCH	Type		Single plate dry, diaphragm spring
MANUAL TRANSMISSION	Type		Synchronized, six-speed forward, one reverse
	Primary reduction		Direct 1:1
	Gear ratio	1st	3.933
		2nd	2.478
		3rd	1.700
		4th	1.250
		5th	0.976
		6th	0.771
		Reverse	4.008
	Final reduction	Type	Single helical gear
		Gear ratio	3.550
AUTOMATIC TRANSMISSION	Type		Electronically-controlled automatic, five-speed forward, one reverse, three-element torque converter with lock-up clutch
	Primary reduction		Direct 1:1
	Gear ratio	1st	2.697
		2nd	1.606
		3rd	1.071
		4th	0.765
		5th	0.612
		Reverse	1.888
	Final reduction	Type	Single helical gear
		Gear ratio	4.312
STEERING	Type		Hydraulic power-assisted rack and pinion
	Overall ratio		13.1
	Turns, lock-to-lock		2.56
	Steering wheel diameter		370 mm (14.6 in.)
SUSPENSION	Type	Front	Independent double wishbone with stabilizer, coil spring
		Rear	Independent multilink with stabilizer, coil spring
	Shock absorber	Front	Telescopic, hydraulic, nitrogen gas-filled
		Rear	Telescopic, hydraulic, nitrogen gas-filled
TIRES	Size (4-door)	Front and rear	P225/50R17 93V
		Spare	T135/80D16 101M
	Size (2-door)	Front and rear	P235/45R18 94V
		Spare	T135/80D16 101M
WHEEL ALIGNMENT	Camber (17 inch wheels)	Front	0 °00 ′
		Rear	−1 °00 ′
	Camber (18 inch wheels)	Front	−0 °05 ′
		Rear	−1 °19 ′
	Caster	Front (4-door)	3 °48 ′
		Front (2-door)	3 °47 ′
	Total toe-in	Front	0 mm (0 in.)
		Rear	2 mm (0.08 in.)
	Front wheel turning angle (17 inch wheels)	Inward	39 °00 ′
		Outward (reference)	31 °50 ′
	Front wheel turning angle (18 inch wheels)	Inward	37 °00 ′
		Outward (reference)	30 °20 ′

Item	Measurement	Qualification	Specification
BRAKES	Type of service brake	Front	Power-assisted self-adjusting ventilated disc
		Rear	Power-assisted self-adjusting solid disc
	Type of parking brake		Mechanical actuating, rear wheels
	Pad friction surface area (swept area)	Front	50.6 cm^2 (7.84 sq in.) x 2
		Rear	27.3 cm^2 (4.23 sq in.) x 2
AIR CONDITIONING	Compressor	Type	Swash plate/DENSO
		Capacity	154.4 mL (9.42 cu in.)/rev.
		Maximum speed	8,400 rpm
		Lubricant capacity	70 mL (2 3/8 fl-oz)
		Lubricant type	DENSO ND-OIL 8
	Condenser	Type	Corrugated fin
	Evaporator	Type	Corrugated fin
	Blower	Type	Stabilized swirling flow
		Motor type	216 W/12 V
		Speed control	Infinitely variable
		Maximum capacity	505 m^3 (17,834 cu ft/h)
	Temperature control		Air-mix type
	Compressor clutch	Type	Dry, single plate, poly V-belt drive
		Electrical power consumption at 68°F (20°C)	35 W maximum at 12 V
	Refrigerant	Type	HFC-134a (R-134a)
		Capacity	400—450 g (14.1—15.9 oz)

HONDA

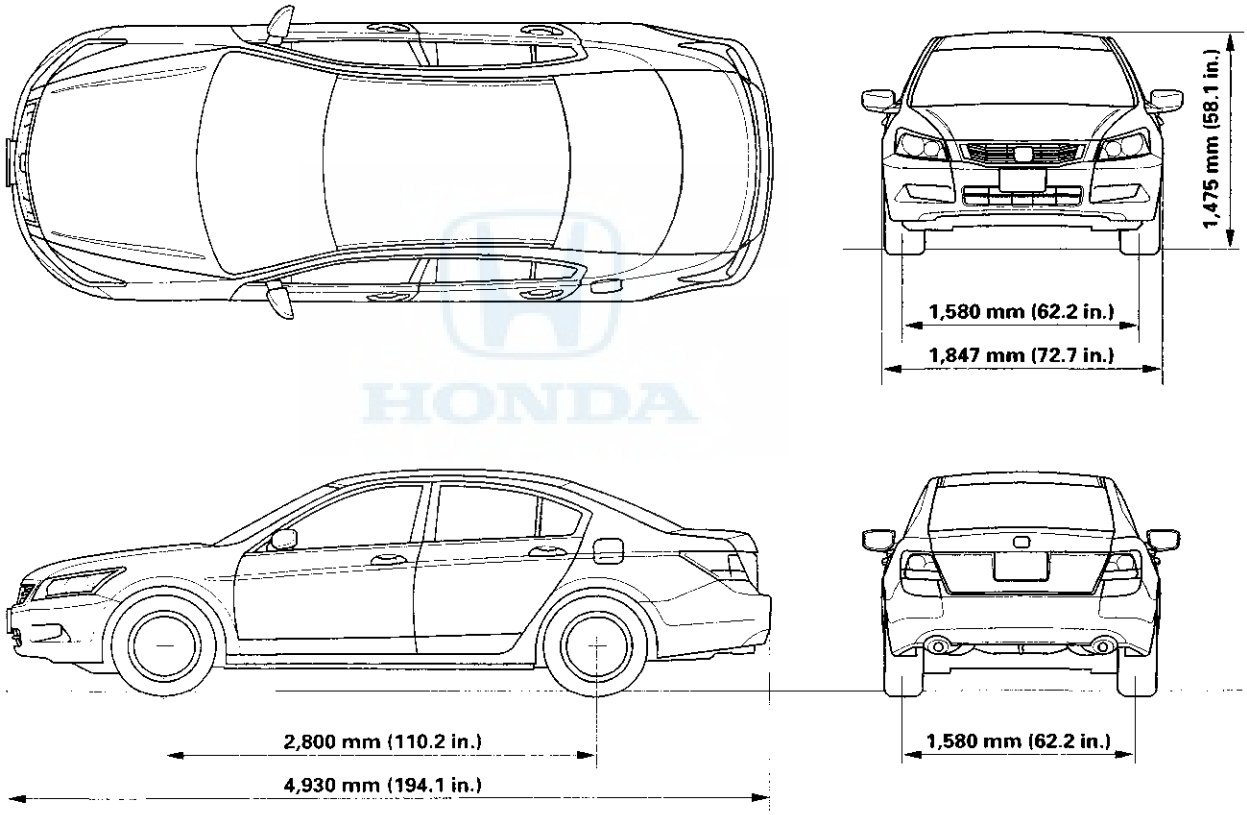
(cont'd)

Design Specifications

Item	Measurement	Qualification	Specification
ELECTRICAL RATINGS	Battery	Except PZEV	12 V—47 Ah/20 HR (12 V—38 Ah/5 HR)
		PZEV	12 V—65 Ah/20 HR (12 V—52 Ah/5 HR)
	Fuse	Under-hood fuse/ relay box	120 A, 60 A, 50 A, 40 A, 30 A, 20 A, 15 A, 7.5 A
		Driver's under-dash fuse/relay box	20 A, 15 A, 10 A, 7.5 A
		Passenger's under-dash fuse/relay box	20 A, 15 A, 10 A, 7.5 A
	Light bulbs	Headlight high beam	12 V—60 W
		Headlight low beam (4-door)	12 V—51 W
		Headlight low beam (2-door)	12 V—55 W
		Front turn signal/ parking lights (4-door)	12 V—21 W/5 W
		Front turn signal/ parking lights (2-door)	12 V—24 CP/2.2 CP
		Front side marker light (4-door)	12 V—3 CP
		Front side marker light (2-door)	12 V—5 W
		Fog light	12 V—55 W
		Rear turn signal lights	12 V—21 W
		Brake/taillights	12 V—21 W/5 W
		High mount brake light	12 V—21 W
		Back-up lights (4-door)	12 V—21 W
		Back-up lights (2-door)	12 V—21 W
		License plate lights	12 V—5 W
		Ceiling light	12 V—8 W
		Trunk light	12 V—5 W
		Front map light	12 V—8 W
		Ambient light	LED
		Vanity mirror lights	12 V—1.1 W
		Glove box light	12 V—2 CP
		Door courtesy light	12 V—2 CP
		Gauge lights	LED
		Indicator lights	LED
	Washer reservoir	Capacity (4-door USA models)	2.5 L (2.64 US qt)
		Capacity (All 2-door models and 4-door Canada models)	4.5 L (4.75 US qt)

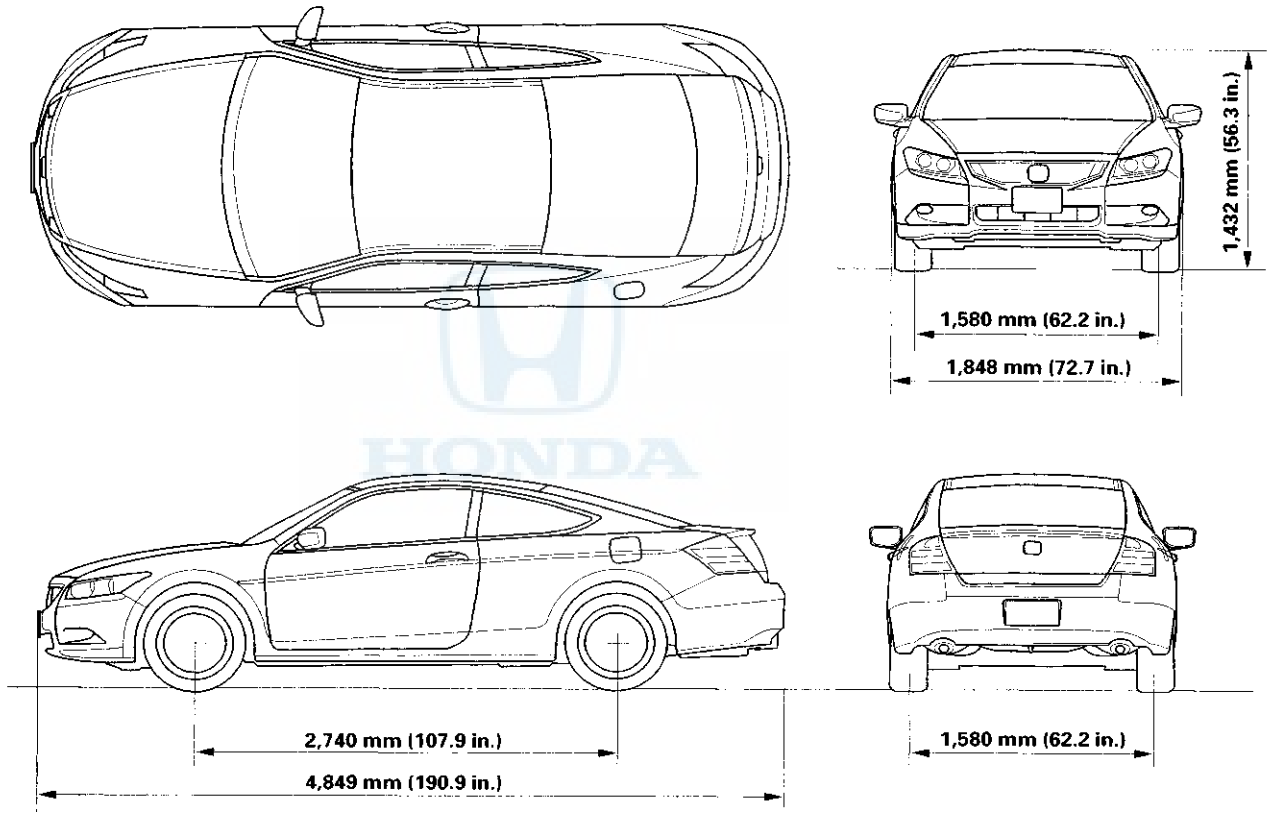
Body Specifications

4-door:



Body Specifications (cont'd)

2-door:



Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Maintenance

Lubricants and Fluids **3-2**

Maintenance Minder
General Information 3-4
Maintenance Main Items 3-7
Maintenance Sub Items 3-8

Outline of Model Change

V6 engine model has been added.

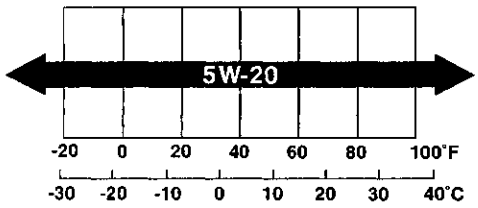
Lubricants and Fluids

For details of the lubrication points and the type of lubricants to be applied, refer to the illustrated index and the various work procedures (such as Assembly/Reassembly, Replacement, Overhaul, Installation, etc.) contained in each section.

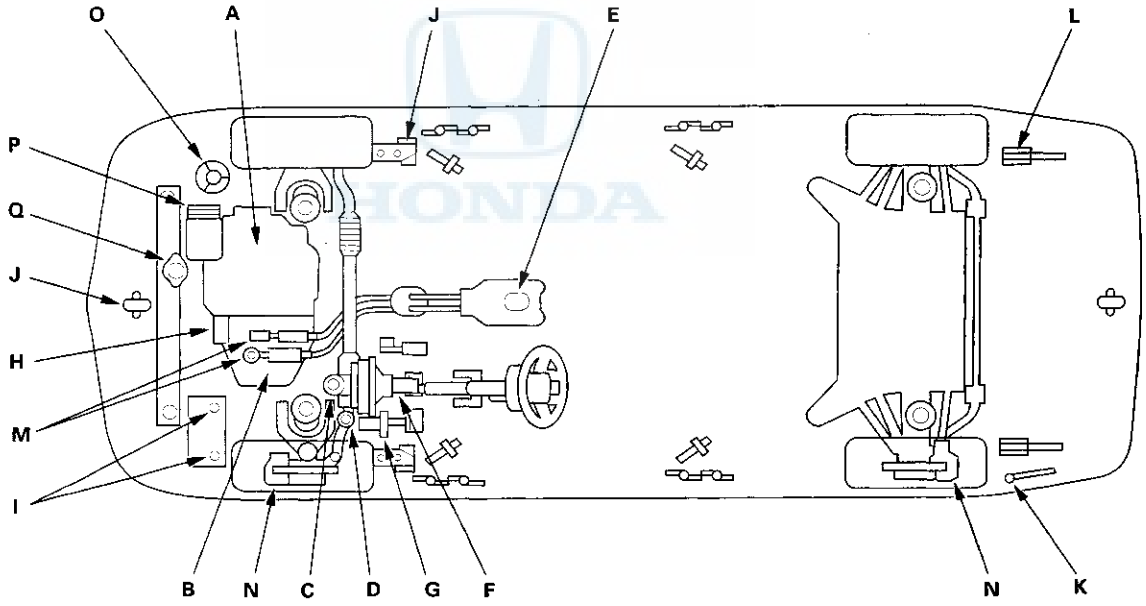
	Application	Lubricant of Fluid
A	Engine	Honda Motor Oil: American Honda P/N 08798-9023 (5W-20) Honda Canada P/N CA66806 (5W-20) Look for the API certification seal on the oil container. Make sure it says "For Gasoline Engines." SAE Viscosity: See chart.
B	Manual Transmission	Honda Manual Transmission Fluid (MTF) American Honda P/N 08798-9031 Honda Canada P/N 08798-9031C Always use Honda MTF. Using motor oil can cause stiffer shifting because it does not contain the proper additives.
	Automatic Transmission	Honda Automatic Transmission Fluid (ATF-Z1): American Honda P/N 08200-9001 Honda Canada P/N CA66689 Always use Honda ATF-Z1. Using a non-Honda ATF can affect shift quality.
C	Brake system (including VSA lines)	Honda DOT 3 Brake fluid: P/N 08798-9008 Always use Honda DOT 3 Brake Fluid. Using a non-Honda brake fluid can cause corrosion and decrease the life of the system.
D	Clutch System (manual transmission)	
E	Shift Lever (manual transmission)	Super High Temp Urea Grease: P/N 08798-9002
F	Brake booster clevis pin	Multipurpose grease
G	Clutch master cylinder clevis pin (manual transmission)	
H	Release fork (manual transmission)	
I	Battery Terminals	
J	Hood hinges and hood latch	
K	Fuel fill door	
L	Trunk hinges	
M	Shift cable ends (manual transmission)	Honda Silicone Grease: P/N 08C30-B0234M
N	Caliper piston boots, caliper pins, and boots	
O	Power steering system	Honda Power Steering Fluid: American Honda P/N 08206-9002 Honda Canada P/N 08206-9002C Always use Honda Power Steering Fluid. Using any other type of power steering fluid or automatic transmission fluid can cause increased wear and poor steering in cold weather.
P	Air conditioning compressor	Compressor oil: DENSO ND-OIL 8 (P/N 38897-PR7-A01AH or 38899-PR7-A01) for refrigerant HFC-134a (R-134a)
Q	Cooling system	Honda Long Life Antifreeze/coolant Type 2: P/N OL999-9001

API CERTIFICATION SEAL

Recommended Engine Oil
Engine oil viscosity for ambient temperature ranges



NOTE:
- Lubricate the following areas using the recommended lubricants and fluids.
- In corrosive areas, more frequent lubrication is necessary.

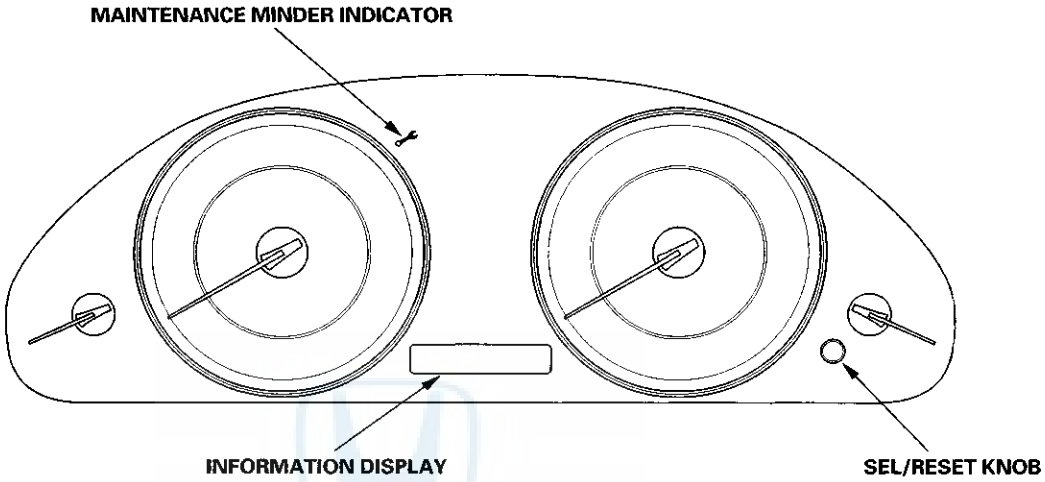


Maintenance Minder

General Information

Maintenance Display

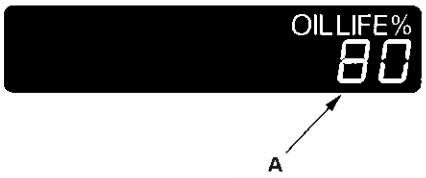
The maintenance minder is an important feature of the information display. Based on engine and transmission operating conditions, the Accord's onboard computer (ECM/PCM) calculates the remaining engine oil and the transmission fluid life. The system also displays the remaining engine oil life along with the codes for other scheduled maintenance items needing service.



HONDA

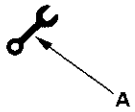
Service Information

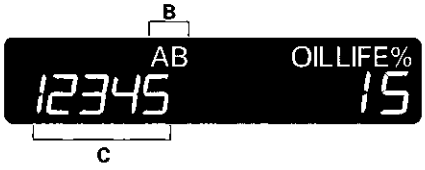
1. The remaining engine oil life on the engine oil life indicator (A) is displayed as a percentage on the information display. To see the current engine oil life, turn the ignition switch to ON (II), then push and release the Select/Reset knob repeatedly until the engine oil life is displayed.



2. When the remaining engine oil life is 6 % to 15 %, the engine oil life indicator will be displayed for several seconds when the ignition switch is ON (II). The maintenance minder indicator (A) will also come on, and the maintenance item code(s) for other scheduled maintenance items needing service will appear in the information display.

   - Complete list of maintenance main items (B) (see page 3-7).
   - Complete list of maintenance sub items (C) (see page 3-8).





3. When the remaining engine oil life is 1 % to 5 %, the maintenance message "SERVICE" (A) appears along with the same maintenance item code(s), when the ignition switch is ON (II).

4. When the remaining engine oil life is 0 %, the engine oil life indicator blinks.
   This display comes on when the ignition switch is ON (II). At this point, the indicated maintenance must be done as soon as possible.

5. If the indicated maintenance is not done, the engine oil life indicator shows a negative mileage, for example "−10," blinking on the display.
   A negative mileage will display after the vehicle is driven 10 miles (for USA models) or 10 km (for Canada models) after the display begins to blink. This means that the indicated maintenance item should have been done 10 miles (for USA models) or 10 km (for Canada models) ago.

(cont'd)

General Information (cont'd)

Resetting the Maintenance Information Display

NOTE:
- The vehicle must be stopped to reset.
- If the required service is done and the display is not reset, or if the display is reset without doing the service, the system will not show the proper maintenance timing. This can lead to serious mechanical problems because there will be no record of when maintenance is needed.

1. Turn the ignition switch to ON (II).
2. If oil life is more than 15 %, press the Select/Reset knob repeatedly until the engine oil life is displayed.
3. Press the Select/Reset knob for about 10 seconds. The engine oil life and the maintenance item code(s) will blink.

   NOTE: If you are resetting the display when the engine oil life is more than 15 %, make sure the maintenance items requiring service have been done before resetting this display.
4. Press the Select/Reset knob for another 5 seconds. The maintenance item code(s) will disappear and the engine oil life will reset to "100".

Resetting Individual Maintenance Items

1. Connect the Honda diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the engine control module/powertrain control module (ECM/PCM). If it doesn't communicate, troubleshoot the DLC circuit (see page 11-259).
4. Select GAUGES in the BODY ELECTRICAL with the HDS.
5. Select ADJUSTMENT in the GAUGES with the HDS.
6. Select SERVICE REMINDER in the ADJUSTMENT with the HDS.
7. Select RESET in the SERVICE REMINDER with the HDS.
8. Select the individual maintenance item you wish to reset.

Maintenance Main Items

If you do not see the maintenance minder indicator or any message in the maintenance information display more than 12 months after the display is reset, change the engine oil every year.

NOTE:
- Independent of the maintenance messages in the information display, replace the brake fluid every 3 years.
- Inspect idle speed every 160,000 miles (256,000 km).
- Adjust the valves during services A, B, 1, 2, or 3 only if they are noisy.

Symbol	Maintenance Main Items
A	Replace engine oil (see page 8-14). Engine oil capacity without oil filter: 4.0 L (4.2 US qt)
B	Replace engine oil and oil filter (see page 8-15). Engine oil capacity with oil filter: 4.3 L (4.5 US qt)
	Check front brake and rear brakes (see page 19-3)*1. • Check pads and discs for wear (thickness), damage, and cracks. • Check calipers for damage, leaks, and tightness of mounting bolts.
	Check parking brake adjustment (see page 19-7)*1. Check the number of clicks (7 to 9) when the parking brake lever is pulled with 196 N (20 kgf, 44 lbf) of force.
	Inspect tie-rod ends, steering gearbox, and gearbox boots (see page 17-10)*1. • Check steering linkage. • Check boots for damage and leaking grease. • Check fluid lines for damage and leaks.
	Inspect suspension components (see page 18-3). • Check bolts for tightness. • Check condition of ball joint boots for deterioration and damage.
	Inspect driveshaft boots (see page 16-4)*1. Check boots for cracks and boot bands for tightness.
	Inspect brake hoses and lines including VSA lines (see page 19-38)*1. Check the master cylinder and VSA modulator-control unit for damage and leakage.
	Inspect all fluid levels and condition of fluids. • Engine coolant (see page 10-6) • Clutch fluid (see step 2 on page 12-9) • Manual transmission fluid (see page 13-14) • Automatic transmission fluid (see page 14-231) • Power steering fluid (see page 17-10) • Brake fluid (see page 19-9)*1 • Windshield washer fluid (see page 22-296)*1
	Inspect exhaust system* (see page 9-10). Check catalytic converter heat shields, exhaust pipes, and muffler for damage, leaks, and tightness.
	Inspect fuel lines (see page 11-404) and connections* (see page 11-407). Check for loose connections, cracks, and deterioration; retighten loose connections and replace damaged parts.

* 1: Refer to the 2008-2009 Accord Service Manual.

NOTE: According to state and federal regulations, failure to do the maintenance items marked with an asterisk (*) will not void the customer's emissions warranties. However, Honda recommends that all maintenance services be done at the recommended interval, to ensure long-term reliability.

Maintenance Minder

Maintenance Sub Items

Number	Maintenance Sub Items
1	Rotate tires, and check tire inflation and condition. Follow the pattern shown in the Owner's Manual.
2	Replace air cleaner element (see page 11-437). If the vehicle is driven primarily in dusty conditions, replace every 15,000 miles (24,000 km).
	Replace dust and pollen filter (see page 21-77)*1. • If the vehicle is driven mostly in areas that have high concentrations of dust, pollen, or soot in the air, replace every 15,000 miles (24,000 km). • Replace the filter whenever airflow from the heating and air conditioning system is less than normal.
	Inspect drive belt (see page 4-38). Look for cracks and damage, then check the position of the drive belt auto-tensioner indicator.
3	Replace manual transmission fluid (see page 13-14). Capacity: 2.1 L (2.2 US qt); use Honda MTF.
	Replace automatic transmission fluid (see page 14-232). • Capacity: 3.3 L (3.5 US qt); use Honda ATF-Z1. • Driving in mountainous areas at very low vehicle speed or trailer towing results in higher transmission temperatures. This requires transmission fluid changes more frequently than recommended by the maintenance minder. If the vehicle is regularly driven under these conditions, change the transmission fluid at 60,000 miles (100,000 km), then every 30,000 miles (48,000 km).
4	Replace spark plugs (see page 4-30). • Use ILZKR7B-11 (NGK) for all models except PZEV. • Use DILZKR7A11G (NGK) for PZEV.
	Replace timing belt (see page 6-22) and inspect water pump (see page 10-5). If the vehicle is regularly driven in very high temperature over 110 °F (43 °C) or in very low temperature under −20 °F (−29 °C), replace timing belt every 60,000 miles (100,000 km).
	Inspect valve clearance (cold) (see page 6-10). Intake: 0.20—0.24 mm (0.008—0.009 in.), Exhaust: 0.28—0.32 mm (0.011—0.013 in.)
5	Replace engine coolant (see page 10-6). Capacity (including reservoir): 6.6 L (1.74 US gal); use Honda Long Life Antifreeze/Coolant Type 2.

* 1: Refer to the 2008-2009 Accord Service Manual.

HONDA

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If engine electrical maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

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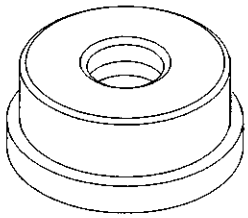
ENGINE

Outline of Model Change

J35Z2 engine and J35Z3 engine have been added.

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07746-0010300	Attachment, 42 x 47 mm	1
②	07749-0010000	Driver	1
③	07SAZ-001000A	Backprobe Set	2



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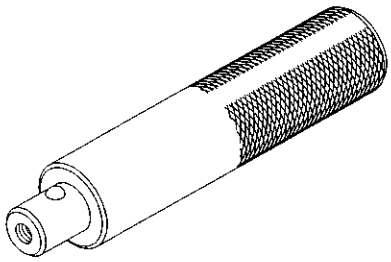

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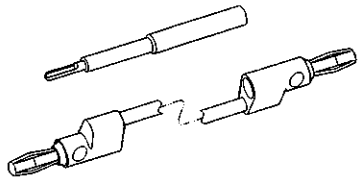

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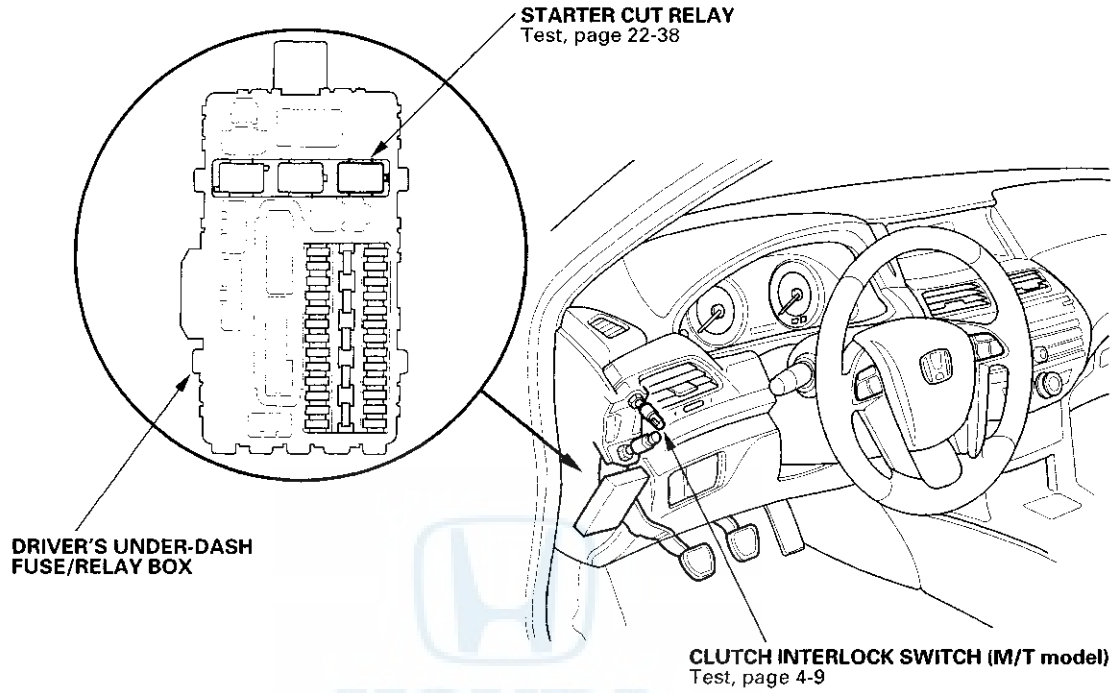
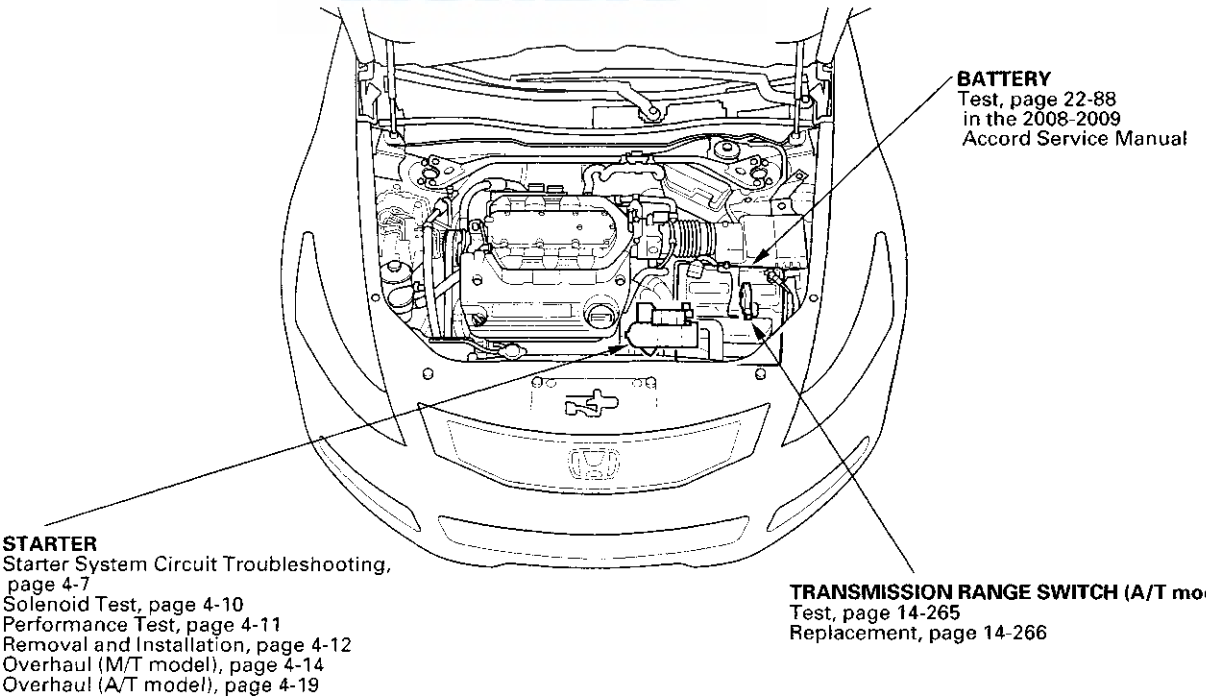
Component Location Index





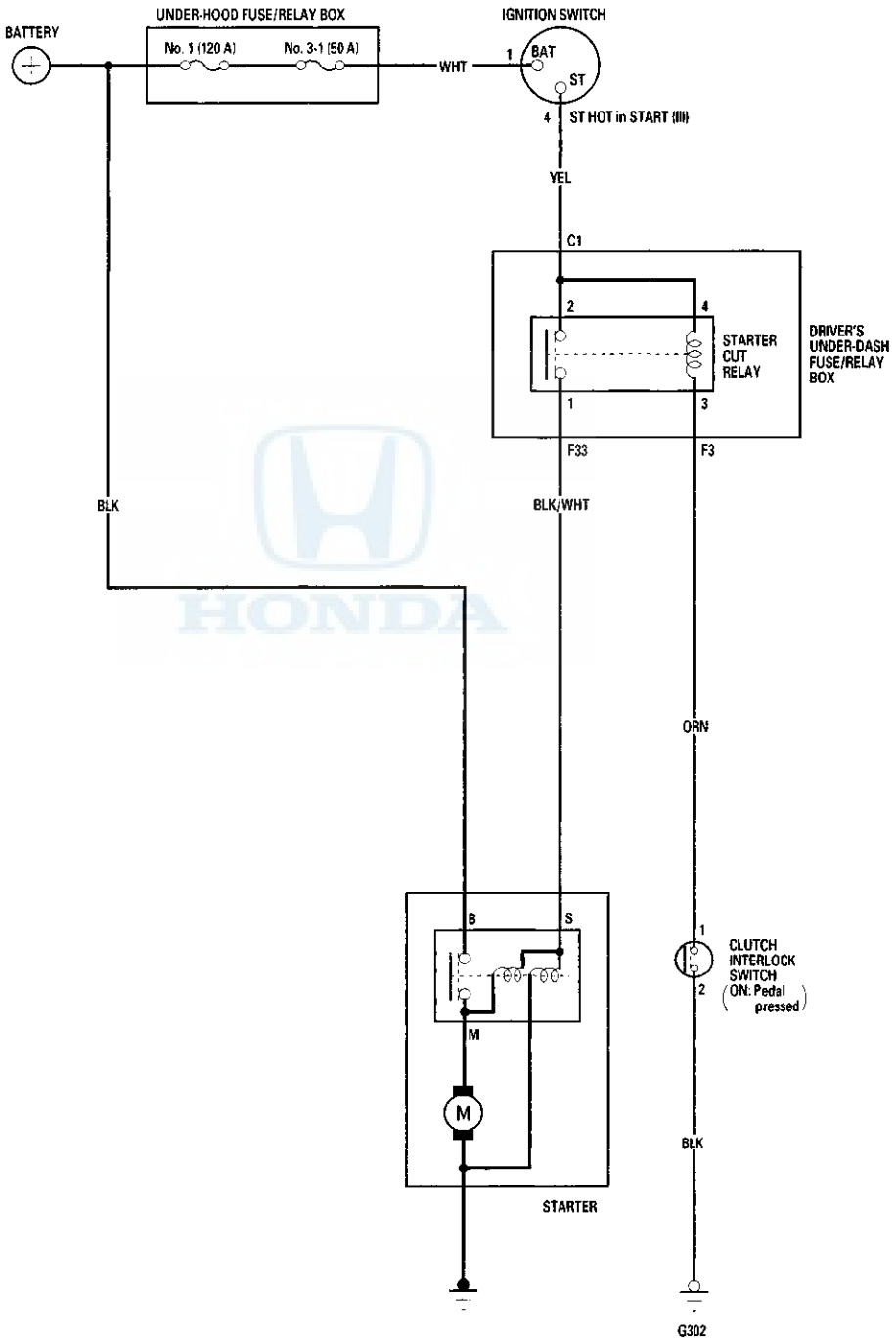
Starting System

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Engine does not start (does not crank)	1. Check for loose battery terminals or connections. 2. Test the battery for a low state of charge, refer to the 2008-2009 Accord Service Manual (see page 22-88). 3. Check the starter (see page 4-7). 4. Check the starter cut relay (see page 22-38). 5. Check the transmission range switch (A/T model) (see page 14-265). 6. Check the clutch interlock switch (M/T model) (see page 4-9). 7. Check the ignition switch or wire, refer to the 2008-2009 Accord Service Manual (see page 22-94).	Poor ground at G101 (A/T model) or G302 (M/T model)
Engine cranks, but does not start	1. Check for PGM-FI DTCs (see page 11-3). 2. Check the PGM-FI main relays (see page 22-38). 3. Check for IMMOBI status and function, refer to the 2008-2009 Accord Service Manual (see page 22-396). 4. Check the fuel pressure (see page 11-403). 5. Check for a plugged or damaged fuel line (see page 11-404). 6. Check for a plugged fuel filter (see page 11-417). 7. Check the throttle body (see page 11-435). 8. Check for low engine compression: • J35Z2 engine (see page 6-7) • J35Z3 engine (see page 6-73) 9. Check for a damaged or broken timing belt. 10. Do the engine control module (ECM)/powertrain control module (PCM) reset in the PGM-FI INSPECTION menu to cancel the ALL INJECTORS STOP with the Honda Diagnostic System (HDS).	
Engine is hard to start	1. Check for PGM-FI DTCs (see page 11-3). 2. Check the fuel pressure (see page 11-403). 3. Check for a plugged or damaged fuel line (see page 11-404). 4. Check for a plugged fuel filter (see page 11-417).	
Engine cranks slowly	1. Check for loose battery terminals or connections. 2. Test the battery for a low state of change, refer to the 2008-2009 Accord Service Manual (see page 22-88). 3. Check the starter for binding: • M/T model (see page 4-14) • A/T model (see page 4-19) 4. Check for excessive drag in the engine.	

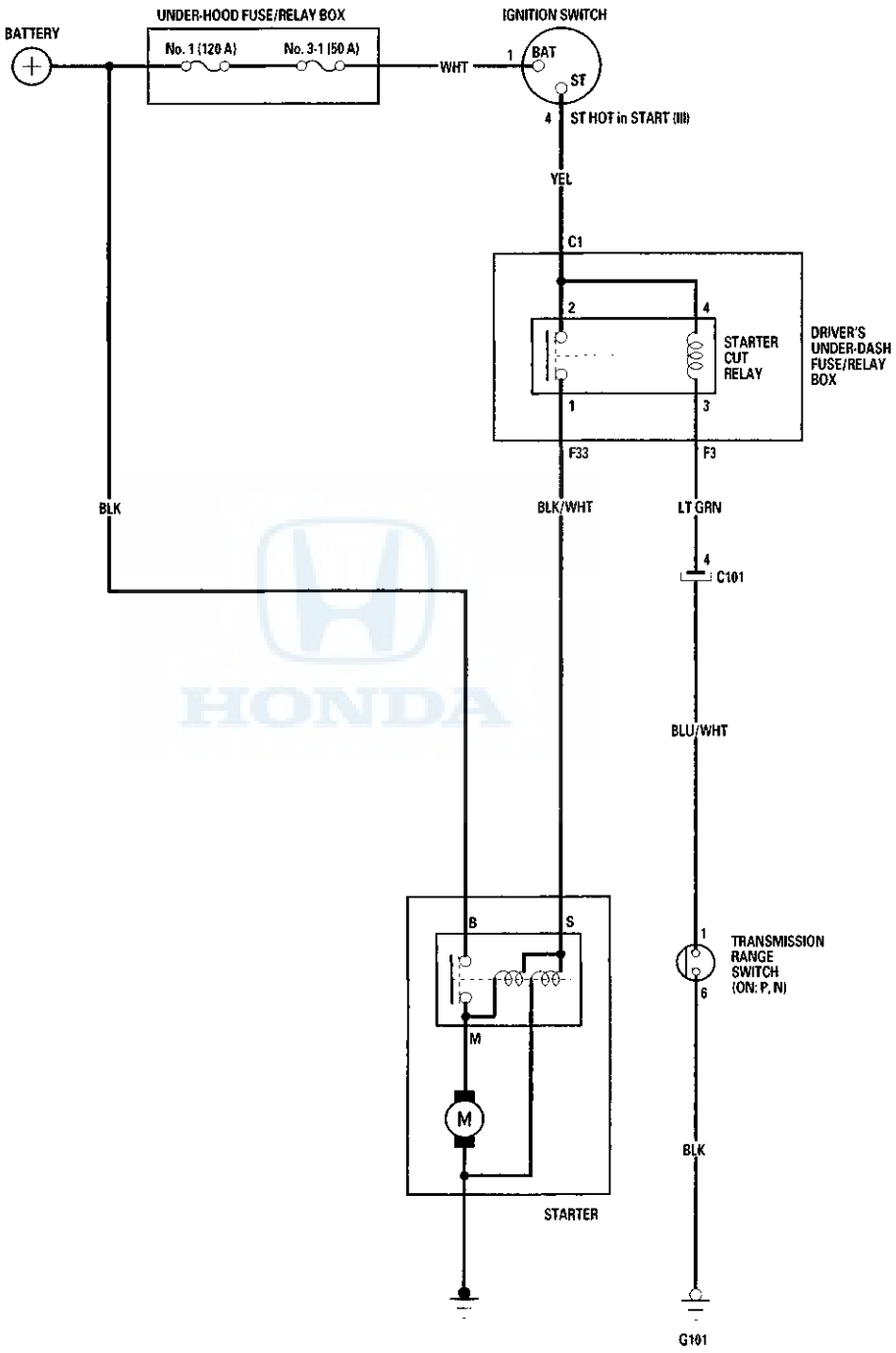
Circuit Diagram

M/T model



Circuit Diagram (cont'd)

A/T model



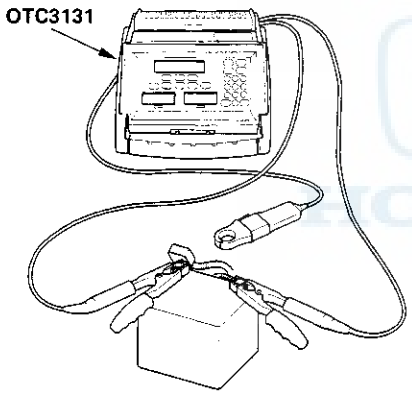
Starter System Circuit Troubleshooting

Special Tools Required
Alternator, Regulator, Battery & Starter tester OTC3131
Available through the Honda Tool and Equipment Program 888-424-6857

NOTE:
- Air temperature must be within 59—100 °F (15—38 °C) during this procedure.
- After the inspection, you must reset the engine control module (ECM)/powertrain control module (PCM). Otherwise, the ECM/PCM will continue to stop the fuel injectors from operating.
- The battery must be in good condition and fully charged.

1. Connect the alternator, regulator, battery & starter tester (OTC3131) to the battery as shown.

   NOTE: The probe is not used for battery testing.



2. Do the BATTERY TEST.

   Does the display indicate GOOD or GOOD, LOW CHARGE?

   YES—The battery is OK. Go to step 3.

   NO—If the display indicates BAD BATTERY, replace the battery, then retest. If the display indicates CHARGE & RETEST, charge the battery, then retest.

3. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).

4. Turn the ignition switch to ON (II).

5. Make sure the HDS communicates with the vehicle and the ECM/PCM. If it does not communicate, troubleshoot the DLC circuit (see page 11-259).

6. Select ALL INJECTORS STOP in the PGM-FI INSPECTION menu with the HDS.

7. Set the parking brake, then with the shift lever in N or P (A/T model) or neutral (M/T model), turn the ignition switch to START (III).

   Does the starter crank the engine normally?

   YES—The starting system is OK. Go to step 14.

   NO—Go to step 8.

8. Turn the ignition switch to LOCK (0).

9. Check the electrical connections at the battery, the negative battery cable to the body, the engine ground cables, and the starter for looseness and corrosion. Then try cranking the engine again.

   Does the starter crank the engine normally?

   YES—Repairing the loose connection corrected the problem. The starting system is OK. Go to step 14.

   NO—Based on the following symptoms, take the appropriate action:■

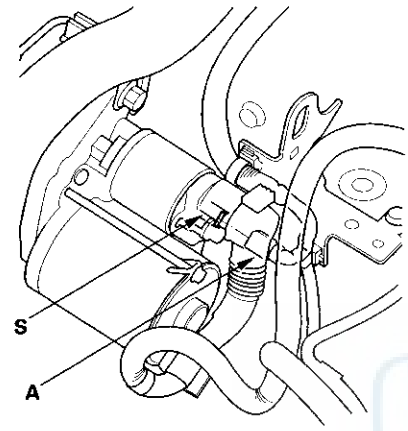
   - If the starter does not crank the engine at all, go to step 10.
   - If the starter cranks the engine erratically or too slowly, go to step 12.
   - If the starter does not disengage from the flywheel ring gear (M/T model) or torque converter ring gear (A/T model) when you release the key, replace the starter, or remove and disassemble it, and check for the following:
     – Starter solenoid and switch malfunction.
     – Dirty drive gear or damaged overrunning clutch.

(cont'd)

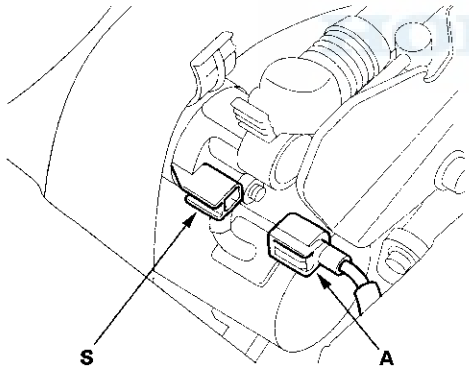
Starter System Circuit Troubleshooting (cont'd)

10. Make sure the shift lever is in N or P (A/T model) or neutral (M/T model), then disconnect the connector (A) from the starter S terminal. Connect a jumper wire from the battery positive terminal to the S terminal.

M/T model



A/T model



Does the starter crank the engine?

YES—Go to step 11.

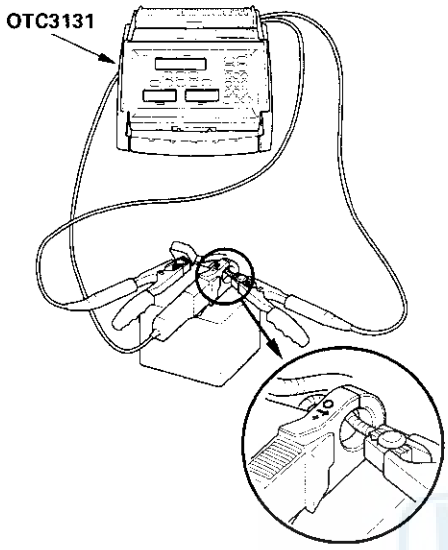
NO—Remove the starter (see page 4-12), then repair or replace it as necessary.■

11. Check the following items in the order listed until you find the problem circuit.

NOTE: After the open circuit or high resistance in the circuit is found and repaired, go to step 14.

- Check for an open or short in the YEL wire and connectors between the driver's under-dash fuse/relay box and the ignition switch.
- Check for an open or short in the BLK/WHT wire and connectors between the driver's under-dash fuse/relay box and the starter.
- Check for an open or short in the ORN wire and connectors between the driver's under-dash fuse/relay box and the clutch interlock switch (M/T model).
- Check for an open or short in the LT GRN wire, BLU/WHT wire and connectors between the driver's under-dash fuse/relay box and the transmission range switch (A/T model).
- Check for poor ground at G302 (M/T model) or G101 (A/T model).
- Check for a faulty ignition switch, refer to the 2008-2009 Accord Service Manual (see page 22-94).
- Check for a faulty clutch interlock switch (M/T model) (see page 4-9).
- Check for a faulty transmission range switch (A/T model) (see page 14-265).
- Check for a faulty starter cut relay (see page 22-38).

12. Do the STARTING TEST with the alternator, regulator, battery & starter tester.



Does the display indicate cranking voltage is equal to or greater than 8.5 V (M/T model)/7.7 V (A/Tmodel) and is the current draw equal to or less than to 380 A (M/T model)/400 A (A/T model)?

YES—Go to step 13.

NO—Replace the starter, or remove and disassemble it, and check for these problems:■

- Drag in the starter armature
- Short in the armature winding
- Excessive drag in the engine
- Open circuit in starter armature commutator segments
- Excessively worn starter brushes
- Open circuit in the starter brushes
- Dirty or damaged helical splines or drive gear
- Faulty overrunning clutch

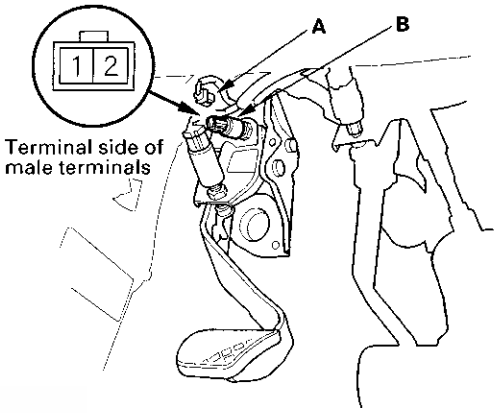
13. Remove the starter, and inspect its drive gear and the flywheel ring gear (M/T model) or torque converter ring gear (A/T model) for damage. Replace any damaged parts.

14. Select ECM/PCM reset (see page 11-4) in the PGM-FI INSPECTION menu to cancel ALL INJECTORS STOP with the HDS.

Clutch Interlock Switch Test

M/T model

1. Disconnect the clutch interlock switch 2P connector (A).



2. Remove the clutch interlock switch (B).

3. Check for continuity between the terminals according to the table.

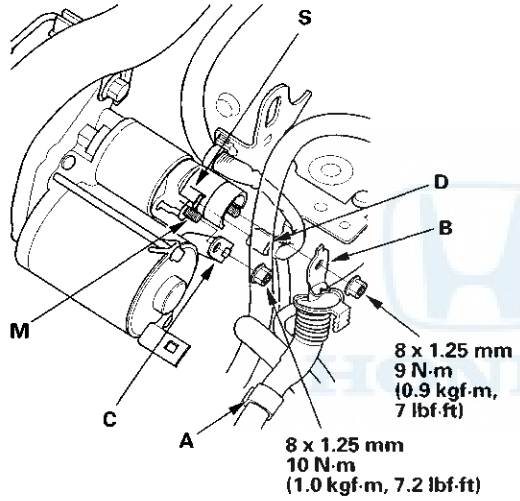
   - If the continuity is not as specified, replace the clutch interlock switch (see page 12-10).
   - If OK, install the clutch interlock switch and adjust the pedal height (see page 12-10).

Terminal / Position	1	2
Clutch Interlock Switch (PRESSED)	○——○	
Clutch Interlock Switch (RELEASED)		

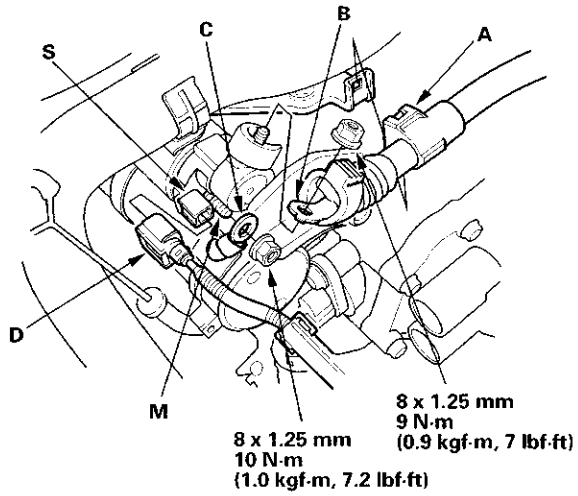
Starter Solenoid Test

1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the battery base (see step 10 on page 5-3).
3. Remove the splash separator and the intake air ducts (see step 4 on page 11-438).
4. Remove the harness clamp (A), then disconnect the positive starter cable (B), the motor wire (C), and the S terminal connector (D).

M/T model



A/T model

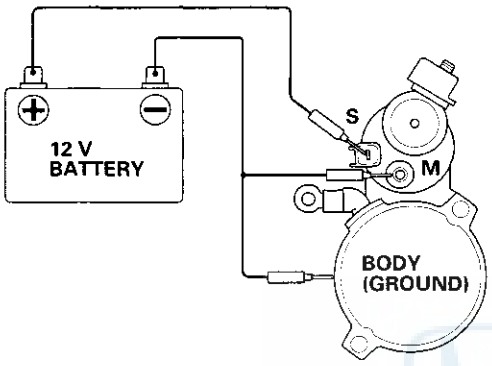


5. Check the hold-in coil for continuity between the S terminal and the armature housing (ground). There should be continuity.
   - If there is continuity, go to step 6.
   - If there is no continuity, replace the solenoid.
6. Check the pull-in coil for continuity between the S terminal and the M terminal. There should be continuity.
   - If there is continuity, the solenoid is OK.
   - If there is no continuity, replace the solenoid.
7. Install the wire and connector in the reverse order of removal.
8. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Starter Performance Test

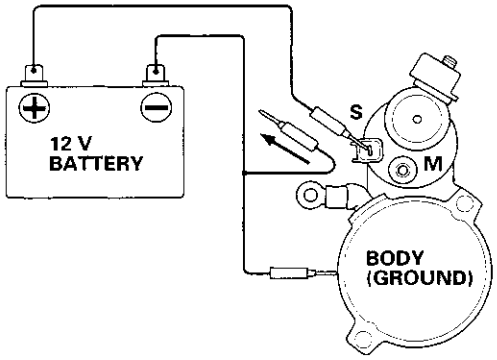
1. Disconnect the motor wire from the M terminal.
2. Make the connection for this test using the thickest (gauge) wire possible (preferably the same gauge as used on the vehicle).

   NOTE: To avoid damaging the starter, never leave the battery connected for more than 10 seconds.

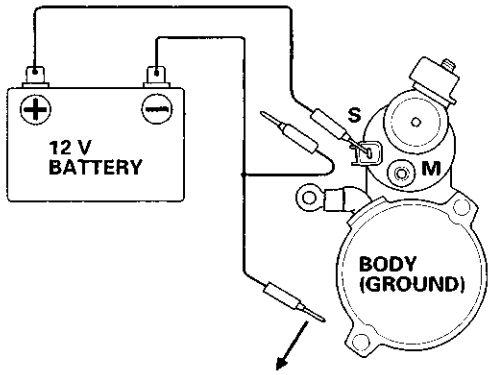


*: This illustration shows A/T model.

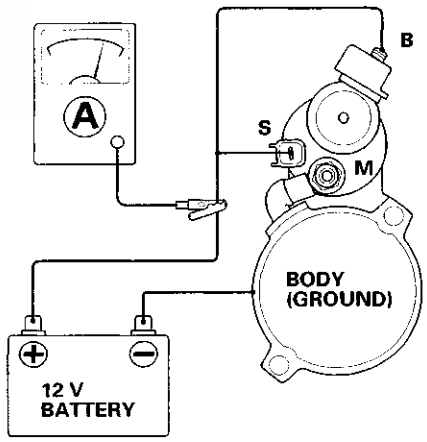
3. Connect the battery as shown. Make sure you disconnect the starter motor wire from the M terminal. If the starter pinion moves out, it is working properly.
4. Disconnect the battery from the M terminal. If the pinion does not retract, the hold-in coil of the solenoid is working properly.



5. Disconnect the battery from the starter body as shown. If the pinion retracts immediately, it is working properly.



6. Clamp the starter firmly in a vise.
7. Reconnect the wire to the M terminal.
8. Connect the starter to the battery as shown, and confirm that the motor runs.



9. If the electric current meets the specification when the battery voltage is at 11.5 V, the starter is working properly.

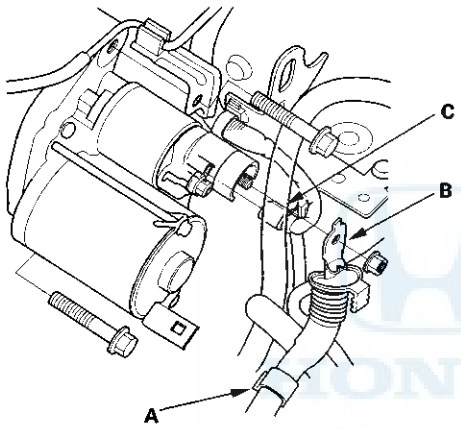
Specification
Electric Current: 80 A (M/T model)/
90 A (A/T model) or less

Starter Removal and Installation

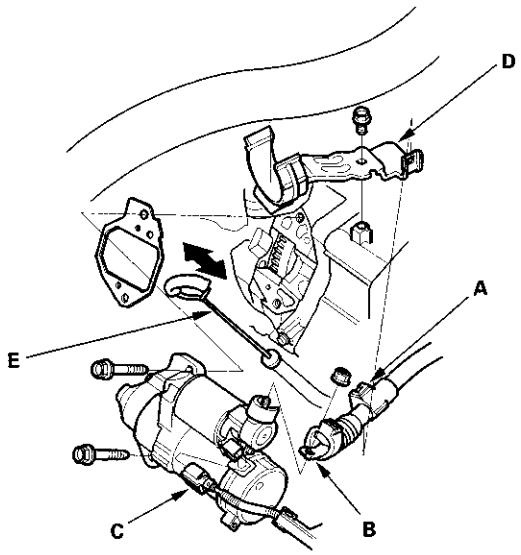
Removal

1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the battery base (see step 10 on page 5-3).
3. Remove the splash separator and the intake air ducts (see step 4 on page 11-438).
4. Remove the harness clamp (A).

M/T model



A/T model



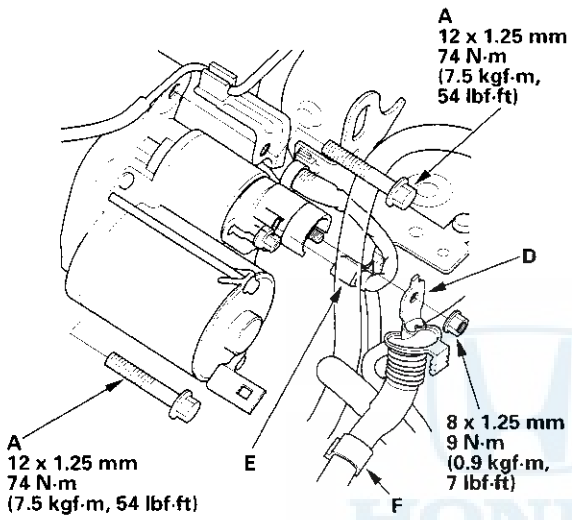
5. Disconnect the positive starter cable (B) and the S terminal connector (C).
6. A/T model: Remove the upper radiator hose bracket (D) and the dipstick (E).
7. Remove the two bolts holding the starter, then remove the starter.

Installation

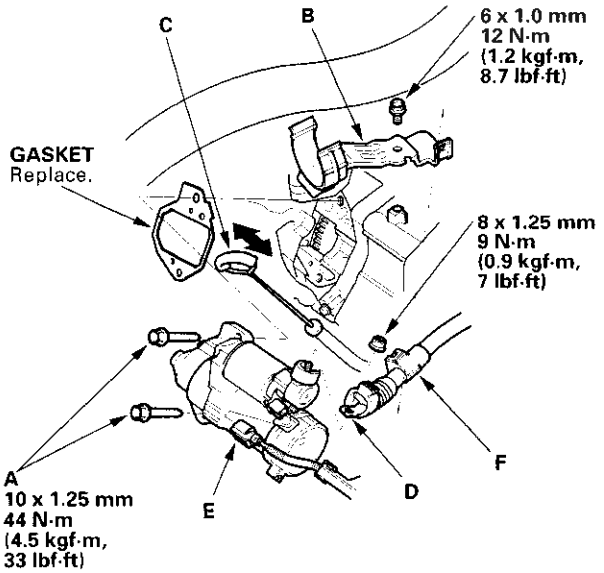
1. Install the starter, then tighten the mounting bolts (A).

   NOTE: Always use a new gasket (A/T model).

   M/T model



   A/T model

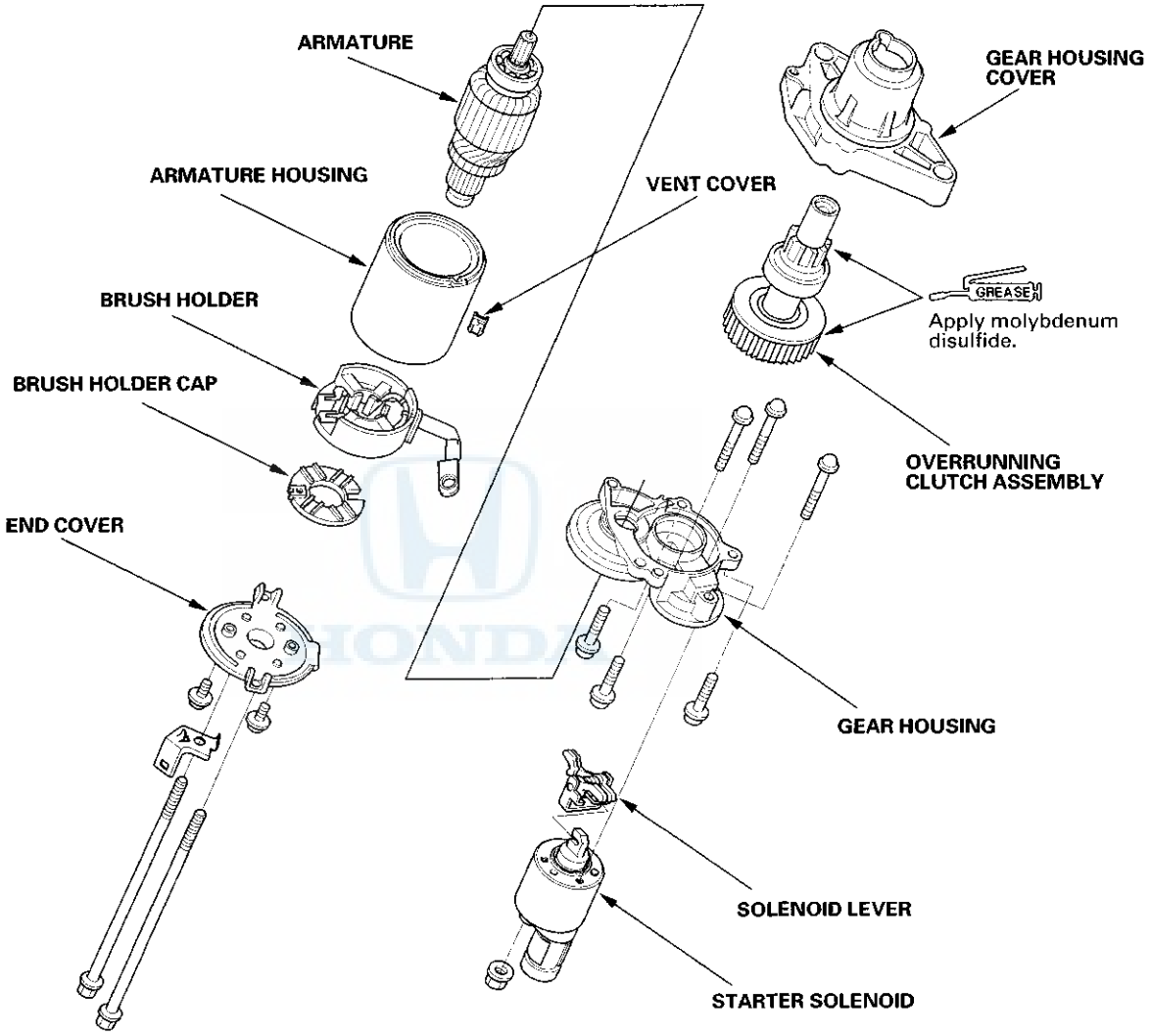


2. A/T model: Install the upper radiator hose bracket (B) and the dipstick (C).
3. Connect the positive starter cable (D) and the S terminal connector (E). Make sure the crimped side of the ring terminal faces away from the starter when you connect it.
4. Install the harness clamp (F).
5. Install the splash separator and the intake air ducts (see step 4 on page 11-438).
6. Install the battery base (see step 65 on page 5-24).
7. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
8. Start the engine to make sure the starter works properly.

Starter Overhaul

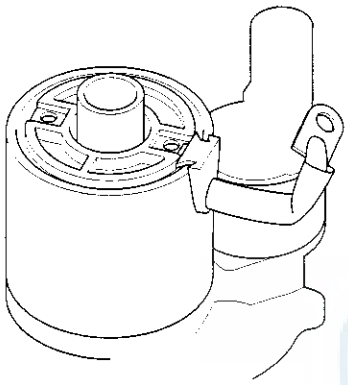
M/T model

Disassembly/Reassembly

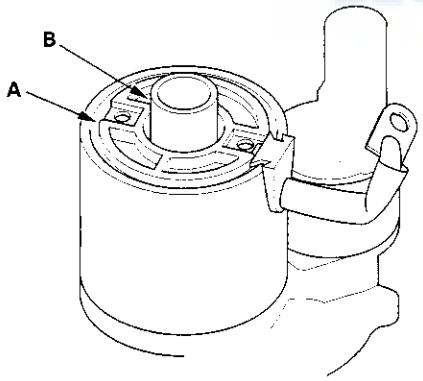


Brush Holder Removal

1. Remove the starter (see page 4-12).
2. Disconnect the motor wire from the M terminal (see page 4-10), and remove the end cover.
3. Place a plastic pipe with an outside diameter of 28.5 mm (1.12 in.) on the armature.

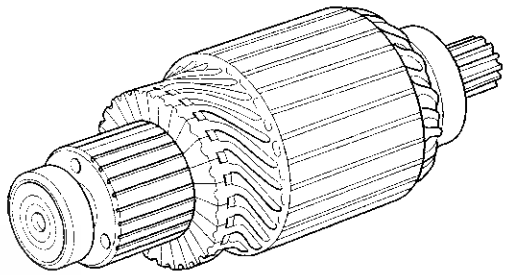


4. Move the brush holder (A) up to the pipe (B) while holding the pipe so the brushes do not pop out from the holder.

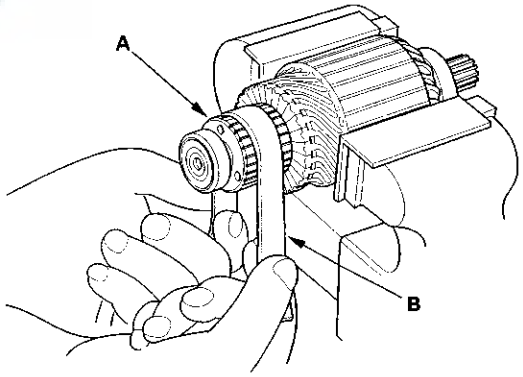


Armature Inspection and Test

5. Disassemble the starter as shown at the beginning of this procedure.
6. Inspect the armature for wear or damage from contact with the permanent magnet. If there is wear or damage, replace the armature.



7. Check the commutator (A) surface. If the surface is dirty or burnt, resurface it with an emery cloth or a lathe to the specifications in step 8, or recondition with #500 or #600 sandpaper (B).

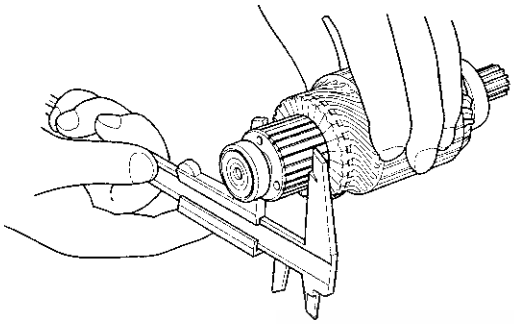


(cont'd)

Starter Overhaul (cont'd)

8. Check the commutator diameter. If the diameter is below the service limit, replace the armature.

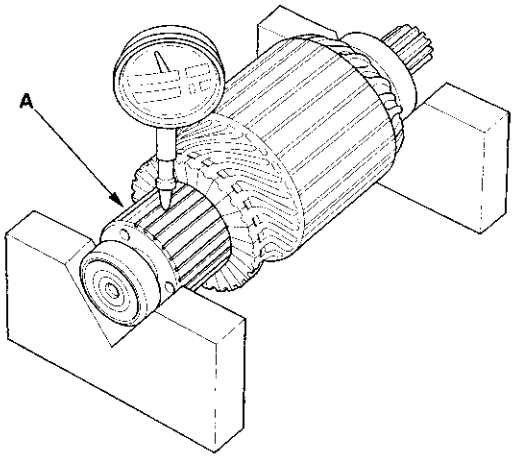
Commutator Diameter
Standard (New): 28.0—28.1 mm (1.102—1.106 in.)
Service Limit: 27.5 mm (1.083 in.)



9. Measure the commutator (A) runout.

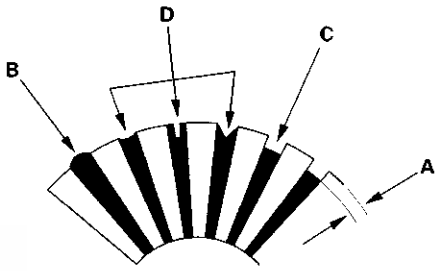
- If the commutator runout is within the service limit, check the commutator for carbon dust or brass chips between the segments.
- If the commutator runout is not within the service limit, replace the armature.

Commutator Runout
Standard (New): 0.02 mm (0.0008 in.) max.
Service Limit: 0.05 mm (0.002 in.)

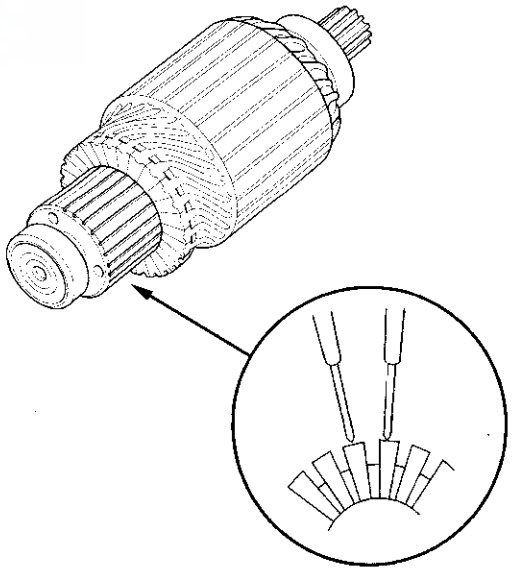


10. Check the mica depth (A). If the mica is too high (B), undercut the mica with a hacksaw blade to the proper depth. Cut away all the mica (C) between the commutator segments. The undercut should not be too shallow, too narrow, or V-shaped (D).

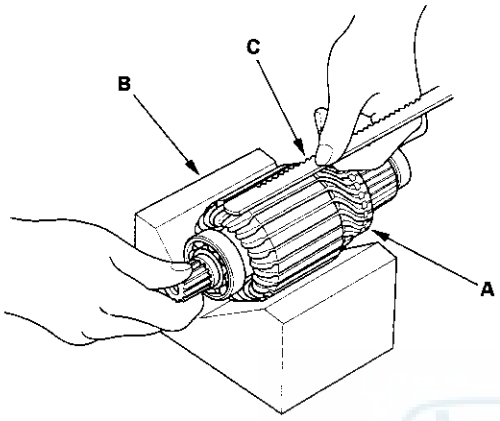
Commutator Mica Depth
Standard (New): 0.4—0.5 mm (0.016—0.020 in.)
Service Limit: 0.15 mm (0.006 in.)



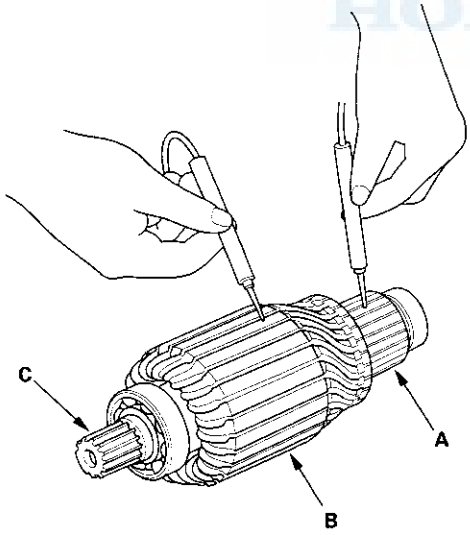
11. Use an ohmmeter to check for continuity between the segments of the commutator. If there is an open circuit between any segments, replace the armature.



12. Place the armature (A) on an armature tester (B). Hold a hacksaw blade (C) on the armature core. If the blade is attracted to the core or vibrates while the core is turned, the armature is shorted. Replace the armature.



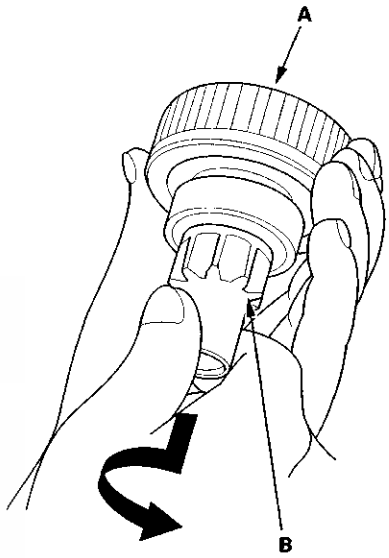
13. Use an ohmmeter to check for continuity between the commutator (A) and the armature coil core (B), and between the commutator and the armature shaft (C). If there is continuity, replace the armature.



Overrunning Clutch Inspection

14. Slide the overrunning clutch along the shaft. Replace it if it does not slide smoothly.

15. Rotate the overrunning clutch (A) both ways. If it does not lock in either direction, or it locks in both directions, replace it.



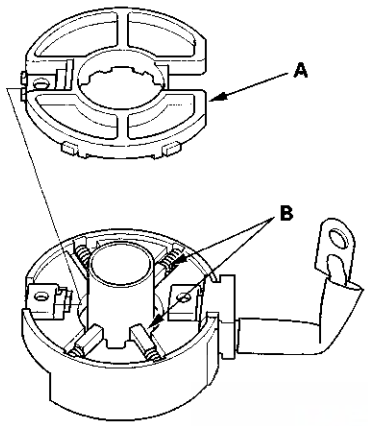
16. If the starter drive gear (B) is worn or damaged, replace the overrunning clutch assembly; the gear is not available separately.
Check the condition of the flywheel ring gear to see if the teeth are damaged.

(cont'd)

Starter Overhaul (cont'd)

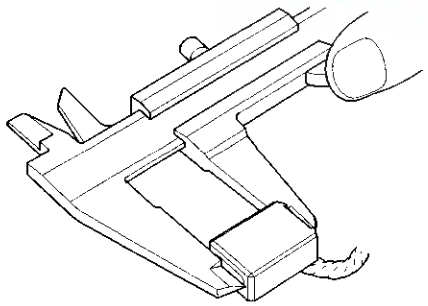
Starter Brush Inspection

17. Remove the brush holder cap (A), then remove the brushes (B).



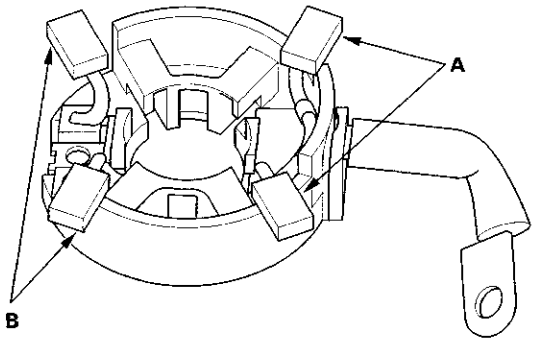
18. Measure the brush length. If it is not within the service limit, replace the brush holder assembly.

Brush Length
Standard (New): 15.8—16.2 mm (0.62—0.64 in.)
Service Limit: 11.0 mm (0.43 in.)



Starter Brush Holder Test

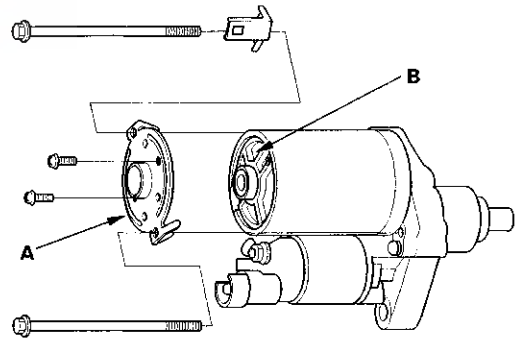
19. Check for continuity between the (+) brushes (A) and the (—) brushes (B). If there is continuity, replace the brush holder assembly.



Starter Reassembly

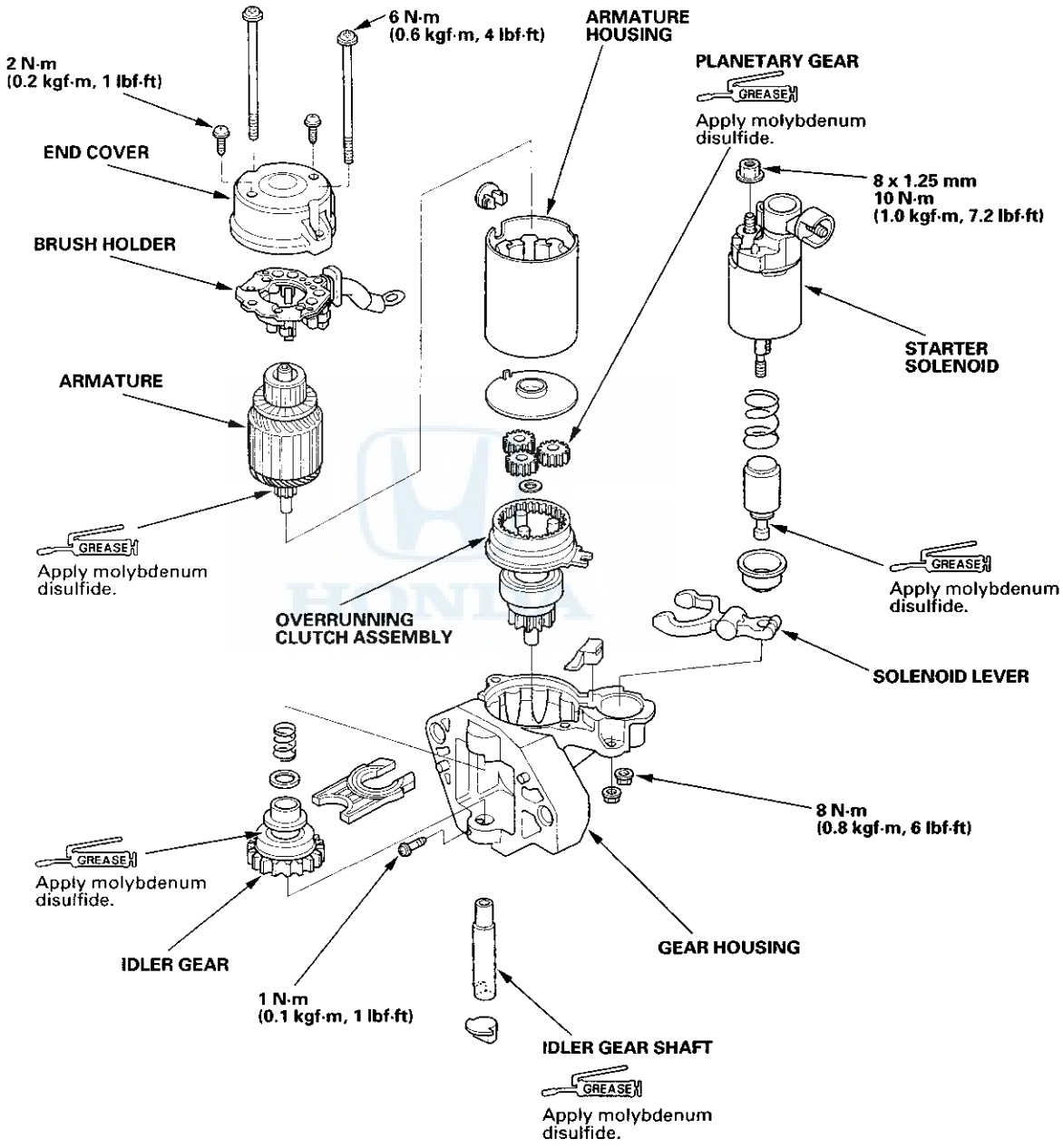
20. Reassemble the starter in the reverse order of disassembly.

21. Install the starter end cover (A) to retain the brush holder (B).



A/T model

Disassembly/Reassembly

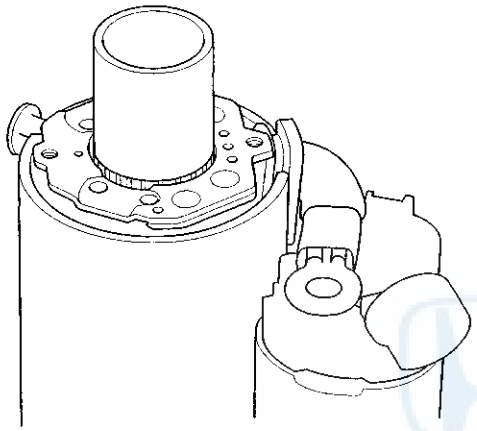


(cont'd)

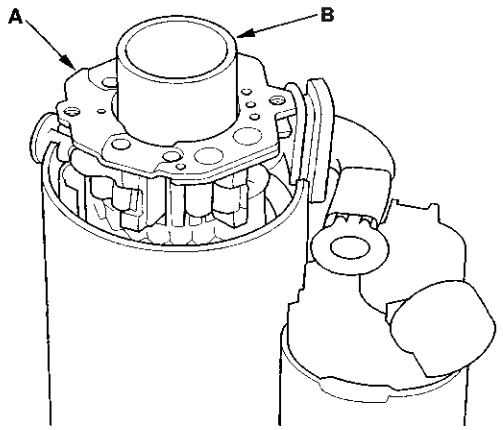
Starter Overhaul (cont'd)

Brush Holder Removal

1. Remove the starter (see page 4-12).
2. Disconnect the motor wire from the M terminal (see page 4-10), and remove the end cover.
3. Place a plastic pipe with an outside diameter of 29.4 mm (1.16 in.) on the armature.

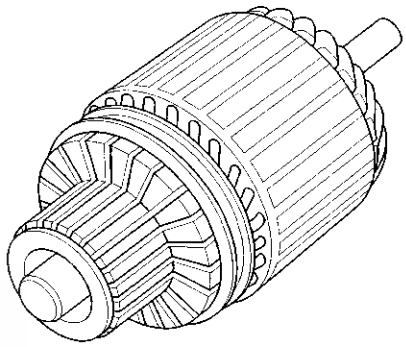


4. Move the brush holder (A) up to the pipe (B) while holding the pipe so the brushes do not pop out from the holder.

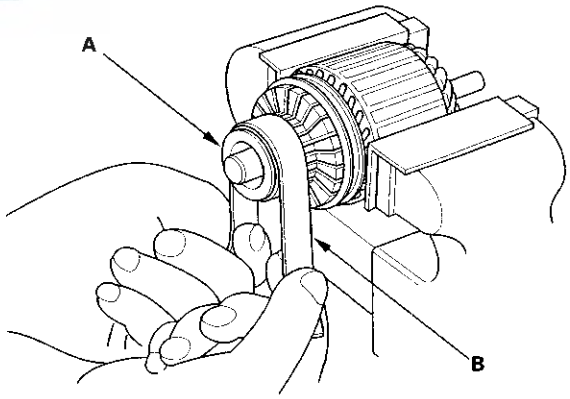


Armature Inspection and Test

5. Disassemble the starter as shown at the beginning of this procedure.
6. Inspect the armature for wear or damage from contact with the permanent magnet. If there is wear or damage, replace the armature.

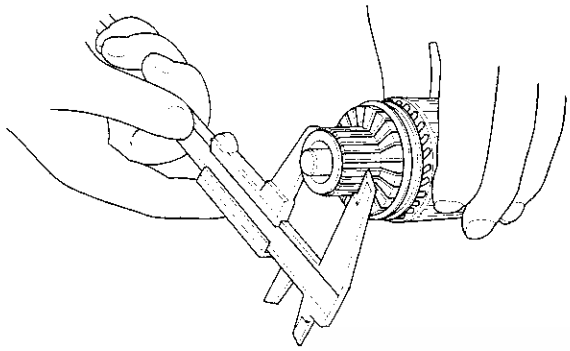


7. Check the commutator (A) surface. If the surface is dirty or burnt, resurface it with an emery cloth or a lathe to the specifications in step 8, or recondition with #500 or #600 sandpaper (B).



8. Check the commutator diameter. If the diameter is below the service limit, replace the armature.

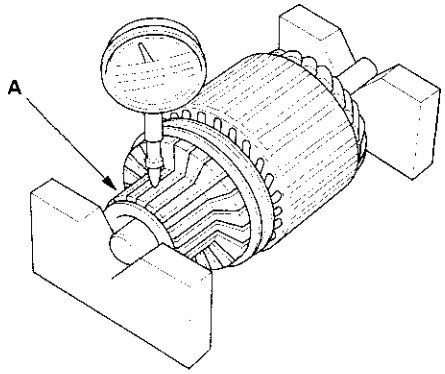
Commutator Diameter
Standard (New): 28.9—29.0 mm (1.138—1.142 in.)
Service Limit: 28.0 mm (1.102 in.)



9. Measure the commutator (A) runout.

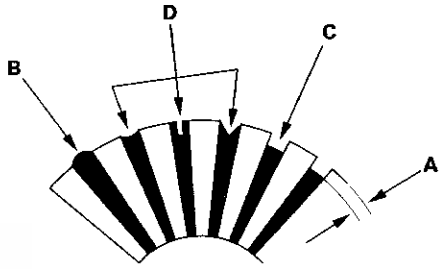
- If the commutator runout is within the service limit, check the commutator for carbon dust or brass chips between the segments.
- If the commutator runout is not within the service limit, replace the armature.

Commutator Runout
Standard (New): 0.02 mm (0.0008 in.) max.
Service Limit: 0.05 mm (0.002 in.)

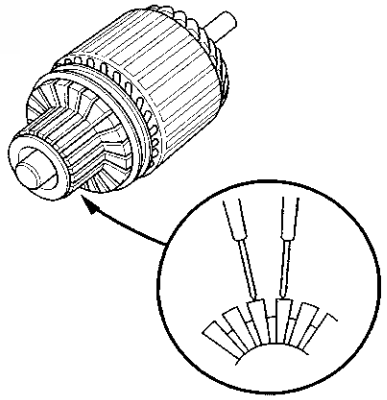


10. Check the mica depth (A). If the mica is too high (B), undercut the mica with a hacksaw blade to the proper depth. Cut away all the mica (C) between the commutator segments. The undercut should not be too shallow, too narrow, or V-shaped (D).

Commutator Mica Depth
Standard (New): 0.50—0.90 mm (0.020—0.035 in.)
Service Limit: 0.20 mm (0.008 in.)



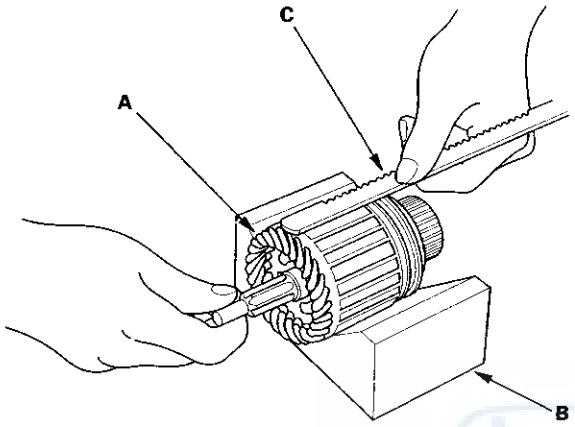
11. Use an ohmmeter to check for continuity between the segments of the commutator. If there is an open circuit between any segments, replace the armature.



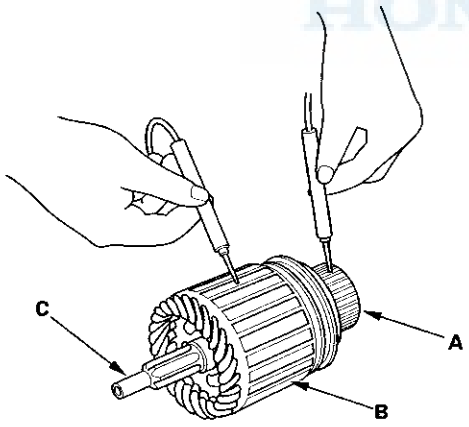
(cont'd)

Starter Overhaul (cont'd)

12. Place the armature (A) on an armature tester (B). Hold a hacksaw blade (C) on the armature core. If the blade is attracted to the core or vibrates while the core is turned, the armature is shorted. Replace the armature.

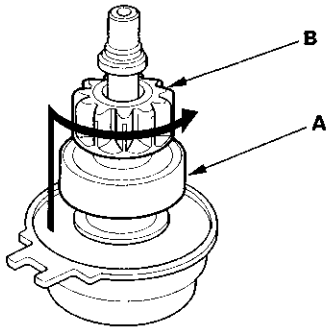


13. Use an ohmmeter to check for continuity between the commutator (A) and the armature coil core (B), and between the commutator and the armature shaft (C). If there is continuity, replace the armature.

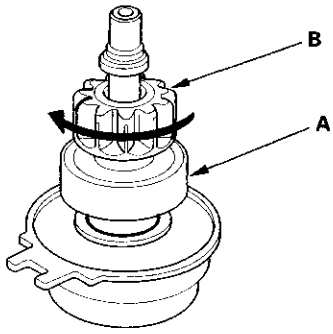


Overrunning Clutch Inspection

14. Slide the overrunning clutch (A) along the shaft. Replace it if it does not slide smoothly.



15. Hold the overrunning clutch (A), and turn the drive gear (B) in the direction shown to make sure it turns freely. Also make sure the drive gear locks in the opposite direction. If it does not lock, replace the overrunning clutch assembly.

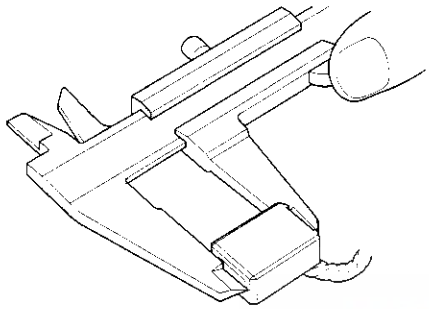


16. If the starter drive gear is worn or damaged, replace the overrunning clutch assembly; the gear is not available separately.
Check the condition of the torque converter ring gear. Replace it if the starter drive gear teeth are damaged.

Starter Brush Inspection

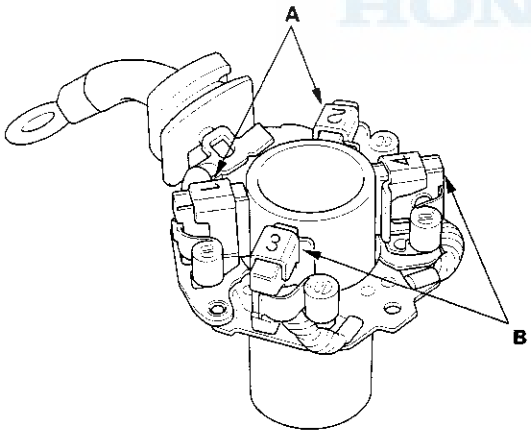
17. Measure the brush length. If it is shorter than the service limit, replace the brush holder assembly.

    Brush Length
    Standard (New): 15.0—16.0 mm (0.59—0.63 in.)
    Service Limit: 9.0 mm (0.35 in.)



Starter Brush Holder Test

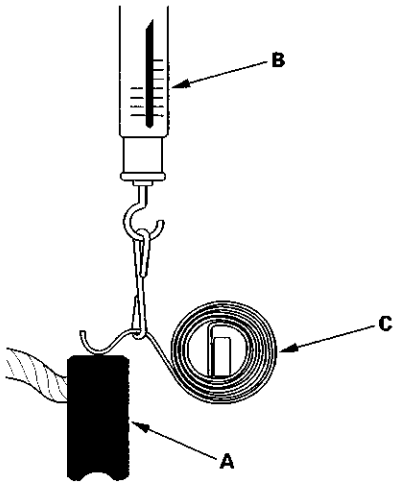
18. Check for continuity between the (+) brushes (A) and the (—) brushes (B). If there is continuity, replace the brush holder assembly.



Brush Spring Inspection

19. Insert the brush (A) into the brush holder, and bring the brush into contact with the commutator, then attach a spring scale (B) to the spring (C). Measure the spring tension at the moment the spring lifts off the brush. If it is not within the standard, replace the brush holder assembly.

    Spring Tension
    Standard (New): 22.3—27.3 N
    (2.27—2.78 kgf, 5.00—6.13 lbf)

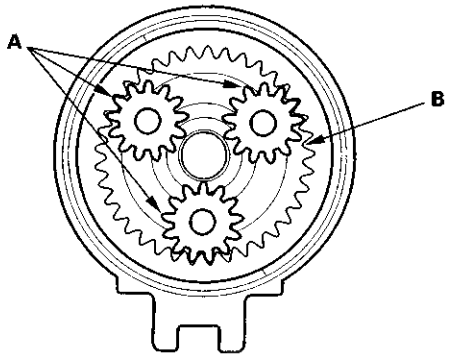


(cont'd)

Starter Overhaul (cont'd)

Planetary Gear Inspection

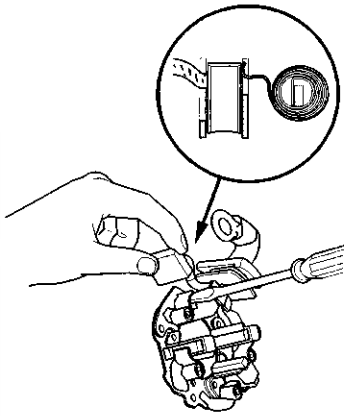
20. Check the planetary gears (A) and the internal ring gear (B). Replace them if they are worn or damaged.



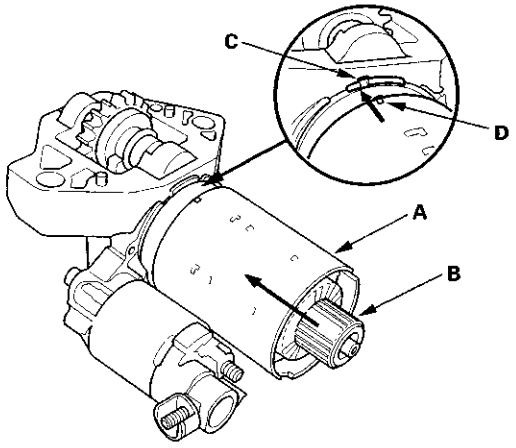
Starter Reassembly

21. Pry back each brush spring with a screwdriver, then position the brush on the brush holder about halfway out of its holder. Release the spring to hold it in place.

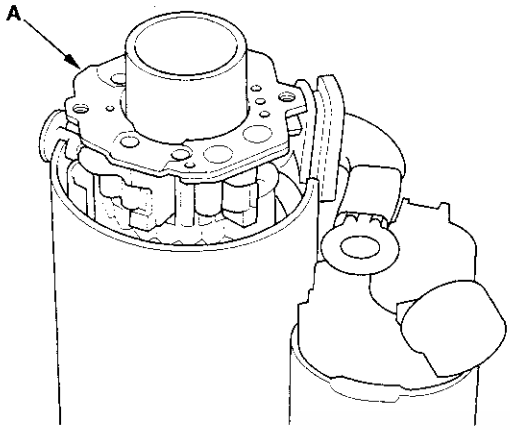
    NOTE: To seat the new brushes. Slip a strip of #500 or #600 sandpaper, with the grit side up, between the commutator and the each brush, and smoothly turn the armature. The contact surface of the brushes will be sanded to the same contour as the commutator.



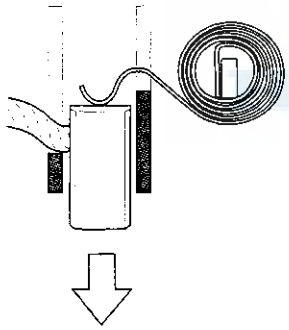
22. Install the armature housing (A) and the armature (B) by aligning the slotted point (C) to the projection (D).



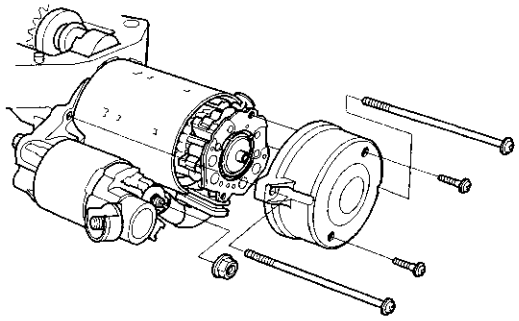
23. Place the brush holder assembly on the armature, then move the brush holder (A) down to the armature.



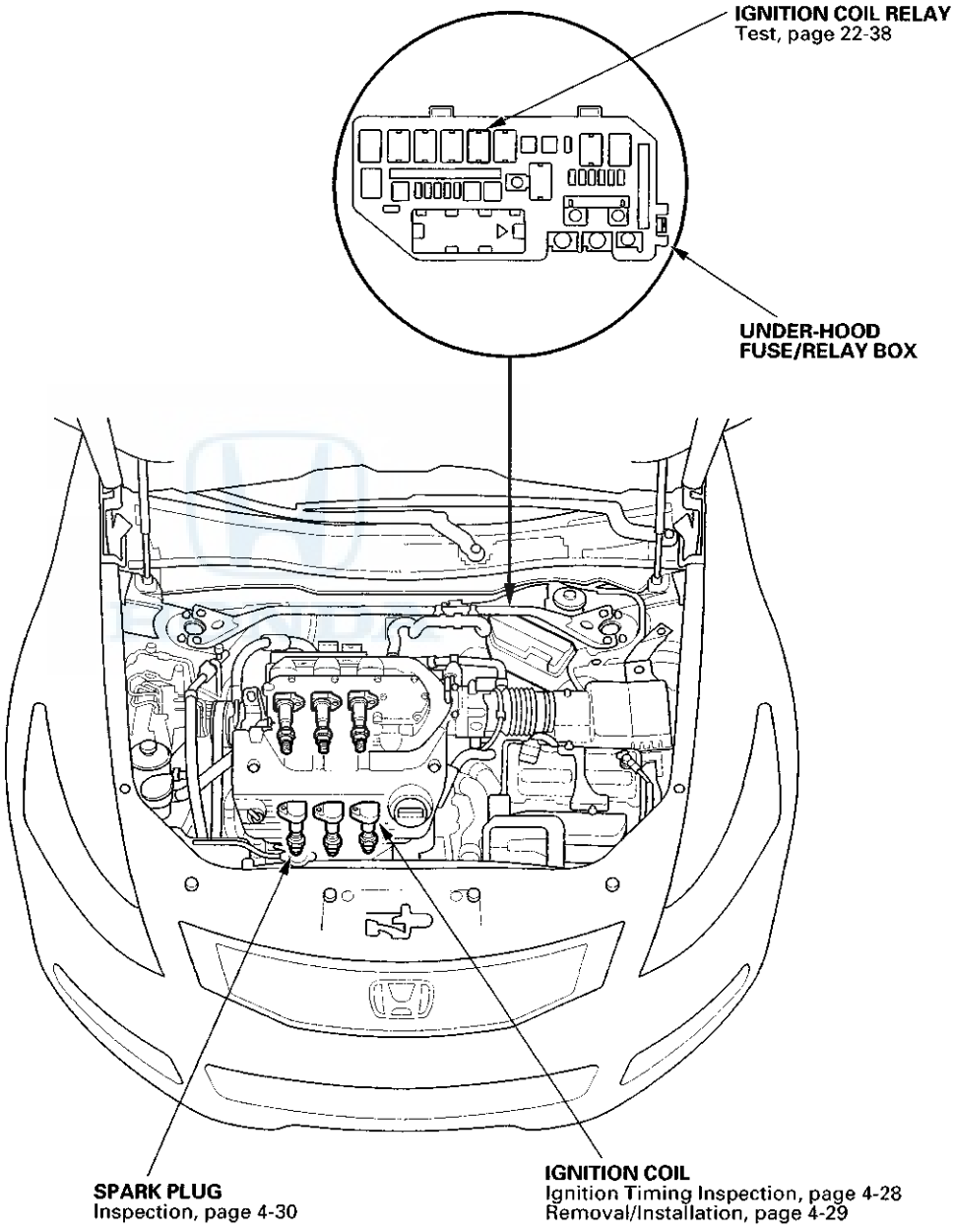
24. Push each brush down until it seats against the commutator, then release the spring against the end of the brush.



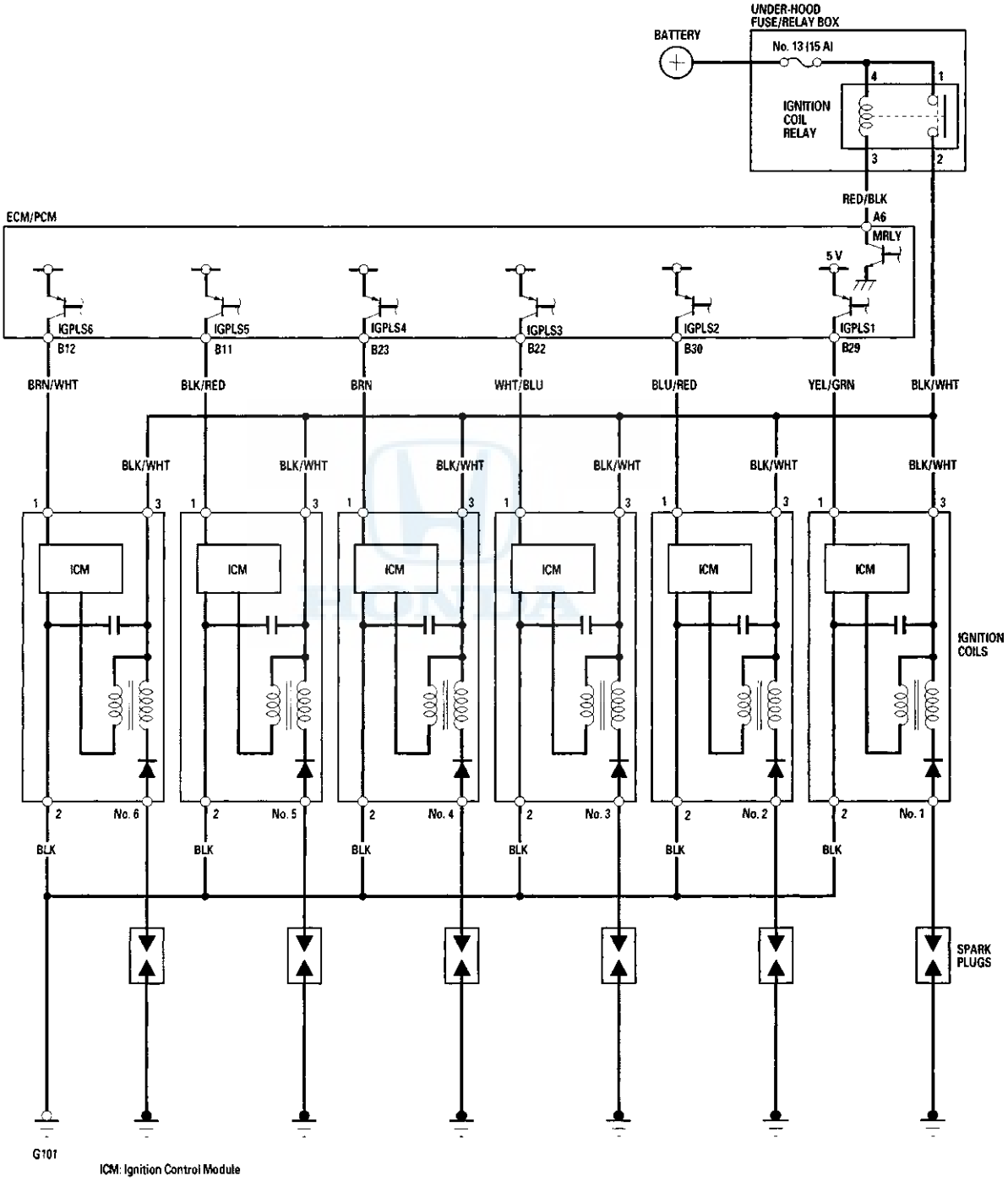
25. Install the end cover to retain the brush holder.



Component Location Index

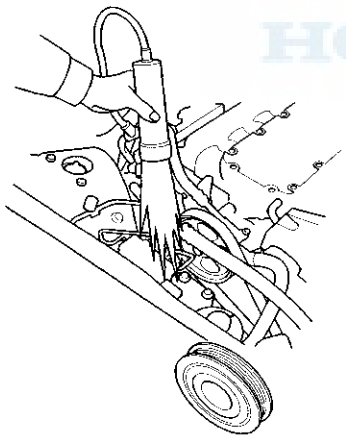


Circuit Diagram



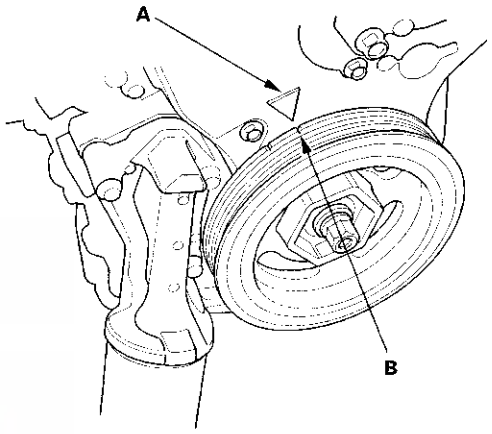
Ignition Timing Inspection

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
4. Check for DTCs (see page 11-3). If a DTC is present, diagnose and repair the cause before continuing with this test.
5. Start the engine. Hold the engine speed at 3,000 rpm with no load (in N or P (A/T model) or neutral (M/T model)) until the radiator fan comes on, then let it idle.
6. Check the idle speed (see page 11-384).
7. Jump the SCS line with the HDS.
8. Connect the timing light to the No.1 ignition coil harness.



9. Aim the light toward the pointer (A) on the timing belt cover. Check the ignition timing under a no load condition (headlights, blower fan, rear window defogger, and air conditioner are turned off).

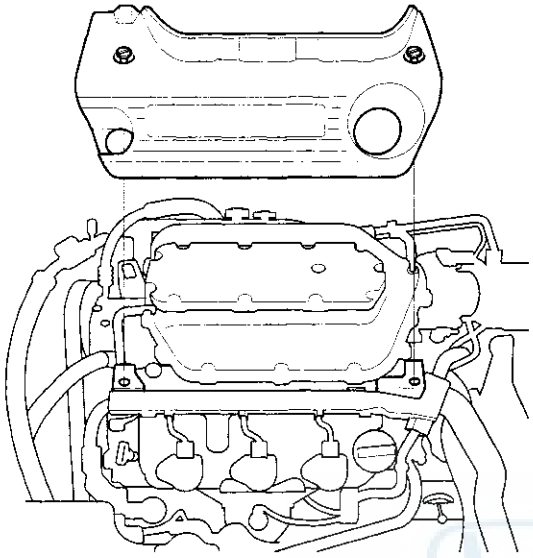
Ignition Timing
M/T model: 5 °±2 °BTDC (RED mark (B)) at idle in neutral
A/T model: 10 °±2 °BTDC (RED mark (B)) at idle in N or P



10. If the ignition timing differs from the specification, check the cam timing. If the cam timing is OK, update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the system works properly, and the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282).
11. Disconnect the HDS and the timing light.

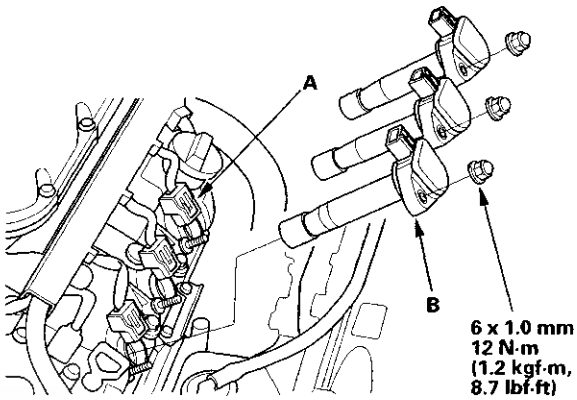
Ignition Coil Removal/Installation

1. Remove the engine cover.

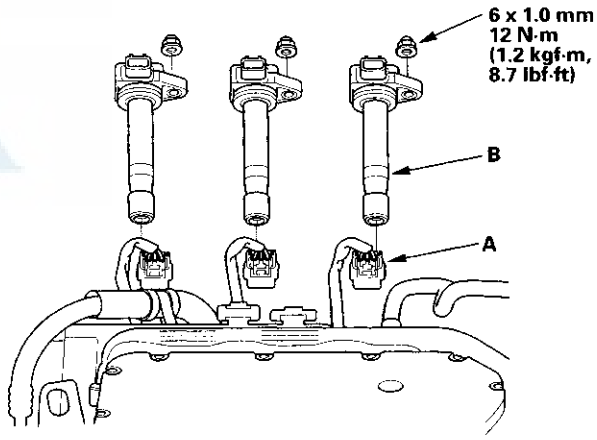


2. Disconnect the ignition coil connectors (A), then remove the ignition coils (B).

FRONT



REAR



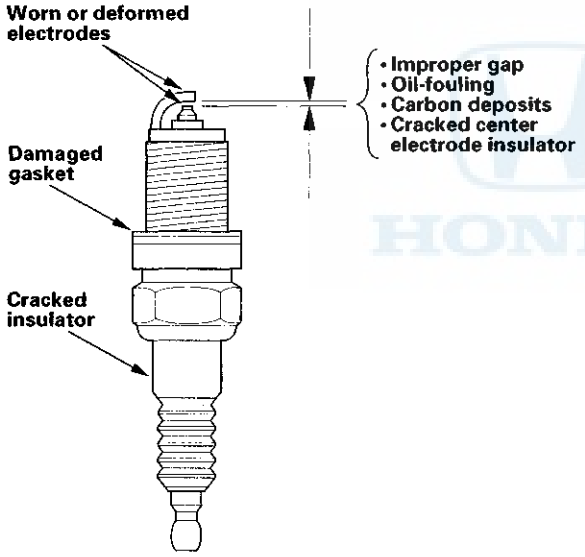
3. Install the ignition coils in the reverse order of removal.

Spark Plug Inspection

1. Remove the spark plugs, then inspect the electrodes and the ceramic insulator.

   • Burned or worn electrodes may be caused by these conditions:
   – Advanced ignition timing
   – Loose spark plug
   – Plug heat range too hot
   – Insufficient cooling

   • Fouled plugs may be caused by these conditions:
   – Retarded ignition timing
   – Oil in combustion chamber
   – Incorrect spark plug gap
   – Plug heat range too cold
   – Excessive idling/low speed running
   – Clogged air cleaner element
   – Deteriorated ignition coils



2. If the spark plug electrode is dirty or contaminated, clean the electrode with a plug cleaner.

   NOTE:
   • Do not use a wire brush or scrape the iridium electrode since this will damage the electrode.
   • When using a sand blaster spark plug cleaner, do not clean for more than 20 seconds to avoid damaging the electrode.

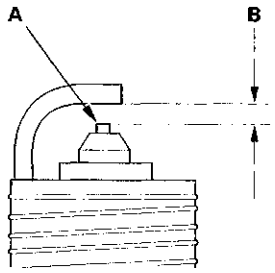
3. Replace the plug at the specified interval, or if the center electrode is rounded (A), or if the spark plug gap (B) is out of specification. Use only the spark plugs listed.

   NOTE: Do not adjust the gap of iridium tip plugs.

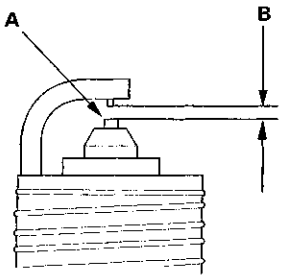
   All models except PZEV
   Spark Plugs
   NGK: ILZKR7B-11
   Electrode Gap
   Standard (New): 1.0—1.1 mm (0.039—0.043 in.)

   PZEV model
   Spark Plugs
   NGK: DILZKR7A11G
   Electrode Gap
   Standard (New): 1.0—1.1 mm (0.039—0.043 in.)

   All models except PZEV



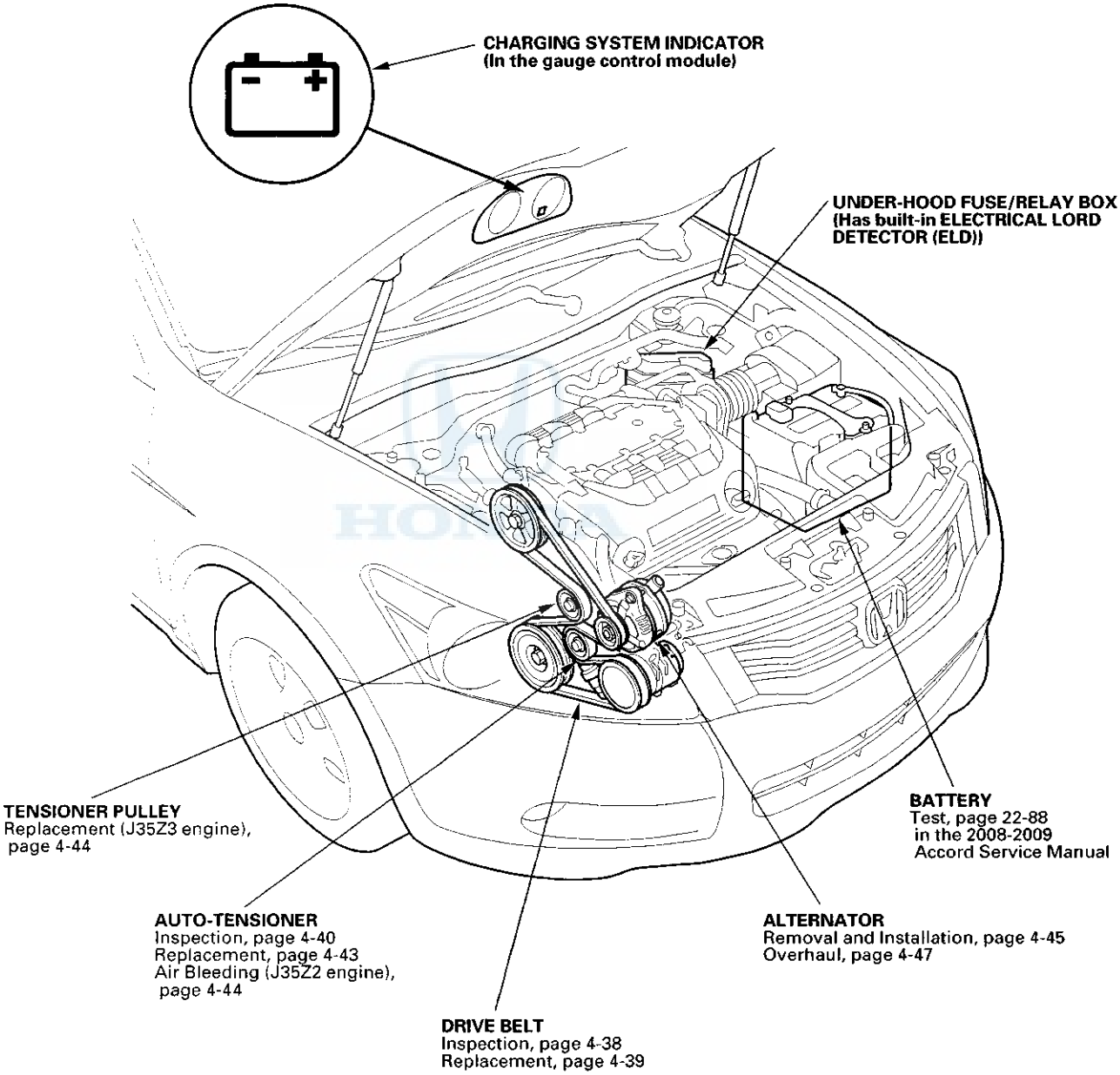
   PZEV model



4. Apply a small amount of anti-seize compound to the plug threads, and screw the plugs into the cylinder head, finger-tight. Torque them to 18 N·m (1.8 kgf·m, 13 lbf·ft).

Charging System

Component Location Index

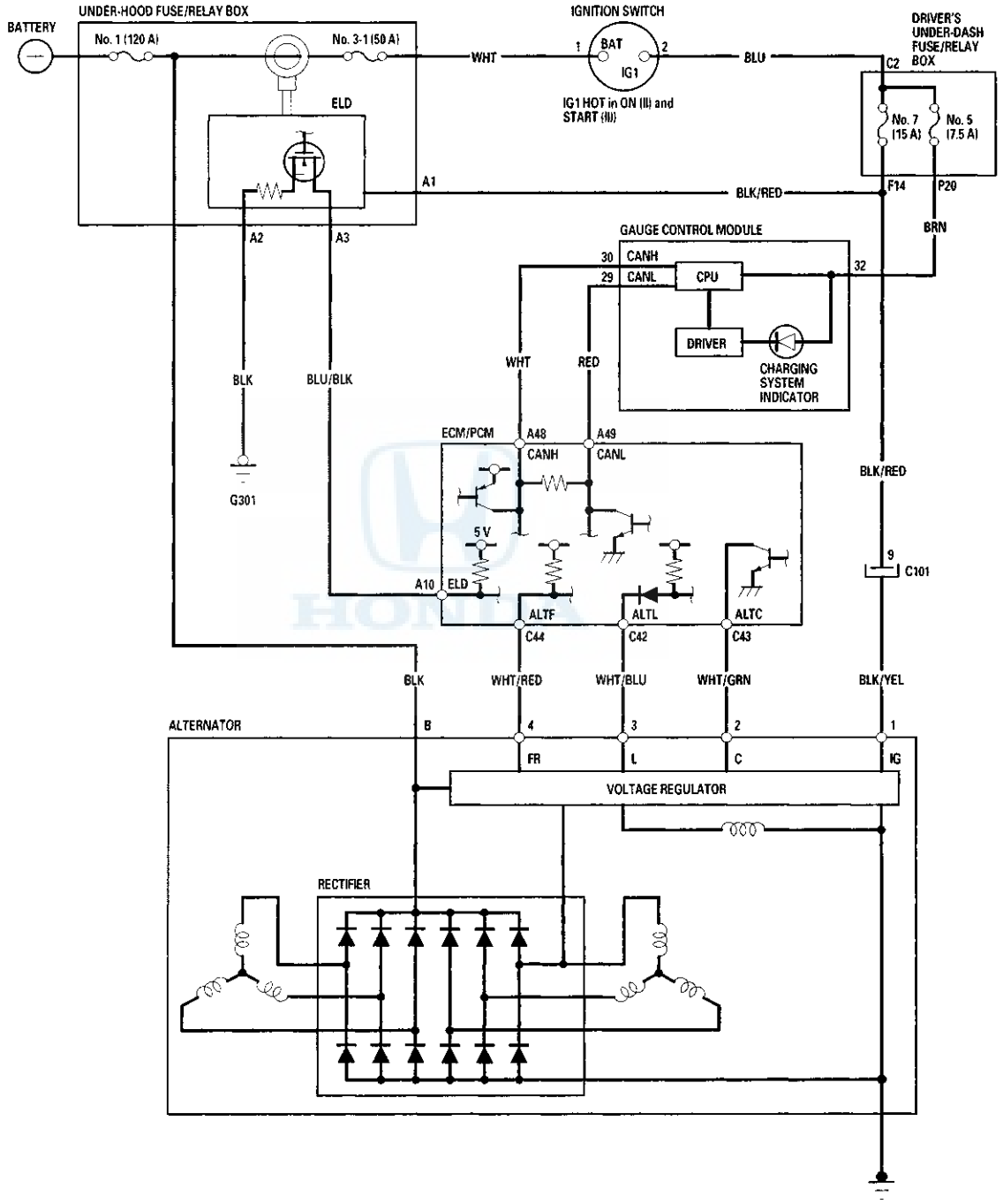


Charging System

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Charging system indicator does not come on with the ignition switch in ON (II)	Troubleshoot the charging system indicator circuit (see page 4-34).	
Charging system indicator stays on	1. Troubleshoot the charging system indicator circuit (see page 4-34). 2. Check for a broken drive belt (see page 4-38). 3. Check the drive belt auto-tensioner (see page 4-40). 4. Check for PGM-FI DTCs (see page 11-3).	
Battery discharged	1. Check for a poor connection at the battery terminal. 2. Test the battery, refer to the 2008-2009 Accord Service Manual (see page 22-88). 3. Troubleshoot the alternator and regulator circuit (see page 4-36). 4. Check for a broken drive belt (see page 4-38). 5. Check the drive belt auto-tensioner (see page 4-40). 6. Check for excessive parasitic electrical current draw with the ignition switch in LOCK (0), and the key removed. The multiplex control unit may take up to 10 minutes to turn off (sleep mode) for some models.	
Battery overcharged	1. Test the battery, refer to the 2008-2009 Accord Service Manual (see page 22-88). 2. Troubleshoot the alternator and regulator circuit (see page 4-36).	

Circuit Diagram



Charging System Indicator Circuit Troubleshooting

NOTE: Check for stored DTCs in the PGM-FI before troubleshooting the charging system indicator.

1. Turn the ignition switch to ON (II).

   Does the charging system indicator come on?

   YES—Go to step 2.

   NO—Go to step 14.

2. Start the engine. Hold the engine speed at 2,000 rpm for 1 minute.

   Does the charging system indicator go off?

   YES—Charging system indicator circuit is OK. Go to the alternator and regulator circuit troubleshooting (see page 4-36). ■

   NO—Go to step 3.

3. Do the gauge control module self-diagnostic function procedure (see page 22-68).

   Does the charging system indicator flash?

   YES—Go to step 4.

   NO—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324). ■

4. Turn the ignition switch to LOCK (0).

5. Disconnect the alternator 4P connector.

6. Turn the ignition switch to ON (II).

   Does the charging system indicator go off?

   YES—Replace the alternator (see page 4-45) or repair the alternator (see page 4-47). ■

   NO—Go to step 7.

7. Turn the ignition switch to LOCK (0).

8. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).

9. Turn the ignition switch to ON (II).

10. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).

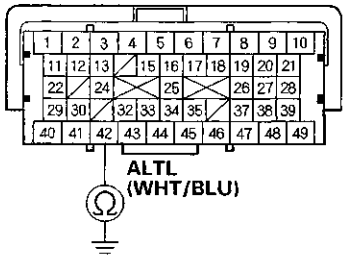
11. Jump the SCS line with the HDS, then turn the ignition switch to LOCK (0).

    NOTE: This step must be done to protect the ECM/PCM from damage.

12. Disconnect ECM/PCM connector C (49P).

13. Check for continuity between ECM/PCM connector terminal C42 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between alternator 4P connector terminal No. 3 and ECM/PCM connector connector terminal C42. ■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). ■

14. Do the gauge control module self-diagnostic function procedure (see page 22-68).

    Does the charging system indicator flash?

    YES—Go to step 15.

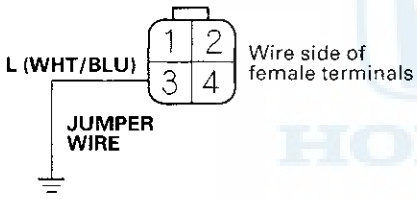
    NO—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).■

15. Turn the ignition switch to LOCK (0).

16. Disconnect the alternator 4P connector.

17. Connect alternator 4P connector terminal No. 3 and body ground with a jumper wire.

ALTERNATOR 4P CONNECTOR



18. Turn the ignition switch to ON (II).

    Does the charging system indicator come on?

    YES—Replace the alternator (see page 4-45) or repair the alternator (see page 4-47).■

    NO—Disconnect the jumper wire, then go to step 19.

19. Turn the ignition switch to LOCK (0).

20. Connect the HDS to the DLC (see step 2 on page 11-3).

21. Turn the ignition switch to ON (II).

22. Make sure the HDS communicates with the vehicle and the ECM/PCM. If it does not communicate, troubleshoot the DLC circuit (see page 11-259).

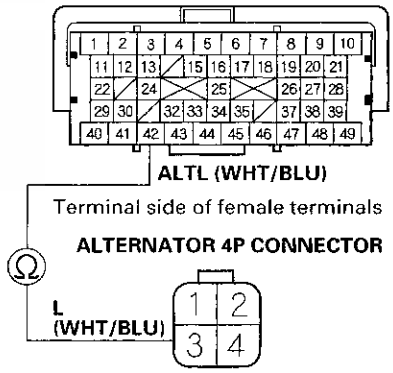
23. Jump the SCS line with the HDS, then turn the ignition switch to LOCK (0).

    NOTE: This step must be done to protect the ECM/PCM from damage.

24. Disconnect ECM/PCM connector C (49P).

25. Check for continuity between ECM/PCM connector terminal C42 and alternator 4P connector terminal No. 3.

ECM/PCM CONNECTOR C (49P)



Is there continuity?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

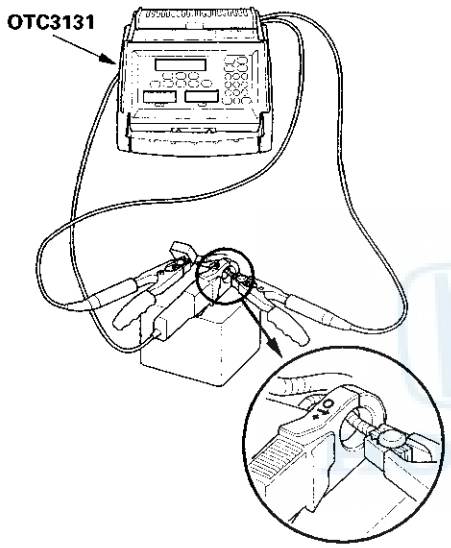
NO—Repair open in the wire between alternator 4P connector terminal No. 3 and ECM/PCM connector terminal C42.■

Alternator and Regulator Circuit Troubleshooting

Special Tools Required
Alternator, Regulator, Battery & Starter tester OTC3131
Available through the Honda Tool and Equipment Program 888-424-6857

1. Make sure the battery connections are good and the battery is sufficiently charged.

2. Connect the alternator, regulator, battery & starter tester (OTC3131) to the battery as shown.



3. Start the engine. Hold the engine speed at 3,000 rpm with no load (in N or P (A/T model) or neutral (M/T model)) until the radiator fan comes on, then let it idle.

4. Do the CHARGING SYSTEM TEST.

   Does the display indicate voltage within 13.5–15.1 V and amperage 87.5 A or more?

   YES—Go to step 5.

   NO—If the voltage is less than 13.5 V, go to alternator control circuit troubleshooting (see page 4-37). If the voltage is over 15.1 V and amperage is less than 87.5 A, replace the alternator (see page 4-45) or repair the alternator (see page 4-47).

5. Check the diode condition on the display.

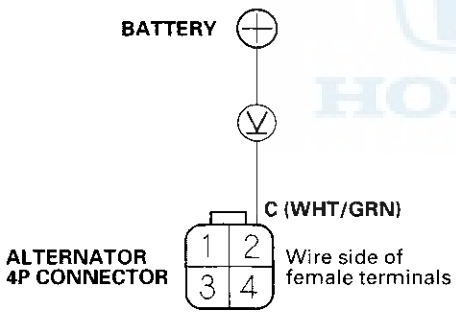
   Does the display indicate GOOD?

   YES—The diode is OK. Troubleshooting is complete.■

   NO—If the display indicates BAD, replace the alternator (see page 4-45) or repair the alternator (see page 4-47), then retest. If the display indicates N/A, the diode pattern could not be diagnosed. Repeat the test again.

Alternator Control Circuit Troubleshooting

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
4. Check for DTCs (see page 11-3). If a DTC is present, diagnose and repair the cause before continuing with this test.
5. Disconnect the alternator 4P connector.
6. Start the engine, and turn on the headlights to high beam.
7. Measure the voltage between alternator 4P connector terminal No. 2 and the positive terminal of the battery.



Is there less than 1 V?

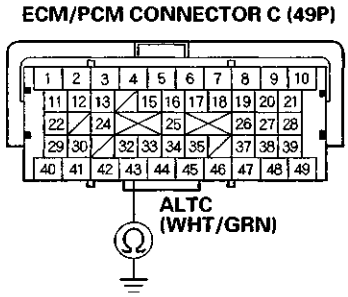
YES—Go to step 11.

NO—Go to step 8.

8. Jump the SCS line with the HDS, then turn the ignition switch to LOCK (0).

   NOTE: This step must be done to protect the ECM/PCM from damage.

9. Disconnect ECM/PCM connector C (49P).
10. Check for continuity between ECM/PCM connector terminal C43 and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between alternator 4P connector terminal No. 2 and ECM/PCM connector terminal C43. ■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). ■

11. Jump the SCS line with the HDS, then turn the ignition switch to LOCK (0).

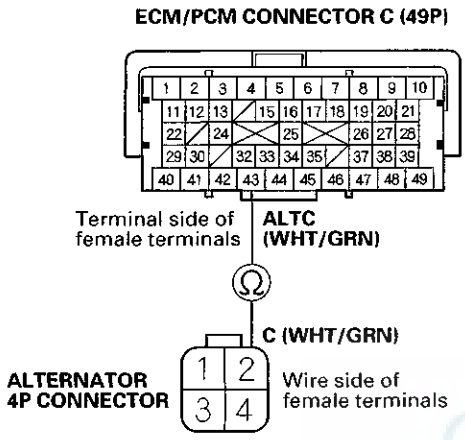
    NOTE: This step must be done to protect the ECM/PCM from damage.

12. Disconnect ECM/PCM connector C (49P).

(cont'd)

Alternator Control Circuit Troubleshooting (cont'd)

13. Check for continuity between ECM/PCM connector terminal C43 and alternator 4P connector terminal No. 2.



Is there continuity?

YES—Replace the alternator (see page 4-45), or repair the alternator (see page 4-47).■

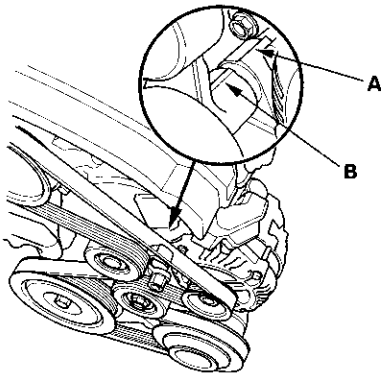
NO—Repair open in the wire between alternator 4P connector terminal No. 2 and ECM/PCM connector terminal C43.■

Drive Belt Inspection

J35Z2 engine

1. Inspect the belt for cracks or damage. If the belt is cracked or damaged, replace it.

2. Check that the auto-tensioner indicator pointer (A) on the A/C compressor bracket is not beyond the edge of the indicator (B) on the auto-tensioner. If the pointer is beyond the indicator, replace the drive belt (see page 4-39).

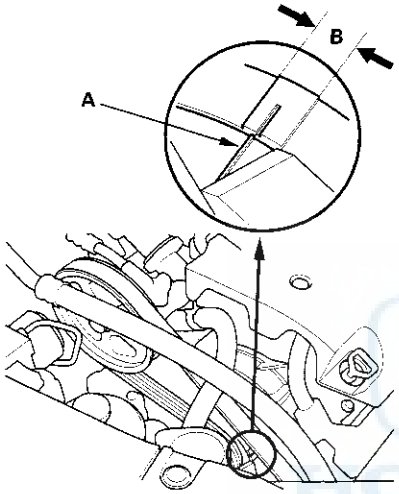


Drive Belt Replacement

J35Z3 engine

1. Inspect the belt for cracks or damage. If the belt is cracked or damaged, replace it.

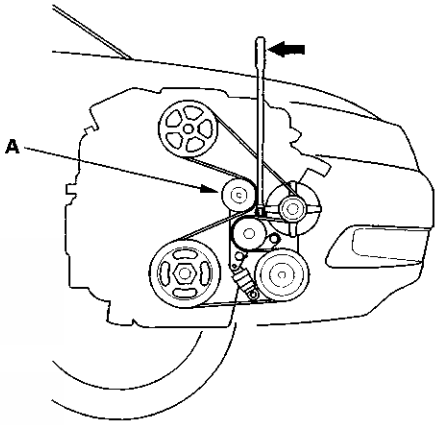
2. Check that the auto-tensioner indicator (A) is within the standard range (B) as shown. If it is out of the standard range, replace the drive belt (see page 4-39).



J35Z2 engine

1. Set a socket wrench on the drive belt auto-tensioner (A), and slowly turn the wrench in the direction shown, then remove the drive belt.

   NOTE: This is a hydraulic type auto-tensioner, so you must turn the wrench slowly for at least 3 seconds.



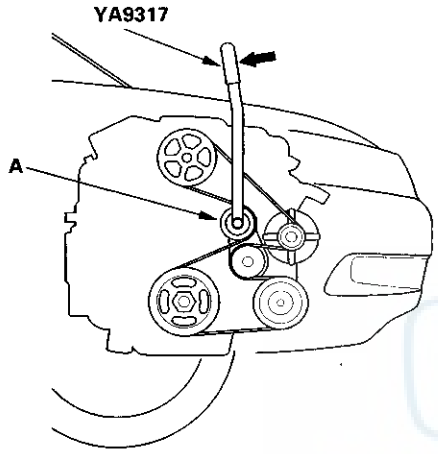
2. Install the new belt in the reverse order of removal.

Drive Belt Replacement (cont'd)

Special Tools Required
Belt tension release tool Snap-on YA9317 or equivalent, commercially available.

J35Z3 engine

1. Move the auto-tensioner (A) using the belt tension release tool to relieve tension from the drive belt, then remove the drive belt.



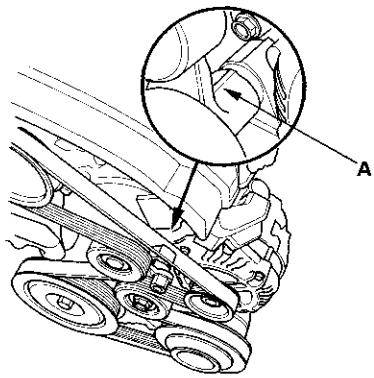
2. Install the new belt in the reverse order of removal.

Drive Belt Auto-tensioner Inspection

J35Z2 engine

1. Turn the ignition switch to ON (II), and make sure the A/C switch is OFF, then turn the ignition switch to LOCK (0).

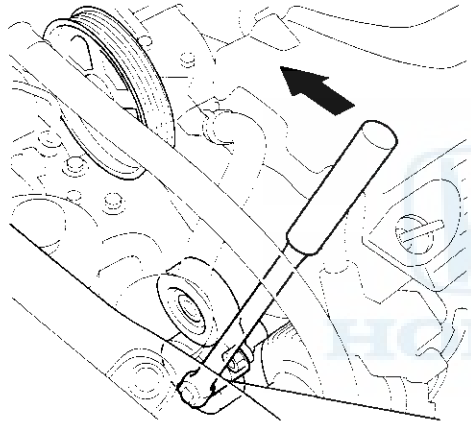
2. Check the position of the auto-tensioner indicator (A). Start the engine, then check the position again with the engine idling. If the position of the indicator moves or fluctuates a lot, do the auto-tensioner air bleeding (see page 4-44), and recheck. If the position is still fluctuates, replace the auto-tensioner (see page 4-43).



3. Remove the drive belt (see page 4-39).

4. Set a socket wrench on the drive belt auto-tensioner, and slowly turn the wrench in the direction of the rotation arrow.

   NOTE:
   - This is a hydraulic type auto-tensioner, so you must turn the wrench slowly for at least 3 seconds.
   - Check the belt for cracks or damage.
   - Check for oil leakage from the damper rubber bellows.
   - If the tensioner does not move smoothly, or you hear abnormal noise, replace the auto-tensioner (see page 4-43).

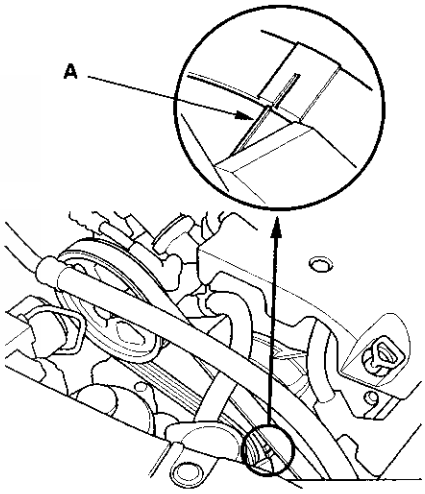


Special Tools Required
Belt tension release tool Snap-on YA9317 or equivalent, commercially available.

J35Z3 engine

1. Turn the ignition switch to ON (II), and make sure the A/C switch is OFF. Then turn the ignition switch to LOCK (0).

2. Check the position of the auto-tensioner indicator (A). Start the engine, then check the position again with the engine idling. If the position of the indicator moves or fluctuates a lot, replace the auto-tensioner (see page 4-43).



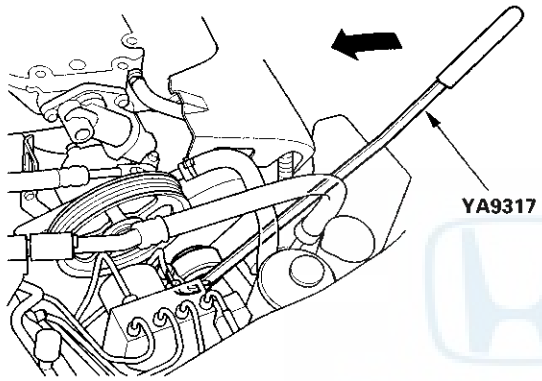
(cont'd)

Drive Belt Auto-tensioner Inspection (cont'd)

3. Check for abnormal noise from the tensioner pulley. If you hear abnormal noise, replace the tensioner pulley (see page 4-44).

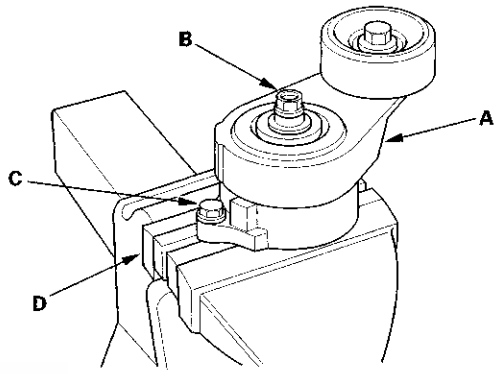
4. Remove the drive belt (see page 4-39).

5. Move the auto-tensioner within its limit using the belt tension release tool in the direction shown. Check that the tensioner moves smoothly and without any abnormal noise. If the tensioner does not move smoothly, or you hear abnormal noise, replace the auto-tensioner (see page 4-43).



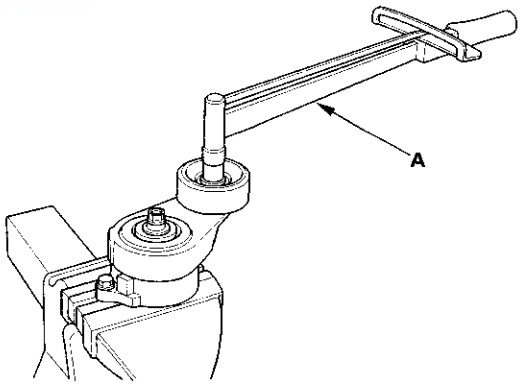
6. Remove the auto-tensioner (see page 4-43).

7. Clamp the auto-tensioner (A) by using a 10 mm bolt (B), a 8 mm bolt (C), and a vise (D) as shown. Do not clamp the auto-tensioner itself.



8. Attach a torque wrench (A) to the pulley bolt. Measure the torque when the tensioner is turned counterclockwise. If the torque is less than the specified value, replace the auto-tensioner (see page 4-43).

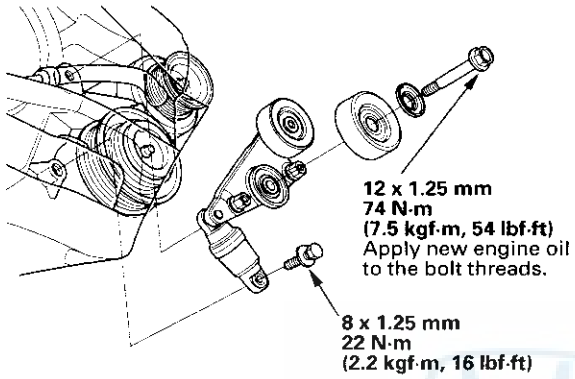
Auto-tensioner Spring Torque:
76.6 N·m (7.81 kgf·m, 56.5 lbf·ft)



Drive Belt Auto-tensioner Replacement

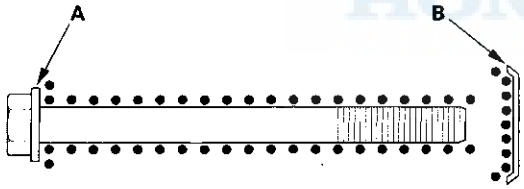
J35Z2 engine

1. Remove the drive belt (see page 4-39).
2. Remove the splash shield (see step 27 on page 5-5).
3. Remove the auto-tensioner.



4. Remove any oil and clean the bolt (A) and the washer (B). Using new engine oil, lubricate the areas shown.

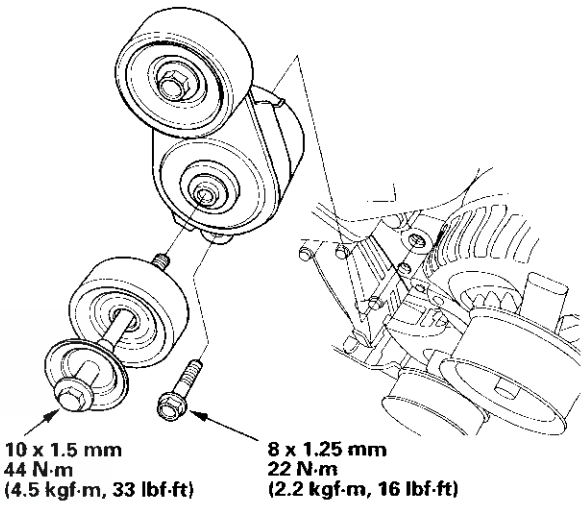
● : **Clean and add new engine oil**



5. Install the auto-tensioner in the reverse order of removal.
6. Do the auto tensioner air bleeding (see page 4-44).

J35Z3 engine

1. Remove the drive belt (see page 4-39).
2. Remove the splash shield (see step 27 on page 5-5).
3. Remove the auto-tensioner.

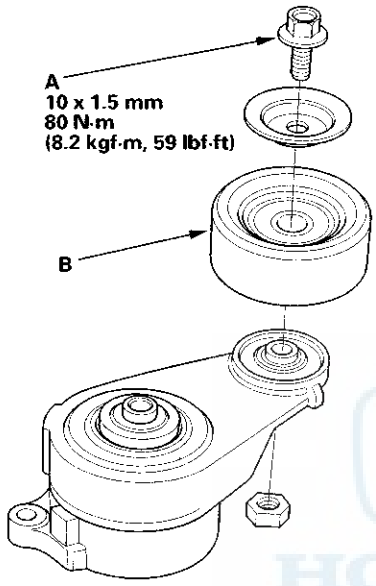


4. Install the auto-tensioner in the reverse order of removal.

Tensioner Pulley Replacement

J35Z3 engine

1. Remove the auto-tensioner (see page 4-43).
2. Remove the pulley bolt (A) (left-hand threads), and remove the tensioner pulley (B).

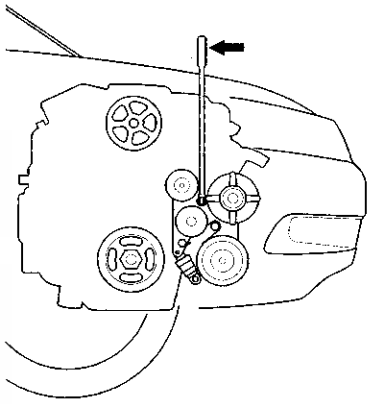


3. Install the tensioner pulley in the reverse order of removal.

Drive Belt Auto-tensioner Air Bleeding

J35Z2 engine

1. Remove the drive belt (see page 4-39).
2. Attach a socket wrench to the drive belt auto-tensioner from above the engine. Slowly, (at least 3 seconds) compress the auto-tensioner, in the direction shown, the full length of its stroke, then slowly (at least 3 seconds) move the auto-tensioner the opposite direction the full length of its stroke. Repeat this operation three times.

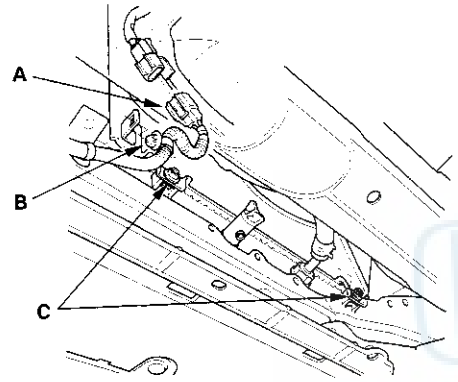


3. Install the drive belt (see page 4-39).

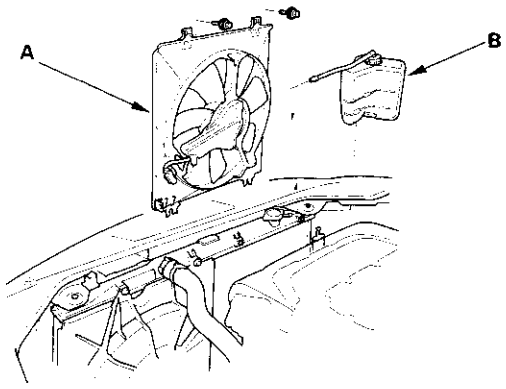
Alternator Removal and Installation

Removal

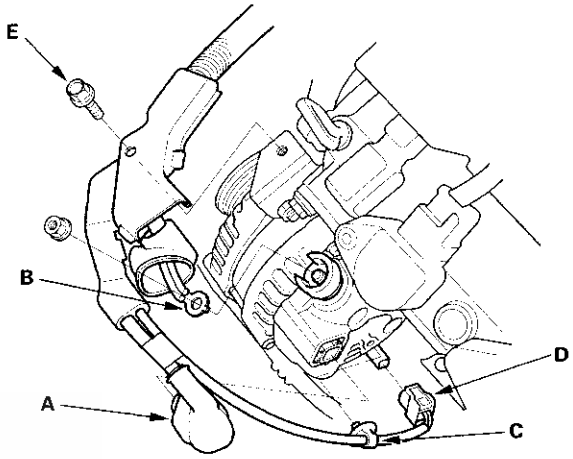
1. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
2. Raise the vehicle on the lift.
3. Remove the splash shield (see step 27 on page 5-5).
4. Disconnect the A/C condenser fan motor connector (A) and remove the harness clamp (B).



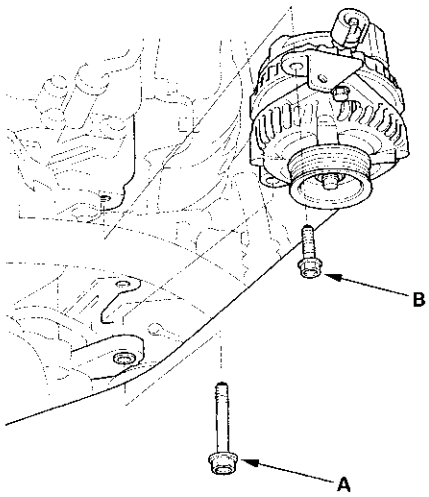
5. Loosen the A/C condenser fan shroud mounting bolts (C).
6. Lower the vehicle on the lift.
7. Remove the A/C condenser fan shroud assembly (A) and the coolant reservoir (B).



8. Remove the drive belt (see page 4-39).
9. Disconnect the alternator connector (A) and the positive alternator cable (B) from the alternator.



10. Remove the harness clamp (C) from the alternator and disconnect the A/C compressor clutch connector (D) from the A/C compressor.
11. Remove the bolt (E) securing the harness holder.
12. Remove the mounting bolt (A) and the alternator bracket mounting bolt (B), then remove the alternator.

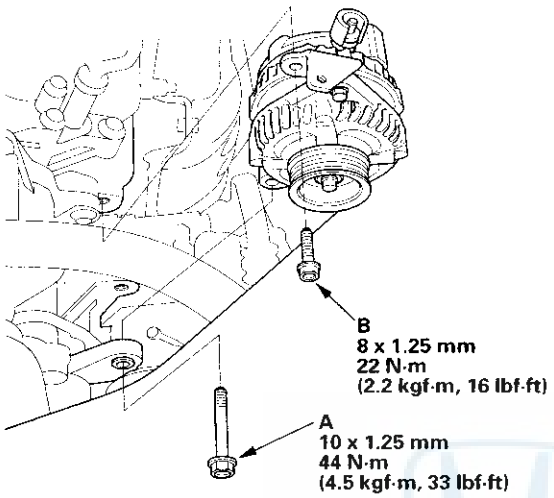


(cont'd)

Alternator Removal and Installation (cont'd)

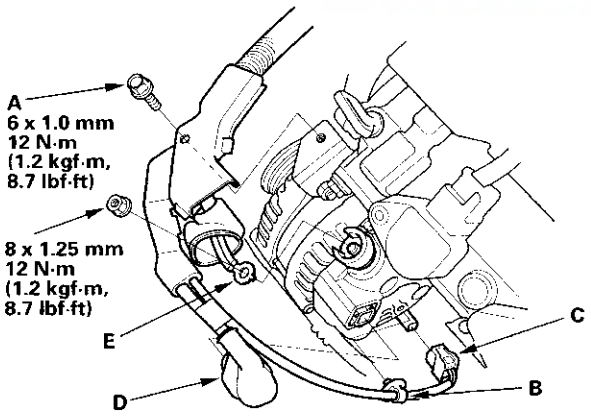
Installation

1. Install the alternator, then tighten the mounting bolt (A) and the alternator bracket mounting bolt (B).



2. Install the bolt (A) securing the harness holder.

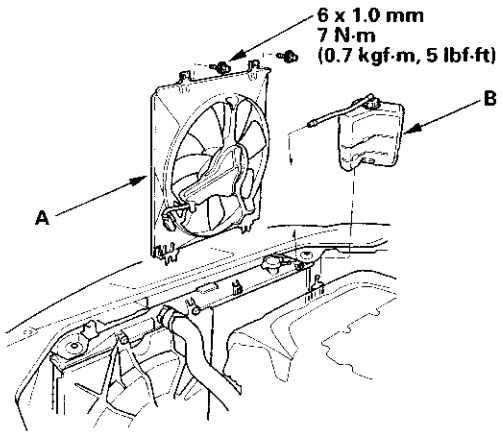
3. Install the harness clamp (B) to the alternator and connect the A/C compressor clutch connector (C) to the A/C compressor.



4. Connect the alternator connecter (D) and the positive alternator cable (E) to the alternator. Make sure the crimped side of the ring terminal faces away from the alternator when you connect it.

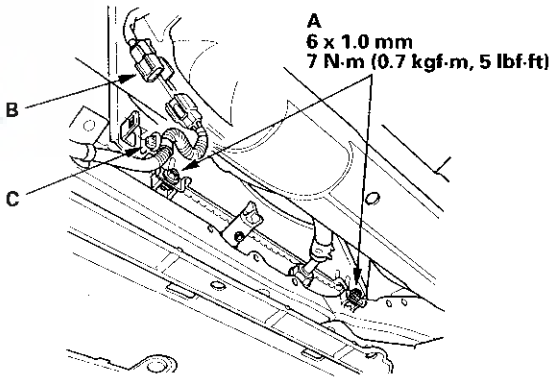
5. Install the drive belt (see page 4-39).

6. Install the A/C condenser fan shroud assembly (A) and the coolant reservoir (B).



7. Raise the vehicle on the lift.

8. Tighten the A/C compressor fan shroud mounting bolts (A).



9. Connect the A/C condenser fan motor connector (B) and install the harness clamp (C).

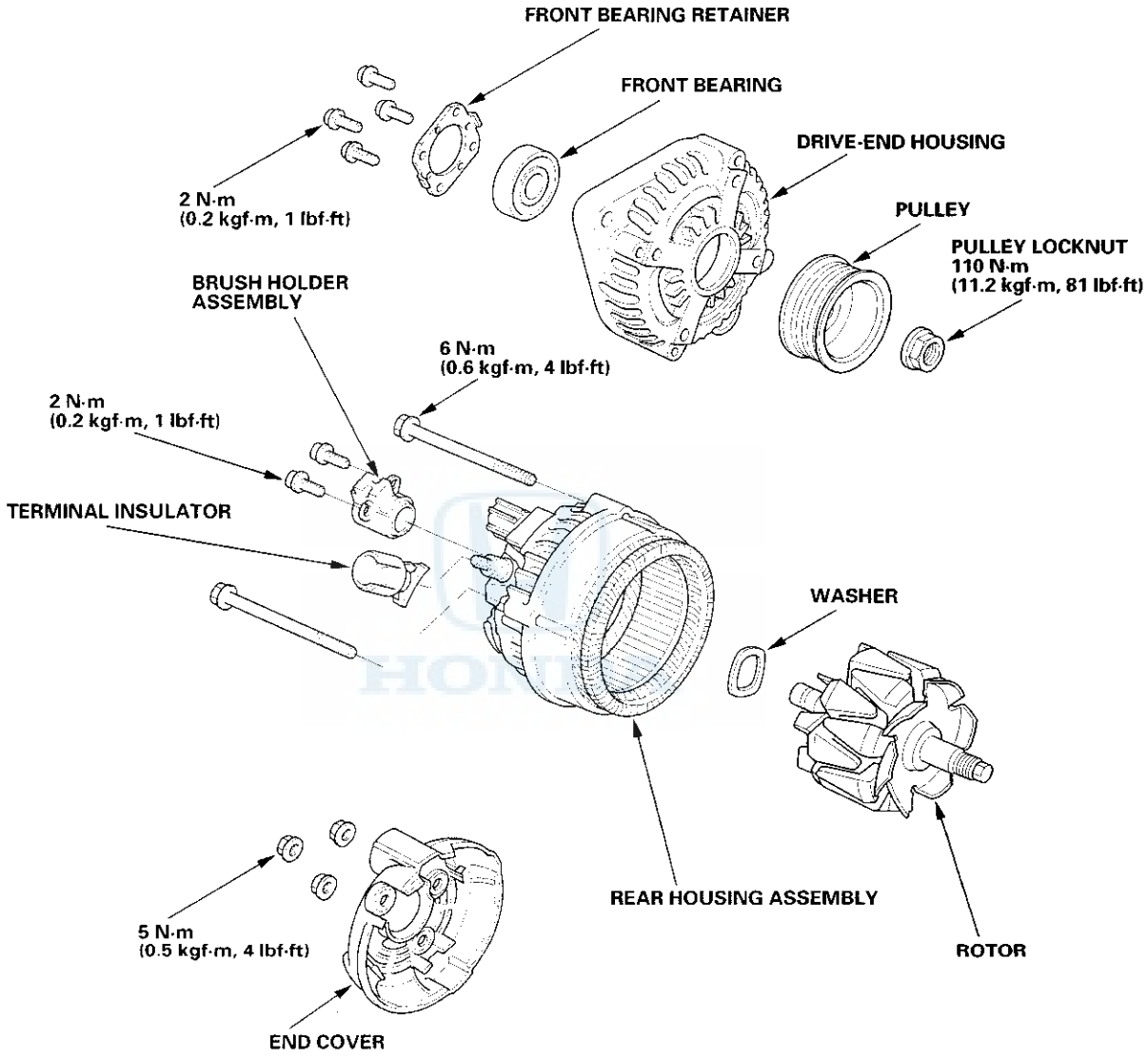
10. Install the splash shield (see step 48 on page 5-22).

11. Lower the vehicle on the lift.

12. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

Alternator Overhaul

Exploded View



(cont'd)

Alternator Overhaul (cont'd)

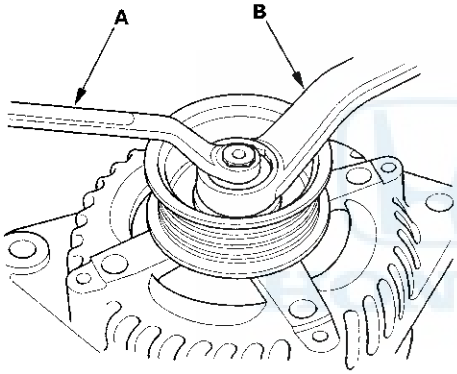
Special Tools Required
- Driver 07749-0010000
- Attachment, 42 x 47 mm 07746-0010300

NOTE: Refer to the exploded view as needed during this procedure.

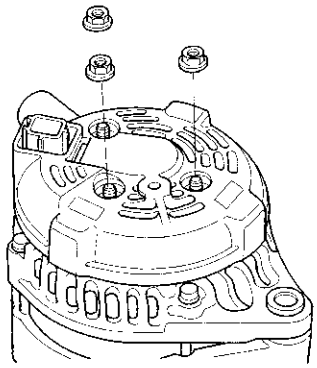
1. Test the alternator and regulator before you remove them (see page 4-36).

2. Remove the alternator (see page 4-45).

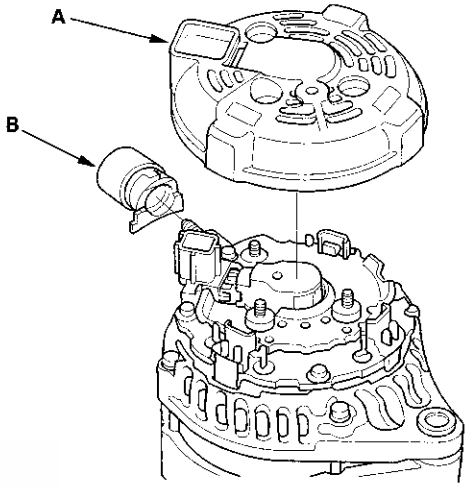
3. If the front bearing needs replacing, remove the pulley locknut with a 10 mm wrench (A) and a 22 mm wrench (B). If necessary, use an impact wrench.



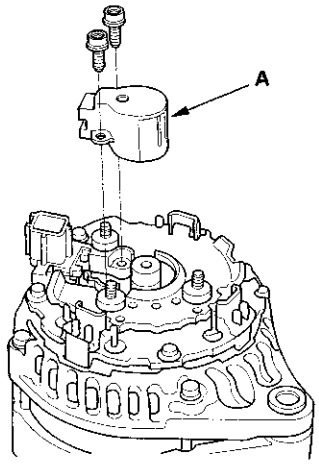
4. Remove the three flange nuts.



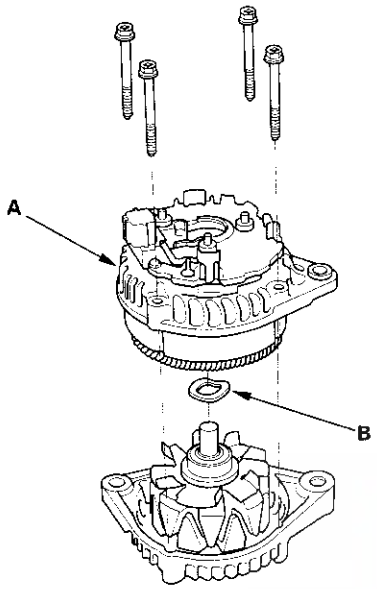
5. Remove the end cover (A) and the terminal insulator (B).



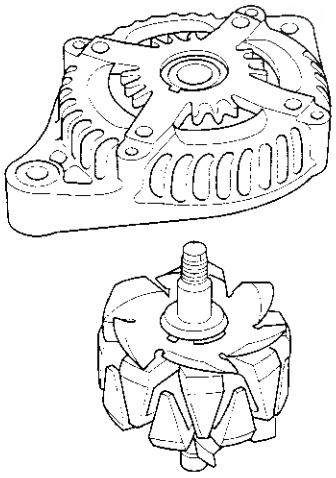
6. Remove the brush holder assembly (A).



7. Remove the four through bolts, then remove the rear housing assembly (A) and the washer (B).

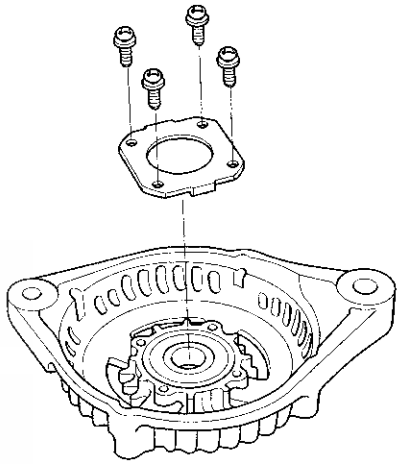


8. If you are not replacing the front bearing, go to step 13. Remove the rotor from the drive-end housing.

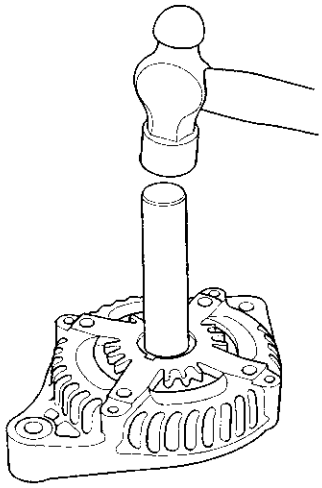


9. Inspect the rotor shaft for scoring, and inspect the bearing journal surface in the drive-end housing for seizure marks.
   - If the rotor is damaged, replace the rotor assembly.
   - If the rotor is OK, go to step 10.

10. Remove the front bearing retainer.



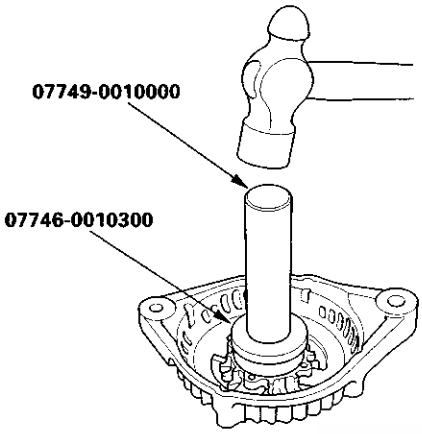
11. Drive out the front bearing with a brass drift and a hammer.



(cont'd)

Alternator Overhaul (cont'd)

12. Install a new front bearing in the drive-end housing with a hammer, the driver, and the attachment, 42 x 47 mm.

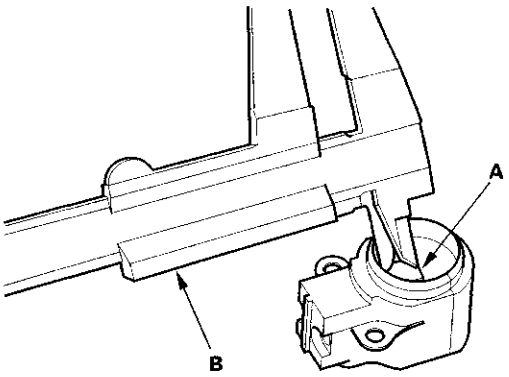


Alternator Brush Inspection

13. Measure the length of both brushes (A) with a vernier caliper (B).

- If either brush is shorter than the service limit, replace the brush holder assembly.
- If the brush length is OK, go to step 14.

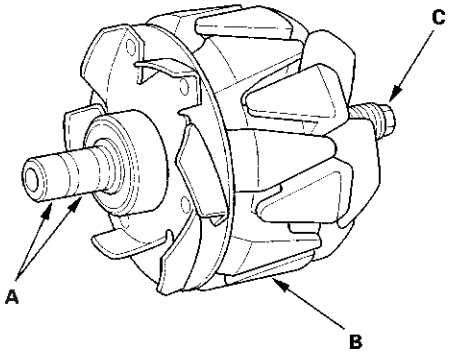
Alternator Brush Length
Standard (New): 10.5 mm (0.41 in.)
Service Limit: 1.5 mm (0.06 in.)



Rotor Slip Ring Test

14. Check for continuity between the slip rings (A).

- If there is continuity, go to step 15.
- If there is no continuity, replace the rotor assembly.



15. Check for continuity between each slip ring and the rotor (B) and the rotor shaft (C).

- If there is no continuity, then go to step 16.
- If there is continuity, replace the rotor assembly.

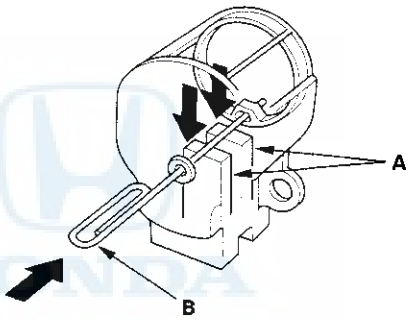
Alternator Reassembly

16. If you removed the pulley, put the rotor in the drive-end housing, then tighten its locknut to 110 N·m (11.2 kgf·m, 81.0 lbf·ft).

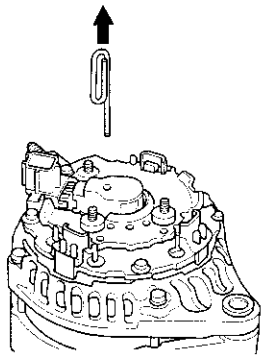
17. Remove any grease or any oil from the slip rings.

18. Put the rear housing assembly and the drive-end housing/rotor assembly together, tighten the four through bolts.

19. Push the brushes (A) in, then insert a pin or drill bit (B) (about 1.6 mm (0.06 in.) diameter) to hold them there.



20. Install the brush holder assembly, and pull out the pin or drill bit.



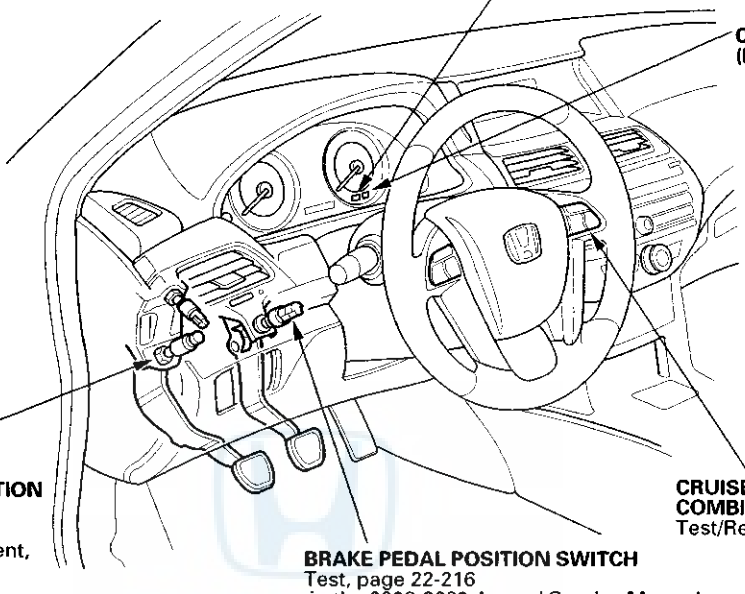
21. Install the end cover.

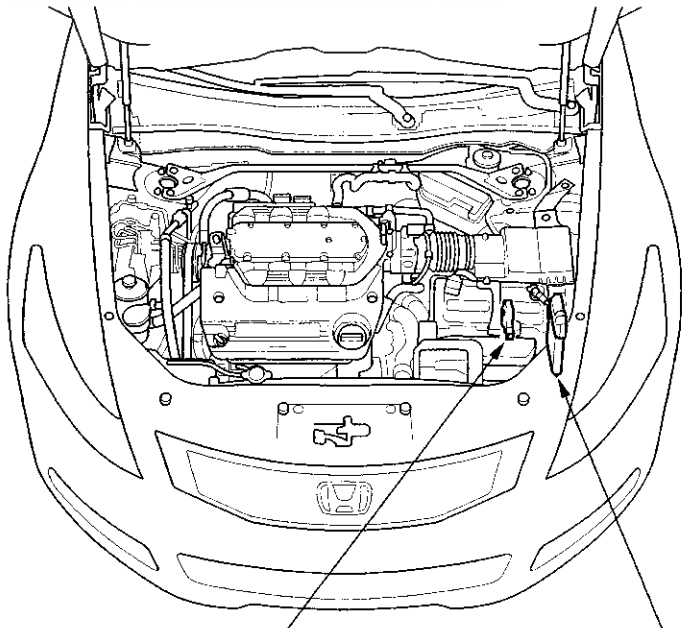
22. After assembling the alternator, turn the pulley by hand to make sure the rotor turns smoothly and without noise.

23. Install the alternator (see page 4-46) and the drive belt (see page 4-39).

Cruise Control

Component Location Index





Symptom Troubleshooting Index

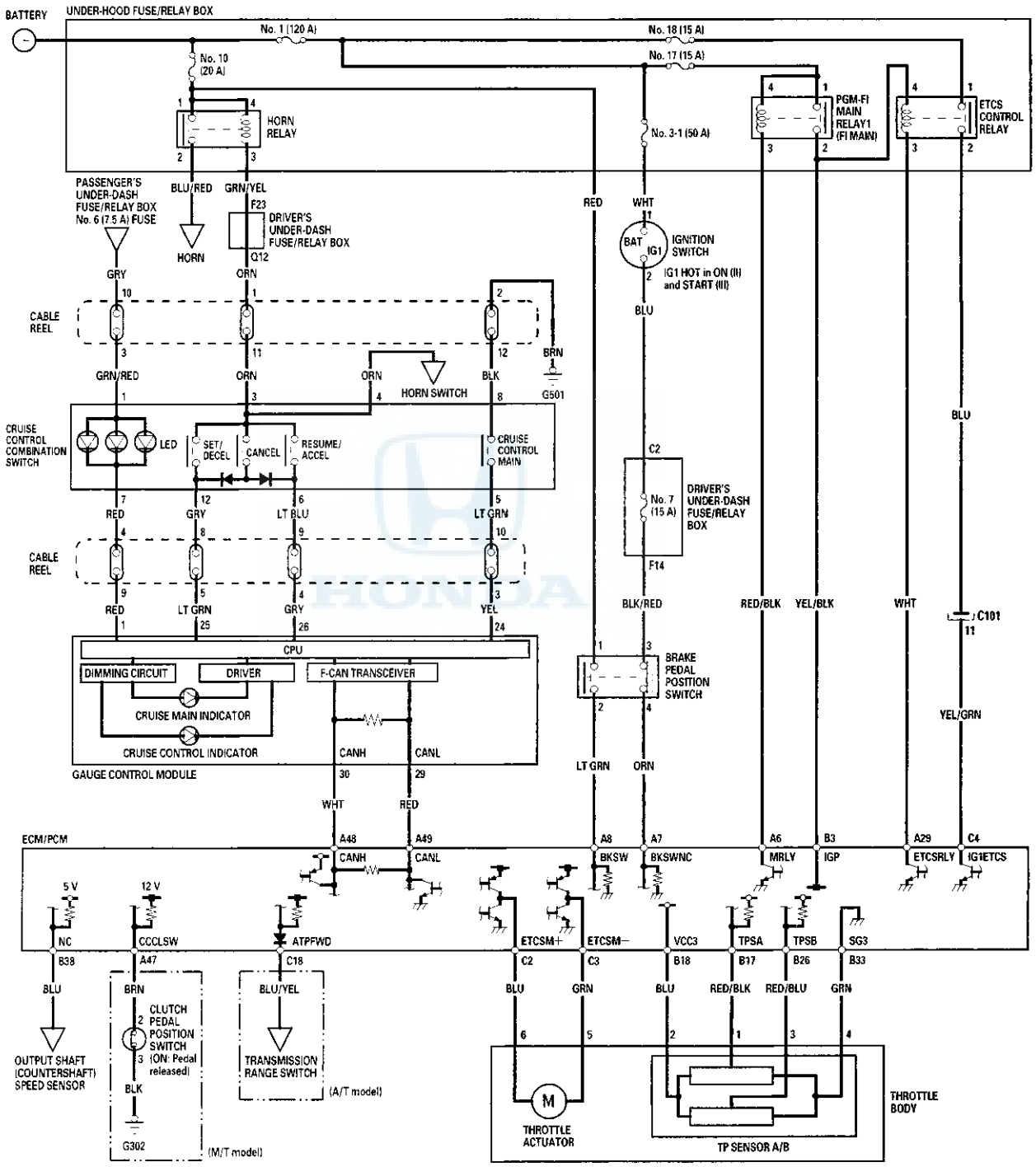
Symptom	Diagnostic procedure	Also check for
Cruise control cannot be set	1. Check for PGM-FI DTCs (see page 11-3). 2. Check the No. 10 (20 A) fuse in the under-hood fuse/relay box, and the No. 7 (15 A) fuse in the driver's under-dash fuse/relay box. 3. Do the cruise control combination switch test (see page 4-58). 4. Do the cruise control input test (see page 4-56).	Poor ground G101 (A/T model) or G302 (M/T model)
Cruise control can be set, but the cruise main indicator does not come on	1. Check for PGM-FI DTCs (see page 11-3). 2. Do the gauge control module self-diagnostic function procedure (see page 22-68). 3. Do the cruise control input test (see page 4-56).	Faulty gauge control module
Cruise control can be set, but the cruise control indicator does not come on	1. Check for PGM-FI DTCs (see page 11-3). 2. Do the gauge control module self-diagnostic function procedure (see page 22-68). 3. Do the cruise control input test (see page 4-56). Test the cruise control indicator signal input.	Faulty gauge control module
Vehicle does not accelerate accordingly when the resume/accel switch is pressed	1. Check for PGM-FI DTCs (see page 11-3). 2. Do the cruise control combination switch test (see page 4-58). 3. Do the cruise control input test (see page 4-56). Test the resume/accel switch signal input.	Open circuit, loose or disconnected terminals: LT BLU, GRY wire
Set speed does not cancel when the brake pedal is pressed	1. Check for PGM-FI DTCs (see page 11-3). 2. Do the brake pedal position switch test, refer to the 2008-2009 Accord Service Manual (see page 22-216). 3. Do the cruise control input test (see page 4-56). Test the brake pedal position switch signal input.	• Short to power on the ORN wire • Faulty brake pedal position switch
Set speed does not cancel (engine rpm stays high) when the clutch pedal is pressed (M/T model)	1. Check for PGM-FI DTCs (see page 11-3). 2. Do the clutch pedal position switch test (see page 4-58). 3. Do the cruise control input test (see page 4-56). Test the clutch pedal position switch signal input.	Short to ground on the BRN wire
Set speed does not cancel when the cruise control main switch is pressed	1. Check for PGM-FI DTCs (see page 11-3). 2. Do the cruise control combination switch test (see page 4-58). 3. Do the cruise control input test (see page 4-56). Test the cruise control main switch signal input.	Short to ground on the LT GRN, YEL wire

(cont'd)

Symptom Troubleshooting Index (cont'd)

Symptom	Diagnostic procedure	Also check for
Set speed does not cancel when the cancel switch is pressed	1. Check for PGM-FI DTCs (see page 11-3). 2. Do the cruise control combination switch test (see page 4-58). 3. Do the cruise control input test (see page 4-56). Test the cancel switch signal input.	Open circuit, loose or disconnected terminals: GRY, LT GRN or LT BLU, GRY wire
Set speed does not resume when the resume/accel switch is pressed (with the cruise control main switch turned on, and set speed temporarily canceled by pressing the brake pedal)	1. Check for PGM-FI DTCs (see page 11-3). 2. Check the brake pedal position switch adjustment (see page 19-3). 3. Do the cruise control combination switch test (see page 4-58). 4. Do the cruise control input test (see page 4-56). Test the resume/accel switch signal input. Test the brake pedal position switch signal input.	• Open circuit, loose or disconnected terminals: LT BLU, GRY wire • Faulty brake pedal position switch
Set speed does not resume when the resume/accel switch is pressed (with the cruise control main switch turned on, and set speed temporarily canceled by pressing the clutch pedal) (M/T model)	1. Check for PGM-FI DTCs (see page 11-3). 2. Check the clutch pedal position switch adjustment (see page 12-10). 3. Do the cruise control combination switch test (see page 4-58). 4. Do the cruise control input test (see page 4-56). Test the resume/accel switch signal input. Test the clutch pedal position switch signal input.	• Open circuit, loose or disconnected terminals: LT BLU, GRY wire • Faulty clutch pedal position switch
With the ignition switch in ON (II), and the lighting switch turned on, the cruise control combination switch illumination does not come on	Check the cruise control combination switch (see page 4-58).	

Circuit Diagram



Cruise Control Input Test

NOTE: Always make sure that you have the latest Honda Diagnostic System (HDS) software.

1. Connect the HDS to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
4. Go to PGM-FI, and check for DTCs (see page 11-3).
5. Do the following tests while monitoring parameters in the PGM-FI DATA LIST with the HDS.

   NOTE: Intermittent failures are often caused by loose circuit connections. While monitoring cruise control inputs, flex the circuit wires, and note if any of the test results change.

Signal to be tested	Test condition	Parameter: Desired result	Possible cause if result is not obtained
Brake pedal position switch signal	Brake pedal pressed, then released	CRUISE BRAKE SW should indicate OFF when the brake pedal is pressed and ON when the brake pedal is released.	• Faulty brake pedal position switch • Blown No. 7 (15 A) fuse in the driver's under-dash fuse/relay box • An open in the wire between the ECM/PCM and the brake pedal position switch • A wire shorted to ground between the ECM/PCM and the brake pedal position switch
Clutch pedal position switch signal (M/T model)	Clutch pedal pressed, then released	SHIFT/CLUTCH SW should indicate ON when the clutch pedal is pressed and OFF when the clutch pedal is released.	• Faulty clutch pedal position switch • An open in the wire between the ECM and the clutch pedal position switch • A wire shorted to ground between the ECM and the clutch pedal position switch • Poor ground G302
Transmission range switch signal (A/T model)	Shift lever in D and D3	SHIFT/CLUTCH SW should indicate ON in P, R, N, 2, and 1 and OFF in D and D3.	• Faulty transmission range switch • An open in the wire between the PCM and the transmission range switch • A wire shorted to ground between the PCM and the transmission range switch • Poor ground G101
Cruise control main switch signal	Cruise control main switch pressed and released	CRUISE MASTER (MAIN) SW should indicate ON when the cruise control main switch is pressed and OFF when the cruise control main switch is released.	• Faulty cruise control combination switch • An open in the wire between the gauge control module and the cruise control combination switch • A wire shorted to ground between the gauge control module and the cruise control combination switch • An open in the wire between the cruise control combination switch and the ground
Set switch signal	Set/decel switch pressed and released	CRUISE SET SW should indicate ON when the set/decel switch is pressed and OFF when the set/decel switch is released.	• Faulty cruise control combination switch • An open in the wire between the gauge control module and the cruise control combination switch • A wire shorted to ground between the gauge control module and the cruise control combination switch

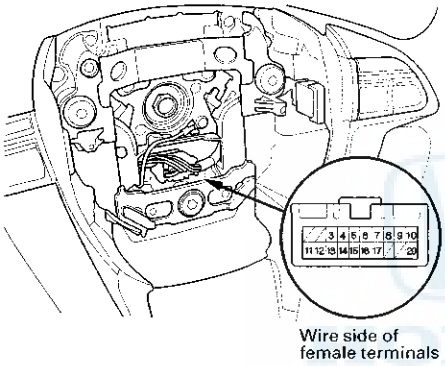
Signal to be tested	Test condition	Parameter: Desired result	Possible cause if result is not obtained
Resume switch signal	Resume/accel switch pressed and released	CRUISE RESUME SW should indicate ON when the resume/accel switch is pressed and OFF when the resume/accel switch is released.	• Faulty cruise control combination switch • An open in the wire between the gauge control module and the cruise control combination switch • A wire shorted to ground between the gauge control module and the cruise control combination switch
Cancel switch signal	Cancel switch pressed and released	CRUISE CANCEL SW should indicate ON when the cancel switch is pressed and OFF when the cancel switch is released.	• Faulty cruise control combination switch • An open in the wire between the gauge control module and the cruise control combination switch • A wire shorted to ground between the gauge control module and the cruise control combination switch
Cruise control indicator signal	Start the engine, press the cruise control main switch on and drive the vehicle above 25 mph (40 km/h) with the cruise control set and cancel the cruise control	CRUISE INDICATOR should indicate ON when the cruise control is set and OFF when the cruise control is cancelled.	Faulty gauge control module

HONDA

Cruise Control Combination Switch Test/Replacement

SRS components are located in this area. Review the SRS component locations, refer to the 2008-2009 Accord Service Manual (see page 24-19) and precautions and procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23) before doing repairs or service.

1. Remove the driver's airbag, refer to the 2008-2009 Accord Service Manual (see page 24-205).
2. Disconnect the cable reel sub harness 20P connector.



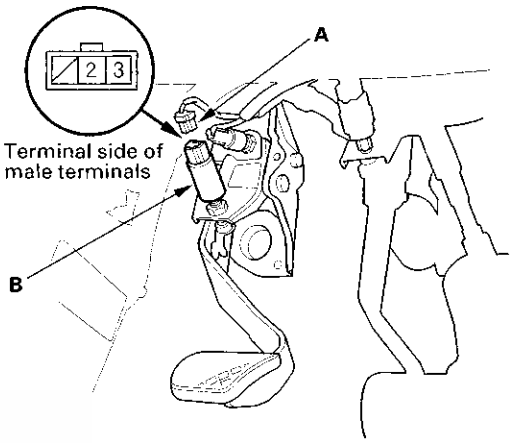
3. Check for continuity between the terminals in each cruise control combination switch position according to the table.
   - If there is continuity, and it matches the table, but the cruise control combination switch failure occurred on the cruise control input test, check and repair the wire harness on the switch circuit.
   - If there is no continuity in one or both positions, replace the cruise control combination switch, refer to the 2008-2009 Accord Service Manual (see page 17-25).

Terminal / Position	3		4	8	9	10		11	12
Cruise control main (ON)						○			○
Cruise control main (OFF)									
Set/decel (PRESSED)				○					○
Resume/accel (PRESSED)					○				○
Cancel (PRESSED)				○		⊣			○
						⊣			
Light (ON)	○		⊗						

Clutch Pedal Position Switch Test

M/T model

1. Disconnect the clutch pedal position switch 3P connector (A).

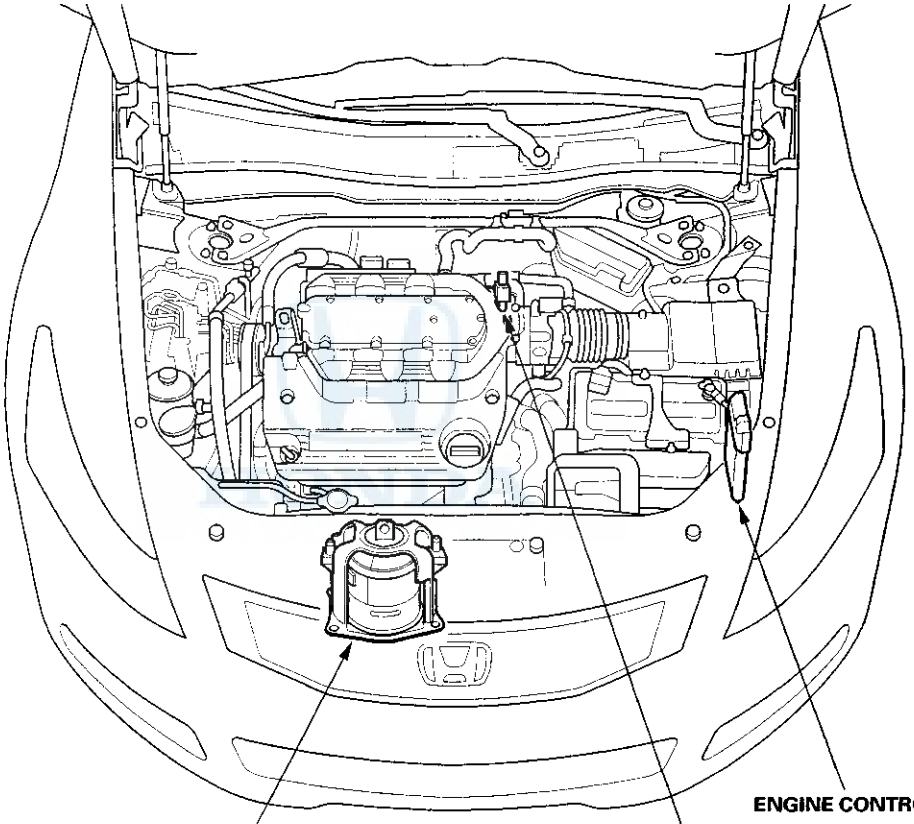


2. Remove the clutch pedal position switch (B).
3. Check for continuity between the terminals according to the table.
   - If the continuity is not as specified, replace the clutch pedal position switch (see page 12-10).
   - If OK, install the clutch pedal position switch and adjust the pedal height (see page 12-10).

Terminal / Position	1	2	3
Clutch Pedal Position Switch (PRESSED)		○	○
Clutch Pedal Position Switch (RELEASED)			

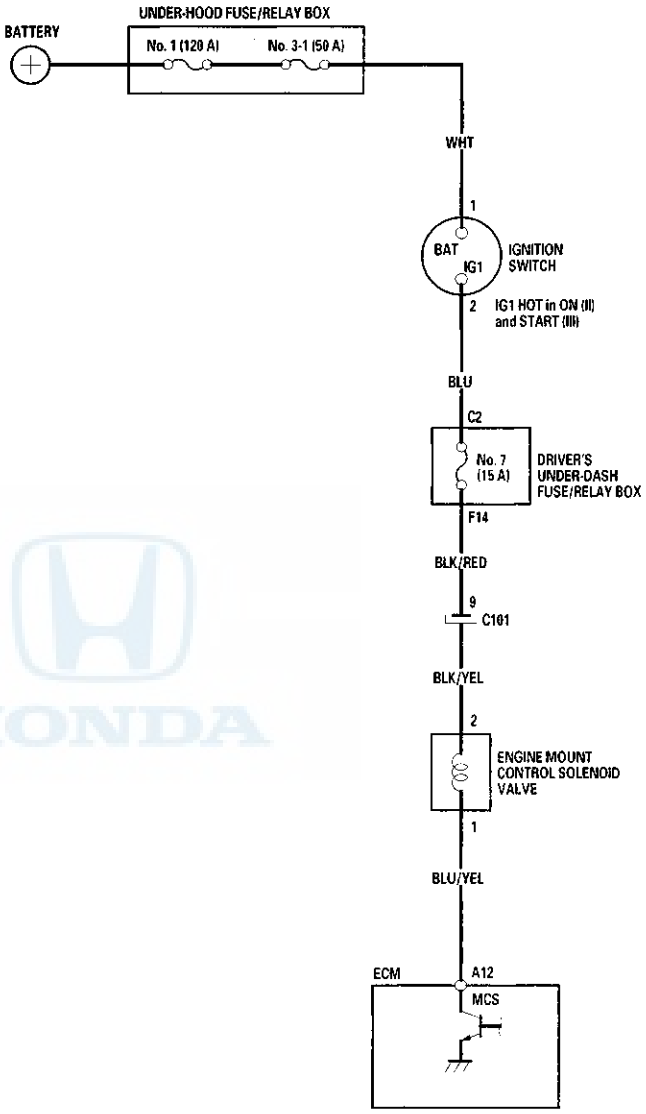
Engine Mount Control System

Component Location Index



Engine Mount Control System

Circuit Diagram



HONDA

Troubleshooting

Special Tools Required
Vacuum pump/gauge, 0—30 in.Hg
Snap-on YA4000A or equivalent, commercially available

NOTE: Check the vacuum hoses and lines for damage and proper connections before troubleshooting.

Follow this procedure if the engine vibrates excessively when idling.

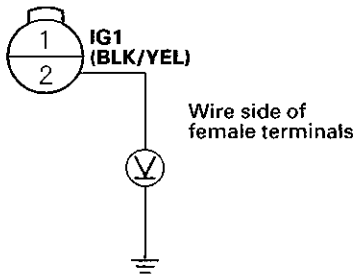
1. Start the engine, and let it idle.
2. Raise the engine speed from idling to 2,000 rpm.
3. Check the MOUNT CTRL SOL in the PGM-FI DATA LIST with the Honda Diagnostic System (HDS).

   Is ON indicated at idling and OFF indicated at 2,000 rpm?

   YES—Go to step 4.

   NO—Update the engine control module (ECM) if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7), then recheck. If the engine mount control system works properly, and the ECM was updated, the troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282).■
4. Turn the ignition switch to LOCK (0).
5. Disconnect the engine mount control solenoid valve 2P connector from the engine mount control solenoid valve.
6. Turn the ignition switch to ON (II).
7. Measure the voltage between engine mount control solenoid valve 2P connector terminal No. 2 and body ground.

ENGINE MOUNT CONTROL SOLENOID VALVE 2P CONNECTOR



Is there battery voltage?

YES—Go to step 8.

NO—Repair open in the wire between engine mount control solenoid valve 2P connector terminal No. 2 and No. 7 (15 A) fuse in the driver's under-dash fuse/relay box.■

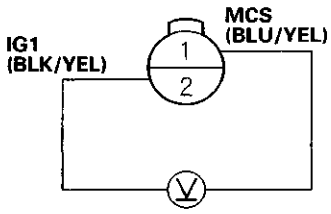
8. Start the engine, and let it idle.

(cont'd)

Troubleshooting (cont'd)

9. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No. 2, with the engine at idle.

ENGINE MOUNT CONTROL SOLENOID VALVE 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

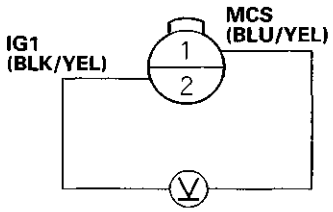
YES—Go to step 10.

NO—Repair open in the wire between ECM connector terminal A12 and the engine mount control solenoid valve 2P connector terminal No. 1. If the wire is OK, update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7), and recheck. If the engine mount control system works properly, and the ECM was updated, the troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282).■

10. Raise the engine speed above 1,000 rpm.

11. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No. 2.

ENGINE MOUNT CONTROL SOLENOID VALVE 2P CONNECTOR



Wire side of female terminals

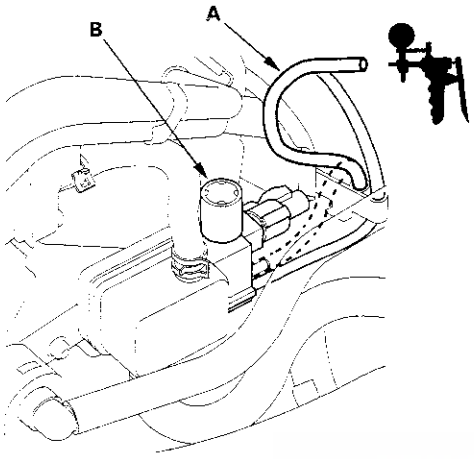
Is there battery voltage?

YES—Repair short to body ground in the wire between ECM connector terminal A12 and the engine mount control solenoid valve. If the wire is OK, update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7), and recheck. If the engine mount control system works properly, and the ECM was updated, the troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282).■

NO—Go to step 12.

12. Turn the ignition switch to LOCK (0).

13. Disconnect the vacuum hose (A) from the engine mount control solenoid valve (B), and connect a vacuum pump/gauge, 0—30 in.Hg, to the hose. Apply about 20 in.Hg of vacuum, and wait for 20 seconds.



Does the engine mount hold vacuum?

YES—Go to step 14.

NO—Either the vacuum hose or one of the engine mount has a vacuum leak. Repair as needed. ■

14. Start the engine and let it idle.

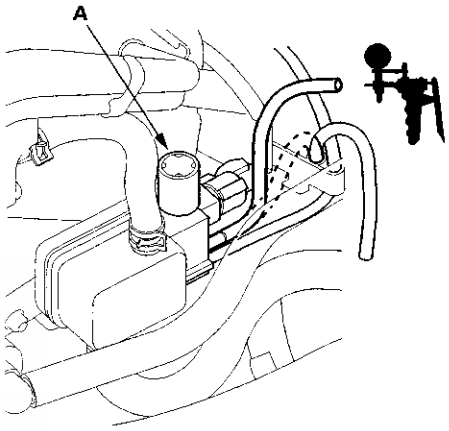
15. Release the vacuum, then apply vacuum again.

Is there a noticeable change in idle smoothness with and without vacuum applied?

YES—Go to step 16.

NO—Replace the front engine mount. ■

16. Connect a vacuum pump/gauge, 0—30 in.Hg, to the engine mount control solenoid valve (A).



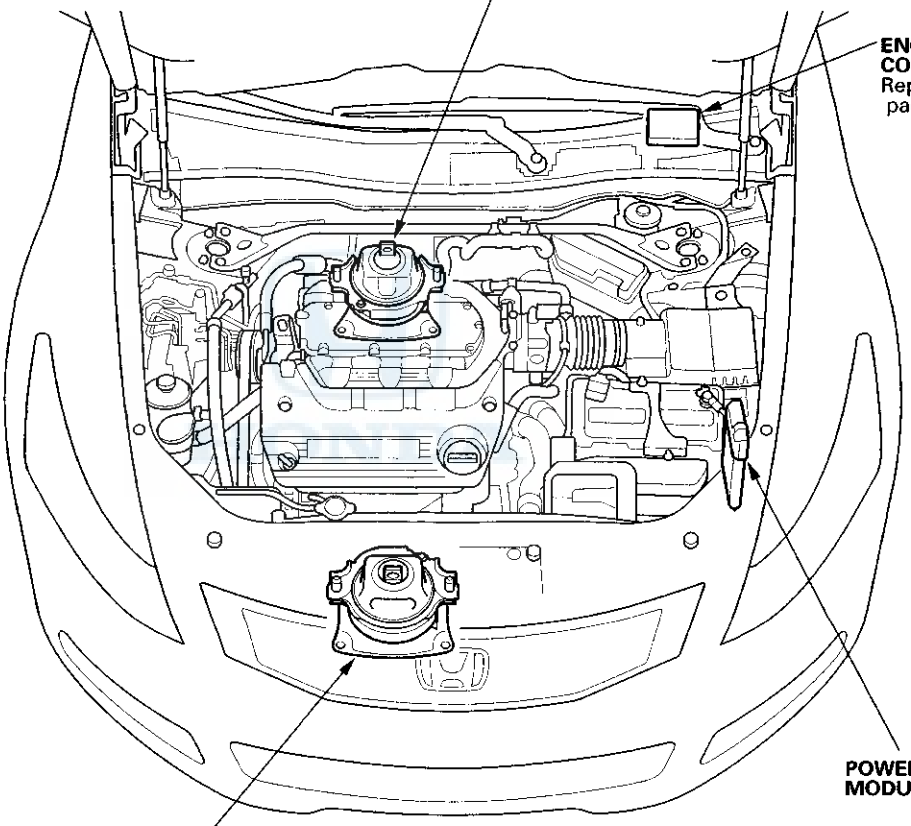
Is there manifold vacuum at idle, and a decrease in manifold vacuum when you raise the engine speed above 1,000 rpm?

YES—The system is OK. ■

NO—Replace the engine mount control solenoid valve. ■

Active Control Engine Mount (ACM) System

Component Location Index



General Troubleshooting Information

Intermittent Failures

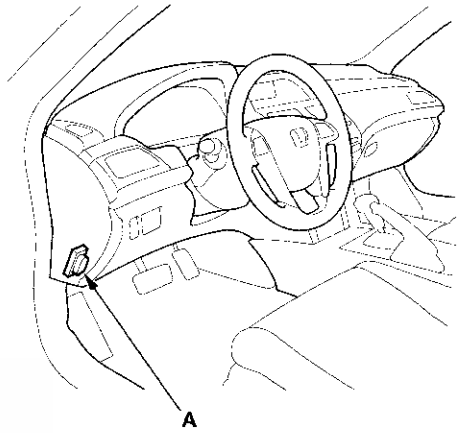
The term intermittent failure means a system may have had a failure, but it checks OK now. Check for poor connections or loose terminals at all connectors related to the circuit that you are troubleshooting.

Opens and Shorts

Open and short are common electrical terms. An open is a break in a wire or at a connection. A short is an accidental connection of a wire to ground or to another wire. In simple electronics, this usually means something won't work at all. With complex electronics (such as PCMs) this can sometimes mean something works, but not the way it's supposed to.

How to Use the HDS (Honda Diagnostic System)

1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).

3. Make sure the HDS communicates with the vehicle and the powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).

4. Check the diagnostic trouble code (DTC) and note it. Also check the freeze data and/or on-board snapshot data, and download any data found. Then refer to the indicated DTC's troubleshooting, and begin the appropriate troubleshooting procedure.

   NOTE:
   - Freeze data indicates the engine conditions when the first malfunction, was detected.
   - The HDS can read the DTC, freeze data, on-board snapshot, and current data about the active control engine mount (ACM) system.
   - For specific operations, refer to the user's manual that came with the HDS.

(cont'd)

General Troubleshooting Information (cont'd)

HDS Clear Command

The PCM stores DTCs about the ACM system even if there is no electrical power such as when the battery negative terminal or No. 19 BACK UP FI ECU (7.5 A) fuse are disconnected. Stored data based on failed parts should be cleared by using the CLEAR COMMAND of the HDS, if parts are replaced.

The HDS has two kinds of clear commands to meet this purpose. They are DTC clear, and ACM reset. The DTC clear command erases all stored DTC codes, freeze data, on-board snapshot, and readiness codes. This must be done with the HDS after reproducing the DTC during troubleshooting.
The PCM reset command erases all stored DTC codes, freeze data, on-board snapshot, readiness codes, and all specific data about the ACM system.

DTC Clear

1. Clear the DTC with the HDS while the engine is stopped.
2. Turn the ignition switch to LOCK (0).
3. Turn the ignition switch to ON (II), and wait 30 seconds.
4. Turn the ignition switch to LOCK (0), and disconnect the HDS from the DLC.

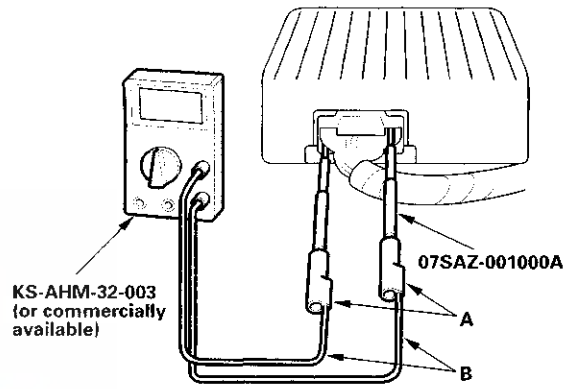
ACM Reset

1. Reset the ACM with the HDS while the engine is stopped.
2. Turn the ignition switch to LOCK (0).
3. Turn the ignition switch to ON (II), and wait 30 seconds.
4. Turn the ignition switch to LOCK (0), and disconnect the HDS from the DLC.

How to Troubleshoot Circuits at the Engine Mount Control Unit

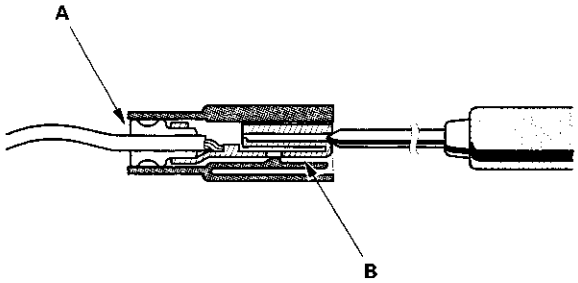
Special Tools Required
- Backprobe set 07SAZ-001000A (2)
- Digital multimeter KS-AHM-32-003 (1) or a commercially available digital multimeter

1. Connect the backprobe adapters (A) to the stacking patch cords (B), and connect the cords to a digital multimeter.



2. Using the wire insulation as a guide for the contoured tip of the backprobe adapter, gently slide the tip into the connector from the wire side until it touches the end of the wire terminal.
3. If you cannot get to the wire side of the connector or the wire side is sealed (A), disconnect the connector, and probe the terminals (B) from the terminal side. Do not force the probe into the connector.

NOTICE
Do not puncture the insulation on a wire. Punctures can cause poor or intermittent electrical connections.



DTC Troubleshooting Index

DTC	Detection Item	Note
P0A14	Front Engine Mount Actuator Circuit Malfunction	(see page 4-70)
P0A15	Front Engine Mount Actuator Control Circuit Low Current	(see page 4-72)
P0AB6	Rear Engine Mount Actuator Circuit Malfunction	(see page 4-70)
P0AB7	Rear Engine Mount Actuator Control Circuit Low Current	(see page 4-72)
P15AB	Engine Mount Control Unit Power Source Circuit Low Voltage	(see page 4-76)
P15AE	Cylinder Pause Signal 1 Malfunction	(see page 4-78)
P15B0	CKP Sensor Signal Malfunction	(see page 4-81)
P15BD	Cylinder Pause Signal 2 Malfunction	(see page 4-85)
P15BE	CMP Sensor Signal Malfunction	(see page 4-88)
P15BF	CMP Sensor Signal Intermittent Interruption	(see page 4-88)
P15C0	CKP Sensor Signal Intermittent Interruption	(see page 4-81)
P16C4	Engine Mount Actuator Control Power Circuit Stuck OFF	(see page 4-91)
P16C5	Engine Mount Actuator Control Power Circuit Stuck ON	(see page 4-94)
P16C6	Engine Mount Actuator High Voltage During Function Test	(see page 4-96)
U0029	F-CAN Malfunction (BUS-OFF)	(see page 4-97)
U0100	F-CAN Malfunction (Engine Mount Control Unit-Powertrain Control Module (PCM))	(see page 4-97)

HONDA

Active Control Engine Mount (ACM) System

System Description

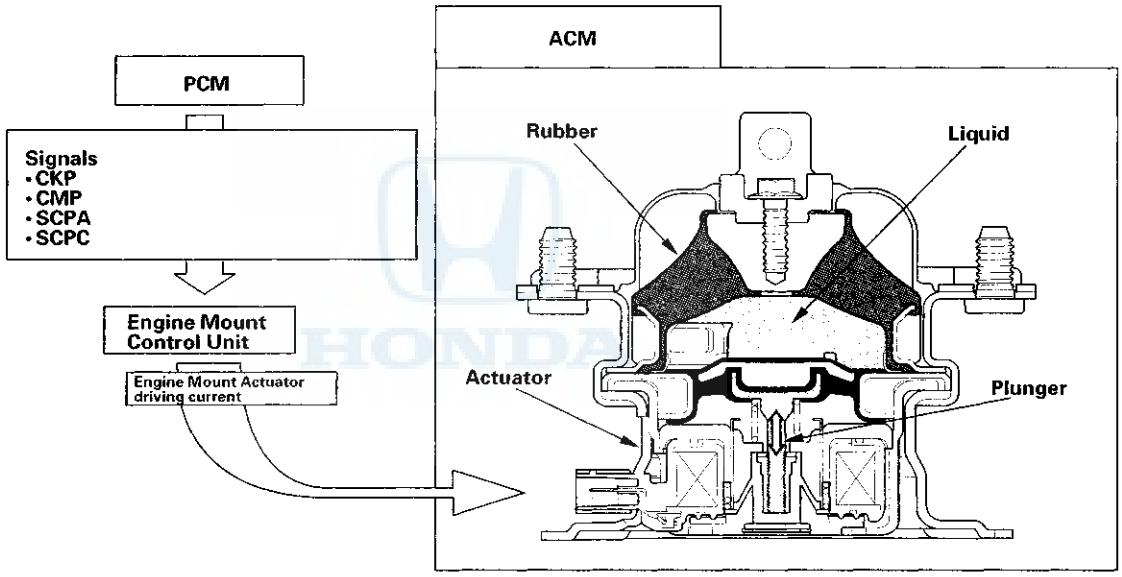
Overview

The active control engine mount (ACM) system reduces the amount of engine vibration that creates engine noise which is transmitted to the passenger's compartment.

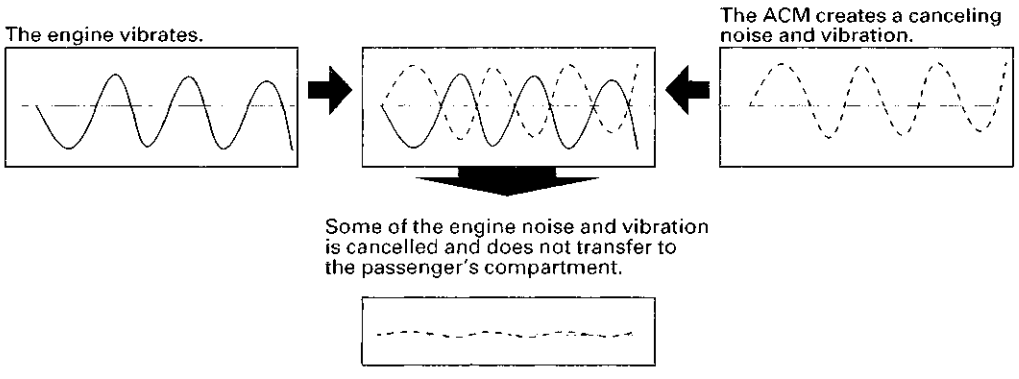
The ACM system consists of the engine mount actuators, the engine mount control unit and the powertrain control module (PCM).

The PCM sends the crankshaft position (CKP) sensor information and camshaft position (CMP) sensor information to the engine mount control unit. The engine mount control unit uses this information to predict the amount of vibration created by the engine.

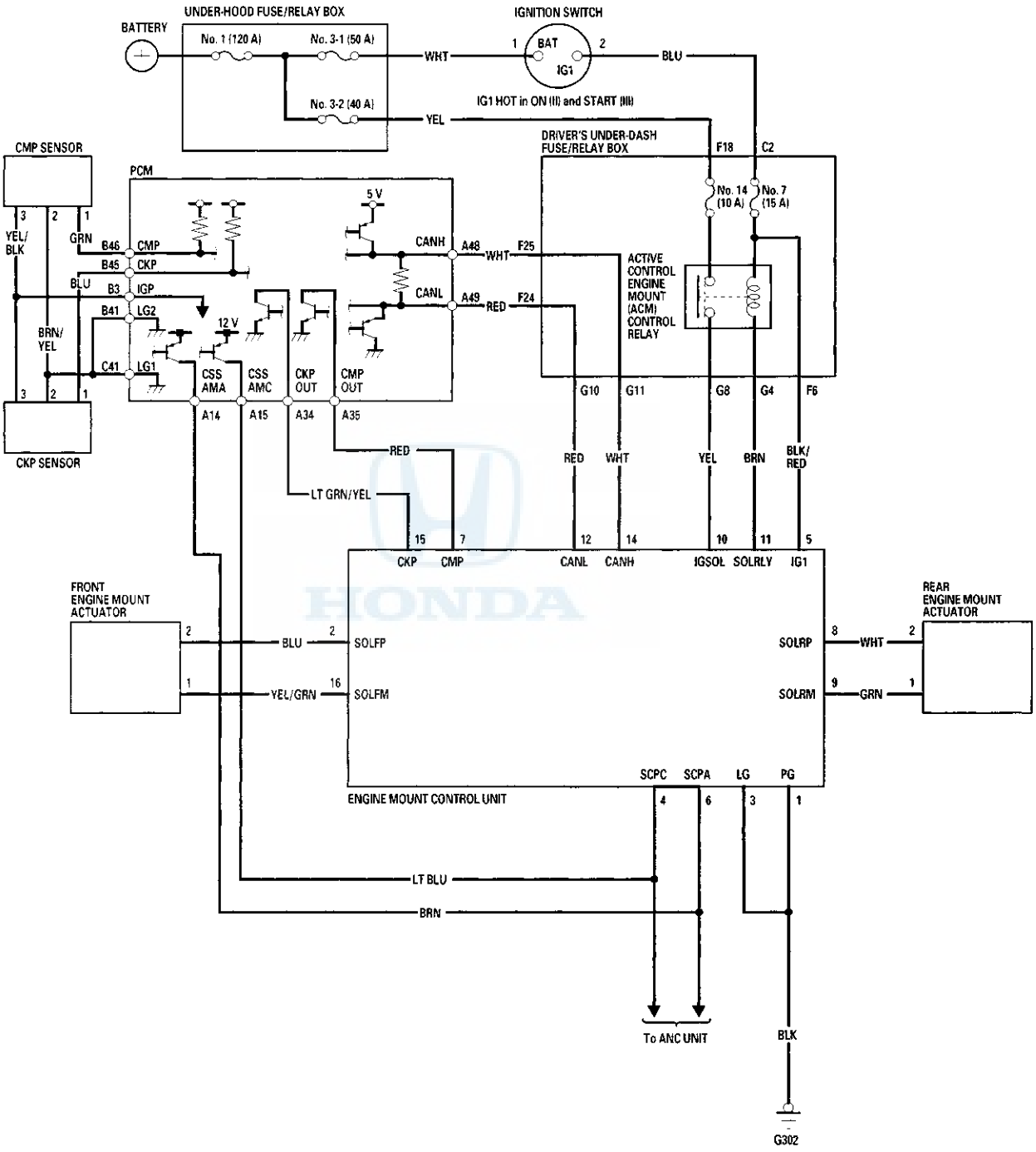
The ACM system then uses the engine mount actuators to generate a canceling vibration that operates like the active noise control (ANC) and reduces the amount of noise and vibration in the passenger's compartment.



The ACM generates a vibration with the actuator and the plunger.



Circuit Diagram



DTC Troubleshooting

DTC P0A14: Front Engine Mount Actuator Circuit Malfunction

DTC P0AB6: Rear Engine Mount Actuator Circuit Malfunction

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).
- Information marked with an asterisk (*) applies to the rear engine mount actuator.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle 20 seconds.
4. Check for Temporary DTCs or DTCs with the HDS.

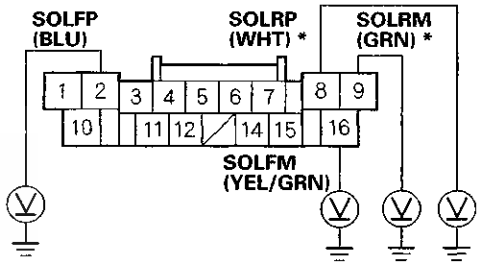
   Is DTC P0A14 and/or P0AB6 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the engine mount actuator.■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the front engine mount actuator (rear engine mount actuator)* 2P connector.
7. Disconnect engine mount control unit 16P connector.
8. Turn the ignition switch to ON (II).
9. Measure the voltage between body ground and the appropriate engine mount control unit 16P connector terminal (see table).

DTC	ENGINE MOUNT ACTUATOR TERMINAL	ENGINE MOUNT CONTROL UNIT TERMINAL	WIRE COLOR
P0AB6	Rear side No. 1	No. 9	GRN
P0AB6	Rear side No. 2	No. 8	WHT
P0A14	Front side No. 1	No. 16	YEL/GRN
P0A14	Front side No. 2	No. 2	BLU

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there battery voltage?

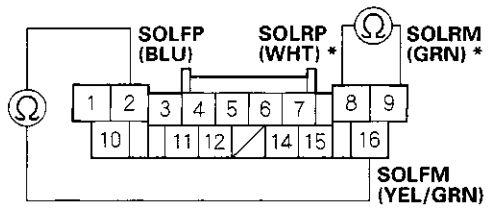
YES—Repair short to power in the wire between the engine mount control unit and the engine mount actuator, then go to step 13.

NO—Go to step 10.

10. Turn the ignition switch to LOCK (0).

11. Check for continuity between engine mount control unit 16P connector terminals No. 2 (No. 8)* and No. 16 (No. 9)*.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

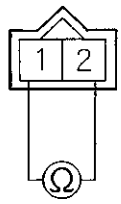
Is there continuity?

YES—Repair short in the wire(s) between engine mount control unit 16P connector terminal No. 2 and No. 16 (No. 8 and No. 9)*, then go to step 14.

NO—Go to step 12.

12. At the engine mount actuator side, measure the resistance between front engine mount actuator (rear engine mount actuator)* 2P connector terminals No. 1 and No. 2.

ENGINE MOUNT ACTUATOR 2P CONNECTOR



Terminal side of male terminals

Is there about 0.48—0.54 Ω ?

YES—Check for poor connections or loose terminals at the engine mount control unit and the engine mount actuator. If it is OK, replace the engine mount control unit (see page 4-100), then go to step 14.

NO—Replace the front engine mount (see page 5-26), or rear engine mount (see page 5-28), then go to step 14.

13. Turn the ignition switch to LOCK (0).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

(cont'd)

DTC Troubleshooting (cont'd)

16. Clear the DTC with the HDS.
17. Start the engine, and let it idle 20 seconds.
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0A14 and/or P0AB6 indicated?*

    YES—Check for poor connections or loose terminals at the engine mount control unit and the engine mount actuator, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0A15: Front Engine Mount Actuator Control Circuit Low Current

DTC P0AB7: Rear Engine Mount Actuator Control Circuit Low Current

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).
- Information marked with an asterisk (*) applies to the rear engine mount actuator.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle 20 seconds.
4. Check for Temporary DTCs or DTCs with the HDS.

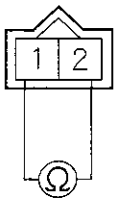
   Is DTC P0A15 and/or P0AB7 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the engine mount actuator, the engine mount control unit, and body ground (G302). ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the front engine mount actuator (rear engine mount actuator)* 2P connector.

7. At the engine mount actuator side, measure the resistance between front engine mount actuator (rear engine mount actuator)' 2P connector terminals No. 1 and No. 2.

ENGINE MOUNT ACTUATOR 2P CONNECTOR



Terminal side of male terminals

Is there about 0.48 – 0.54 Ω ?

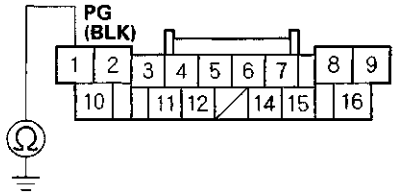
YES—Go to step 8.

NO—Replace the front engine mount (see page 5-26) or rear engine mount (see page 5-28), then go to step 13.

8. Disconnect engine mount control unit 16P connector.

9. Check for continuity between engine mount control unit 16P connector terminal No. 1 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 1 and body ground (G302), then go to step 13.

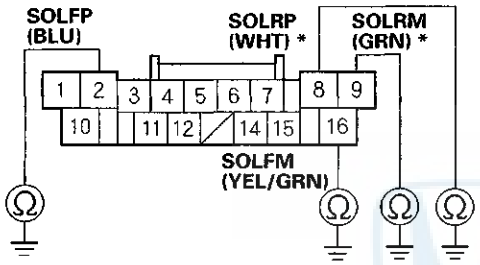
(cont'd)

DTC Troubleshooting (cont'd)

10. Check for continuity between body ground and the appropriate engine mount control unit 16P connector terminal (see table).

DTC	ENGINE MOUNT ACTUATOR TERMINAL	ENGINE MOUNT CONTROL UNIT TERMINAL	WIRE COLOR
P0AB7	Rear side No. 1	No. 9	GRN
P0AB7	Rear side No. 2	No. 8	WHT
P0A15	Front side No. 1	No. 16	YEL/GRN
P0A15	Front side No. 2	No. 2	BLU

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

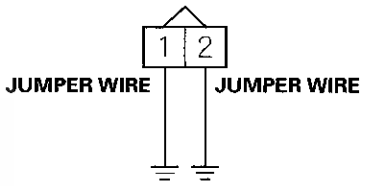
YES—Repair short to ground in the wire between the engine mount control unit and the engine mount actuator, then go to step 13.

NO—Go to step 11.

11. Connect the appropriate front engine mount actuator (rear engine mount actuator)* 2P connector terminal to body ground with a jumper wire (see table).

DTC	ENGINE MOUNT ACTUATOR TERMINAL	WIRE COLOR
P0AB7	Rear side No. 1	GRN
P0AB7	Rear side No. 2	WHT
P0A15	Front side No. 1	YEL/GRN
P0A15	Front side No. 2	BLU

ENGINE MOUNT ACTUATOR 2P CONNECTOR

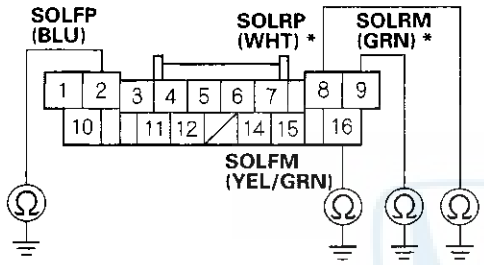


Wire side of female terminals

12. Check for continuity between body ground and the appropriate engine mount control unit 16P connector terminal (see table).

DTC	ENGINE MOUNT ACTUATOR TERMINAL	ENGINE MOUNT CONTROL UNIT TERMINAL	WIRE COLOR
P0AB7	Rear side No. 1	No. 9	GRN
P0AB7	Rear side No. 2	No. 8	WHT
P0A15	Front side No. 1	No. 16	YEL/GRN
P0A15	Front side No. 2	No. 2	BLU

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Check for poor connections or loose terminals at the engine mount control unit and the engine mount actuator. If it is OK, replace the engine mount control unit (see page 4-100), then go to step 13.

NO—Repair open in the wire between the engine mount control unit and the engine mount actuator, then go to step 13.

13. Reconnect all connectors.

14. Turn the ignition switch to ON (II).

15. Clear the DTC with the HDS.

16. Start the engine, and let it idle 20 seconds.

17. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0A15 and/or P0AB7' indicated?

YES—Check for poor connections or loose terminals at the engine mount control unit and the engine mount actuator, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC Troubleshooting (cont'd)

DTC P15AB: Engine Mount Control Unit Power Source Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).

1. Turn the ignition switch to ON (II).
2. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P16C5 indicated?

   YES—Do the troubleshooting for the DTC P16C5 (see page 4-94).

   NO—Go to step 3.
3. Clear the DTC with the HDS.
4. Start the engine, and let it idle 10 seconds.
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P15AB indicated?

   YES—Go to step 6.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the body ground (G302).
6. Turn the ignition switch to LOCK (0).
7. Inspect the No. 7 ACG fuse in the driver's under-dash fuse/relay box.

   Is the fuse OK?

   YES—Go to step 8.

   NO—Repair short to ground in the wire between the No. 7 ACG fuse and engine mount control unit 16P connector terminal No. 5. Also replace the No. 7 ACG fuse, then go to step 14.
8. Check for poor connections or loose terminals at the engine mount control unit 16P connector.

   Are the connections and terminals OK?

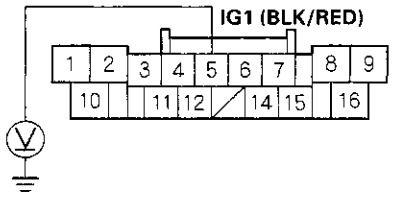
   YES—Go to step 9.

   NO—Repair the connections or terminals, then go to step 14.
9. Disconnect engine mount control unit 16P connector.

10. Turn the ignition switch to ON (II).

11. Measure the voltage between engine mount control unit 16P connector terminal No. 5 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there battery voltage?

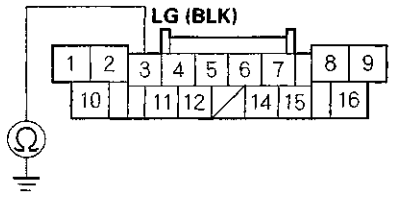
YES—Go to step 12.

NO—Repair open in the wire between the No. 7 ACG fuse and engine mount control unit 16P connector terminal No. 5, then go to step 14.

12. Turn the ignition switch to LOCK (0).

13. Check for continuity between engine mount control unit 16P connector terminal No. 3 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Replace the engine mount control unit (see page 4-100), then go to step 14.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 3 and body ground (G302), then go to step 14.

(cont'd)

DTC Troubleshooting (cont'd)

14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Clear the DTC with the HDS.
17. Start the engine, and let it idle 10 seconds.
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15AB indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and body ground (G302), then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P15AE: Cylinder Pause Signal 1 Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 3 CYLINDER ACTIVATION TEST with the HDS.
4. Check for Temporary DTCs or DTCs with the HDS.

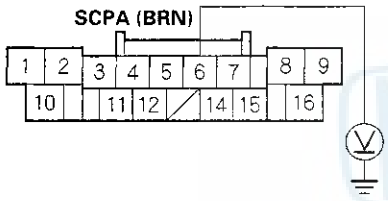
   Is DTC P15AE indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the PCM.

5. Turn the ignition switch to LOCK (0).
6. Disconnect engine mount control unit 16P connector.
7. Turn the ignition switch to ON (II).
8. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 3 CYLINDER ACTIVATION TEST with the HDS.
9. Measure the voltage between engine mount control unit 16P connector terminal No. 6 and body ground during 3 cylinder pause mode.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

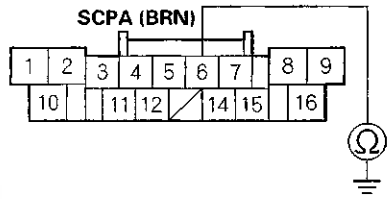
Is there battery voltage?

YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If it is OK, replace the engine mount control unit (see page 4-100), then go to step 16.

NO—Go to step 10.

10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect PCM connector A (49P).
13. Check for continuity between engine mount control unit 16P connector terminal No. 6 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between engine mount control unit 16P connector terminal No. 6 and PCM connector terminal A14, then go to step 16.

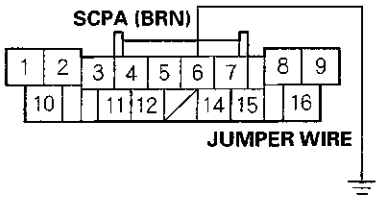
NO—Go to step 14.

(cont'd)

DTC Troubleshooting (cont'd)

14. Connect engine mount control unit 16P connector terminal No. 6 to body ground with a jumper wire.

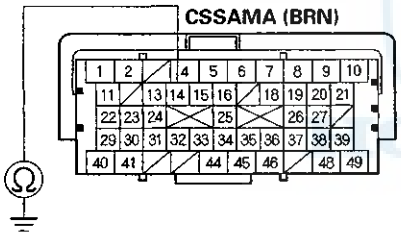
ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

15. Check for continuity between PCM connector terminal A14 and body ground.

PCM CONNECTOR A (49P)



Terminalside of female terminals

Is there continuity?

YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If it is OK, go to step 21.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 6 and PCM connector terminal A14, then go to step 16.

16. Reconnect all connectors.

17. Turn the ignition switch to ON (II).

18. Clear the DTC with the HDS.

19. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 3 CYLINDER ACTIVATION TEST with the HDS.

20. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P15AE indicated?

YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

21. Reconnect all connectors.

22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

23. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 3 CYLINDER ACTIVATION TEST with the HDS.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15AE indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), and retest. If the PCM was substituted and the symptom indicated goes away, replace the original PCM (see page 11-282).

    NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P15B0: CKP Sensor Signal Malfunction

DTC P15C0: CKP Sensor Signal Intermittent Interruption

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).
- If PGM-FI system's DTC P0335 and/or P0339 is stored at the same time as DTC P15B0 and/or P15C0, troubleshoot P0335 and/or P0339 first, then recheck for P15B0 and/or P15C0.

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine, and let it idle 20 seconds.

4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P15B0 and/or P15C0 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the PCM.

5. Turn the ignition switch to LOCK (0).

6. Check for poor connections or loose terminals at the engine mount control unit 16P connector and PCM connector A (49P).

   Are the connections and terminals OK?

   YES—Go to step 7.

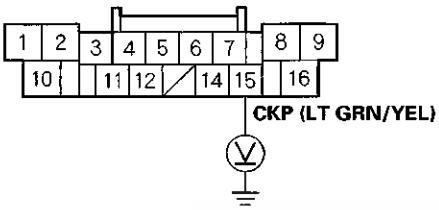
   NO—Repair the connections or terminals, then go to step 26.

(cont'd)

DTC Troubleshooting (cont'd)

7. Disconnect CKP sensor 3P connector.
8. Turn the ignition switch to ON (II).
9. Measure the voltage between engine mount control unit 16P connector terminal No. 15 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

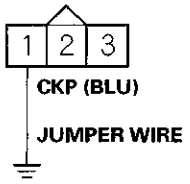
Is there about 5 V?

YES—Go to step 10.

NO—Go to step 20.

10. Turn the ignition switch to LOCK (0).
11. Connect CKP sensor 3P connector terminal No. 1 to body ground with a jumper wire.

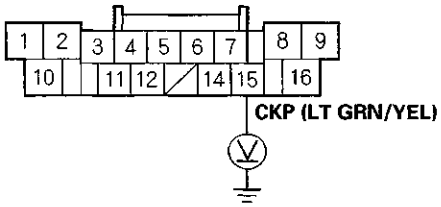
CKP SENSOR 3P CONNECTOR



Wire side of female terminals

12. Turn the ignition switch to ON (II).
13. Measure the voltage between engine mount control unit 16P connector terminal No. 15 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

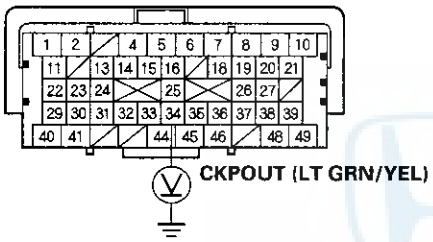
Is there about 0 V?

YES—Replace the engine mount control unit (see page 4-100), then go to step 26.

NO—Go to step 14.

14. Turn the ignition switch to LOCK (0).
15. Remove the jumper wire from the CKP sensor 3P connector.
16. Jump the SCS line with the HDS.
17. Disconnect PCM connector A (49P).
18. Turn the ignition switch to ON (II).
19. Measure the voltage between PCM connector terminal A34 and body ground.

PCM CONNECTOR A (49P)



Terminalside of female terminals

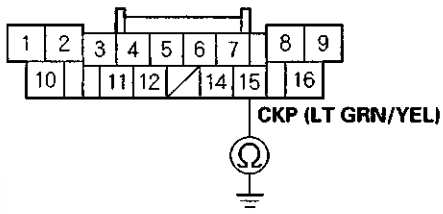
Is there about 5 V?

YES—Go to step 31.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 15 and PCM connector terminal A34, then go to step 26.

20. Turn the ignition switch to LOCK (0).
21. Disconnect engine mount control unit 16P connector.
22. Check for continuity between engine mount control unit 16P connector terminal No. 15 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 23.

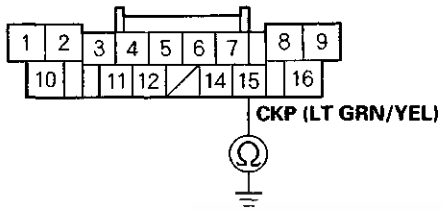
NO—Replace the engine mount control unit (see page 4-100), then go to step 26.

(cont'd)

DTC Troubleshooting (cont'd)

23. Jump the SCS line with the HDS.
24. Disconnect PCM connector A (49P).
25. Check for continuity between engine mount control unit 16P connector terminal No. 15 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between engine mount control unit 16P connector terminal No. 15 and PCM connector terminal A34, then go to step 26.

NO—Go to step 31.

26. Reconnect all connectors.
27. Turn the ignition switch to ON (II).
28. Clear the DTC with the HDS.
29. Start the engine, and let it idle 20 seconds.
30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15B0 and/or P15C0 indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■
31. Reconnect all connectors.
32. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
33. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15B0 and/or P15C0 indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If the PCM was updated, substituted a known-good PCM (see page 11-7), and retest. If the PCM was substituted and the symptom indicated goes away, replace the original PCM (see page 11-282). ■

    NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P15BD: Cylinder Pause Signal 2 Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 4 CYLINDER ACTIVATION TEST with the HDS.
4. Check for Temporary DTCs or DTCs with the HDS.

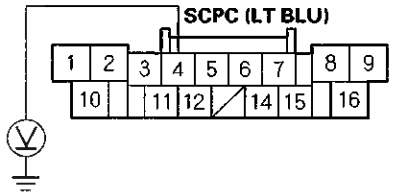
   Is DTC P15BD indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the PCM.

5. Turn the ignition switch to LOCK (0).
6. Disconnect engine mount control unit 16P connector.
7. Turn the ignition switch to ON (II).
8. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 4 CYLINDER ACTIVATION TEST with the HDS.
9. Measure the voltage between engine mount control unit 16P connector terminal No. 4 and body ground during 2 cylinder pause mode.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If it is OK, replace the engine mount control unit (see page 4-100), then go to step 16.

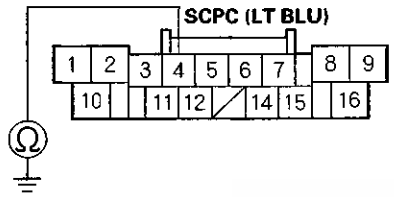
NO—Go to step 10.

(cont'd)

DTC Troubleshooting (cont'd)

10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect PCM connector A (49P).
13. Check for continuity between engine mount control unit 16P connector terminal No. 4 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

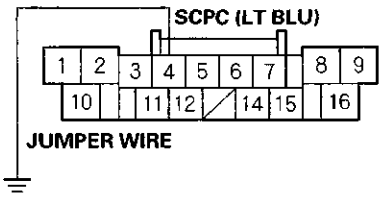
Is there continuity?

YES—Repair short to ground in the wire between connector terminal engine mount control unit 16P connector terminal No. 4 and PCM connector terminal A15, then go to step 16.

NO—Go to step 14.

14. Connect engine mount control unit 16P connector terminal No. 4 to body ground with a jumper wire.

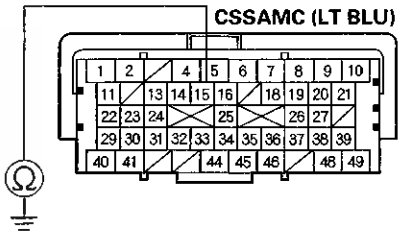
ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

15. Check for continuity between PCM connector terminal A15 and body ground.

PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If it is OK, go to step 21.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 4 and PCM connector terminal A15, then go to step 16.

16. Reconnect all connectors.
17. Turn the ignition switch to ON (II).
18. Clear the DTC with the HDS.
19. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 4 CYLINDER ACTIVATION TEST with the HDS.
20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15BD indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to indicated DTC's troubleshooting. ■

21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
23. Select the VTEC TEST in the PGM-FI INSPECTION menu, and do the VPS TEST of the 4 CYLINDER ACTIVATION TEST with the HDS.
24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15BD indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), and retest. If the PCM was substituted and the symptom indicated goes away, replace the original PCM (see page 11-282). ■

    NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P15BE: CMP Sensor Signal Malfunction

DTC P15BF: CMP Sensor Signal Intermittent Interruption

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).
- If PGM-FI system's DTC P0365 and/or P0369 is stored at the same time as DTC P15BE and/or P15BF, troubleshoot P0365 and/or P0369 first, then recheck for P15BE and/or P15BF.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle 20 seconds.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P15BE and/or P15BF indicated?

   YES—Go to step 5.

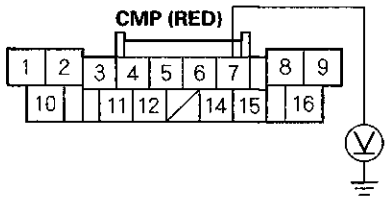
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the PCM.
5. Turn the ignition switch to LOCK (0).
6. Check for poor connections or loose terminals at the engine mount control unit 16P connector and PCM connector A (49P).

   Are the connections and terminals OK?

   YES—Go to step 7.

   NO—Repair the connections or terminals, then go to step 26.
7. Disconnect CMP sensor 3P connector.
8. Turn the ignition switch to ON (II).
9. Measure the voltage between engine mount control unit 16P connector terminal No. 7 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

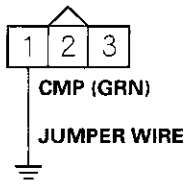
Is there about 5 V?

YES—Go to step 10.

NO—Go to step 20.

10. Turn the ignition switch to LOCK (0).
11. Connect CMP sensor 3P connector terminal No. 1 to body ground with a jumper wire.

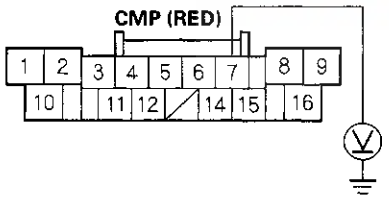
CMP SENSOR 3P CONNECTOR



Wire side of female terminals

12. Turn the ignition switch to ON (II).
13. Measure the voltage between engine mount control unit 16P connector terminal No. 7 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

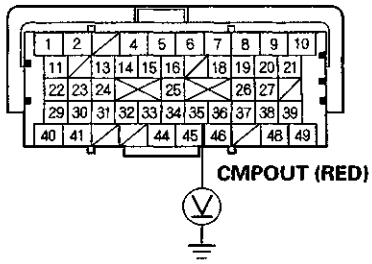
Is there about 0 V?

YES—Replace the engine mount control unit (see page 4-100), the go to step 26.

NO—Go to step 14.

14. Turn the ignition switch to LOCK (0).
15. Remove the jumper wire from the CMP sensor 3P connector.
16. Jump the SCS line with the HDS.
17. Disconnect PCM connector A (49P).
18. Turn the ignition switch to ON (II).
19. Measure the voltage between PCM connector terminal A35 and body ground.

PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 5 V?

YES—Go to step 31.

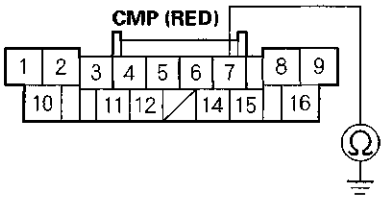
NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 7 and PCM connector terminal A35, then go to step 26.

(cont'd)

DTC Troubleshooting (cont'd)

20. Turn the ignition switch to LOCK (0).
21. Disconnect engine mount control unit 16P connector.
22. Check for continuity between engine mount control unit 16P connector terminal No. 7 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

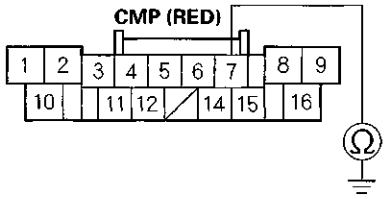
Is there continuity?

YES—Go to step 23.

NO—Replace the engine mount control unit (see page 4-100), then go to step 26.

23. Jump the SCS line with the HDS.
24. Disconnect PCM connector A (49P).
25. Check for continuity between engine mount control unit 16P connector terminal No. 7 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between engine mount control unit 16P connector terminal No. 7 and PCM connector terminal A35, then go to step 26.

NO—Go to step 31.

26. Reconnect all connectors.
27. Turn the ignition switch to ON (II).
28. Clear the DTC with the HDS.
29. Start the engine, and let it idle 20 seconds.
30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15BE and/or P15BF indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
31. Reconnect all connectors.
32. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
33. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P15BE and/or P15BF indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If the PCM was updated, substituted a known-good PCM (see page 11-7), and retest. If the PCM was substituted and the symptom indicated goes away, replace the original PCM (see page 11-282).■

    NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P16C4: Engine Mount Actuator Control Power Circuit Stuck OFF

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).

1. Turn the ignition switch to ON (II).
2. Clear the DTCs with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P16C4 indicated?

    YES—Go to step 4.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the driver's under-dash fuse/relay box (active control engine mount (ACM) control relay).
4. Turn the ignition switch to LOCK (0).
5. Inspect the No. 14 ACM (10 A) fuse in the driver's under-dash fuse/relay box.

    Is the fuse OK?

    YES—Go to step 10.

    NO—Go to step 6.

(cont'd)

DTC Troubleshooting (cont'd)

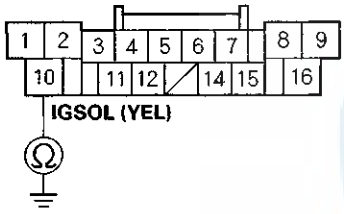
6. Remove the driver's dashboard lower cover, refer to the 2008-2009 Accord Service Manual (see page 20-153).

7. Disconnect driver's under-dash fuse/relay box connector G (14P).

8. Disconnect engine mount control unit 16P connector.

9. Check for continuity between engine mount control unit 16P connector terminal No. 10 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between engine mount control unit 16P connector terminal No. 10 and the driver's under-dash fuse/relay box (active control engine mount (ACM) control relay). Also replace the No. 14 ACM (10 A) fuse, then go to step 17.

NO—Check the driver's under-dash fuse/relay box, and replace it if needed. Also replace the No. 14 ACM (10 A) fuse, then go to step 17.

10. Test the active control engine mount (ACM) control relay in the driver's under-dash fuse/relay box (see page 22-38).

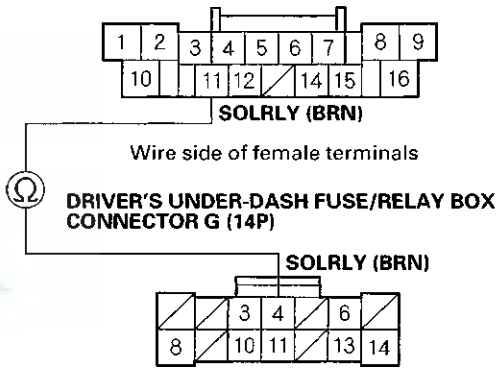
Is the relay OK?

YES—Go to step 11.

NO—Replace the driver's under-dash fuse/relay box, then go to step 17.

11. Check for continuity between engine mount control unit 16P connector terminal No. 11 and driver's under-dash fuse/relay box connector G (14P) terminal No. 4.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Wire side of female terminals

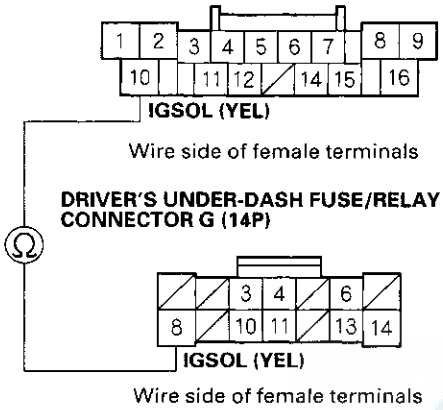
Is there continuity?

YES—Go to step 12.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 11 and driver's under-dash fuse/relay box connector G terminal No. 4, then go to step 17.

12. Check for continuity between engine mount control unit 16P connector terminal No. 10 and driver's under-dash fuse/relay box connector G (14P) terminal No. 8.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Is there continuity?

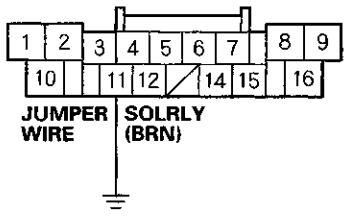
YES—Go to step 13.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 10 and driver's under-dash fuse/relay box connector G terminal No. 8, then go to step 17.

13. Reconnect driver's under-dash fuse/relay box connector G (14P).

14. Connect engine mount control unit 16P connector terminal No. 11 and body ground with a jumper wire.

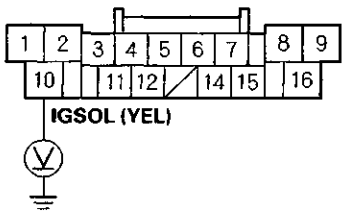
ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



15. Turn the ignition switch to ON (II).

16. Measure the voltage between engine mount control unit 16P connector terminal No. 10 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Is there battery voltage?

YES—Replace the engine mount control unit (see page 4-100), then go to step 17.

NO—Replace the driver's under-dash fuse/relay box, then go to step 17.

(cont'd)

DTC Troubleshooting (cont'd)

17. Reconnect all connectors.
18. Turn the ignition switch ON (II).
19. Clear the DTC with the HDS.
20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P16C4 indicated?

    YES—Check for poor connections or loose terminals at the engine mount control unit and the driver's under-dash fuse/relay box (active control engine mount (ACM) control relay), then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P16C5: Engine Mount Actuator Control Power Circuit Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).

1. Turn the ignition switch to ON (II).
2. Check the ACM UNIT SUPPLY VOLTAGE and ACM RELAY CONTROL in the DATA LIST with the HDS.

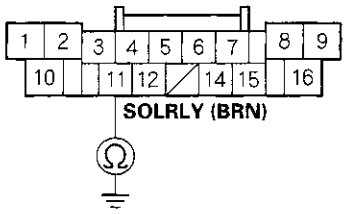
   Does the ACM UNIT SUPPLY VOLTAGE indicate battery voltage when the ACM RELAY CONTROL indicates OFF?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the driver's under-dash fuse/relay box (active control engine mount (ACM) control relay).
3. Turn the ignition switch to LOCK (0).
4. Disconnect driver's under-dash fuse/relay box connector G (14P).
5. Disconnect engine mount control unit 16P connector.

6. Check for continuity between engine mount control unit 16P connector terminal No. 11 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

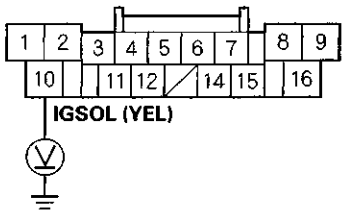
YES—Repair short to ground in the wire between engine mount control unit 16P connector terminal No. 11 and driver's under-dash fuse/relay box connector G terminal No. 4, then go to step 12.

NO—Go to step 7.

7. Turn the ignition switch to ON (II).

8. Measure the voltage between engine mount control unit 16P connector terminal No. 10 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Repair short to power in the wire between engine mount control unit 16P connector terminal No. 10 and driver's under-dash fuse/relay box connector G terminal No. 8, then go to step 12.

NO—Go to step 9.

9. Turn the ignition switch to LOCK (0).

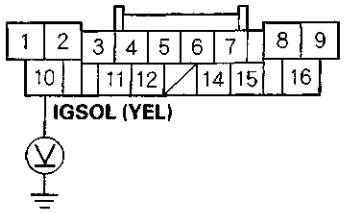
10. Reconnect driver's under-dash fuse/relay box connector G (14P).

(cont'd)

DTC Troubleshooting (cont'd)

11. Measure the voltage between engine mount control unit 16P connector terminal No. 10 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Replace the driver's under-dash fuse/relay box, then go to step 12.

NO—Replace the engine mount control unit (see page 4-100), then go to step 12.

12. Reconnect all connectors.
13. Turn the ignition switch to ON (II).
14. Clear the DTC with the HDS.
15. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16C5 indicated?

YES—Check for poor connections or loose terminals at the engine mount control unit and the driver's under-dash fuse/relay box (active control engine mount (ACM) control relay), then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P16C6: Engine Mount Actuator High Voltage During Function Test

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).
- If DTC P0A14, P0A16, P0AB6, P16C7, or P16C8 are stored at the same time as P16C6, troubleshoot those DTCs first, then recheck for P16C6.

1. Turn the ignition switch to ON (II).
2. Clear the DTCs with the HDS.
3. Start the engine, and let it idle 20 seconds.
4. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES—Go to the indicated DTCs troubleshooting. ■

NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit, the engine mount actuator, and body ground (G302). ■

DTC U0029: F-CAN Malfunction (BUS-OFF)

DTC U0100: F-CAN Malfunction (Engine Mount Control Unit-PCM)

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshots, and review the general troubleshooting information (see page 4-65).
- Information marked with an asterisk (*) applies to the CANL line.

1. Check the MIL on the gauge (see page 11-258).

   Is the MIL on?

   YES—Go to the PGM-FI system's general troubleshooting information (see page 11-3).

   NO—Go to step 2.

2. Turn the ignition switch to ON (II).
3. Clear the DTC with the HDS.
4. Check for Temporary DTCs or DTCs with the HDS.

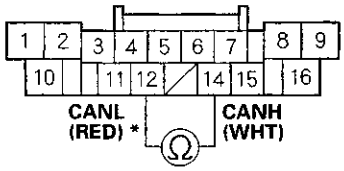
   Is DTC U0029 and/or U0100 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the PCM. ■

5. Turn the ignition switch to LOCK (0).
6. Disconnect engine mount control unit 16P connector.
7. Measure the resistance between engine mount control unit 16P connector terminal No. 12* and No. 14.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

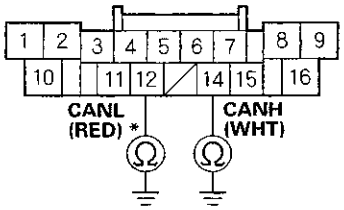
Is there about 20 Ω or more?

YES—Go to step 8.

NO—Repair short in the wire(s) between engine mount control unit 16P connector terminals No. 12* and No. 14, then go to step 13.

8. Check for continuity between engine mount control unit 16P connector terminal No. 14 (No. 12)* and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between engine mount control unit 16P connector terminal No. 14 (No. 12)* and body ground, then go to step 13.

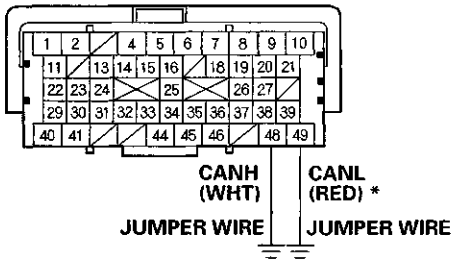
NO—Go to step 9.

(cont'd)

DTC Troubleshooting (cont'd)

9. Jump the SCS line with the HDS.
10. Disconnect PCM connector A (49P).
11. Connect PCM connector terminal A48 (A49)* to body ground with the jumper wire.

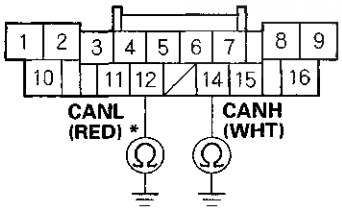
PCM CONNECTOR A (49P)



Terminal side of female terminals

12. Check for continuity between engine mount control unit 16P connector terminal No. 14 (No. 12)* and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM. If it is OK, replace the engine mount control unit (see page 4-100), then go to step 13.

NO—Repair open in the wire between engine mount control unit 16P connector terminal No. 14 (No. 12)* and the PCM connector terminal A48 (A49)*, then go to step 13.

13. Reconnect all connectors.
14. Turn the ignition switch to ON (II).
15. Clear the DTC with the HDS.
16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0029 and/or U0100 indicated?

YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

Symptom Troubleshooting

Harsh engine vibration felt in the passenger's compartment

1. Start the engine, and let it idle 20 seconds.
2. Check for PGM-FI system's DTC with the HDS.

   Are any Temporary DTCs or DTCs indicated?

   YES—Go to the indicated DTC's troubleshooting. ■

   NO—Go to step 3.
3. Select the ACM in the PGM-FI system, and check for ACM system's DTCs with the HDS.

   Are any Temporary DTCs or DTCs indicated?

   YES—Go to the indicated DTC's troubleshooting. ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Open the engine hood.
6. Select the ACM TEST in the ACM INSPECTION menu with the HDS.
7. Do the Fr ACM SOL OFF with the HDS.

   Does the engine vibration change when you turn the Fr ACM SOL OFF?

   YES—Turn the Fr ACM SOL to ON, then go to step 10.

   NO—Go to step 8.
8. Exit the ACM TEST, and select the Fr ACM SOL.V ACTIVATION in the ACM INSPECTION menu with the HDS.
9. Check the front engine mount with your hand.

   Does the mount vibrate?

   YES—Check the mount for damage. If needed, replace the front engine mount (see page 5-26). If the mount is OK, go to step 1 and recheck.

   NO—Replace the front engine mount (see page 5-26). ■
10. Do the Rr ACM SOL OFF with the HDS.

    Does the engine vibration change when you turn the Rr ACM SOL OFF?

    YES—The ACM system is OK at this time. Check for other engine mount and other engine problems caused vibration. ■

    NO—Go to step 11.
11. Exit the ACM TEST, and select the Rr ACM SOL.V ACTIVATION in the ACM INSPECTION menu with the HDS.
12. Check the rear engine mount with your hand.

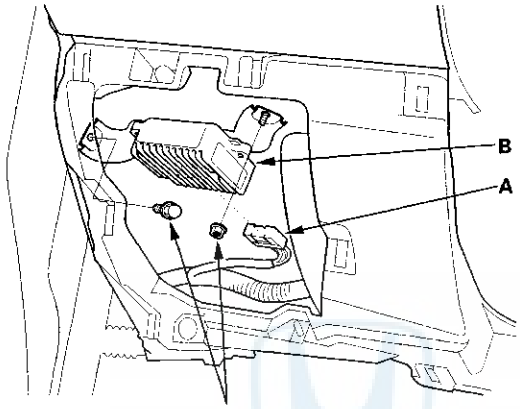
    Does the mount vibrate?

    YES—Check the mount for damage. If needed, replace the rear engine mount (see page 5-28). If the mount is OK, go to step 1 and recheck.

    NO—Replace the rear engine mount (see page 5-28). ■

Engine Mount Control Unit Replacement

1. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
2. Remove the driver's under-dash fuse/relay box.
3. Disconnect the engine mount control unit 16P connector (A).



4. Remove the engine mount control unit (B).
5. Install the parts in the reverse order of removal.
6. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Engine Mechanical

Engine Assembly
- Special Tools 5-2
- Engine Removal 5-3
- Engine Installation 5-13
- Engine Mount Replacement 5-25
- Front Engine Mount Removal and Installation 5-26
- Rear Engine Mount Removal and Installation 5-28

Cylinder Head **6-1**

Engine Block **7-1**

Engine Lubrication **8-1**

Intake Manifold and Exhaust System **9-1**

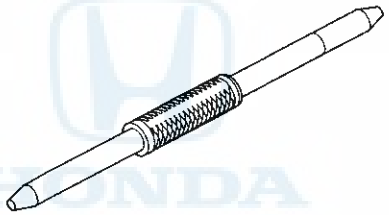
Outline of Model Change

J35Z2 engine and J35Z3 engine have been added.

Engine Assembly

Special Tools

Ref. No.	Tool Number	Description	Qty
①	070AG-SJAA10S	Subframe Alignment Pin	1



①

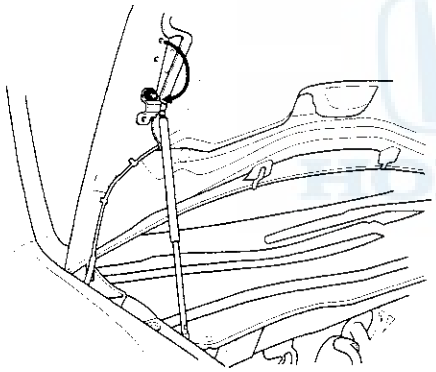
Engine Removal

Special Tools Required
- 2008 V6 Attachment arm SIL02C000033
- Engine support hanger, A and Reds AAR-T1256
- Engine hanger balance bar VSB02C000019
- Front subframe adapter VSB02C000016

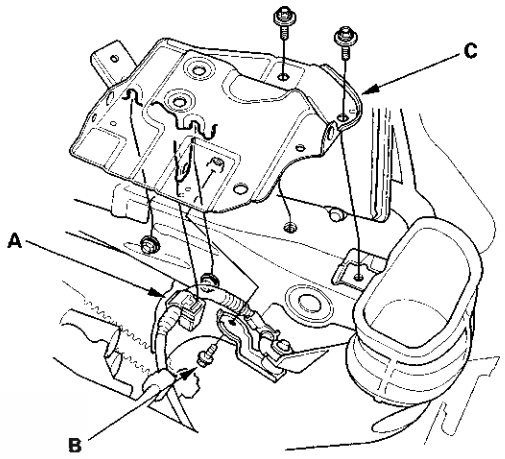
These special tools are available through the Honda Tool and Equipment Program, 888-424-6857

NOTE:
- Use fender covers to avoid damaging painted surfaces.
- To avoid damaging the wiring and terminals, unplug the wiring connectors carefully while holding the connector portion.
- Mark all wiring and hoses to avoid misconnection. Also, be sure that they do not contact other wiring or hoses, or interfere with other parts.

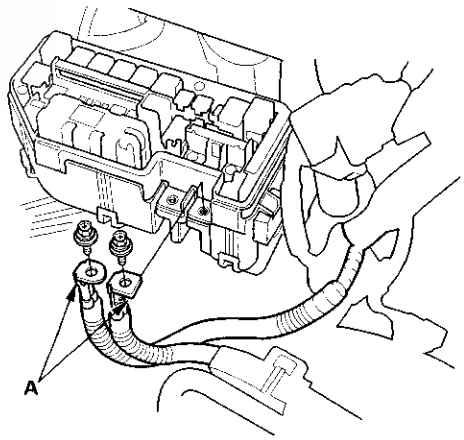
1. Remove the hood support rod, then use it as shown to prop the hood in the wide-open position.



2. Remove the strut brace, refer to the 2008-2009 Accord Service Manual (see page 20-289).
3. Drain the power steering fluid (see page 17-10).
4. Relieve the fuel pressure (see page 11-400).
5. Remove the engine cover (see step 1 on page 4-29).
6. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
7. Remove the splash separator (see step 2 on page 10-15).
8. Remove the front grille cover, refer to the 2008-2009 Accord Service Manual (see page 20-257).
9. Remove the air cleaner assembly (see page 11-436).
10. Remove the harness clamp (A) and the bolt (B), then remove the battery base (C).



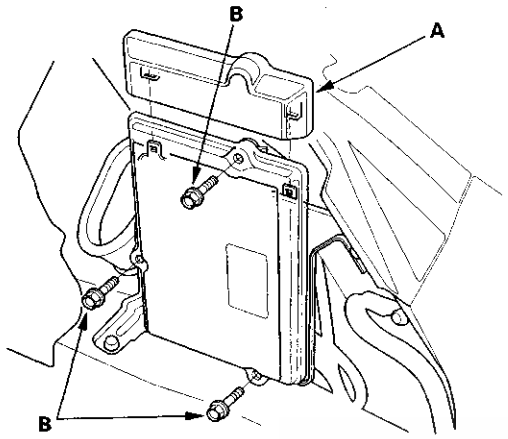
11. Disconnect the battery cables (A) from the under-hood fuse/relay box.



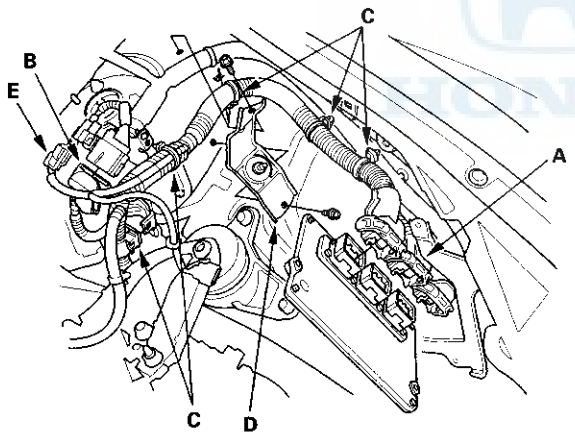
(cont'd)

Engine Removal (cont'd)

12. Remove the engine control module (ECM)/ powertrain control module (PCM) cover (A), then remove the three bolts (B) securing the ECM/PCM.

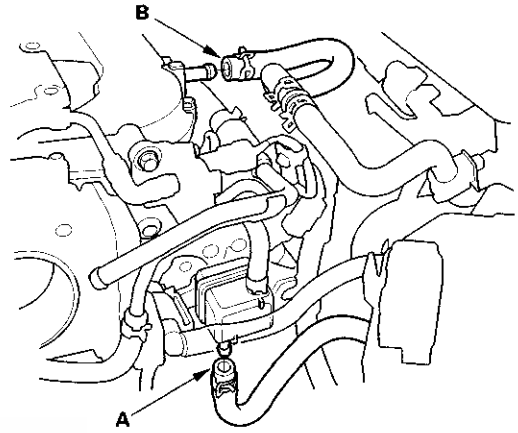


13. Disconnect the ECM/PCM connectors (A), the engine wire harness connector (B), and the harness clamps (C), and remove the bracket (D).

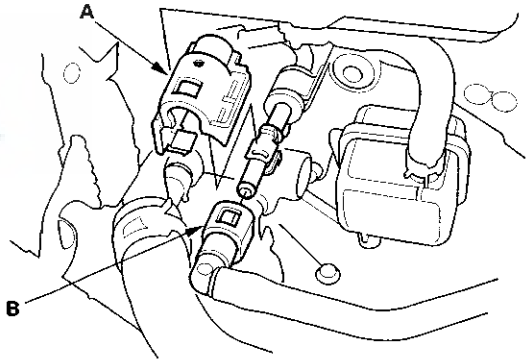


14. M/T model: Disconnect the engine wire harness connector (E).

15. Disconnect the evaporative emission (EVAP) canister hose (A) and the brake booster vacuum hose (B).

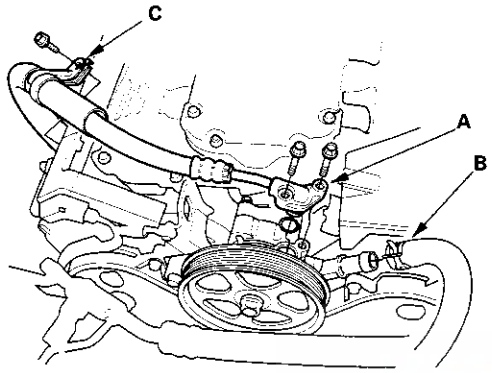


16. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (B) (see page 11-408).



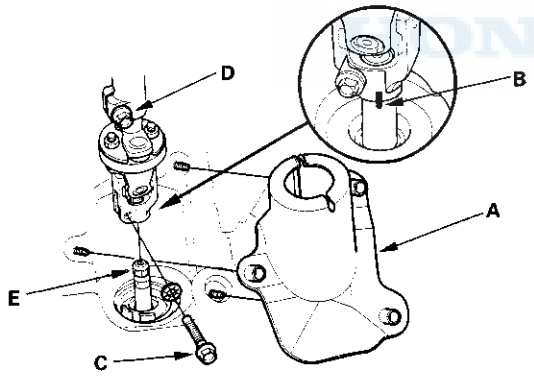
17. Remove the drive belt (see page 4-39).

18. Disconnect the power steering (P/S) pump outlet line (A) and the P/S pump inlet line (B) from the P/S pump and remove the P/S hose bracket (C), then plug the outlet line and the P/S pump.



19. Remove the steering wheel, refer to the 2008-2009 Accord Service Manual (see page 17-24).

20. Remove the steering joint cover (A).



21. Make a reference mark (B) across the steering joint and the steering gearbox pinion shaft. Remove the steering joint bolt (C), and loosen the steering joint bolt (D), then disconnect the steering joint from the steering gearbox pinion shaft (E).

22. M/T model: Remove the three bolts securing the shift cable holder, then remove the shift cable and the select cable. Do not bend the cables excessively (see step 16 on page 13-21).

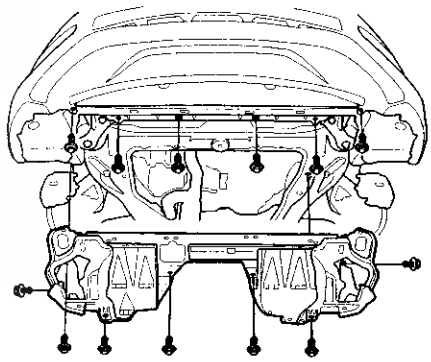
23. M/T model: Remove the clutch slave cylinder and the clutch line bracket mounting nut. Do not operate the clutch pedal once the slave cylinder has been removed (see step 17 on page 13-21).

24. A/T model: Remove the shift cable. Do not bend the shift cable excessively (see step 17 on page 14-234).

25. Raise the vehicle on the lift.

26. Remove the front wheels.

27. Remove the splash shield.



28. Loosen the drain plug in the radiator, and drain the engine coolant (see page 10-6).

29. Drain the engine oil (see page 8-14).

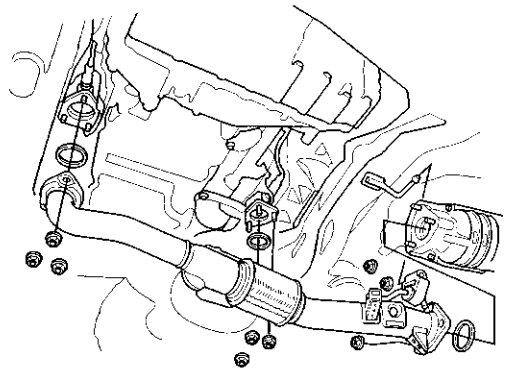
30. Drain the transmission fluid:

    - Manual transmission (see page 13-14)
    - Automatic transmission (see page 14-232)

(cont'd)

Engine Removal (cont'd)

31. Remove exhaust pipe A.



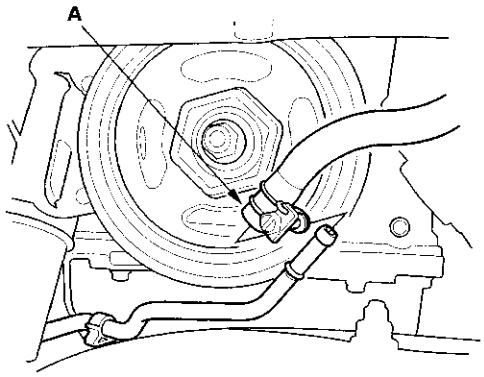
32. Remove the damper fork, refer to the 2008-2009 Accord Service Manual (see step 4 on page 18-31).

33. Separate the tie-rod end ball joints from the knuckles, refer to the 2008-2009 Accord Service Manual (see step 26 on page 17-40).

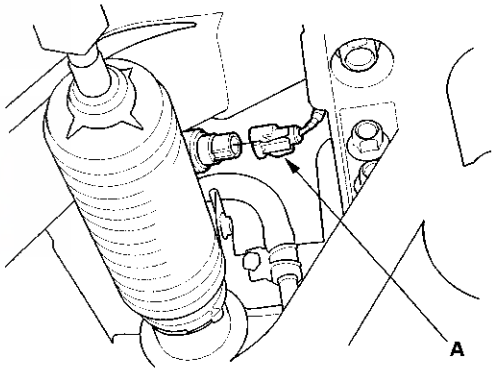
34. Separate the knuckles from the lower arms, refer to the 2008-2009 Accord Service Manual (see step 11 on page 18-15).

35. Remove the driveshafts. Coat all precision-finished surfaces with new engine oil. Tie plastic bags over the driveshaft ends.

36. Disconnect the P/S hose (A), then plug the line and the hose.



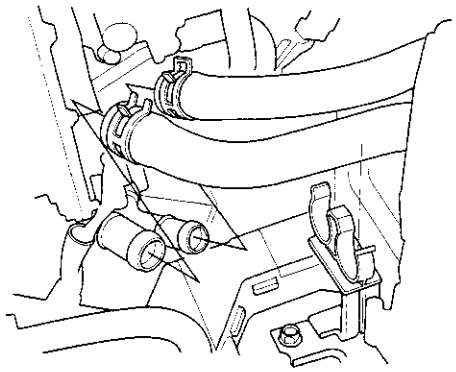
37. Disconnect the power steering pressure switch connector (A).



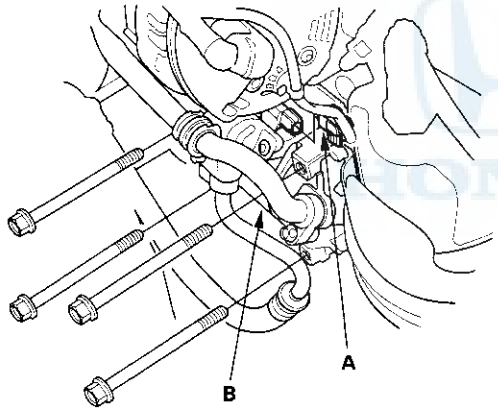
38. Lower the vehicle on the lift.

39. Remove the radiator (see page 10-15).

40. Disconnect the heater hoses.



41. Disconnect the A/C compressor clutch connector (A), then remove the A/C compressor (B) without disconnecting the A/C hoses. Do not bend the A/C hoses excessively.



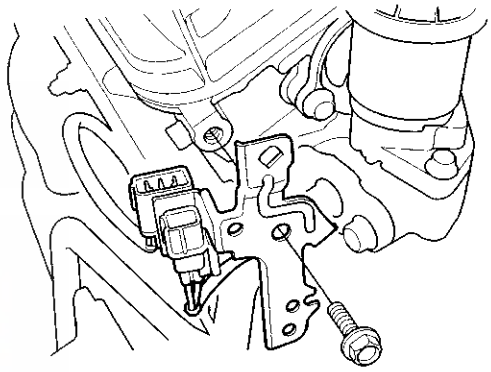
42. A/T model: Remove the ATF cooler hoses from the transmission, then plug the ATF cooler hoses and the lines (see page 14-259).

43. Remove the harness holder and the connectors from the front cylinder head:

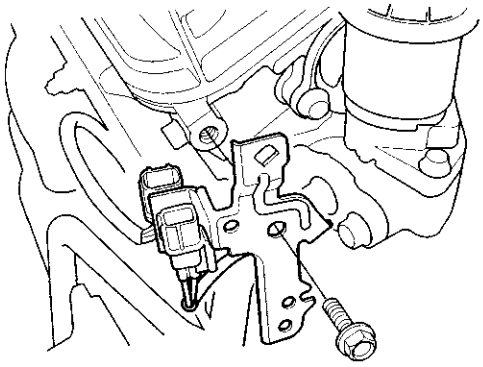
    - J35Z2 engine (see step 3 on page 6-28)
    - J35Z3 engine (see step 3 on page 6-93)

44. Remove the connector bracket from the front cylinder head; use the bracket bolt hole to attach the engine hanger balance bar front arm.

J35Z2 engine



J35Z3 engine

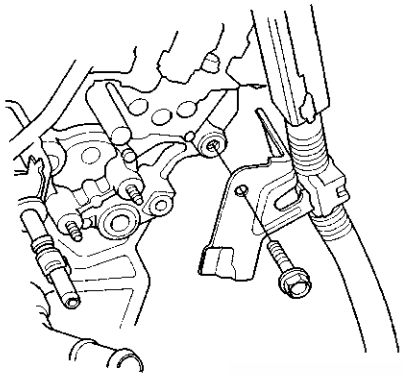


(cont'd)

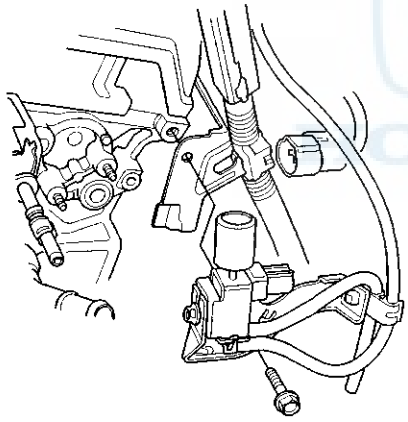
Engine Removal (cont'd)

45. Remove the harness clamp bracket from the rear cylinder head; use the bracket bolt hole to attach the 2008 V6 attachment arm (SIL02C000033).

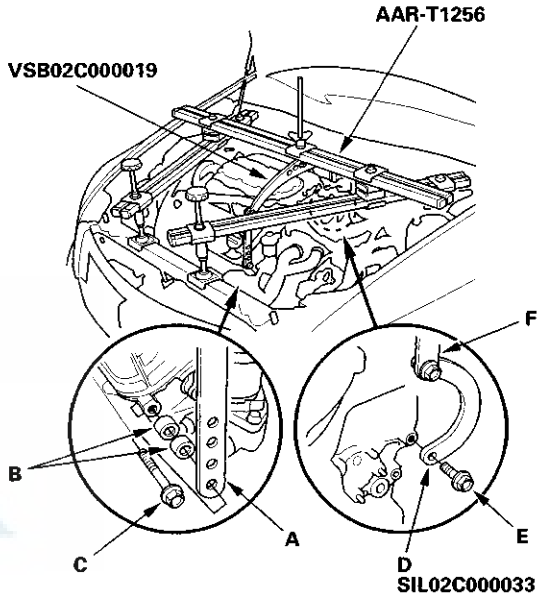
J35Z2 engine



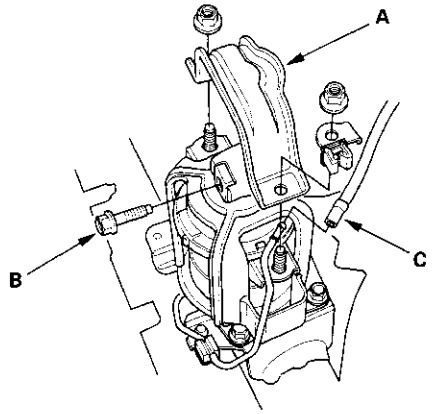
J35Z3 engine



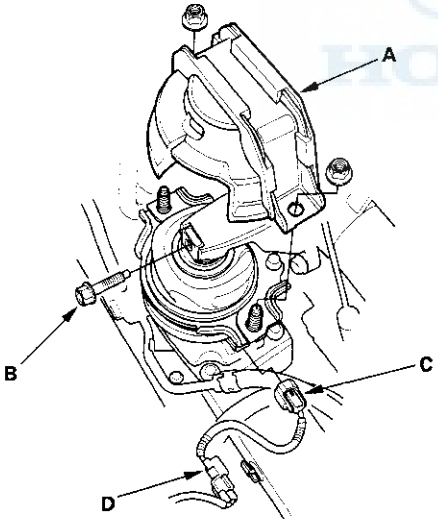
46. Lift and support the engine with the engine support hanger (AAR-T1256) and the engine hanger balance bar (VSB02C000019). Attach the front arm (A) to the front cylinder head with several spacers (B) and the bolt (10 x 1.25 mm) (C). Attach the 2008 V6 attachment arm (D) to the rear cylinder head with a bolt (8 x 1.25 mm) (E), then attach the rear arm (F) to the 2008 V6 attachment arm.



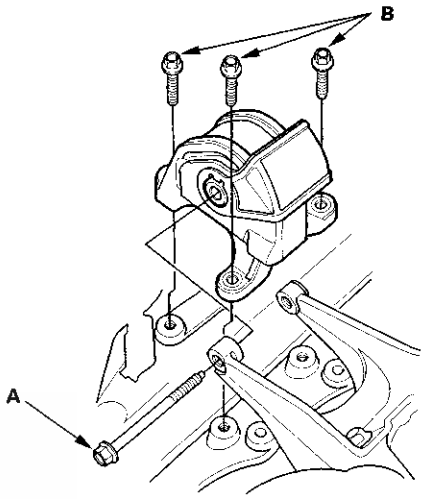
47. M/T model: Remove the front engine mount stop (A), then remove the front engine mount bolt (B) and disconnect the vacuum hose (C).



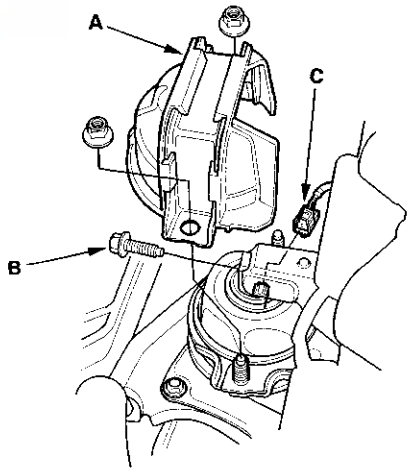
48. A/T model: Remove the front engine mount stop (A), then remove the front engine mount bolt (B) and disconnect the engine mount actuator connector (C) and remove the connector (D) from the front subframe.



49. M/T model: Support the transmission with a jack and a wood block under the transmission. Remove the rear engine mount bolt (A), then remove the mount-to-subframe bolts (B).



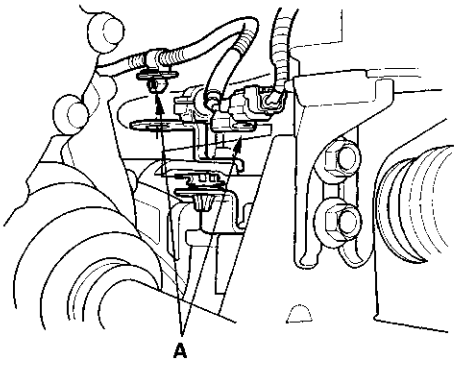
50. A/T model: Remove the rear engine mount stop (A), then remove the rear engine mount bolt (B) and disconnect the engine mount actuator connector (C).



(cont'd)

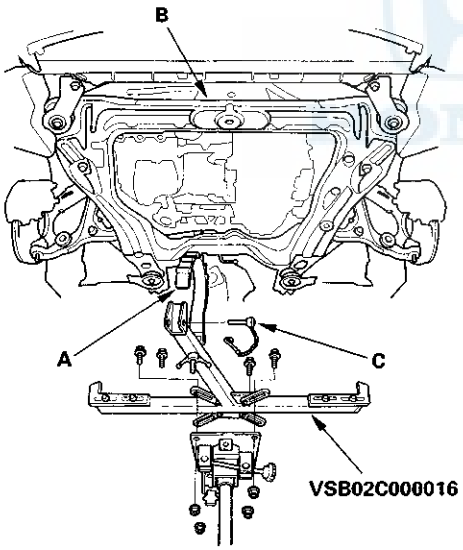
Engine Removal (cont'd)

51. A/T model: Remove the harness clamps (A).



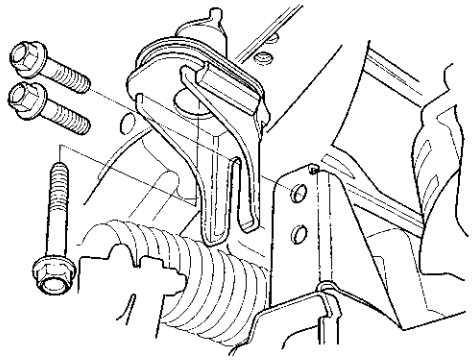
52. Raise the vehicle on the lift.

53. Attach the front subframe adapter (VSB02C000016) to the subframe by hanging the belt (A) over the front of the subframe (B), then secure the belt with its stop (C).

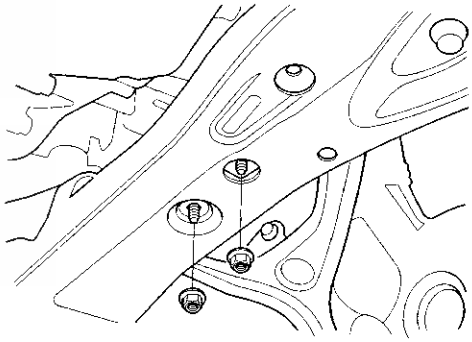


54. Raise the jack and line up the slots in the front subframe adapter arms with the bolt holes on the jack base, then securely attach them with four bolts.

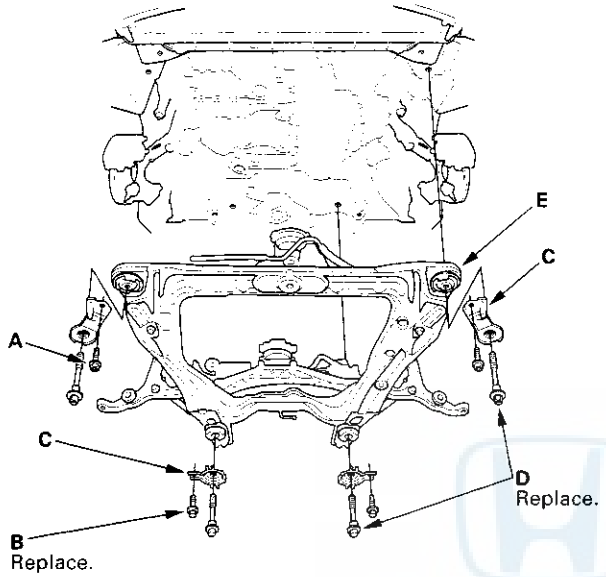
55. Remove the subframe middle mount.



56. Remove the nuts securing the lower transmission mount.

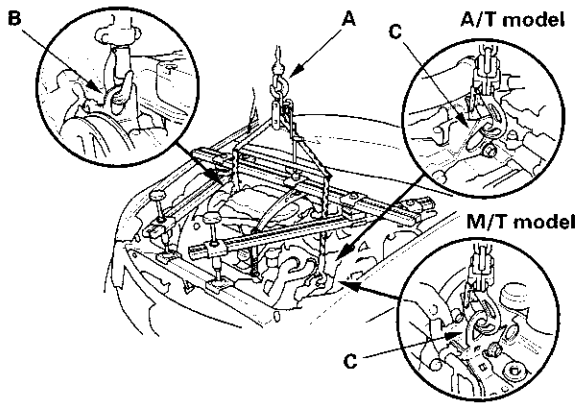


57. Remove the four 12 x 1.25 mm bolts (A) (B) securing the stiffeners (C), the four subframe mounting bolts (D), and the stiffeners, then lower the front subframe (E).

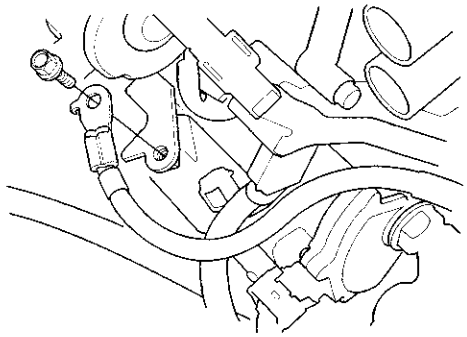


58. Lower the vehicle on the lift.

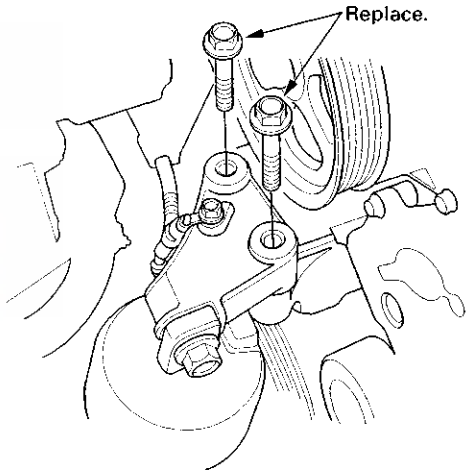
59. Attach a chain hoist (A) to the engine hook (B) and the transmission hook (C), then lift the engine/transmission until it is securely supported by the chain hoist, and remove the engine support hanger and the engine hanger balance bar.



60. A/T model: Remove the ground cable.



61. Remove the mounting bolts from the upper half of the side engine mount bracket.

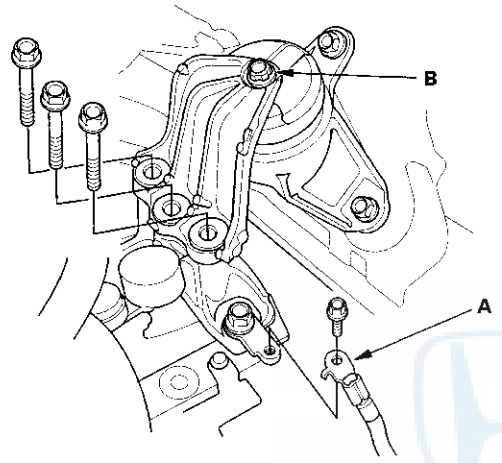


(cont'd)

Engine Removal (cont'd)

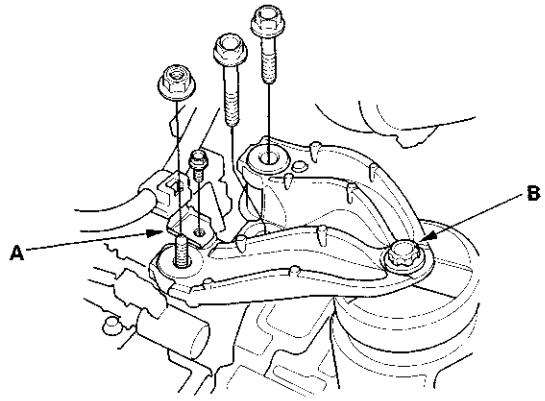
62. M/T model: Remove the ground cable (A), then remove the upper transmission mount bracket mounting bolts.

    NOTE: Do not remove the TORX bolt (B) from the upper transmission mount. If the TORX bolt is removed, the upper transmission mount must be replaced as an assembly.



63. A/T model: Remove the bracket (A), then remove the upper transmission mount bracket mounting bolts and nut.

    NOTE: Do not remove the TORX bolt (B) from the upper transmission mount. If the TORX bolt is removed, the upper transmission mount must be replaced as an assembly.



64. Check that the engine/transmission is completely free of vacuum hoses, fuel hoses, coolant hoses, and electrical wiring.

65. Slowly lower the engine/transmission about 150 mm (6 in.). Check once again that all the hoses and the electrical wiring are disconnected and free from the engine/transmission, then lower it all the way and support it.

66. Disconnect the chain hoist from the engine/transmission.

67. Raise the vehicle, and remove the engine/transmission from under the vehicle.

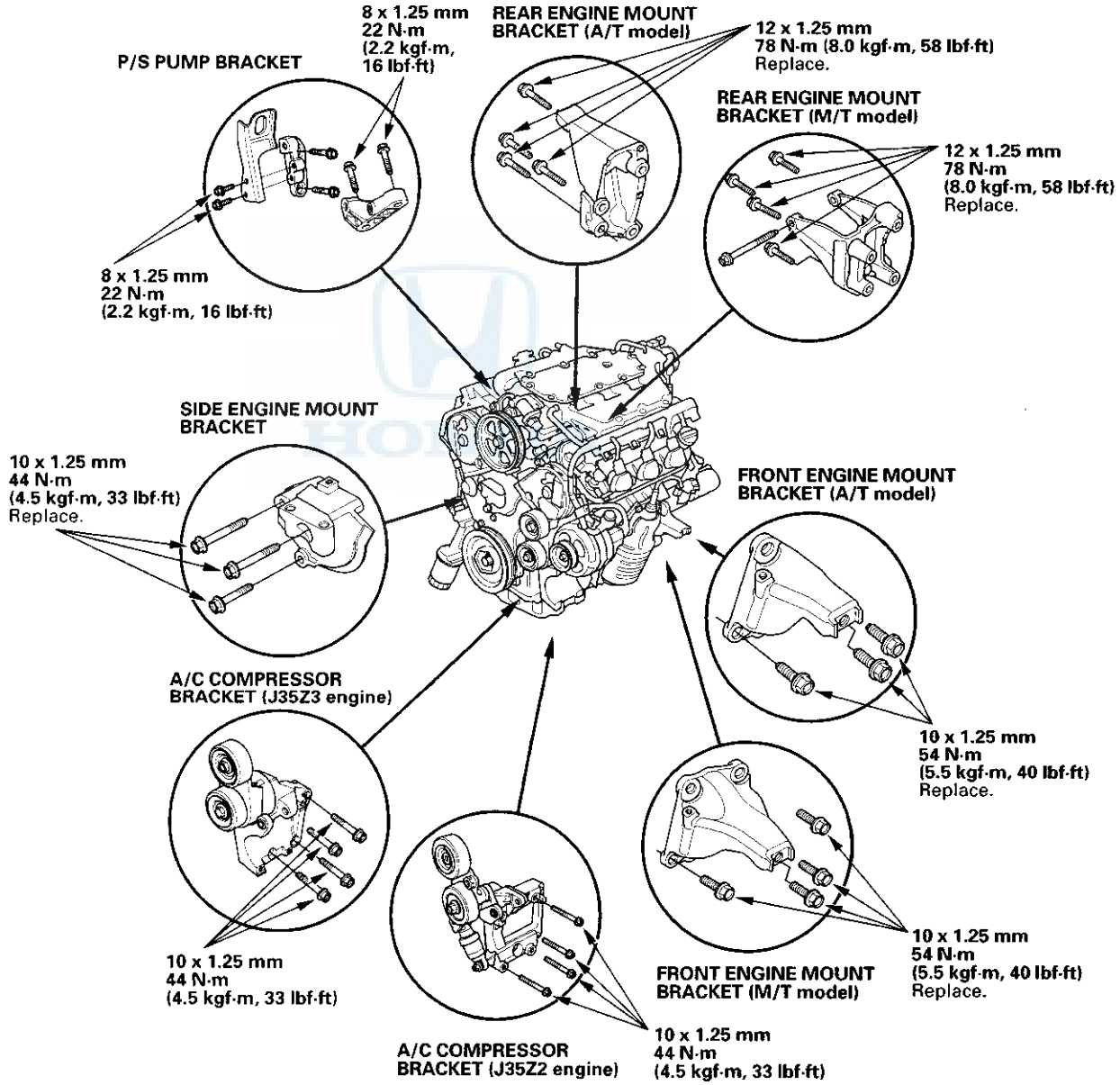
Engine Installation

Special Tools Required

- Engine support hanger, A and Reds AAR-T1256 *
- Engine hanger balance bar VSB02C000019 *
- 2008 V6 Attachment arm SIL02C000033 *
- Front subframe adapter VSB02C000016 *
- Subframe alignment pin 070AG-SJAA10S

* : These special tools are available through Honda Tool and Equipment Program, 888-424-6857

1. Install the engine mount brackets and the accessory brackets, then tighten their bolts to the specified torque.

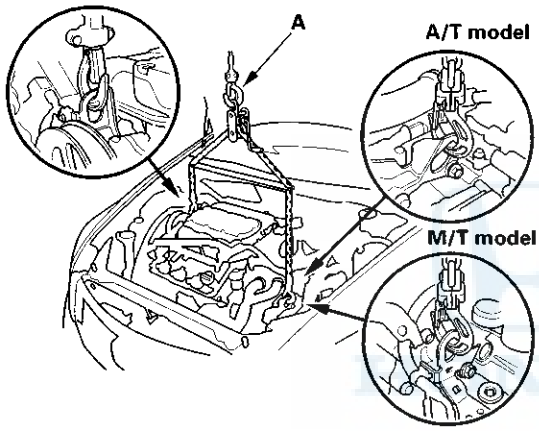


(cont'd)

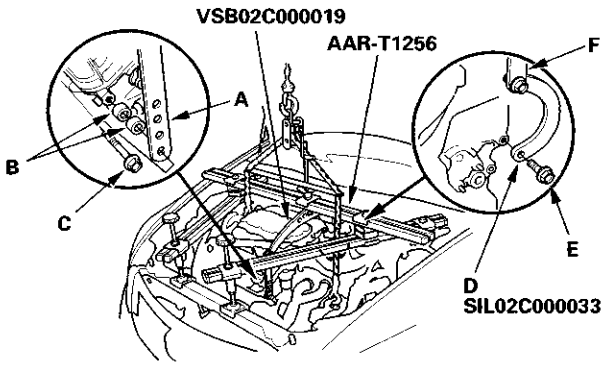
Engine Installation (cont'd)

2. Position the engine/transmission under the vehicle. Be sure that they are properly aligned. Carefully lower the vehicle until the engine/transmission are properly positioned in the engine compartment. Make sure the vehicle is not resting on any part of the engine/transmission. Support the engine/transmission with a chain hoist (A) and carefully raise the engine/transmission into place.

   NOTE: Reinstall the mounting bolts/support nuts in the sequence given in the following steps. Failure to follow this sequence may cause excessive noise and vibration, and reduce engine mount life.

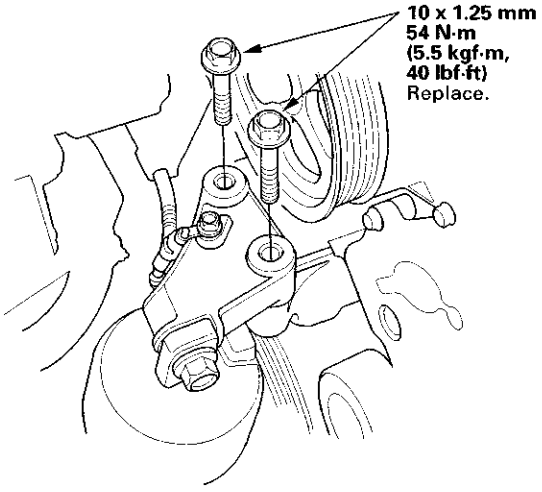


3. Install the engine support hanger (AAR-T1256) to the vehicle.

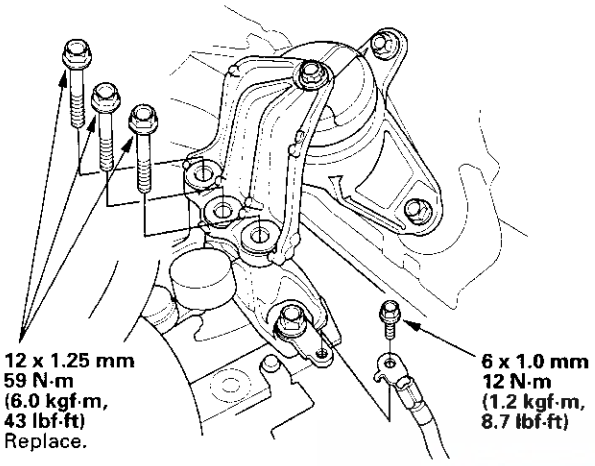


4. Lift and support the engine with the engine hanger balance bar (VSB02C000019). Attach the front arm (A) to the front cylinder head with several spacers (B) and the bolt (10 x 1.25 mm) (C). Attach the 2008 V6 attachment arm (SIL02C000033) (D) to the rear cylinder head with a bolt (8 x 1.25 mm) (E), then attach the rear arm (F) to the 2008 V6 attachment arm.

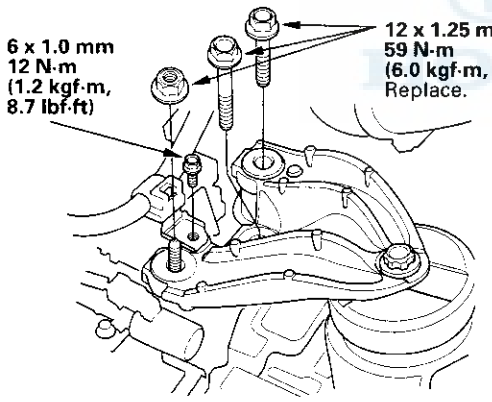
5. Install the mounting bolts into the upper half of the side engine mount bracket. Tighten the bolts to the specified torque.



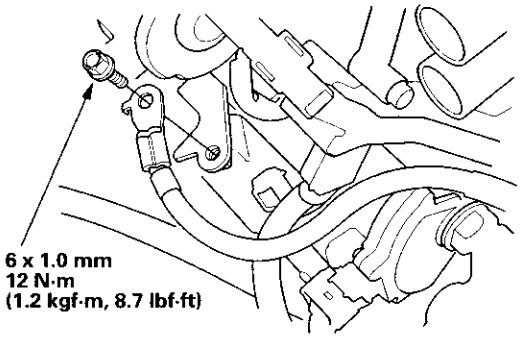
6. M/T model: Tighten the upper transmission mount bracket mounting bolts to the specified torque, then install the ground cable.



7. A/T model: Tighten the upper transmission mount bracket mounting bolts and nut to the specified torque, then install the bracket.

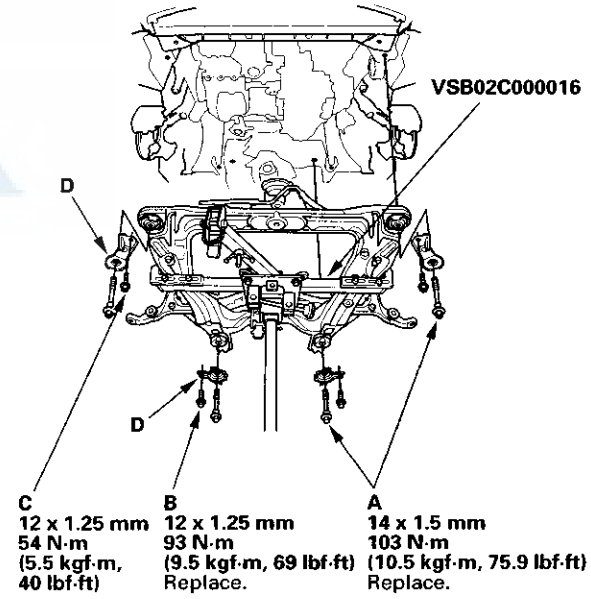


8. A/T model: Install the ground cable.



9. Remove the chain hoist, then raise the vehicle on the lift.

10. Using the subframe adapter (VSB20C000016) and a jack, raise the front subframe up to the body.

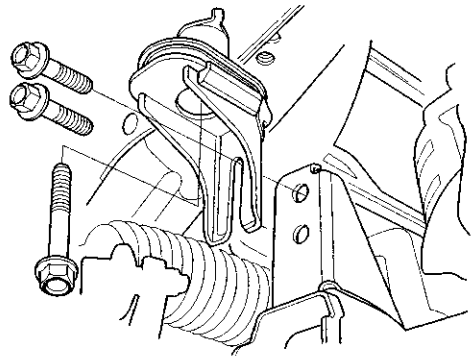


11. Loosely install the new front subframe mounting bolts (four) (A), the 12 x 1.25 mm bolts (four) (B) (C), and the stiffeners (D).

(cont'd)

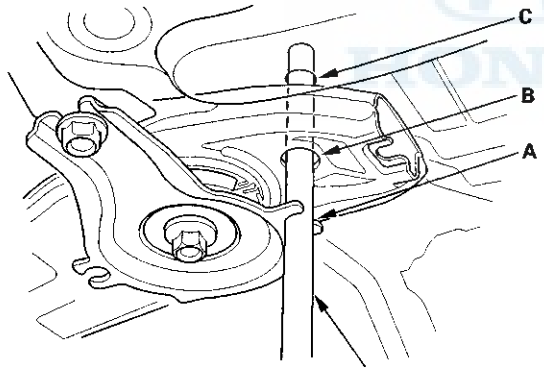
Engine Installation (cont'd)

12. Loosely install the subframe middle mount.



13. Remove the jack and the front subframe adapter.

14. Insert the 15.7 mm side of the subframe alignment pin (070AG-SJAA10S) through the positioning slot (A) on the right rear stiffener, through the positioning hole (B) on the subframe, and into the positioning hole (C) on the body, then loosely tighten the subframe right rear mounting bolt.



070AG-SJAA10S

15. Insert the 15.7 mm side of the subframe alignment pin through the positioning slot on the left rear stiffener, through the positioning hole on the subframe, and into the positioning hole on the body, then loosely tighten the subframe left rear mounting bolt.

16. Using the subframe alignment pin, tighten the subframe right rear mounting bolt.

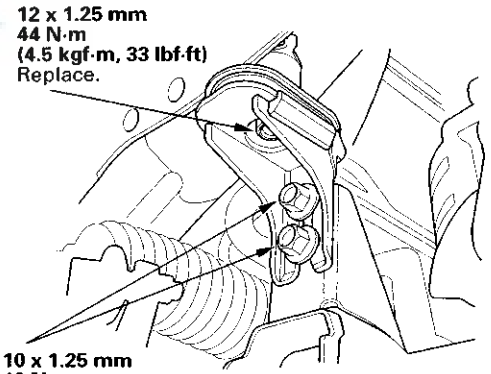
17. Using the subframe alignment pin, tighten the subframe left rear mounting bolt.

18. Tighten the stiffener mounting bolts to the specified torque.

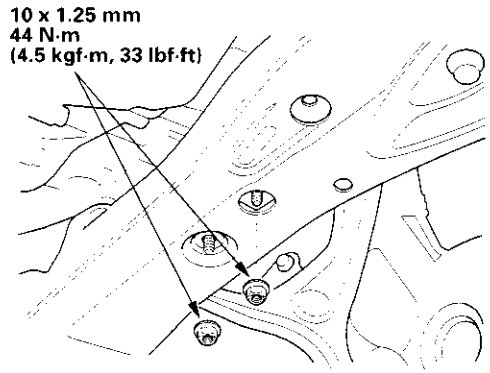
19. Tighten the front and rear subframe mounting bolts to the specified torque.

20. Check that the positioning slots on the right/left rear stiffener, the positioning holes on the subframe, and the positioning holes on the body are aligned using the subframe alignment pin.

21. Tighten the bolts securing the subframe middle mounts.



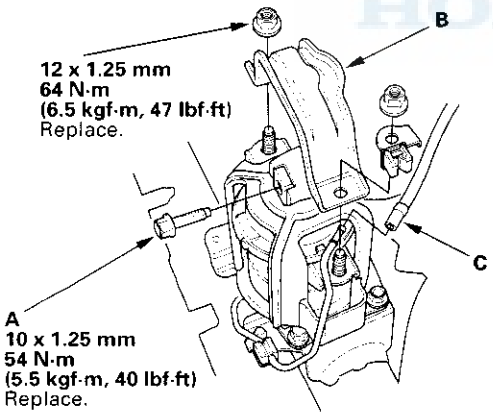
22. Tighten the nuts securing the lower transmission mount.



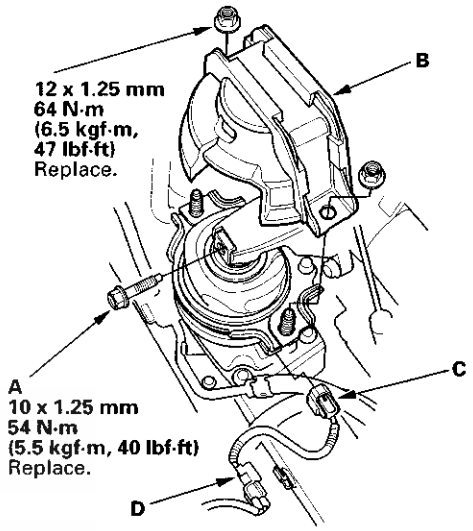
23. Lower the vehicle on the lift.

24. Remove the engine support hanger, the engine hanger balance bar, and the 2008 V6 attachment arm.

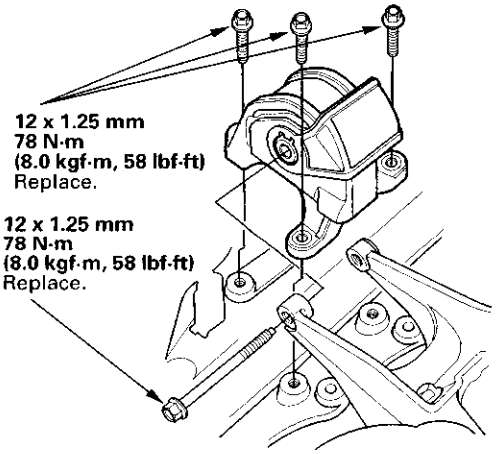
25. M/T model: Tighten the front engine mount bolt (A), then install the front engine mount stop (B) and connect the vacuum hose (C).



26. A/T model: Tighten the front engine mount bolt (A), then install the front engine mount stop (B), and connect the engine mount actuator connector (C), and install the connector (D) to the front subframe.



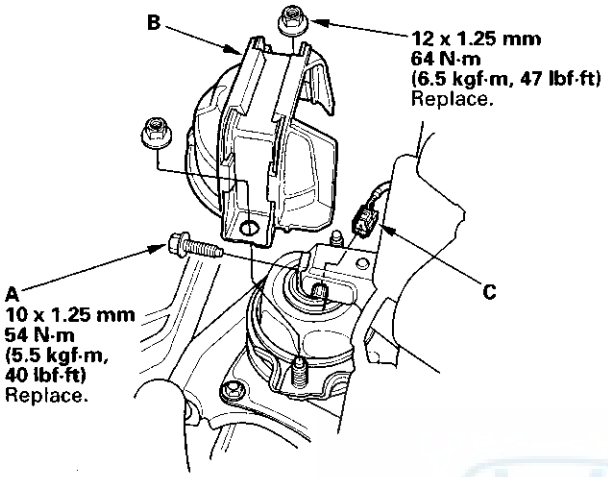
27. M/T model: Support the transmission with a jack and a wood block under the transmission, then install the rear engine mount.



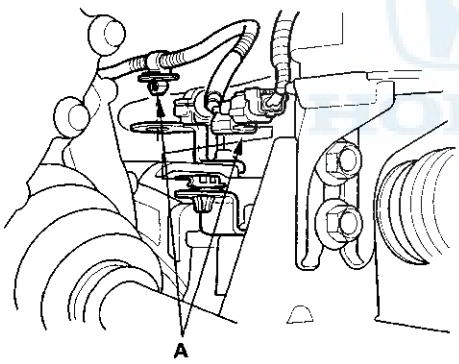
(cont'd)

Engine Installation (cont'd)

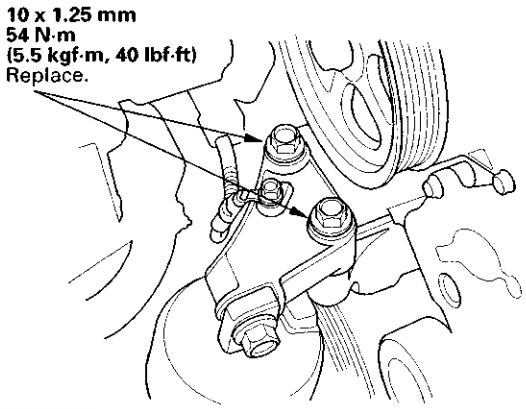
28. A/T model: Tighten the rear engine mount bolt (A), then install the rear engine mount stop (B), and connect the engine mount actuator connector (C).



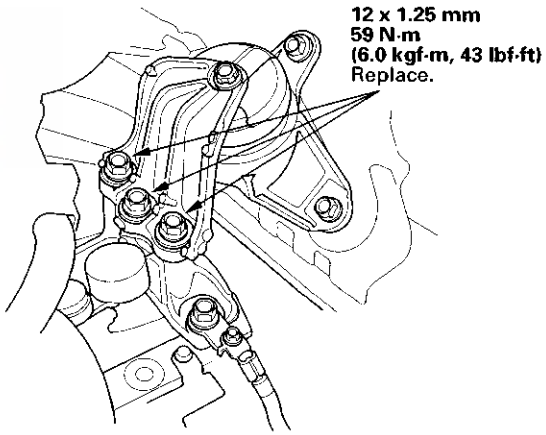
29. A/T model: Install the harness clamps (A).



30. Loosen the mounting bolts for the upper half of the side engine mount bracket, then retighten them to the specified torque.

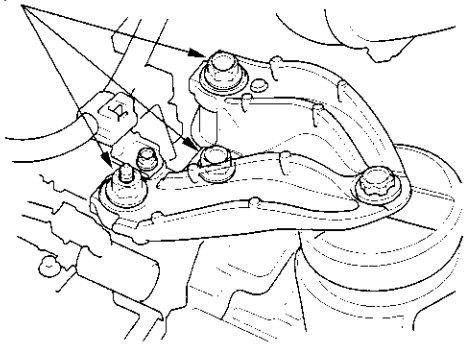


31. M/T model: Loosen the mounting bolts for the upper transmission mount bracket, then retighten them to the specified torque.



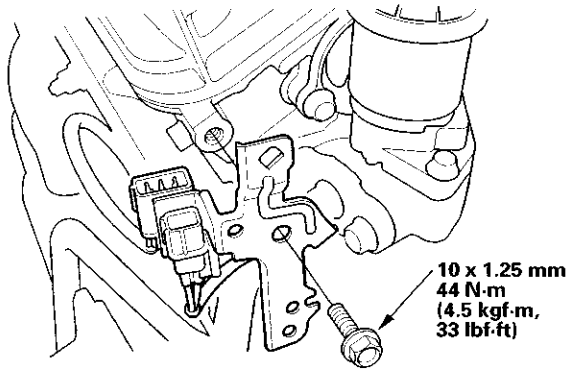
32. A/T model: Loosen the mounting bolts and nut for the upper transmission mount bracket, then retighten them to the specified torque.

12 x 1.25 mm
59 N·m (6.0 kgf·m, 43 lbf·ft)
Replace.

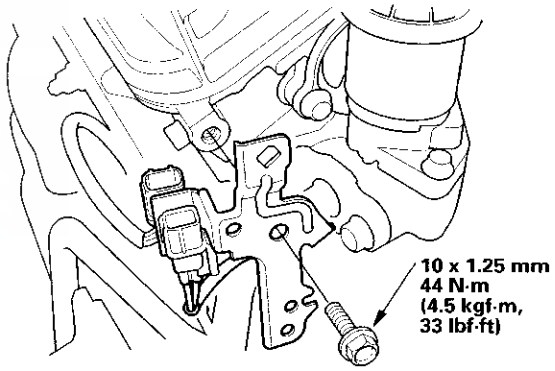


33. Install the connector bracket to the front cylinder head.

J35Z2 engine



J35Z3 engine



34. Install the harness holder and the connectors to the front cylinder head:

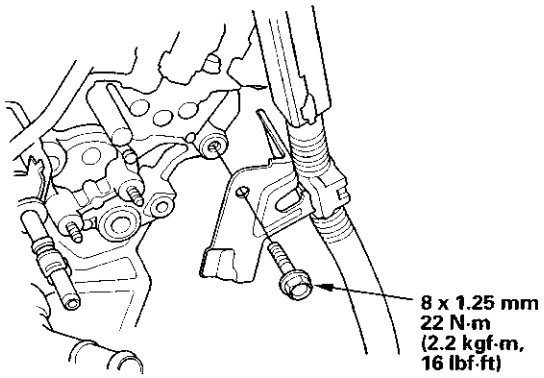
- J35Z2 engine (see step 12 on page 6-31)
- J35Z3 engine (see step 12 on page 6-97)

(cont'd)

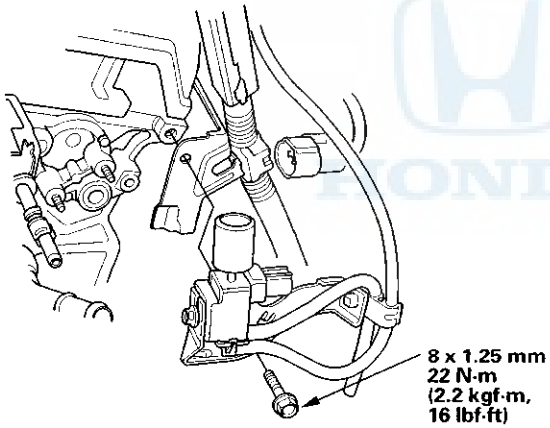
Engine Installation (cont'd)

35. Install the harness clamp bracket to the rear cylinder head.

J35Z2 engine

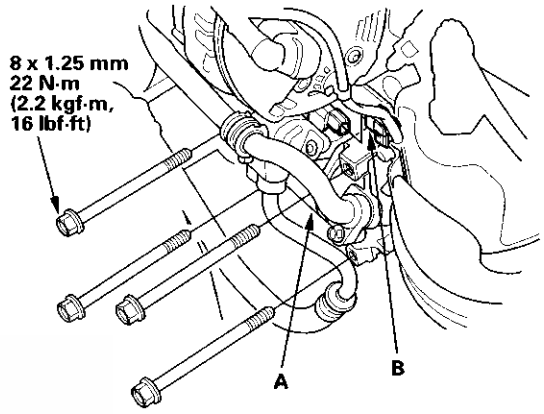


J35Z3 engine

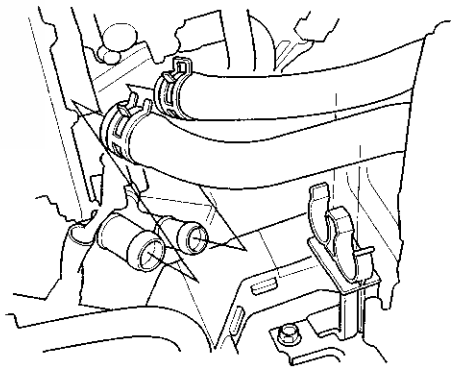


36. A/T model: Install the ATF cooler hoses to the transmission, and secure the hoses with the clips (see page 14-259).

37. Install the A/C compressor (A), then connect the A/C compressor clutch connector (B).



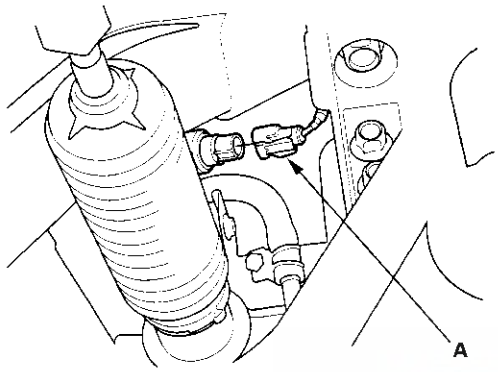
38. Connect the heater hoses.



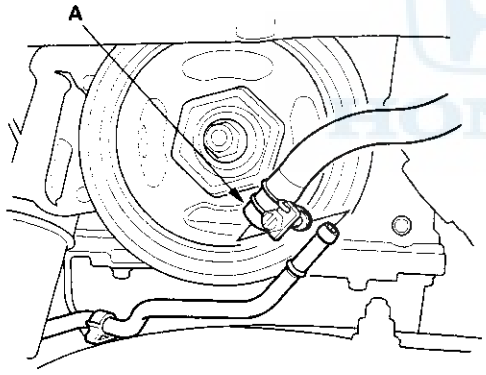
39. Install the radiator (see page 10-15).

40. Raise the vehicle on the lift.

41. Connect the power steering pressure switch connector (A).



42. Connect the power steering (P/S) hose (A).



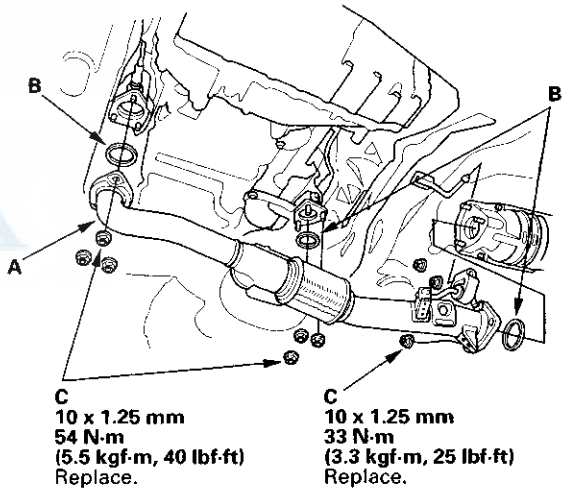
43. Install a new set ring on the end of each driveshaft, then install the driveshafts. Make sure each ring "clicks" into place in the differential and the intermediate shaft.

44. Connect the lower arms to the knuckles, refer to the 2008-2009 Accord Service Manual (see step 11 on page 18-15).

45. Connect the tie-rod end ball joints to the knuckles, refer to the 2008-2009 Accord Service Manual (see step 32 on page 17-62).

46. Install the damper fork, refer to the 2008-2009 Accord Service Manual (see step 4 on page 18-31).

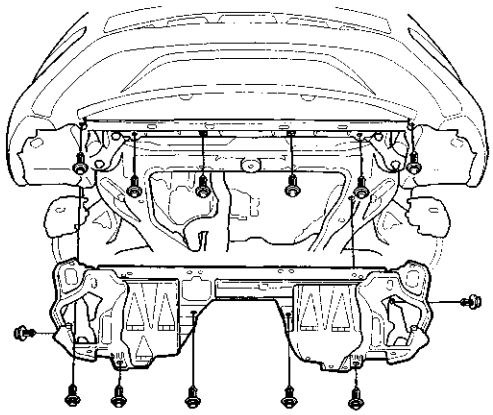
47. Install exhaust pipe A using new gaskets (B) and new self locking nuts (C).



(cont'd)

Engine Installation (cont'd)

48. Install the splash shield.



49. Install the front wheels.

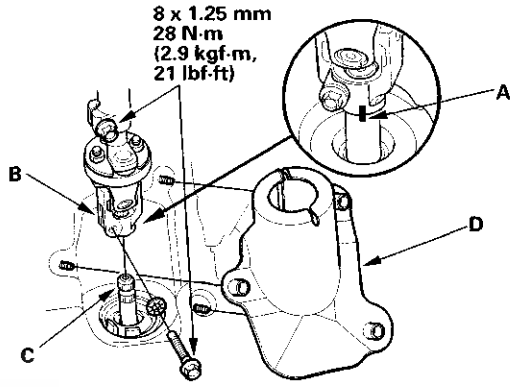
50. Lower the vehicle on the lift.

51. A/T model: Install the shift cable (see step 66 on page 14-255).

52. M/T model: Install the clutch slave cylinder and the clutch line bracket mounting bolt (see step 43 on page 13-35).

53. M/T model: Install the shift cable and the select cable, then tighten the three bolts securing the shift cable holder (see step 44 on page 13-36).

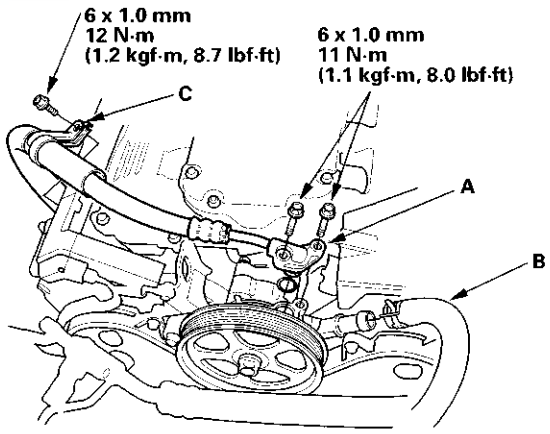
54. Align the reference mark (A) on the steering joint and the steering gearbox pinion shaft. Connect the steering joint (B) to the steering gearbox pinion shaft (C). Tighten the steering joint bolts.



55. Install the steering joint cover (D).

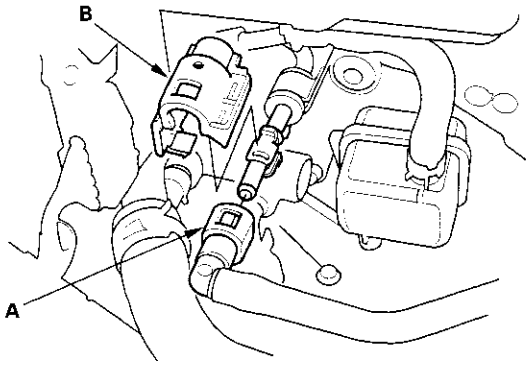
56. Install the steering wheel, refer to the 2008-2009 Accord Service Manual (see page 17-27).

57. Install the P/S pump outlet line (A) and the P/S pump inlet line (B) to the P/S pump and install the P/S hose bracket (C).

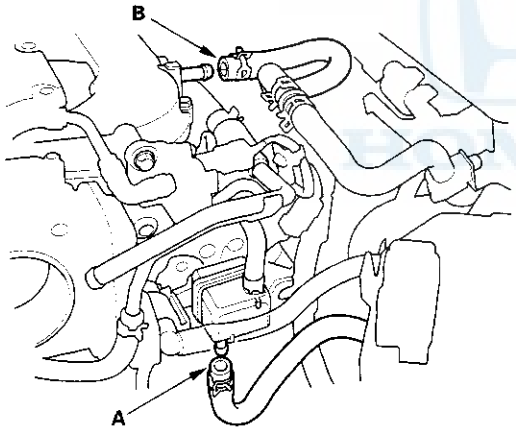


58. Install the drive belt (see page 4-39).

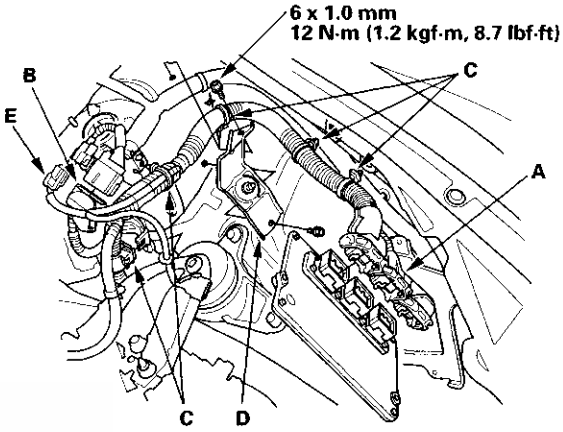
59. Connect the fuel feed hose (A) (see page 11-411), then install the quick-connect fitting cover (B).



60. Connect the evaporative emission (EVAP) canister hose (A) and the brake booster vacuum hose (B).

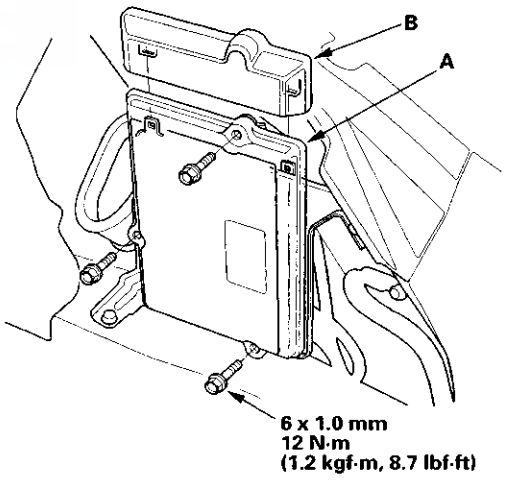


61. Connect the engine control module (ECM)/ powertrain control module (PCM) connectors (A), the engine wire harness connector (B), and the harness clamps (C), and install the bracket (D).



62. M/T model: Connect the engine wire harness connector (E).

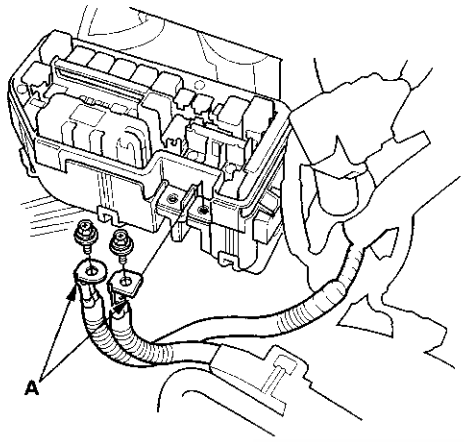
63. Install the ECM/PCM (A), then install the ECM/PCM cover (B).



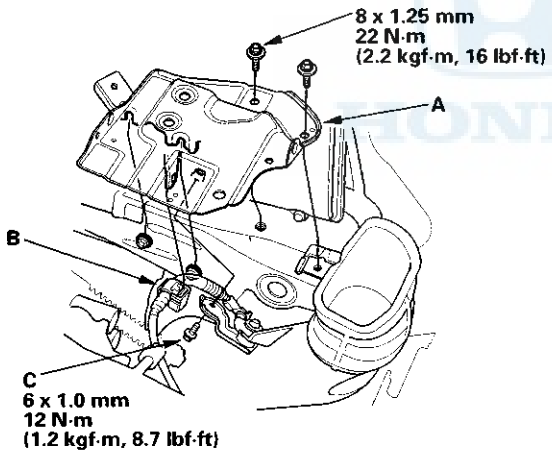
(cont'd)

Engine Installation (cont'd)

64. Connect the battery cables (A) to the under-hood fuse/relay box.



65. Install the battery base (A), then install the harness clamp (B) and the bolt (C).



66. Install the air cleaner assembly (see page 11-436).

67. Install the front grille cover, refer to the 2008-2009 Accord Service Manual (see page 20-257).

68. Install the splash separator (see step 2 on page 10-15).

69. Install the engine cover (see step 1 on page 4-29).

70. Install the strut brace, refer to the 2008-2009 Accord Service Manual (see page 20-289).

71. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

72. Inspect for fuel leaks. Turn the ignition switch to ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation three times, then check for fuel leakage at any point in the fuel line.

73. Refill the engine with the recommended engine oil (see step 4 on page 8-14).

74. Refill the transmission with fluid:

    - Manual transmission (see page 13-14)
    - Automatic transmission (see page 14-232)

75. A/T model: Move the shift lever to each gear, and verify that the A/T gear position indicator follows the transmission range switch.

76. M/T model: Check that the transmission shifts into all gears smoothly.

77. Refill the reservoir with power steering fluid (see step 5 on page 17-10).

78. Refill the radiator with engine coolant (see step 8 on page 10-7).

79. Do the power steering system bleeding procedure (see step 6 on page 17-10).

80. Do the cooling system bleeding procedure (see step 8 on page 10-7).

81. Check for fluid leaks.

82. Do the ECM/PCM reset procedure (see page 11-4).

83. Do the ECM/PCM idle learn procedure (see page 11-385).

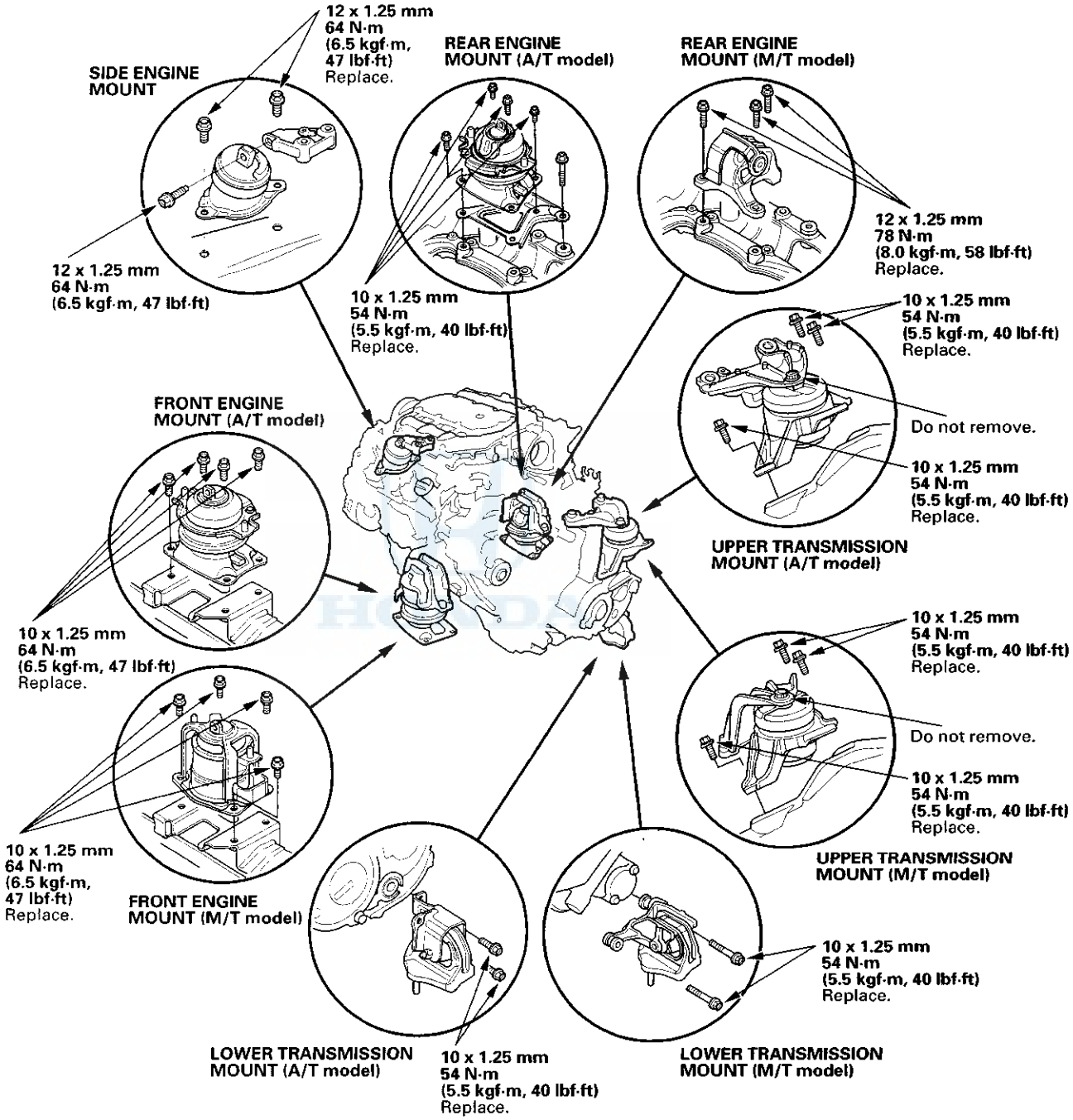
84. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

85. Inspect the idle speed (see page 11-384).

86. Inspect the ignition timing (see page 4-28).

87. Check the wheel alignment (see page 18-4).

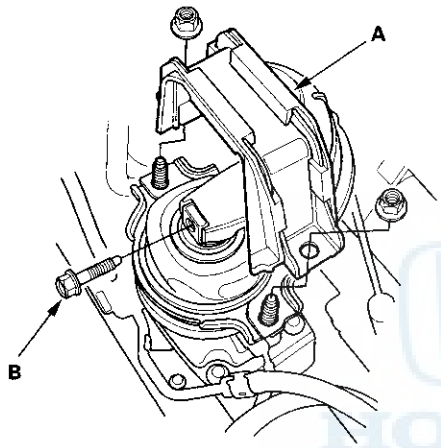
Engine Mount Replacement



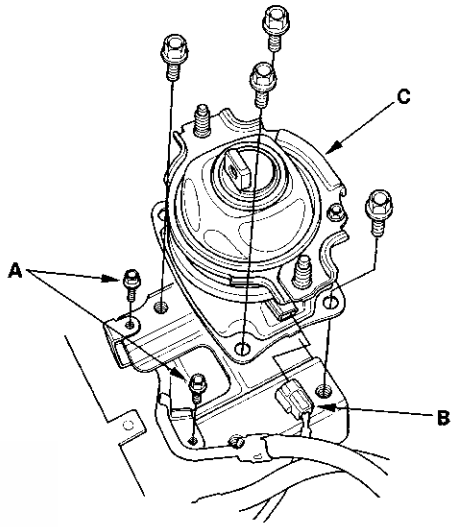
Front Engine Mount Removal and Installation

Removal-J35Z2 engine

1. Remove the radiator fan shroud assembly, then remove the A/C condenser fan shroud assembly (see page 10-12).
2. Support the engine with a jack and a wood block under the oil pan.
3. Remove the front engine mount stop (A), then remove the front engine mount bolt (B).



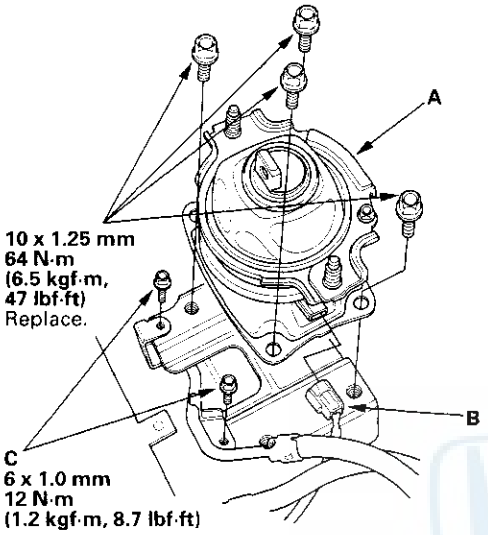
4. Remove the two bolts (A) securing the ATF cooler pipe bracket.



5. Disconnect the engine mount actuator connector (B), then remove the front engine mount (C).

Installation-J35Z2 engine

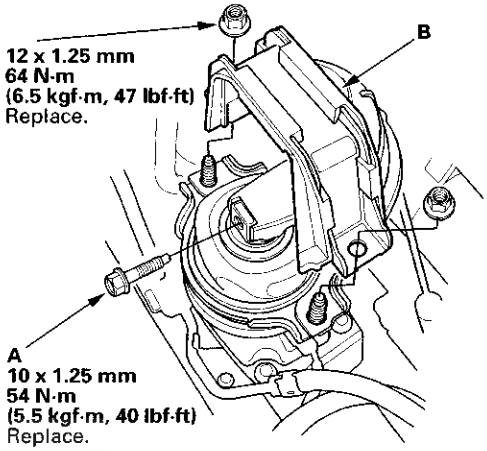
1. Install the front engine mount (A), then connect the engine mount actuator connector (B).



2. Install the two bolts (C) securing the ATF cooler pipe bracket.

3. Remove the jack and the wood block.

4. Install the front engine mount bolt (A), then install the front engine mount stop (B).



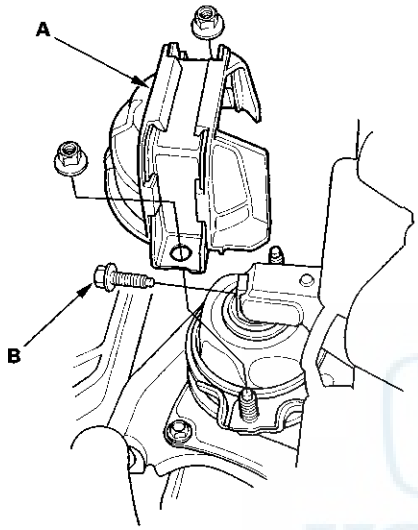
5. Install the A/C condenser fan shroud assembly, then install the radiator fan shroud assembly (see page 10-13).

HONDA

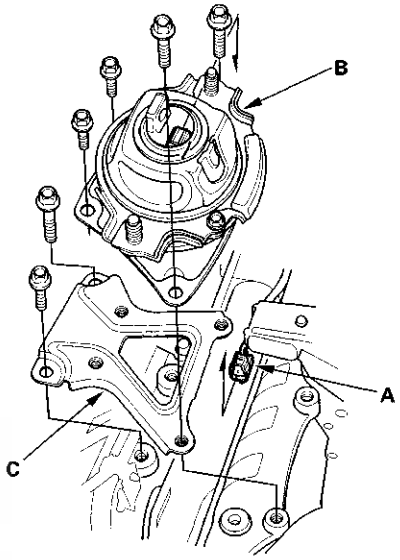
Rear Engine Mount Removal and Installation

Removal-J35Z2 engine

1. Support the engine with a jack and a wood block under the oil pan.
2. Remove the rear engine mount stop (A), then remove the rear engine mount bolt (B).

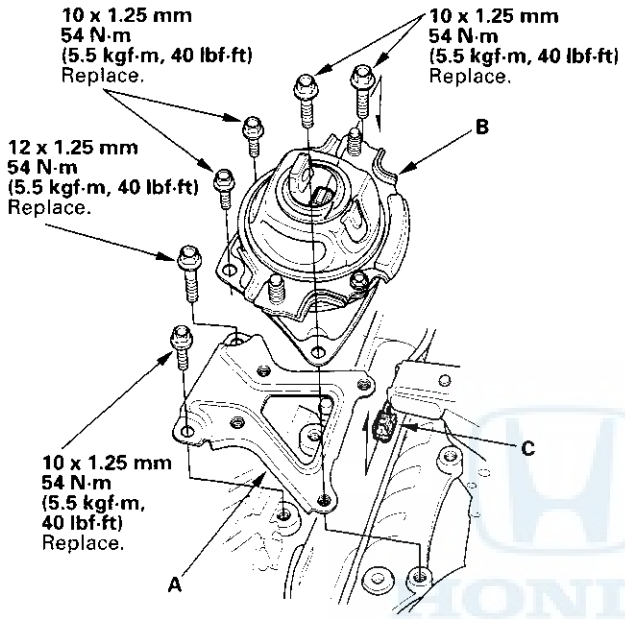


3. Disconnect the engine mount actuator connector (A), then remove the rear engine mount (B) and the rear engine mount base (C).



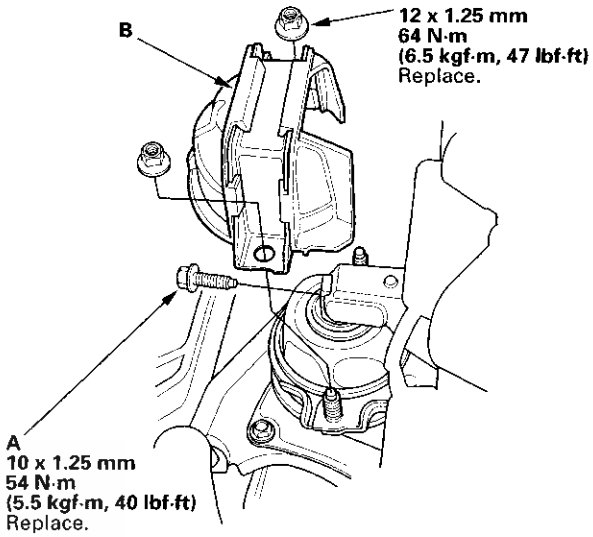
Installation-J35Z2 engine

1. Install the rear engine mount base (A) and the rear engine mount (B), then connect the engine mount actuator connector (C).



2. Remove the jack and the wood block.

3. Install the rear engine mount bolt (A), then install the rear engine mount stop (B).



HONDA

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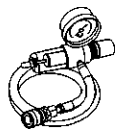
Outline of Model Change

J35Z2 engine has been added.

Cylinder Head

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07AAJ-PNAA101	Air Pressure Regulator	1
②	07AAJ-R70A200	VTEC Air Stop Tool B	1
③	07HAH-PJ7A100	Valve Guide Reamer, 5.5 mm	1
④	07JAA-001020A	Socket, 19 mm	1
⑤	07JAB-001020B	Holder Handle	1
⑥	07MAB-PY3010A	Holder Attachment, 50 mm, Offset	1
⑦	07PAD-0010000	Stem Seal Driver	1
⑧	07PAF-0030100	Camshaft Oil Seal Driver	1
⑨	070AJ-001A101	VTEC/VCM Air Adapter	1
⑩	07742-0010100	Valve Guide Driver, 5.5 mm	1
⑪	07757-PJ1010A	Valve Spring Compressor Attachment	1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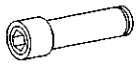
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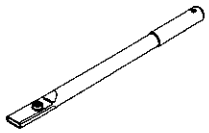
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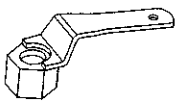
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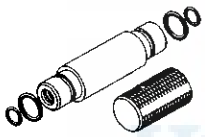
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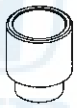
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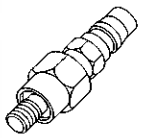
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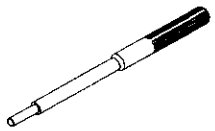
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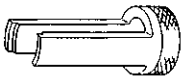
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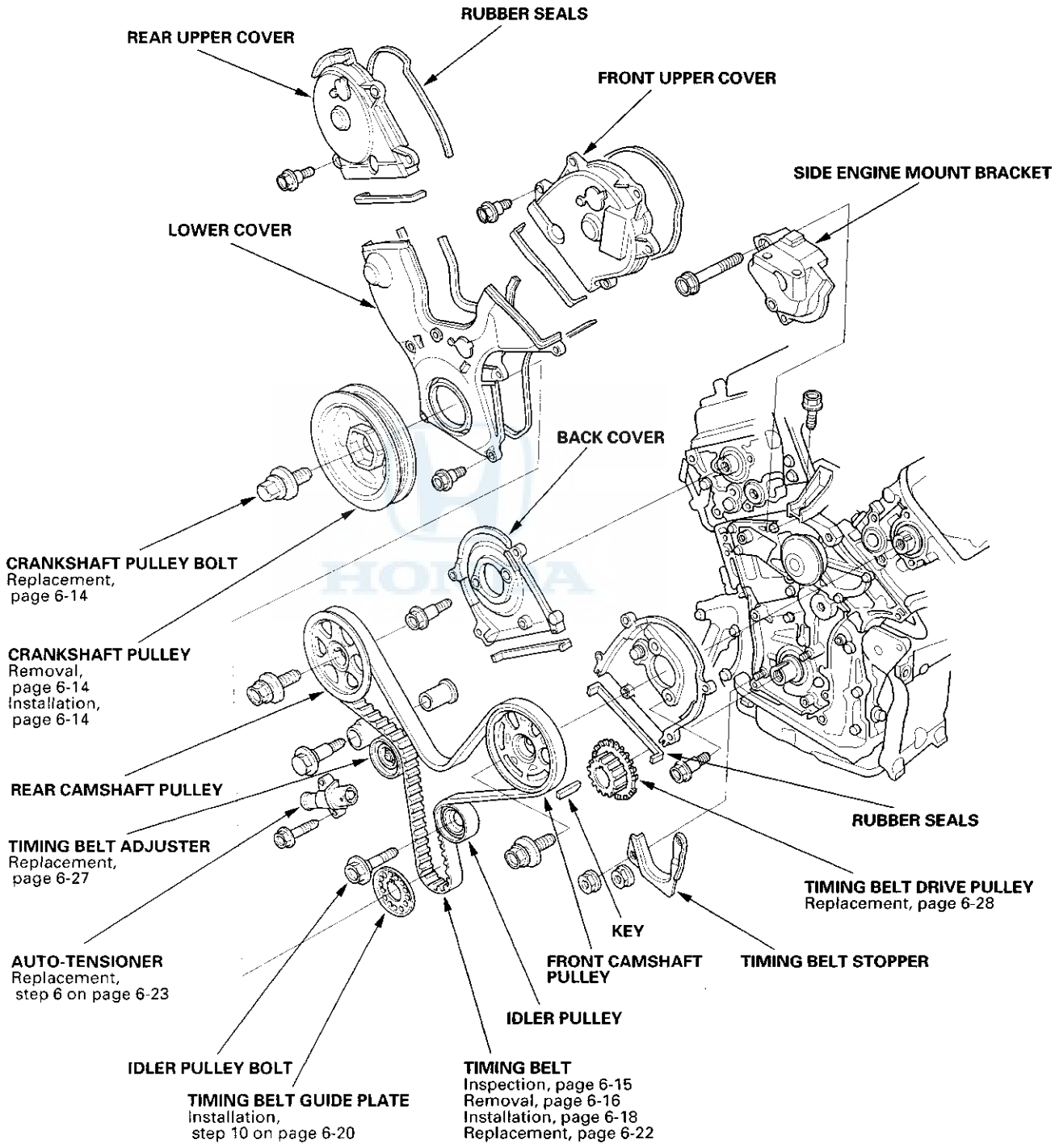

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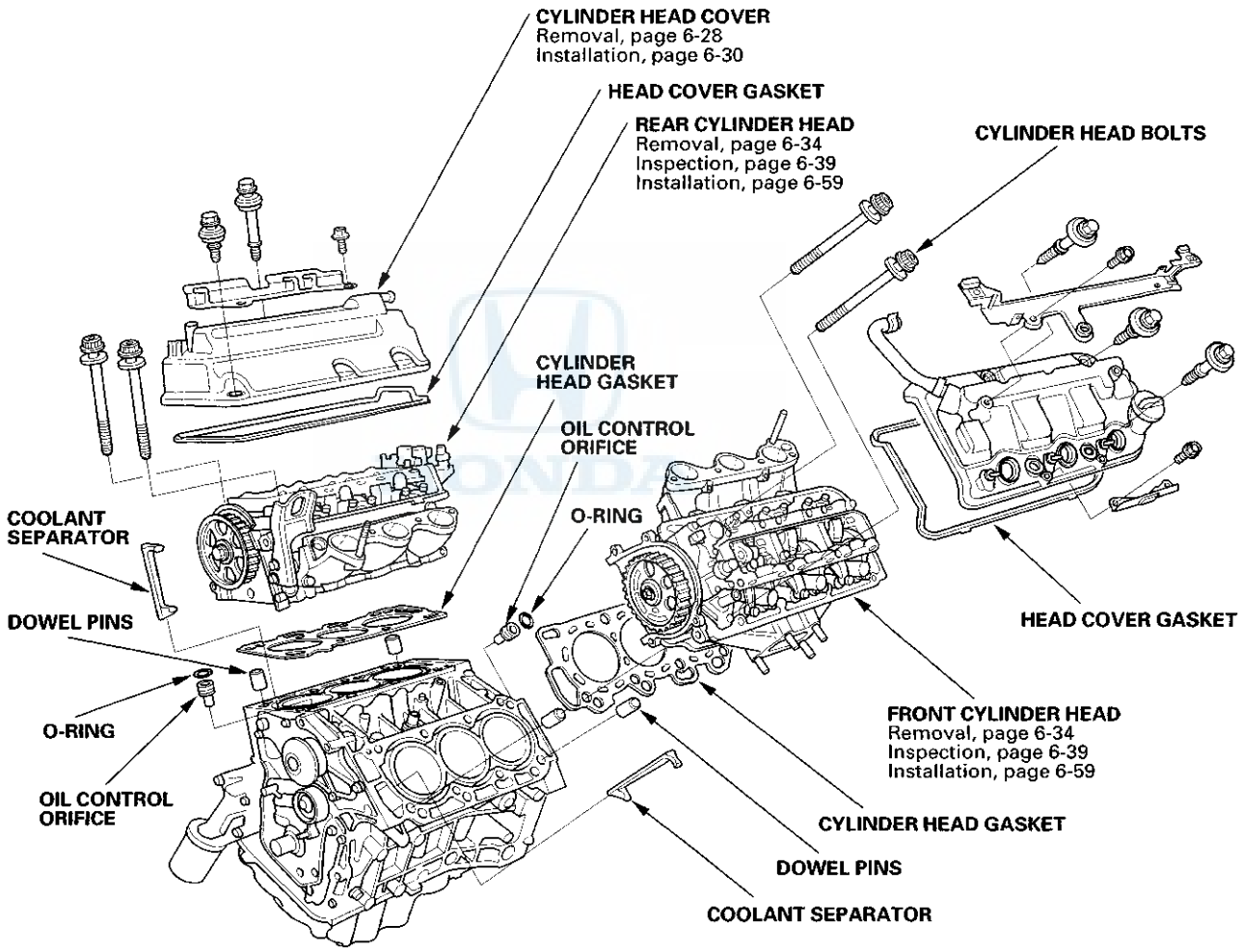

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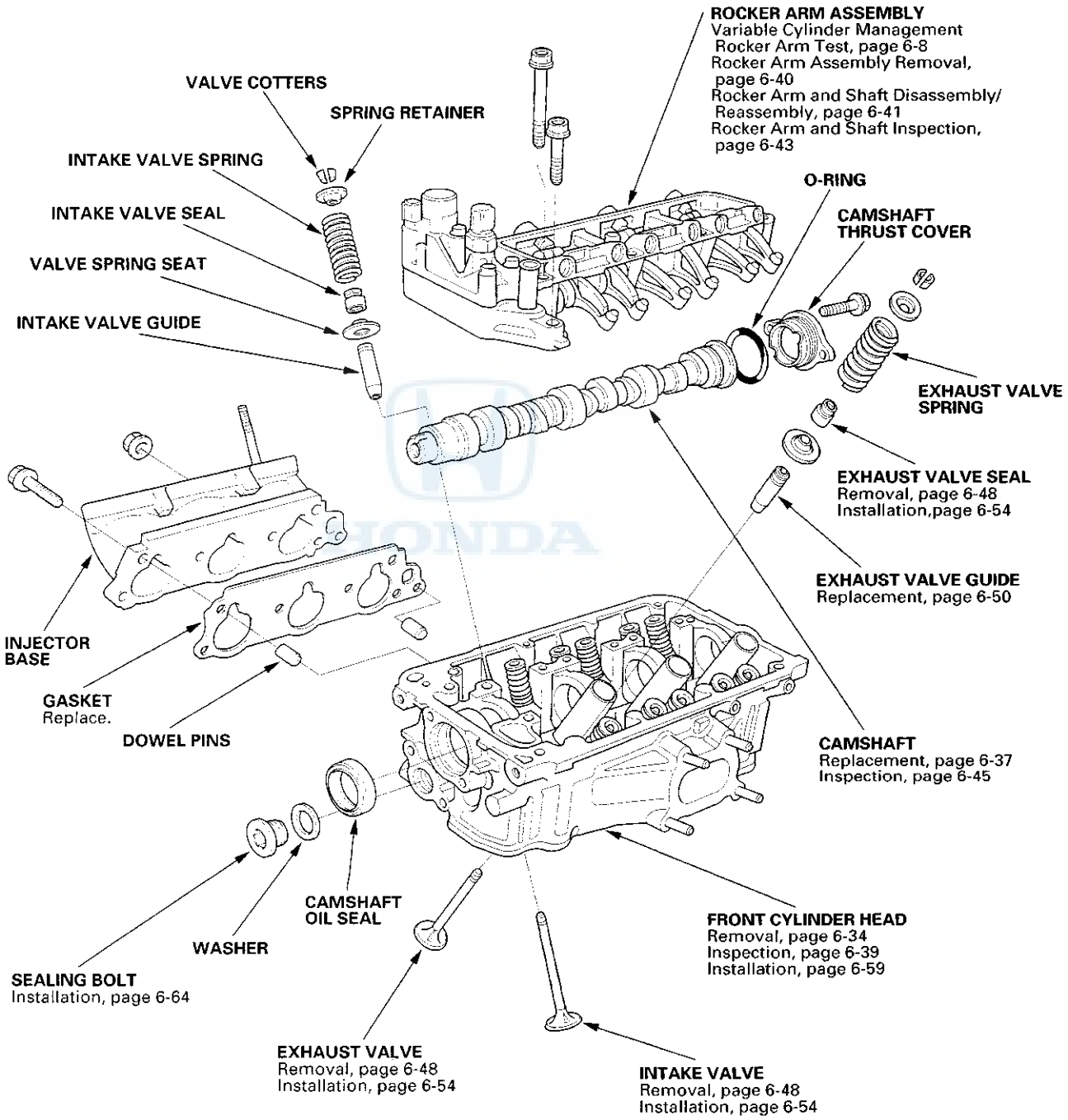
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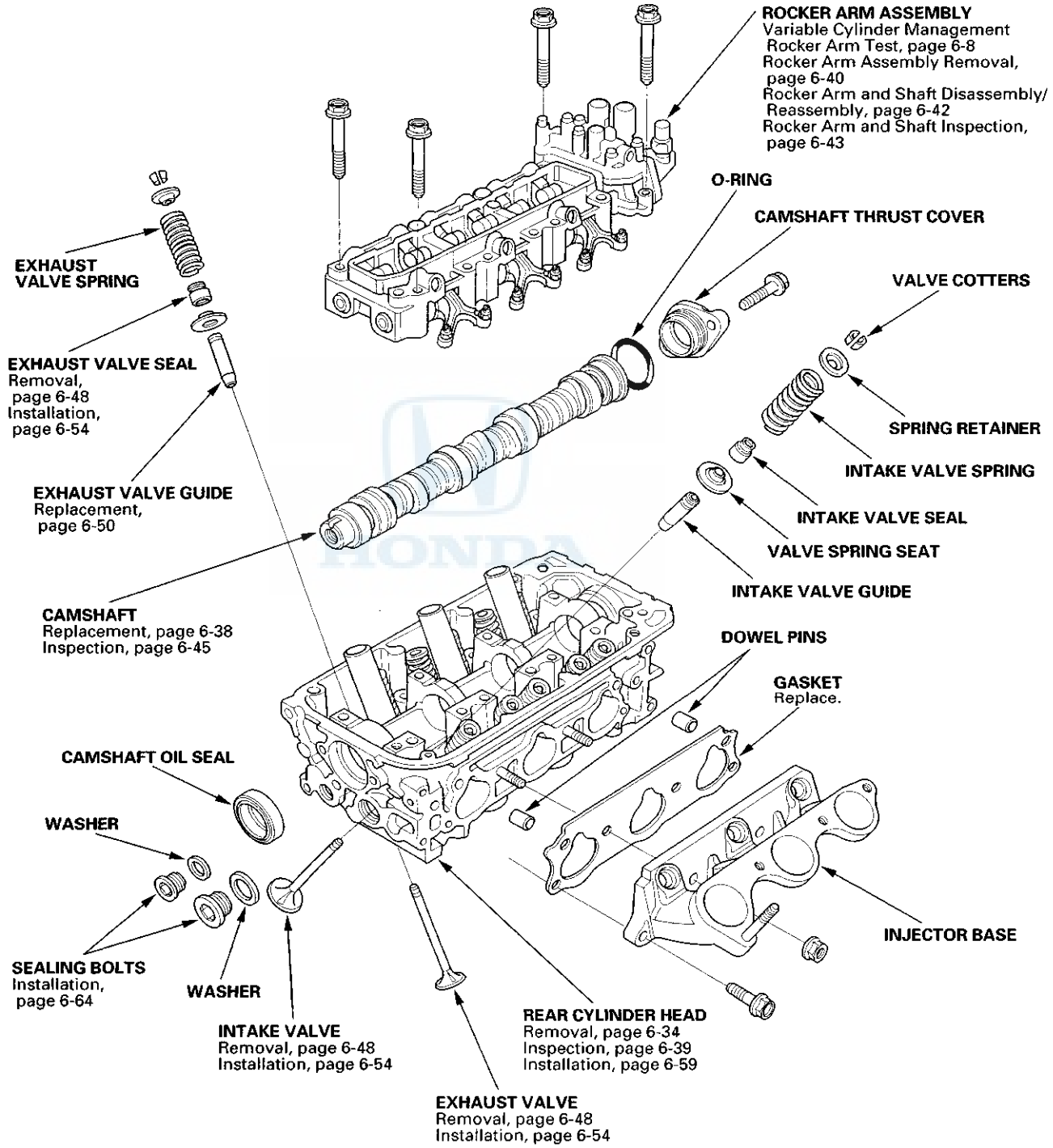
Component Location Index (cont'd)

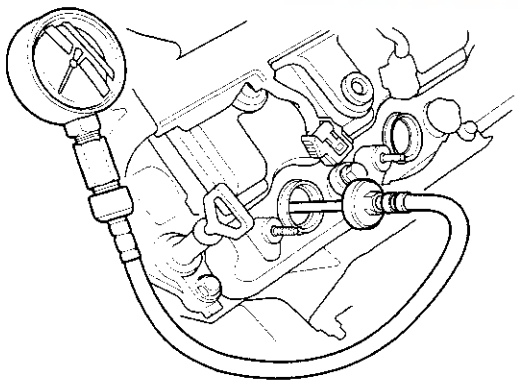
REAR



Engine Compression Inspection

NOTE: After the inspection, you must reset the powertrain control module (PCM). Otherwise, the PCM will continue to stop the fuel injectors from operating.

1. Warm up the engine to normal operating temperature (cooling fan comes on).
2. Turn the ignition switch to LOCK (0).
3. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
4. Turn the ignition switch to ON (II).
5. Make sure the HDS communicates with the vehicle and the PCM. If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
6. Select ALL INJECTORS STOP in the PGM-FI INSPECTION menu with the HDS.
7. Turn the ignition switch to LOCK (0).
8. Remove the six ignition coils (see page 4-29).
9. Remove the six spark plugs.
10. Attach the compression gauge to a spark plug hole.



11. Step on the accelerator pedal to open the throttle fully, then crank the engine with the starter motor, and measure the compression.

    Compression Pressure:
    Above 930 kPa (9.5 kgf/cm², 135 psi)

12. Measure the compression on the remaining cylinders.

    Maximum Variation:
    Within 200 kPa (2.0 kgf/cm², 28 psi)

13. If the compression is not within specifications, check the following items, then remeasure the compression.

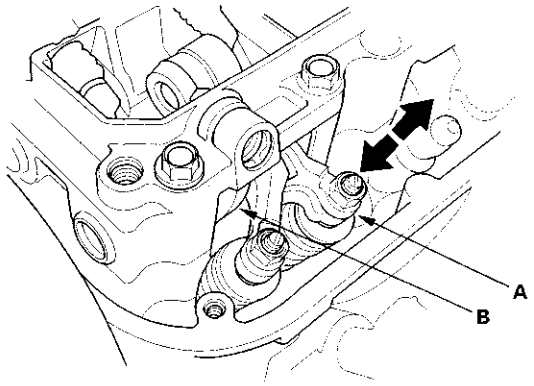
    - Incorrect valve clearance
    - Confirmation of cam timing
    - Damaged or worn cam lobes
    - Damaged or worn valves and seats
    - Damaged cylinder head gaskets
    - Damaged or worn piston rings
    - Damaged or worn piston and cylinder bore

14. Remove the compression gauge from the spark plug hole.
15. Install the six spark plugs.
16. Install the six ignition coils (see page 4-29).
17. Select PCM reset (see page 11-4) in the PGM-FI INSPECTION menu to cancel ALL INJECTORS STOP with the HDS.

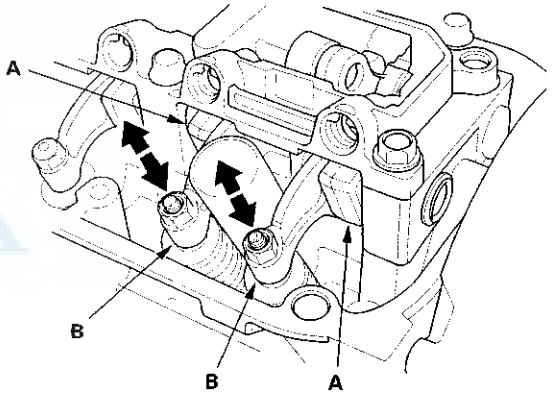
Variable Cylinder Management Rocker Arm Test

Special Tools Required
- VTEC/VCM air adapter 070AJ-001A101
- VTEC air stop tool B 07AAJ-R70A200
- Air pressure regulator 07AAJ-PNAA101

1. Start the engine and let it run for 5 minutes, then turn the ignition switch to LOCK (0).
2. Remove the six spark plugs.
3. Remove the cylinder head covers (see page 6-28).
4. Rotate the crankshaft pulley clockwise. Make sure that the intake primary rocker arm (A) and the intake secondary rocker arm (B) are mechanically connected by the pistons and that the intake primary rocker arm and the intake secondary rocker arm move together.
   - If the intake secondary rocker arm moves independently, remove the intake primary rocker arm and the intake secondary rocker arm as an assembly, and check that the pistons in the rocker arms move smoothly. If any intake rocker arm needs replacing, replace the primary and secondary rocker arms as an assembly, then retest.
   - If the intake primary rocker arm and the intake secondary rocker arm move together, go to step 5.



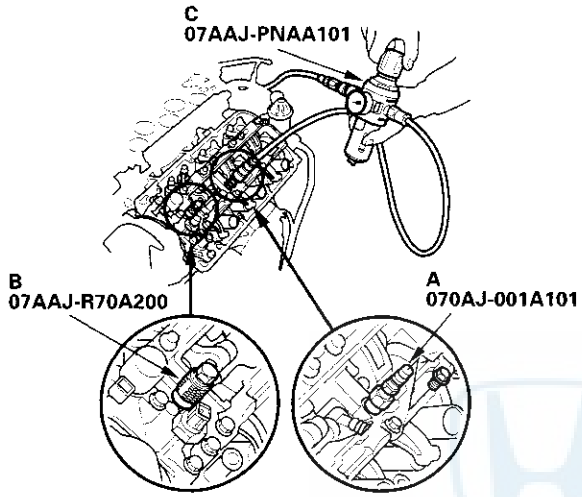
5. Rotate the crankshaft pulley clockwise. Make sure that the exhaust primary rocker arm (A) and the exhaust secondary rocker arm (B) are mechanically connected by the pistons and that the exhaust primary rocker arm and the exhaust secondary rocker arm move together.
   - If the exhaust primary rocker arm moves independently, remove the exhaust primary rocker arm and the exhaust secondary rocker arm as an assembly, and check that the pistons in the rocker arms move smoothly. If any exhaust rocker arm needs replacing, replace the primary and secondary rocker arms as an assembly, then retest.
   - If the exhaust primary rocker arm and the exhaust secondary rocker arm move together, go to step 6.



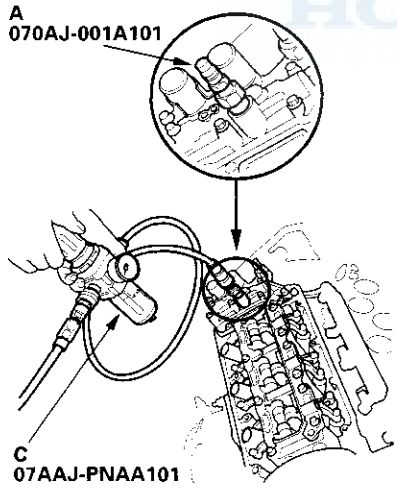
6. Repeat steps 4 and 5 for the other cylinders. When the rocker arms pass the test, go to step 7.
7. Check that the air pressure on the shop air compressor gauge indicates over 690 kPa (7.0 kgf/cm², 100 psi).
8. Inspect the valve clearance (see page 6-10).

9. Remove the sealing bolt, then install the VTEC/VCM air adapter (A) to the inspection hole and install the VTEC air stop tool B (B), then connect the air pressure regulator (C) as shown.

FRONT



REAR

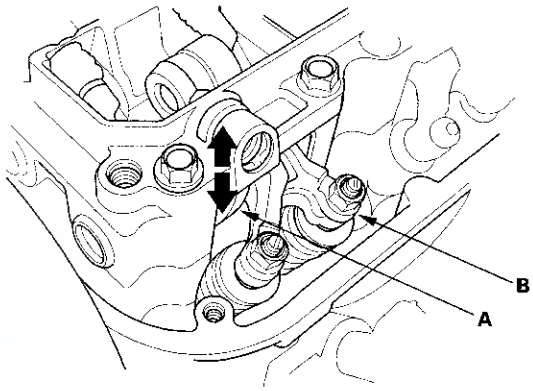


10. Loosen the valve on the regulator, and apply the specified air pressure.

Specified Air Pressure:
551-689 kPa (5.6-7.0 kgf/cm², 80-100 psi)

11. With the specified air pressure applied, rotate the crankshaft pulley clockwise. The intake secondary rocker arm (A) move independently of the intake primary rocker arm (B).

- If the intake secondary rocker arm does not move independently, remove the intake primary rocker arm and the intake secondary rocker arm as an assembly, and check that the pistons in the rocker arms move smoothly. If any intake rocker arm needs replacing, replace the primary and secondary rocker arms as an assembly, then retest.
- If the intake secondary rocker arm move independently, go to step 12.



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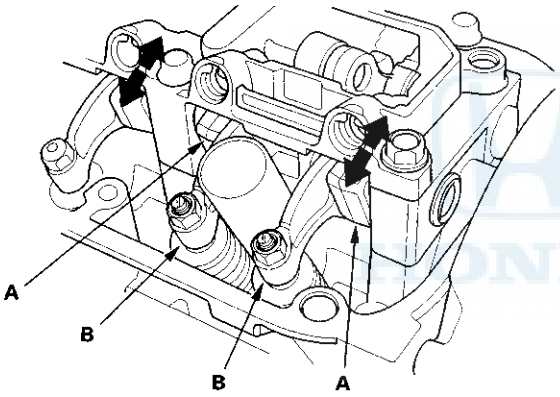
Variable Cylinder Management Rocker Arm Test (cont'd)

12. With the specified air pressure applied, rotate the crankshaft pulley clockwise. The exhaust primary rocker arm (A) move independently of the exhaust secondary rocker arm (B).

    - If the exhaust primary rocker arm does not move independently, remove the exhaust primary rocker arm and the exhaust secondary rocker arm as an assembly, and check that the pistons in the rocker arms move smoothly. If any exhaust rocker arm needs replacing, replace the primary and secondary rocker arms as an assembly, then retest.
    - If the exhaust primary rocker arm moves independently, go to step 13.

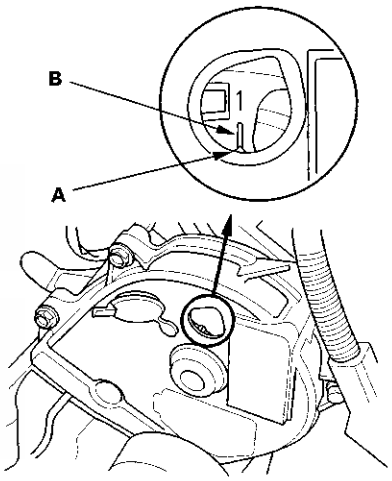


13. Repeat step 11 and 12 for the other cylinders. When the rocker arms pass the test, go to step 14.
14. Remove the air pressure regulator, the VTEC/VCM air adapter, and the VTEC air stop tool B.
15. Tighten the sealing bolts to 22 N·m (2.2 kgf·m, 16 lbf·ft).
16. Install the cylinder head covers (see page 6-30).
17. Install the six spark plugs.

Valve Clearance Adjustment

NOTE: Connect the Honda Diagnostic System (HDS) to the data link connector (DLC), and monitor the engine coolant temperature (ECT) sensor 1. Adjust the valve clearance only when the ECT sensor 1 temperature is less than 100 °F (38 °C).

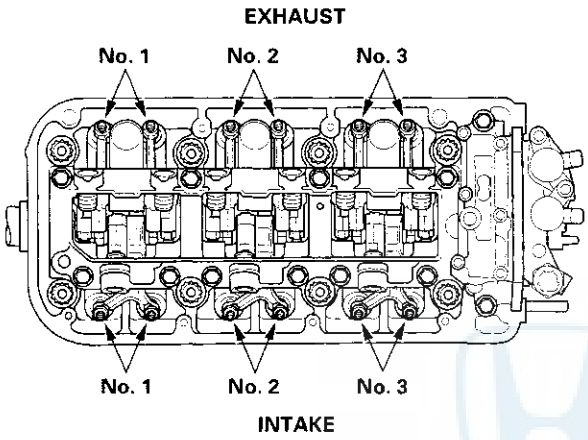
1. Remove the cylinder head covers (see page 6-28).
2. Set the No. 1 piston at top dead center (TDC). Align the pointer (A) on the front upper cover with the No. 1 piston TDC mark (B) on the front camshaft pulley.



3. Select the correct feeler gauge for the valve clearance you are going to check.

Valve Clearance
Intake: 0.20—0.24 mm (0.008—0.009 in.)
Exhaust: 0.28—0.32 mm (0.011—0.013 in.)

REAR



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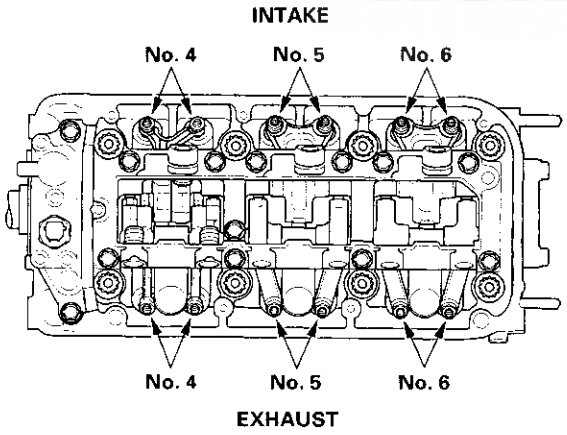
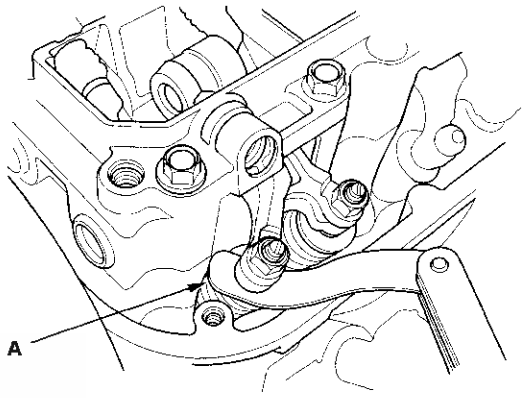
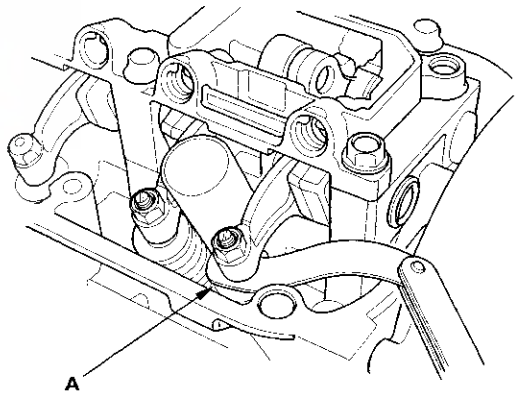


4. Insert the feeler gauge (A) between the adjusting screw and the end of the valve stem on the No. 1 cylinder, and slide it back and forth; you should feel a slight amount of drag.

INTAKE



EXHAUST



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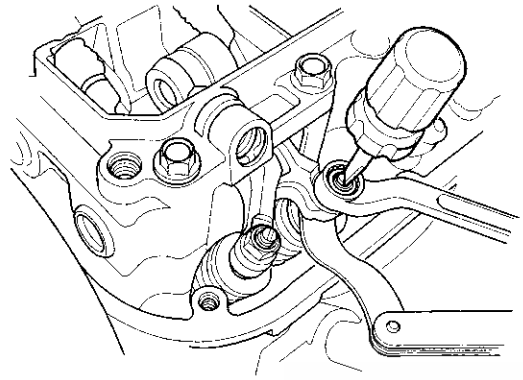
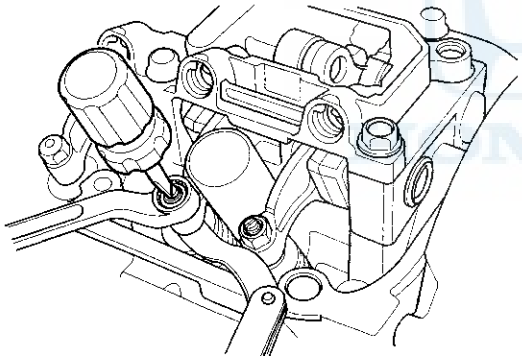
Valve Clearance Adjustment (cont'd)

5. If you feel too much or too little drag, loosen the locknut, and turn the adjusting screw until the drag on the feeler gauge is correct.

INTAKE



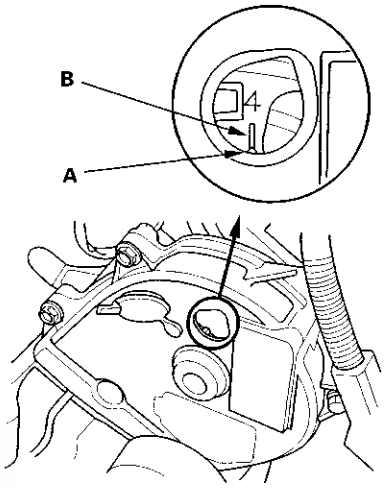
EXHAUST



6. While holding the adjusting screw with the screw driver, tighten the locknut, then recheck the clearance. Repeat the adjustment, if necessary.

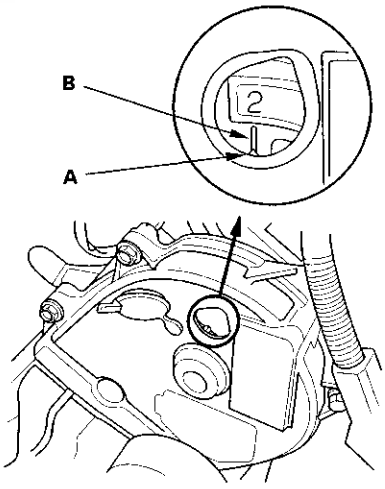
Specified Torque
No. 1, No. 2, No. 3, and No. 4 cylinders:
20 N·m (2.0 kgf·m, 14 lbf·ft)
Apply new engine oil to the nut threads.
No. 5 and No. 6 cylinders:
14 N·m (1.4 kgf·m, 10 lbf·ft)
Apply new engine oil to the nut threads.

7. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 4 piston TDC mark (B) on the front camshaft pulley.



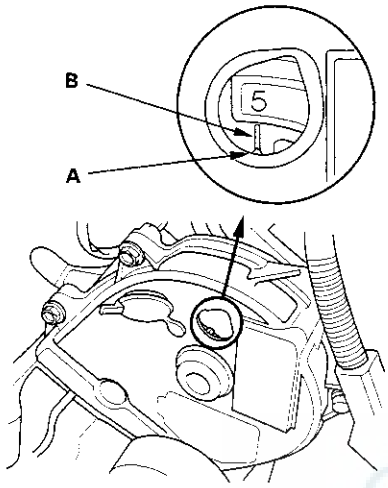
8. Check and, if necessary, adjust the valve clearance on the No. 4 cylinder.

9. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 2 piston TDC mark (B) on the front camshaft pulley.



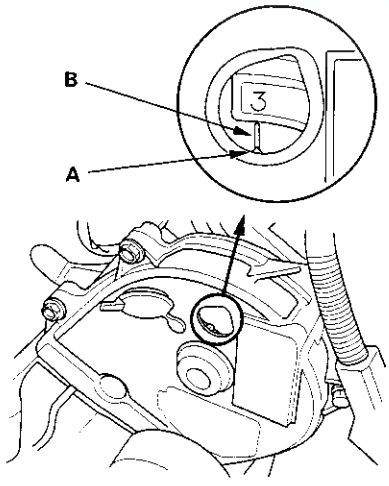
10. Check and, if necessary, adjust the valve clearance on the No. 2 cylinder.

11. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 5 piston TDC mark (B) on the front camshaft pulley.



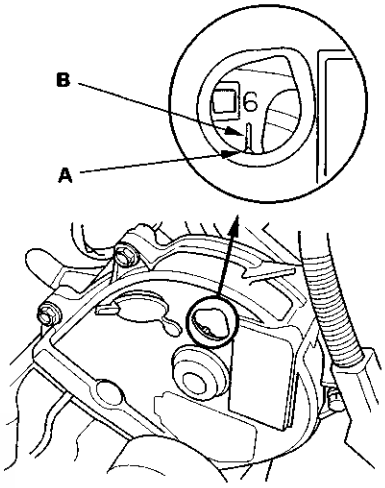
12. Check and, if necessary, adjust the valve clearance on the No. 5 cylinder.

13. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 3 piston TDC mark (B) on the front camshaft pulley.



14. Check and, if necessary, adjust the valve clearance on the No. 3 cylinder.

15. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 6 piston TDC mark (B) on the front camshaft pulley.



16. Check and, if necessary, adjust the valve clearance on the No. 6 cylinder.

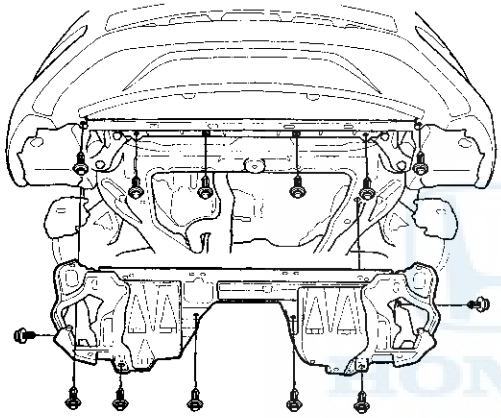
17. Install the cylinder head covers (see page 6-30).

Crankshaft Pulley Removal and Installation

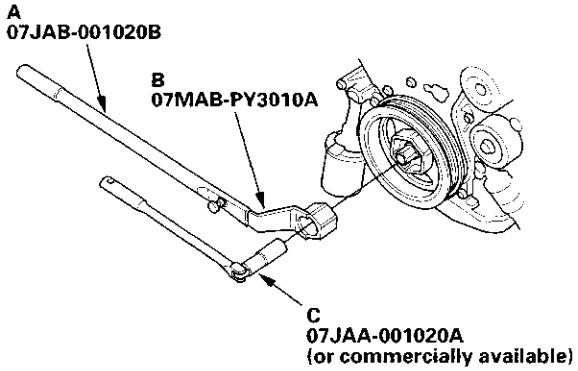
Special Tools Required
- Holder handle 07JAB-001020B
- Holder attachment, 50 mm, offset 07MAB-PY3010A
- Socket, 19 mm 07JAA-001020A, or a commercially available 19 mm socket

Removal

1. Raise the vehicle on the lift.
2. Remove the right front wheel.
3. Remove the splash shield.



4. Remove the drive belt (see page 4-39).
5. Hold the pulley with the holder handle (A) and the holder attachment (B).

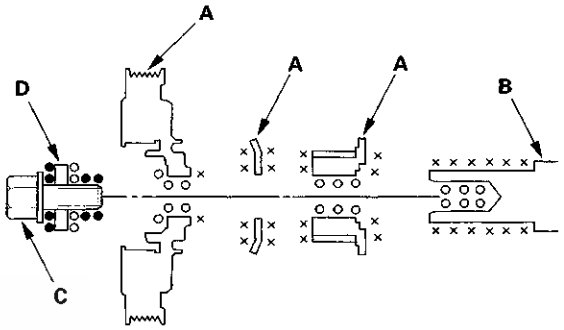


6. Remove the bolt with a heavy duty 19 mm socket (C) and a breaker bar, then remove the crankshaft pulley.

Installation

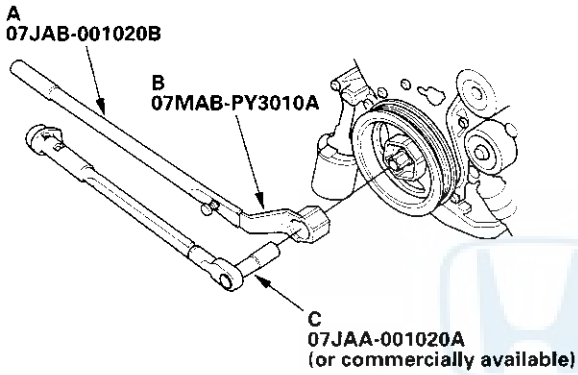
1. Remove any oil and clean the pulleys (A), the crankshaft (B), the bolt (C), and the washer (D). Lubricate with new engine oil as shown.

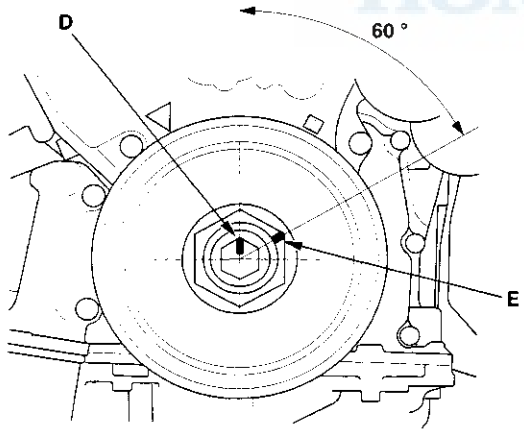
×: Remove any oil
○: Clean
●: Lubricate with new engine oil



2. Install the crankshaft pulley, and tighten the bolt. Do not use an impact wrench.

   -1 Hold the pulley with the holder handle (A) and the holder attachment (B). Tighten the bolt to 64 N·m (6.5 kgf·m, 47 lbf·ft) with a torque wrench and a 19 mm socket (C).
   -2 Mark the bolt head (D) and the crankshaft pulley (E) as shown, then tighten the bolt an additional 60 ° (The mark on the bolt head lines up with the mark on the crankshaft pulley).

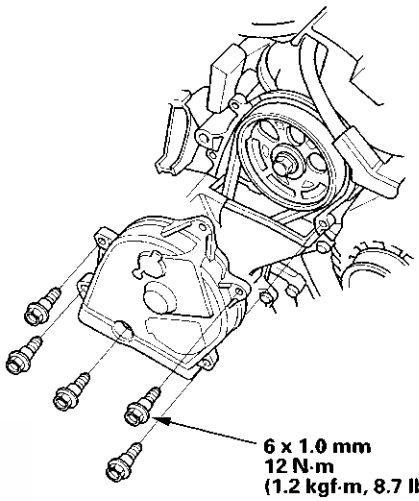




3. Install the drive belt (see page 4-39).
4. Install the splash shield.
5. Install the right front wheel.

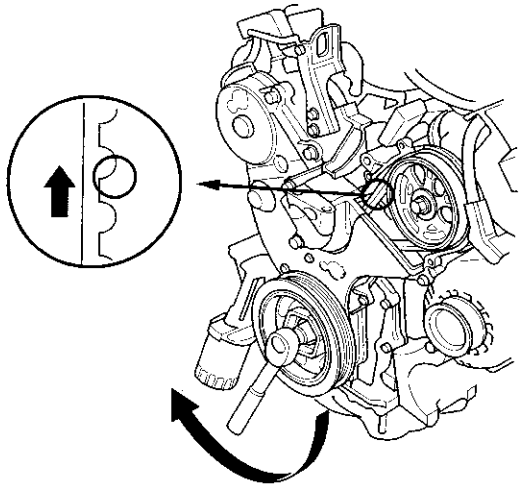
Timing Belt Inspection

1. Remove the drive belt (see page 4-39).
2. Remove the front upper cover.



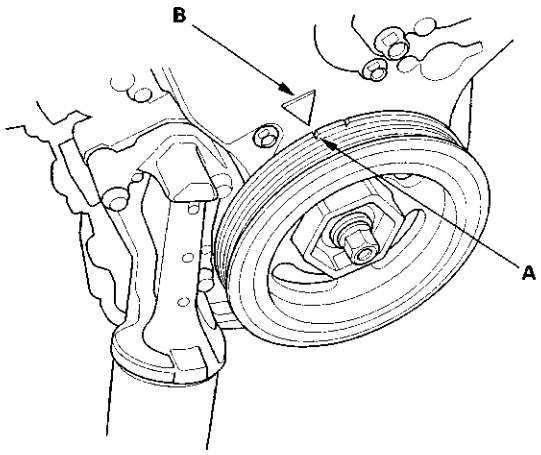
3. Inspect the timing belt for cracks and oil or coolant contamination. Replace the belt if it is cracked, or contaminated with oil or coolant. Wipe off any oil or solvent that gets on the belt pulleys.

   NOTE: If there is any leakage, repair them before replacing the timing belt.



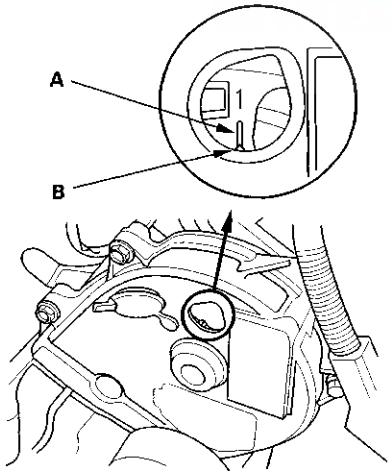
Timing Belt Removal

1. Turn the crankshaft pulley so its white mark (A) lines up with the pointer (B).



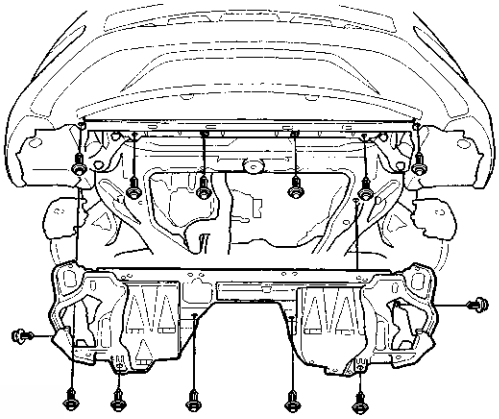
2. Check that the No. 1 piston top dead center (TDC) mark (A) on the front camshaft pulley and the pointer (B) on the front upper cover are aligned.

   NOTE: If the marks are not aligned, rotate the crankshaft 360 degrees, and recheck the camshaft pulley mark.



3. Raise the vehicle on the lift, then remove the right front wheel.

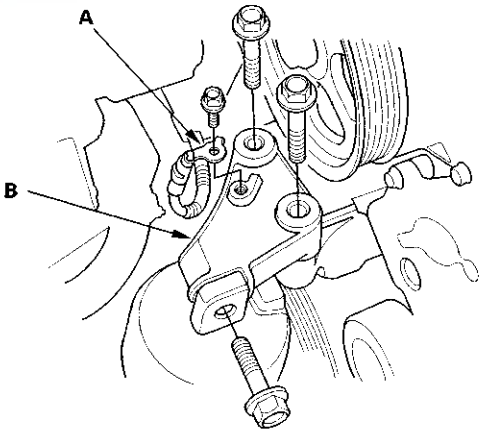
4. Remove the splash shield.



5. Remove the drive belt auto-tensioner (see page 4-43).

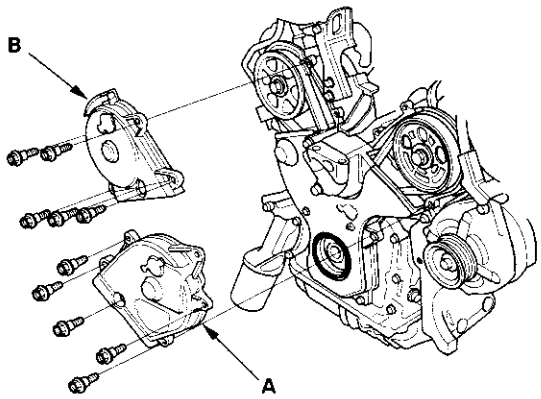
6. Support the engine with a jack and a wood block under the oil pan.

7. Remove the ground cable (A), then remove the upper half of the side engine mount bracket (B).

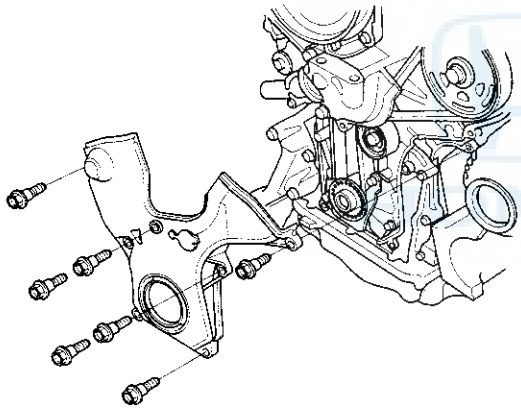


8. Remove the crankshaft pulley (see page 6-14).

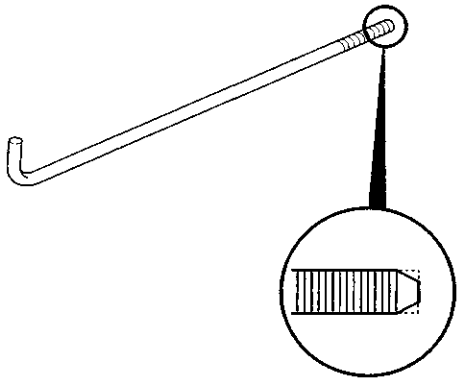
9. Remove the front upper cover (A) and the rear upper cover (B).



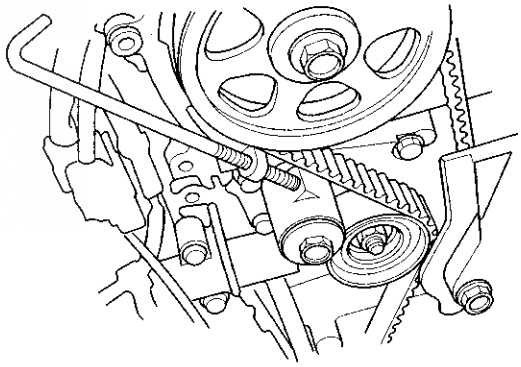
10. Remove the lower cover.



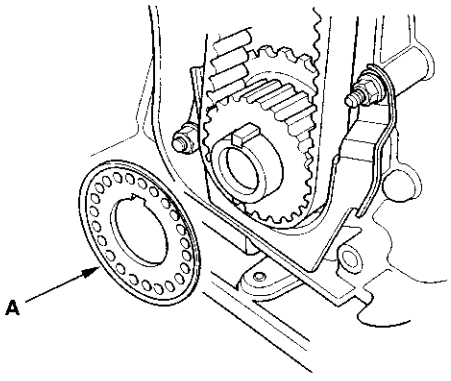
11. Remove one of the battery clamp bolts from the battery tray, and grind the end of it as shown.



12. Thread the battery clamp bolt in as shown to hold the timing belt adjuster in its current position. Tighten it by hand, do not use a wrench.



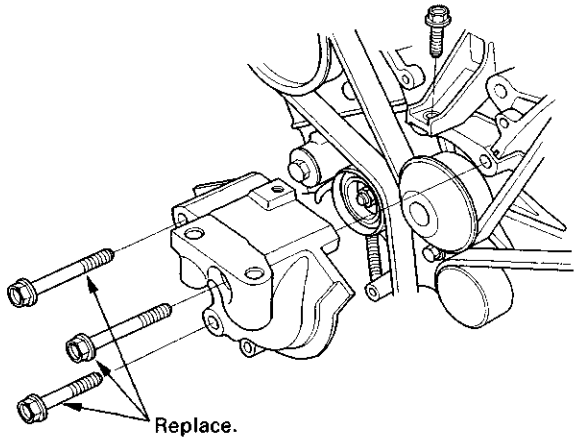
13. Remove the timing belt guide plate (A).



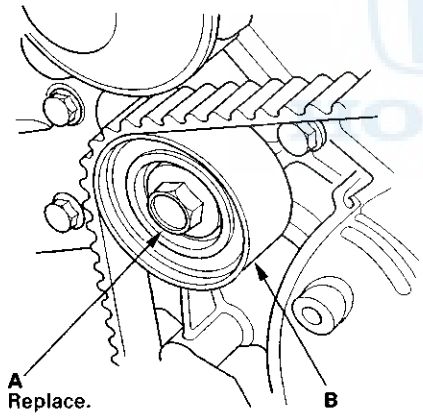
(cont'd)

Timing Belt Removal (cont'd)

14. Remove the lower half of the side engine mount bracket.



15. Remove the idler pulley bolt (A) and the idler pulley (B), then remove the timing belt. Discard the idler pulley bolt.

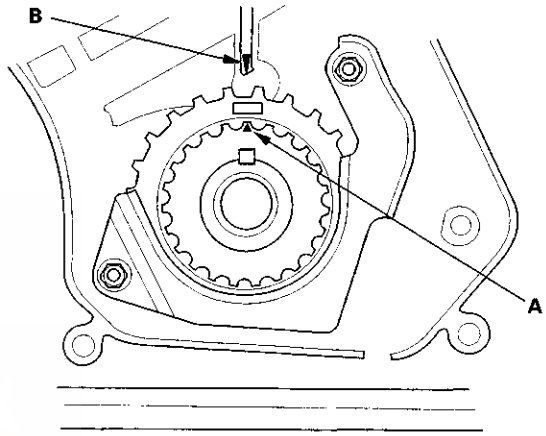


Timing Belt Installation

NOTE: The following procedure is for installing a used timing belt. If you are installing a new belt, refer to the timing belt replacement procedure (see page 6-22).

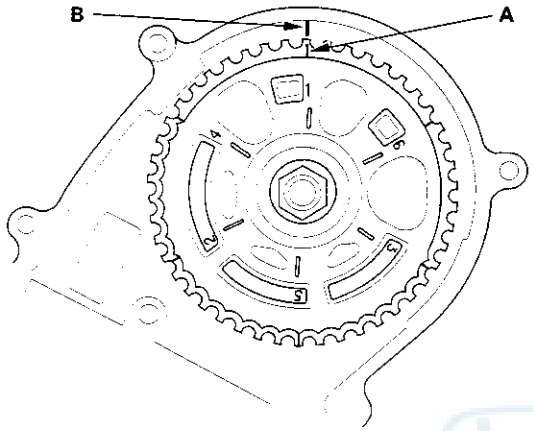
1. Clean the timing belt pulleys, the timing belt guide plate, and the upper and lower covers.

2. Set the timing belt drive pulley to top dead center (TDC) by aligning the TDC mark (A) on the tooth of the timing belt drive pulley with the pointer (B) on the oil pump.

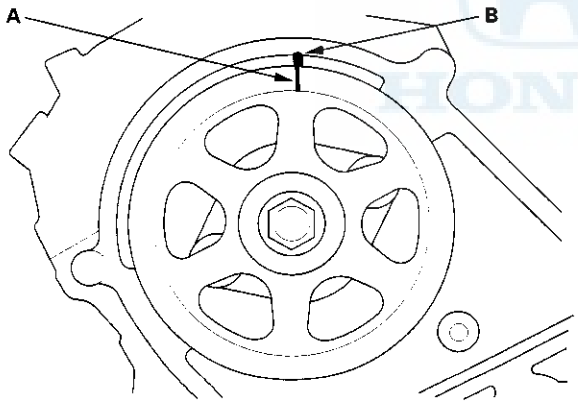


3. Set the camshaft pulleys to TDC by aligning the TDC marks (A) on the camshaft pulleys with the pointers (B) on the back covers.

FRONT



REAR

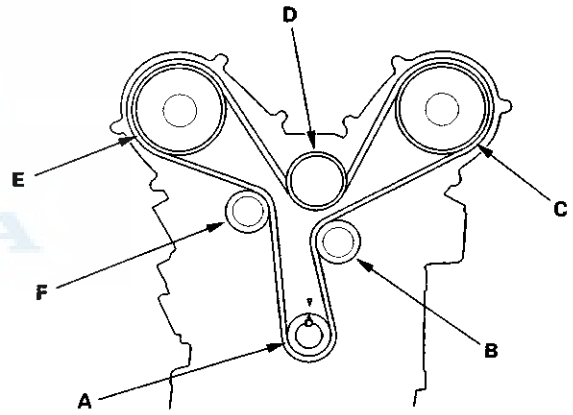


4. Loosely install the idler pulley with a new idler pulley bolt so the pulley can move but does not come off.

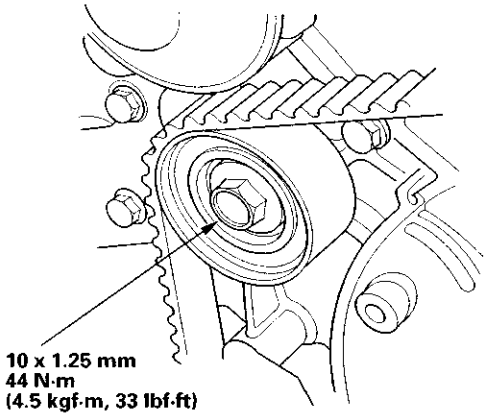
5. If the auto-tensioner has extended and the timing belt cannot be installed, do the timing belt replacement procedure (see page 6-22).

6. Install the timing belt in a counterclockwise sequence starting with the drive pulley. Take care not to damage the timing belt during installation.

   -1 Drive pulley (A)
   -2 Idler pulley (B)
   -3 Front camshaft pulley (C)
   -4 Water pump pulley (D)
   -5 Rear camshaft pulley (E)
   -6 Adjusting pulley (F)



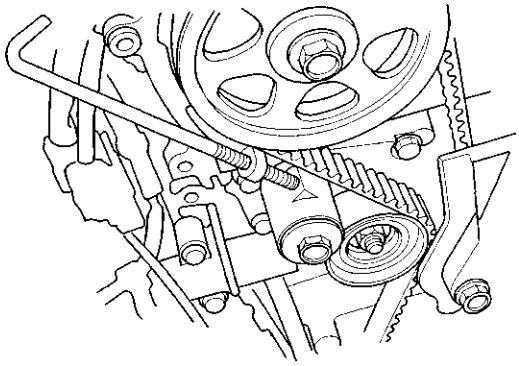
7. Tighten the idler pulley bolt.



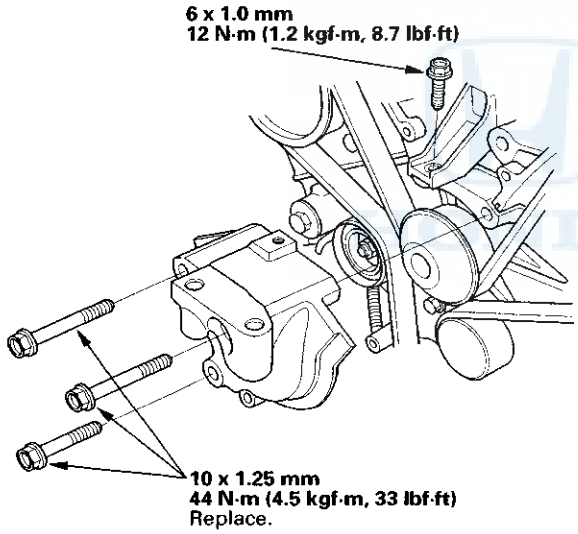
(cont'd)

Timing Belt Installation (cont'd)

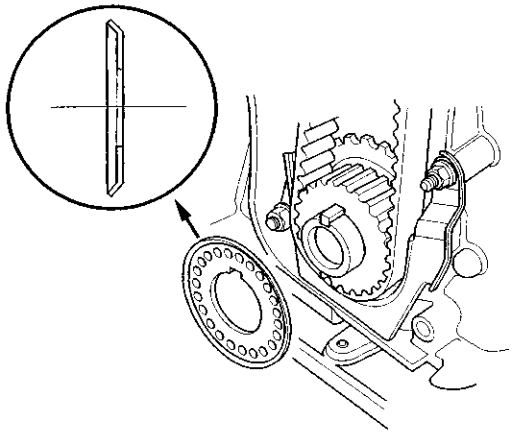
8. Remove the battery clamp bolt from the back cover.



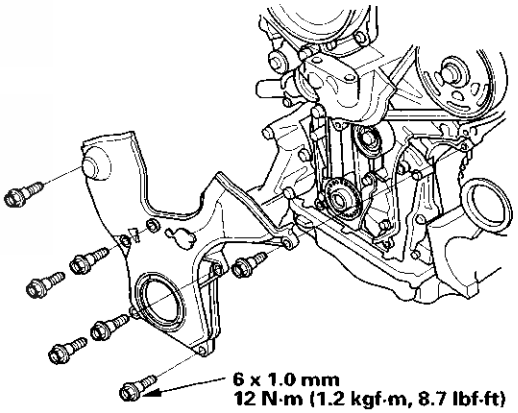
9. Install the lower half of the side engine mount bracket.



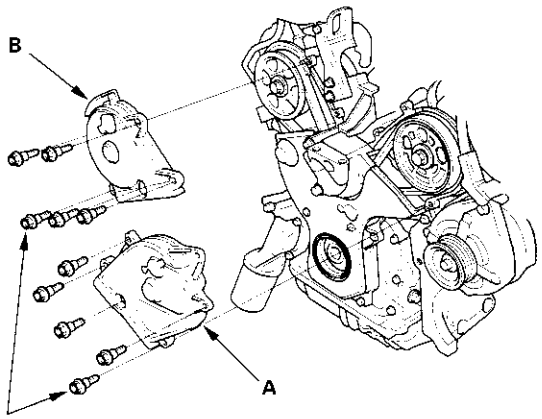
10. Install the timing belt guide plate as shown.



11. Install the lower cover.



12. Install the front upper cover (A) and the rear upper cover (B).

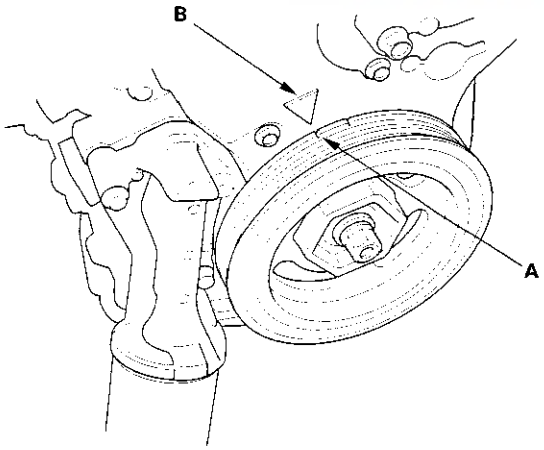


6 x 1.0 mm
12 N·m (1.2 kgf·m, 8.7 lbf·ft)

13. Install the crankshaft pulley (see page 6-14).

14. Rotate the crankshaft pulley about six turns clockwise so the timing belt positions itself on the pulleys.

15. Turn the crankshaft pulley so its white mark (A) lines up with the pointer (B).

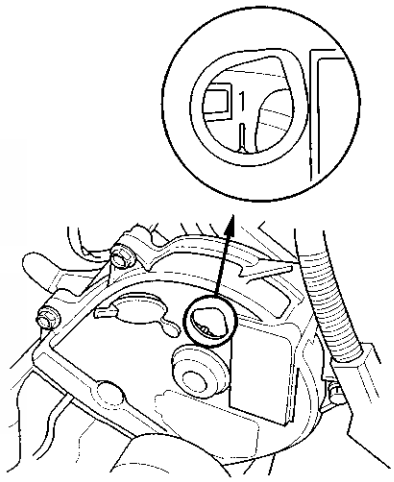


16. Check the camshaft pulley marks.

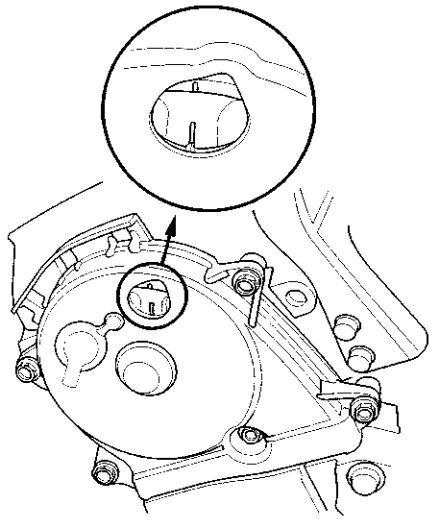
NOTE: If the marks are not aligned, rotate the crankshaft 360 degrees, and recheck the camshaft pulley mark.

- If the camshaft pulley marks are at TDC, go to step 17.
- If the camshaft pulley marks are not at TDC, remove the timing belt and repeat steps 2 through 16.

FRONT



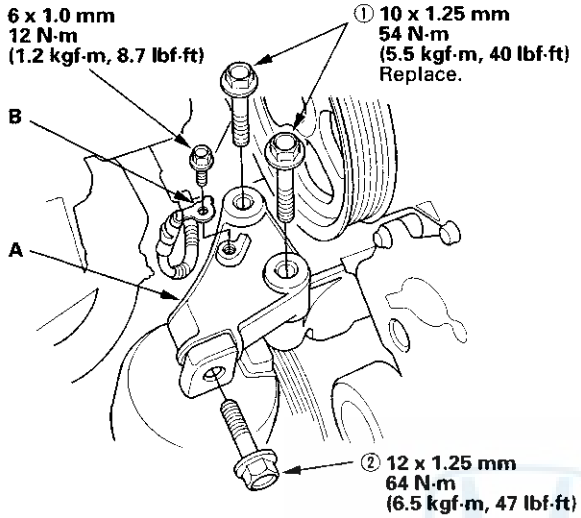
REAR



(cont'd)

Timing Belt Installation (cont'd)

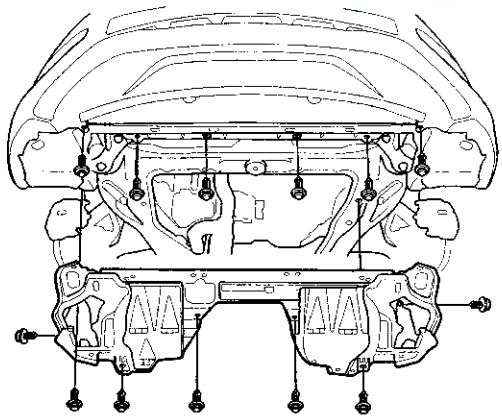
17. Install the upper half of the side engine mount bracket (A), then tighten the mounting bolts in the numbered sequence shown.



18. Install the ground cable (B).

19. Install the drive belt auto-tensioner (see page 4-43).

20. Install the splash shield.



21. Install the right front wheel.

22. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

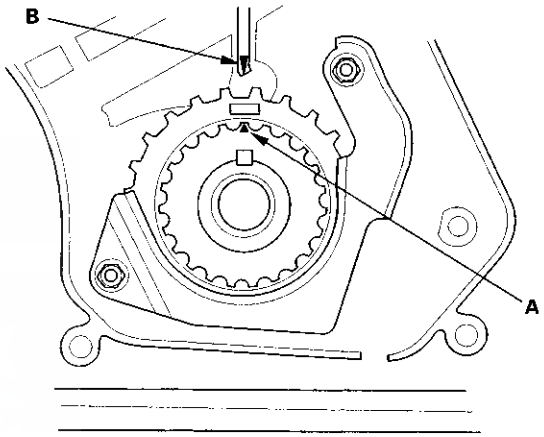
Timing Belt Replacement

NOTE: The following procedure is for installing a new timing belt. If you are installing a used belt, refer to the timing belt installation procedure (see page 6-18).

1. Remove the timing belt (see page 6-16).

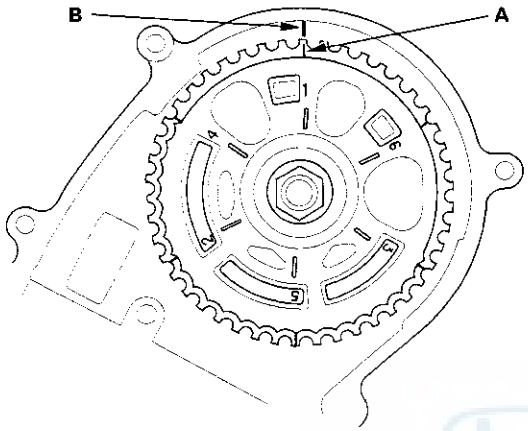
2. Clean the timing belt pulleys, the timing belt guide plate, and the upper and lower covers.

3. Set the timing belt drive pulley to top dead center (TDC) by aligning the TDC mark (A) on the tooth of the timing belt drive pulley with the pointer (B) on the oil pump.

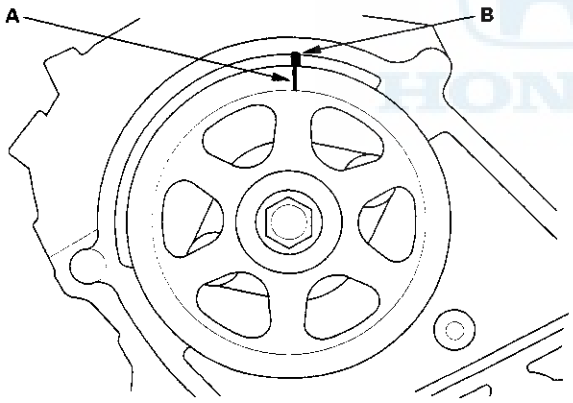


4. Set the camshaft pulleys to TDC by aligning the TDC marks (A) on the camshaft pulleys with the pointers (B) on the back covers.

FRONT

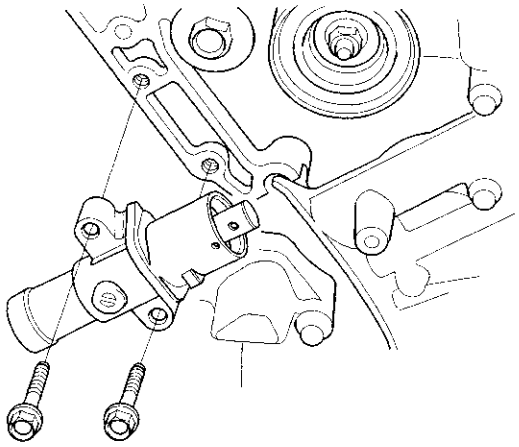


REAR

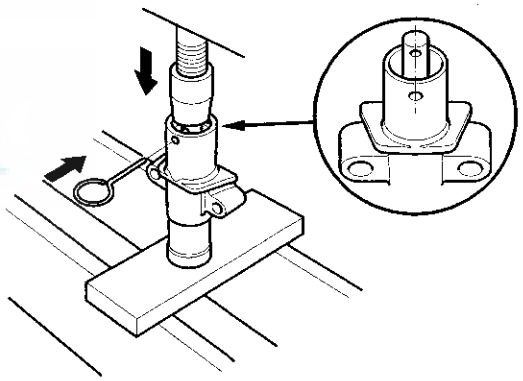


5. Remove the battery clamp bolt from the back cover.

6. Remove the auto-tensioner.



7. Align the holes on the rod and the housing of the auto-tensioner.



8. Use a hydraulic press to slowly compress the auto-tensioner. Insert a 2.0 mm (0.08 in.) pin through the housing and the rod.

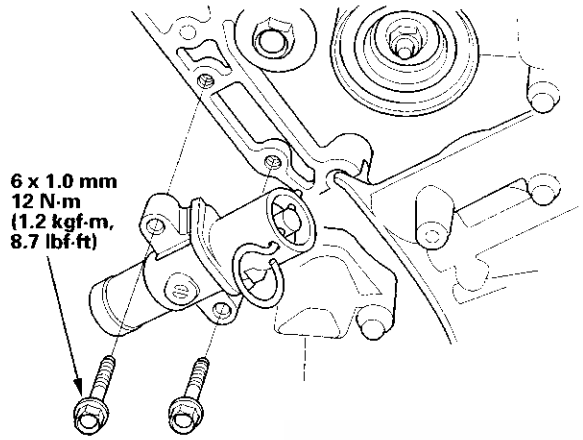
   NOTE: The compression pressure should not exceed 9,800 N (1,000 kgf, 2,200 lbf).

(cont'd)

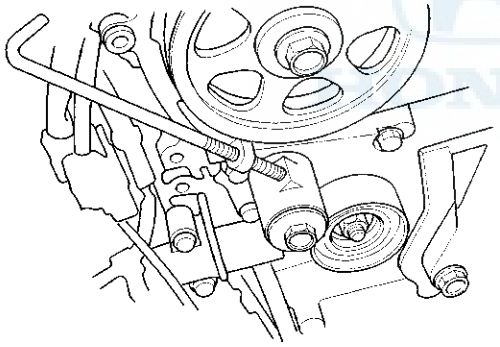
Timing Belt Replacement (cont'd)

9. Install the auto-tensioner.

   NOTE: Make sure the pin stays in place.



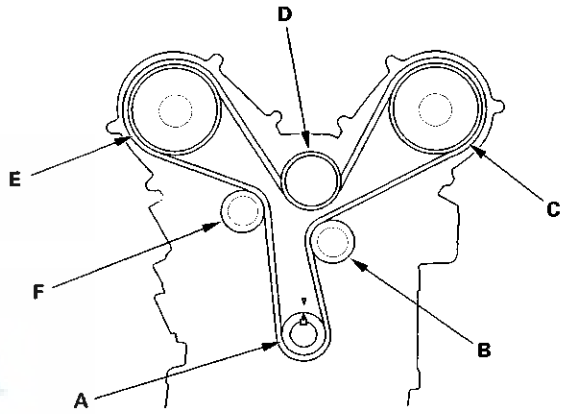
10. Thread the battery clamp bolt in as shown to hold the timing belt adjuster. Tighten it by hand, do not use a wrench.



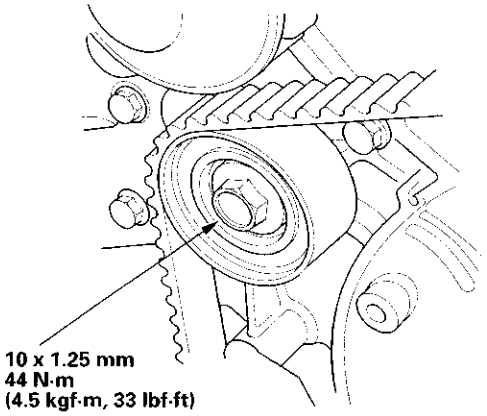
11. Loosely install the idler pulley with a new idler pulley bolt so the pulley can move but does not come off.

12. Install the timing belt in a counterclockwise sequence starting with the drive pulley.

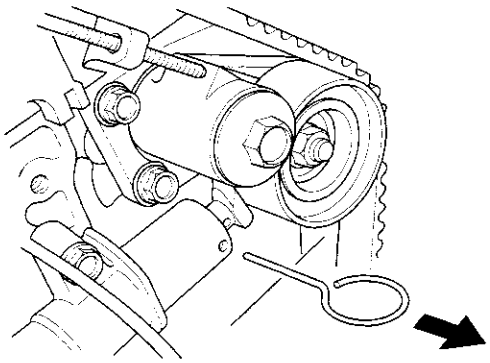
    1 Drive pulley (A)
    2 Idler pulley (B)
    3 Front camshaft pulley (C)
    4 Water pump pulley (D)
    5 Rear camshaft pulley (E)
    6 Adjusting pulley (F)



13. Tighten the idler pulley bolt.

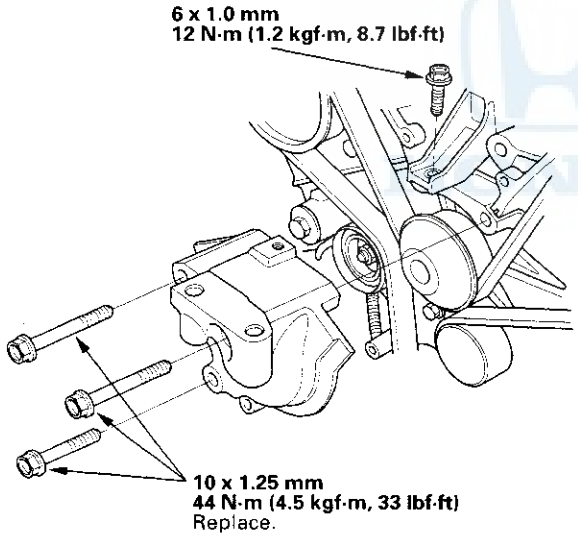


14. Remove the pin from the auto-tensioner.

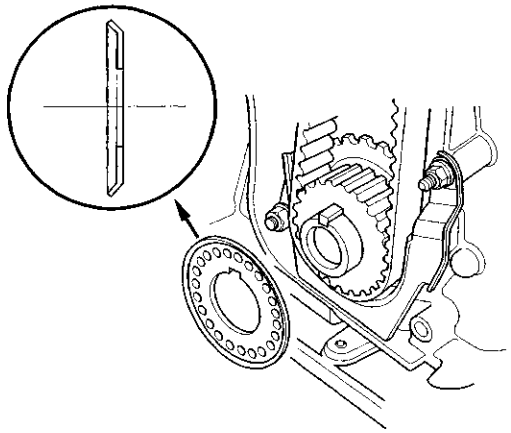


15. Remove the battery clamp bolt from the back cover.

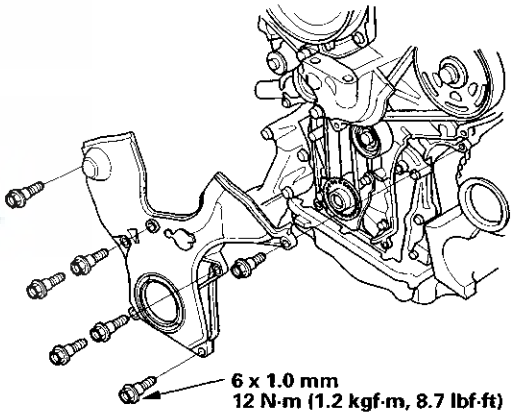
16. Install the lower half of the side engine mount bracket.



17. Install the timing belt guide plate as shown.



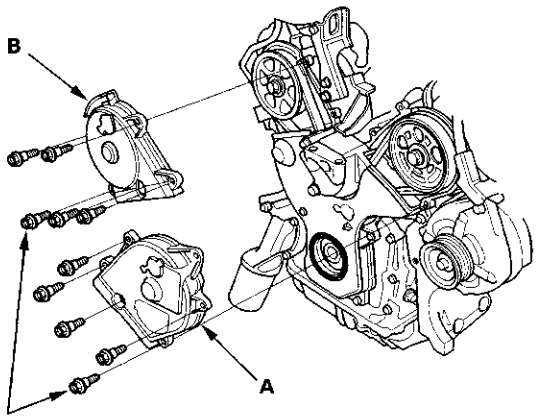
18. Install the lower cover.



(cont'd)

Timing Belt Replacement (cont'd)

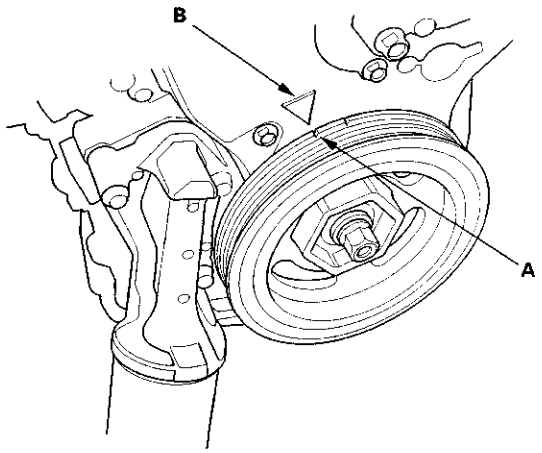
19. Install the front upper cover (A) and the rear upper cover (B).



20. Install the crankshaft pulley (see page 6-14).

21. Rotate the crankshaft pulley about six turns clockwise so the timing belt positions itself on the pulleys.

22. Turn the crankshaft pulley so its white mark (A) lines up with the pointer (B).

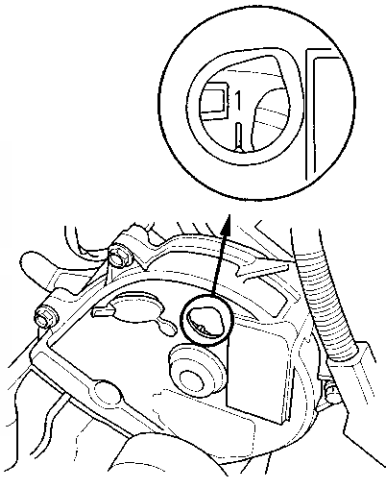


23. Check the camshaft pulley marks.

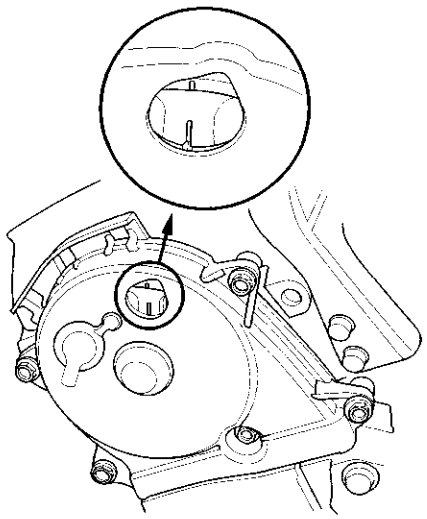
NOTE: If the marks are not aligned, rotate the crankshaft 360 degrees, and recheck the camshaft pulley mark.

- If the camshaft pulley marks are at TDC, go to step 24.
- If the camshaft pulley marks are not at TDC, remove the timing belt and repeat steps 3 through 23.

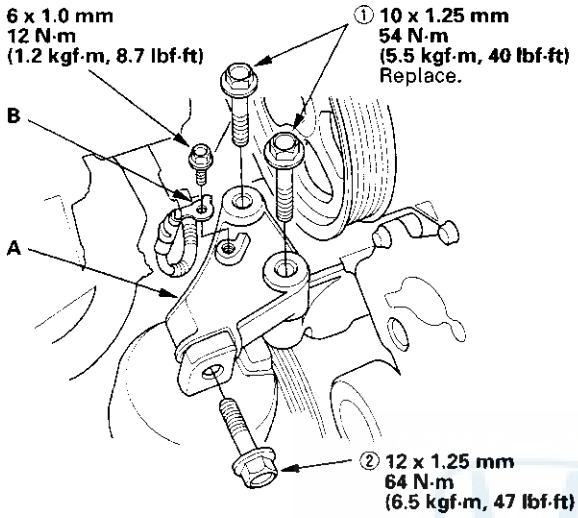
FRONT



REAR



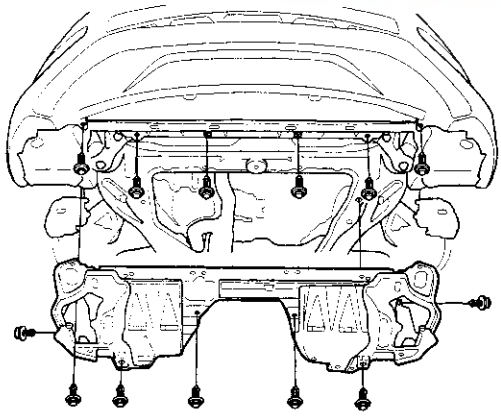
24. Install the upper half of the side engine mount bracket (A), then tighten the mounting bolts in the numbered sequence shown.



25. Install the ground cable (B).

26. Install the drive belt auto-tensioner (see page 4-43).

27. Install the splash shield.



28. Install the right front wheel.

29. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

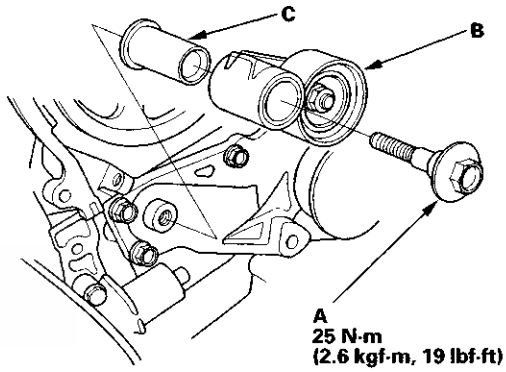
Timing Belt Adjuster Replacement

1. Remove the timing belt (see page 6-16).

2. Remove the battery clamp bolt from the back cover.

3. Remove the auto-tensioner (see step 6 on page 6-23).

4. Remove the bolt (A), then remove the timing belt adjuster (B) and the collar (C).



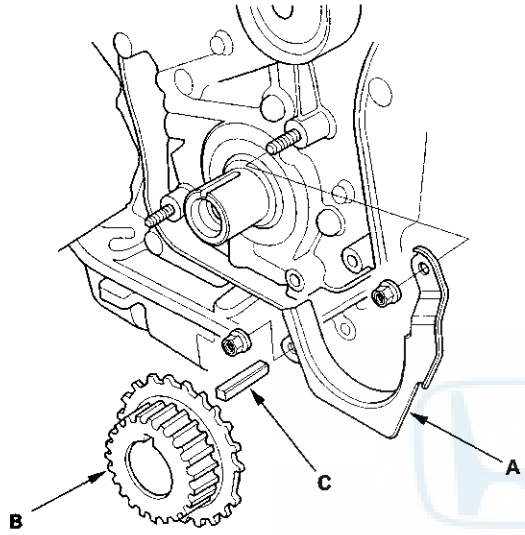
5. Install the timing belt adjuster in the reverse order of removal.

6. Install the timing belt (see page 6-18).

HONDA

Timing Belt Drive Pulley Replacement

1. Remove the timing belt (see page 6-16).
2. Remove the timing belt stopper (A), then remove the timing belt drive pulley (B) and the key (C).

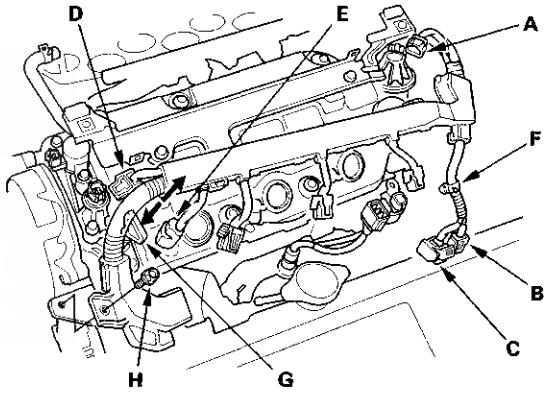


3. Inspect the timing belt drive pulley and the key for damage. If it is cracked or damaged, replace the timing belt drive pulley.
4. Install the new timing belt drive pulley and the key, then install the timing belt stopper.
5. Install the timing belt (see page 6-18).
6. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

Cylinder Head Cover Removal

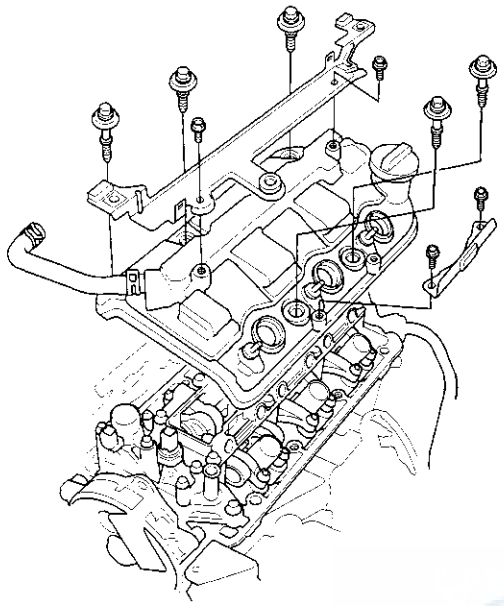
Front

1. Remove the intake manifold (see page 9-4).
2. Remove the three ignition coils from the front cylinder head (see page 4-29).
3. Disconnect the exhaust gas recirculation (EGR) valve connector (A), the front secondary heated oxygen sensor 2 (secondary HO2S) connector (B), the front air fuel ratio (A/F) sensor 2 connector (C), the rocker arm oil control solenoid A (BANK 2) connector (D), the front rocker arm oil pressure switch connector (E) and the harness clamp (F) securing the harness holder, and remove the dipstick (G).



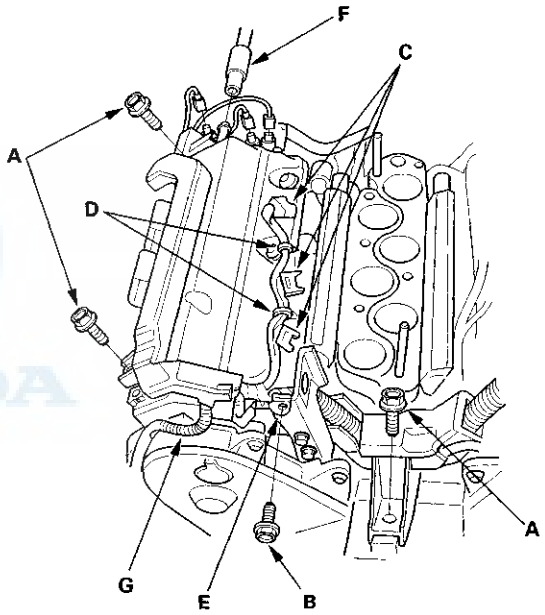
4. Remove the bolt (H) securing the harness holder.

5. Remove the front cylinder head cover.



Rear

1. Remove the intake manifold (see page 9-4).
2. Remove the three ignition coils from the rear cylinder head (see page 4-29).
3. Remove the drive belt (see page 4-39).
4. Remove the power steering (P/S) pump and the P/S hose bracket (see step 5 on page 6-34) with its hoses connected.
5. Remove the harness holder mounting bolts (A) and the engine ground cable bolt (B).

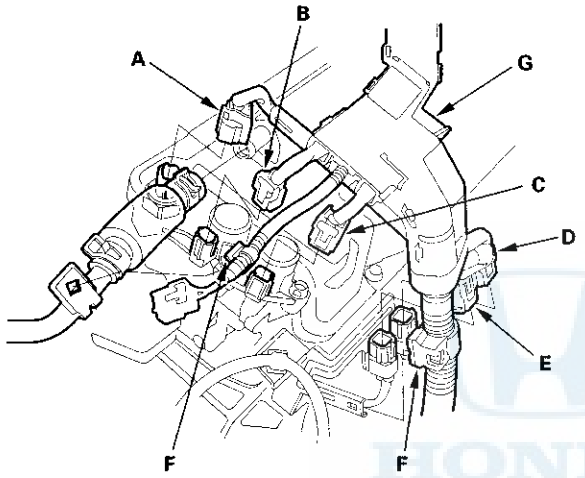


6. Disconnect the three injector connectors (C) and the two harness clips (D).
7. Remove the engine ground cable (E) and disconnect the breather hose (F).
8. Remove the harness (G) from the upper cover.

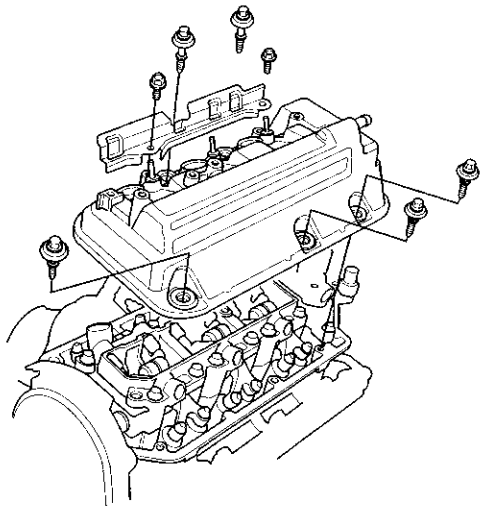
(cont'd)

Cylinder Head Cover Removal (cont'd)

9. Disconnect the rear rocker arm oil pressure switch connector (A), the rocker arm oil control solenoid B (BANK 1) connector (B), the rocker arm oil control solenoid A (BANK 1) connector (C), the rear air fuel ratio (A/F) sensor 1 connector (D), the rear secondary heated oxygen sensor 2 (secondary HO2S) connector (E), and the harness clamps (F), then remove the harness holder (G).



10. Remove the rear cylinder head cover.



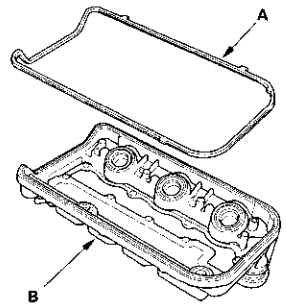
Cylinder Head Cover Installation

Front

1. Check the spark plug seals for damage. If any seal is damaged, replace it.

2. Thoroughly clean the head cover gasket and the groove.

3. Install the head cover gasket (A) in the groove of the cylinder head cover (B). Make sure the head cover gasket is seated securely.

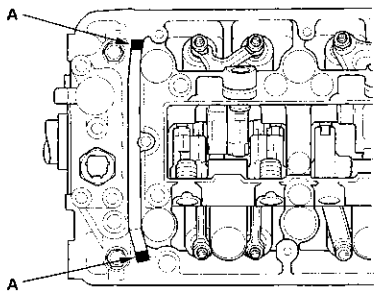


4. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.

5. Clean the head cover contacting surfaces with a shop towel.

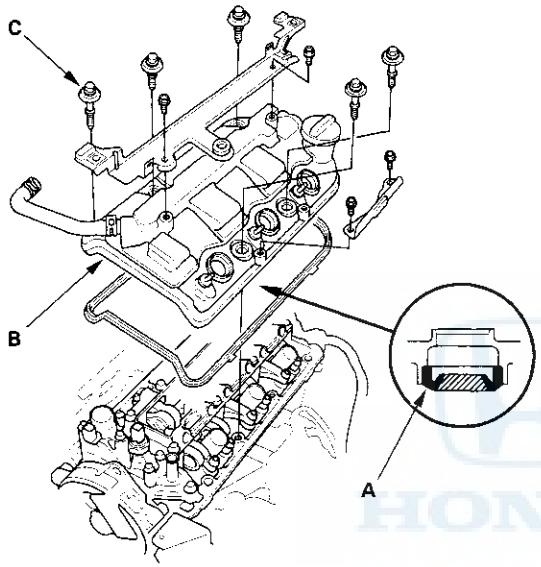
6. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating areas (A). Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



7. Set the spark plug seals (A) on the spark plug tubes, and install the front cylinder head cover (B).

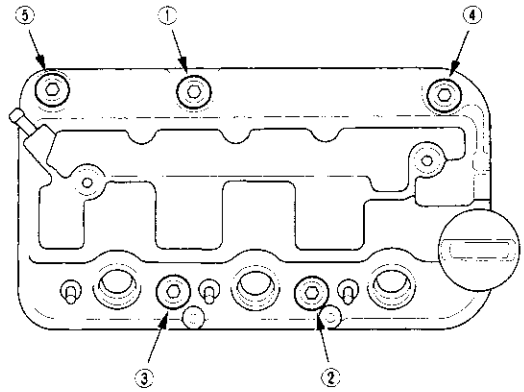
   NOTE:
   - Wait at least 30 minutes before filling the engine with oil.
   - Do not run the engine for at least 3 hours after installing the cylinder head cover.



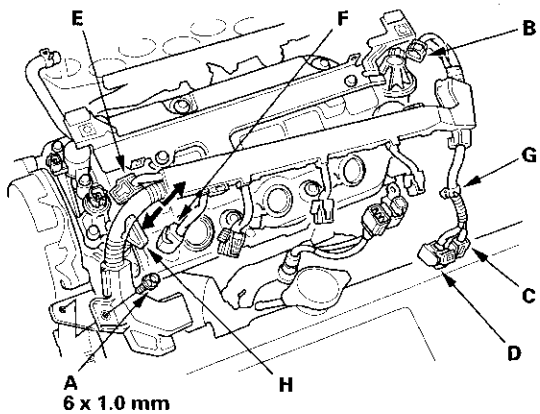
8. Inspect the spark plug seals for damage.

9. Inspect the cover washers (C). Replace any washer that is damaged or deteriorated.

10. Tighten the bolts in three steps. In the final step tighten all bolts, in sequence, 12 N·m (1.2 kgf·m, 8.7 lbf·ft).



11. Install the bolt (A) securing the harness holder.



6 x 1.0 mm
12 N·m (1.2 kgf·m, 8.7 lbf·ft)

12. Connect the exhaust gas recirculation (EGR) valve connector (B), the front secondary heated oxygen sensor 2 (secondary HO2S) connector (C), the front air fuel ratio (A/F) sensor 2 connector (D), the rocker arm oil control solenoid A (BANK 2) connector (E), the front rocker arm oil pressure switch connector (F) and the harness clamp (G) securing the harness holder, and install the dipstick (H).

13. Install the three ignition coils to the front cylinder head (see page 4-29).

14. Install the intake manifold (see page 9-6).

(cont'd)

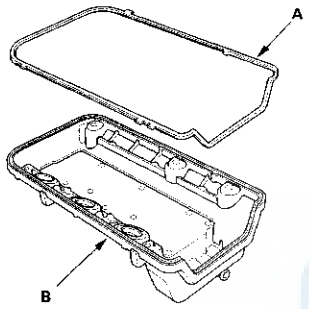
Cylinder Head Cover Installation (cont'd)

Rear

1. Check the spark plug seals for damage. If any seal is damaged, replace it.

2. Thoroughly clean the head cover gasket and the groove.

3. Install the head cover gasket (A) in the groove of the cylinder head cover (B). Make sure the head cover gasket is seated securely.

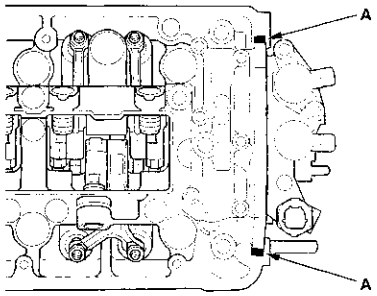


4. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.

5. Clean the head cover contacting surfaces with a shop towel.

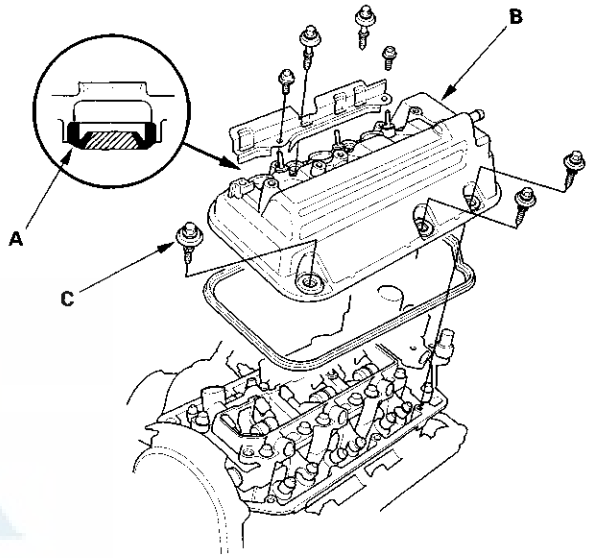
6. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating areas (A). Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



7. Set the spark plug seals (A) on the spark plug tubes, and install the rear cylinder head cover (B).

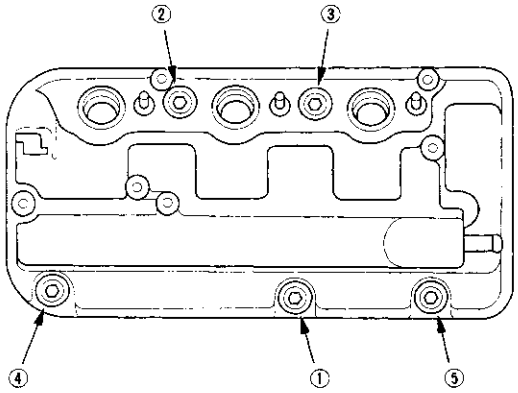
   NOTE:
   - Wait at least 30 minutes before filling the engine with oil.
   - Do not run the engine for at least 3 hours after installing the cylinder head cover.



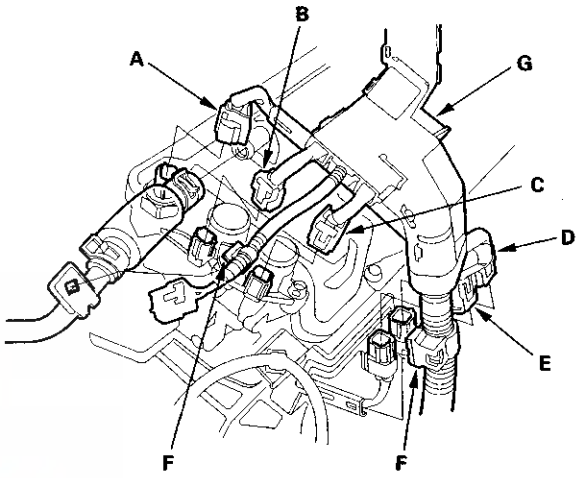
8. Inspect the spark plug seals for damage.

9. Inspect the cover washers (C). Replace any washer that is damaged or deteriorated.

10. Tighten the bolts in three steps. In the final step tighten all bolts, in sequence, 12 N·m (1.2 kgf·m, 8.7 lbf·ft).



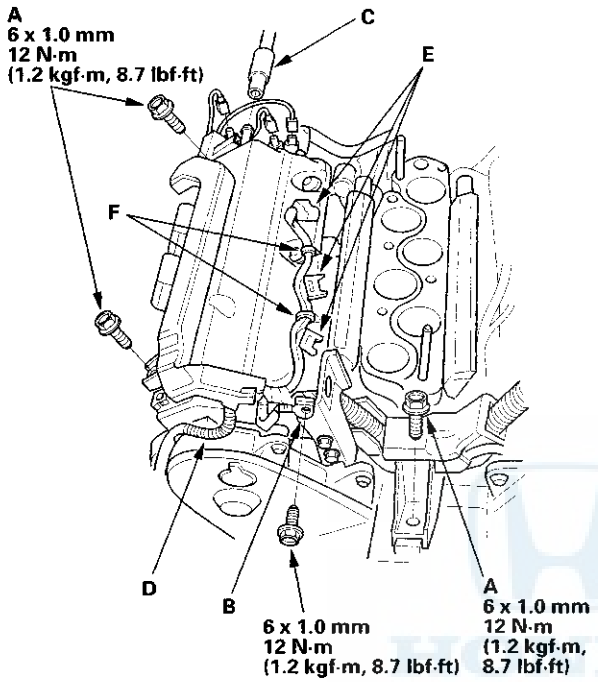
11. Connect the rear rocker arm oil pressure switch connector (A), the rocker arm oil control solenoid B (BANK 1) connector (B), the rocker arm oil control solenoid A (BANK 1) connector (C), the rear air fuel ratio (A/F) sensor 1 connector (D), the rear secondary heated oxygen sensor 2 (secondary HO2S) connector (E), and the harness clamps (F), then install the harness holder (G).



(cont'd)

Cylinder Head Cover Installation (cont'd)

12. Tighten the harness holder mounting bolts (A).

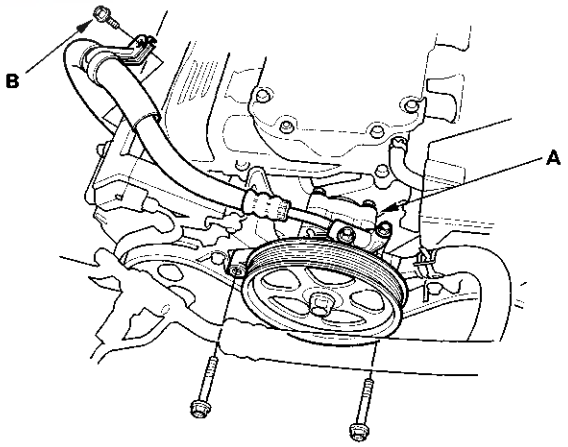


13. Install the engine ground cable (B) and connect the breather hose (C), then install the harness (D) to the upper cover.
14. Reconnect the three injector connectors (E) and the two harness clips (F).
15. Install the power steering (P/S) pump and the P/S hose bracket (see step 26 on page 6-62).
16. Install the drive belt (see page 4-39).
17. Install the three ignition coils to the rear cylinder head (see page 4-29).
18. Install the intake manifold (see page 9-6).

Cylinder Head Removal

NOTE:
- Use fender covers to avoid damaging painted surfaces.
- To avoid damaging the wiring and terminals, unplug the wiring connectors carefully while holding the connector portion.
- Connect the Honda Diagnostic System (HDS) to the data link connector (DLC), and monitor the engine coolant temperature (ECT) sensor 1. To avoid damaging the cylinder head, wait until the ECT sensor 1 temperature drops below 100 °F (38 °C) before loosening the cylinder head bolts.
- Mark all wiring and hoses to avoid misconnection. Also, be sure that they do not contact any other wiring or hoses, or interfere with any other parts.

1. Relieve the fuel pressure (see page 11-400).
2. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
3. Drain the engine coolant (see page 10-6).
4. Remove the drive belt (see page 4-39).
5. Remove the power steering (P/S) pump (A) and the bolt (B) securing the P/S hose bracket.



6. Remove the alternator (see page 4-45).
7. Remove the intake manifold (see page 9-4).

8. Remove the six ignition coils (see page 4-29).

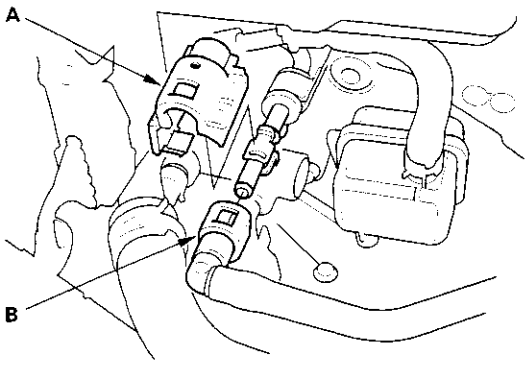
9. Remove the timing belt (see page 6-16).

10. Disconnect the following engine wire harness connectors and wire harness clamps from the cylinder head:

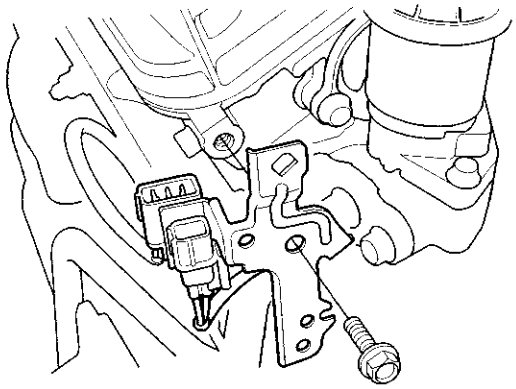
    - Six injector connectors
    - Knock sensor connector
    - Engine coolant temperature (ECT) sensor 1 connector
    - Exhaust gas recirculation (EGR) valve connector
    - Front rocker arm pressure switch connector
    - Rear rocker arm oil pressure switch connector
    - Camshaft position (CMP) sensor connector
    - Two air fuel ratio (A/F) sensor connectors
    - Two secondary heated oxygen sensor (secondary HO2S) connectors
    - Rocker arm oil pressure sensor connector
    - Rocker arm oil control solenoid A (BANK 1) connector
    - Rocker arm oil control solenoid A (BANK 2) connector
    - Rocker arm oil control solenoid B (BANK 1) connector

11. Remove the front warm up three way catalytic converter (front WU-TWC) (see page 11-445) and the rear warm up three way catalytic converter (rear WU-TWC) (see page 11-446).

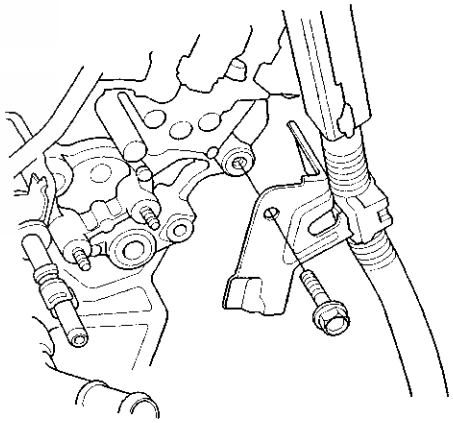
12. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (B) (see page 11-408).



13. Remove the connector bracket from the front cylinder head.



14. Remove the harness clamp bracket from the rear cylinder head.



15. Remove the injector bases (see page 9-8).

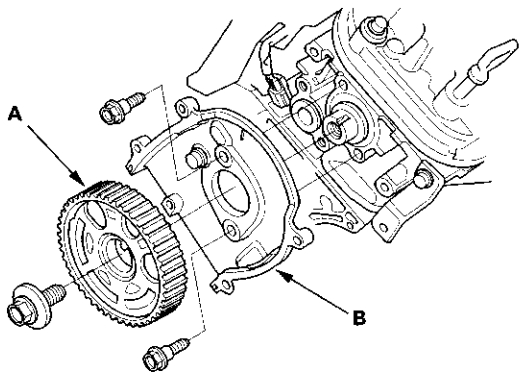
16. Remove the water passage (see page 10-10).

(cont'd)

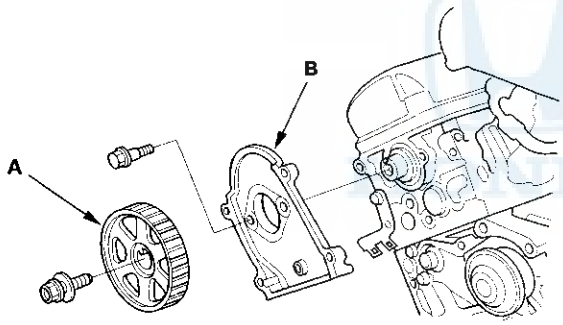
Cylinder Head Removal (cont'd)

17. Remove the camshaft pulleys (A) and the back covers (B).

FRONT



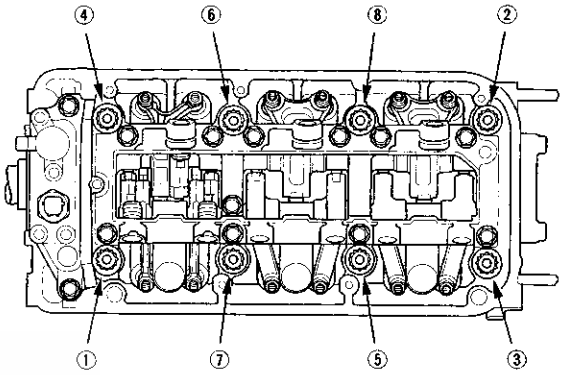
REAR



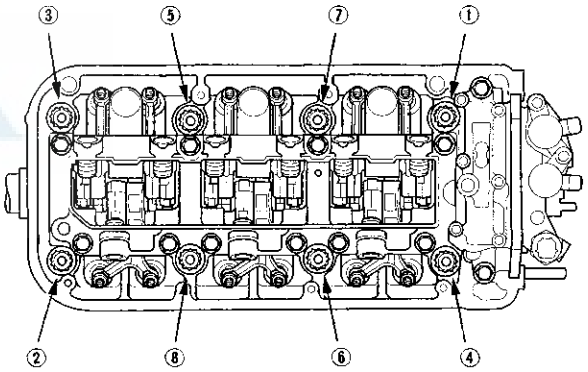
18. Remove the cylinder head covers (see page 6-28).

19. Remove the cylinder head bolts. To prevent warpage, loosen the bolts in sequence 1/3 turn at a time; repeat the sequence until all bolts are loosened.

FRONT



REAR

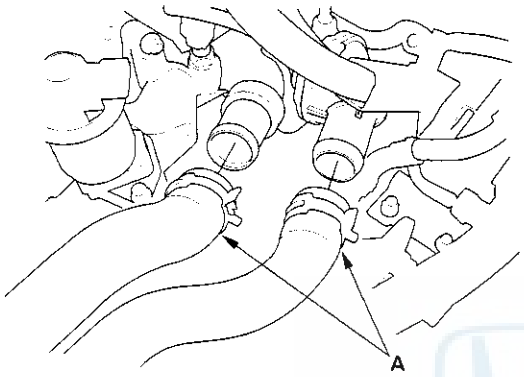


20. Remove the cylinder heads.

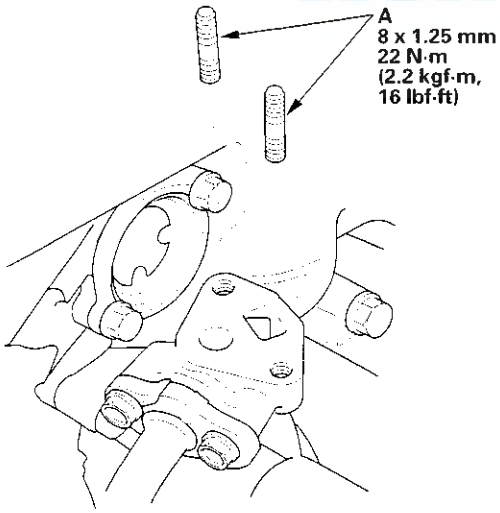
Camshaft Replacement

Front

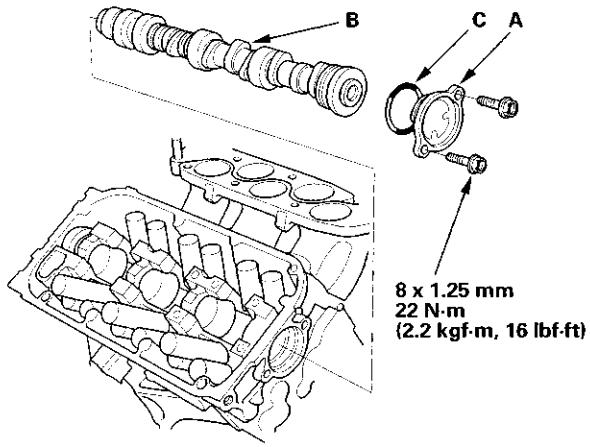
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Drain the engine coolant (see page 10-6).
3. Disconnect the radiator hoses (A).



4. Remove the exhaust gas recirculation (EGR) valve (see page 11-461).
5. Remove the EGR valve stud bolts (A).



6. Remove the timing belt (see page 6-16).
7. Remove the rocker arm assembly (see page 6-40).
8. Remove the front camshaft pulley.
9. Remove the thrust cover (A), then remove the front camshaft (B).



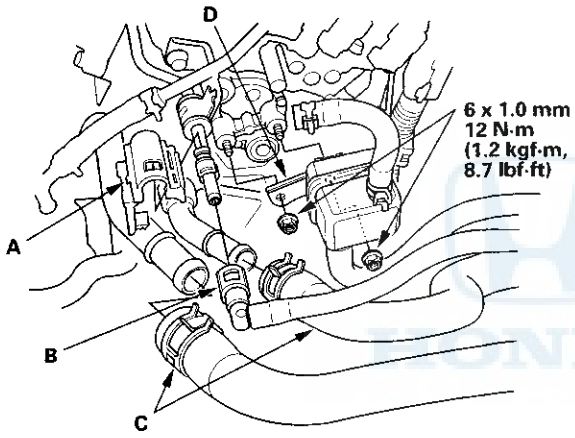
10. Install the front camshaft in the reverse order of removal. Always use a new O-ring (C). Apply new engine oil to the journals and the cam lobes.
11. Apply new engine oil to the threads of the camshaft pulley mounting bolt, then install the front camshaft pulley (see step 13 on page 6-56).
12. Install the rocker arm assembly, then tighten the mounting bolts (see step 11 on page 6-56).
13. Install the timing belt (see page 6-18).
14. Adjust the valve clearance (see page 6-10).
15. Install the EGR valve stud bolts, then install the EGR valve (see page 11-461).
16. Connect the radiator hoses.
17. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
18. Fill the radiator with engine coolant and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).
19. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

(cont'd)

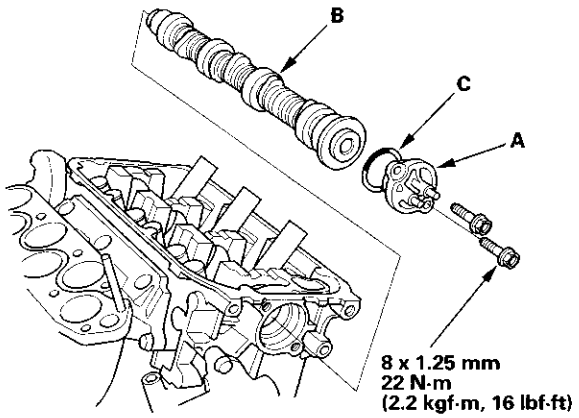
Camshaft Replacement (cont'd)

Rear

1. Relieve the fuel pressure (see page 11-400).
2. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
3. Remove the under-hood fuse/relay box.
4. Drain the engine coolant (see page 10-6).
5. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (B) (see page 11-408).



6. Disconnect the heater hoses (C) and remove the bracket (D).
7. Remove the timing belt (see page 6-16).
8. Remove the rocker arm assembly (see page 6-40).
9. Remove the rear camshaft pulley.
10. Remove the thrust cover (A), then remove the rear camshaft (B).



11. Install the rear camshaft in the reverse order of removal. Always use a new O-ring (C). Apply new engine oil to the journals and cam lobes.
12. Apply new engine oil to the threads of the camshaft pulley mounting bolt, then install the rear camshaft pulley (see step 13 on page 6-58).
13. Install the rocker arm assembly, then tighten the mounting bolts (see step 11 on page 6-58).
14. Install the timing belt (see page 6-18).
15. Adjust the valve clearance (see page 6-10).
16. Connect the heater hoses and install the bracket.
17. Connect the fuel feed hose (see page 11-411), then install the quick-connect fitting cover.

18. Install the under-hood fuse/relay box.

19. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

20. Inspect for fuel leaks. Turn the ignition switch to ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation three times, then check for fuel leakage at any point in the fuel line.

21. Fill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).

22. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

Cylinder Head Inspection for Warpage

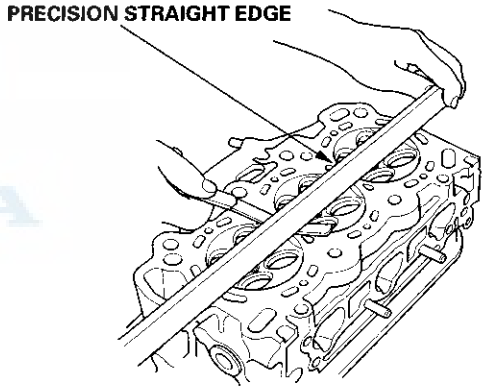
1. Remove the cylinder head (see page 6-34).

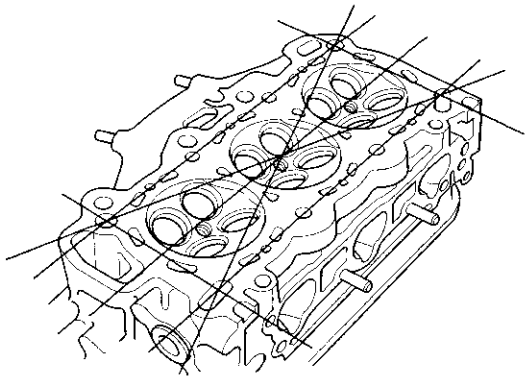
2. Inspect the camshaft (see page 6-45).

3. Check the cylinder head for warpage. Measure along the edges, and three ways across the center.

   - If warpage is less than 0.05 mm (0.002 in.), cylinder head resurfacing is not required.
   - If warpage is between 0.05 mm (0.002 in.) and 0.2 mm (0.008 in.), resurface the cylinder head.
   - Maximum resurface limit is 0.2 mm (0.008 in.) based on a height of 121 mm (4.76 in.).

Cylinder Head Height
Standard (New): 120.95—121.05 mm (4.762—4.766 in.)

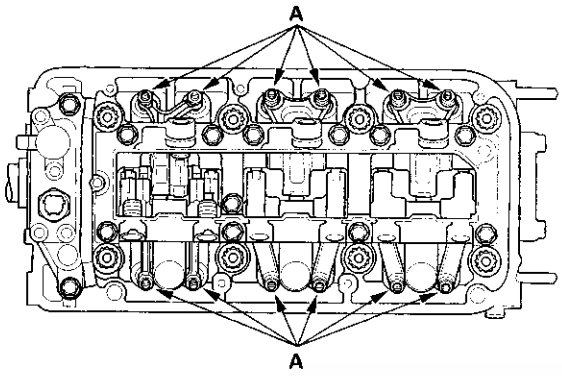




Rocker Arm Assembly Removal

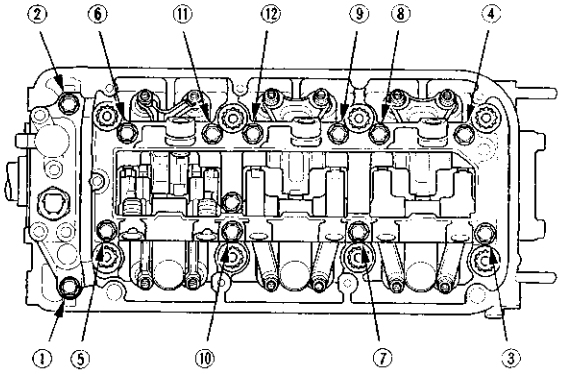
Front

1. Remove the cylinder head cover (see page 6-28).
2. Loosen the locknuts and the adjusting screws (A).



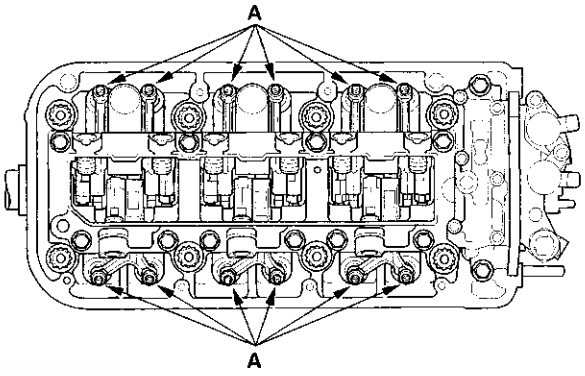
3. Remove the rocker shaft bridge mounting bolts, the rocker shaft holder mounting bolts, and the rocker arm assembly.

-1 Loosen the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts in sequence two turns at a time, to prevent damaging the valves or the rocker arm assembly.
-2 When removing the rocker arm assembly, do not remove the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts. The bolts will keep the rocker arms on the shafts.



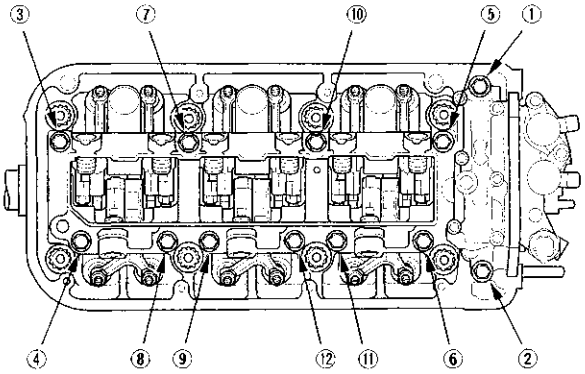
Rear

4. Remove the cylinder head cover (see page 6-29).
5. Loosen the locknuts and the adjusting screws (A).



6. Remove the rocker shaft bridge mounting bolts, the rocker shaft holder mounting bolts, and the rocker arm assembly.

-1 Loosen the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts in sequence two turns at a time, to prevent damaging the valves or the rocker arm assembly.
-2 When removing the rocker arm assembly, do not remove the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts. The bolts will keep the rocker arms on the shafts.

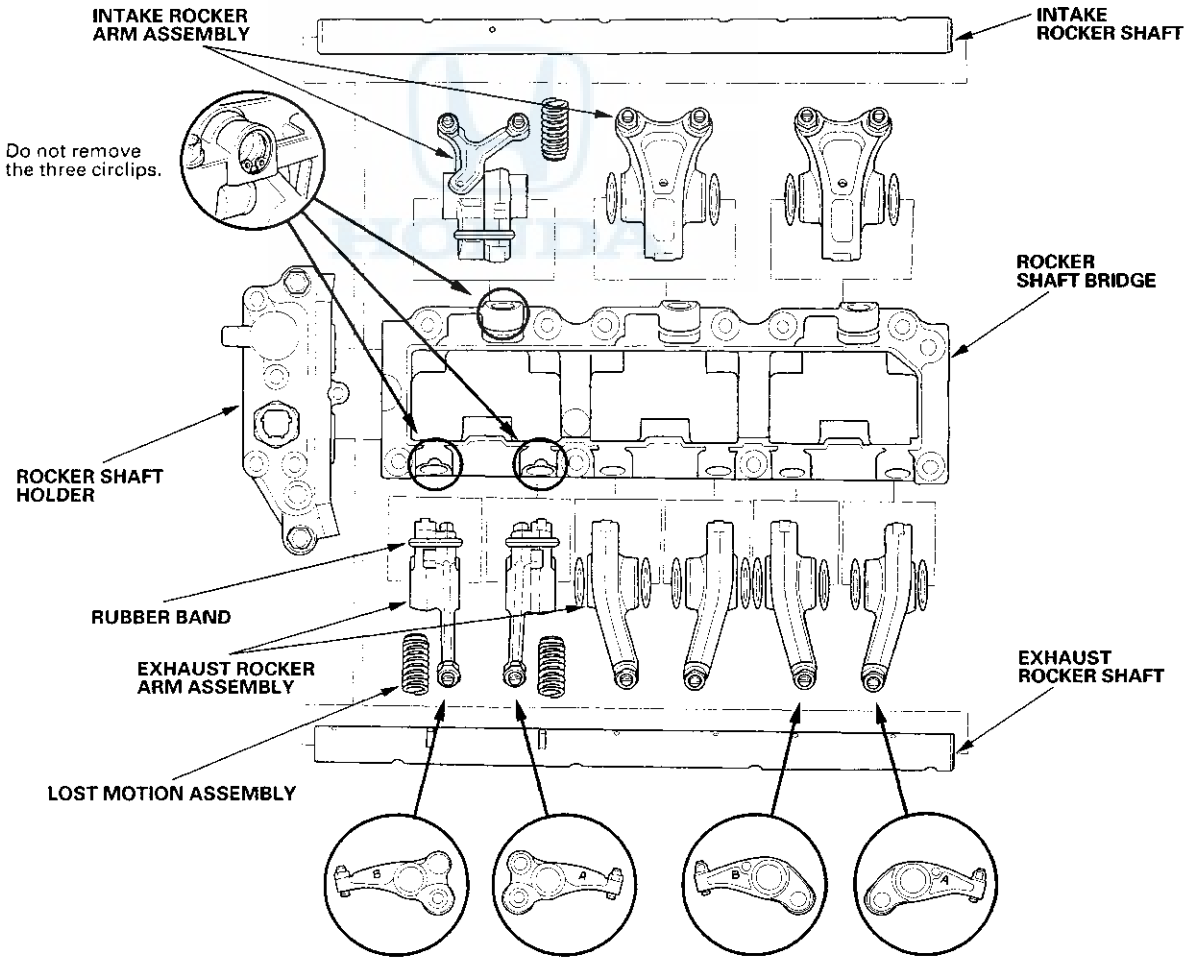


Rocker Arm and Shaft Disassembly/Reassembly

Front

NOTE:

- Identify parts as they are removed so they can be reinstalled in their original locations.
- Inspect the rocker shafts and the rocker arms (see page 6-43).
- If reused, the rocker arms must be installed in their original locations.
- When removing or installing the rocker arm assembly, do not remove the mounting bolts. The bolts will keep the rocker arms, the rocker shaft bridge, and the rocker shaft holder on the shaft.
- If the rocker shaft cannot be removed or installed by hand, remove or install the rocker shaft by heating the rocker shaft bridge.
- Bundle the rocker arms with rubber bands to keep them together as a set, and remove the bands after the rocker arms have been installed.
- Prior to reassembling, clean all the parts in solvent, dry them, and apply new engine oil to all contact points and bearing surfaces.
- When replacing the rocker arm assembly, remove the fastening hardware from the new rocker arm assembly.
- Never remove any of the circlips that retain the lost motion assemblies in the rocker shaft bridge. The circlips are not available separately, and are factory installed in the rocker shaft bridge. To remove the lost motion assemblies, first remove the rocker shafts and the rocker arms.

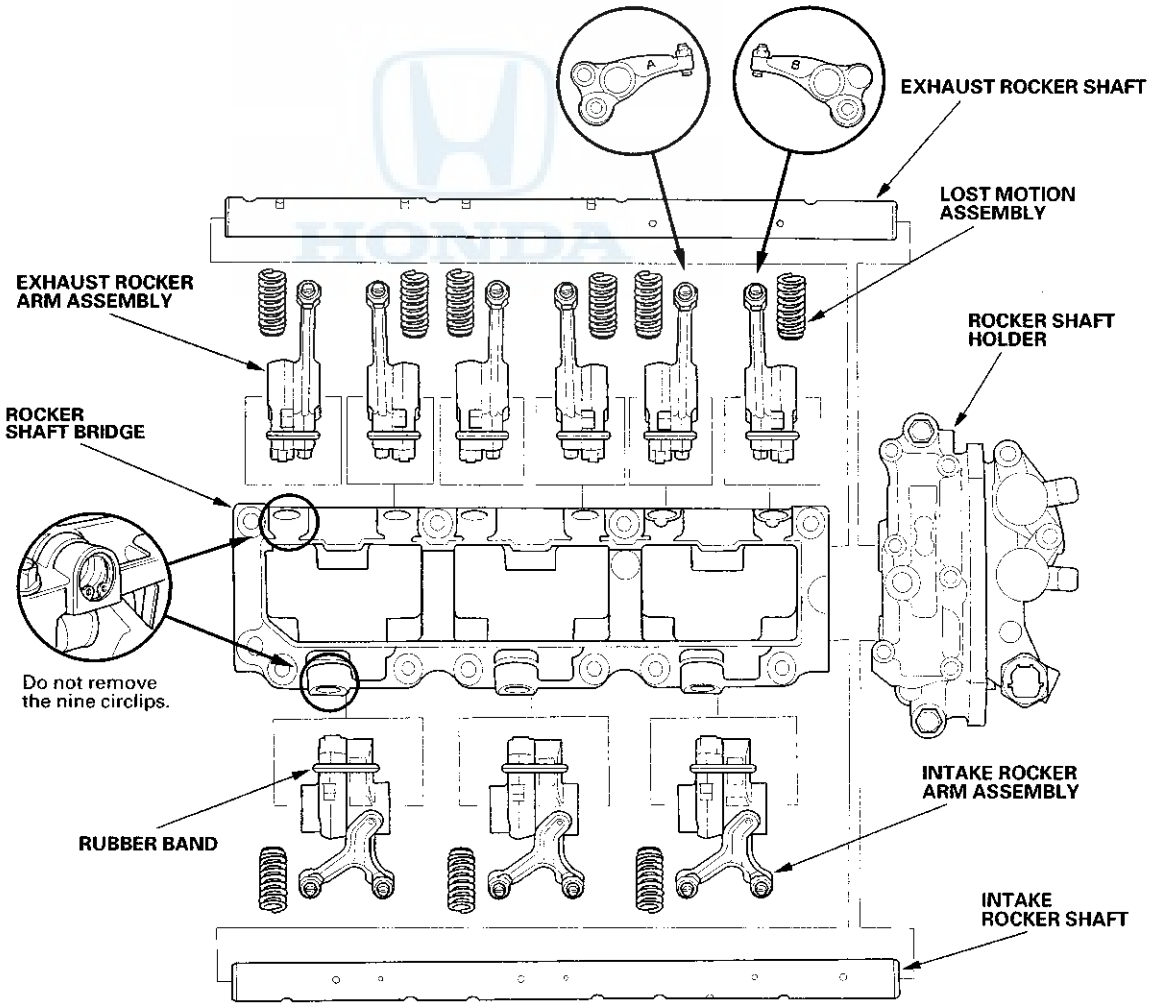


(cont'd)

Rocker Arm and Shaft Disassembly/Reassembly (cont'd)

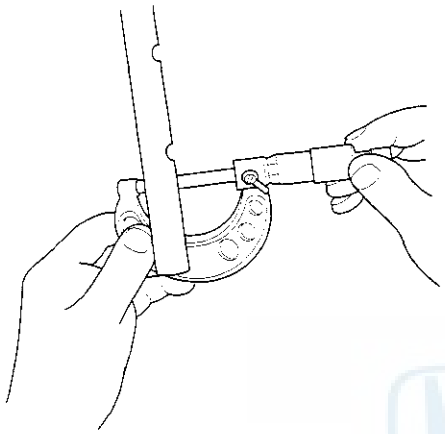
Rear

NOTE:
- Identify parts as they are removed so they can be reinstalled in their original locations.
- Inspect the rocker shafts and the rocker arms (see page 6-43).
- If reused, the rocker arms must be installed in their original locations.
- When removing or installing the rocker arm assembly, do not remove the mounting bolts. The bolts will keep the rocker arms, the rocker shaft bridge, and the rocker shaft holder on the shaft.
- If the rocker shaft cannot be removed or installed by hand, remove or install the rocker shaft by heating the rocker shaft bridge.
- Bundle the rocker arms with rubber bands to keep them together as a set, and remove the bands after the rocker arms have been installed.
- Prior to reassembling, clean all the parts in solvent, dry them, and apply new engine oil to all contact points and bearing surfaces.
- When replacing the rocker arm assembly, remove the fastening hardware from the new rocker arm assembly.
- Never remove any of the circlips that retain the lost motion assemblies in the rocker shaft bridge. The circlips are not available separately, and are factory installed in the rocker shaft bridge. To remove the lost motion assemblies, first remove the rocker shafts and the rocker arms.

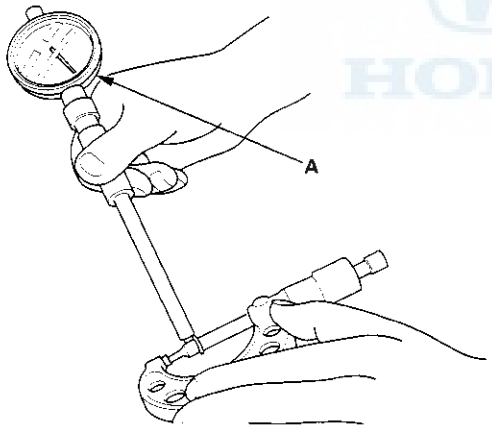


Rocker Arm and Shaft Inspection

1. Remove the rocker arm assembly (see page 6-40).
2. Disassemble the rocker arm assembly (see page 6-41).
3. Measure the diameter of the shaft at the first rocker location.



4. Zero the gauge (A) to the shaft diameter.



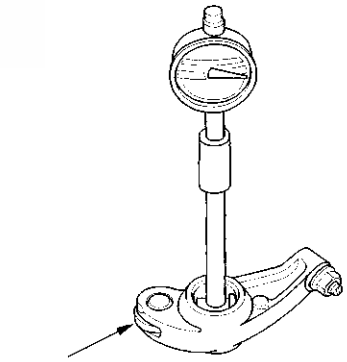
5. Measure the inside diameter of the rocker arm, and check it for an out-of-round condition.

No. 1, No. 2, No. 3, and No. 4 CYLINDERS
Intake Rocker Arm-to-Shaft Clearance:
Standard (New): 0.015—0.046 mm (0.0006—0.0018 in.)
Service Limit: 0.046 mm (0.0018 in.)

No. 1, No. 2, No. 3, and No. 4 CYLINDERS
Exhaust Rocker Arm-to-Shaft Clearance:
Standard (New): 0.015—0.046 mm (0.0006—0.0018 in.)
Service Limit: 0.046 mm (0.0018 in.)

No. 5 and No. 6 CYLINDERS
Intake Rocker Arm-to-Shaft Clearance:
Standard (New): 0.018—0.056 mm (0.0007—0.0022 in.)
Service Limit: 0.056 mm (0.0022 in.)

No. 5 and No. 6 CYLINDERS
Exhaust Rocker Arm-to-Shaft Clearance:
Standard (New): 0.018—0.047 mm (0.0007—0.0019 in.)
Service Limit: 0.047 mm (0.0019 in.)



(cont'd)

Rocker Arm and Shaft Inspection (cont'd)

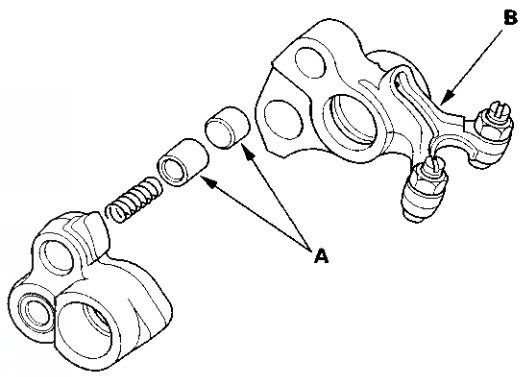
6. Repeat for all rockers and both shafts. If the clearance is over the limit, replace the rocker shaft and all over-tolerance rocker arms. If any variable cylinder management rocker arm needs replacement, replace all rocker arms in that set (primary and secondary).

Variable Cylinder Management Rocker Arms

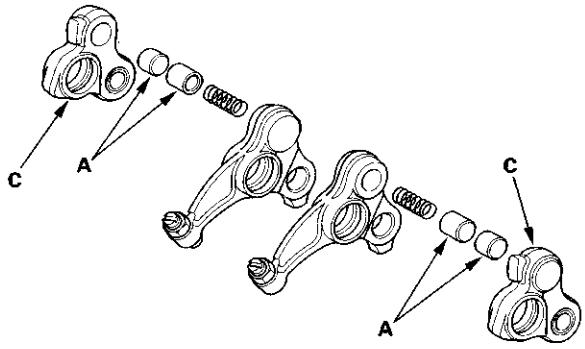
7. Inspect the rocker arm pistons (A). Slide them into the rocker arms. If they do not move smoothly, replace the rocker arm set.

   NOTE:
   - Apply new engine oil to the rocker arm pistons when reassembling.
   - When removing the rocker arm pistons from the intake primary rocker arm (B) and the exhaust primary rocker arms (C), carefully apply air pressure to the oil passage of the rocker arm.

INTAKE



EXHAUST

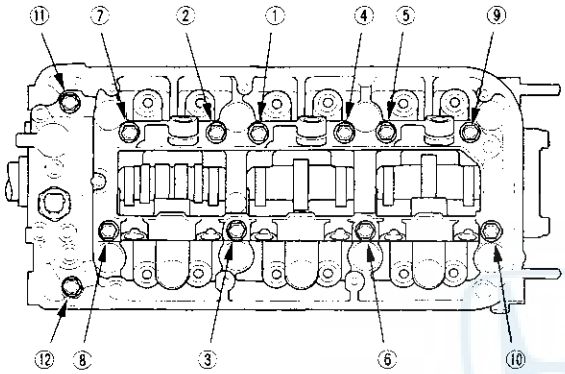


8. Install the rocker arm assembly (see page 6-55).

Camshaft Inspection

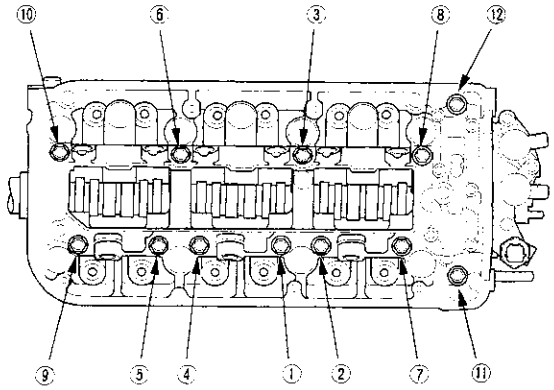
1. Remove the cylinder head (see page 6-34).
2. Remove the rocker arm assembly (see page 6-40).
3. Front: Put the rocker shafts bridge and the rocker shaft holder on the front cylinder head, then tighten the bolts to the specified torque.

Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)



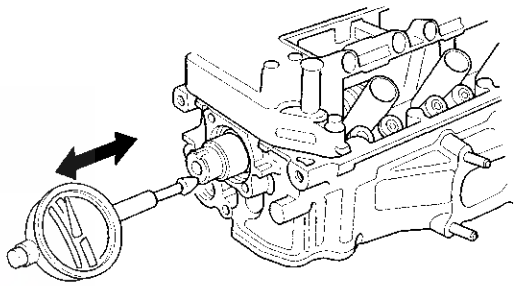
4. Rear: Put the rocker shaft bridge and the rocker shaft holder on the rear cylinder head, then tighten the bolts to the specified torque.

Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)

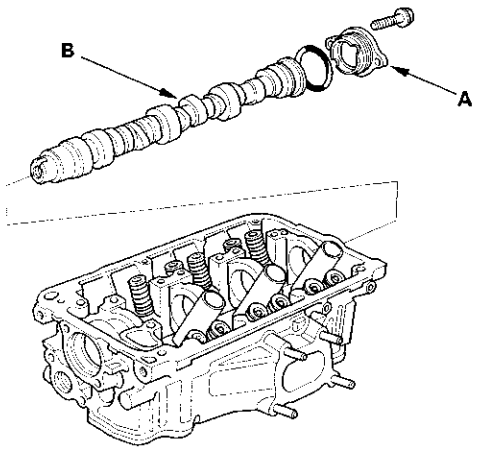


5. Seat the camshaft by pushing it toward the rear of the cylinder head.
6. Zero the dial indicator against the end of the camshaft. Push the camshaft back and forth and read the end play. If the end play is beyond the service limit, replace the thrust cover and recheck. If it is still beyond the service limit, replace the camshaft.

Camshaft End Play
Standard (New): 0.05—0.20 mm (0.002—0.008 in.)
Service Limit: 0.20 mm (0.008 in.)



7. Remove the camshaft thrust cover (A), then pull out the camshaft (B).

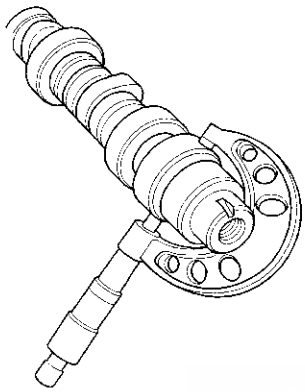


(cont'd)

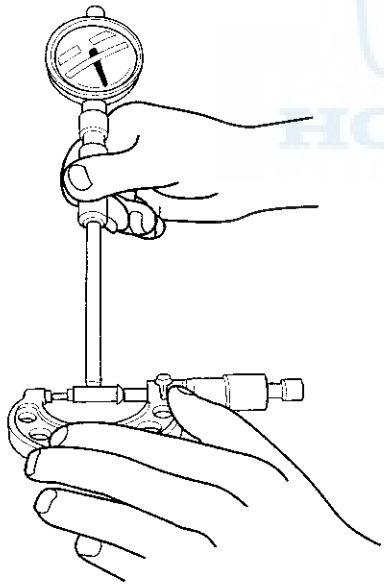
Camshaft Inspection (cont'd)

8. Wipe the camshaft clean, then inspect the lift ramps. Replace the camshaft if any lobes are pitted, scored, or excessively worn.

9. Measure the diameter of each camshaft journal.



10. Zero the gauge to the journal diameter.

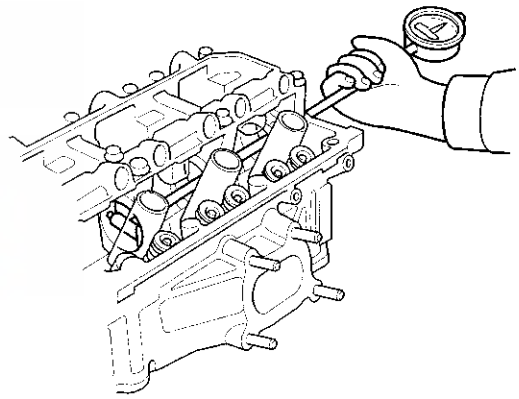


11. Clean the camshaft bearing surfaces in the cylinder head. Measure the inside diameter of each camshaft bearing surface, and check for an out-of-round condition.

- If the camshaft-to-holder clearance is within limits, go to step 13.
- If the camshaft-to-holder clearance is beyond the service limit and the camshaft has been replaced, replace the cylinder head.
- If the camshaft-to-holder clearance is beyond the service limit and the camshaft has not been replaced, go to step 12.

Camshaft-to-Holder Oil Clearance

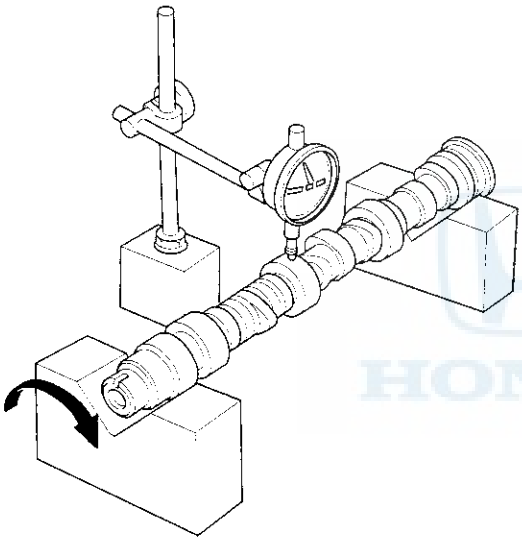
Standard (New):	**0.050—0.089 mm (0.0020—0.0035 in.)**
Service Limit:	**0.15 mm (0.0060 in.)**



12. Check total runout with the camshaft supported on V-blocks.

    - If the total runout of the camshaft is within the service limit, replace the cylinder head.
    - If the total runout is beyond the service limit, replace the camshaft and recheck the oil clearance. If the oil clearance is still out of tolerance, replace the cylinder head.

Camshaft Total Runout
Standard (New): 0.03 mm (0.0012 in.) max.
Service Limit: 0.04 mm (0.002 in.)

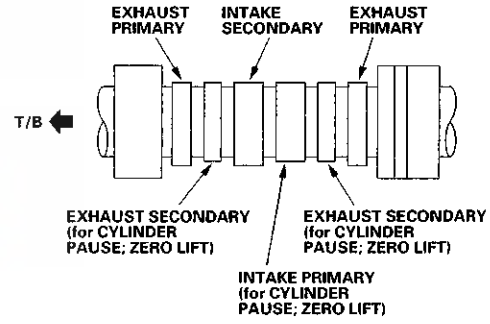


13. Measure the cam lobe height.

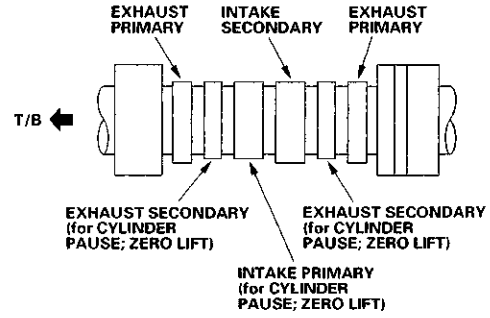
    NOTE:
    - When measuring the No. 1, No. 2, No. 3, and No. 4 cylinders intake cam lobe height of the camshaft, measure the secondary cam lobes.
    - When measuring the No. 1, No. 2, No. 3, and No. 4 cylinders exhaust cam lobe height of the camshaft, measure the primary cam lobes.

Cam Lobe Height Standard (New)
No. 1, No. 2, No. 3, and No. 4 CYLINDERS:
Intake: 35.472 mm (1.3965 in.)
Exhaust: 36.783 mm (1.4481 in.)
No. 5 and No. 6 CYLINDERS:
Intake: 35.469 mm (1.3964 in.)
Exhaust: 36.760 mm (1.4472 in.)

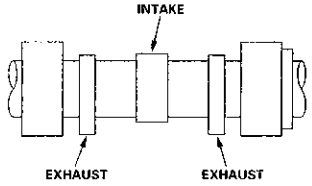
No. 1, No. 2, and No. 3 CYLINDERS



No. 4 CYLINDER



No. 5 and No. 6 CYLINDERS

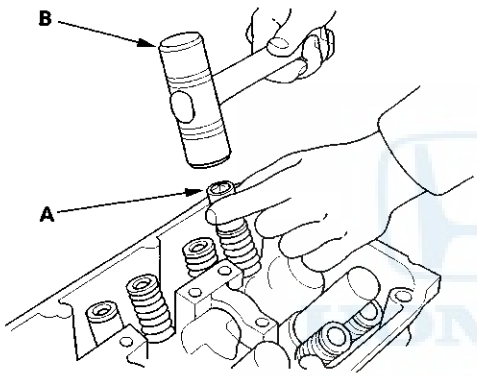


Valve, Spring, and Valve Seal Removal

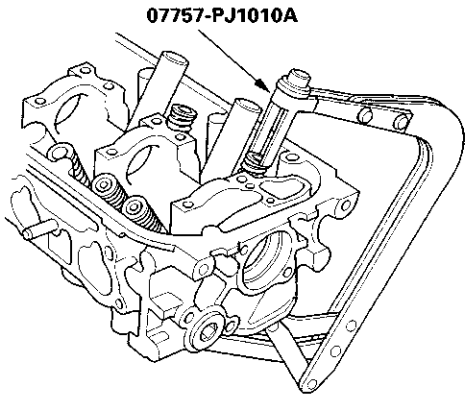
Special Tools Required
Valve spring compressor attachment
07757-PJ1010A

Identify the valves and the valve springs as they are removed so that each item can be reinstalled in its original position.

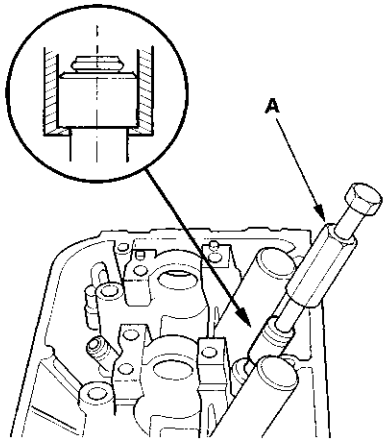
1. Remove the cylinder head (see page 6-34).
2. Remove the rocker arm assembly (see page 6-40).
3. Using an appropriate-sized socket (A) and a plastic mallet (B), lightly tap the spring retainer to loosen the valve cotters.



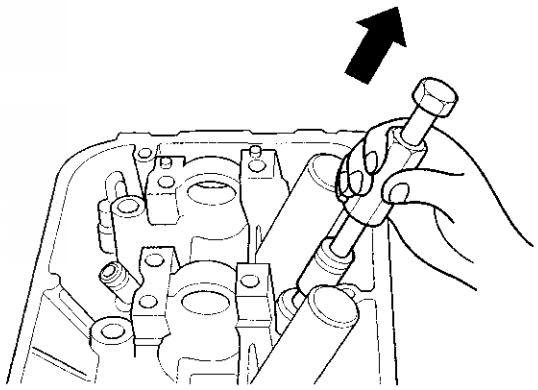
4. Install the valve spring compressor attachment and the valve spring compressor. Compress the spring and remove the valve cotters.



5. Remove the valve spring compressor and the valve spring compressor attachment, then remove the spring retainer, the valve spring, and the valve.
6. Install the valve guide seal remover (A).



7. Remove the valve seal.



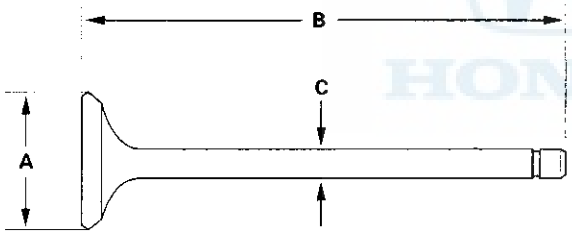
8. Remove the valve spring seat.

Valve Inspection

1. Remove the valves (see page 6-48).
2. Measure the valve in these areas.

Intake Valve Dimensions
A Standard (New): 35.90—36.10 mm (1.413—1.421 in.)
B Standard (New): 116.55—117.15 mm (4.589—4.612 in.)
C Standard (New): 5.485—5.495 mm (0.2159—0.2163 in.)
C Service Limit: 5.455 mm (0.2148 in.)

Exhaust Valve Dimensions
A Standard (New): 29.90—30.10 mm (1.177—1.185 in.)
B Standard (New): 113.90—114.50 mm (4.484—4.508 in.)
C Standard (New): 5.450—5.460 mm (0.2146—0.2150 in.)
C Service Limit: 5.420 mm (0.2134 in.)



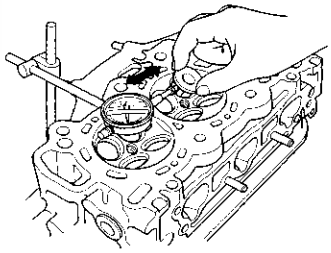
Valve Stem-to-Guide Clearance Inspection

1. Remove the valves (see page 6-48).
2. Slide the valve out of its guide about 10 mm (0.39 in.), then measure the stem-to-guide clearance with a dial indicator while rocking the stem in the direction of normal thrust (wobble method).

   - If the measurement exceeds the service limit, recheck it using a new valve.
   - If the measurement is now within the service limit, reassemble using a new valve.
   - If the measurement with a new valve still exceeds the service limit, go to step 3.

Intake Valve Stem-to-Guide Clearance
Standard (New): 0.04—0.09 mm (0.002—0.004 in.)
Service Limit: 0.16 mm (0.006 in.)

Exhaust Valve Stem-to-Guide Clearance
Standard (New): 0.11—0.16 mm (0.004—0.006 in.)
Service Limit: 0.22 mm (0.009 in.)



3. Subtract the O.D. of the valve stem, measured with a micrometer, from the I.D. of the valve guide, measured with an inside micrometer or a ball gauge. Take the measurements in three places along the valve stem and three places inside the valve guide. The difference between the largest guide measurement and the smallest stem measurement should not exceed the service limit.

Intake Valve Stem-to-Guide Clearance
Standard (New): 0.020—0.045 mm (0.0008—0.0018 in.)
Service Limit: 0.08 mm (0.003 in.)

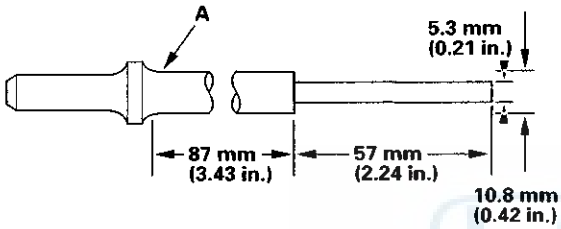
Exhaust Valve Stem-to-Guide Clearance
Standard (New): 0.055—0.080 mm (0.0022—0.0031 in.)
Service Limit: 0.11 mm (0.004 in.)

Valve Guide Replacement

Special Tools Required
- Valve guide driver, 5.5 mm 07742-0010100
- Valve guide reamer, 5.5 mm 07HAH-PJ7A100

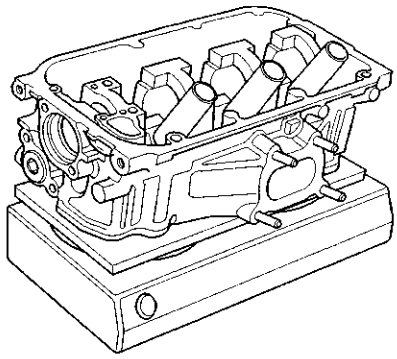
1. Inspect the valve stem-to-guide clearance (see page 6-49).

2. As illustrated, use a commercially available air-impact valve guide driver (A) modified to fit the diameter of the valve guides. In most cases, the same procedure can be done using the valve guide driver and a conventional hammer.



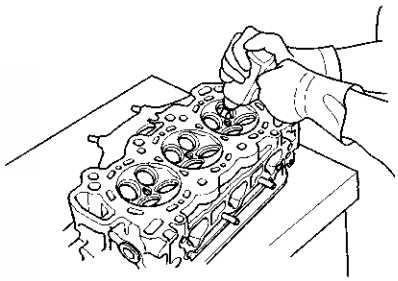
3. Select the proper replacement guides, and chill them in the freezer section of a refrigerator for at least an hour.

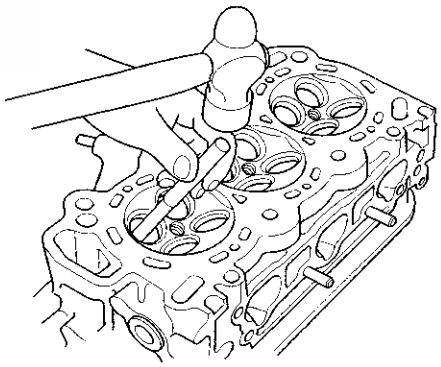
4. Use a hot plate or oven to evenly heat the cylinder head to 300 °F (150 °C). Monitor the temperature with a cooking thermometer. Do not get the head hotter than 300 °F (150 °C); excessive heat may loosen the valve seats.



5. Working from the camshaft side, use the driver and an air hammer to drive the guide about 2 mm (0.1 in.) towards the combustion chamber. This will knock off some of the carbon and make removal easier. Hold the air hammer directly in line with the valve guide to prevent damaging the driver. Wear safety goggles or a face shield.

6. Turn the head over, and drive the guide out toward the camshaft side of the head.





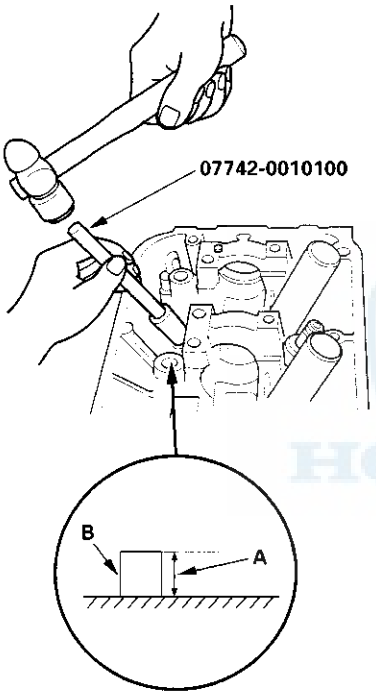
7. If a valve guide still will not move, drill it out with a 8 mm (5/16 in.) bit, then try again.

   NOTE: Drill guides only in extreme cases; you could damage the cylinder head if the guide breaks.

8. Remove the new guide(s) from the freezer, one at a time, as you need them.

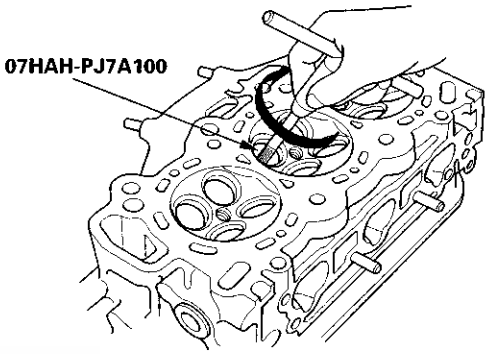
9. Apply a thin coat of new engine oil to the outside of the new valve guide. Install the guide from the camshaft side of the head; use the valve guide driver to drive the guide to the specified installed height (A) of the guide (B). If you have all 12 guides to do, you may have to reheat the head.

Valve Guide Installed Height
Intake: 21.20—22.20 mm (0.835—0.874 in.)
Exhaust: 20.60—21.60 mm (0.811—0.850 in.)



10. Coat both the reamer and the valve guide with cutting oil.

11. Rotate the reamer clockwise the full length of the valve guide bore.



12. Continue to rotate the reamer clockwise while removing it from the bore.

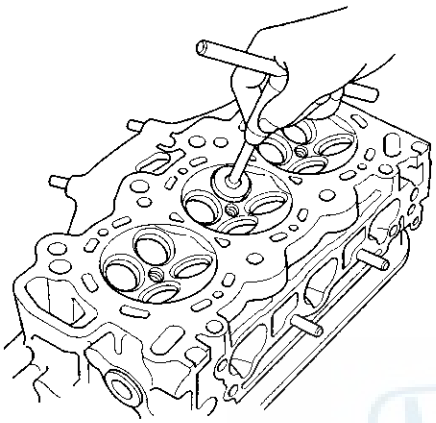
13. Thoroughly wash the guide in detergent and water to remove any cutting residue.

14. Check the clearance with a valve (see page 6-49). Verify that a valve slides in the intake and exhaust valve guides without sticking.

Valve Seat Reconditioning

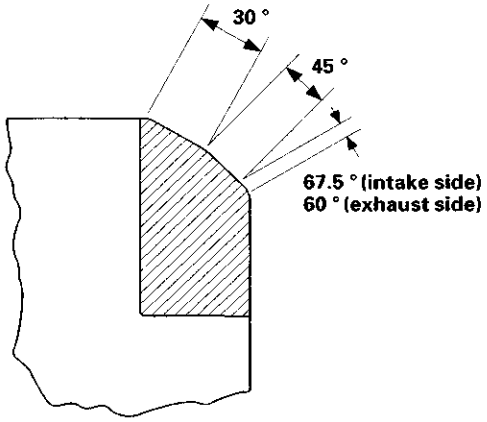
1. Inspect valve stem-to-guide clearance (see page 6-49). If the valve guides are worn, replace them (see page 6-50) before cutting the valve seats.

2. Renew the valve seats in the cylinder head using a valve seat cutter.



3. Carefully cut a 45 ° seat, removing only enough material to ensure a smooth and concentric seat.

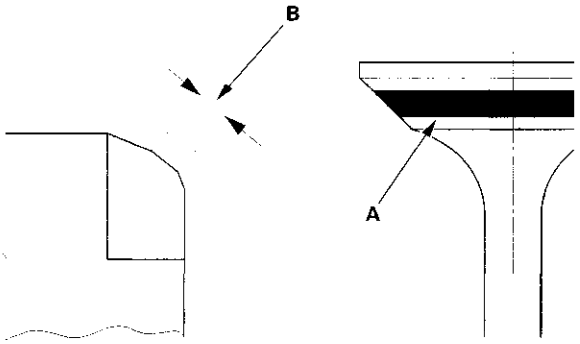
4. Bevel the upper and lower edges at the angles shown in the illustration.
Check the width of the seat and adjust accordingly.



5. Make one more very light pass with the 45 ° cutter to remove any possible burrs caused by the other cutters.

Valve Seat Width
Standard (New): 1.25—1.55 mm (0.049—0.061 in.)
Service Limit: 2.00 mm (0.079 in.)

6. After resurfacing the seat, inspect it for even valve seating. Apply Prussian Blue compound (A) to the valve face. Insert the valve in its original location in the head, then lift it and snap it closed against the seat several times.



7. The actual valve seating surface (B), as shown by the blue compound, should be centered on the seat.

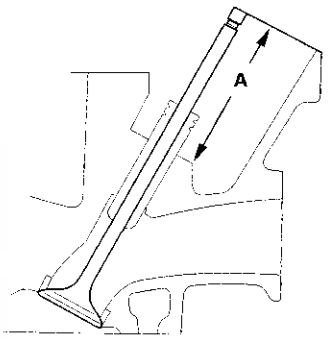
   - If it is too high (closer to the valve stem), you must make a second cut with the 67.5 ° cutter (intake seat) or the 60 ° cutter (exhaust seat) to move it down, then one more cut with the 45 ° cutter to restore seat width.
   - If it is too low (closer to the valve edge), you must make a second cut with the 30 ° cutter to move it up, then one more cut with the 45 ° cutter to restore seat width.

   NOTE: The final cut should always be made with the 45 ° cutter.

8. Insert the intake and exhaust valves in the head, and measure the valve stem installed height (A).

   Intake Valve Stem Installed Height
   Standard (New): 46.75—47.55 mm (1.841—1.872 in.)
   Service Limit: 47.80 mm (1.882 in.)

   Exhaust Valve Stem Installed Height
   Standard (New): 46.68—47.48 mm (1.838—1.869 in.)
   Service Limit: 47.73 mm (1.879 in.)



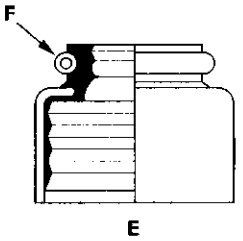
9. If the valve stem installed height is over the service limit, replace the valve and recheck. If it is still over the service limit, replace the cylinder head; the valve seat in the head is too deep.

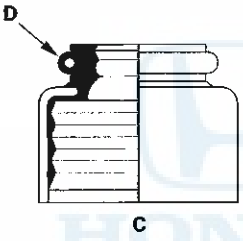
Valve, Spring, and Valve Seal Installation

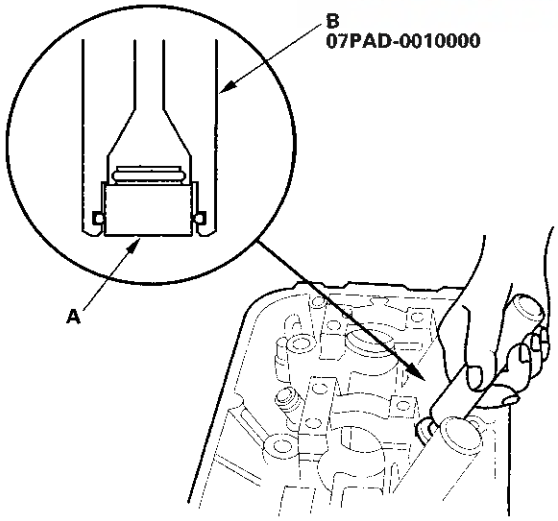
Special Tools Required
- Stem seal driver 07PAD-0010000
- Valve spring compressor attachment 07757-PJ1010A

1. Coat the valve stems with new engine oil. Install the valves in the valve guides.
2. Check that the valves move up and down smoothly.
3. Install the spring seats on the cylinder head.
4. Install the new valve seals (A) using the 5.5 mm side of the stem seal driver (B).

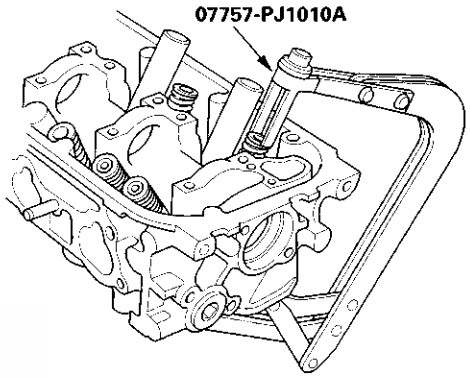
   NOTE: Exhaust valve seals (C) have a black spring (D) and intake valve seals (E) have a white or silver spring (F). They are not interchangeable.



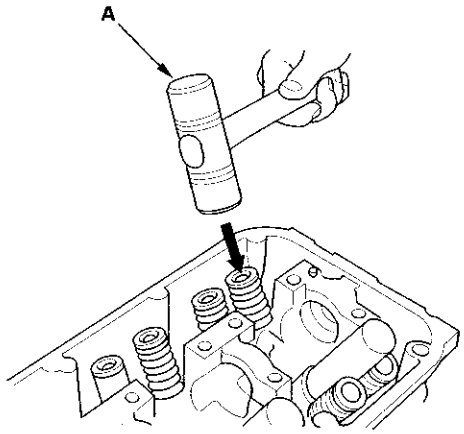




5. Install the valve spring and the spring retainer. Place the end of the valve spring with the closely wound coils toward the cylinder head.
6. Install the valve spring compressor attachment and the valve spring compressor. Compress the spring and install the valve cotters.



7. Remove the valve spring compressor and the valve spring compressor attachment.
8. Lightly tap the end of each valve stem two or three times with a plastic mallet (A) to ensure proper seating of the valve and valve cotters. Tap the valve stem only along its axis so you do not bend the stem.



Camshaft, Rocker Arm Assembly, Camshaft Seal, and Pulley Installation

Front

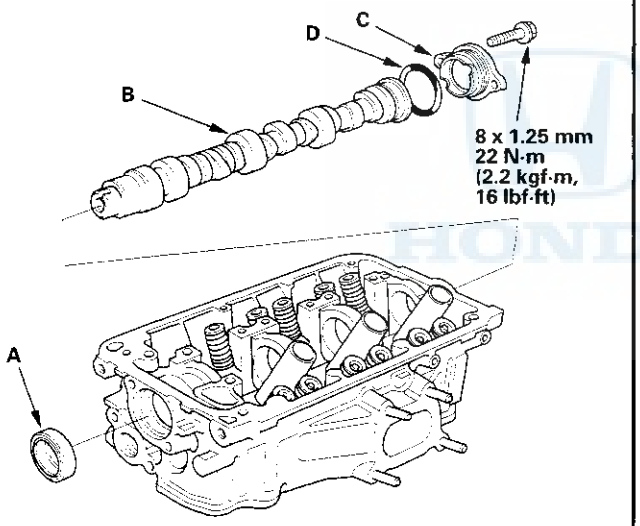
1. Loosen the locknuts and the adjusting screws (see page 6-10).

2. Apply a light coat of new engine oil around the camshaft oil seal.

3. Apply a light coat of new engine oil to the lip of the camshaft oil seal.

4. Gently tap the new camshaft oil seal (A) into the cylinder head.

   -1 Tap the camshaft oil seal in squarely.
   -2 Install the oil seal about 0.5 —1.5 mm (0.02—0.06 in.) below the surface of the cylinder head.



5. Insert the camshaft (B) into the cylinder head, then install the camshaft thrust cover (C). Always use a new O-ring (D). Apply new engine oil to the journals and the cam lobes.

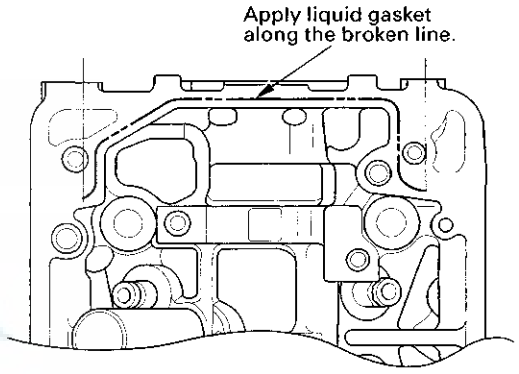
6. Check that the oil seal lips are not distorted.

7. If the rocker arm assembly is disassembled, reassemble the rocker arm assembly (see page 6-41).

8. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.

9. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating surface of the cylinder head. Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



10. Set the rocker arm assembly in place, and loosely install the bolts. Make sure that the rocker arms are properly positioned on the valve stems.

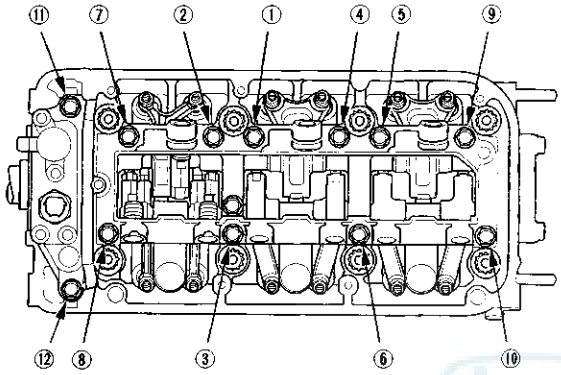
    NOTE:
    - Wait at least 30 minutes before filling the engine with oil.
    - Do not run the engine for at least 3 hours after installing the rocker arm assembly.

(cont'd)

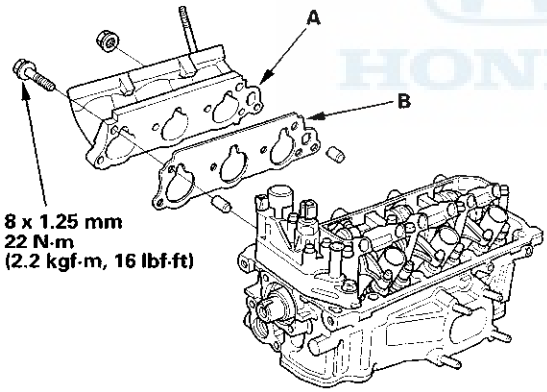
Camshaft, Rocker Arm Assembly, Camshaft Seal, and Pulley Installation (cont'd)

11. Tighten each bolt two turns at a time in the sequence shown to ensure that the rockers do not bind on the valves.

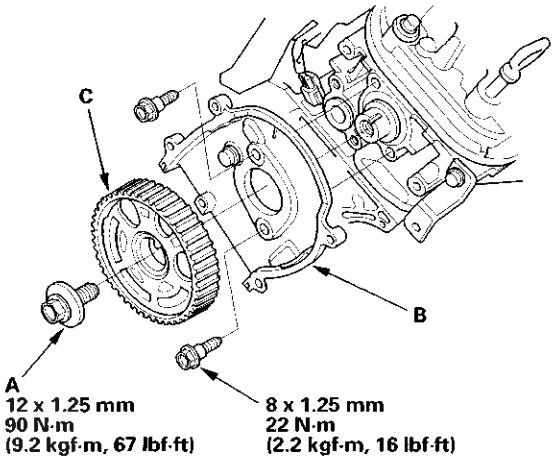
Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)



12. Install the injector base (A). Always use a new gasket (B).



13. Apply new engine oil to the threads of the camshaft pulley mounting bolt (A). Install the back cover (B), then install the camshaft pulley (C).



14. Set the camshaft pulleys to top dead center (TDC) before bolting them onto the engine block (see step 6 on page 6-59).

Rear

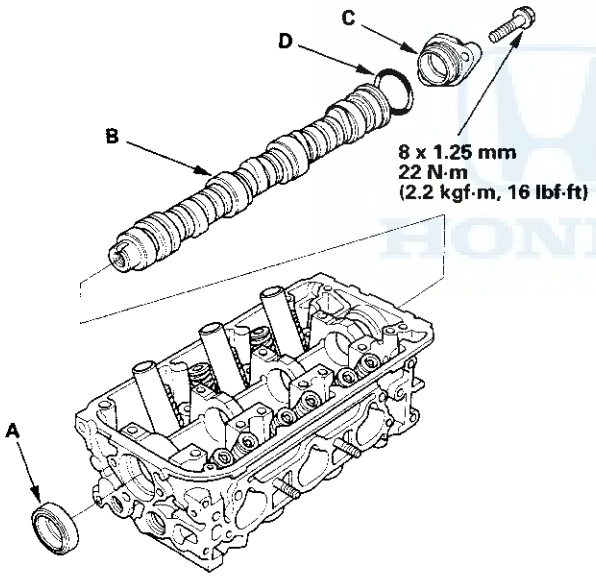
1. Loosen the locknuts and the adjusting screws (see page 6-10).

2. Apply a light coat of new engine oil around the camshaft oil seal.

3. Apply a light coat of new engine oil to the lip of the camshaft oil seal.

4. Gently tap the new camshaft oil seal (A) into the cylinder head.

   -1 Tap the camshaft oil seal in squarely.
   -2 Install the oil seal about 0.5 —1.5 mm (0.02—0.06 in.) below the surface of the cylinder head.



5. Insert the camshaft (B) into the cylinder head, then install the camshaft thrust cover (C). Always use a new O-ring (D). Apply new engine oil to the journals and the cam lobes.

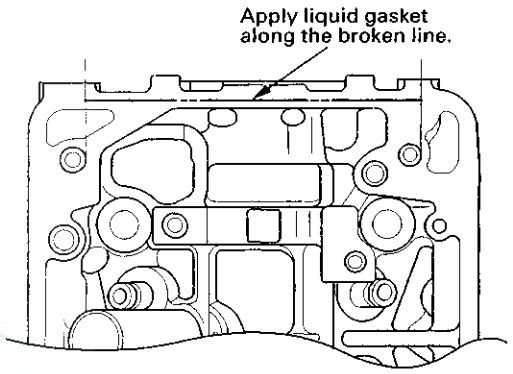
6. Check that the oil seal lips are not distorted.

7. If the rocker arm assembly is disassembled, reassemble the rocker arm assembly (see page 6-42).

8. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.

9. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating surface of the cylinder head. Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



10. Set the rocker arm assembly in place, and loosely install the bolts. Make sure that the rocker arms are properly positioned on the valve stems.

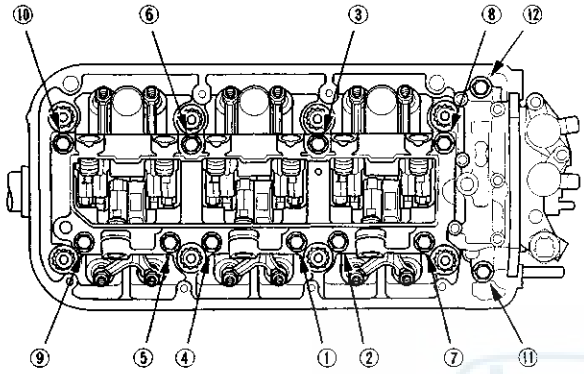
    NOTE:
    - Wait at least 30 minutes before filling the engine with oil.
    - Do not run the engine for at least 3 hours after installing the rocker arm assembly.

(cont'd)

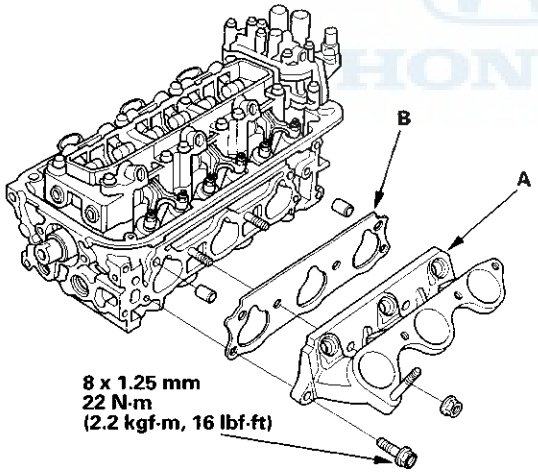
Camshaft, Rocker Arm Assembly, Camshaft Seal, and Pulley Installation (cont'd)

11. Tighten each bolt two turns at a time in the sequence shown to ensure that the rockers do not bind on the valves.

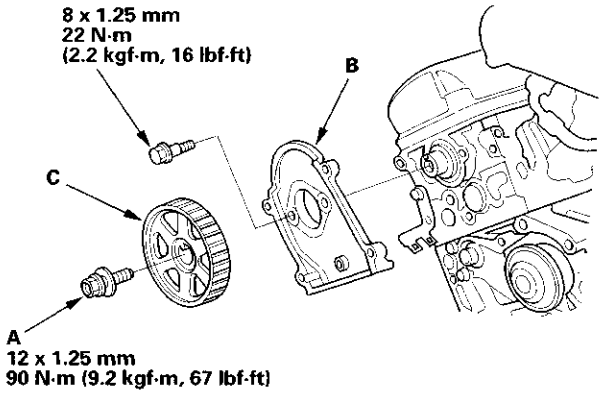
Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)



12. Install the injector base (A). Always use a new gasket (B).



13. Apply new engine oil to the threads of the camshaft pulley mounting bolt (A). Install the back cover (B), then install the camshaft pulley (C).

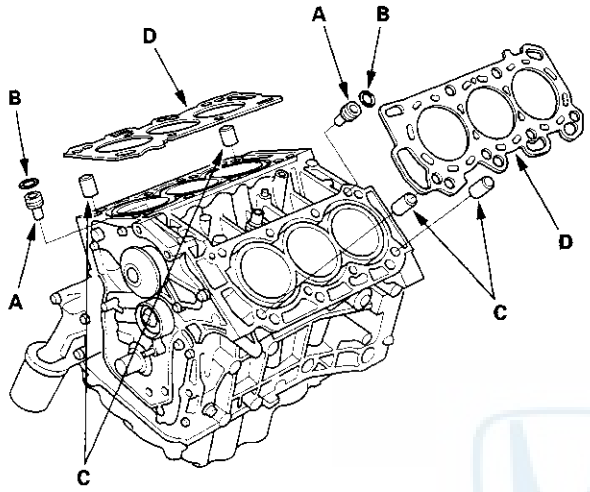


14. Set the camshaft pulleys to TDC before bolting them onto the engine block (see step 6 on page 6-59).

Cylinder Head Installation

1. Clean the cylinder head and the engine block surface.

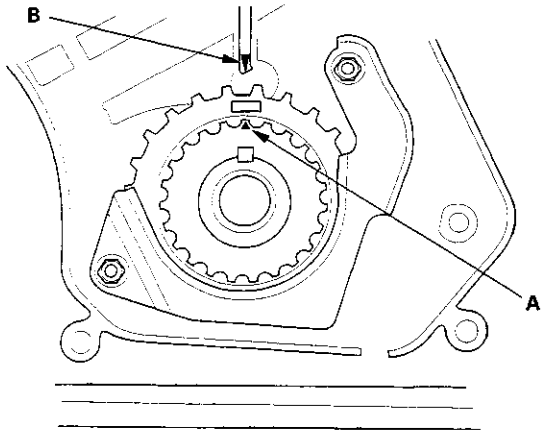
2. Clean and install the oil control orifices (A) with new O-rings (B).



3. Install the dowel pins (C) and the new cylinder head gaskets (D).

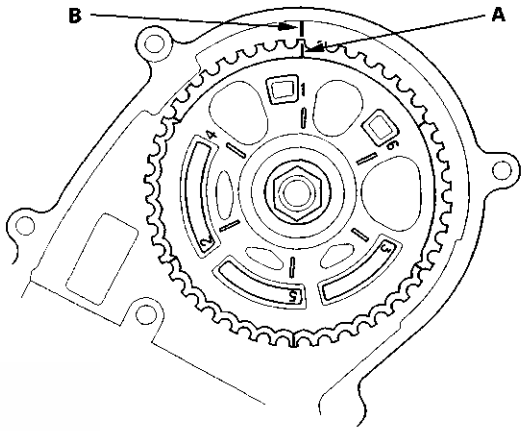
4. Clean the timing belt pulleys, the timing belt guide plate, and the upper and lower covers.

5. Set the timing belt drive pulley to top dead center (TDC) by aligning the TDC mark (A) on the tooth of the timing belt drive pulley with the pointer (B) on the oil pump.



6. Set the camshaft pulleys to TDC by aligning the TDC marks (A) on the camshaft pulleys with the pointers (B) on the back covers.

FRONT



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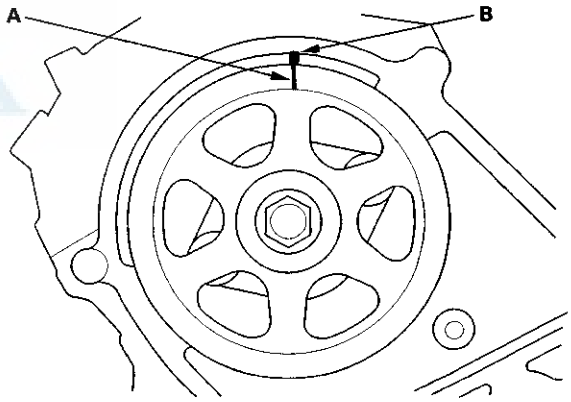
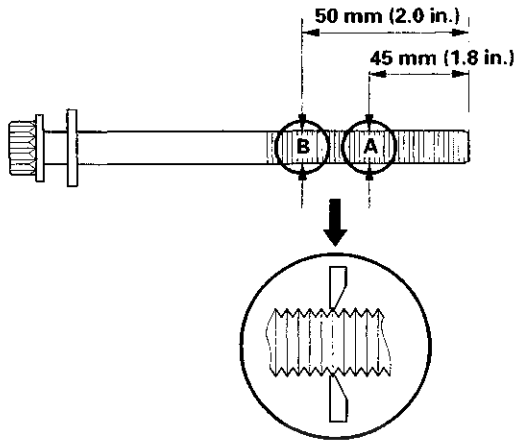


7. Install the cylinder heads on the engine block.

(cont'd)

Cylinder Head Installation (cont'd)

8. Measure the diameter of each cylinder head bolt at point A and point B.

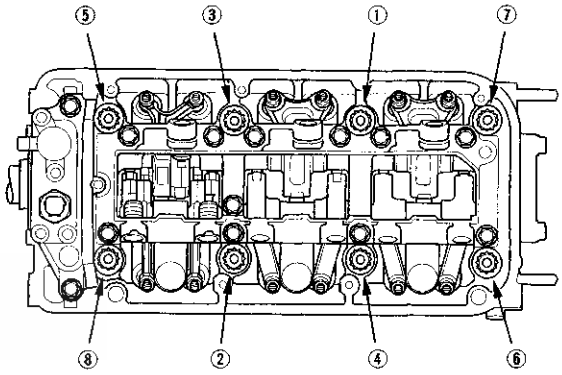


9. If either diameter is less than 10.6 mm (0.42 in.), replace the cylinder head bolt.

10. Apply new engine oil to the threads and under the bolt heads of all cylinder head bolts.

11. Tighten the cylinder head bolts in sequence to 29 N·m (3.0 kgf·m, 22 lbf·ft) using a beam-type torque wrench. When using a preset click-type torque wrench, be sure to tighten slowly and do not overtighten. If a bolt makes any noise while you are torquing it, loosen the bolt and retighten it from the first step.

FRONT



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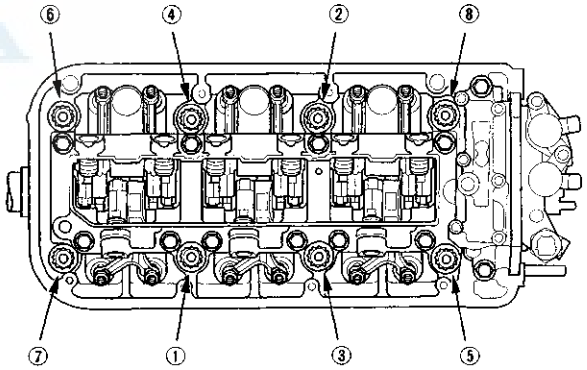
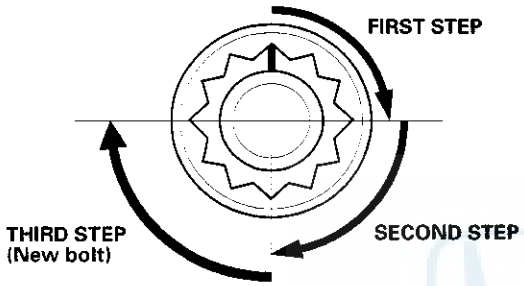


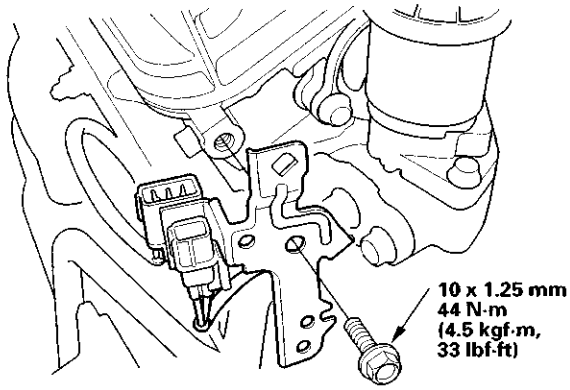
12. After torquing, tighten all cylinder head bolts in two steps (90 ° per step) using the sequence shown in step 11. If you are using a new cylinder head bolt, tighten the bolt an extra 90 °.

    NOTE: Remove the cylinder head bolt if you tightened it beyond the specified angle, and go back to step 8 of the procedure. Do not loosen it back to the specified angle.

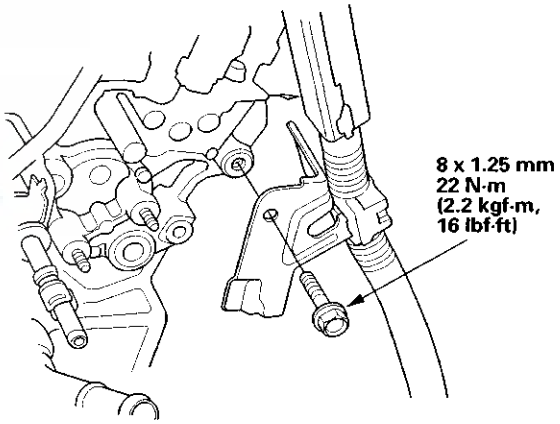


13. Install the timing belt (see page 6-18).
14. Adjust the valve clearance (see page 6-10).
15. Install the cylinder head covers (see page 6-30).
16. Install the water passage (see page 10-10).
17. Install the injector bases (see page 9-8).

18. Install the connector bracket to the front cylinder head.



19. Install the harness clamp bracket to the rear cylinder head.



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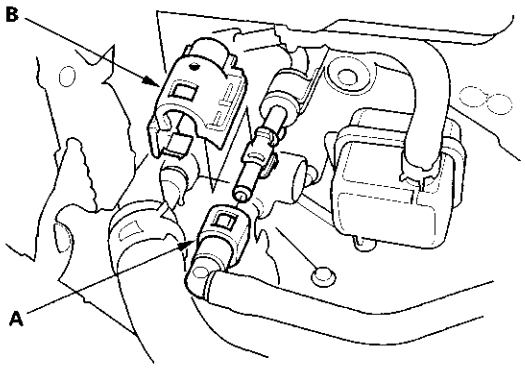
Cylinder Head Installation (cont'd)

20. Connect the fuel feed hose (A) (see page 11-411), then install the quick-connect fitting cover (B).



21. Install the front warm up three way catalytic converter (front WU-TWC) (see page 11-445) and the rear warm up three way catalytic converter (rear WU-TWC) (see page 11-446).

22. Connect the following engine wire harness connectors, and install the wire harness clamps to the cylinder head:

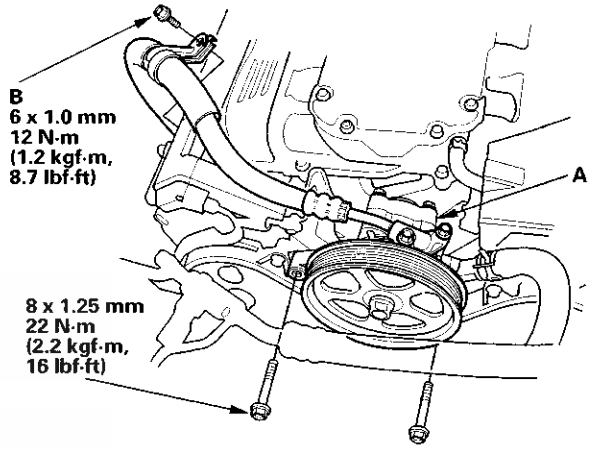
- Six injector connectors
- Knock sensor connector
- Engine coolant temperature (ECT) sensor 1 connector
- Exhaust gas recirculation (EGR) valve connector
- Front rocker arm oil pressure switch connector
- Rear rocker arm oil pressure switch connector
- Camshaft position (CMP) sensor connector
- Two air fuel ratio (A/F) sensor connectors
- Two secondary heated oxygen sensor (secondary HO2S) connectors
- Rocker arm oil pressure sensor connector
- Rocker arm oil control solenoid A (BANK 1) connector
- Rocker arm oil control solenoid A (BANK 2) connector
- Rocker arm oil control solenoid B (BANK 1) connector

23. Install the six ignition coils (see page 4-29).

24. Install the intake manifold (see page 9-6).

25. Install the alternator (see page 4-46).

26. Install the power steering (P/S) pump (A) and tighten the bolt (B) securing the P/S hose bracket.



27. Install the drive belt (see page 4-39).

28. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

29. After installation, check that all tubes, hoses, and connectors are installed correctly.

30. Inspect for fuel leaks. Turn the ignition switch to ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation three times, then check for fuel leakage at any point in the fuel line.

31. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).

32. Check for fluid leaks.

33. Do the powertrain control module (PCM) idle learn procedure (see page 11-385).

34. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

35. Inspect the idle speed (see page 11-384).

36. Inspect the ignition timing (see page 4-28).

Camshaft Oil Seal Installation - In Car

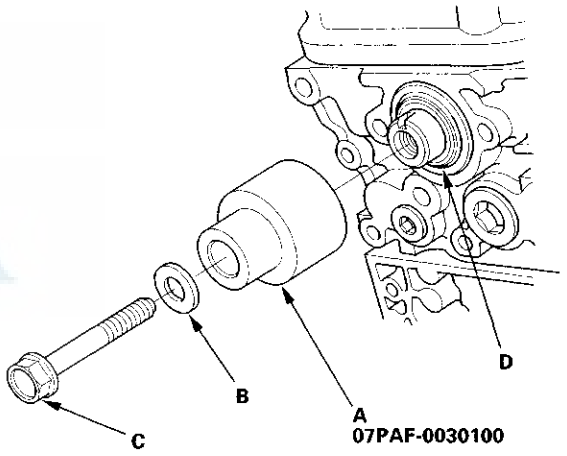
Special Tools Required
Camshaft oil seal driver 07PAF-0030100

1. Dry the camshaft oil seal housing.

2. Apply a light coat of new engine oil around the camshaft oil seal.

3. Apply a light coat of new engine oil to the lip of the camshaft oil seal

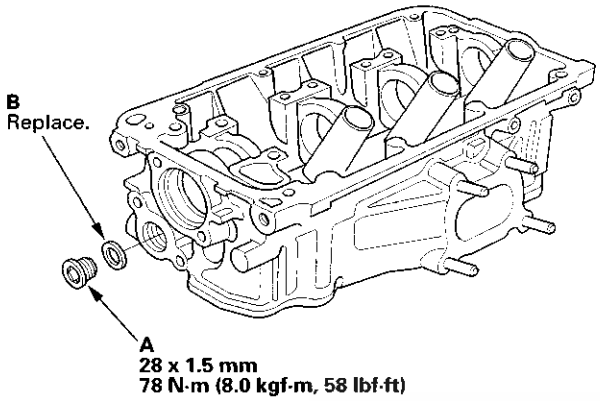
4. Using the camshaft oil seal driver (A), a washer (B), and a 12 x 75 x 1.25 mm bolt (C), press in the new camshaft oil seal (D) about 0.5—1.5 mm (0.02—0.06 in.) below the surface of the cylinder head.



Sealing Bolt Installation

NOTE: When installing the sealing bolt (A), always use a new washer (B).

FRONT



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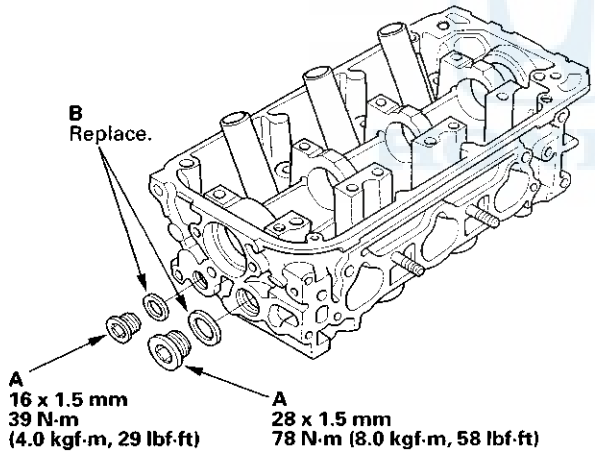
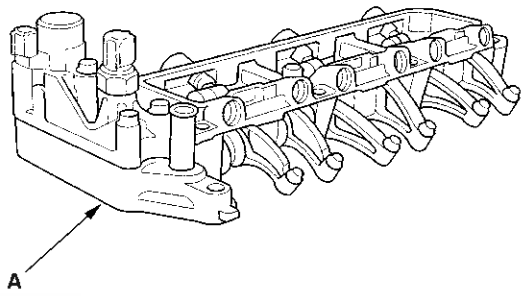


Front Rocker Arm Oil Control Valve Replacement

1. Remove the front rocker arm assembly (see page 6-40).
2. Remove the front rocker arm oil control valve (A).

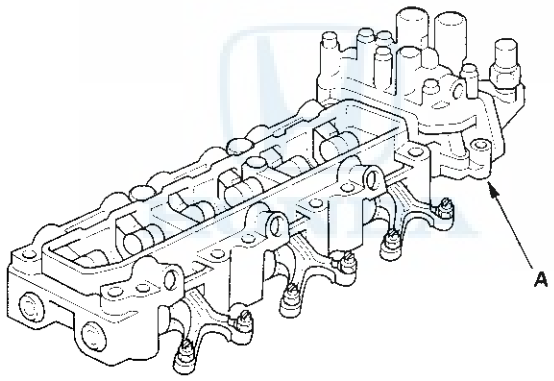


3. Install the front rocker arm oil control valve in the reverse order of removal.

Rear Rocker Arm Oil Control Valve Replacement

1. Remove the rear rocker arm assembly (see page 6-40).

2. Remove the rear rocker arm oil control valve (A).



3. Install the rear rocker arm oil control valve in the reverse order of removal.

HONDA

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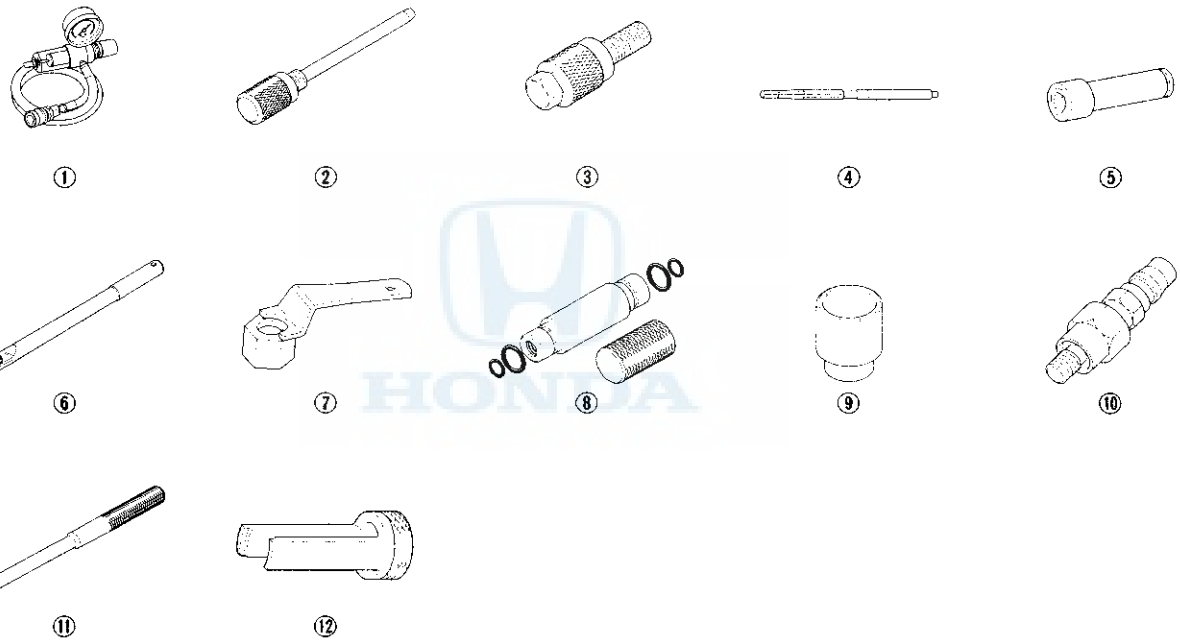
Outline of Model Change

J35Z3 engine has been added.

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07AAJ-PNAA101	Air Pressure Regulator	1
②	07AAJ-R70A100	VTEC Air Stop Tool A	1
③	07AAJ-R70A200	VTEC Air Stop Tool B	1
④	07HAH-PJ7A100	Valve Guide Reamer, 5.5 mm	1
⑤	07JAA-001020A	Socket, 19 mm	1
⑥	07JAB-001020B	Holder Handle	1
⑦	07MAB-PY3010A	Holder Attachment, 50 mm, Offset	1
⑧	07PAD-0010000	Stem Seal Driver	1
⑨	07PAF-0030100	Camshaft Oil Seal Driver	1
⑩	070AJ-001A101	VTEC/VCM Air Adapter	1
⑪	07742-0010100	Valve Guide Driver, 5.5 mm	1
⑫	07757-PJ1010A	Valve Spring Compressor Attachment	1



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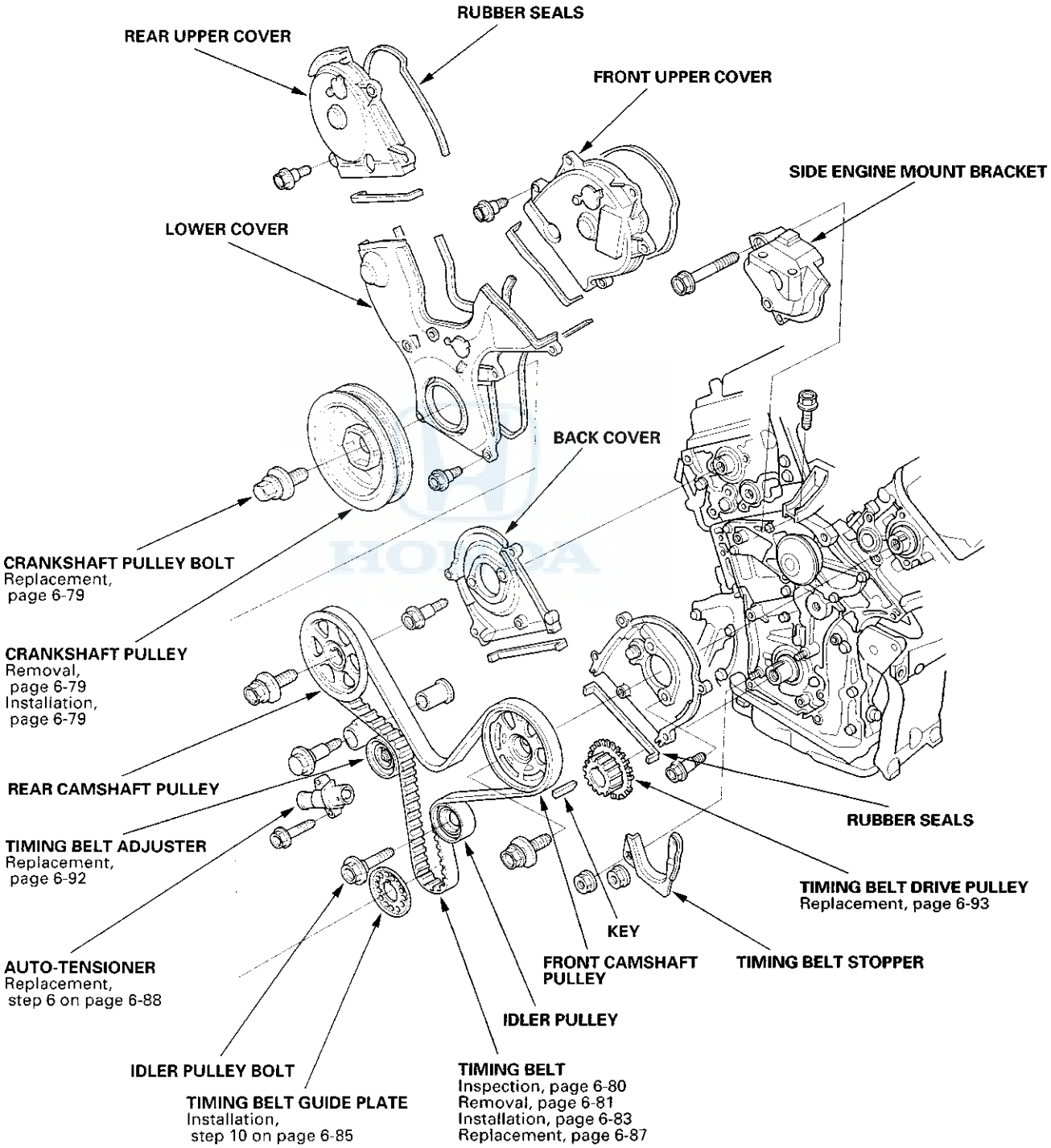

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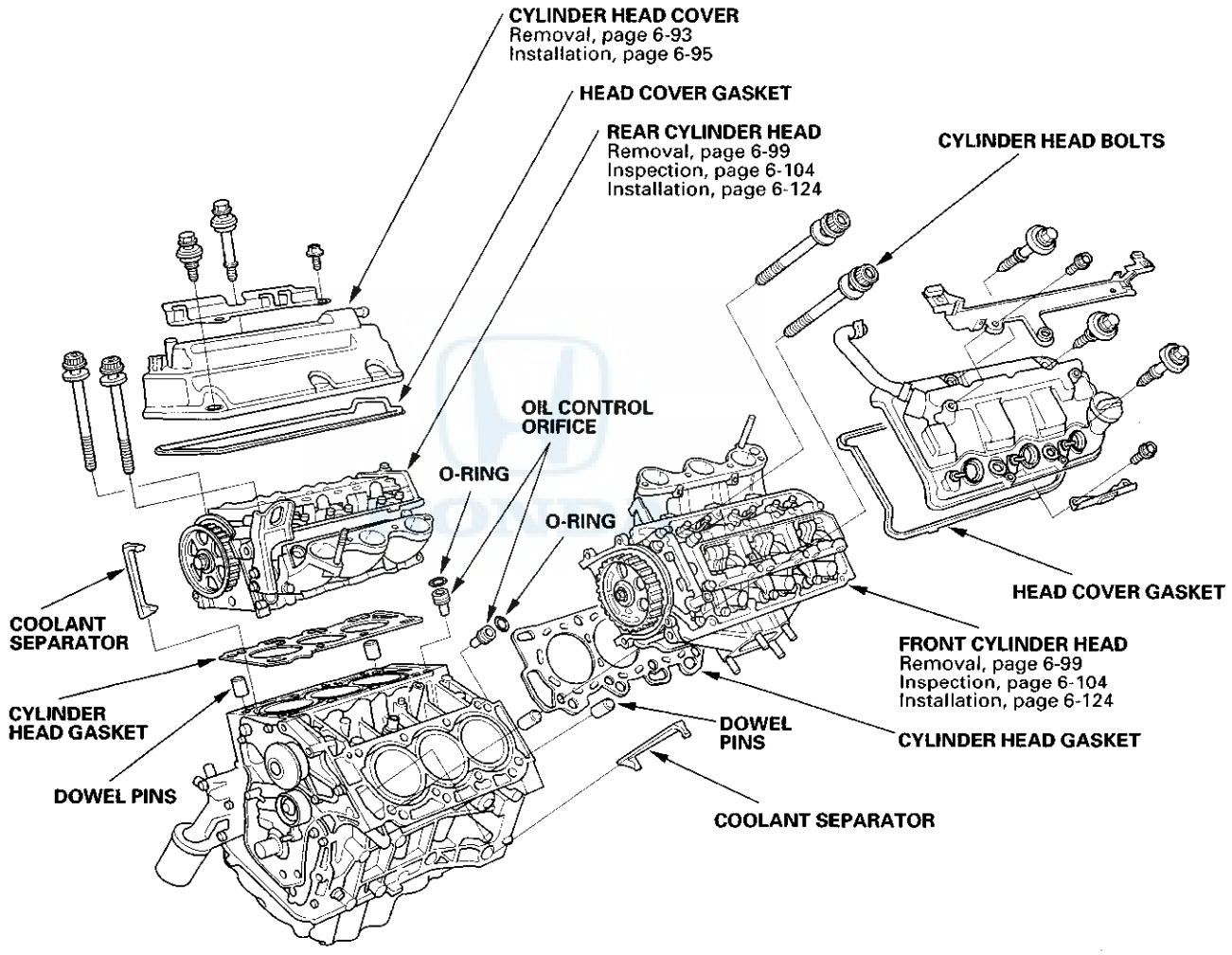

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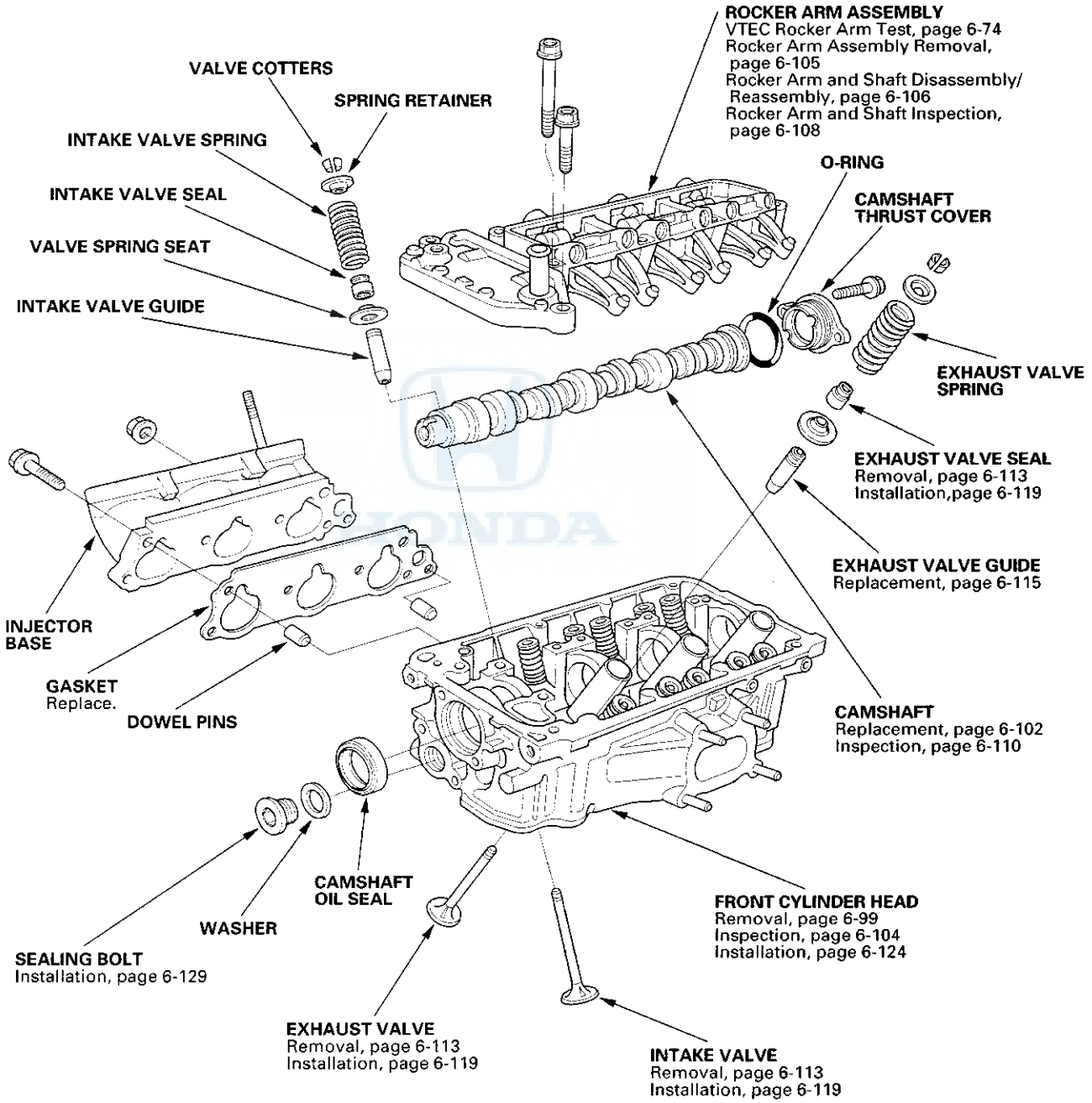
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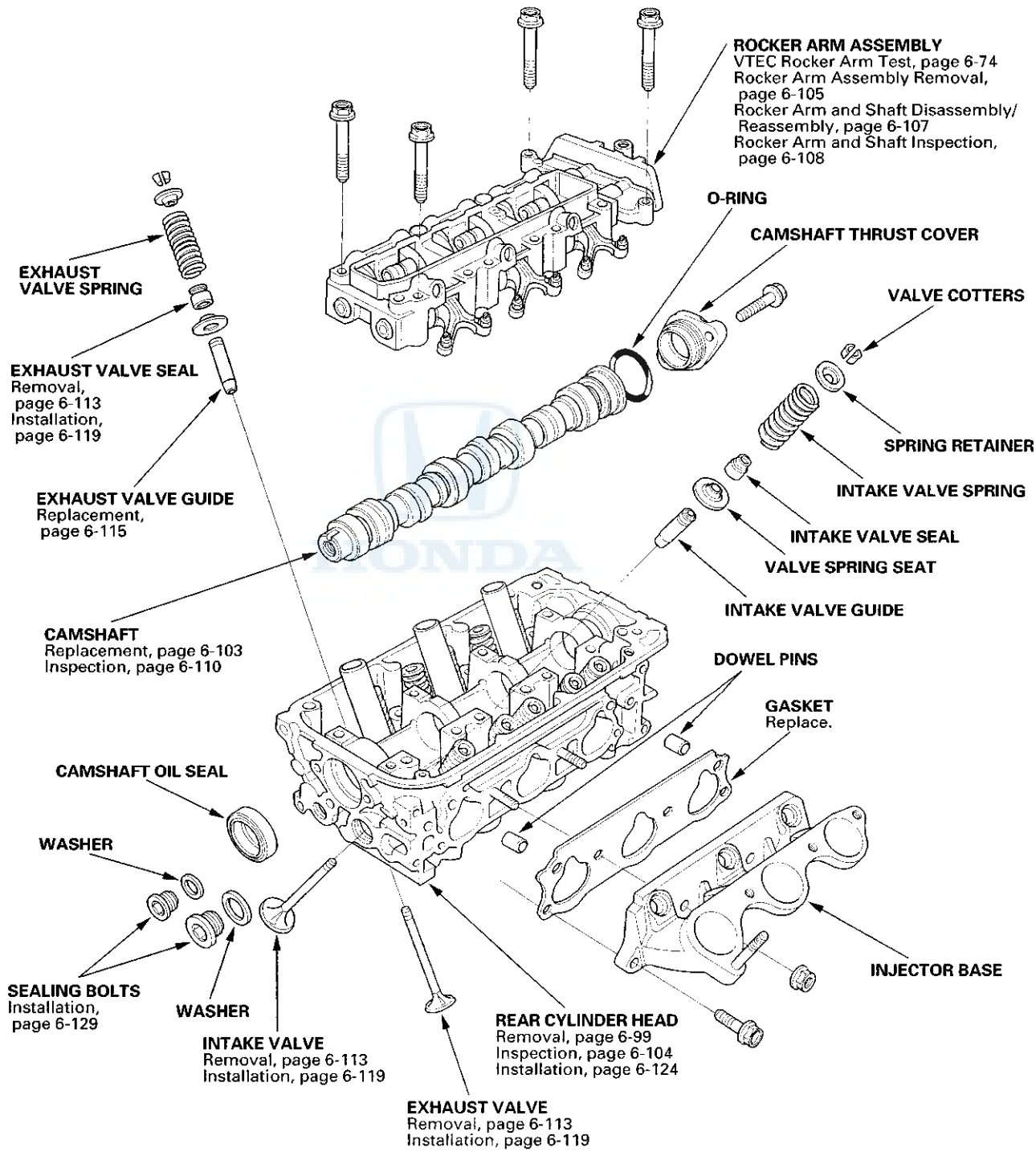
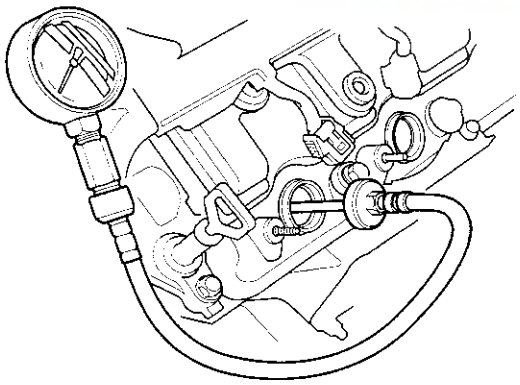
REAR



Engine Compression Inspection

NOTE: After the inspection, you must reset the engine control module (ECM). Otherwise, the ECM will continue to stop the fuel injectors from operating.

1. Warm up the engine to normal operating temperature (cooling fan comes on).
2. Turn the ignition switch to LOCK (0).
3. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
4. Turn the ignition switch to ON (II).
5. Make sure the HDS communicates with the vehicle and the ECM. If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
6. Select ALL INJECTORS STOP in the PGM-FI INSPECTION menu with the HDS.
7. Turn the ignition switch to LOCK (0).
8. Remove the six ignition coils (see page 4-29).
9. Remove the six spark plugs.
10. Attach the compression gauge to a spark plug hole.



11. Step on the accelerator pedal to open the throttle fully, then crank the engine with the starter motor, and measure the compression.

    Compression Pressure:
    Above 930 kPa (9.5 kgf/cm², 135 psi)

12. Measure the compression on the remaining cylinders.

    Maximum Variation:
    Within 200 kPa (2.0 kgf/cm², 28 psi)

13. If the compression is not within specifications, check the following items, then remeasure the compression.

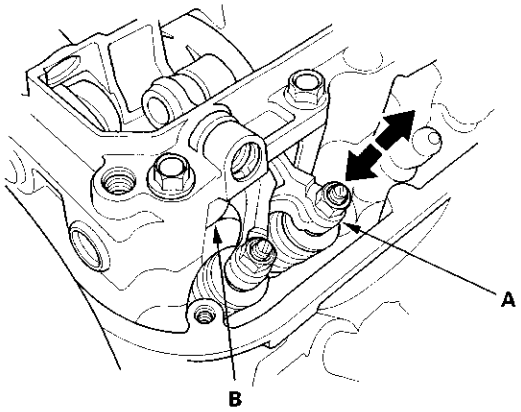
    - Incorrect valve clearance
    - Confirmation of cam timing
    - Damaged or worn cam lobes
    - Damaged or worn valves and seats
    - Damaged cylinder head gaskets
    - Damaged or worn piston rings
    - Damaged or worn piston and cylinder bore

14. Remove the compression gauge from the spark plug hole.
15. Install the six spark plugs.
16. Install the six ignition coils (see page 4-29).
17. Select ECM reset (see page 11-4) in the PGM-FI INSPECTION menu to cancel ALL INJECTORS STOP with the HDS.

VTEC Rocker Arm Test

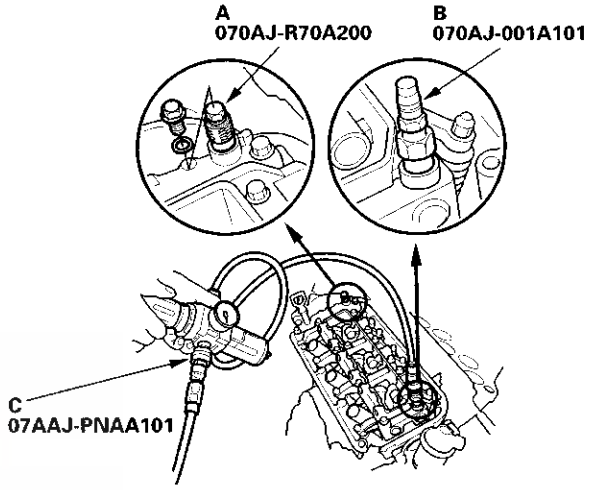
Special Tools Required
- VTEC air stop tool B 07AAJ-R70A200
- VTEC/VCM air adapter 070AJ-001A101
- Air pressure regulator 07AAJ-PNAA101
- VTEC air stop tool A 07AAJ-R70A100

1. Start the engine and let it run for 5 minutes, then turn the ignition switch to LOCK (0).
2. Remove the six ignition coils (see page 4-29).
3. Remove the cylinder head covers (see page 6-93).
4. Set the No. 1 piston at top dead center (TDC) (see step 2 on page 6-75).
5. Push on the intake secondary rocker arm (A) for the No. 1 cylinder. The intake secondary rocker arm should move independently of the primary rocker arm (B).
   - If the intake secondary rocker arm moves freely, go to step 6.
   - If the intake secondary rocker arm does not move independently, remove the intake primary and secondary rocker arms as an assembly, then check that the rocker arm pistons in the rocker arms move smoothly. If any rocker arm needs replacing, replace the primary and secondary rocker arms as an assembly, then retest.



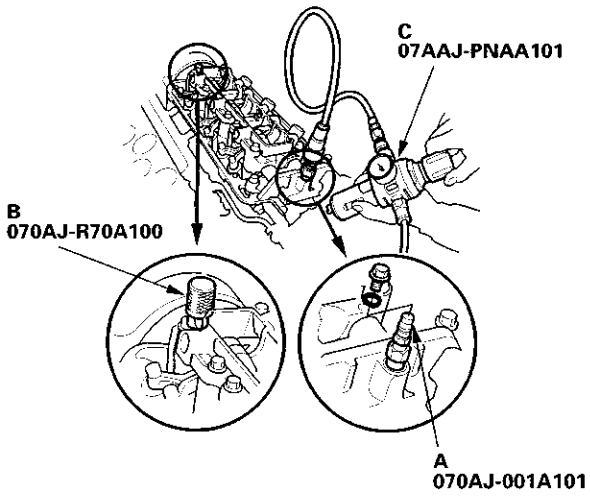
6. If repeat step 5 on the remaining intake secondary rocker arms with each piston at TDC. When all the secondary rocker arms pass the test, go to step 7.
7. Check that the air pressure on the shop air compressor gauge indicates over 690 kPa (7.0 kgf/cm², 100 psi).
8. Inspect the valve clearance (see page 6-75).
9. Remove the sealing bolt, then install the VTEC air stop tool B (A) and the VTEC/VCM air adapter (B) to the inspection hole, then connect the air pressure regulator (C) as shown.

FRONT



10. Remove the sealing bolt, then install the VTEC/VCM air adapter (A) and the VTEC air stop tool A (B) to the inspection hole, then connect the air pressure regulator (C) as shown.

REAR

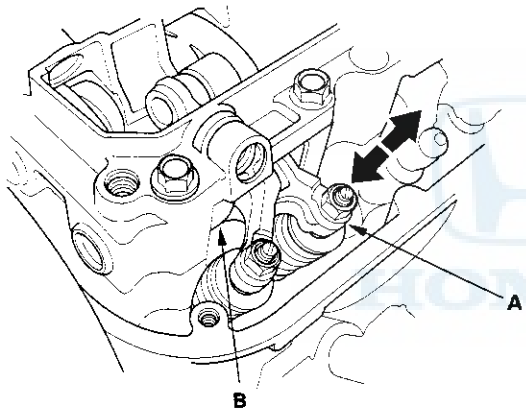


11. Loosen the valve on the regulator, and apply the specified air pressure.

    Specified Air Pressure:
    551—689 kPa (5.6—7.0 kgf/cm², 80—100 psi)

    NOTE: If the rocker arm pistons do not move after applying air pressure, move the primary or secondary rocker arm up and down manually.

12. Make sure that the intake secondary rocker arm (A) is mechanically connected by the piston and that the primary rocker arm (B) does not move when pushed manually. If any intake secondary rocker arm moves independently of the primary rocker arms, replace the rocker arms as a set.



13. If repeat step 12 on the remaining intake secondary rocker arms with each piston at TDC. When all the secondary rocker arms pass the test, go to step 14.

14. Remove the air pressure regulator, the VTEC/VCM air adapter, the VTEC air stop tool A, and the VTEC air stop tool B.

15. Tighten the sealing bolts to 22 N·m (2.2 kgf·m, 16 lbf·ft).

16. Install the cylinder head covers (see page 6-95).

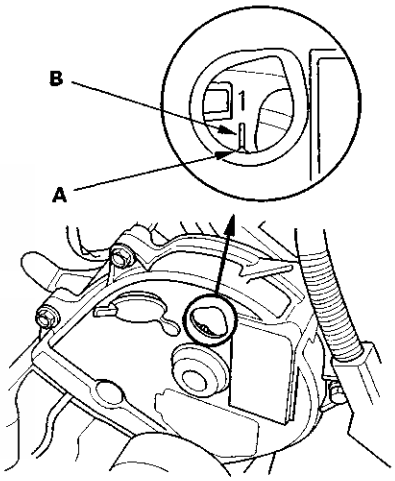
17. Install the six ignition coils (see page 4-29).

Valve Clearance Adjustment

NOTE: Connect the Honda Diagnostic System (HDS) to the data link connector (DLC), and monitor the engine coolant temperature (ECT) sensor 1. Adjust the valve clearance only when the ECT sensor 1 temperature is less than 100 °F (38 °C).

1. Remove the cylinder head covers (see page 6-93).

2. Set the No. 1 piston at top dead center (TDC). Align the pointer (A) on the front upper cover with the No. 1 piston TDC mark (B) on the front camshaft pulley.



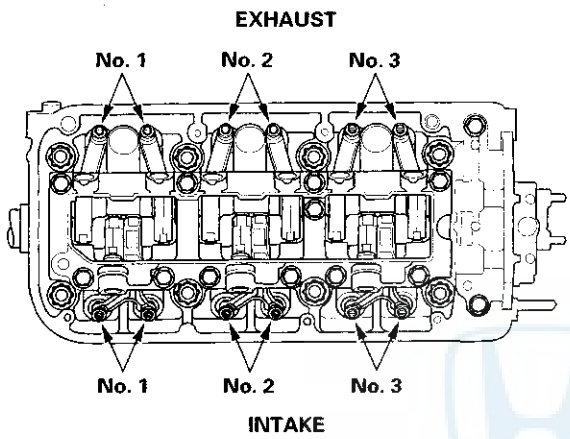
(cont'd)

Valve Clearance Adjustment (cont'd)

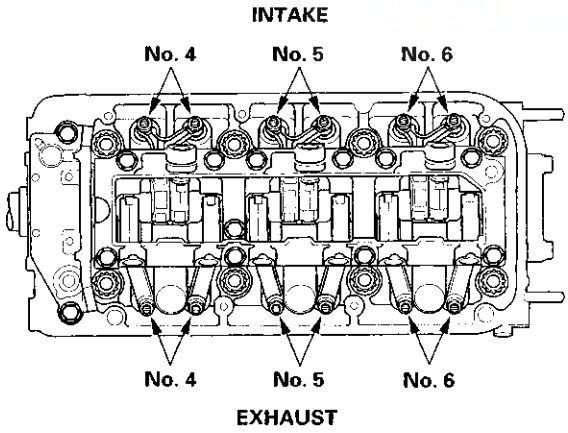
3. Select the correct feeler gauge for the valve clearance you are going to check.

Valve Clearance
Intake: 0.20—0.24 mm (0.008—0.009 in.)
Exhaust: 0.28—0.32 mm (0.011—0.013 in.)

REAR

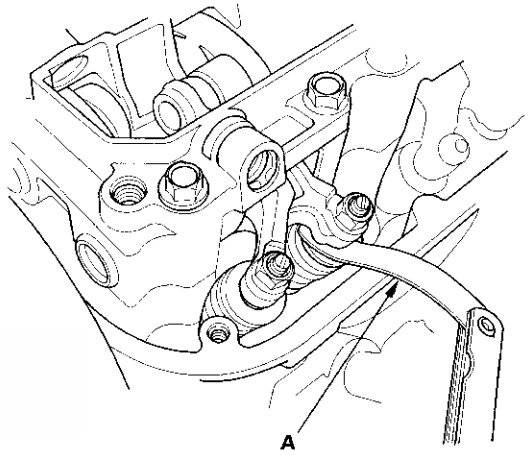


FRONT

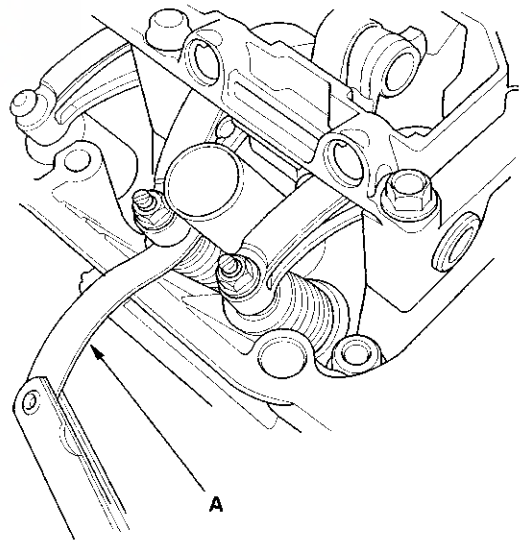


4. Insert the feeler gauge (A) between the adjusting screw and the end of the valve stem on the No. 1 cylinder, and slide it back and forth; you should feel a slight amount of drag.

INTAKE

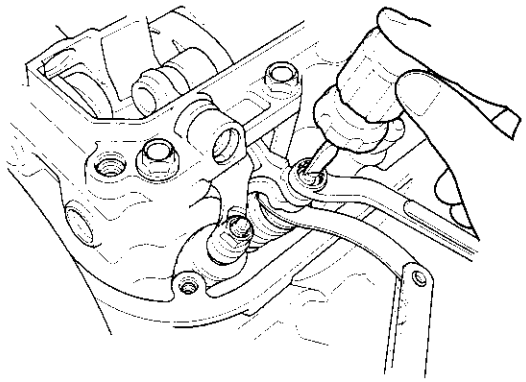


EXHAUST

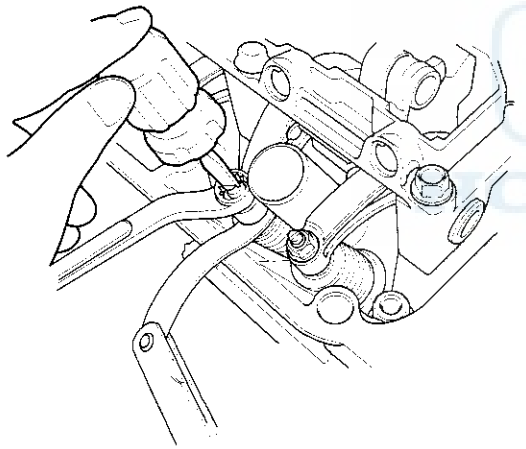


5. If you feel too much or too little drag, loosen the locknut, and turn the adjusting screw until the drag on the feeler gauge is correct.

INTAKE



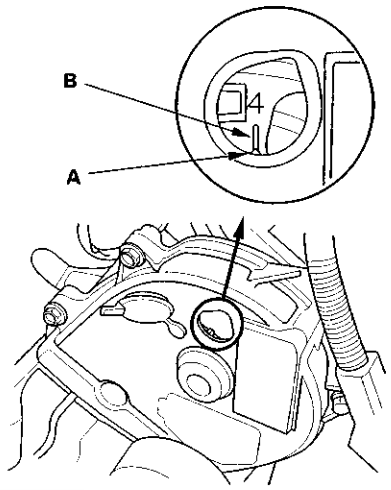
EXHAUST



6. While holding the adjusting screw with the screw driver, tighten the locknut, then recheck the clearance. Repeat the adjustment, if necessary.

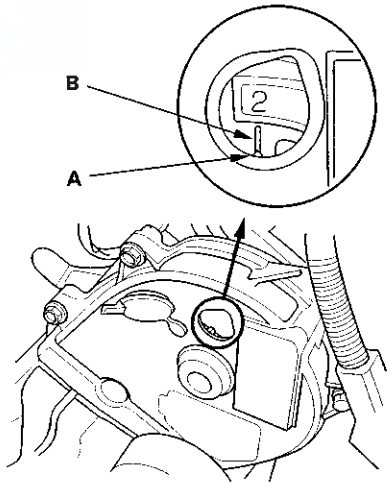
Specified Torque
Intake: 20 N·m (2.0 kgf·m, 14 lbf·ft)
Apply new engine oil to the nut threads.
Exhaust: 14 N·m (1.4 kgf·m, 10 lbf·ft)
Apply new engine oil to the nut threads.

7. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 4 piston TDC mark (B) on the front camshaft pulley.



8. Check and, if necessary, adjust the valve clearance on the No. 4 cylinder.

9. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 2 piston TDC mark (B) on the front camshaft pulley.

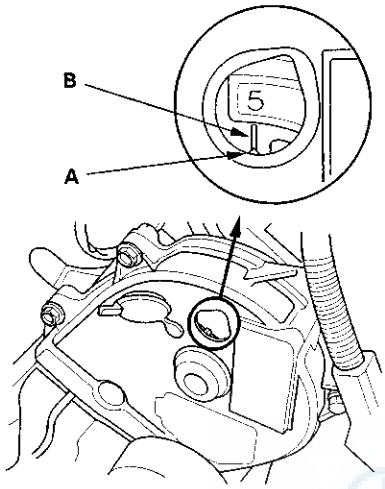


10. Check and, if necessary, adjust the valve clearance on the No. 2 cylinder.

(cont'd)

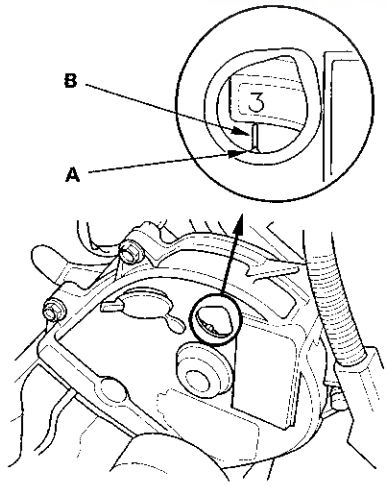
Valve Clearance Adjustment (cont'd)

11. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 5 piston TDC mark (B) on the front camshaft pulley.



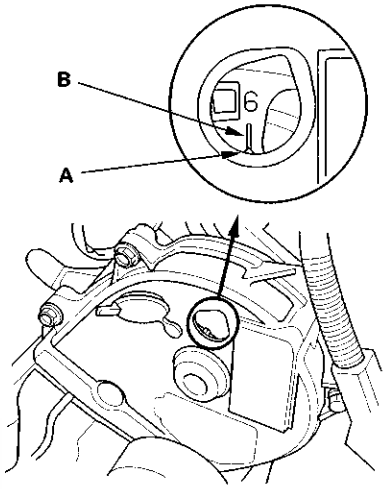
12. Check and, if necessary, adjust the valve clearance on the No. 5 cylinder.

13. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 3 piston TDC mark (B) on the front camshaft pulley.



14. Check and, if necessary, adjust the valve clearance on the No. 3 cylinder.

15. Rotate the crankshaft clockwise. Align the pointer (A) on the front upper cover with the No. 6 piston TDC mark (B) on the front camshaft pulley.



16. Check and, if necessary, adjust the valve clearance on the No. 6 cylinder.

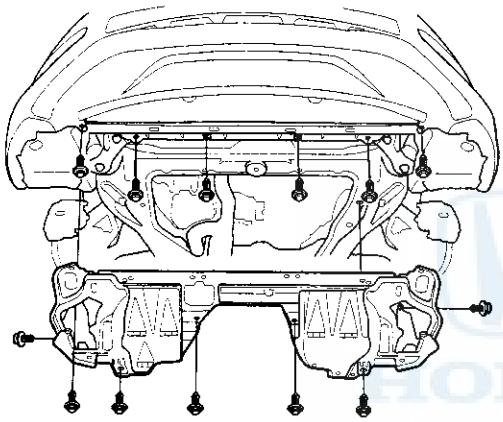
17. Install the cylinder head covers (see page 6-95).

Crankshaft Pulley Removal and Installation

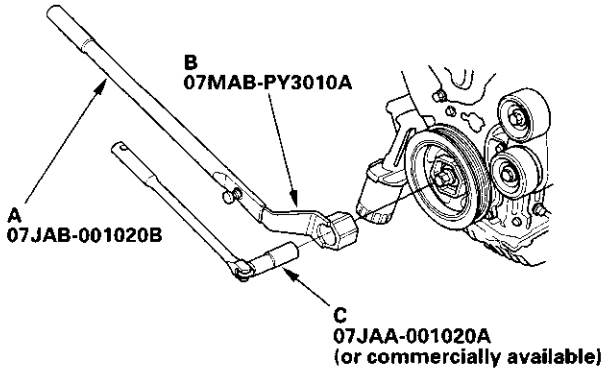
Special Tools Required
- Holder handle 07JAB-001020B
- Holder attachment, 50 mm, offset 07MAB-PY3010A
- Socket, 19 mm 07JAA-001020A, or a commercially available 19 mm socket

Removal

1. Raise the vehicle on the lift.
2. Remove the right front wheel.
3. Remove the splash shield.



4. Remove the drive belt (see page 4-40).
5. Hold the pulley with the holder handle (A) and the holder attachment (B).

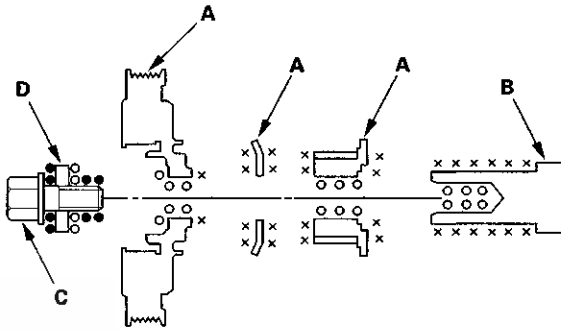


6. Remove the bolt with a heavy duty 19 mm socket (C) and a breaker bar, then remove the crankshaft pulley.

Installation

1. Remove any oil and clean the pulleys (A), the crankshaft (B), the bolt (C), and the washer (D). Lubricate with new engine oil as shown.

×: Remove any oil
○: Clean
●: Lubricate with new engine oil



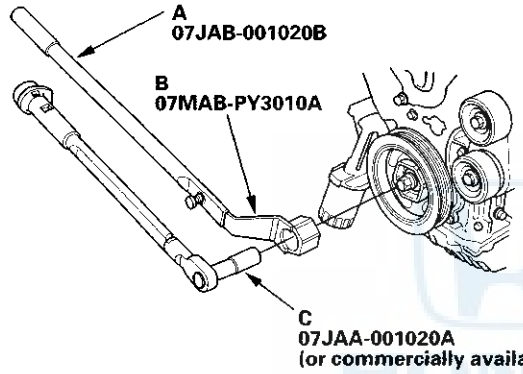
(cont'd)

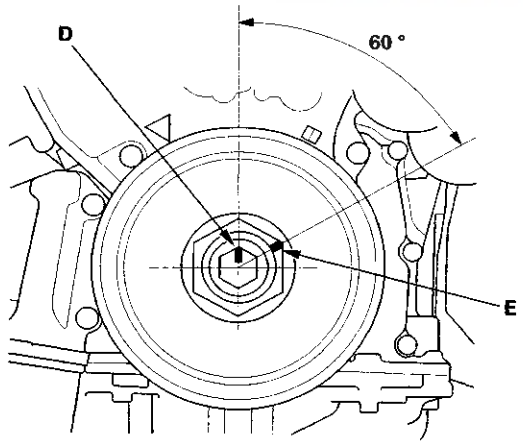
Crankshaft Pulley Removal and Installation (cont'd)

2. Install the crankshaft pulley, and tighten the bolt. Do not use an impact wrench.

   -1 Hold the pulley with the holder handle (A) and the holder attachment (B). Tighten the bolt to 64 N·m (6.5 kgf·m, 47 lbf·ft) with a torque wrench and a 19 mm socket (C).

   -2 Mark the bolt head (D) and the crankshaft pulley (E) as shown, then tighten the bolt an additional 60 ° (The mark on the bolt head lines up with the mark on the crankshaft pulley).

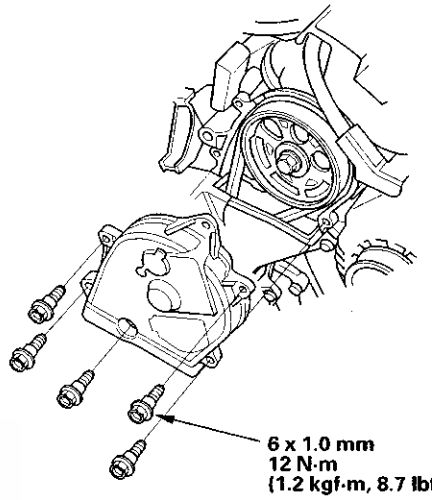




3. Install the drive belt (see page 4-40).
4. Install the splash shield.
5. Install the right front wheel.

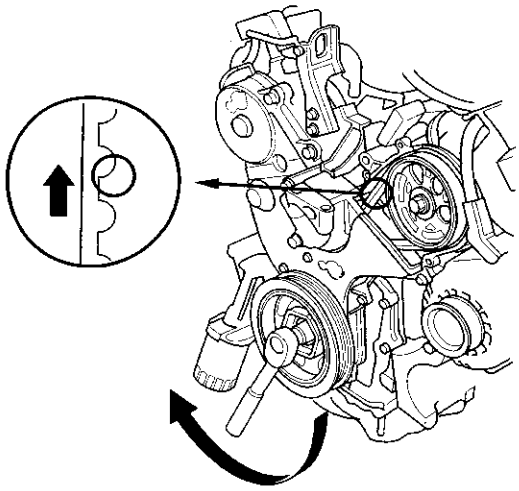
Timing Belt Inspection

1. Remove the drive belt (see page 4-40).
2. Remove the front upper cover.



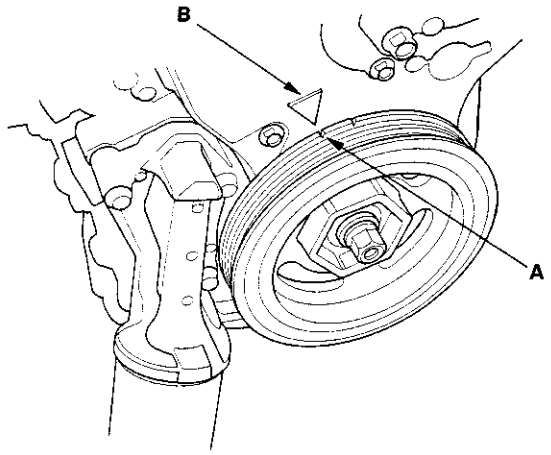
3. Inspect the timing belt for cracks and oil or coolant contamination. Replace the belt if it is cracked, or contaminated with oil or coolant. Wipe off any oil or solvent that gets on the belt pulleys.

   NOTE: If there is any leakage, repair them before replacing the timing belt.



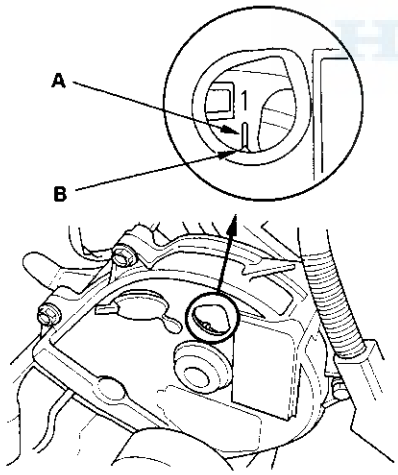
Timing Belt Removal

1. Turn the crankshaft so its white mark (A) lines up with the pointer (B).



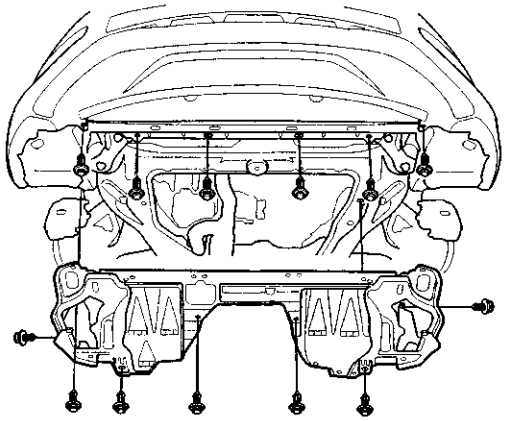
2. Check that the No. 1 piston top dead center (TDC) mark (A) on the front camshaft pulley and the pointer (B) on the front upper cover are aligned.

   NOTE: If the marks are not aligned, rotate the crankshaft 360 degrees, and recheck the camshaft pulley mark.



3. Raise the vehicle on the lift, then remove the right front wheel.

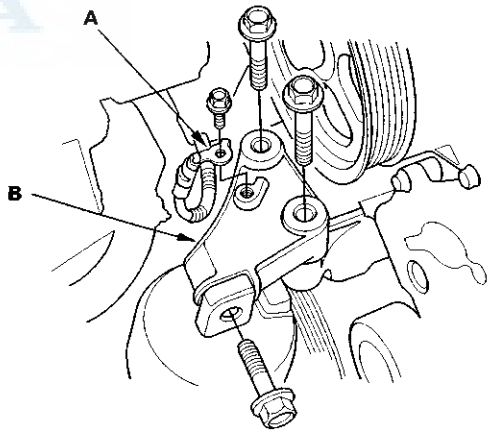
4. Remove the splash shield.



5. Remove the drive belt auto-tensioner (see page 4-43).

6. Support the engine with a jack and a wood block under the oil pan.

7. Remove the ground cable (A), then remove the upper half of the side engine mount bracket (B).

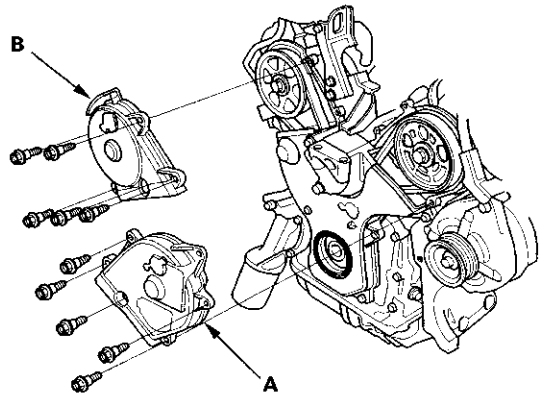


8. Remove the crankshaft pulley (see page 6-79).

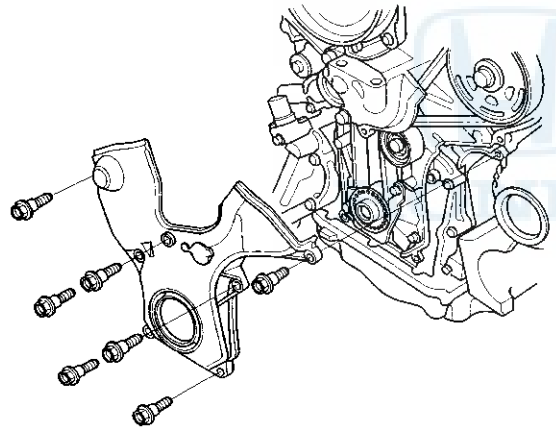
(cont'd)

Timing Belt Removal (cont'd)

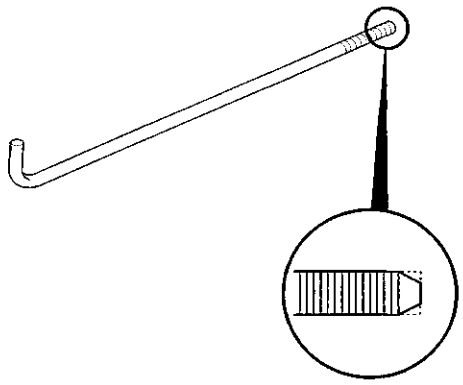
9. Remove the front upper cover (A) and the rear upper cover (B).



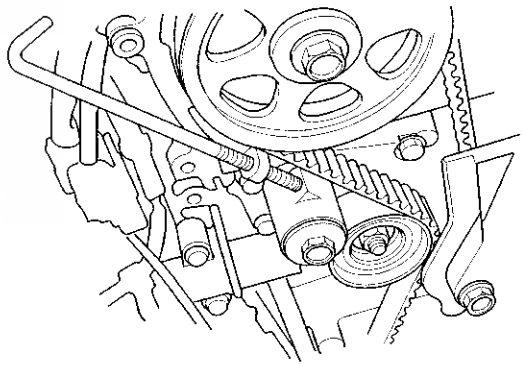
10. Remove the lower cover.



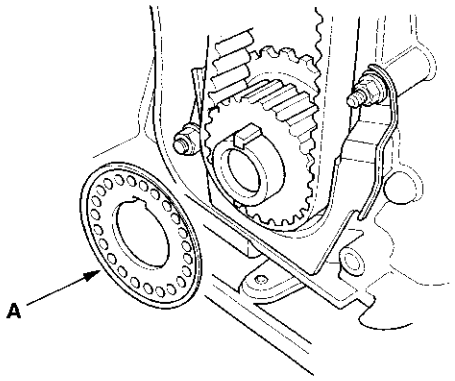
11. Remove one of the battery clamp bolts from the battery tray, and grind the end of it as shown.



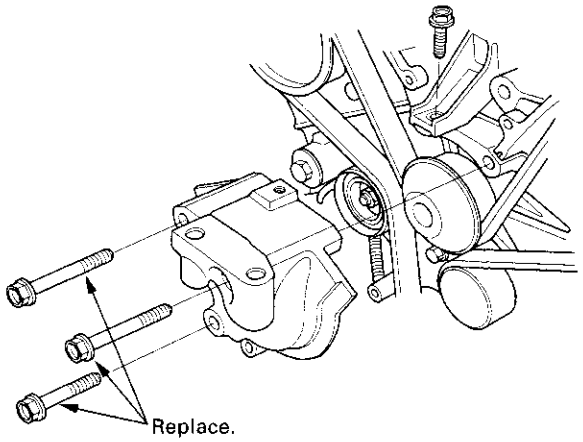
12. Thread the battery clamp bolt in as shown to hold the timing belt adjuster in its current position. Tighten it by hand, do not use a wrench.



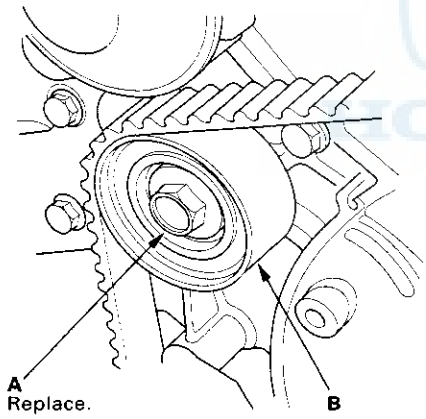
13. Remove the timing belt guide plate (A).



14. Remove the lower half of the side engine mount bracket.



15. Remove the idler pulley bolt (A) and the idler pulley (B), then remove the timing belt. Discard the idler pulley bolt.

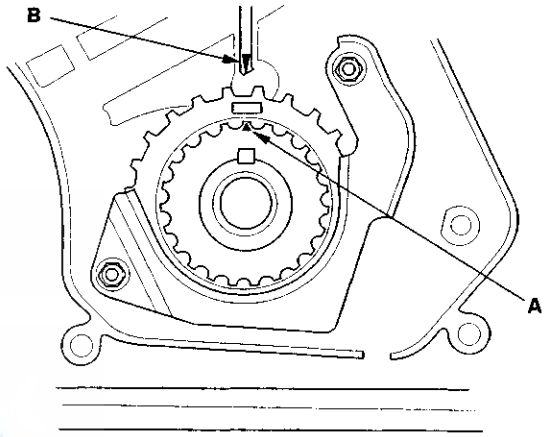


Timing Belt Installation

NOTE: The following procedure is for installing a used timing belt. If you are installing a new belt, refer to the timing belt replacement procedure (see page 6-87).

1. Clean the timing belt pulleys, the timing belt guide plate, and the upper and lower covers.

2. Set the timing belt drive pulley to top dead center (TDC) by aligning the TDC mark (A) on the tooth of the timing belt drive pulley with the pointer (B) on the oil pump.

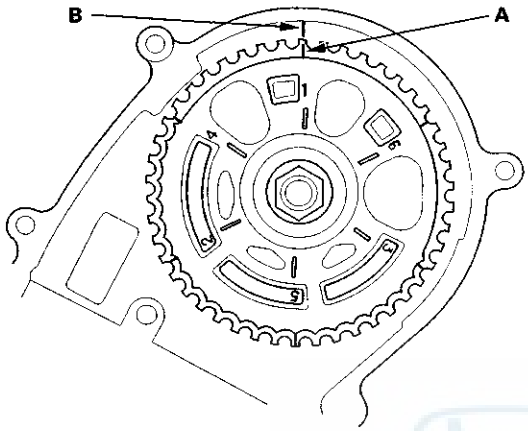


(cont'd)

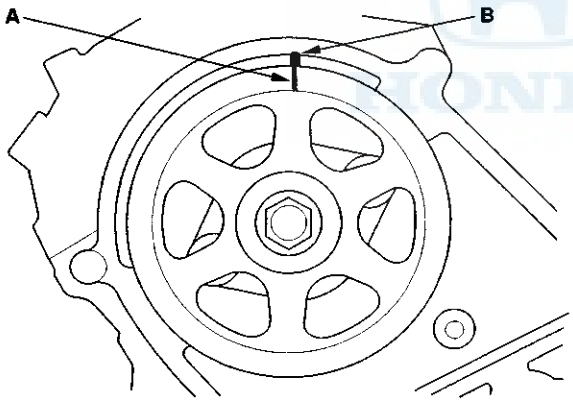
Timing Belt Installation (cont'd)

3. Set the camshaft pulleys to TDC by aligning the TDC marks (A) on the camshaft pulleys with the pointers (B) on the back covers.

FRONT



REAR

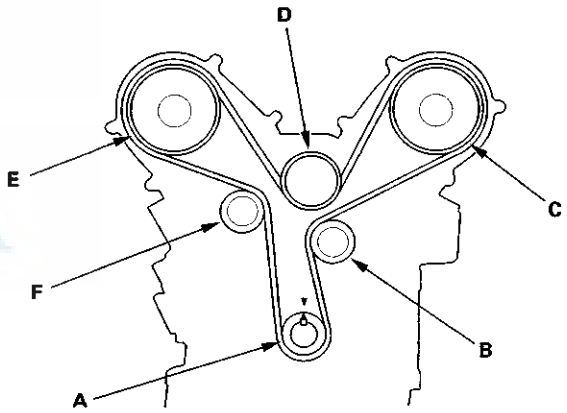


4. Loosely install the idler pulley with a new idler pulley bolt so the pulley can move but does not come off.

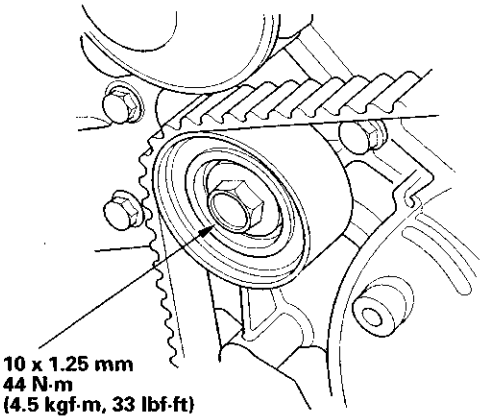
5. If the auto-tensioner has extended and the timing belt cannot be installed, do the timing belt replacement procedure (see page 6-87).

6. Install the timing belt in a counterclockwise sequence starting with the drive pulley. Take care not to damage the timing belt during installation.

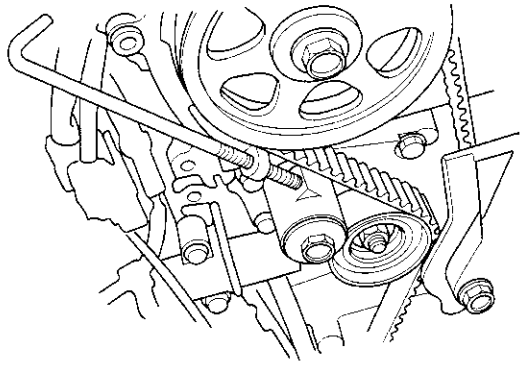
   -1 Drive pulley (A)
   -2 Idler pulley (B)
   -3 Front camshaft pulley (C)
   -4 Water pump pulley (D)
   -5 Rear camshaft pulley (E)
   -6 Adjusting pulley (F)



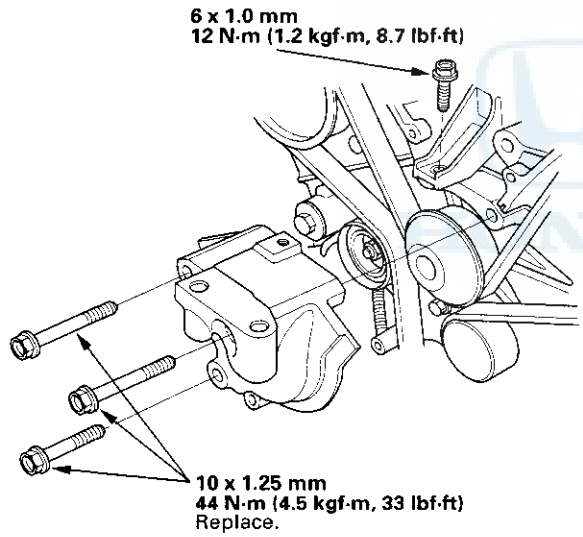
7. Tighten the idler pulley bolt.



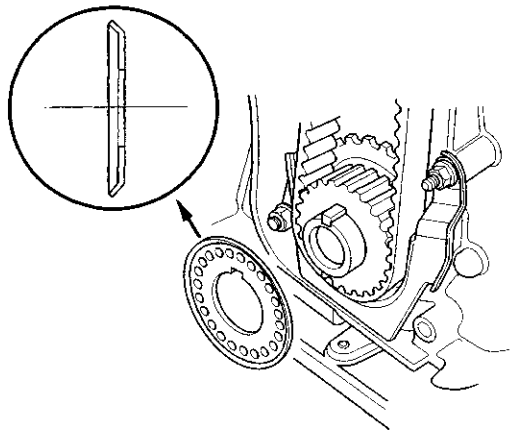
8. Remove the battery clamp bolt from the back cover.



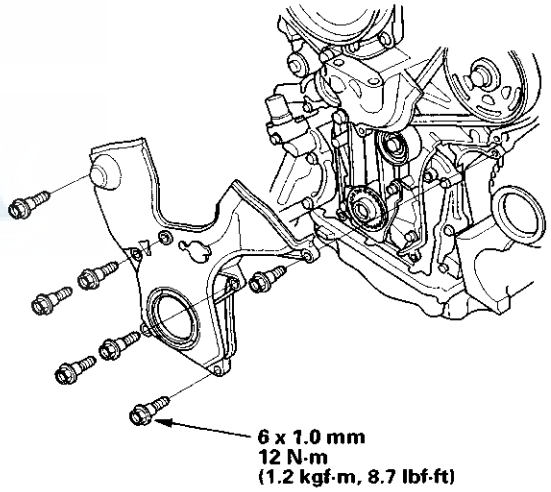
9. Install the lower half of the side engine mount bracket.



10. Install the timing belt guide plate as shown.



11. Install the lower cover.



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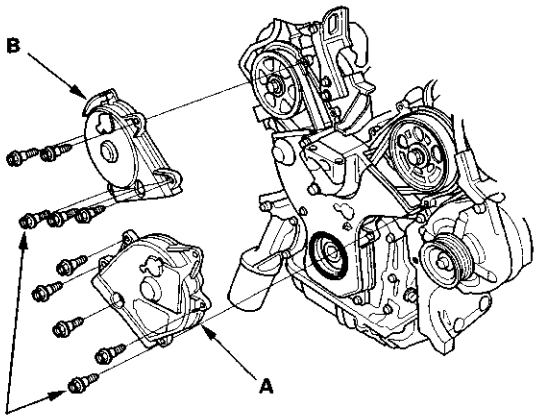
Timing Belt Installation (cont'd)

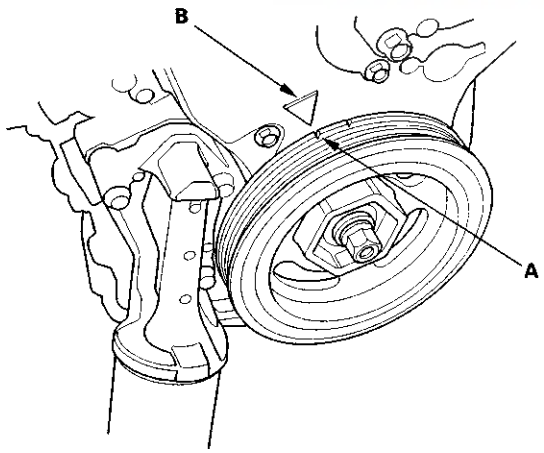
12. Install the front upper cover (A) and the rear upper cover (B).



13. Install the crankshaft pulley (see page 6-79).

14. Rotate the crankshaft pulley about six turns clockwise so the timing belt positions itself on the pulleys.

15. Turn the crankshaft pulley so its white mark (A) lines up with the pointer (B).

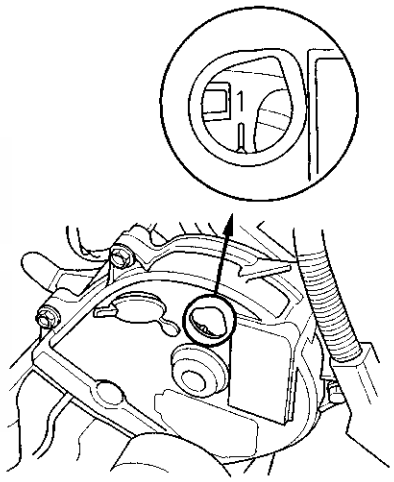


16. Check the camshaft pulley marks.

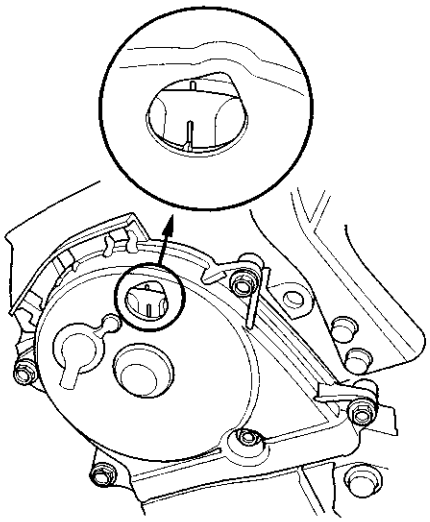
NOTE: If the marks are not aligned, rotate the crankshaft 360 degrees, and recheck the camshaft pulley mark.

- If the camshaft pulley marks are at TDC, go to step 17.
- If the camshaft pulley marks are not at TDC, remove the timing belt and repeat steps 2 through 16.

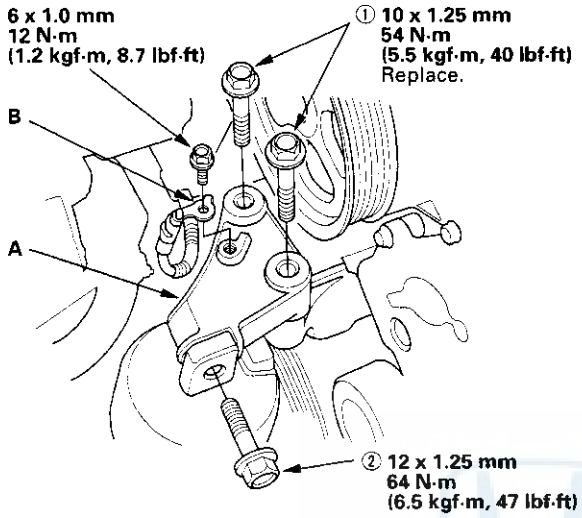
FRONT



REAR



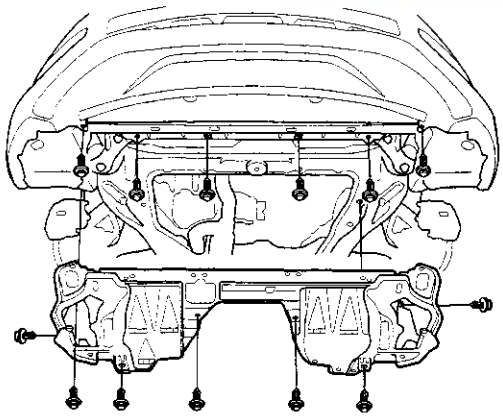
17. Install the upper half of the side engine mount bracket (A), then tighten the mounting bolts in the numbered sequence shown.



18. Install the ground cable (B).

19. Install the drive belt auto-tensioner (see page 4-43).

20. Install the splash shield.



21. Install the right front wheel.

22. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

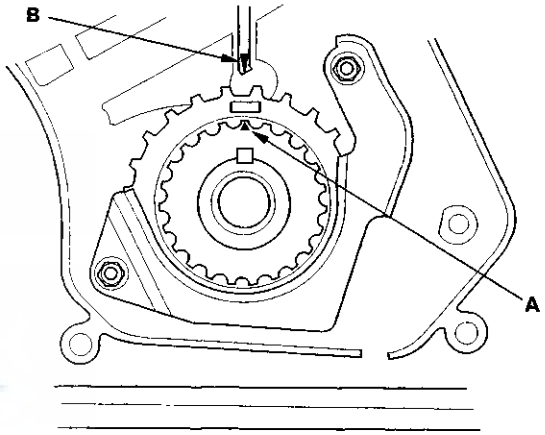
Timing Belt Replacement

NOTE: The following procedure is for installing a new timing belt. If you are installing a used belt, refer to the timing belt installation procedure (see page 6-83).

1. Remove the timing belt (see page 6-81).

2. Clean the timing belt pulleys, the timing belt guide plate, and the upper and lower covers.

3. Set the timing belt drive pulley to top dead center (TDC) by aligning the TDC mark (A) on the tooth of the timing belt drive pulley with the pointer (B) on the oil pump.

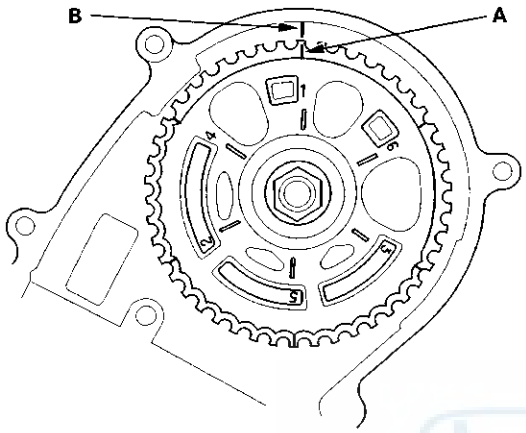


(cont'd)

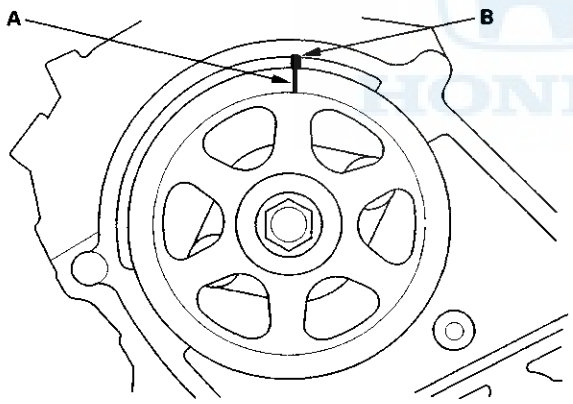
Timing Belt Replacement (cont'd)

4. Set the camshaft pulleys to TDC by aligning the TDC marks (A) on the camshaft pulleys with the pointers (B) on the back covers.

FRONT

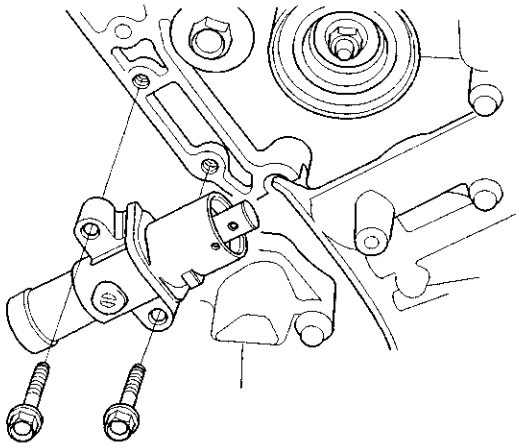


REAR

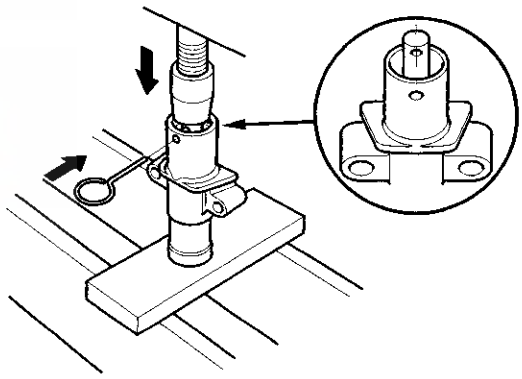


5. Remove the battery clamp bolt from the back cover.

6. Remove the auto-tensioner.



7. Align the holes on the rod and the housing of the auto-tensioner.

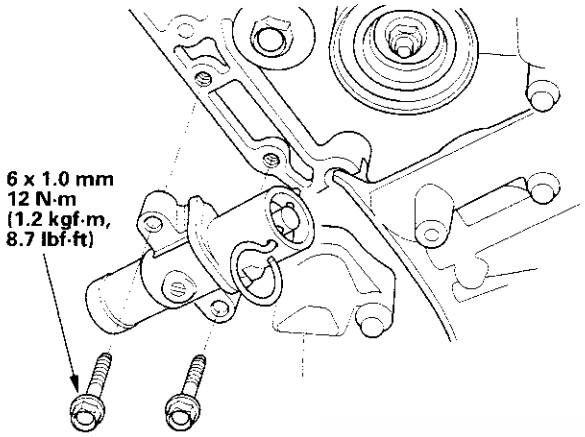


8. Use a hydraulic press to slowly compress the auto-tensioner. Insert a 2.0 mm (0.08 in.) pin through the housing and the rod.

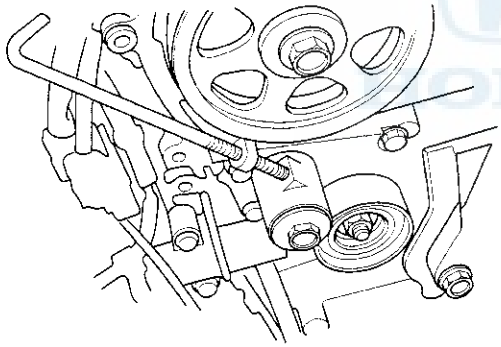
   NOTE: The compression pressure should not exceed 9,800 N (1,000 kgf, 2,200 lbf).

9. Install the auto-tensioner.

   NOTE: Make sure the pin stays in place.



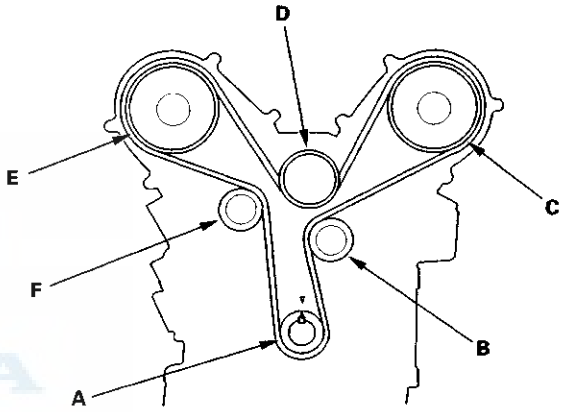
10. Thread the battery clamp bolt in as shown to hold the timing belt adjuster. Tighten it by hand, do not use a wrench.



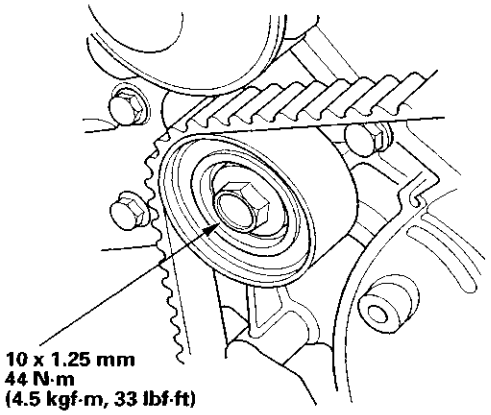
11. Loosely install the idler pulley with a new idler pulley bolt so the pulley can move but does not come off.

12. Install the timing belt in a counterclockwise sequence starting with the drive pulley.

    -1 Drive pulley (A)
    -2 Idler pulley (B)
    -3 Front camshaft pulley (C)
    -4 Water pump pulley (D)
    -5 Rear camshaft pulley (E)
    -6 Adjusting pulley (F)



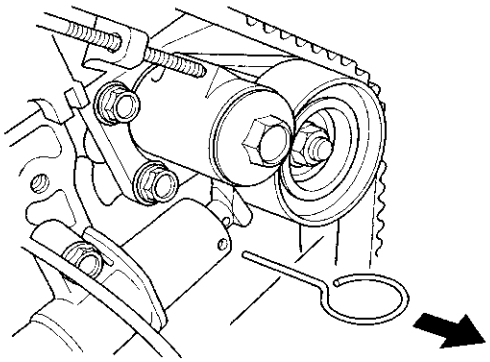
13. Tighten the idler pulley bolt.



(cont'd)

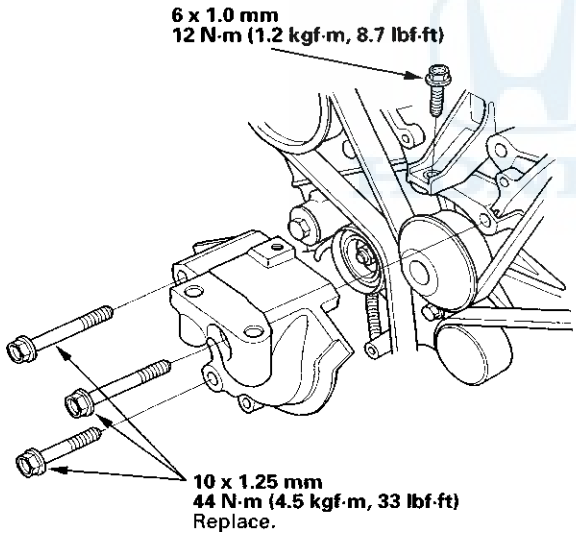
Timing Belt Replacement (cont'd)

14. Remove the pin from the auto-tensioner.

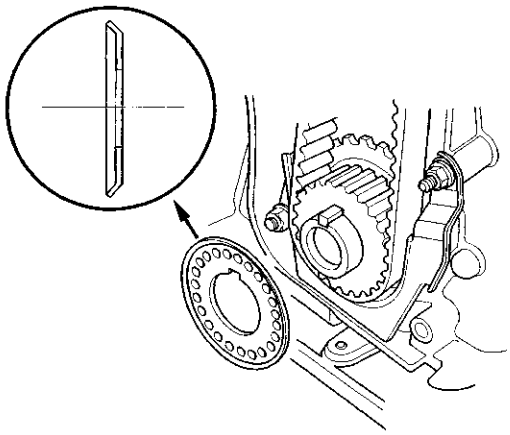


15. Remove the battery clamp bolt from the back cover.

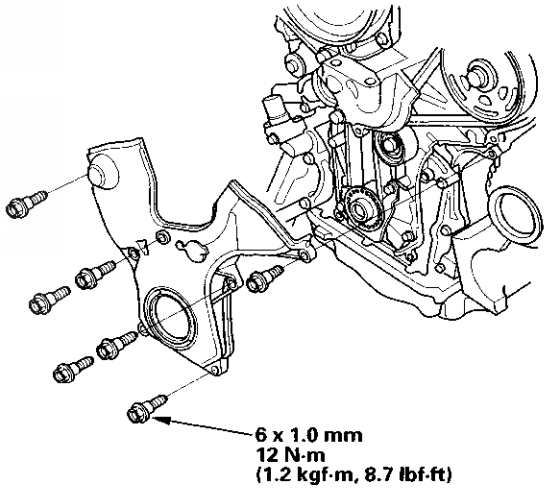
16. Install the lower half of the side engine mount bracket.



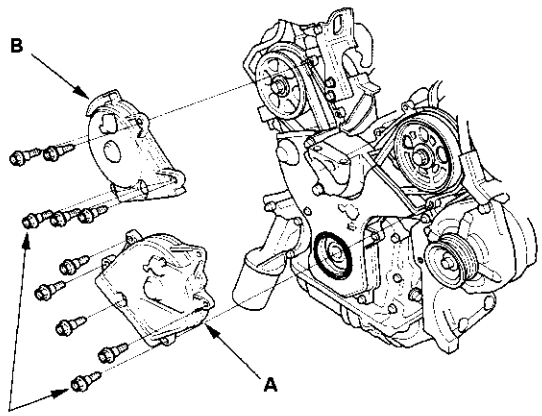
17. Install the timing belt guide plate as shown.



18. Install the lower cover.



19. Install the front upper cover (A) and the rear upper cover (B).

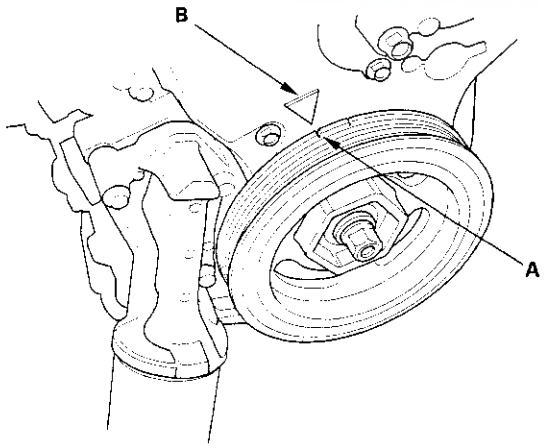


6 x 1.0 mm
12 N·m (1.2 kgf·m, 8.7 lbf·ft)

20. Install the crankshaft pulley (see page 6-79).

21. Rotate the crankshaft pulley about six turns clockwise so the timing belt positions itself on the pulleys.

22. Turn the crankshaft pulley so its white mark (A) lines up with the pointer (B).

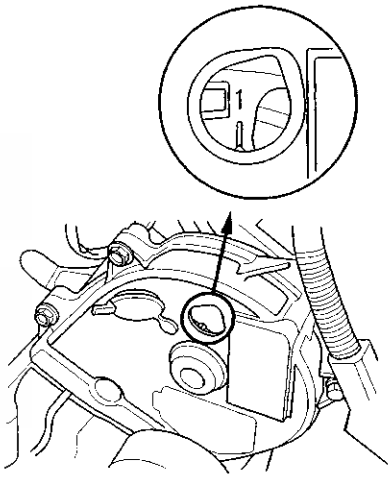


23. Check the camshaft pulley marks.

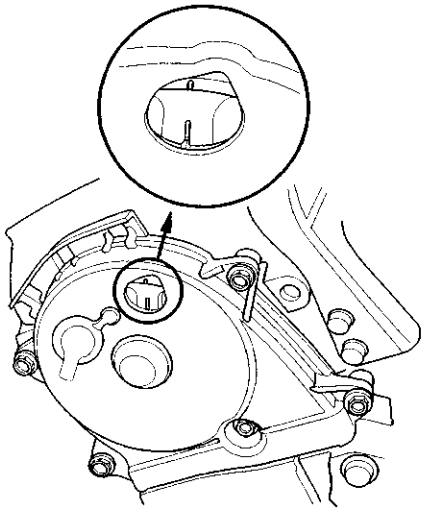
NOTE: If the marks are not aligned, rotate the crankshaft 360 degrees, and recheck the camshaft pulley mark.

- If the camshaft pulley marks are at TDC, go to step 24.
- If the camshaft pulley marks are not at TDC, remove the timing belt and repeat steps 3 through 23.

FRONT



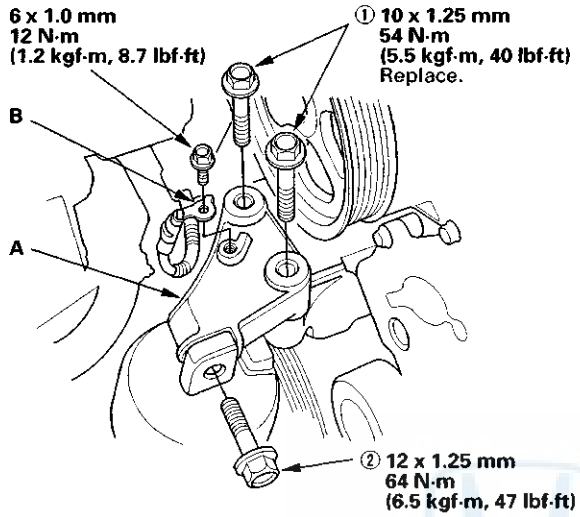
REAR



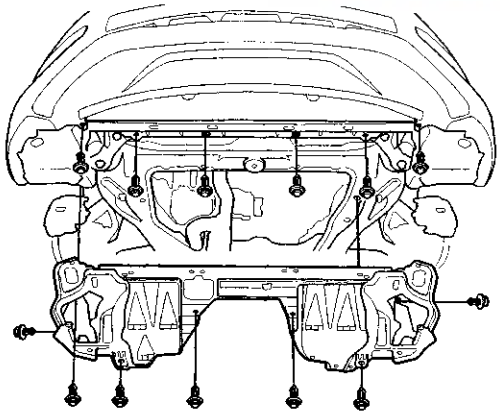
(cont'd)

Timing Belt Replacement (cont'd)

24. Install the upper half of the side engine mount bracket (A), then tighten the mounting bolts in the numbered sequence shown.



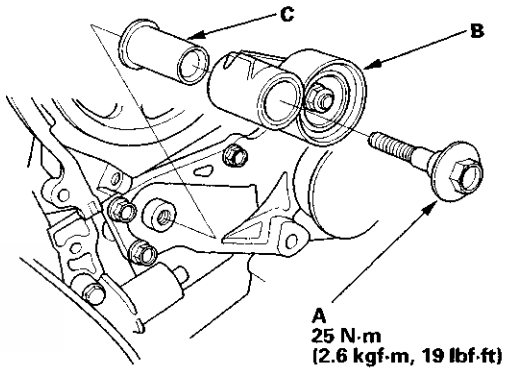
25. Install the ground cable (B).
26. Install the drive belt auto-tensioner (see page 4-43).
27. Install the splash shield.



28. Install the right front wheel.
29. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

Timing Belt Adjuster Replacement

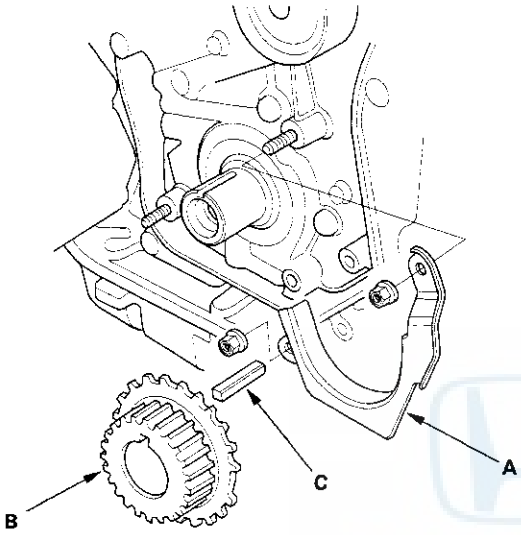
1. Remove the timing belt (see page 6-81).
2. Remove the battery clamp bolt from the back cover.
3. Remove the auto-tensioner (see step 6 on page 6-88).
4. Remove the bolt (A), then remove the timing belt adjuster (B) and the collar (C).



5. Install the timing belt adjuster in the reverse order of removal.
6. Install the timing belt (see page 6-83).

Timing Belt Drive Pulley Replacement

1. Remove the timing belt (see page 6-81).
2. Remove the timing belt stopper (A), then remove the timing belt drive pulley (B) and the key (C).

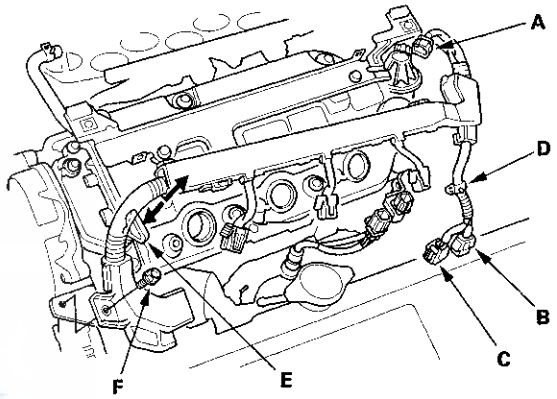


3. Inspect the timing belt drive pulley and the key for damage. If it is cracked or damaged, replace the timing belt drive pulley.
4. Install the new timing belt drive pulley and the key, then install the timing belt stopper.
5. Install the timing belt (see page 6-83).
6. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

Cylinder Head Cover Removal

Front

1. Remove the intake manifold (see page 9-4).
2. Remove the three ignition coils from the front cylinder head (see page 4-29).
3. Disconnect the exhaust recirculation (EGR) valve connector (A), the front secondary heated oxygen sensor 2 (secondary HO2S) connector (B), the front air fuel ratio (A/F) sensor 2 connector (C), and the harness clamp (D) securing the harness holder, and remove the dipstick (E).

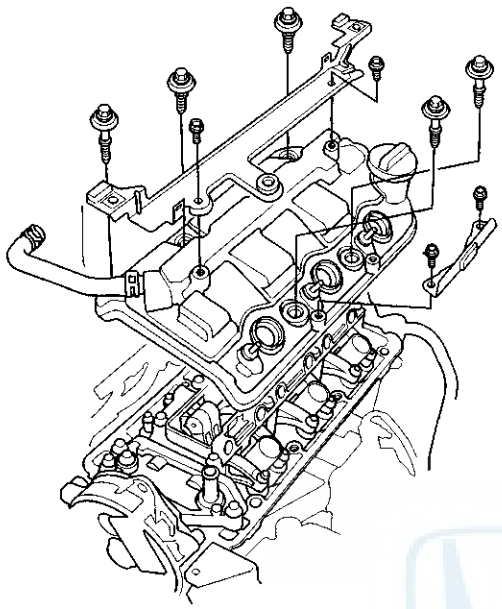


4. Remove the bolt (F) securing the harness holder.

(cont'd)

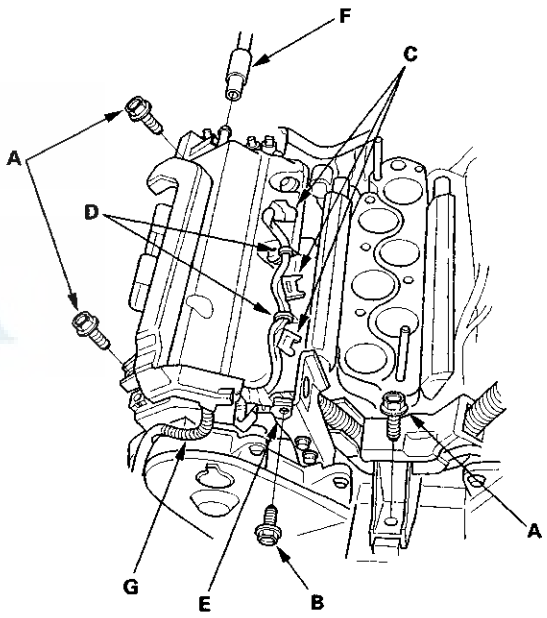
Cylinder Head Cover Removal (cont'd)

5. Remove the front cylinder head cover.



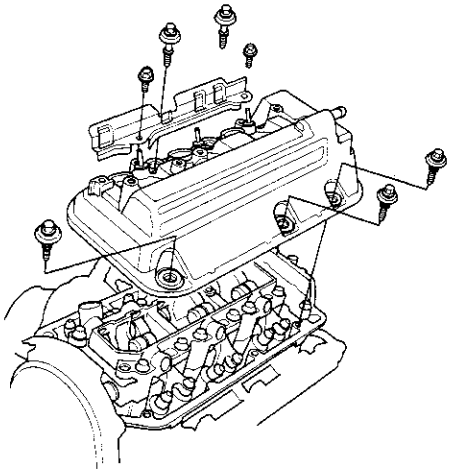
Rear

1. Remove the intake manifold (see page 9-4).
2. Remove the three ignition coils from the rear cylinder head (see page 4-29).
3. Remove the drive belt (see page 4-40).
4. Remove the power steering (P/S) pump and the P/S hose bracket (see step 5 on page 6-99) with its hoses connected.
5. Remove the harness holder mounting bolts (A) and the engine ground cable bolt (B).



6. Disconnect the three injector connectors (C) and the two harness clips (D).
7. Remove the engine ground cable (E) and disconnect the breather hose (F).
8. Remove the harness (G) from the upper cover.

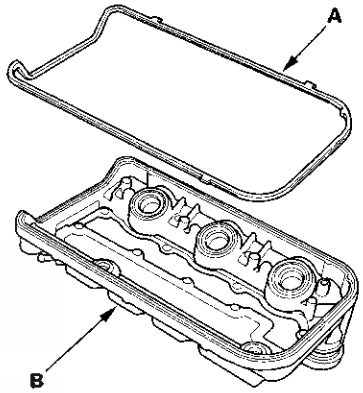
9. Remove the rear cylinder head cover.



Cylinder Head Cover Installation

Front

1. Check the spark plug seals for damage. If any seal is damaged, replace it.
2. Thoroughly clean the head cover gasket and the groove.
3. Install the head cover gasket (A) in the groove of the cylinder head cover (B). Make sure the head cover gasket is seated securely.



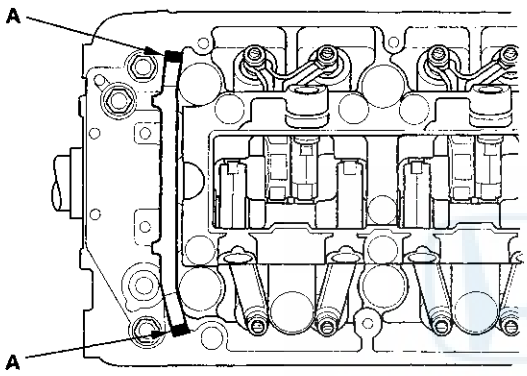
4. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.
5. Clean the head cover contacting surfaces with a shop towel.

(cont'd)

Cylinder Head Cover Installation (cont'd)

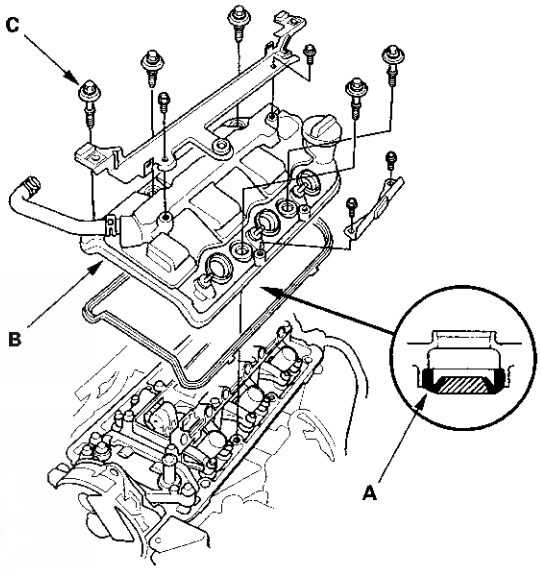
6. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating areas (A). Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



7. Set the spark plug seals (A) on the spark plug tubes, and install the front cylinder head cover (B).

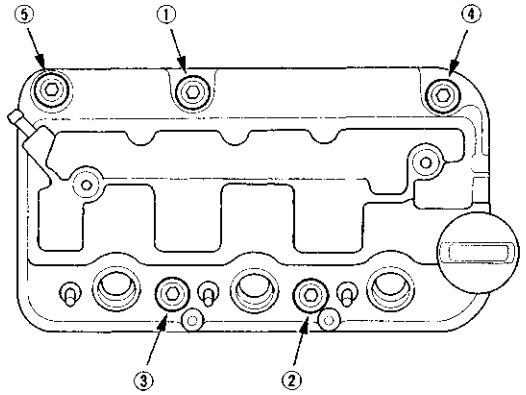
   NOTE:
   - Wait at least 30 minutes before filling the engine with oil.
   - Do not run the engine for at least 3 hours after installing the cylinder head cover.



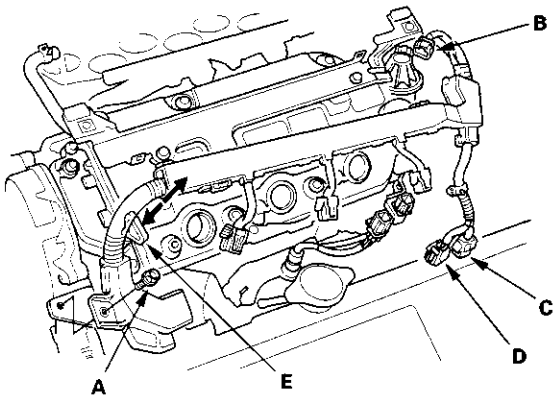
8. Inspect the spark plug seals for damage.

9. Inspect the cover washers (C). Replace any washer that is damaged or deteriorated.

10. Tighten the bolts in three steps. In the final step tighten all bolts, in sequence, 12 N·m (1.2 kgf·m, 8.7 lbf·ft).



11. Install the bolt (A) securing the harness holder.



A
6 x 1.0 mm
12 N·m (1.2 kgf·m, 8.7 lbf·ft)

12. Connect the exhaust gas recirculation (EGR) valve connector (B), the front secondary heated oxygen sensor 2 (secondary HO2S) connector (C), the front air fuel ratio (A/F) sensor 2 connector (D), and install the dipstick (E).

13. Install the three ignition coils to the front cylinder head (see page 4-29).

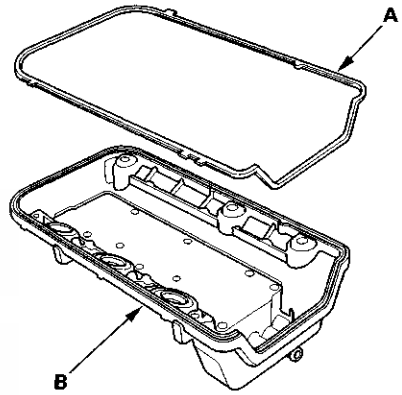
14. Install the intake manifold (see page 9-6).

Rear

1. Check the spark plug seals for damage. If any seal is damaged, replace it.

2. Thoroughly clean the head cover gasket and the groove.

3. Install the head cover gasket (A) in the groove of the cylinder head cover (B). Make sure the head cover gasket is seated securely.



4. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.

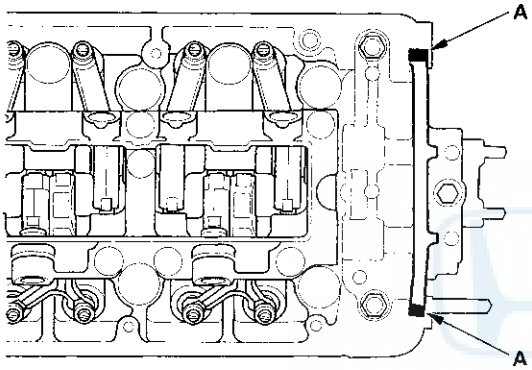
5. Clean the head cover contacting surfaces with a shop towel.

(cont'd)

Cylinder Head Cover Installation (cont'd)

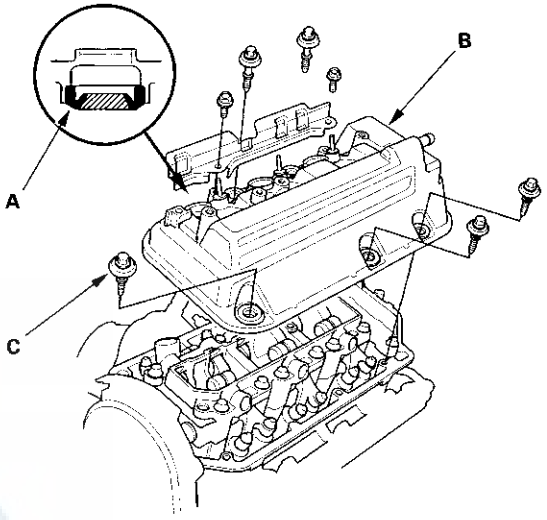
6. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating areas (A). Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



7. Set the spark plug seals (A) on the spark plug tubes, and install the rear cylinder head cover (B).

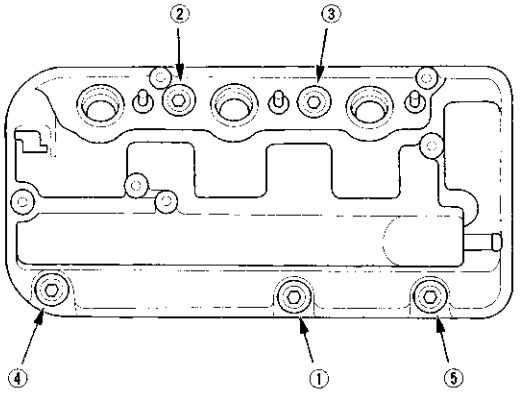
   NOTE:
   - Wait at least 30 minutes before filling the engine with oil.
   - Do not run the engine for at least 3 hours after installing the cylinder head cover.



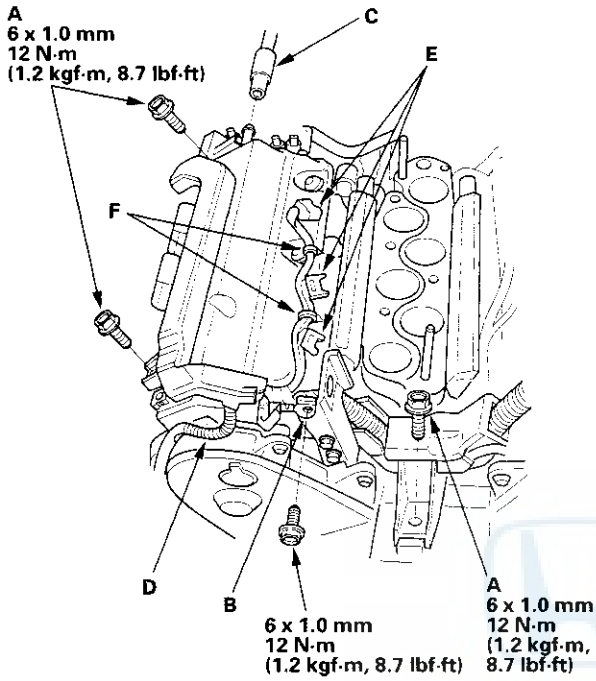
8. Inspect the spark plug seals for damage.

9. Inspect the cover washers (C). Replace any washer that is damaged or deteriorated.

10. Tighten the bolts in three steps. In the final step tighten all bolts, in sequence, 12 N·m (1.2 kgf·m, 8.7 lbf·ft).



11. Tighten the harness holder mounting bolts (A).



12. Install the engine ground cable (B) and connect the breather hose (C), then install the harness (D) to the upper cover.

13. Reconnect the three injector connectors (E) and the two harness clips (F).

14. Install the power steering (P/S) pump and the P/S hose bracket (see page 17-12).

15. Install the drive belt (see page 4-40).

16. Install the three ignition coils to the rear cylinder head (see page 4-29).

17. Install the intake manifold (see page 9-6).

Cylinder Head Removal

NOTE:
- Use fender covers to avoid damaging painted surfaces.
- To avoid damaging the wiring and terminals, unplug the wiring connectors carefully while holding the connector portion.
- Connect the Honda Diagnostic System (HDS) to the data link connector (DLC), and monitor the engine coolant temperature (ECT) sensor 1. To avoid damaging the cylinder head, wait until the ECT sensor 1 temperature drops below 100 °F (38 °C) before loosening the cylinder head bolts.
- Mark all wiring and hoses to avoid misconnection. Also, be sure that they do not contact any other wiring or hoses, or interfere with any other parts.

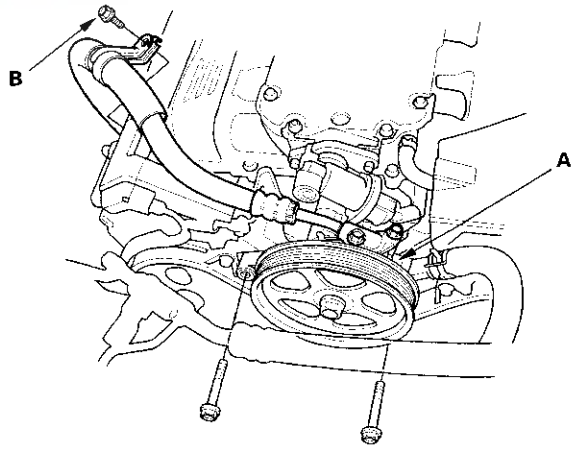
1. Relieve the fuel pressure (see page 11-400).

2. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

3. Drain the engine coolant (see page 10-6).

4. Remove the drive belt (see page 4-40).

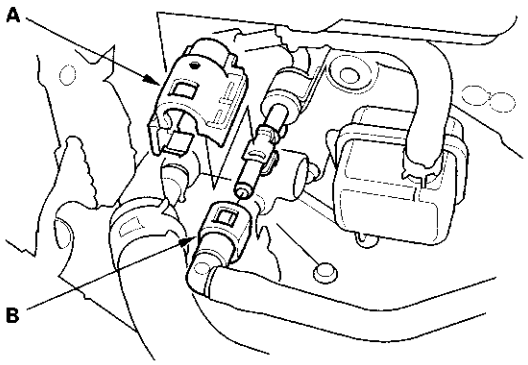
5. Remove the power steering (P/S) pump (A) and the bolt (B) securing the P/S hose bracket.



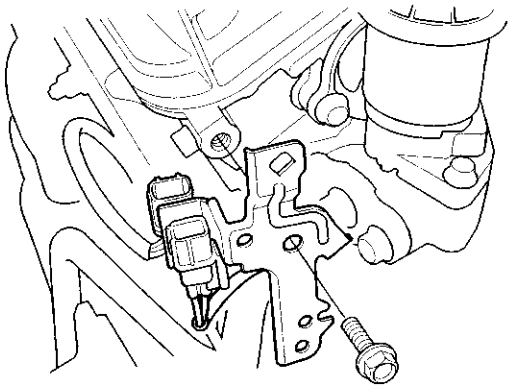
(cont'd)

Cylinder Head Removal (cont'd)

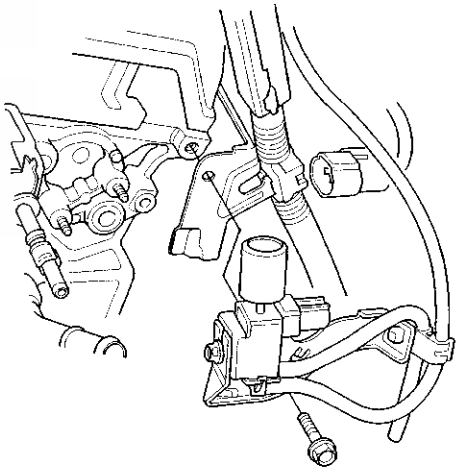
6. Remove the alternator (see page 4-45).
7. Remove the intake manifold (see page 9-4).
8. Remove the six ignition coils (see page 4-29).
9. Remove the timing belt (see page 6-81).
10. Disconnect the following engine wire harness connectors and wire harness clamps from the cylinder head:
    - Six injector connectors
    - Knock sensor connector
    - Engine coolant temperature (ECT) sensor 1 connector
    - Engine mount control solenoid connector
    - Camshaft position (CMP) sensor connector
    - Rocker arm oil control solenoid connector
    - Rocker arm oil pressure switch connector
    - Two air fuel ratio (A/F) sensor connectors
    - Two secondary heated oxygen sensor (secondary HO2S) connectors
11. Remove the front warm up three way catalytic converter (front WU-TWC) (see page 11-445) and the rear warm up three way catalytic converter (rear WU-TWC) (see page 11-446).
12. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (B) (see page 11-408).



13. Remove the connector bracket from the front cylinder head.



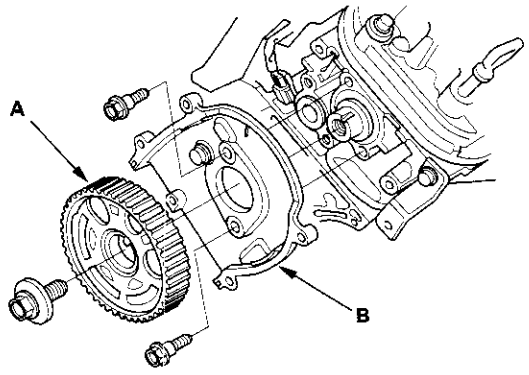
14. Remove the harness clamp bracket from the rear cylinder head.



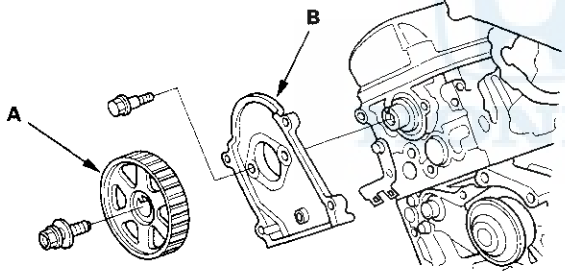
15. Remove the injector bases (see page 9-8).
16. Remove the water passage (see page 10-10).

17. Remove the camshaft pulleys (A) and the back covers (B).

FRONT



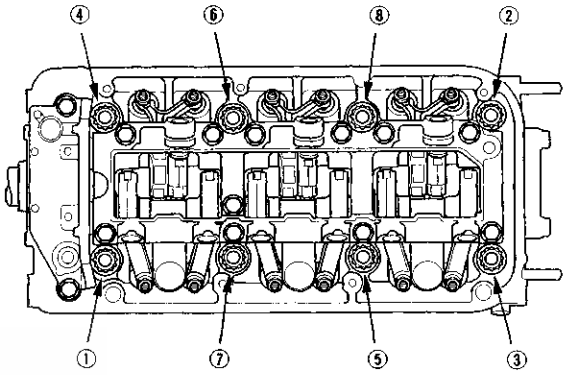
REAR



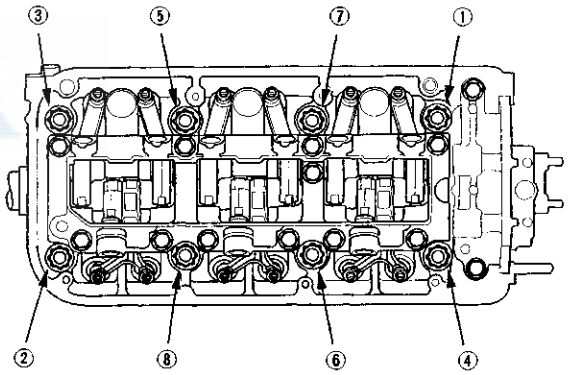
18. Remove the cylinder head covers (see page 6-93).

19. Remove the cylinder head bolts. To prevent warpage, loosen the bolts in sequence 1/3 turn at a time; repeat the sequence until all bolts are loosened.

FRONT



REAR

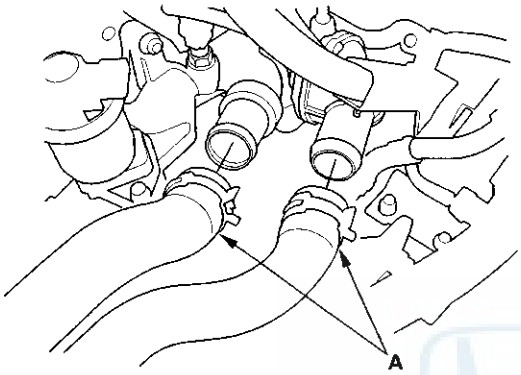


20. Remove the cylinder heads.

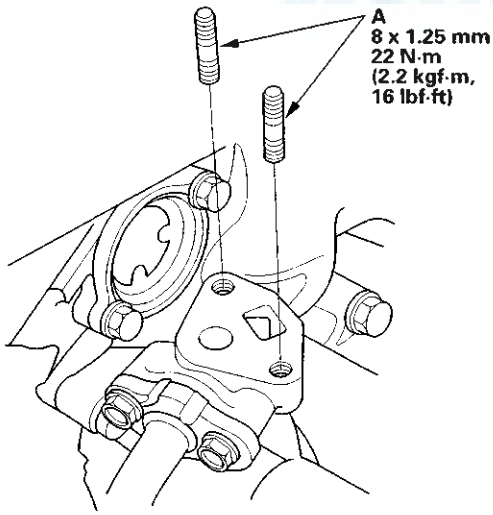
Camshaft Replacement

Front

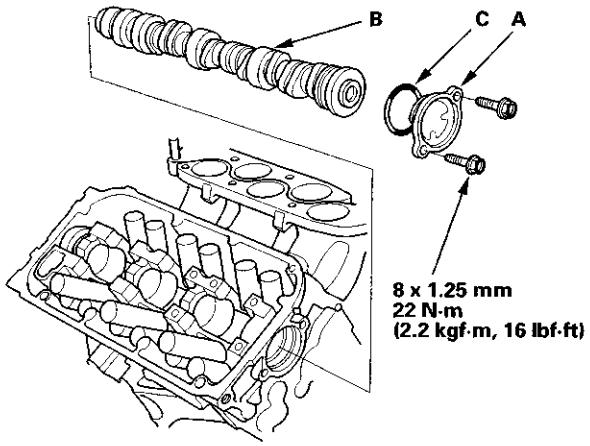
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Drain the engine coolant (see page 10-6).
3. Disconnect the radiator hoses (A).



4. Remove the exhaust gas recirculation (EGR) valve (see page 11-461).
5. Remove the EGR valve stud bolts (A).



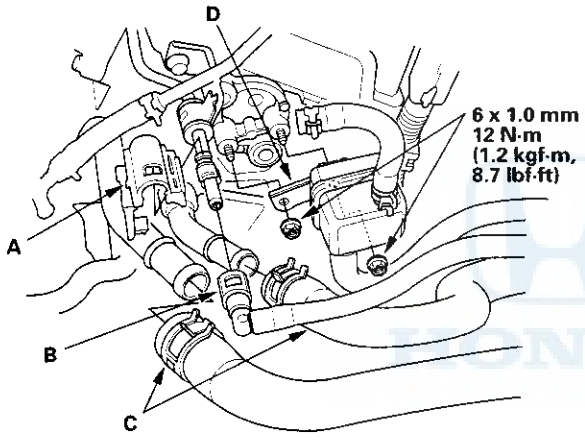
6. Remove the timing belt (see page 6-81).
7. Remove the rocker arm assembly (see page 6-105).
8. Remove the front camshaft pulley.
9. Remove the thrust cover (A), then remove the front camshaft (B).



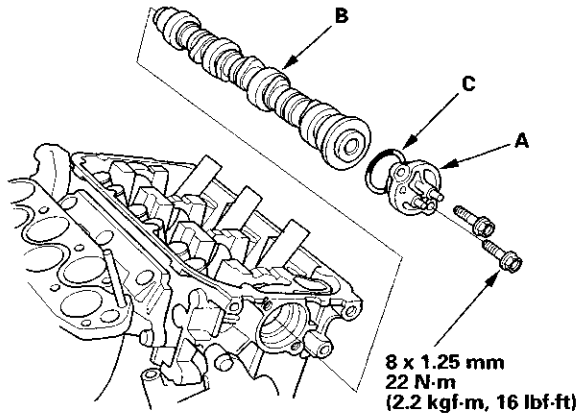
10. Install the front camshaft in the reverse order of removal. Always use a new O-ring (C). Apply new engine oil to the journals and the cam lobes.
11. Apply new engine oil to the threads of the camshaft pulley mounting bolt, then install the front camshaft pulley (see step 13 on page 6-121).
12. Install the rocker arm assembly, then tighten the mounting bolts (see step 11 on page 6-121).
13. Install the timing belt (see page 6-83).
14. Adjust the valve clearance (see page 6-75).
15. Install the EGR valve stud bolts, then install the EGR valve (see page 11-461).
16. Connect the radiator hoses.
17. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
18. Fill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).
19. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

Rear

1. Relieve the fuel pressure (see page 11-400).
2. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
3. Remove the under-hood fuse/relay box.
4. Drain the engine coolant (see page 10-6).
5. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (B) (see page 11-408).



6. Disconnect the heater hoses (C) and remove the bracket (D).
7. Remove the timing belt (see page 6-81).
8. Remove the rocker arm assembly (see page 6-105).
9. Remove the rear camshaft pulley.
10. Remove the thrust cover (A), then remove the rear camshaft (B).



11. Install the rear camshaft in the reverse order of removal. Always use a new O-ring (C). Apply new engine oil to the journals and cam lobes.
12. Apply new engine oil to the threads of the camshaft pulley mounting bolt, then install the rear camshaft pulley (see step 13 on page 6-123).
13. Install the rocker arm assembly, then tighten the mounting bolts (see step 11 on page 6-123).
14. Install the timing belt (see page 6-83).
15. Adjust the valve clearance (see page 6-75).
16. Connect the heater hoses and install the bracket.
17. Connect the fuel feed hose (see page 11-411), then install the quick-connect fitting cover.

(cont'd)

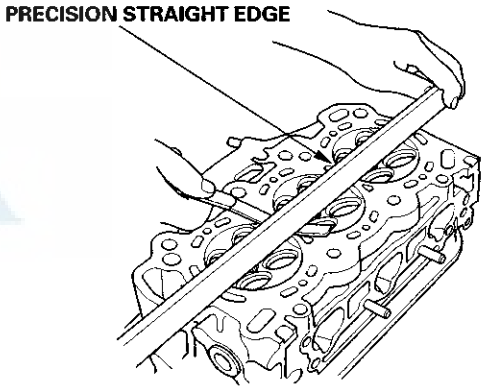
Camshaft Replacement (cont'd)

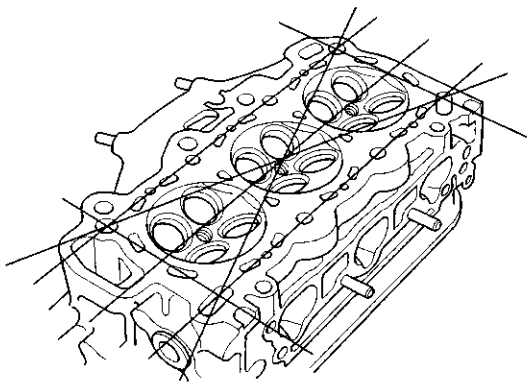
18. Install the under-hood fuse/relay box.
19. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
20. Inspect for fuel leaks. Turn the ignition switch to ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation three times, then check for fuel leakage at any point in the fuel line.
21. Fill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).
22. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).

Cylinder Head Inspection for Warpage

1. Remove the cylinder head (see page 6-99).
2. Inspect the camshaft (see page 6-110).
3. Check the cylinder head for warpage. Measure along the edges, and three ways across the center.
   - If warpage is less than 0.05 mm (0.002 in.), cylinder head resurfacing is not required.
   - If warpage is between 0.05 mm (0.002 in.) and 0.2 mm (0.008 in.), resurface the cylinder head.
   - Maximum resurface limit is 0.2 mm (0.008 in.) based on a height of 121 mm (4.76 in.).

Cylinder Head Height
Standard (New): 120.95—121.05 mm (4.762—4.766 in.)

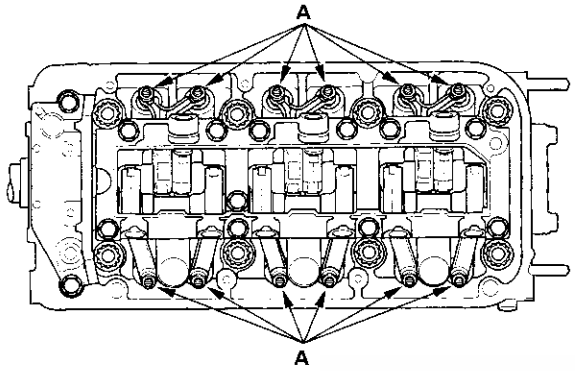




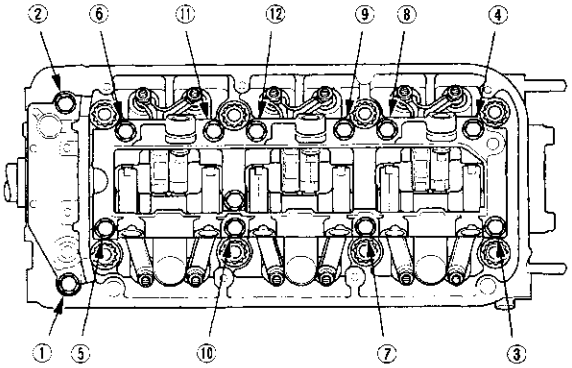
Rocker Arm Assembly Removal

Front

1. Remove the cylinder head cover (see page 6-93).
2. Loosen the locknuts and the adjusting screws (A).

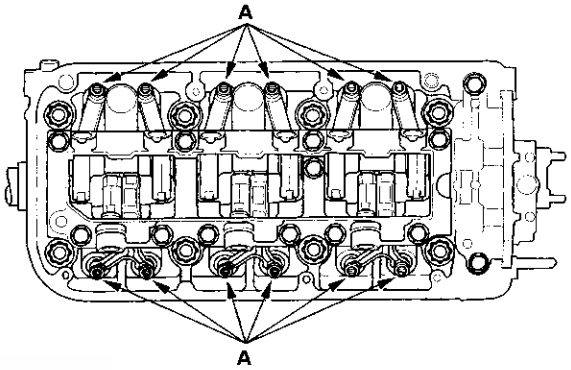


3. Remove the rocker shaft bridge mounting bolts, the rocker shaft holder mounting bolts, and the rocker arm assembly.
   - 1 Loosen the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts in sequence two turns at a time, to prevent damaging the valves or the rocker arm assembly.
   - 2 When removing the rocker arm assembly, do not remove the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts. The bolts will keep the rocker arms on the shafts.

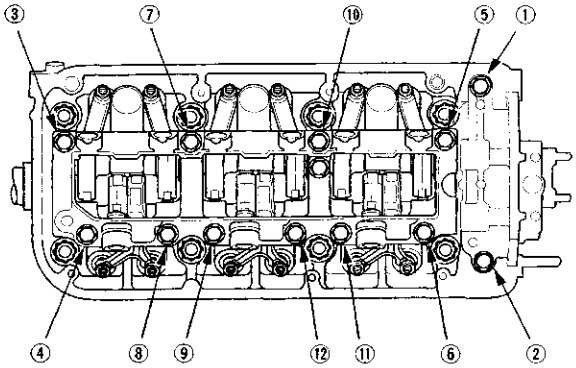


Rear

4. Remove the cylinder head cover (see page 6-93).
5. Loosen the locknuts and the adjusting screws (A).



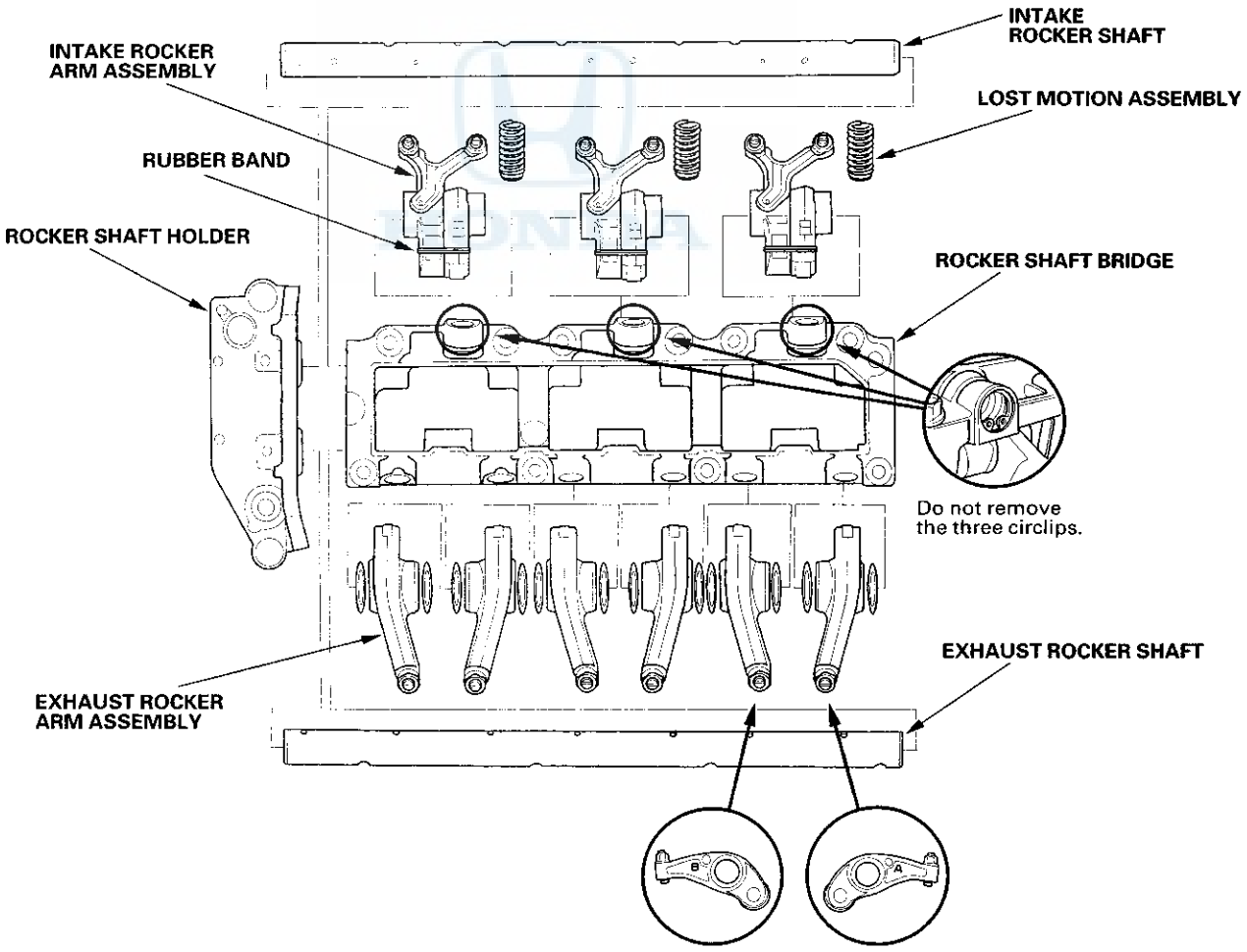
6. Remove the rocker shaft bridge mounting bolts, the rocker shaft holder mounting bolts, and the rocker arm assembly.
   - 1 Loosen the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts in sequence two turns at a time, to prevent damaging the valves or the rocker arm assembly.
   - 2 When removing the rocker arm assembly, do not remove the rocker shaft bridge mounting bolts and the rocker shaft holder mounting bolts. The bolts will keep the rocker arms on the shafts.



Rocker Arm and Shaft Disassembly/Reassembly

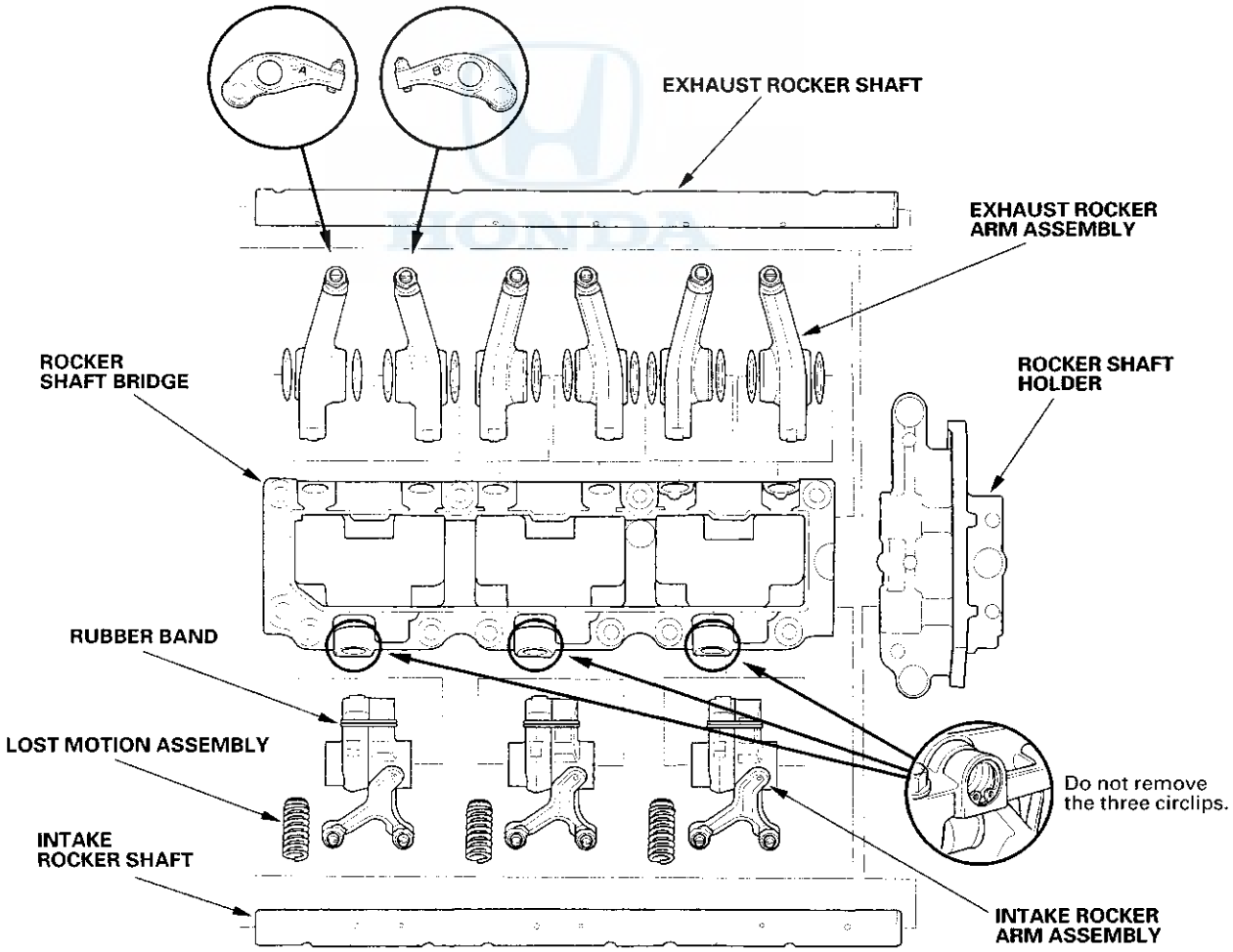
Front

NOTE:
- Identify parts as they are removed so they can be reinstalled in their original locations.
- Inspect the rocker shafts and the rocker arms (see page 6-108).
- If reused, the rocker arms must be installed in their original locations.
- When removing or installing the rocker arm assembly, do not remove the mounting bolts. The bolts will keep the rocker arms, the rocker shaft bridge, and the rocker shaft holder on the shaft.
- If the rocker shaft cannot be removed or installed by hand, remove or install the rocker shaft by heating the rocker shaft bridge.
- Bundle the rocker arms with rubber bands to keep them together as a set, and remove the bands after the rocker arms have been installed.
- Prior to reassembling, clean all the parts in solvent, dry them, and apply new engine oil to all contact points and bearing surfaces.
- When replacing the rocker arm assembly, remove the fastening hardware from the new rocker arm assembly.
- Never remove any of the circlips that retain the lost motion assemblies in the rocker shaft bridge. The circlips are not available separately, and are factory installed in the rocker shaft bridge. To remove the lost motion assemblies, first remove the rocker shafts and the rocker arms.



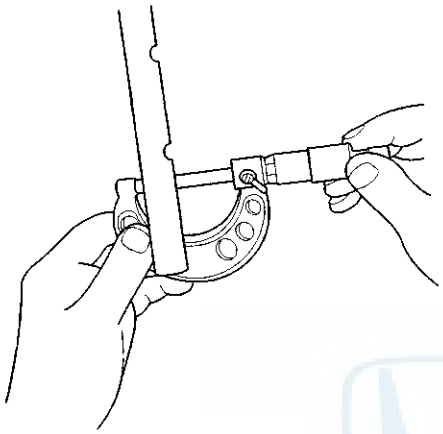
Rear

NOTE:
- Identify parts as they are removed so they can be reinstalled in their original locations.
- Inspect the rocker shafts and the rocker arms (see page 6-108).
- If reused, the rocker arms must be installed in their original locations.
- When removing or installing the rocker arm assembly, do not remove the mounting bolts. The bolts will keep the rocker arms, the rocker shaft bridge, and the rocker shaft holder on the shaft.
- If the rocker shaft cannot be removed or installed by hand, remove or install the rocker shaft by heating the rocker shaft bridge.
- Bundle the rocker arms with rubber bands to keep them together as a set, and remove the bands after the rocker arms have been installed.
- Prior to reassembling, clean all the parts in solvent, dry them, and apply new engine oil to all contact points and bearing surfaces.
- When replacing the rocker arm assembly, remove the fastening hardware from the new rocker arm assembly.
- Never remove any of the circlips that retain the lost motion assemblies in the rocker shaft bridge. The circlips are not available separately, and are factory installed in the rocker shaft bridge. To remove the lost motion assemblies, first remove the rocker shafts and the rocker arms.

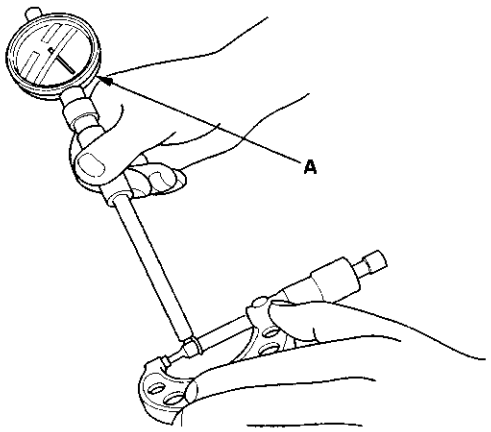


Rocker Arm and Shaft Inspection

1. Remove the rocker arm assembly (see page 6-105).
2. Disassemble the rocker arm assembly (see page 6-106).
3. Measure the diameter of the shaft at the first rocker location.



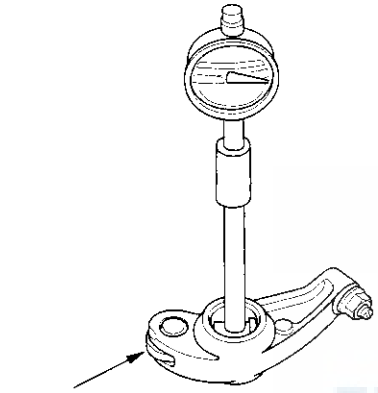
4. Zero the gauge (A) to the shaft diameter.



5. Measure the inside diameter of the rocker arm, and check it for an out-of-round condition.

Intake Rocker Arm-to-Shaft Clearance:
Standard (New): 0.015—0.046 mm (0.0006—0.0018 in.)
Service Limit: 0.046 mm (0.0018 in.)

Exhaust Rocker Arm-to-Shaft Clearance:
Standard (New): 0.019—0.050 mm (0.0007—0.0020 in.)
Service Limit: 0.050 mm (0.0020 in.)



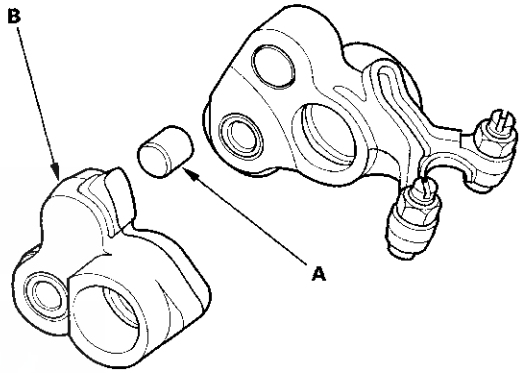
Inspect rocker arm face for wear.

6. Repeat for all rockers and both shafts. If the clearance is over the limit, replace the rocker shaft and all over-tolerance rocker arms. If any intake rocker arm needs replacement, replace all rocker arms in that set (primary and secondary).

VTEC Rocker Arms

7. Inspect the rocker arm piston (A). Slide them into the rocker arms. If they do not move smoothly, replace the rocker arm set.

NOTE:
- Apply new engine oil to the rocker arm piston when reassembling.
- When removing the rocker arm piston from the intake primary rocker arm (B), carefully apply air pressure to the oil passage of the rocker arm.



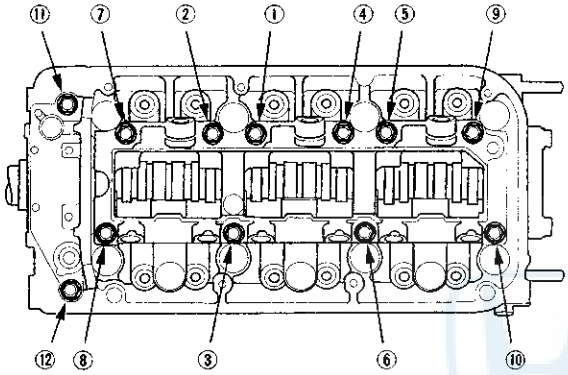
8. Install the rocker arm assembly (see page 6-120).

HONDA

Camshaft Inspection

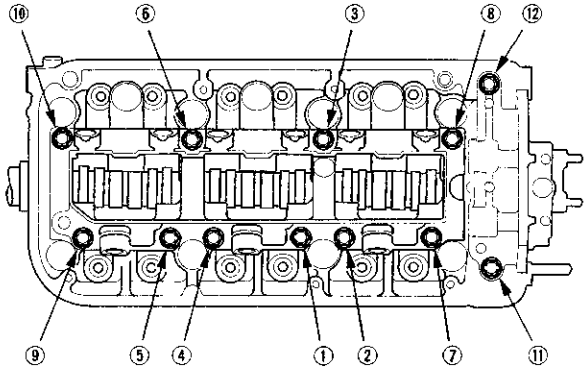
1. Remove the cylinder head (see page 6-99).
2. Remove the rocker arm assembly (see page 6-105).
3. Front: Put the rocker shafts bridge and the rocker shaft holder on the front cylinder head, then tighten the bolts to the specified torque.

Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)



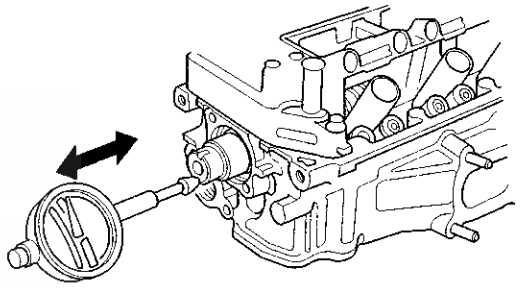
4. Rear: Put the rocker shaft bridge and the rocker shaft holder on the rear cylinder head, then tighten the bolts to the specified torque.

Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)

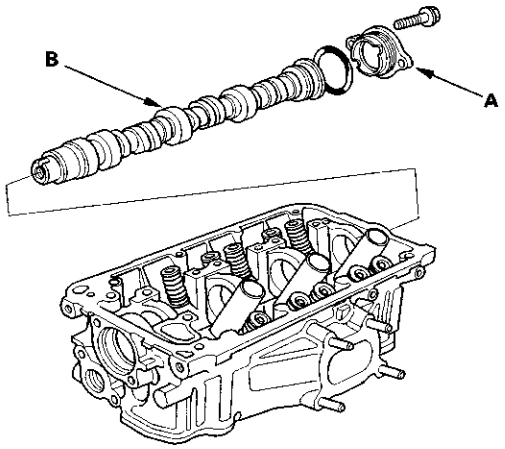


5. Seat the camshaft by pushing it toward the rear of the cylinder head.
6. Zero the dial indicator against the end of the camshaft. Push the camshaft back and forth and read the end play. If the end play is beyond the service limit, replace the thrust cover and recheck. If it is still beyond the service limit, replace the camshaft.

Camshaft End Play
Standard (New): 0.05—0.20 mm (0.002—0.008 in.)
Service Limit: 0.20 mm (0.008 in.)

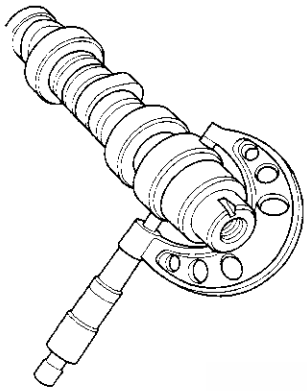


7. Remove the camshaft thrust cover (A), then pull out the camshaft (B).

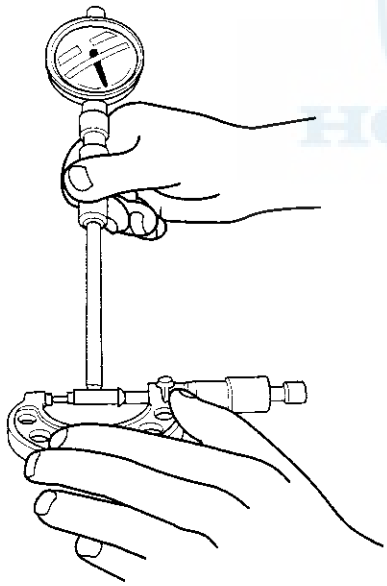


8. Wipe the camshaft clean, then inspect the lift ramps. Replace the camshaft if any lobes are pitted, scored, or excessively worn.

9. Measure the diameter of each camshaft journal.



10. Zero the gauge to the journal diameter.

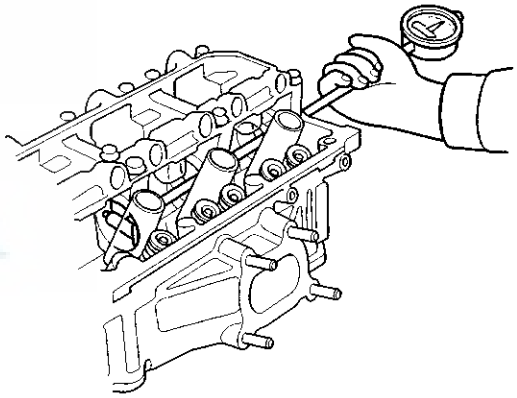


11. Clean the camshaft bearing surfaces in the cylinder head. Measure the inside diameter of each camshaft bearing surface, and check for an out-of-round condition.

- If the camshaft-to-holder clearance is within limits, go to step 13.
- If the camshaft-to-holder clearance is beyond the service limit and the camshaft has been replaced, replace the cylinder head.
- If the camshaft-to-holder clearance is beyond the service limit and the camshaft has not been replaced, go to step 12.

Camshaft-to-Holder Oil Clearance

Standard (New):	**0.050—0.089 mm (0.0020—0.0035 in.)**
Service Limit:	**0.15 mm (0.0060 in.)**



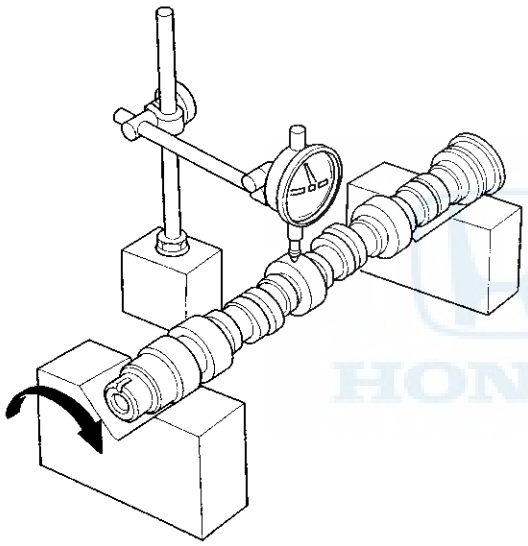
(cont'd)

Camshaft Inspection (cont'd)

12. Check total runout with the camshaft supported on V-blocks.

    - If the total runout of the camshaft is within the service limit, replace the cylinder head.
    - If the total runout is beyond the service limit, replace the camshaft and recheck the oil clearance. If the oil clearance is still out of tolerance, replace the cylinder head.

Camshaft Total Runout
Standard (New): 0.03 mm (0.0012 in.) max.
Service Limit: 0.04 mm (0.002 in.)

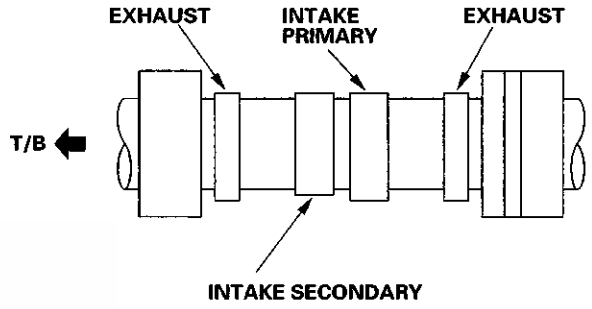


13. Measure the cam lobe height.

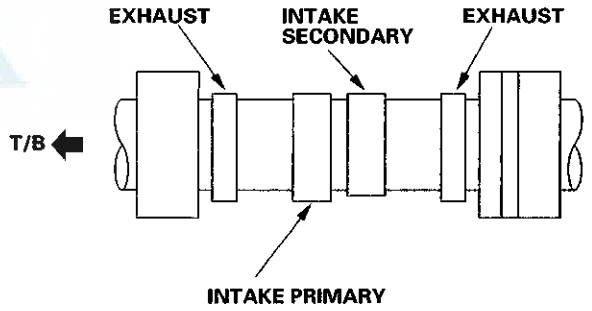
Cam Lobe Height Standard (New):

	INTAKE	EXHAUST
PRI	35.621 mm (1.4024 in.)	36.760 mm (1.4472 in.)
SEC	34.299 mm (1.3504 in.)	

FRONT



REAR

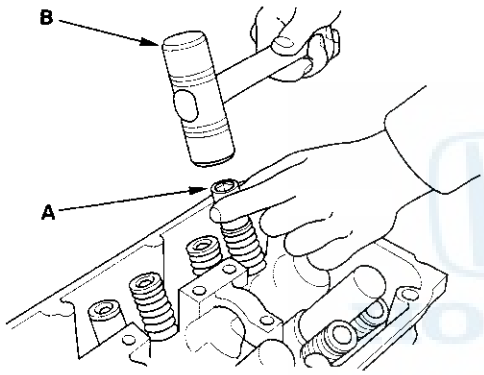


Valve, Spring, and Valve Seal Removal

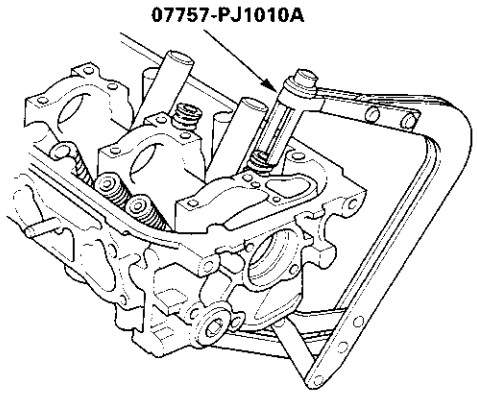
Special Tools Required
Valve spring compressor attachment
07757-PJ1010A

Identify the valves and the valve springs as they are removed so that each item can be reinstalled in its original position.

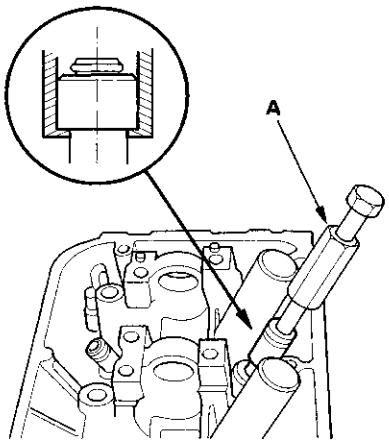
1. Remove the cylinder head (see page 6-99).
2. Remove the rocker arm assembly (see page 6-105).
3. Using an appropriate-sized socket (A) and a plastic mallet (B), lightly tap the spring retainer to loosen the valve cotters.



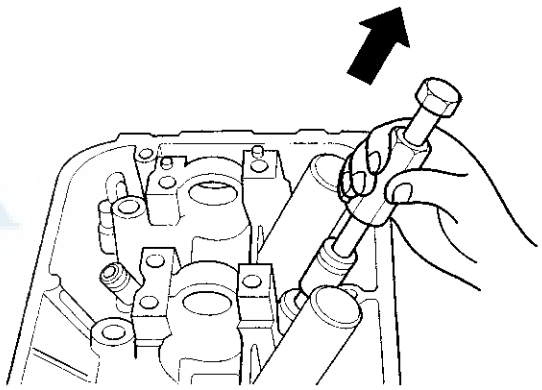
4. Install the valve spring compressor attachment and the valve spring compressor. Compress the spring and remove the valve cotters.



5. Remove the valve spring compressor and the valve spring compressor attachment, then remove the spring retainer, the valve spring, and the valve.
6. Install the valve guide seal remover (A).



7. Remove the valve seal.



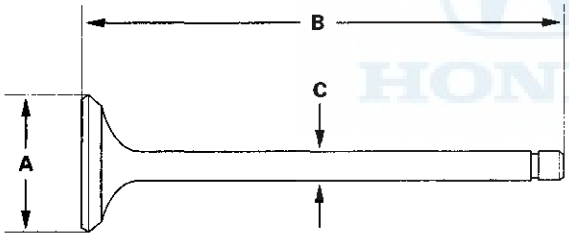
8. Remove the valve spring seat.

Valve Inspection

1. Remove the valves (see page 6-113).
2. Measure the valve in these areas.

Intake Valve Dimensions
A Standard (New): 35.90—36.01 mm (1.413—1.421 in.)
B Standard (New): 116.55—117.15 mm (4.589—4.612 in.)
C Standard (New): 5.485—5.495 mm (0.2159—0.2163 in.)
C Service Limit: 5.455 mm (0.2148 in.)

Exhaust Valve Dimensions
A Standard (New): 29.90—30.10 mm (1.177—1.185 in.)
B Standard (New): 113.90—114.50 mm (4.484—4.508 in.)
C Standard (New): 5.450—5.460 mm (0.2146—0.2150 in.)
C Service Limit: 5.420 mm (0.2134 in.)



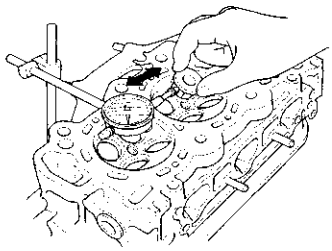
Valve Stem-to-Guide Clearance Inspection

1. Remove the valves (see page 6-113).
2. Slide the valve out of its guide about 10 mm (0.39 in.), then measure the stem-to-guide clearance with a dial indicator while rocking the stem in the direction of normal thrust (wobble method).

   - If the measurement exceeds the service limit, recheck it using a new valve.
   - If the measurement is now within the service limit, reassemble using a new valve.
   - If the measurement with a new valve still exceeds the service limit, go to step 3.

Intake Valve Stem-to-Guide Clearance
Standard (New): 0.04—0.09 mm (0.002—0.004 in.)
Service Limit: 0.16 mm (0.006 in.)

Exhaust Valve Stem-to-Guide Clearance
Standard (New): 0.11—0.16 mm (0.004—0.006 in.)
Service Limit: 0.22 mm (0.009 in.)



3. Subtract the O.D. of the valve stem, measured with a micrometer, from the I.D. of the valve guide, measured with an inside micrometer or a ball gauge. Take the measurements in three places along the valve stem and three places inside the valve guide. The difference between the largest guide measurement and the smallest stem measurement should not exceed the service limit.

Intake Valve Stem-to-Guide Clearance
Standard (New): 0.020—0.045 mm (0.0008—0.0018 in.)
Service Limit: 0.08 mm (0.003 in.)

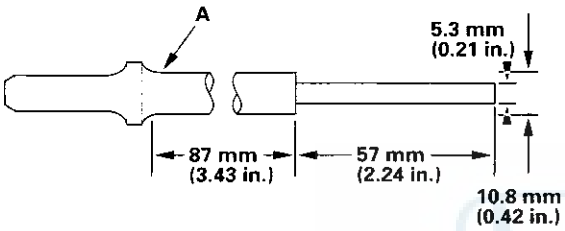
Exhaust Valve Stem-to-Guide Clearance
Standard (New): 0.055—0.080 mm (0.0022—0.0031 in.)
Service Limit: 0.11 mm (0.004 in.)

Valve Guide Replacement

Special Tools Required
- Valve guide driver, 5.5 mm 07742-0010100
- Valve guide reamer, 5.5 mm 07HAH-PJ7A100

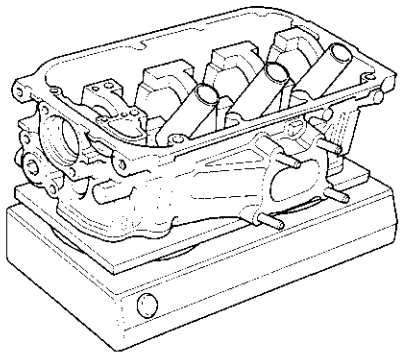
1. Inspect the valve stem-to-guide clearance (see page 6-114).

2. As illustrated, use a commercially available air-impact valve guide driver (A) modified to fit the diameter of the valve guides. In most cases, the same procedure can be done using the valve guide driver and a conventional hammer.



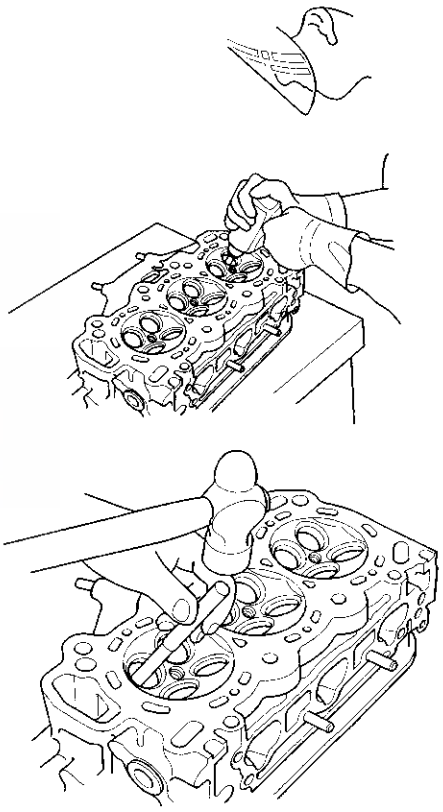
3. Select the proper replacement guides, and chill them in the freezer section of a refrigerator for at least an hour.

4. Use a hot plate or oven to evenly heat the cylinder head to 300 °F (150 °C). Monitor the temperature with a cooking thermometer. Do not get the head hotter than 300 °F (150 °C); excessive heat may loosen the valve seats.



5. Working from the camshaft side, use the driver and an air hammer to drive the guide about 2 mm (0.1 in.) towards the combustion chamber. This will knock off some of the carbon and make removal easier. Hold the air hammer directly in line with the valve guide to prevent damaging the driver. Wear safety goggles or a face shield.

6. Turn the head over, and drive the guide out toward the camshaft side of the head.



7. If a valve guide still will not move, drill it out with a 8 mm (5/16 in.) bit, then try again.

   NOTE: Drill guides only in extreme cases; you could damage the cylinder head if the guide breaks.

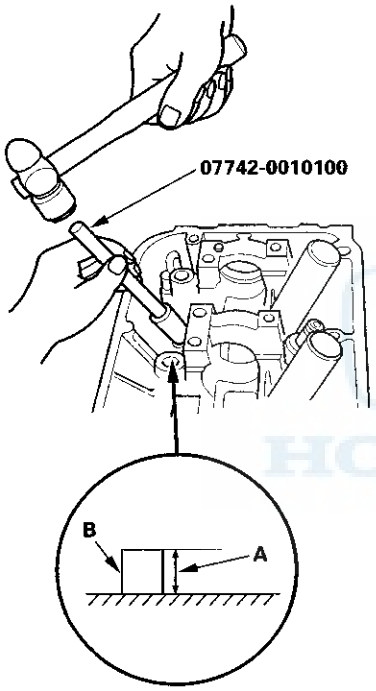
8. Remove the new guide(s) from the freezer, one at a time, as you need them.

(cont'd)

Valve Guide Replacement (cont'd)

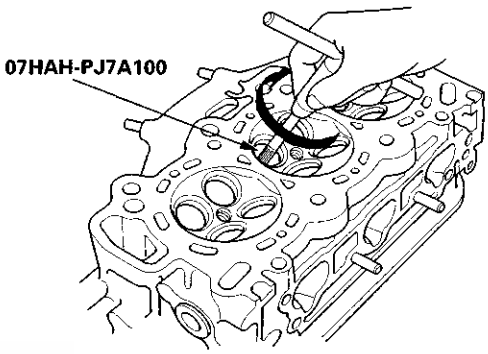
9. Apply a thin coat of new engine oil to the outside of the new valve guide. Install the guide from the camshaft side of the head; use the valve guide driver to drive the guide to the specified installed height (A) of the guide (B). If you have all 12 guides to do, you may have to reheat the head.

Valve Guide Installed Height
Intake: 21.20—22.20 mm (0.835—0.874 in.)
Exhaust: 20.60—21.60 mm (0.811—0.850 in.)



10. Coat both the reamer and the valve guide with cutting oil.

11. Rotate the reamer clockwise the full length of the valve guide bore.



12. Continue to rotate the reamer clockwise while removing it from the bore.

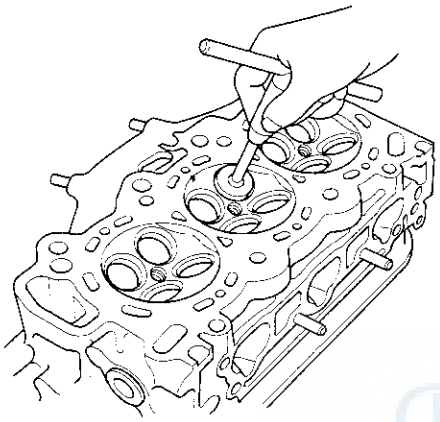
13. Thoroughly wash the guide in detergent and water to remove any cutting residue.

14. Check the clearance with a valve (see page 6-114). Verify that a valve slides in the intake and exhaust valve guides without sticking.

Valve Seat Reconditioning

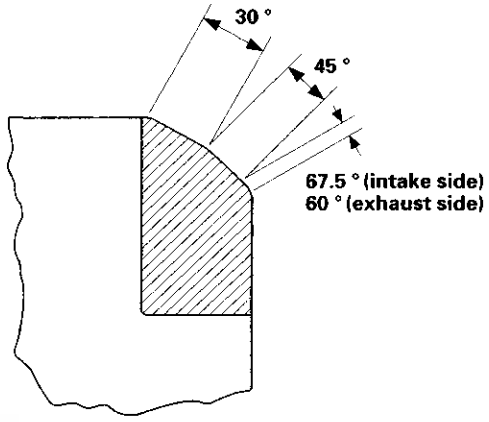
1. Inspect valve stem-to-guide clearance (see page 6-114). If the valve guides are worn, replace them (see page 6-115) before cutting the valve seats.

2. Renew the valve seats in the cylinder head using a valve seat cutter.



3. Carefully cut a 45 °seat, removing only enough material to ensure a smooth and concentric seat.

4. Bevel the upper and lower edges at the angles shown in the illustration.
Check the width of the seat and adjust accordingly.



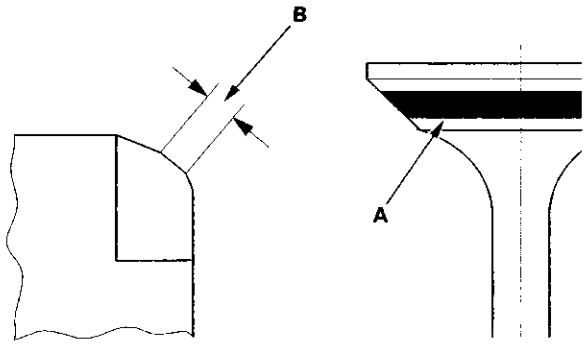
5. Make one more very light pass with the 45 °cutter to remove any possible burrs caused by the other cutters.

Valve Seat Width
Standard (New): 1.25—1.55 mm (0.049—0.061 in.)
Service Limit: 2.00 mm (0.079 in.)

(cont'd)

Valve Seat Reconditioning (cont'd)

6. After resurfacing the seat, inspect it for even valve seating. Apply Prussian Blue compound (A) to the valve face. Insert the valve in its original location in the head, then lift it and snap it closed against the seat several times.



7. The actual valve seating surface (B), as shown by the blue compound, should be centered on the seat.

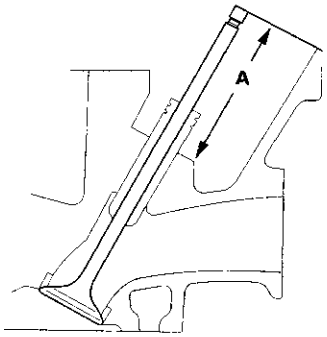
   - If it is too high (closer to the valve stem), you must make a second cut with the 67.5 ° cutter (intake seat) or the 60 ° cutter (exhaust seat) to move it down, then one more cut with the 45 ° cutter to restore seat width.
   - If it is too low (closer to the valve edge), you must make a second cut with the 30 ° cutter to move it up, then one more cut with the 45 ° cutter to restore seat width.

   NOTE: The final cut should always be made with the 45 ° cutter.

8. Insert the intake and exhaust valves in the head, and measure the valve stem installed height (A).

Intake Valve Stem Installed Height
Standard (New): 46.75—47.55 mm (1.841—1.872 in.)
Service Limit: 47.80 mm (1.882 in.)

Exhaust Valve Stem Installed Height
Standard (New): 46.68—47.48 mm (1.838—1.869 in.)
Service Limit: 47.73 mm (1.879 in.)



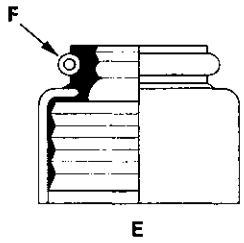
9. If the valve stem installed height is over the service limit, replace the valve and recheck. If it is still over the service limit, replace the cylinder head; the valve seat in the head is too deep.

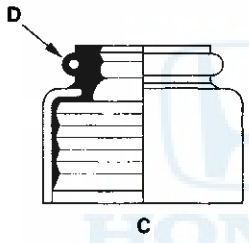
Valve, Spring, and Valve Seal Installation

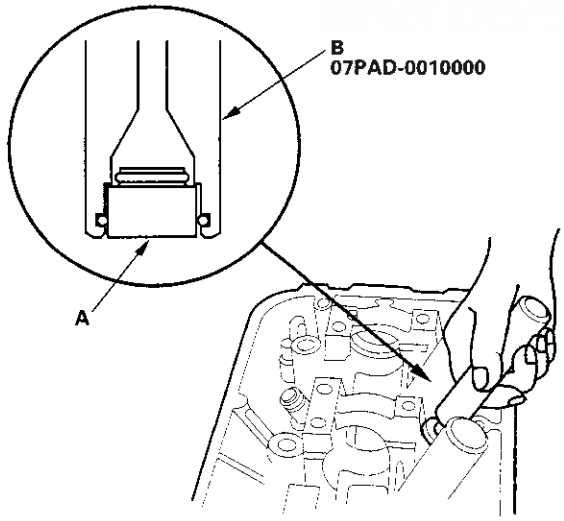
Special Tools Required
- Stem seal driver 07PAD-0010000
- Valve spring compressor attachment 07757-PJ1010A

1. Coat the valve stems with new engine oil. Install the valves in the valve guides.
2. Check that the valves move up and down smoothly.
3. Install the spring seats on the cylinder head.
4. Install the new valve seals (A) using the 5.5 mm side of the stem seal driver (B).

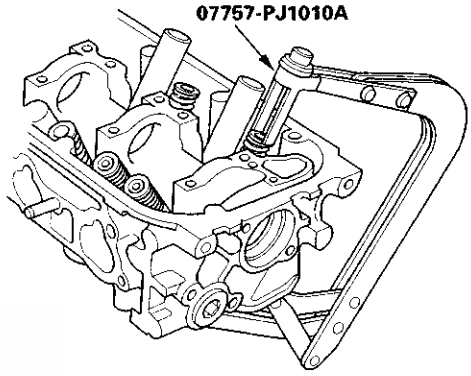
   NOTE: Exhaust valve seals (C) have a black spring (D) and intake valve seals (E) have a white or silver spring (F). They are not interchangeable.



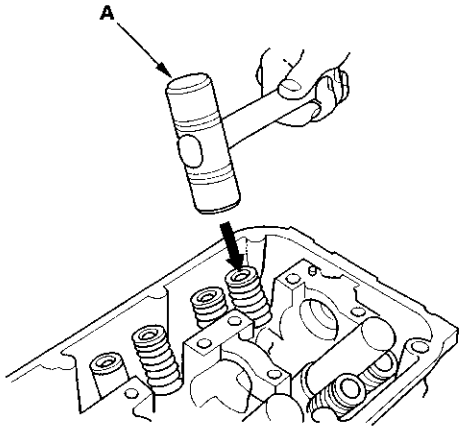




5. Install the valve spring and the spring retainer. Place the end of the valve spring with the closely wound coils toward the cylinder head.
6. Install the valve spring compressor attachment and the valve spring compressor. Compress the spring and install the valve cotters.



7. Remove the valve spring compressor and the valve spring compressor attachment.
8. Lightly tap the end of each valve stem two or three times with a plastic mallet (A) to ensure proper seating of the valve and valve cotters. Tap the valve stem only along its axis so you do not bend the stem.



Camshaft, Rocker Arm Assembly, Camshaft Seal, and Pulley Installation

Front

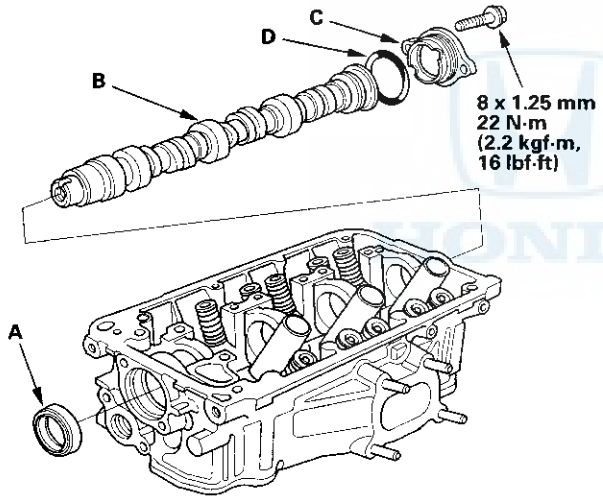
1. Loosen the locknuts and the adjusting screws (see page 6-75).

2. Apply a light coat of new engine oil around the camshaft oil seal.

3. Apply a light coat of new engine oil to the lip of the camshaft oil seal.

4. Gently tap the new camshaft oil seal (A) into the cylinder head.

   -1 Tap the camshaft oil seal in squarely.
   -2 Install the oil seal about 0.5 —1.5 mm (0.02—0.06 in.) below the surface of the cylinder head.



5. Insert the camshaft (B) into the cylinder head, then install the camshaft thrust cover (C). Always use a new O-ring (D). Apply new engine oil to the journals and the cam lobes.

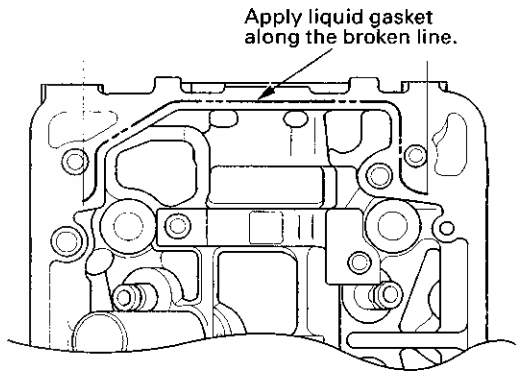
6. Check that the oil seal lips are not distorted.

7. If the rocker arm assembly is disassembled, reassemble the rocker arm assembly (see page 6-106).

8. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.

9. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating surface of the cylinder head. Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.

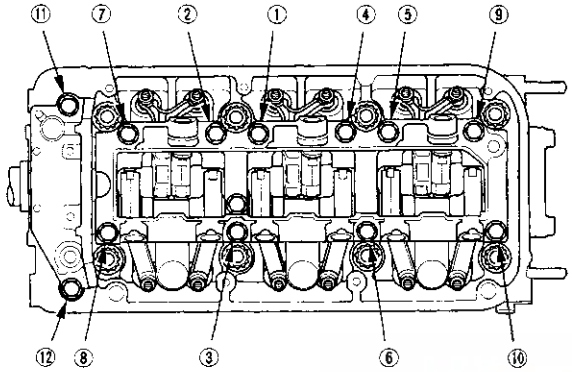


10. Set the rocker arm assembly in place, and loosely install the bolts. Make sure that the rocker arms are properly positioned on the valve stems.

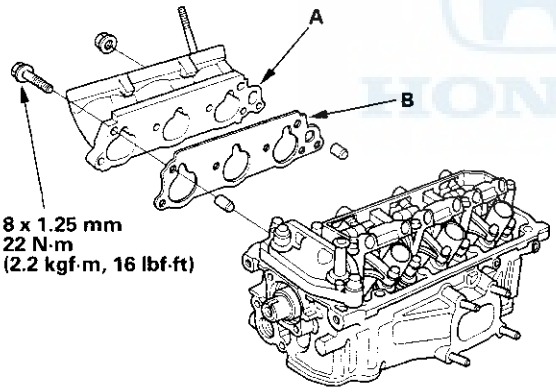
    NOTE:
    - Wait at least 30 minutes before filling the engine with oil.
    - Do not run the engine for at least 3 hours after installing the rocker arm assembly.

11. Tighten each bolt two turns at a time in the sequence shown to ensure that the rockers do not bind on the valves.

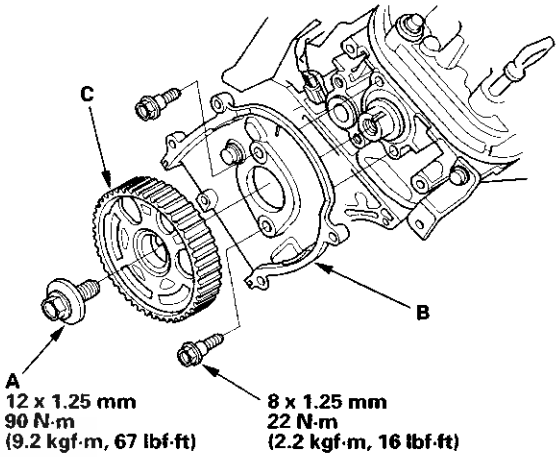
Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)



12. Install the injector base (A). Always use a new gasket (B).



13. Apply new engine oil to the threads of the camshaft pulley mounting bolt (A). Install the back cover (B), then install the camshaft pulley (C).



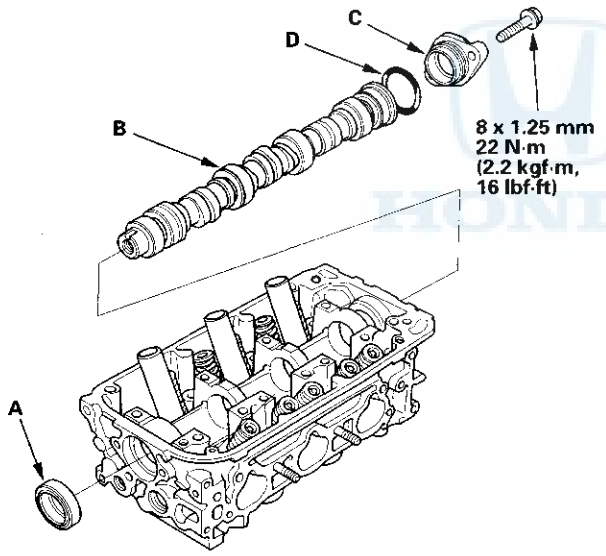
14. Set the camshaft pulleys to top dead center (TDC) before bolting them onto the engine block (see step 6 on page 6-124).

(cont'd)

Camshaft, Rocker Arm Assembly, Camshaft Seal, and Pulley Installation (cont'd)

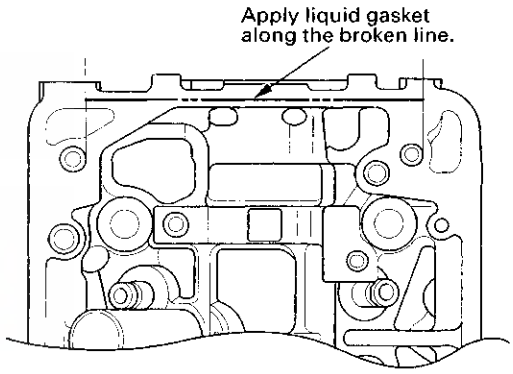
Rear

1. Loosen the locknuts and the adjusting screws (see page 6-75).
2. Apply a light coat of new engine oil around the camshaft oil seal.
3. Apply a light coat of new engine oil to the lip of the camshaft oil seal.
4. Gently tap the new camshaft oil seal (A) into the cylinder head.
   - 1 Tap the camshaft oil seal in squarely.
   - 2 Install the oil seal about 0.5 —1.5 mm (0.02—0.06 in.) below the surface of the cylinder head.



5. Insert the camshaft (B) into the cylinder head, then install the camshaft thrust cover (C). Always use a new O-ring (D). Apply new engine oil to the journals and the cam lobes.
6. Check that the oil seal lips are not distorted.
7. If the rocker arm assembly is disassembled, reassemble the rocker arm assembly (see page 6-107).
8. Remove all of the old liquid gasket from the rocker shaft holder and the cylinder head.
9. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the rocker shaft holder mating surface of the cylinder head. Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.

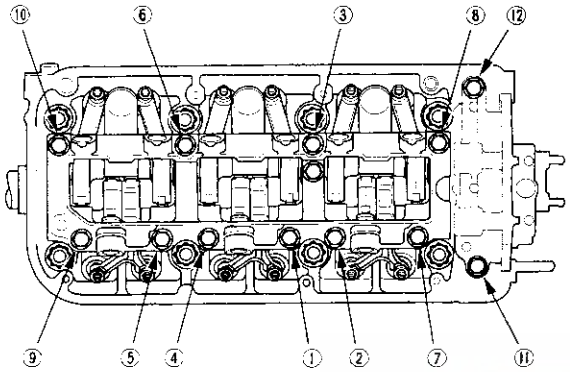


10. Set the rocker arm assembly in place, and loosely install the bolts. Make sure that the rocker arms are properly positioned on the valve stems.

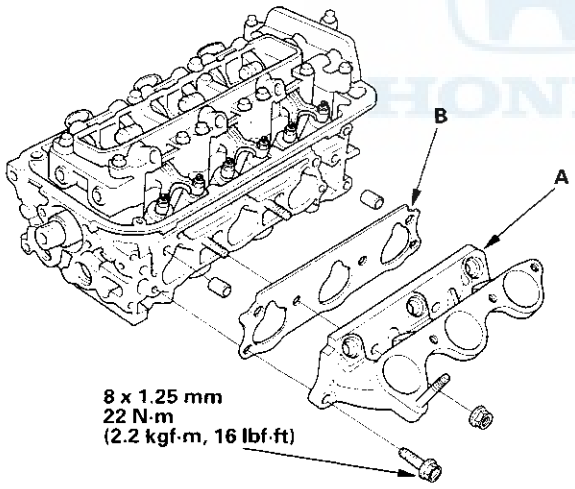
    NOTE:
    - Wait at least 30 minutes before filling the engine with oil.
    - Do not run the engine for at least 3 hours after installing the rocker arm assembly.

11. Tighten each bolt two turns at a time in the sequence shown to ensure that the rockers do not bind on the valves.

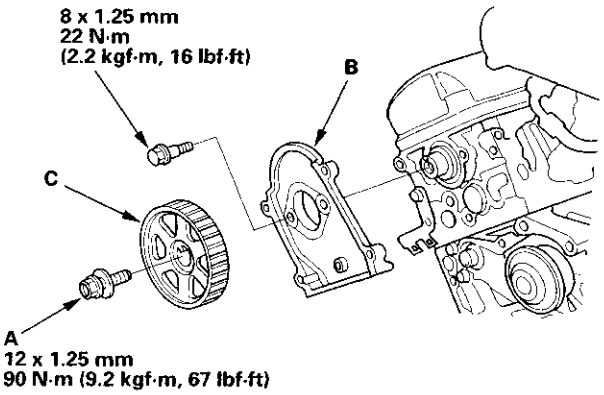
Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)



12. Install the injector base (A). Always use a new gasket (B).



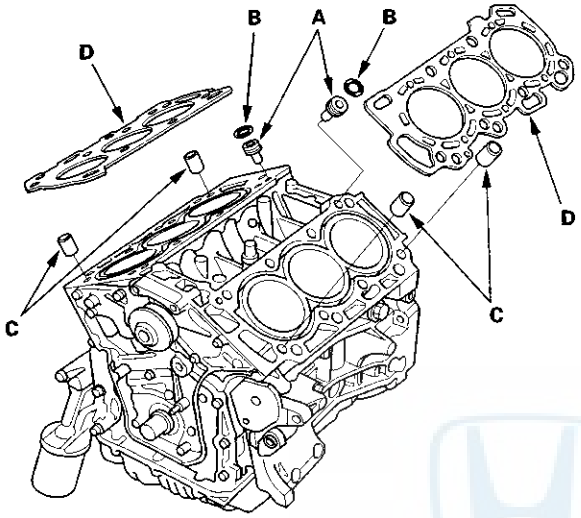
13. Apply new engine oil to the threads of the camshaft pulley mounting bolt (A). Install the back cover (B), then install the camshaft pulley (C).



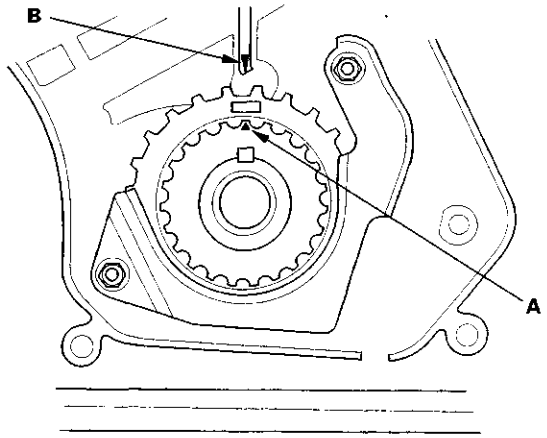
14. Set the camshaft pulleys to TDC before bolting them onto the engine block (see step 6 on page 6-124).

Cylinder Head Installation

1. Clean the cylinder head and the engine block surface.
2. Clean and install the oil control orifices (A) with new O-rings (B).

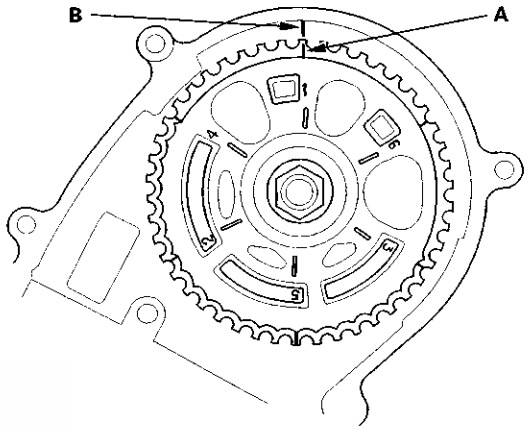


3. Install the dowel pins (C) and the new cylinder head gaskets (D).
4. Clean the timing belt pulleys, the timing belt guide plate, and the upper and lower covers.
5. Set the timing belt drive pulley to top dead center (TDC) by aligning the TDC mark (A) on the tooth of the timing belt drive pulley with the pointer (B) on the oil pump.



6. Set the camshaft pulleys to TDC by aligning the TDC marks (A) on the camshaft pulleys with the pointers (B) on the back covers.

FRONT



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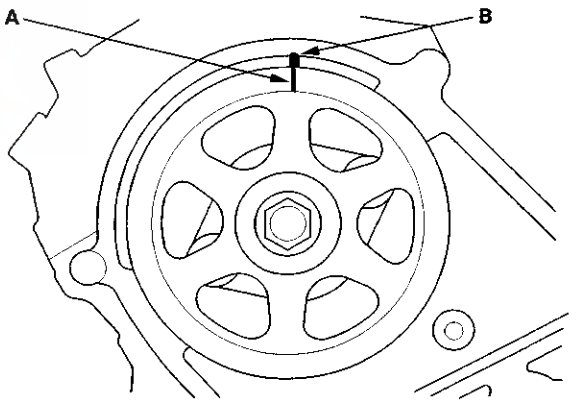
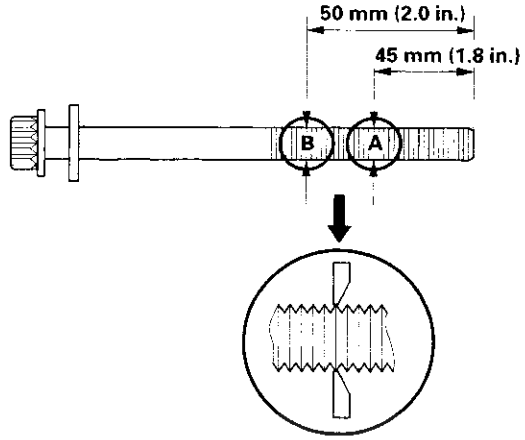


7. Install the cylinder heads on the engine block.

8. Measure the diameter of each cylinder head bolt at point A and point B.

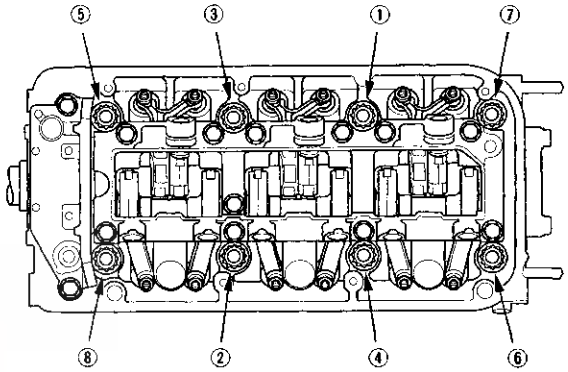


9. If either diameter is less than 10.6 mm (0.42 in.), replace the cylinder head bolt.

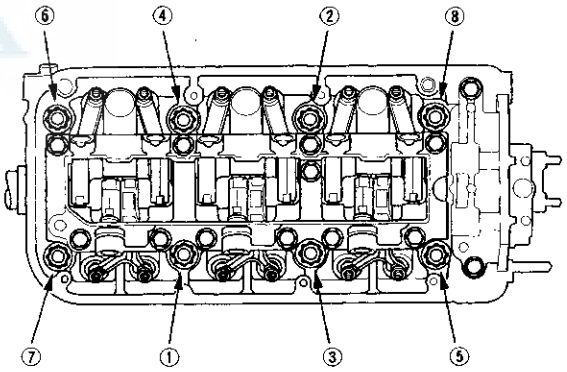
10. Apply new engine oil to the threads and under the bolt heads of all cylinder head bolts.

11. Tighten the cylinder head bolts in sequence to 29 N·m (3.0 kgf·m, 22 lbf·ft) using a beam-type torque wrench. When using a preset click-type torque wrench, be sure to tighten slowly and do not overtighten. If a bolt makes any noise while you are torquing it, loosen the bolt and retighten it from the first step.

FRONT



REAR

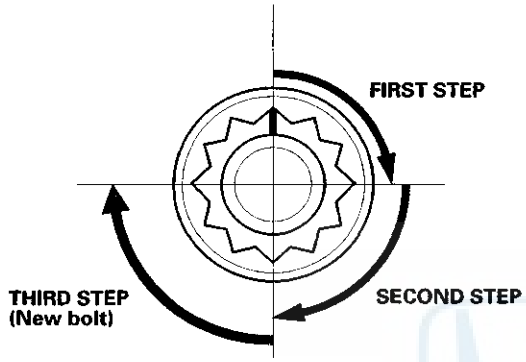


(cont'd)

Cylinder Head Installation (cont'd)

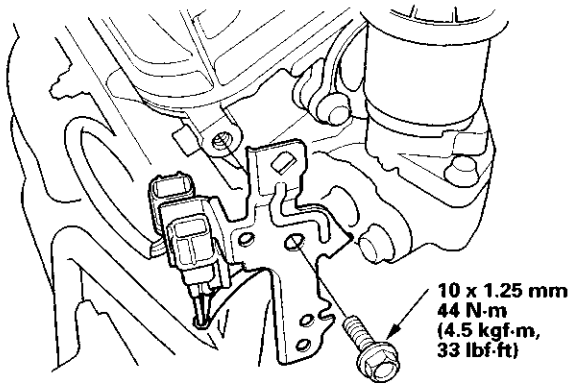
12. After torquing, tighten all cylinder head bolts in two steps (90 ° per step) using the sequence shown in step 11. If you are using a new cylinder head bolt, tighten the bolt an extra 90 °.

    NOTE: Remove the cylinder head bolt if you tightened it beyond the specified angle, and go back to step 8 of the procedure. Do not loosen it back to the specified angle.

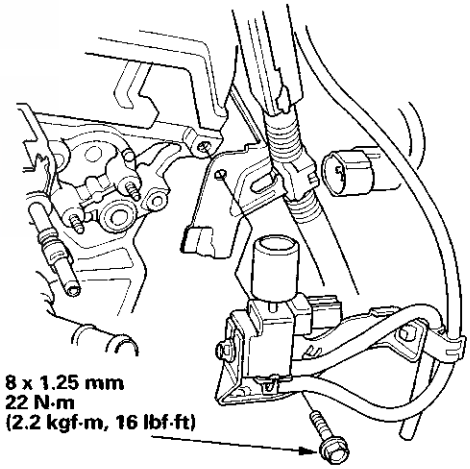


13. Install the timing belt (see page 6-83).
14. Adjust the valve clearance (see page 6-75).
15. Install the cylinder head covers (see page 6-95).
16. Install the water passage (see page 10-10).
17. Install the injector bases (see page 9-8).

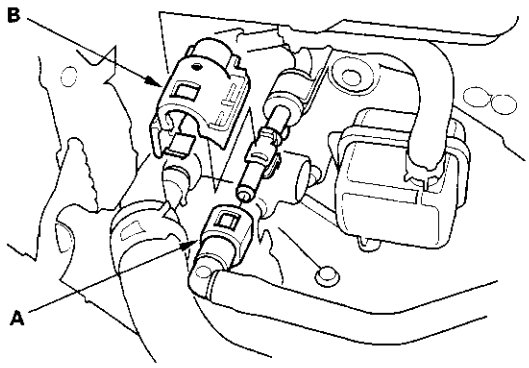
18. Install the connector bracket to the front cylinder head.



19. Install the harness clamp bracket to the rear cylinder head.



20. Connect the fuel feed hose (A) (see page 11-411), then install the quick-connect fitting cover (B).



21. Install the front warm up three way catalytic converter (front WU-TWC) (see page 11-445) and the rear warm up three way catalytic converter (rear WU-TWC) (see page 11-446).

22. Connect the following engine wire harness connectors, and install the wire harness clamps to the cylinder head:

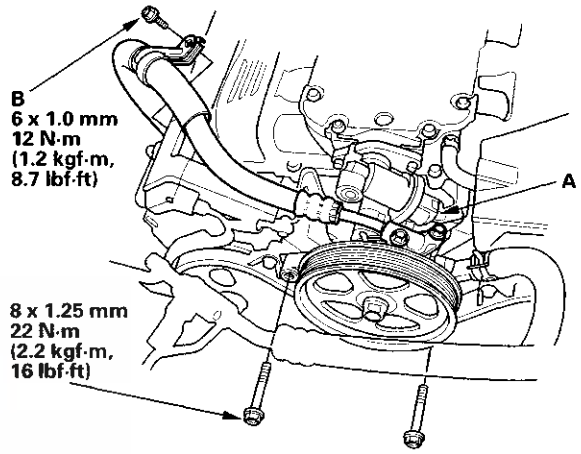
- Six injector connectors
- Knock sensor connector
- Engine coolant temperature (ECT) sensor 1 connector
- Engine mount control solenoid connector
- Camshaft position (CMP) sensor connector
- Rocker arm oil control solenoid connector
- Rocker arm oil pressure switch connector
- Two air fuel ratio (A/F) sensor connectors
- Two secondary heated oxygen sensor (secondary HO2S) connectors

23. Install the six ignition coils (see page 4-29).

24. Install the intake manifold (see page 9-6).

25. Install the alternator (see page 4-46).

26. Install the power steering (P/S) pump (A) and tighten the bolt (B) securing the P/S hose bracket.



27. Install the drive belt (see page 4-40).

(cont'd)

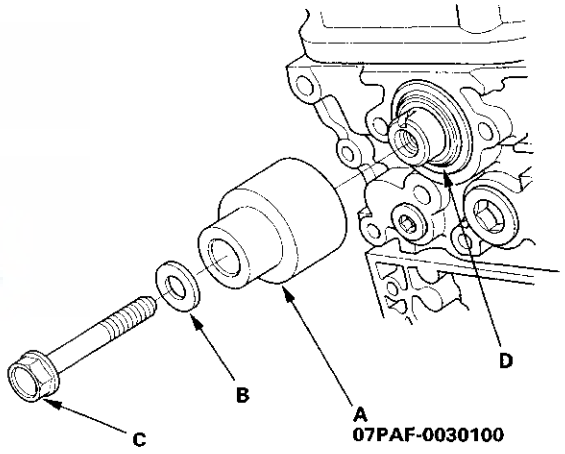
Cylinder Head Installation (cont'd)

28. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
29. After installation, check that all tubes, hoses, and connectors are installed correctly.
30. Inspect for fuel leaks. Turn the ignition switch to ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation three times, then check for fuel leakage at any point in the fuel line.
31. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).
32. Check for fluid leaks.
33. Do the engine control module (ECM) idle learn procedure (see page 11-385).
34. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see page 11-5).
35. Inspect the idle speed (see page 11-384).
36. Inspect the ignition timing (see page 4-28).

Camshaft Oil Seal Installation - In Car

Special Tools Required
Camshaft oil seal driver 07PAF-0030100

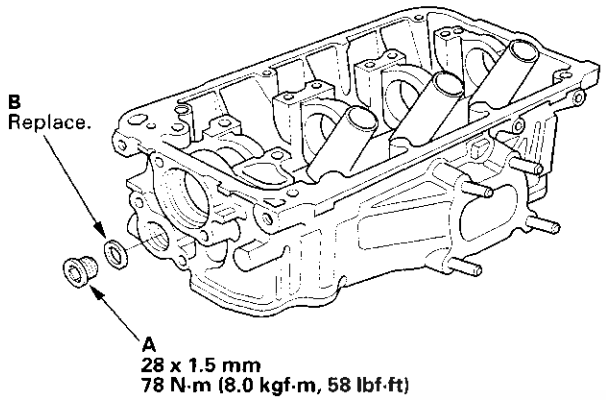
1. Dry the camshaft oil seal housing.
2. Apply a light coat of new engine oil around the camshaft oil seal.
3. Apply a light coat of new engine oil to the lip of the camshaft oil seal.
4. Using the camshaft oil seal driver (A), a washer (B), and a 12 x 75 x 1.25 mm bolt (C), press in the new camshaft oil seal (D) about 0.5—1.5 mm (0.02—0.06 in.) below the surface of the cylinder head.



Sealing Bolt Installation

NOTE: When installing the sealing bolts (A), always use a new washer (B).

FRONT



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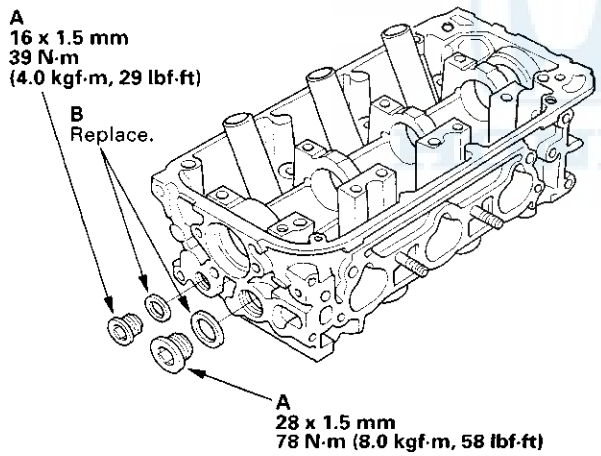

HONDA

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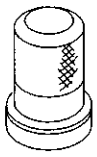
Outline of Model Change

J35Z2 engine and J35Z3 engine have been added.

Engine Block

Special Tools

Ref. No.	Tool Number	Description	Qty
①	070AD-RCAA100	Oil Seal Driver, 64 mm	1
②	070AD-RCA0200	Driver Attachment, 106 mm	1
③	07749-0010000	Driver	1



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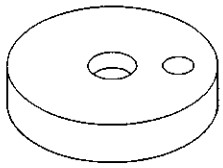

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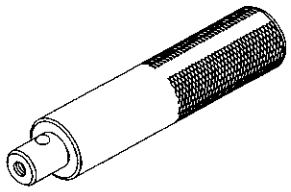

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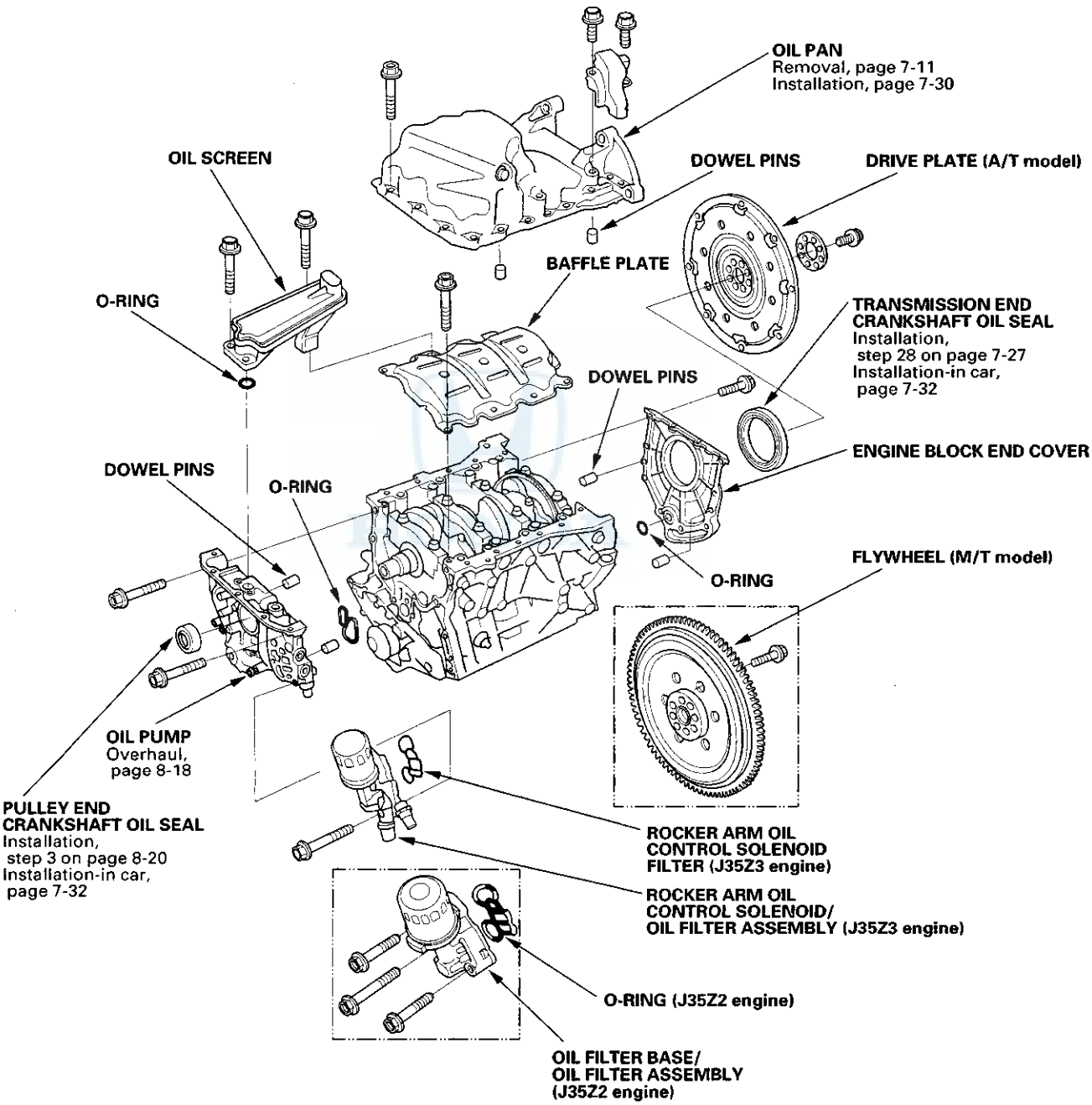
HONDA

Component Location Index



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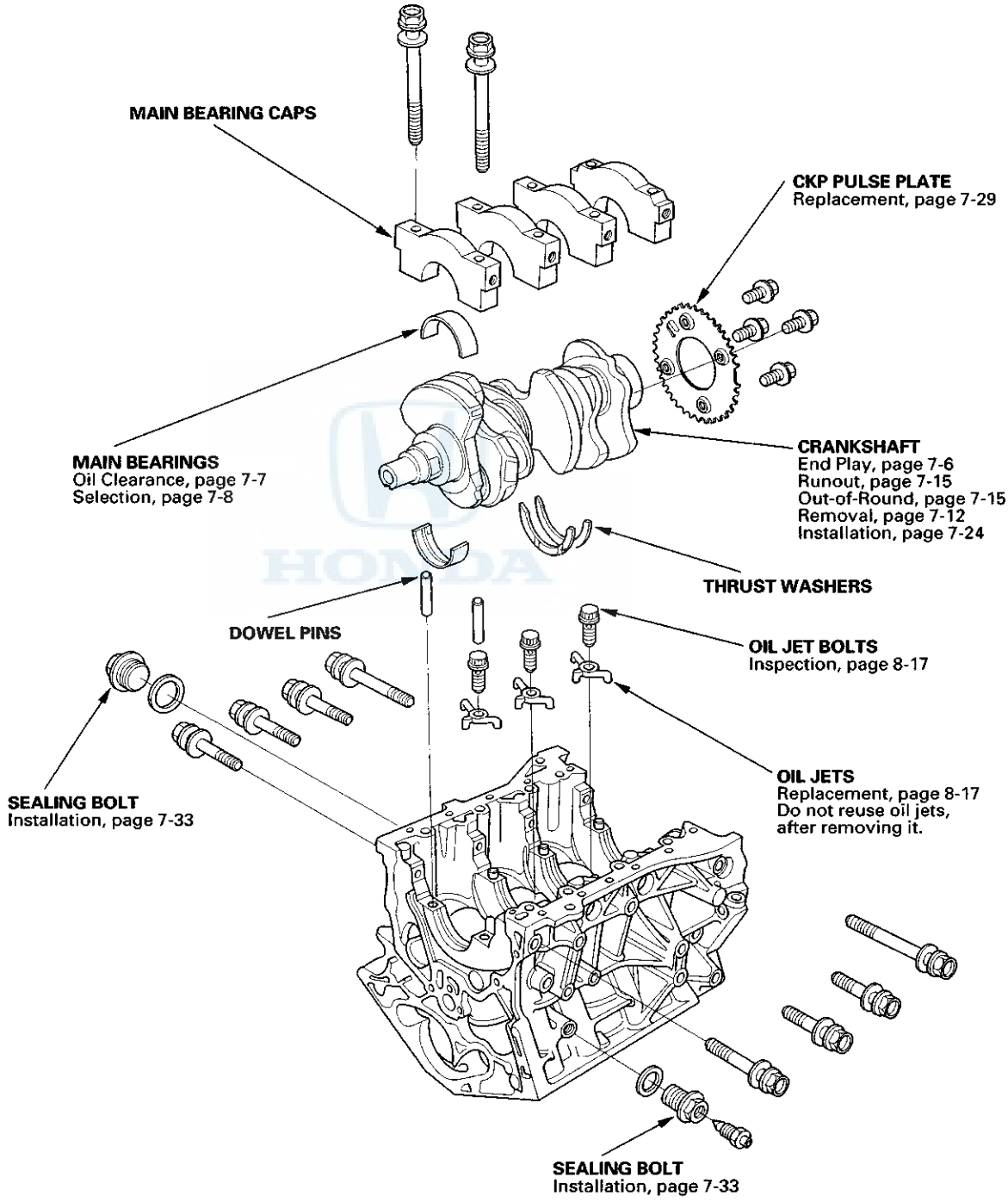
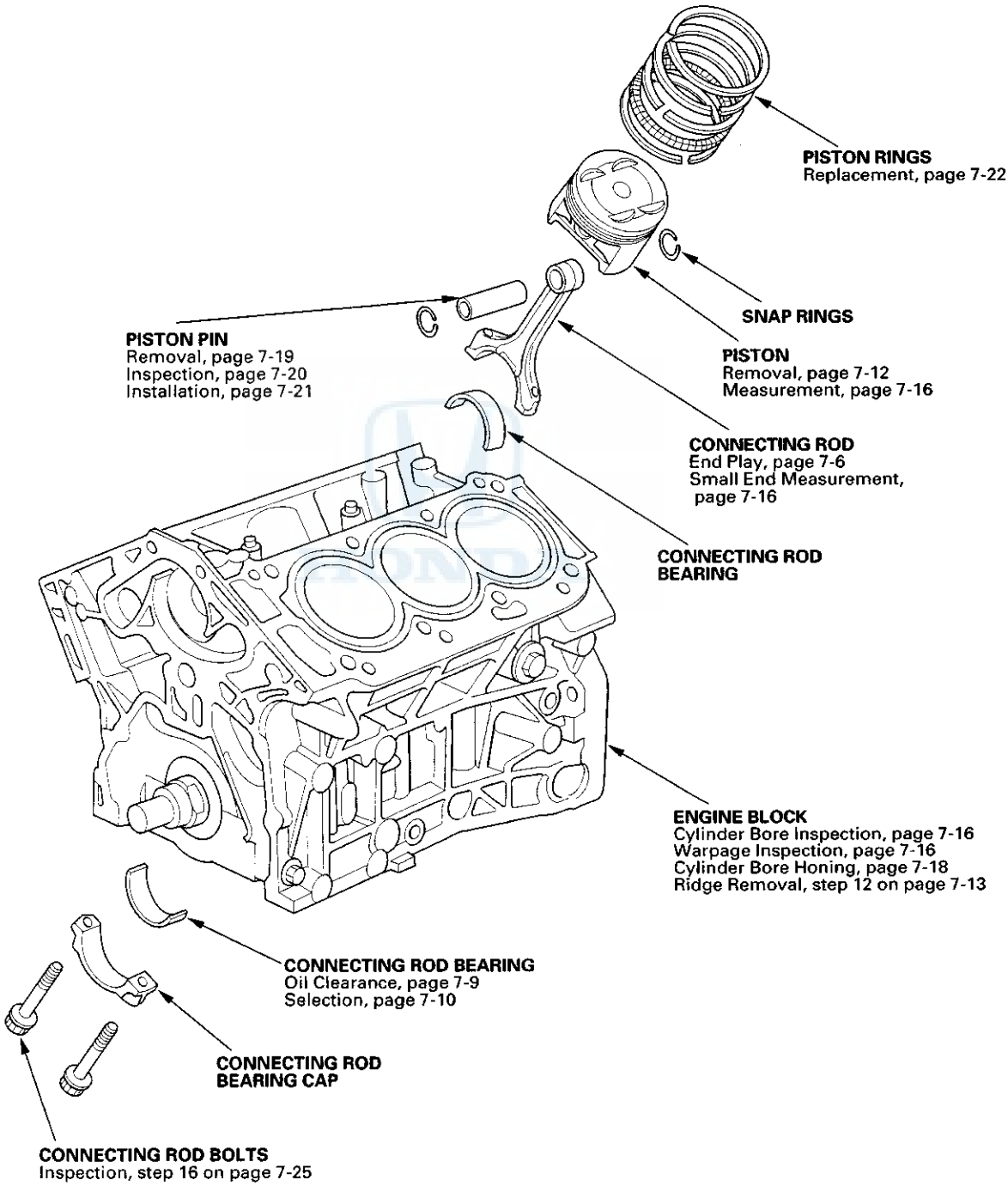
Component Location Index (cont'd)

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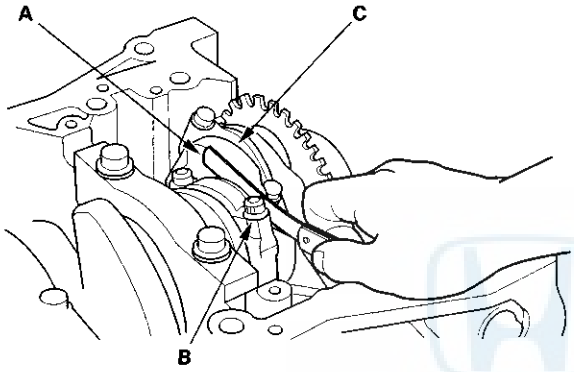
Connecting Rod and Crankshaft End Play Inspection

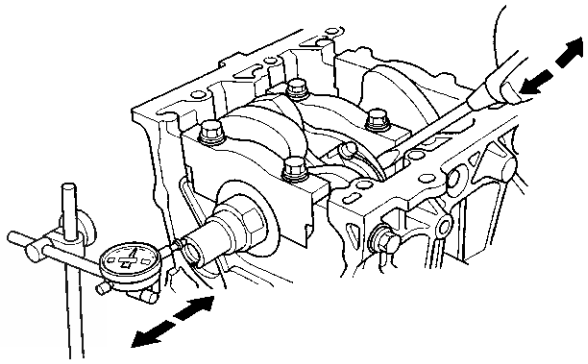
1. Remove the oil pump (see page 8-19).
2. Remove the baffle plate (see step 11 on page 7-13).
3. Measure the connecting rod end play with a feeler gauge (A) between the connecting rod (B) and the crankshaft (C).

Connecting Rod End Play
Standard (New): 0.15—0.35 mm (0.006—0.014 in.)
Service Limit: 0.45 mm (0.018 in.)



4. If the connecting rod end play is beyond the service limit, install a new connecting rod and recheck. If it is still beyond the service limit, replace the crankshaft (see page 7-12).
5. Push the crankshaft firmly away from the dial indicator, and zero the dial against the end of the crankshaft. Then pull the crankshaft firmly back toward the indicator; the dial reading should not exceed the service limit.

Crankshaft End Play
Standard (New): 0.10—0.35 mm (0.004—0.014 in.)
Service Limit: 0.45 mm (0.018 in.)



6. If the end play is excessive, replace the thrust washers and recheck. If it is still beyond the service limit, replace the crankshaft (see page 7-12).

Crankshaft Main Bearing Replacement

Main Bearing Clearance Inspection

1. Remove the main bearing caps and the bearing halves (see page 7-12).

2. Clean each main journal and bearing half with a clean shop towel.

3. Place one strip of plastigage across each main journal.

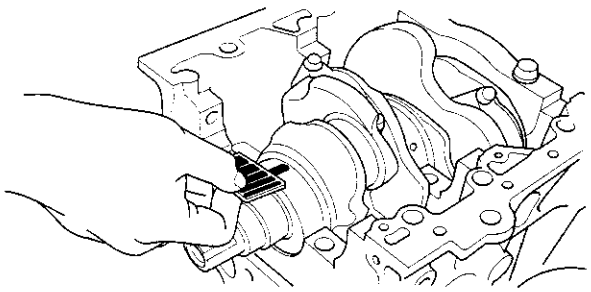
   NOTE: If the engine is still in the vehicle when you bolt the main cap down to check the clearance, the weight of the crankshaft and the drive plate will flatten the plastigage further than just the torque on the cap bolt and give you an incorrect reading. For an accurate reading, support the crank with a jack under the counterweights, and check only one bearing at a time.

4. Reinstall the bearings and the caps, then tighten the bearing cap bolts to 74 N·m (7.5 kgf·m, 54 lbf·ft), and the bearing cap side bolts to 49 N·m (5.0 kgf·m, 36 lbf·ft) in the proper sequence (see step 23 on page 7-26).

   NOTE:
   - Apply new engine oil to the bolt threads and flanges.
   - Do not rotate the crankshaft during inspection.

5. Remove the cap and the bearing half, and measure the widest part of the plastigage.

   Main Bearing-to-Journal Oil Clearance
   Standard (New): 0.019—0.045 mm (0.0007—0.0018 in.)
   Service Limit: 0.050 mm (0.0020 in.)



6. If the plastigage measures too wide or too narrow, remove the crankshaft, and remove the upper half of the bearing. Install a new, complete bearing with the same color code, and recheck the clearance. Do not file, shim, or scrape the bearings or the caps to adjust clearance.

7. If the plastigage shows the clearance is still incorrect, try the next larger or smaller bearing (the color listed above or below that one), and check clearance again. If the proper clearance cannot be obtained by using the appropriate larger or smaller bearings, replace the crankshaft and start over (see page 7-12).

(cont'd)

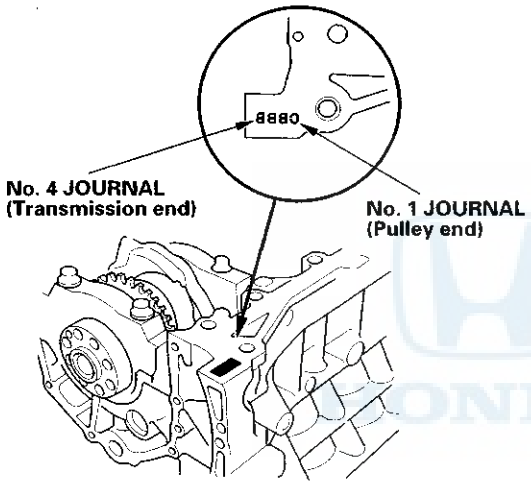
Crankshaft Main Bearing Replacement (cont'd)

Main Bearing Selection

Crankshaft Bore Code Location

Letters or bars have been stamped on the end of the engine block as a code for the size of each of the four main journal bores.

Use them, and the numbers stamped on the crankshaft (codes for main journal size), to choose the correct bearings. If the codes are indecipherable because of an accumulation of dirt and dust, do not scrub them with a wire brush or scraper. Clean them only with solvent or detergent.



Bearing Identification

Color code is on the edge of the bearing

Larger block bore →

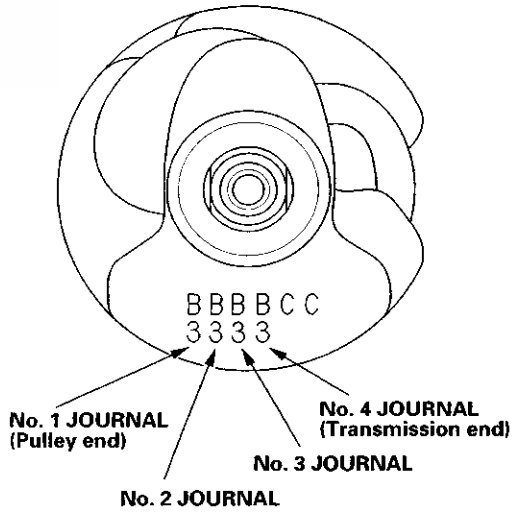
1 or I	A or I	B or II	C or III	D or IIII
2 or II	Red/ Pink	Pink	Pink/ Yellow	Yellow
3 or III	Pink	Pink/ Yellow	Yellow	Yellow/ Green
4 or IIII	Pink/ Yellow	Yellow	Yellow/ Green	Green
5 or IIIII	Yellow	Yellow/ Green	Green	Green/ Brown
6 or IIIIII	Yellow/ Green	Green	Green/ Brown	Brown
	Green	Green/ Brown	Brown	Brown/ Black

Smaller main journal ↓

Smaller bearing (Thicker) →

NOTE: When using bearing halves of different colors, it does not matter which color is used in the top or bottom.

Main Journal Code Locations (Numbers or Bars)



Connecting Rod Bearing Replacement

Connecting Rod Bearing Clearance Inspection

1. Remove the connecting rod cap and the bearing half (see page 7-12).

2. Clean the crankshaft rod journal and bearing half with a clean shop towel.

3. Place a strip of plastigage across the rod journal.

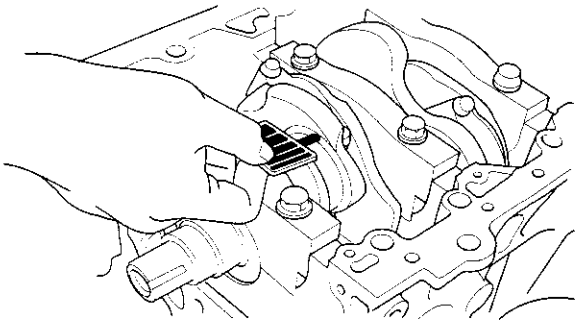
4. Reinstall the bearing half and the cap, and tighten the bolts.

   NOTE:
   - Apply new engine oil to the bolt threads and flanges.
   - Do not rotate the crankshaft during inspection.

   Tightening Torque:
   20 N·m (2.0 kgf·m, 14 lbf·ft) + 90 °

5. Remove the rod cap and the bearing half and measure the widest part of the plastigage.

   Connecting Rod Bearing-to-Journal Oil Clearance
   Standard (New): 0.020—0.044 mm (0.0008—0.0017 in.)
   Service Limit: 0.050 mm (0.0020 in.)



6. If the plastigage measures too wide or too narrow, remove the upper half of the bearing, then install a new, complete bearing with the same color code, and recheck the clearance. Do not file, shim, or scrape the bearings or the caps to adjust clearance.

7. If the plastigage shows the clearance is still incorrect, try the next larger or smaller bearing (the color listed above or below that one), and check clearance again. If the proper clearance cannot be obtained by using the appropriate larger or smaller bearings, replace the crankshaft and start over (see page 7-12).

(cont'd)

Connecting Rod Bearing Replacement (cont'd)

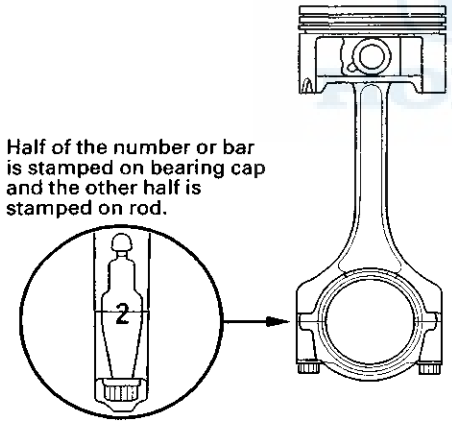
Connecting Rod Bearing Selection

Each connecting rod falls into one of four tolerance ranges (from 0 to 0.024 mm (0.0009 in.), in 0.006 mm (0.0002 in.) increments) depending on the size of its big end bore.
It's then stamped with a number or bar (1, 2, 3, or 4/I, II, III, or IIII) indicating the range. You may find any combination of 1, 2, 3, or 4/I, II, III, or IIII in any engine.

Normal Bore Size: 58.0 mm (2.28 in.)

Inspect the connecting rod for cracks and heat damage.

Connecting Rod Journal Code Locations
Numbers or bars have been stamped on the side of each connecting rod as a code for the size of the big end. Use them, and the letters or bars stamped on the crank (codes for rod journal size), to choose the correct bearings. If the codes are indecipherable because of an accumulation of dirt and dust, do not scrub them with a wire brush or scraper. Clean them only with solvent or detergent.



Bearing Identification
Color code is on the edge of the bearing

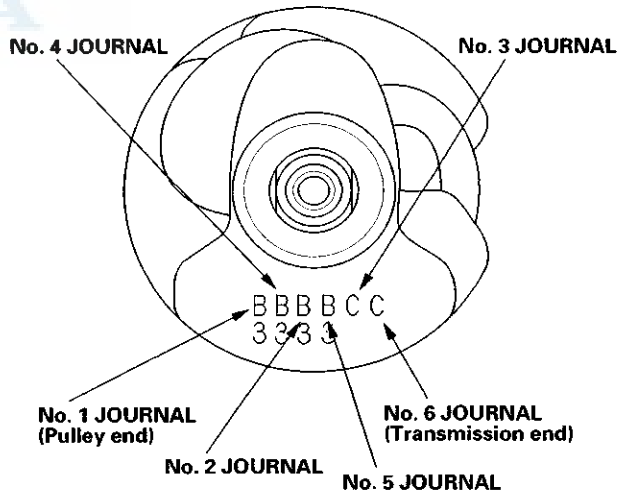
Larger big end bore →

Smaller rod journal	1 or I	2 or II	3 or III	4 or IIII
A or I	Pink	Pink/ Yellow	Yellow	Yellow/ Green
B or II	Pink/ Yellow	Yellow	Yellow/ Green	Green
C or III	Yellow	Yellow/ Green	Green	Green/ Brown
D or IIII	Yellow/ Green	Green	Green/ Brown	Brown
E or IIIII	Green	Green/ Brown	Brown	Brown/ Black
F or IIIIII	Green/ Brown	Brown	Brown/ Black	Black

Smaller bearing (Thicker) →

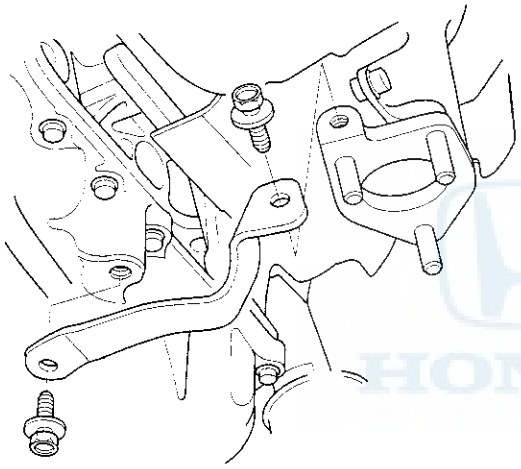
NOTE: When using bearing halves of different colors, it does not matter which color is used in the top or bottom.

Connecting Rod Journal Code Locations (Letters or Bars)

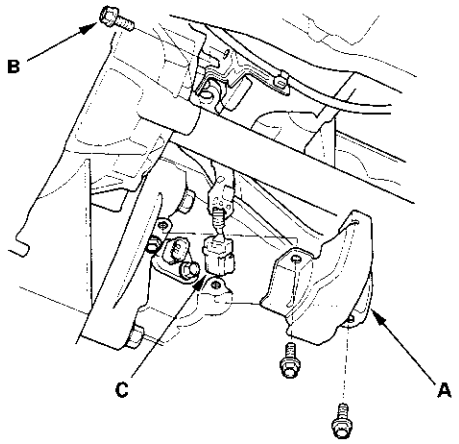


Oil Pan Removal

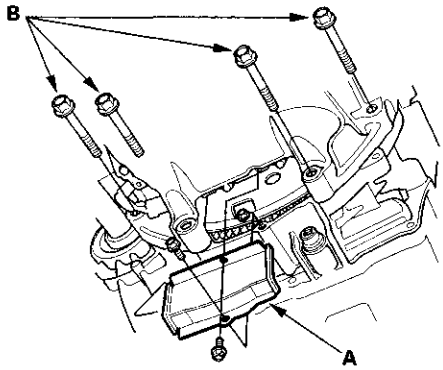
1. If the engine is already out of the vehicle, go to step 6.
2. Raise the vehicle on the lift.
3. Drain the engine oil (see page 8-14).
4. Remove the splash shield (see step 27 on page 5-5).
5. Remove exhaust pipe A (see step 31 on page 5-6).
6. Remove the rear warm up three way catalytic converter (rear WU-TWC) bracket.



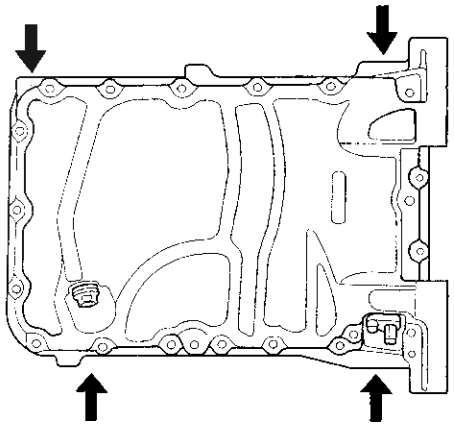
7. Remove the crankshaft position (CKP) sensor cover (A) and the bolt (B), then disconnect the CKP sensor connector (C).



8. Remove the clutch/torque converter cover (A) and the four bolts (B) securing the transmission.



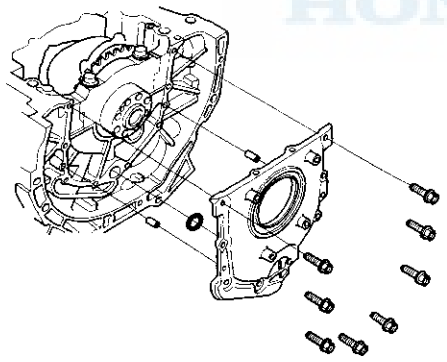
9. Remove the bolts securing the oil pan.
10. Using a flat blade screwdriver, separate the oil pan from the engine block in the places shown.



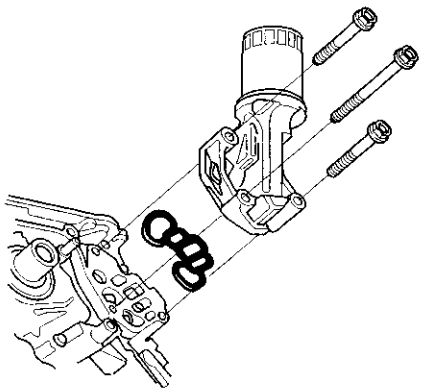
11. Remove the oil pan.

Crankshaft and Piston Removal

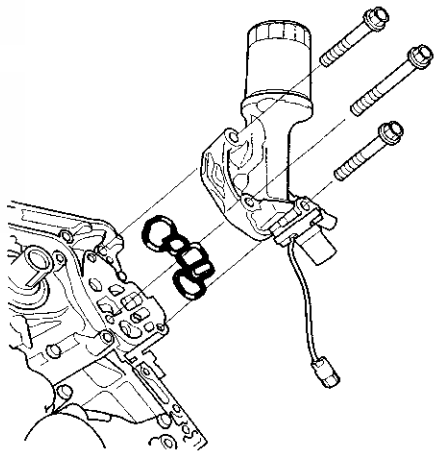
1. Remove the engine/transmission (see page 5-3).
2. Remove the transmission:
   - Manual transmission (see page 13-18)
   - Automatic transmission (see page 14-233)
3. M/T model: Remove the flywheel (see page 12-22).
4. A/T model: Remove the drive plate (see page 14-258).
5. Remove the cylinder heads:
   - J35Z2 engine (see page 6-34)
   - J35Z3 engine (see page 6-99)
6. Remove the timing belt drive pulley from the crankshaft:
   - J35Z2 engine (see page 6-28)
   - J35Z3 engine (see page 6-93)
7. Remove the oil pan (see page 7-11).
8. Remove the engine block end cover.



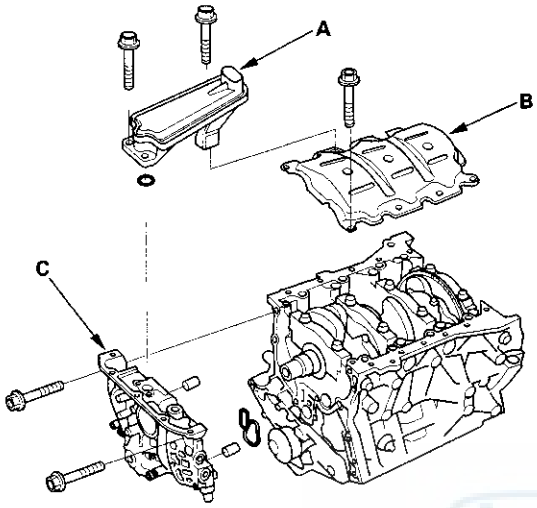
9. J35Z2 engine: Remove the oil filter base/oil filter assembly.



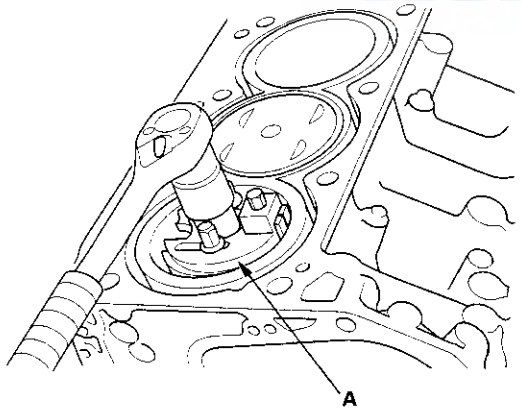
10. J35Z3 engine: Remove the rocker arm oil control solenoid/oil filter assembly.



11. Remove the oil screen (A), the baffle plate (B), and the oil pump (C).

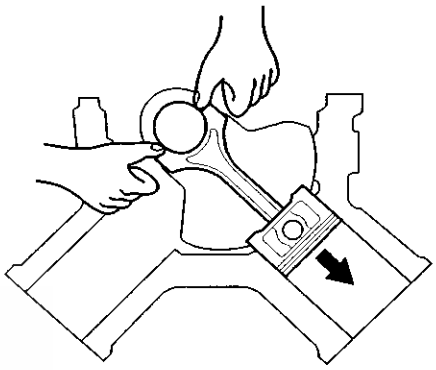


12. If you can feel a ridge of metal or hard carbon around the top of any cylinder, remove it with a ridge reamer (A). Follow the reamer manufacturer's instructions. If the ridge is not removed, it may damage the piston as it's pushed out.

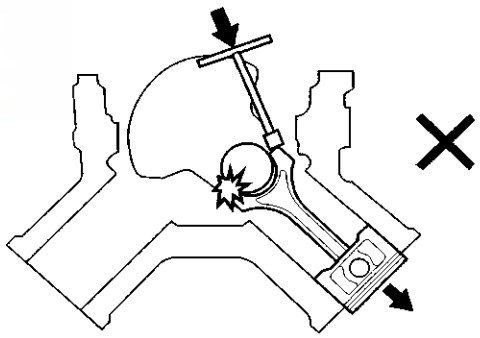


13. Remove the connecting rod caps after setting the crank pin at bottom dead center (BDC) for each cylinder. Remove the piston/connecting rod assembly by pushing on the connecting rod. Take care not to damage the oil jets, the crank pin, or the cylinder with the connecting rod.

CORRECT



INCORRECT



(cont'd)

Crankshaft and Piston Removal (cont'd)

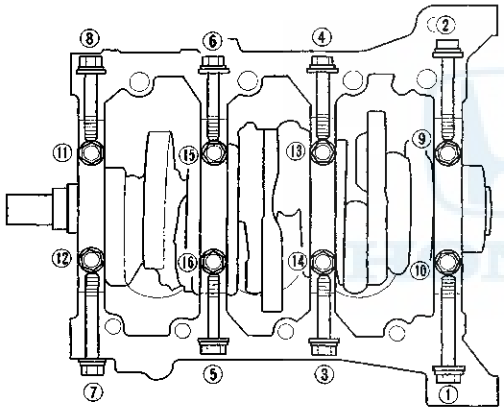
14. Remove the bearing from the cap. Keep all caps/bearings in order.

15. Remove the upper bearing halves from the connecting rods, and set them aside with their respective caps.

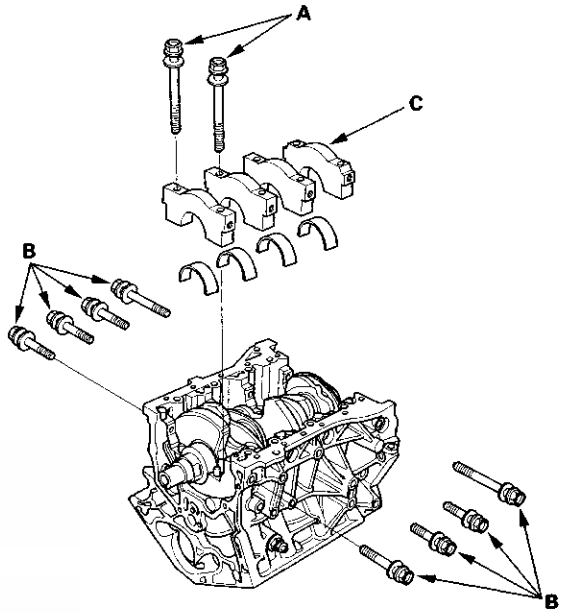
16. After removing a piston/connecting rod assembly, reinstall the cap on the rod.

17. To avoid confusion during reassembly, mark each piston/connecting rod assembly with its cylinder number.

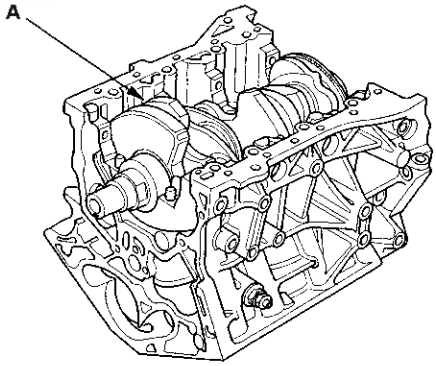
18. Loosen the bearing cap bolts and the bearing cap side bolts in sequence 1/3 turn at a time; repeat the sequence until all bolts are loosened.



19. Remove the bearing cap bolts (A) and the bearing cap side bolts (B), then remove the bearing caps (C).



20. Lift the crankshaft (A) out of the engine block, being careful not to damage the journals and the CKP pulse plate.



21. Remove the CKP pulse plate from the crankshaft (see page 7-29).

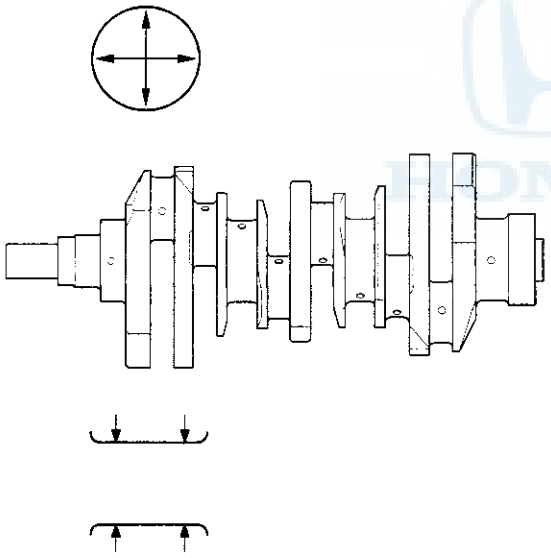
22. Reinstall the main caps and the bearings on the engine block in the proper order.

Crankshaft Inspection

Out-of-Round and Taper

1. Remove the crankshaft from the engine block (see page 7-12).
2. Remove the CKP pulse plate from the crankshaft (see page 7-29).
3. Clean the crankshaft oil passages with pipe cleaners or a suitable brush.
4. Check the keyway slot and the threaded holes for damage.
5. Measure the out-of-round at the middle of each rod and the main journal in two places. The difference between measurements on each journal must not be more than the service limit.

Journal Out-of-Round
Standard (New): 0.005 mm (0.0002 in.) max.
Service Limit: 0.010 mm (0.0004 in.)



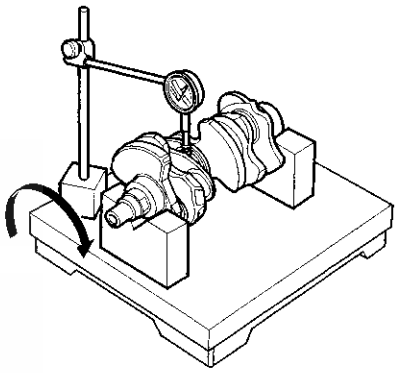
6. Measure the taper at the edges of each rod and main journal. The difference between measurements on each journal must not be more than the service limit.

Journal Taper
Standard (New): 0.005 mm (0.0002 in.) max.
Service Limit: 0.010 mm (0.0004 in.)

Straightness

7. Place the V-blocks on a flat surface.
8. Check the total runout with the crankshaft supported on V-blocks.
9. Measure the runout on all of the main journals. Rotate the crankshaft two complete revolutions. The difference between measurements on each journal must not be more than the service limit.

Crankshaft Total Runout
Standard (New): 0.025 mm (0.0010 in.) max.
Service Limit: 0.030 mm (0.0012 in.)



Block and Piston Inspection

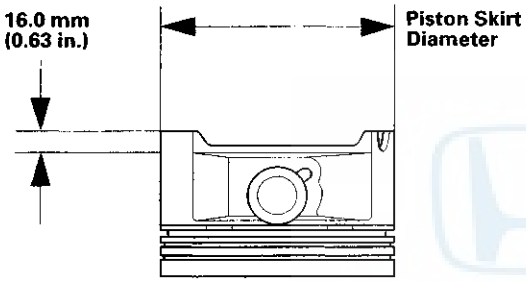
1. Remove the pistons from the engine block (see page 7-12).

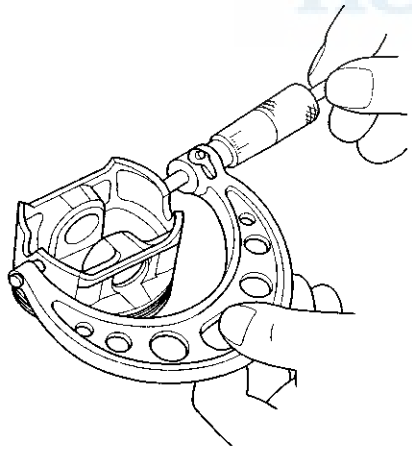
2. Check the pistons for distortion or cracks.

3. Measure the piston skirt diameter at a point 16.0 mm (0.63 in.) from the bottom of the skirt.

Piston Skirt Diameter
Standard (New): 88.975—88.985 mm (3.5029—3.5033 in.)
Service Limit: 88.965 mm (3.5026 in.)

Oversize Piston Skirt Diameter
0.25: 89.225—89.235 mm (3.5128—3.5132 in.)



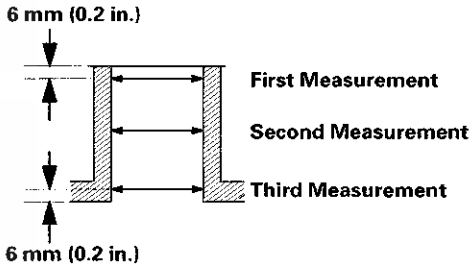


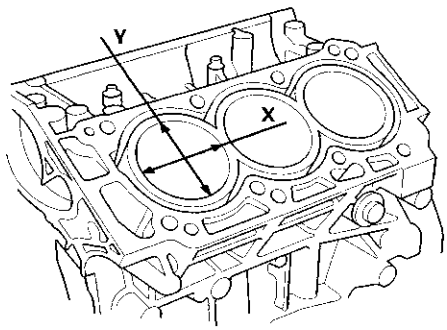
4. Measure the wear and taper in direction X and Y at three levels in each cylinder as shown. If measurements in any cylinder are beyond the oversize bore service limit, replace the engine block. If the engine block has to be rebored, refer to step 7 after reboring.

Cylinder Bore Size
Standard (New): 89.000—89.015 mm (3.5039—3.5045 in.)
Service Limit: 89.065 mm (3.5065 in.)

Oversize
0.25: 89.250—89.265 mm (3.5138—3.5144 in.)
Reboring Limit: 0.25 mm (0.01 in.)

Bore Taper
Limit: (Difference between first and third measurement) 0.05 mm (0.002 in.)

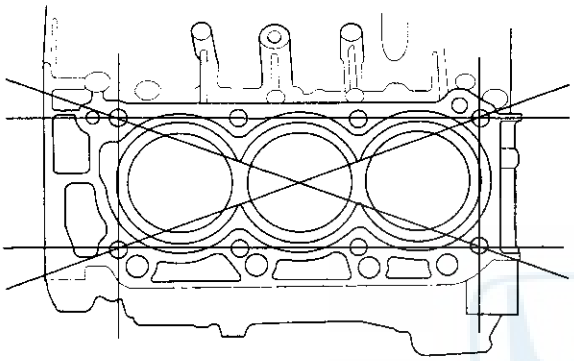


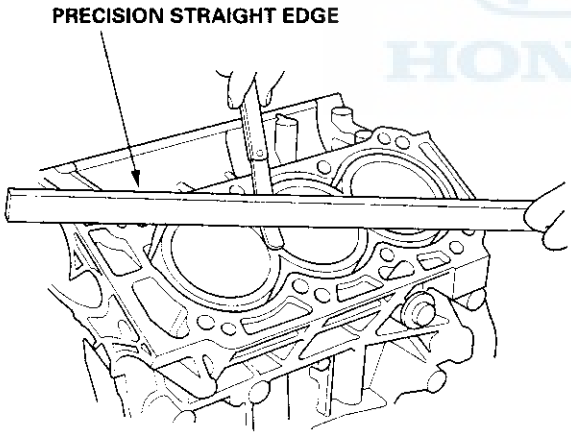


5. Hone any scored or scratched cylinder bores. (see page 7-18).

6. Check the top of the engine block for warpage. Measure along the edges and across the center as shown.

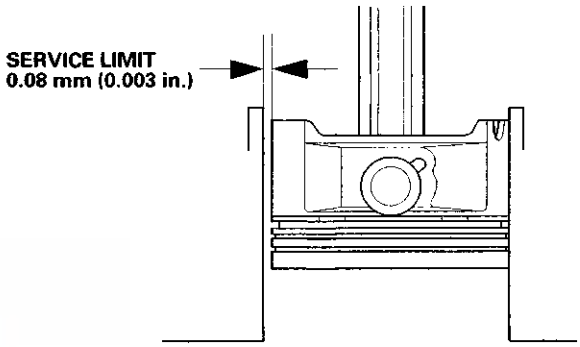
Engine Block Warpage
Standard (New): 0.07 mm (0.003 in.) max.
Service Limit: 0.10 mm (0.004 in.)





7. Calculate the difference between the cylinder bore diameter and the piston diameter. If the clearance is near or exceeds the service limit, inspect the piston and the cylinder bore for excessive wear.

Piston-to-Cylinder Bore Clearance
Standard (New): 0.015—0.040 mm (0.0006—0.0016 in.)
Service Limit: 0.08 mm (0.003 in.)



HONDA

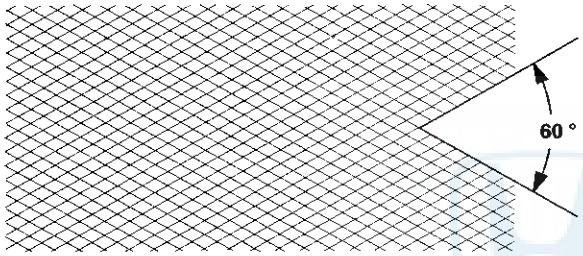
Cylinder Bore Honing

1. Measure the cylinder bores (see step 4 on page 7-16). If the engine block is to be reused, hone the cylinders and remeasure the bores. Only scored or scratched cylinder bores must be honed.

2. Remove the oil jets (see page 8-17).

3. Hone the cylinder bores with honing oil and a fine (400 grit) stone in a 60 degree crosshatch pattern.

   NOTE:
   - Use only a rigid hone with 400 grit or finer stone, such as Sunnen, Ammco, or equivalent.
   - Do not use stones that are worn or broken.



4. When honing is complete, thoroughly clean the engine block of all metal particles. Wash the cylinder bores with hot soapy water, then dry and oil them immediately to prevent rusting.

   NOTE: Never use solvent, it will only redistribute the grit on the cylinder walls.

5. If scoring or scratches are still present in the cylinder bores after honing to the service limit, rebore the engine block. Some light vertical scoring and scratching is acceptable if it is not deep enough to catch your fingernail and does not run the full length of the bore.

6. Install the oil jets (see page 8-17).

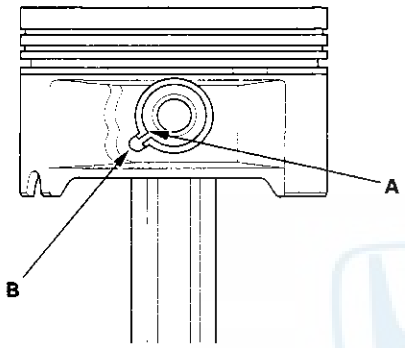
Piston, Pin, and Connecting Rod Replacement

Disassembly

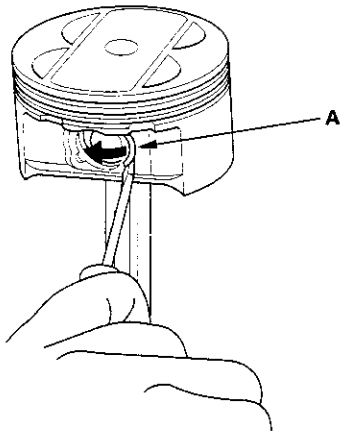
1. Remove the pistons from the engine block (see page 7-12).

2. Apply new engine oil to the piston pin snap rings (A) and turn them in the ring grooves until the end gaps are lined up with the cutouts in the piston pin bores (B).

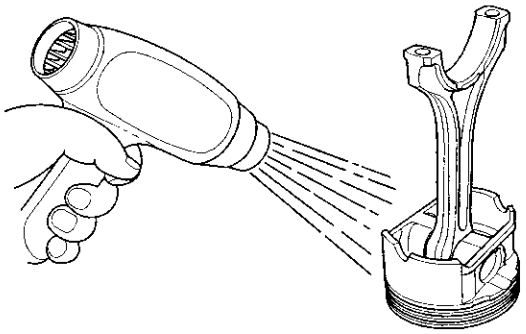
   NOTE: Take care not to damage the ring grooves.



3. Remove the snap rings (A) from both sides of each piston. Start at the cutout in the piston pin bore. Remove the snap rings carefully so they do not go flying or get lost. Wear eye protection.



4. Separately heat each piston and connecting rod assembly to about 158 °F (70 °C), then remove the piston pin.



(cont'd)

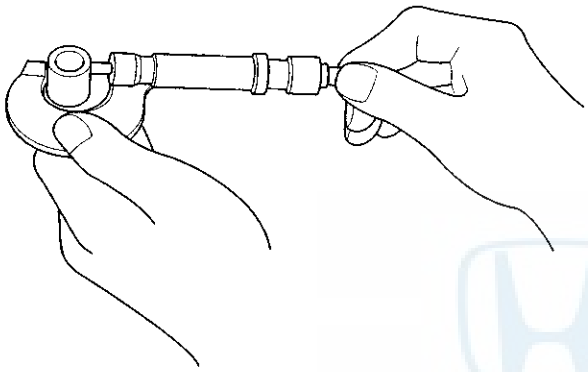
Piston, Pin, and Connecting Rod Replacement (cont'd)

Inspection

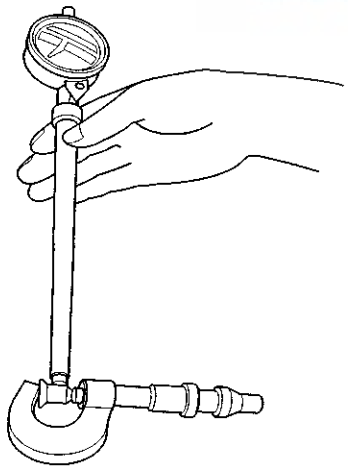
NOTE: Inspect the piston, the piston pin, and the connecting rod when they are at room temperature.

1. Measure the diameter of the piston pin.

Piston Pin Diameter
Standard (New): 21.962—21.965 mm (0.8646—0.8648 in.)
Service Limit: 21.954 mm (0.8643 in.)

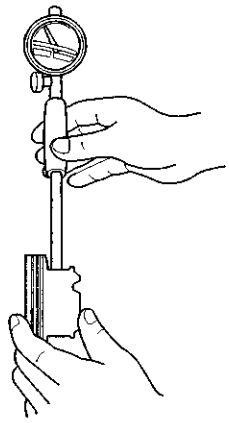


2. Zero the dial indicator to the piston pin diameter.



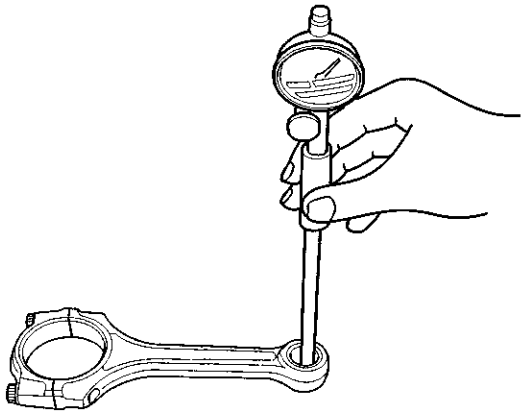
3. Check the difference between the piston pin diameter and the piston pin hole diameter on the piston.

Piston Pin-to-Piston Clearance
Standard (New): −0.0050 to +0.0010 mm (−0.00020 to +0.00004 in.)
Service Limit: 0.004 mm (0.0002 in.)



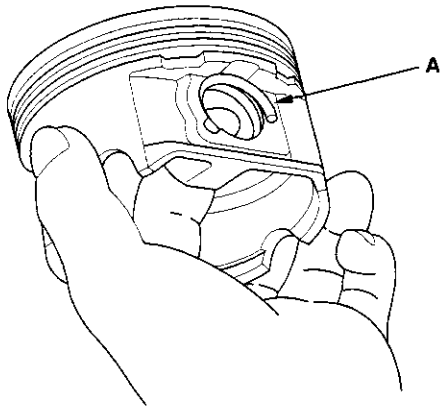
4. Measure the piston pin-to-connecting rod clearance.

Piston Pin-to-Connecting Rod Clearance
Standard (New): 0.005—0.014 mm (0.0002—0.0006 in.)
Service Limit: 0.019 mm (0.0007 in.)



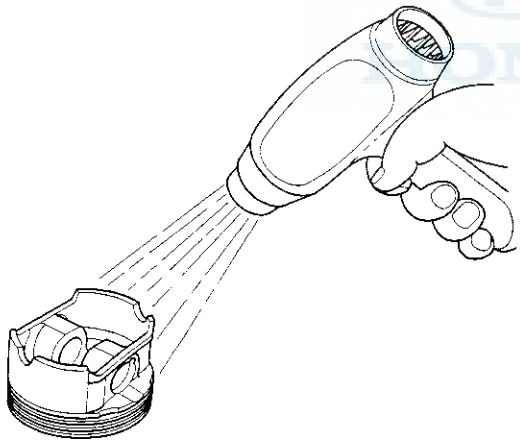
Reassembly

1. Install a piston pin snap ring (A) only on one side.



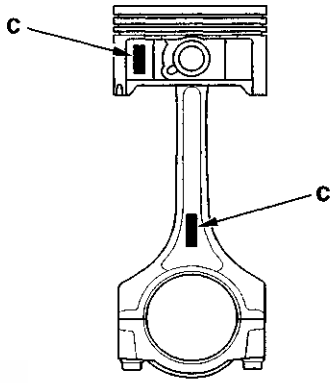
2. Coat the piston pin bore in the piston, the bore in the connecting rod, and the piston pin with new engine oil.

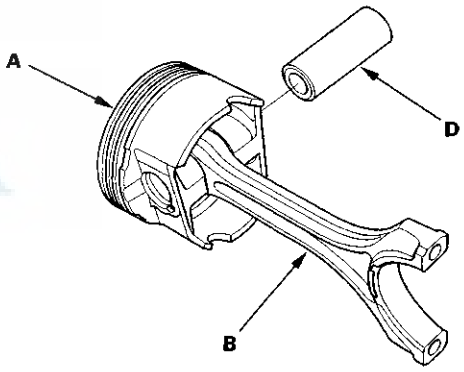
3. Heat the piston to about 158 °F (70 °C).



4. Assemble the piston (A) and the connecting rod (B) with the embossed marks (C) on the same side. Install the piston pin (D).

   NOTE: Apply new engine oil to the piston pin.





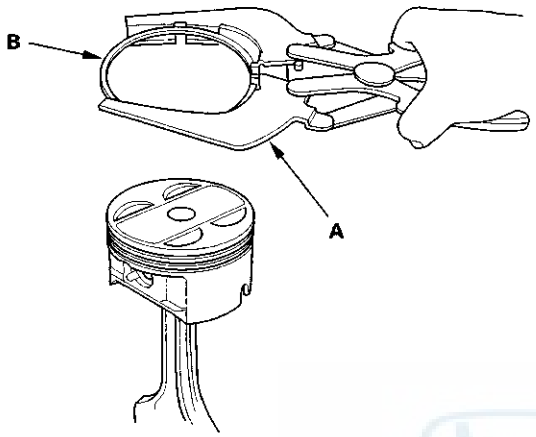
5. Install the remaining snap ring.

6. Reassemble the other pistons the same way.

Piston Ring Replacement

1. Remove the pistons from the engine block (see page 7-12).

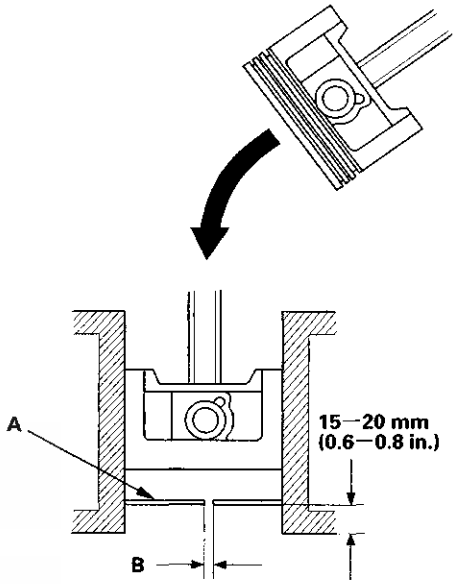
2. Using a ring expander (A), remove the old piston rings (B).



3. Clean all the ring grooves thoroughly with a squared-off broken ring, or a ring groove cleaner with a blade to fit the piston grooves. File down the blade, if necessary. The top ring and second ring grooves are 1.2 mm (0.05 in.) wide, and the oil ring groove is 2.8 mm (0.11 in.) wide. Do not use a wire brush to clean the ring grooves, or cut the ring grooves deeper with the cleaning tool.

   NOTE: If the piston is to be separated from the connecting rod, do not install new rings yet.

4. Using a piston, push a new ring (A) into the cylinder bore 15—20 mm (0.6—0.8 in.) from the bottom.



5. Measure the piston ring end-gap (B) with a feeler gauge:

   - If the gap is too small, check to see if you have the proper rings for your engine.
   - If the gap is too large, recheck the cylinder bore diameter against the wear limits (see step 4 on page 7-16). If the bore is over the service limit, the engine block must be rebored.

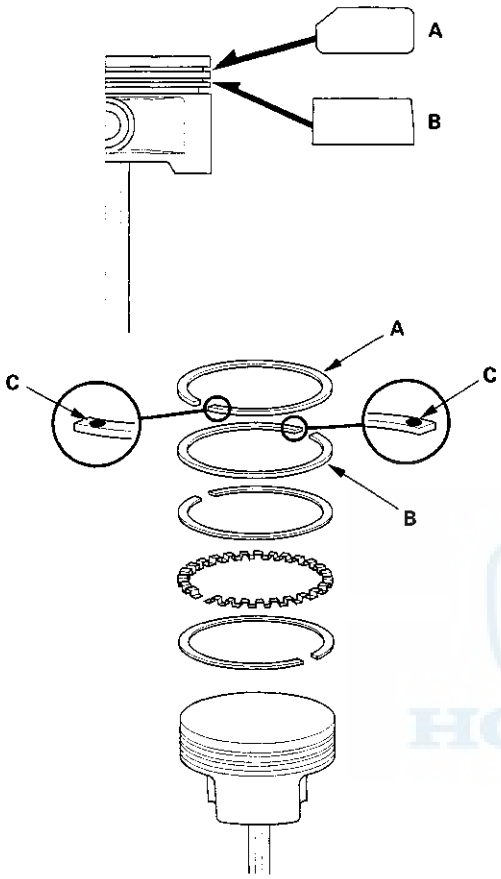
Piston Ring End-Gap

Top Ring:
Standard (New): 0.20—0.35 mm (0.008—0.014 in.)
Service Limit: 0.60 mm (0.024 in.)

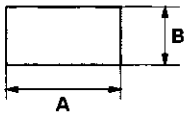
Second Ring:
Standard (New): 0.40—0.55 mm (0.016—0.022 in.)
Service Limit: 0.70 mm (0.028 in.)

Oil Ring:
Standard (New): 0.20—0.70 mm (0.008—0.028 in.)
Service Limit: 0.80 mm (0.031 in.)

6. Install the rings as shown. The top ring (A) has a 1D mark and the second ring (B) has a 2X mark. The manufacturing marks (C) must be facing upward.



Piston Ring Dimensions:



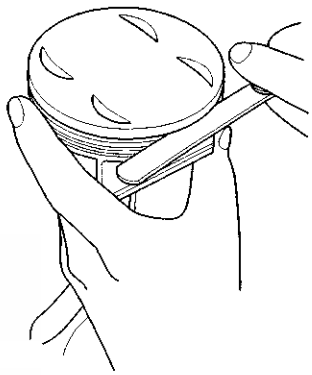
Top Ring (Standard)
A: 3.1 mm (0.12 in.)
B: 1.2 mm (0.05 in.)

Second Ring (Standard)
A: 3.6 mm (0.14 in.)
B: 1.2 mm (0.05 in.)

7. After installing a new set of rings, measure the ring-to-groove clearance:

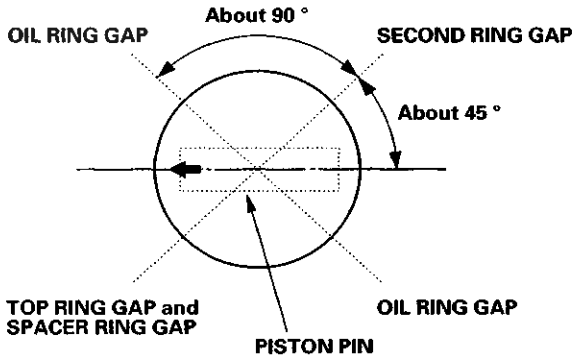
Top Ring Clearance
Standard (New): 0.055—0.080 mm (0.0022—0.0031 in.)
Service Limit: 0.15 mm (0.006 in.)

Second Ring Clearance
Standard (New): 0.030—0.055 mm (0.0012—0.0022 in.)
Service Limit: 0.13 mm (0.005 in.)



8. Rotate the rings in their grooves to make sure they do not bind.

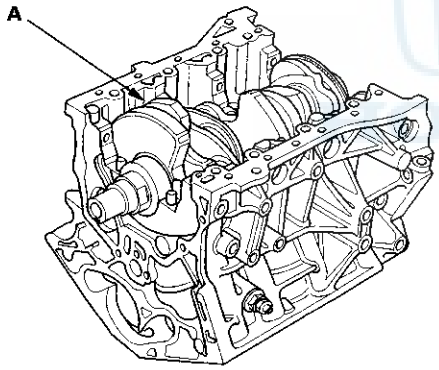
9. Position the ring end gaps as shown:



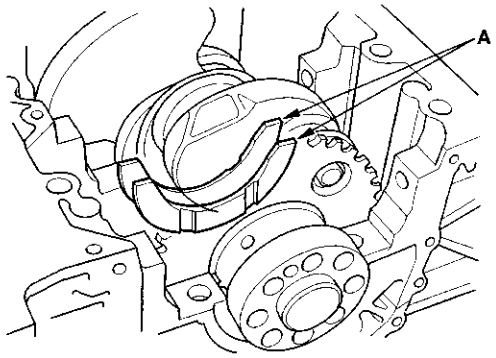
Crankshaft and Piston Installation

Special Tools Required
- Driver 07749-0010000
- Driver attachment, 106 mm 070AD-RCA0200

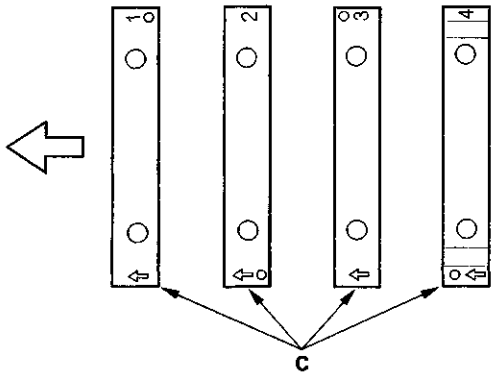
1. Check the connecting rod bearing clearance with plastigage (see page 7-9).
2. Check the main bearing clearance with plastigage (see page 7-7).
3. Install the bearing halves in the engine block and the connecting rods.
4. Apply new engine oil to the inside of the main bearings and the rod bearings.
5. Install the CKP pulse plate to the crankshaft (see page 7-29).
6. Lower the crankshaft (A) into the engine block, being careful not to damage the journals and the CKP pulse plate.

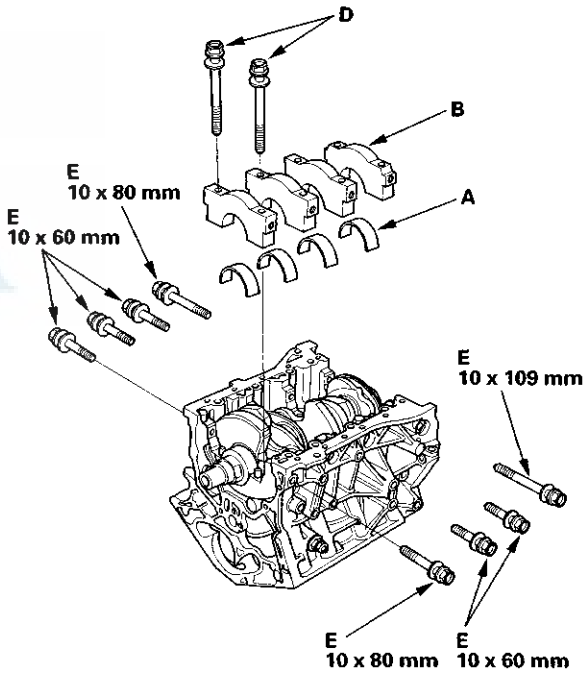


7. Apply new engine oil to the side with the thrust washer groove. Install the thrust washers (A) in the No. 3 journal.



8. Install the bearings (A) and the bearing caps (B) with the arrow (C) facing the timing belt side of the engine block.





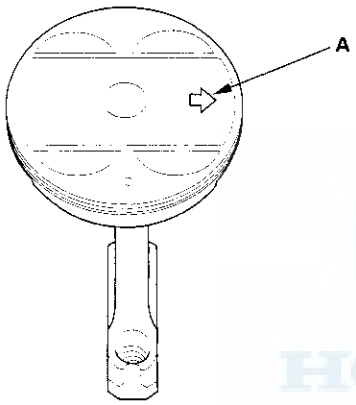
9. Apply new engine oil to the bolt threads and flanges, then loosely install the bearing cap bolts (D) and the bearing cap side bolts (E).

10. Set the crankshaft to bottom dead center (BDC) for the cylinder you are installing the piston in.

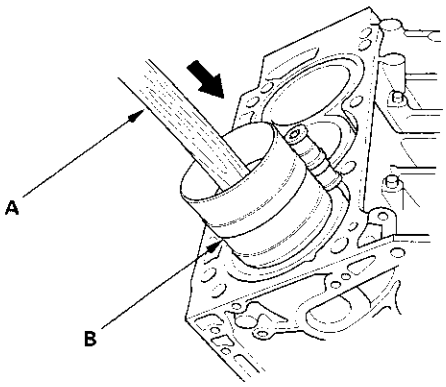
11. Apply new engine oil to the piston, the inside of the ring compressor, and the cylinder bore.

12. Attach the ring compressor to the piston/connecting rod assembly, and check that the bearing is securely in place.

13. Position the piston/connecting rod assembly with the arrow (A) facing the timing belt side of the engine block.

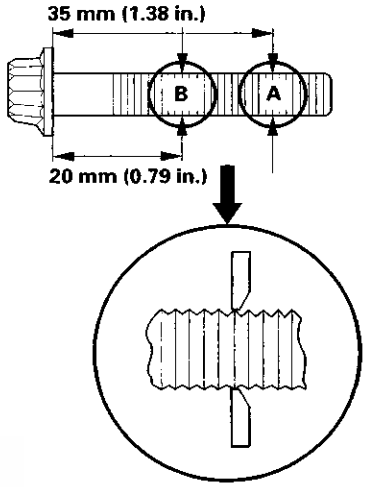


14. Position the piston/connecting rod assembly in the cylinder, and tap it in using the wooden handle of a hammer (A). Maintain downward force on the ring compressor (B) to prevent the rings from expanding before entering the cylinder bore.



15. Stop after the ring compressor pops free, and check the connecting rod-to-rod journal alignment before pushing the piston into place.

16. Measure the diameter of each connecting rod bolt at point A and point B.



17. Calculate the difference in diameter between point A and point B.

Point A—Point B = Difference in Diameter

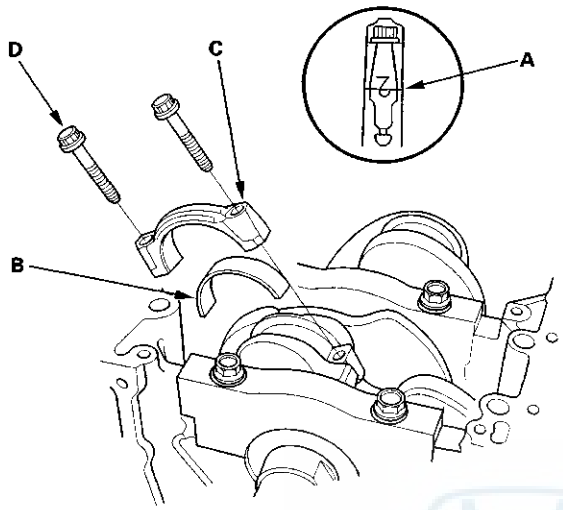
Difference in Diameter
Specification: 0—0.1 mm (0—0.004 in.)

18. If the difference in diameter is out of tolerance, replace the connecting rod bolt.

(cont'd)

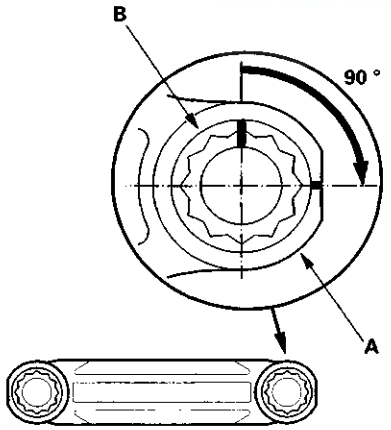
Crankshaft and Piston Installation (cont'd)

19. Line up the mark (A) on the connecting rod and the cap, then install the bearing (B) and the cap (C).



20. Apply new engine oil to the bolt threads and flanges. Tighten the bolts (D) to 20 N·m (2.0 kgf·m, 14 lbf·ft).

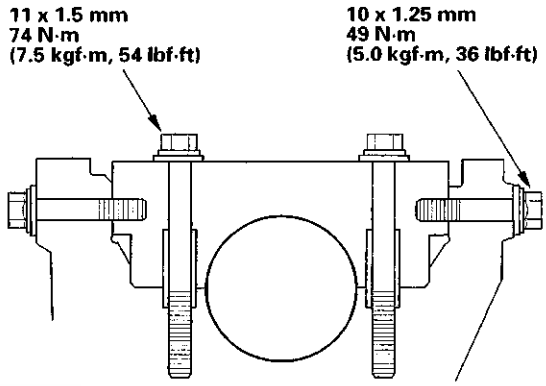
21. Mark the connecting rod (A) and the bolt head (B) as shown.

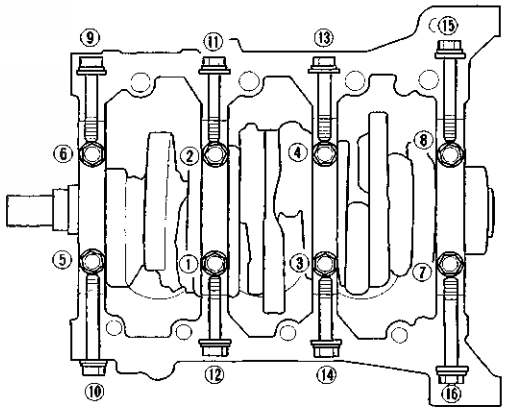


22. Tighten the bolt until the mark on the bolt head lines up with the mark on the connecting rod (turn the bolt 90 °).

    NOTE: Remove the connecting rod bolt if you tightened it beyond the specified angle, and go back to step 16 of the procedure. Do not loosen it back to the specified angle. Repeat step 10 to 22 for the remaining cylinders.

23. Tighten the bearing cap bolts, and then the bearing cap side bolts to the specified torque in the sequence as shown. Repeat the torque sequence again to ensure the bolts are properly torqued.





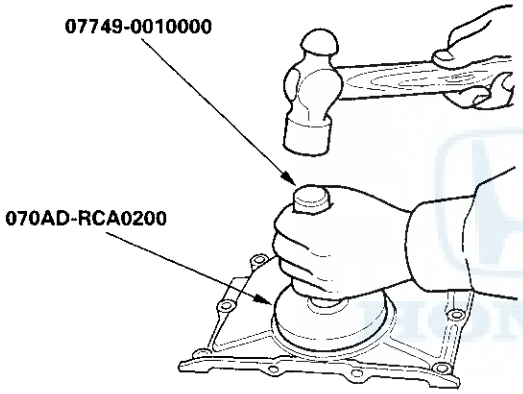
24. Remove all of the old liquid gasket from the engine block end cover mating surfaces, the bolts, and the bolt holes.

25. Clean and dry the engine block end cover mating surfaces.

26. Apply a light coat of new engine oil around the crankshaft oil seal.

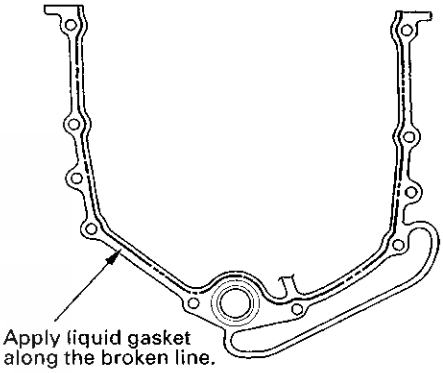
27. Apply a light coat of new engine oil to the lip of the crankshaft oil seal.

28. Drive the new crankshaft oil seal until the driver attachment bottoms on the engine block end cover.



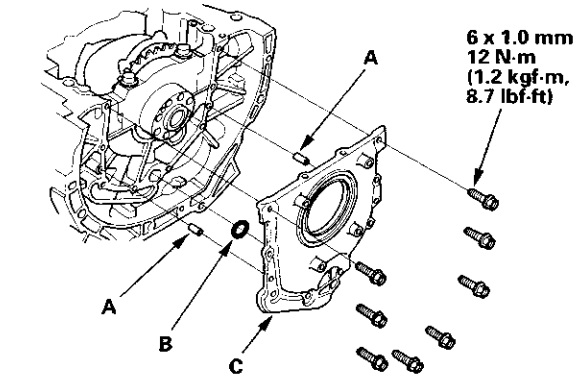
29. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the engine block mating surface of the engine block end cover and to the inside edge of the threaded bolt holes. Install the component within 5 minutes of applying the liquid gasket.

NOTE:
- If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
- If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



30. Install the dowel pins (A), a new O-ring (B), and the engine block end cover (C) on the engine block.

NOTE:
- Wait at least 30 minutes before filling the engine with oil.
- Do not run the engine for at least 3 hours after installing the engine block end cover.



31. Clean the excess grease off the crankshaft, and check the seal for distortion.

(cont'd)

Crankshaft and Piston Installation (cont'd)

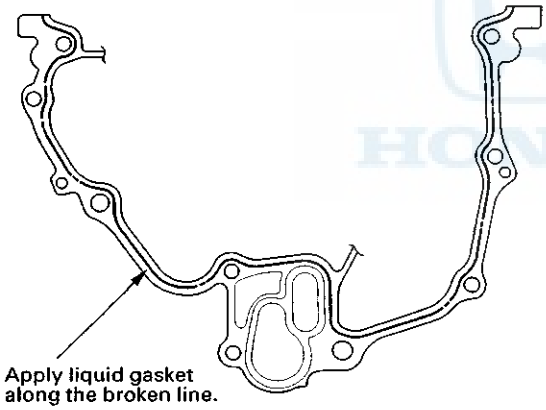
32. Install a new crankshaft oil seal in the oil pump (see step 3 on page 8-20).

33. Remove all of the old liquid gasket from the oil pump mating surfaces, the bolts, and the bolt holes.

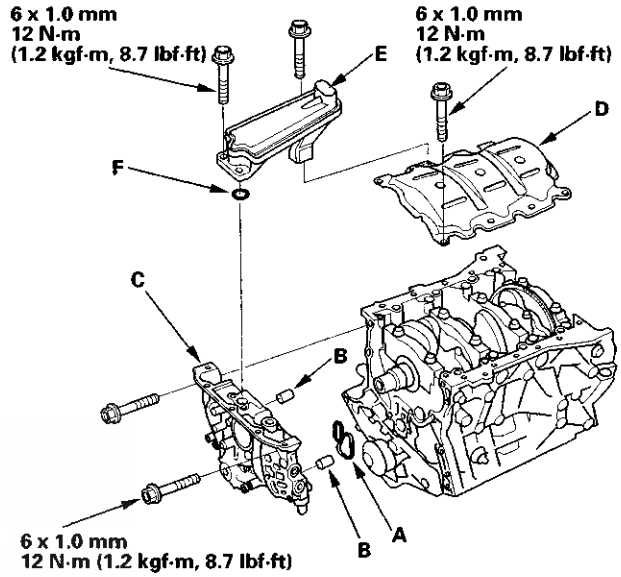
34. Clean and dry the oil pump mating surfaces.

35. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the engine block mating surface of the oil pump and to the inside edge of the threaded bolt holes. Install the component within 5 minutes of applying the liquid gasket.

    NOTE:
    - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
    - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



36. Apply a light coat of new engine oil to the lip of the crankshaft oil seal, and apply new engine oil to the new O-ring (A).

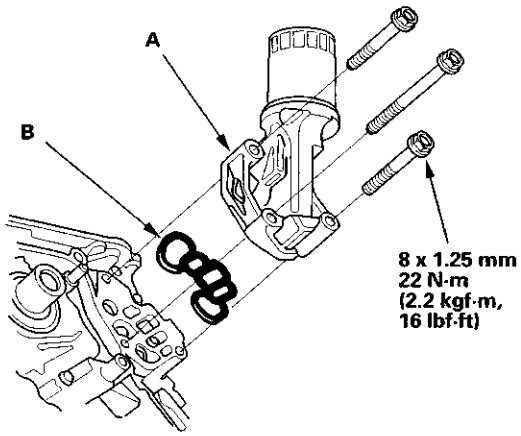


37. Install the dowel pins (B), then align the inner rotor with the crankshaft, and install the oil pump (C).

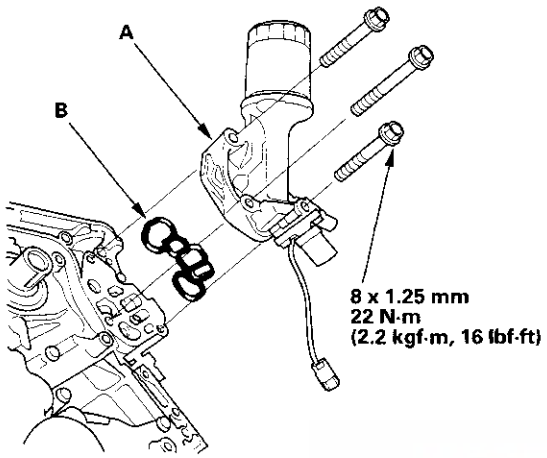
38. Clean the excess grease off the crankshaft, and check the seal for distortion.

39. Install the baffle plate (D), then install the oil screen (E) with a new O-ring (F).

40. J35Z2 engine: Install the oil filter base/oil filter assembly (A), with a new O-ring (B).



41. J35Z3 engine: Install the rocker arm oil control solenoid/oil filter assembly (A), with a new rocker arm oil control solenoid filter (B).



42. Install the oil pan (see page 7-30).

43. Install the timing belt drive pulley to the crankshaft:

    - J35Z2 engine (see page 6-28)
    - J35Z3 engine (see page 6-93)

44. Install the cylinder heads:

    - J35Z2 engine (see page 6-59)
    - J35Z3 engine (see page 6-124)

45. M/T model: Install the flywheel (see page 12-22).

46. A/T model: Install drive plate (see page 14-258).

47. Install the transmission:

    - Manual transmission (see page 13-29)
    - Automatic transmission (see page 14-245)

48. Install the engine/transmission (see page 5-13).

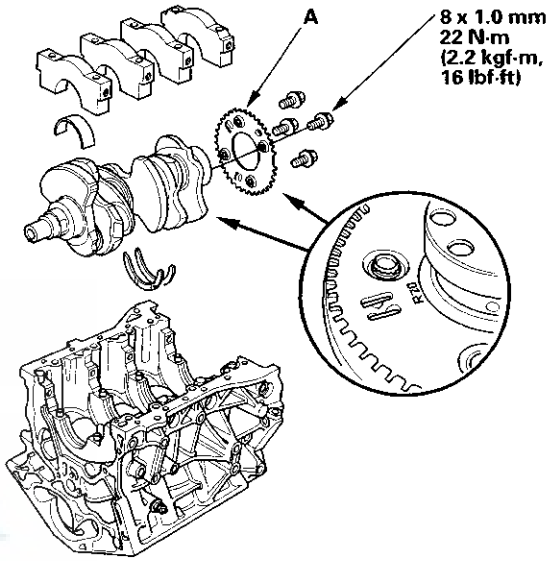
    NOTE: When any crankshaft or connecting rod bearing is replaced, run the engine at idle until it reaches normal operating temperature, then continue to run it for about 15 minutes.

CKP Pulse Plate Replacement

1. Remove the crankshaft from the engine block (see page 7-12).

2. Remove the CKP pulse plate (A) from the crankshaft.

   NOTE: Be careful not to damage the journals and the CKP pulse plate.



3. Install the CKP pulse plate in the reverse order of removal.

HONDA

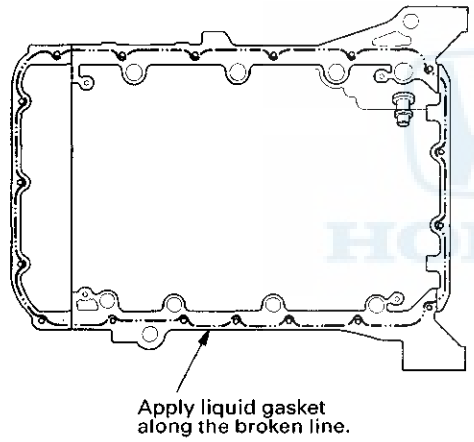
Oil Pan Installation

1. Remove all of the old liquid gasket from the oil pan mating surfaces, the bolts, and the bolt holes.

2. Clean and dry the oil pan mating surfaces.

3. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the oil pan mating surface of the engine block and to the inside edge of the threaded bolt holes. Install the component within 5 minutes of applying the liquid gasket.

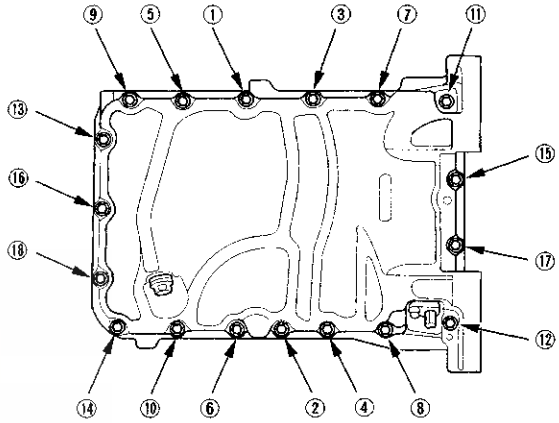
   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply the new liquid gasket.



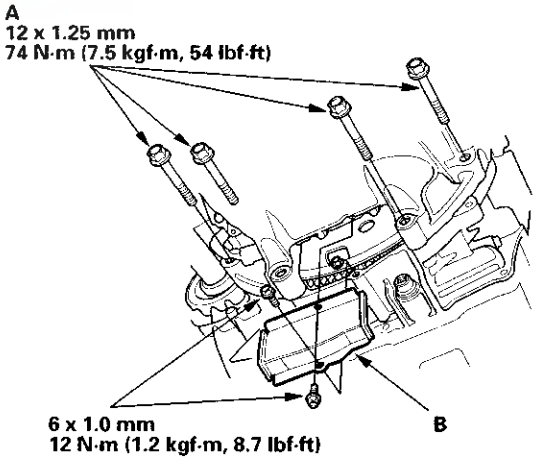
4. Install the oil pan on the engine block.

5. Tighten the bolts in three steps. In the final step, tighten all bolts, in sequence, to 12 N·m (1.2 kgf·m, 8.7 lbf·ft).

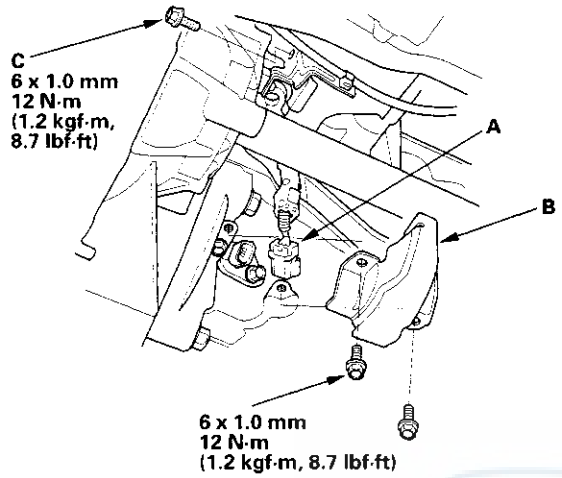
   NOTE:
   - Wait at least 30 minutes before filling the engine with oil.
   - Do not run the engine for at least 3 hours after installing the oil pan.



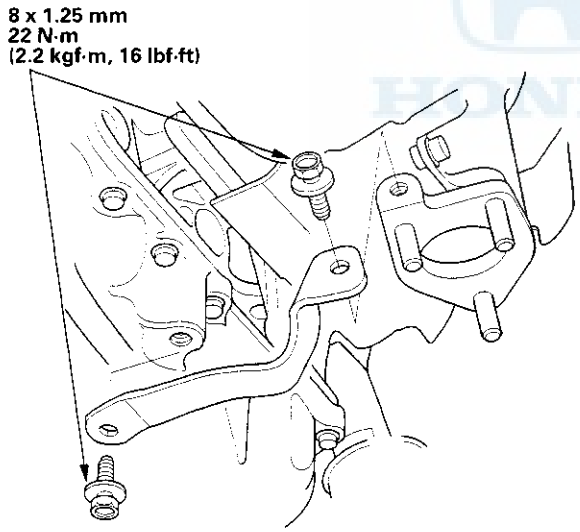
6. Tighten the four bolts (A) securing the transmission, then install the clutch/torque converter cover (B).



7. Connect the crankshaft position (CKP) sensor connector (A), then install the CKP sensor cover (B) and the bolt (C).



8. Install the rear warm up three way catalytic converter (rear WU-TWC) bracket.

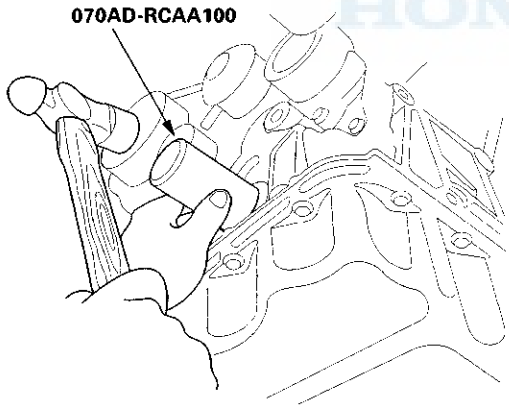


9. If the engine is still in the vehicle, do the following steps.
10. Install exhaust pipe A using new gaskets and new self-locking nuts (see step 47 on page 5-21).
11. Install the splash shield (see step 48 on page 5-22).
12. Refill the engine with the recommended engine oil (see step 4 on page 8-14).

Pulley End Crankshaft Oil Seal Installation - In Car

Special Tools Required
Oil seal driver, 64 mm 070AD-RCAA100

1. Remove the timing belt, the timing belt stopper, and the timing belt drive pulley:
   - J35Z2 engine (see page 6-28)
   - J35Z3 engine (see page 6-93)
2. Remove the pulley end crankshaft oil seal.
3. Clean and dry the crankshaft oil seal housing.
4. Apply a light coat of new engine oil around the crankshaft oil seal.
5. Apply a light coat of new engine oil to the lip of the crankshaft oil seal.
6. Using the oil seal driver, drive in the crankshaft oil seal until the oil seal driver bottoms against the oil pump. When the seal is in place, clean any excess grease off the crankshaft, and check that the oil seal lip is not distorted.

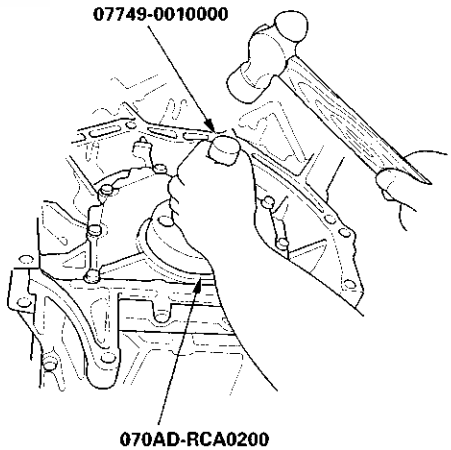


7. Install the timing belt drive pulley, timing belt stopper, and the timing belt:
   - J35Z2 engine (see page 6-28)
   - J35Z3 engine (see page 6-93)

Transmission End Crankshaft Oil Seal Installation - In Car

Special Tools Required
- Driver 07749-0010000
- Driver attachment, 106 mm 070AD-RCA0200

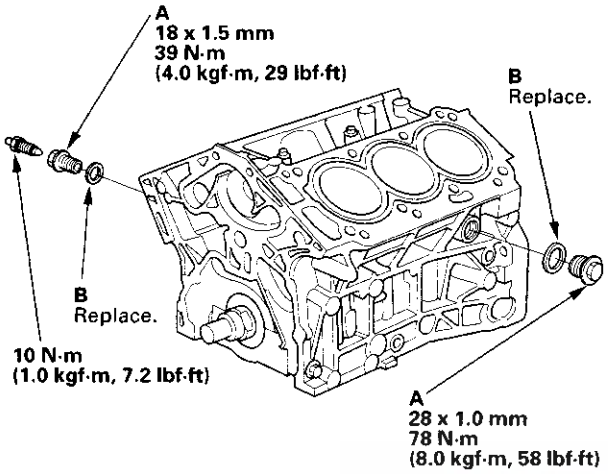
1. M/T model: Remove the transmission (see page 13-14), the clutch disc and the pressure plate (see page 12-19), and the flywheel (see page 12-22).
2. A/T model: Remove the transmission (see page 14-233) and the drive plate (see page 14-258).
3. Remove the transmission end crankshaft oil seal.
4. Clean and dry the crankshaft oil seal housing.
5. Apply a light coat of new engine oil around the crankshaft oil seal.
6. Apply a light coat of new engine oil to the lip of the crankshaft oil seal.
7. Using the driver and the driver attachment, drive in the crankshaft oil seal until the driver attachment bottoms against the engine block end cover. Align the hole in the driver attachment with the pin on the crankshaft.



8. Clean any excess grease off the crankshaft, and check that the oil seal lip is not distorted.
9. M/T model: Install the flywheel (see page 12-22), the clutch disc and the pressure plate (see page 12-19), and the transmission (see page 13-29).
10. A/T model: Install the drive plate (see page 14-258), and the transmission (see page 14-245).

Sealing Bolt Installation

NOTE: When installing the sealing bolt (A), always use a new washer (B).



HONDA

HONDA

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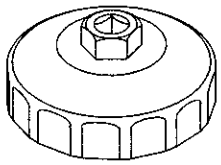
Outline of Model Change

J35Z2 engine and J35Z3 engine have been added.

Engine Lubrication

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07AAA-PLCA100	Oil Filter Wrench	1
②-1	07MAJ-PY4011A	A/T Pressure Hose, 2,210 mm	1
②-2	07MAJ-PY40120	A/T Pressure Hose, Adapter	1
②-3	07406-0020201	A/T Pressure Hose	1
②-4	07406-0070301	A/T Low Pressure Gauge W/Panel	1
③	07NAJ-P07010A	Pressure Gauge Adapter	1
④	07ZAJ-S5AA200	Oil Pressure Hose	1
⑤	070AD-RCAA100	Oil Seal Driver, 64 mm	1



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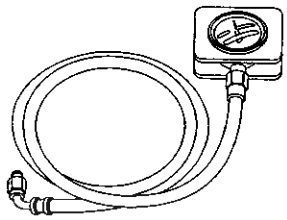
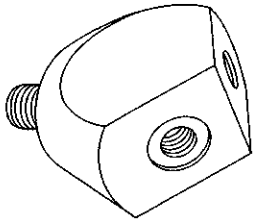


②-1, ②-2, ②-3, ②-4



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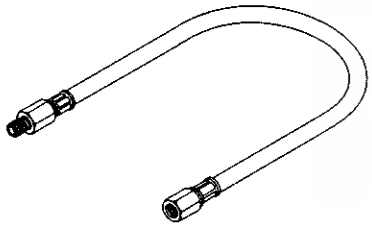

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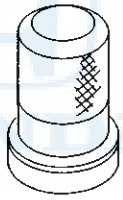
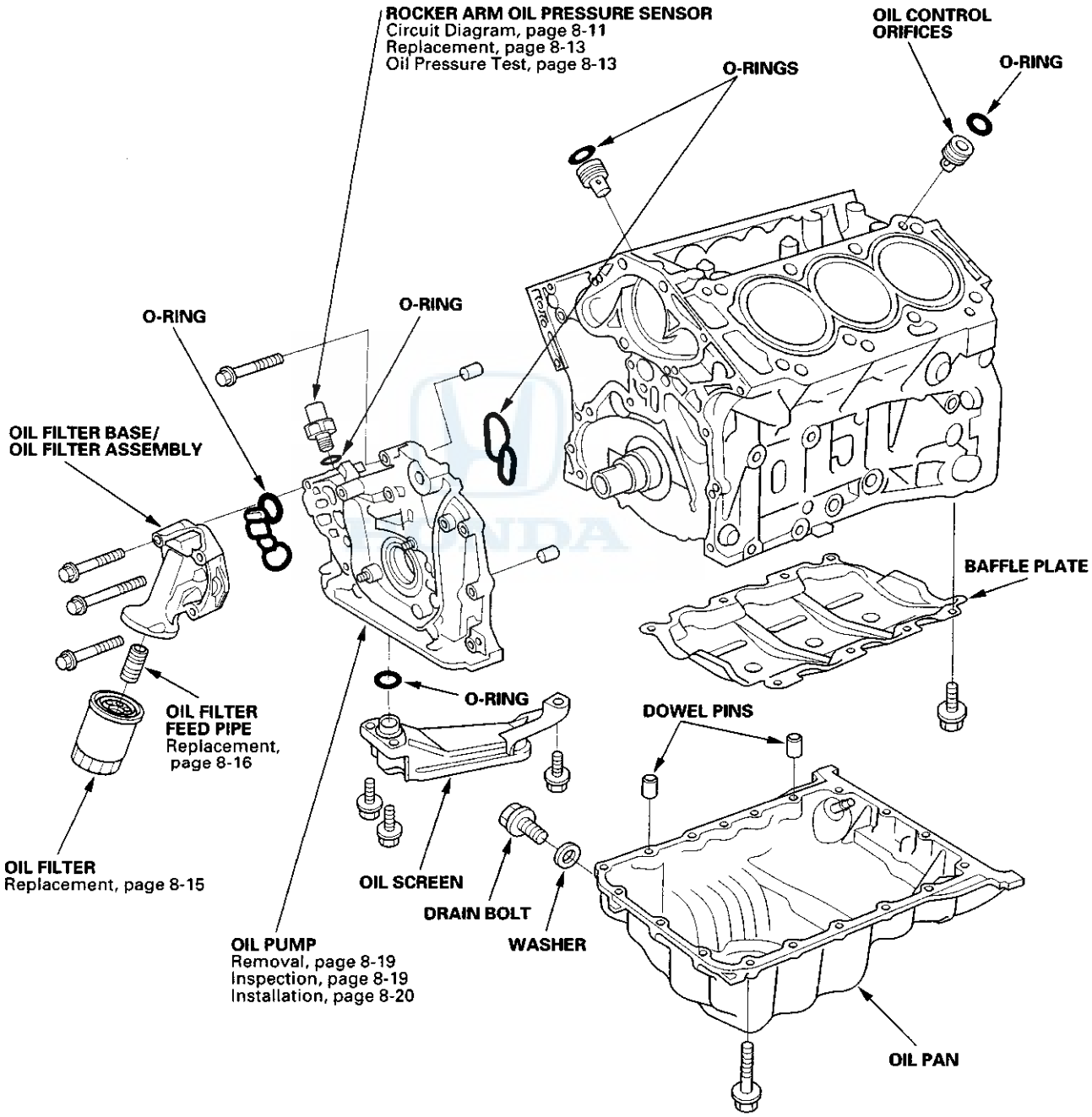


⑤

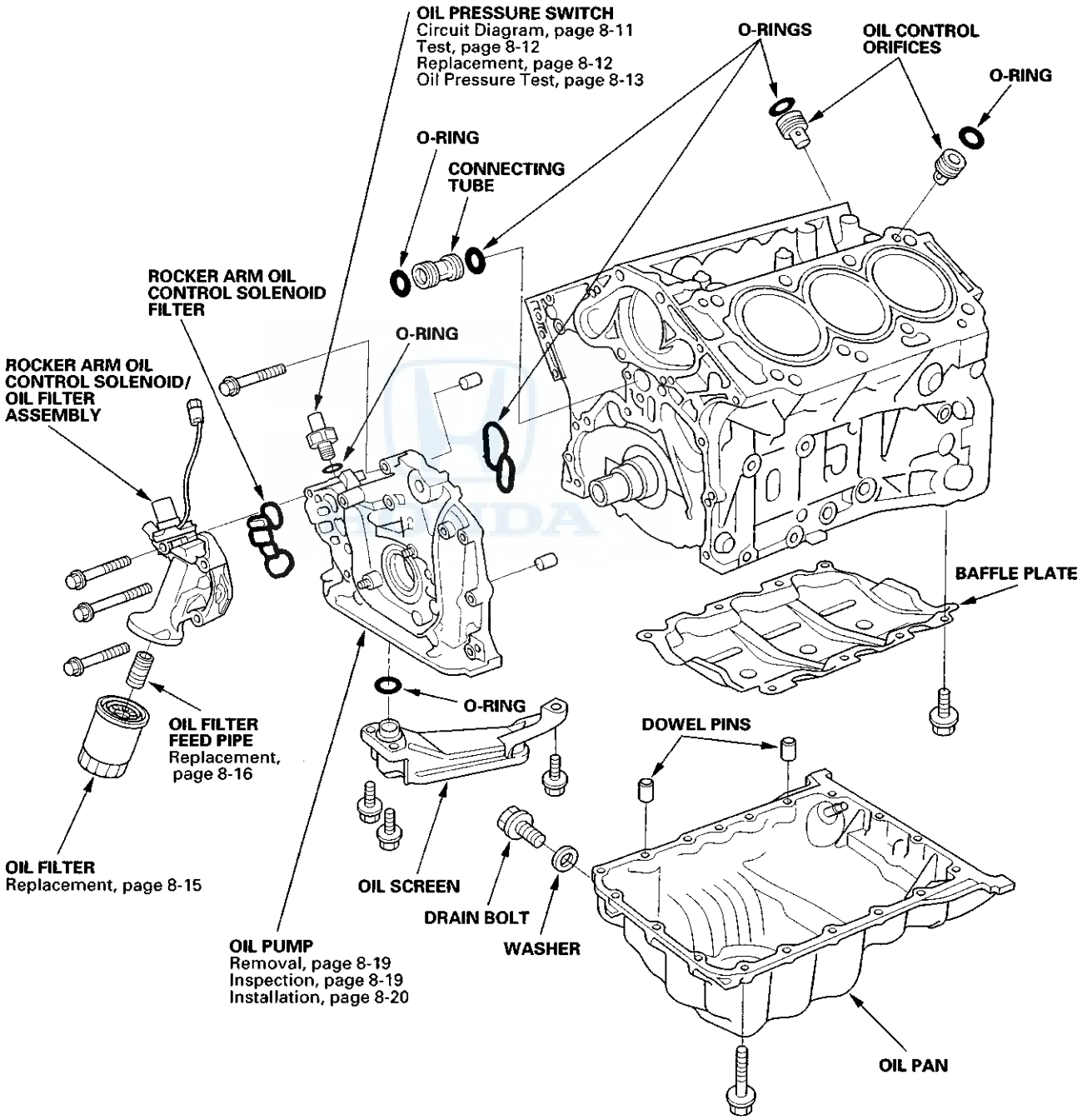
Component Location Index

J35Z2 engine



Component Location Index (cont'd)

J35Z3 engine



Symptom Troubleshooting Index

J35Z2 engine

Symptom	Diagnostic procedure	Also check for
Excessive engine oil consumption	1. Verify the engine oil filler cap, the oil drain bolt, and the oil filter are tight. 2. Check for oil leaks. 3. Check for worn valve guide(s) (see page 6-49) or worn valve stem seal(s) (see page 6-48). 4. Check for damaged or worn piston ring(s) (see page 7-22). 5. Check for damaged or worn engine internal parts (cylinder wall, pistons, etc.) (see page 7-16).	Check the maintenance records, worn out engine oil will burn off at a higher rate
Low oil pressure indicator does not come on with the ignition switch in ON (II)	Do the low oil pressure indicator does not come on with the ignition switch in ON (II) procedure (see page 8-9).	An open in the wire between the powertrain control module (PCM) and the rocker arm oil pressure sensor
Low oil pressure indicator stays on	1. Check the engine oil level. 2. Do the low oil pressure indicator stays on procedure (see page 8-9).	A wire shorted to ground between the PCM and the rocker arm oil pressure sensor

HONDA

(cont'd)

Symptom Troubleshooting Index (cont'd)

J35Z3 engine

Symptom	Diagnostic procedure	Also check for
Excessive engine oil consumption	1. Verify the engine oil filler cap, the oil drain bolt, and the oil filter are tight. 2. Check for oil leaks. 3. Check for worn valve guide(s) (see page 6-114) or worn valve stem seal(s) (see page 6-113). 4. Check for damaged or worn piston ring(s) (see page 7-22). 5. Check for damaged or worn engine internal parts (cylinder wall, pistons, etc.) (see page 7-16).	Check the maintenance records, worn out engine oil will burn off at a higher rate
Low oil pressure indicator does not come on with the ignition switch in ON (II)	1. Do the low oil pressure indicator circuit troubleshooting (Open) (see page 8-7). 2. Test the oil pressure switch (see page 8-12).	An open in the wire between the engine control module (ECM) and the oil pressure switch
Low oil pressure indicator stays on	1. Check the engine oil level. 2. Do the low oil pressure indicator circuit troubleshooting (Short) (see page 8-8). 3. Test the oil pressure switch (see page 8-12). 4. Check the engine oil pressure (see page 8-13). 5. Check the oil filter for clogging. 6. Check the oil screen for clogging. 7. Check the relief valve (see page 8-18). 8. Test the oil pump (see page 8-19).	A wire shorted to ground between the ECM and the oil pressure switch

Low Oil Pressure Indicator Circuit Troubleshooting (Open)

J35Z3 engine

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the engine control module (ECM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
4. Check for DTCs (see page 11-3). If a DTC is present, diagnose, and repair the cause before continuing with this test.
5. Check the OIL PRESSURE SWITCH in the PGM-FI DATA LIST with the HDS.

   Is ON indicated?

   YES—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).■

   NO—Go to step 6.
6. Turn the ignition switch to LOCK (0).
7. Check the oil pressure switch (see page 8-12).

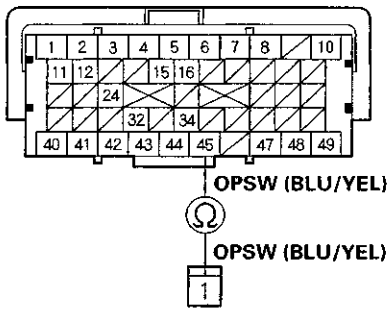
   Is the oil pressure switch OK?

   YES—Go to step 8.

   NO—Replace the oil pressure switch (see page 8-12).■
8. Turn the ignition switch to ON (II), and jump the SCS line with the HDS, then turn the ignition switch to LOCK (0).

   NOTE: This step must be done to protect the ECM from damage.
9. Disconnect ECM connector C (49P) and the oil pressure switch connector.
10. Check for continuity between ECM connector terminal C45 and the oil pressure switch connector.

ECM CONNECTOR C (49P)
Terminal side of female terminals



OIL PRESSURE SWITCH CONNECTOR
Wire side of female terminal

Is there continuity?

YES—Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM, replace the original ECM (see page 11-282).■

NO—Repair open in the wire between the oil pressure switch and ECM connector terminal C45.■

Low Oil Pressure Indicator Circuit Troubleshooting (Short)

J35Z3 engine

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the engine control module (ECM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
4. Check for DTCs (see page 11-3). If a DTC is present, diagnose, and repair the cause before continuing with this test.
5. Start the engine, and check the OIL PRESSURE SWITCH in the PGM-FI DATA LIST with the HDS.

   Is OFF indicated?

   YES—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324). ■

   NO—Go to step 6.
6. Turn the ignition switch to LOCK (0).
7. Disconnect the oil pressure switch connector.
8. Start the engine, and check the OIL PRESSURE SWITCH in the PGM-FI DATA LIST with the HDS.

   Is OFF indicated?

   YES—Turn the ignition switch to LOCK (0), then go to step 9.

   NO—Turn the ignition switch to LOCK (0), then go to step 10.
9. Check the oil pressure switch (see page 8-12).

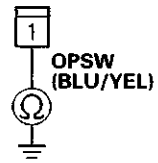
   Is the oil pressure switch OK?

   YES—Do the oil pressure test (see page 8-13).

   NO—Replace the oil pressure switch (see page 8-12). ■
10. Turn the ignition switch to ON (II), and jump the SCS line with the HDS, then turn the ignition switch to LOCK (0).

    NOTE: This step must be done to protect the ECM from damage.
11. Disconnect ECM connector C (49P).
12. Check for continuity between the oil pressure switch connector and body ground.

OIL PRESSURE SWITCH CONNECTOR



Wire side of female terminal

Is there continuity?

YES—Repair short to ground in the wire between the oil pressure switch and ECM connector terminal C45. ■

NO—Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM, replace the original ECM (see page 11-282). ■

Symptom Troubleshooting

Low oil pressure indicator does not come on with the ignition switch in ON (II)

J35Z2 engine

1. Turn the ignition switch to ON (II).
2. Do the gauge control module self-diagnostic function (see page 22-68).

   Is the gauge control module OK?

   YES—Go to step 3.

   NO—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).■
3. Completely opens the throttle.
4. Check the MAP SENSOR and BARO SENSOR in the PGM-FI DATA LIST with the Honda Diagnostic System (HDS).

   MAP SENSOR—BARO SENSOR = "A"

   Is "A" 19.9 kPa (0.20 kgf/cm², 2.89 psi) or less?

   YES—Go to step 5.

   NO—Replace the powertrain control module (PCM) (see page 11-282).■
5. Check the ROCKER ARM OIL PRESSURE SENSOR in the PGM-FI DATA LIST with the HDS.

   Is the 19.0 kPa (0.19 kgf/cm², 2.76 psi) or less?

   YES—Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM, then recheck. If the symptom/indicator goes away with a known-good PCM, replace the original PCM (see page 11-282).■

   NO—Replace rocker arm oil pressure sensor (see page 8-13).■

Special Tools Required
- Oil pressure hose 07ZAJ-S5AA200
- A/T pressure hose 07406-0020201
- A/T low pressure gauge w/panel 07406-0070301
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure hose, adapter 07MAJ-PY40120
- Pressure gauge adapter 07NAJ-P07010A

Low oil pressure indicator stays on

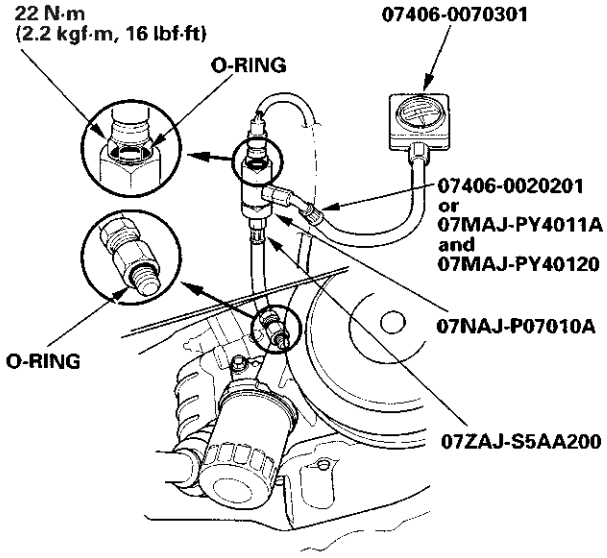
J35Z2 engine

1. Check the engine oil level.

   Is the engine oil level normal?

   YES—Go to step 2.

   NO—Add engine oil to the normal level, then recheck.
2. Remove the rocker arm oil pressure sensor (see page 8-13).
3. Install the oil pressure hose, the A/T pressure hose, the A/T low pressure gauge w/panel, the A/T pressure hose, 2,210 mm and the A/T pressure hose, adapter as shown, then install the rocker arm oil pressure sensor to the pressure gauge adapter.



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Symptom Troubleshooting (cont'd)

4. Warm up the engine.

5. At the idling of an engine, check the oil pressure gauge valve.

   70 kPa (0.7 kgf/cm², 10 psi) or less?

   YES—Go to step 6.

   NO—Check the following items:■

   - Blocking of oil filter.
   - Blocking of oil screen.
   - Inspect the oil pressure relief valve (see page 8-18).
   - Check the oil pump (see page 8-19).

6. Check the ROCKER ARM OIL PRESSURE SENSOR in the PGM-FI DATA LIST with the HDS.

   Is the 19.0 kPa (0.19 kgf/cm², 2.76 psi) or less?

   YES—Go to step 11.

   NO—Go to step 7.

7. Turn the ignition switch to LOCK (0).

8. Jump the SCS line with the HDS.

9. Disconnect the PCM connector C (49P).

10. Turn the ignition switch to ON (II).

    Does the low oil pressure indicator go off?

    YES—Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see page 11-282).■

    NO—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).■

11. Check the MAP SENSOR and BARO SENSOR in the PGM-FI DATA LIST with HDS.

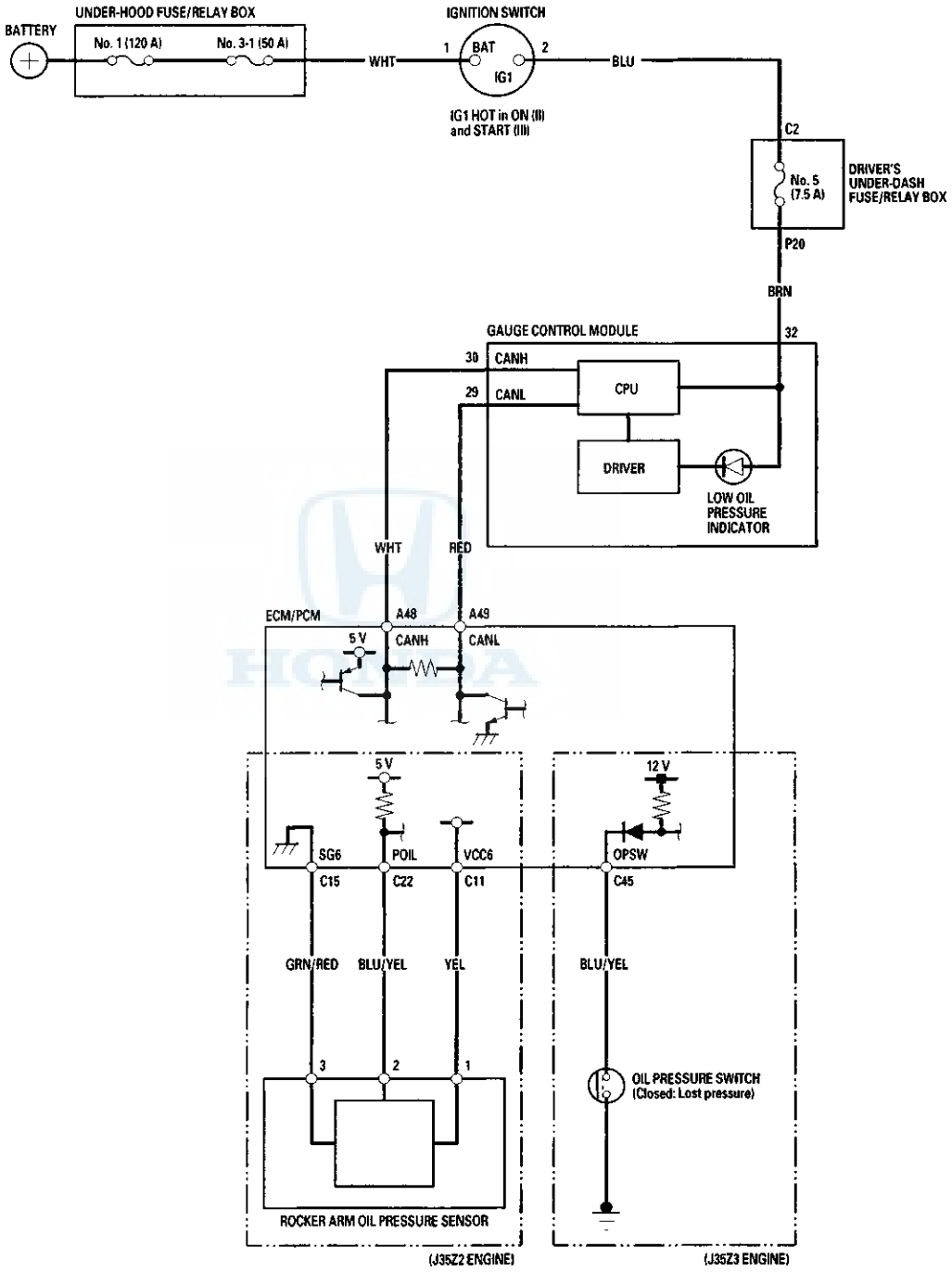
    BARO SENSOR—MAP SENSOR="A"

    Is "A" 19.9 kPa (0.20 kgf/cm², 2.89 psi) or less?

    YES—Replace rocker arm oil pressure sensor (see page 8-13).■

    NO—Replace the PCM (see page 11-282).■

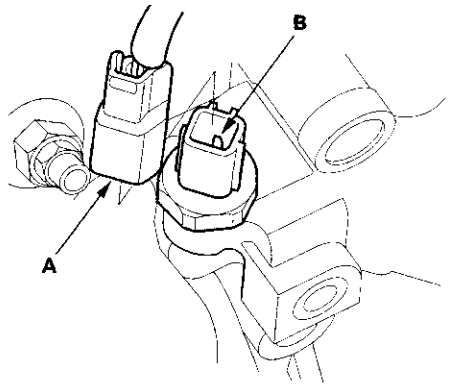
Low Oil Pressure Indicator Circuit Diagram



Oil Pressure Switch Test

J35Z3 engine

1. Disconnect the oil pressure switch connector (A).

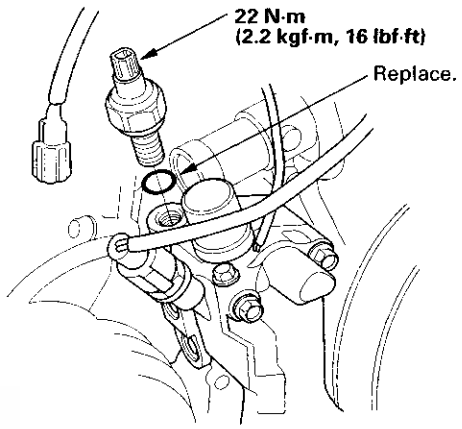


2. Check for continuity between the positive terminal (B) and the engine (ground). There should be continuity with the engine stopped. There should be no continuity with the engine running.

Oil Pressure Switch Replacement

J35Z3 engine

1. Disconnect the oil pressure switch connector, then remove the oil pressure switch.

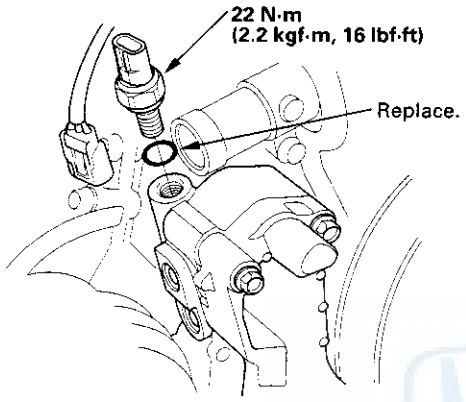


2. Install the oil pressure switch with a new O-ring.
3. Connect the oil pressure switch connector.

Rocker Arm Oil Pressure Sensor Replacement

J35Z2 engine

1. Disconnect the rocker arm oil pressure sensor connector, then remove the rocker arm oil pressure sensor.



2. Install the rocker arm oil pressure sensor with a new O-ring.

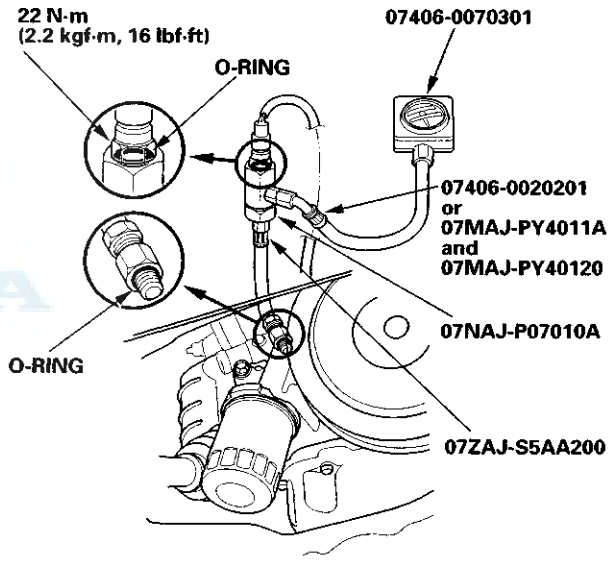
3. Connect the rocker arm oil pressure sensor connector.

Oil Pressure Test

Special Tools Required
- Oil pressure hose 07ZAJ-S5AA200
- A/T pressure hose 07406-0020201
- A/T low pressure gauge w/panel 07406-0070301
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure hose, adapter 07MAJ-PY40120
- Pressure gauge adapter 07NAJ-P07010A

If the low oil pressure indicator stays on with the engine running, check the engine oil level. If the oil level is correct:

1. J35Z2 engine: Remove the rocker arm oil pressure sensor (see page 8-13).
   J35Z3 engine: Remove the oil pressure switch (see page 8-12).



2. Install the oil pressure hose, the A/T pressure hose, the A/T low pressure gauge w/panel, the A/T pressure hose, 2,210 mm and the A/T pressure hose, adapter.

3. J35Z2 engine: Install the rocker arm oil pressure sensor to the pressure gauge adapter.
   J35Z3 engine: Install the oil pressure switch to the pressure gauge adapter.

(cont'd)

Oil Pressure Test (cont'd)

4. Start the engine. Shut it off immediately if the gauge registers no oil pressure. Repair the problem before continuing.

5. Allow the engine to reach operating temperature (fan comes on at least twice). The pressure should be:

   Engine Oil Temperature: 176 °F (80 °C)
   Engine Oil Pressure:
   At Idle: 70 kPa (0.7 kgf/cm², 10 psi) min.
   At 3,000 rpm: 490 kPa (5.0 kgf/cm², 71 psi) min.

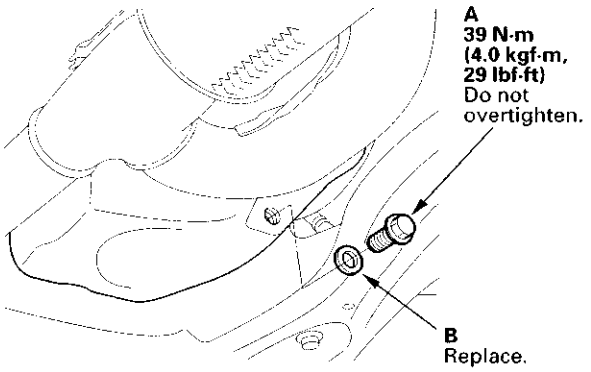
6. If oil pressure is not within specifications, inspect these items:

   - Blocking of oil filter.
   - Blocking of oil screen.
   - Inspect the oil pressure relief valve (see page 8-18).
   - Inspect the oil pump (see page 8-19).

Engine Oil Replacement

1. Warm up the engine.

2. Remove the drain bolt (A), and drain the engine oil.



3. Reinstall the drain bolt with a new washer (B).

4. Refill with the recommended oil (see page 3-2).

   Capacity
   At Oil Change:
   4.0 L (4.2 US qt)
   At Oil Change including Filter:
   4.3 L (4.5 US qt)
   After Engine Overhaul:
   5.0 L (5.3 US qt)

5. Run the engine for more than 3 minutes, then check for oil leakage.

6. If the maintenance minder required engine oil replacement, reset the maintenance minder (see page 3-4), and this procedure is complete.If the maintenance minder did not require engine oil replacement, go to step 7.

7. Turn the ignition switch to LOCK (0).

8. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).

9. Turn the ignition switch to ON (II).

10. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).

11. Select GAUGES in the BODY ELECTICAL with the HDS.

12. Select ADJUSTMENT in the GAUGES with the HDS.

13. Select SERVICE REMINDER in the ADJUSTMENT with the HDS.

14. Select RESET in the SERVICE REMINDER with the HDS.

15. Select RESETTING THE ENGINE OIL LIFE with the HDS.

    NOTE: If you changed the ATF at the same time with the engine oil, select RESETTING THE ENGINE OIL LIFE AND ATF with the HDS instead.

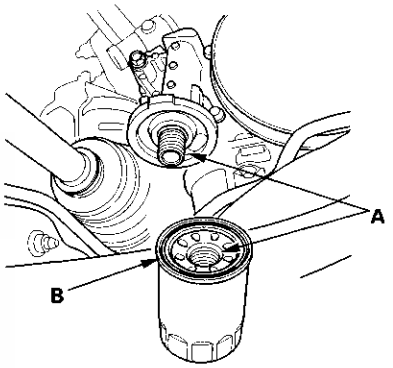
Engine Oil Filter Replacement

Special Tools Required
Oil filter wrench 07AAA-PLCA100

1. Remove the oil filter with the oil filter wrench.

2. Inspect the filter to make sure the rubber seal is not stuck to the oil filter seating surface of the engine.

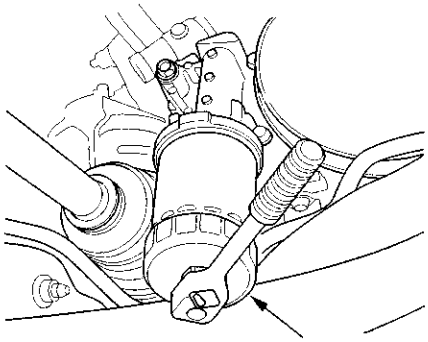
3. Inspect the threads (A) and the rubber seal (B) on the new filter. Clean the seat on the oil filter base, then apply a light coat of new engine oil to the filter rubber seal. Use only filters with a built-in bypass system.



4. Install the oil filter by hand.

5. After the rubber seal seats, tighten the oil filter clockwise with the oil filter wrench.

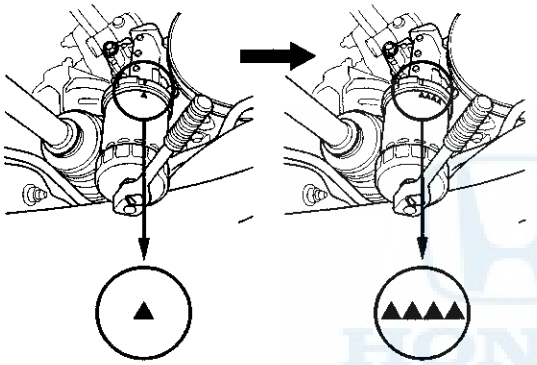
   Tighten: 3/4 Turn Clockwise
   Tightening Torque:12 N·m (1.2 kgf·m, 8.7 lbf·ft)



(cont'd)

Engine Oil Filter Replacement (cont'd)

6. If four numbers or marks (1 to 4 or ▼ to ▼▼▼▼) are printed around the outside of the filter, you can use the following procedure to tighten the filter.
   - Spin the filter on until its seal lightly seats against the oil filter base, and note which number or mark is at the bottom.
   - Tighten the filter by turning it clockwise three numbers or marks from the one you noted. For example, if mark ▼ is at the bottom when the seal is lightly seated, tighten the filter until the mark ▼▼▼▼ comes around to the bottom.



Mark when rubber seal is seated.

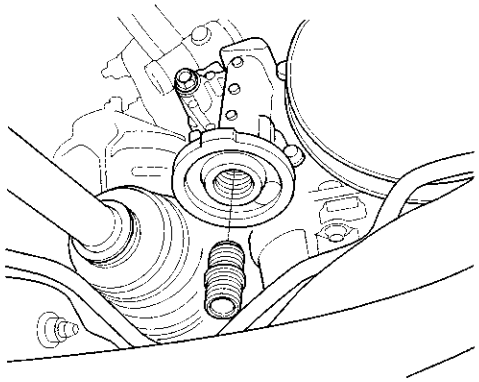
Mark after tightening.

Number or Mark when rubber seal is seated	1 or ▼	2 or ▼▼	3 or ▼▼▼	4 or ▼▼▼▼
Number or Mark after tightening	4 or ▼▼▼▼	1 or ▼	2 or ▼▼	3 or ▼▼▼

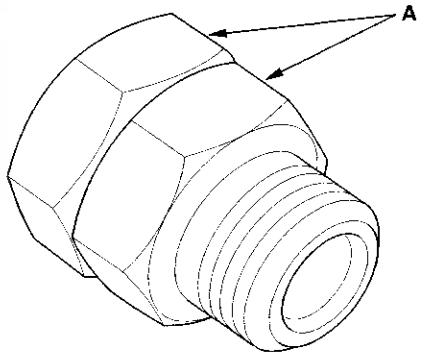
7. After installation, fill the engine with oil up to the specified level, run the engine for more than 3 minutes, then check for oil leakage.

Oil Filter Feed Pipe Replacement

1. Remove the oil filter (see page 18-15).
2. Remove the oil filter feed pipe.



3. Install two 20 x 1.5 mm nuts (A) onto the new oil filter feed pipe, and hold one nut with a wrench, then tighten the other nut.

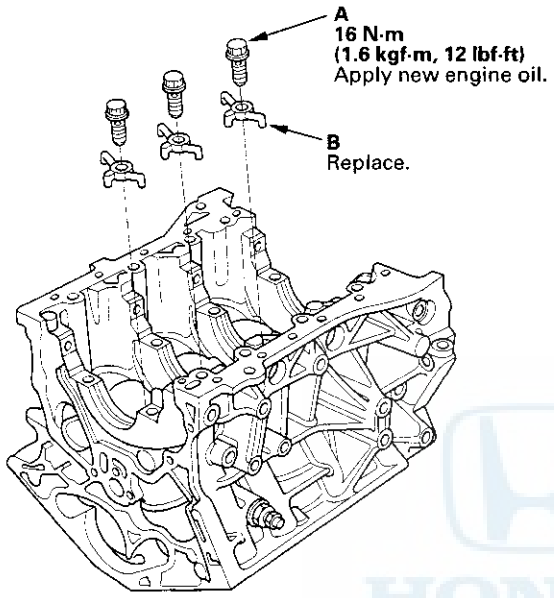


4. Tighten the oil filter feed pipe to 44 N·m (4.5 kgf·m, 33 lbf·ft), then remove the nuts from the oil filter feed pipe.

Oil Jet Replacement

1. Remove the crankshaft from the engine block (see page 7-12).

2. Remove the oil jet bolt (A), then remove the oil jet (B).



3. Carefully install the new oil jet and tighten the oil jet bolt.

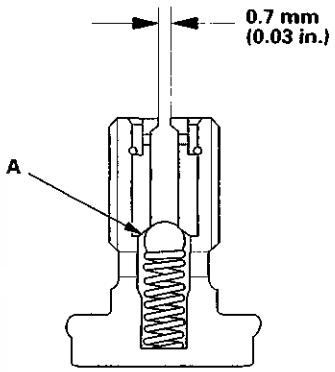
4. Install the crankshaft (see page 7-24).

Oil Jet Bolt Inspection

1. Remove the oil jet bolt (see page 8-17).

2. Inspect the oil jet bolt as follows.

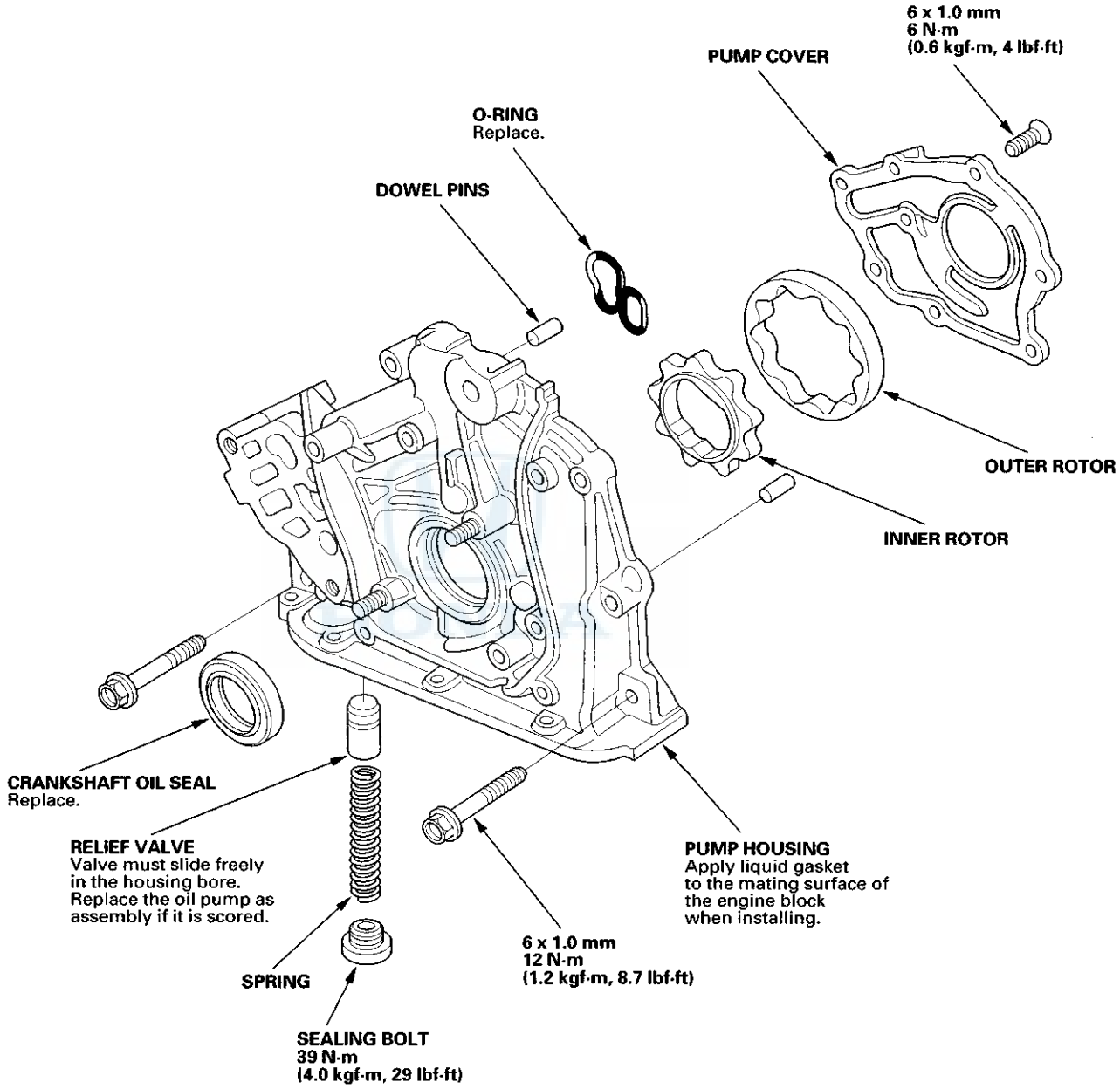
   - Make sure that a 0.6 mm (0.02 in.) diameter drill will go through the oil intake (0.7 mm [0.03 in.] diameter). Make sure the check ball (A) moves smoothly and has a stroke of about 4.0 mm (0.16 in.).
   - Check the oil jet bolt operation with an air nozzle. It should take at least 120 kPa (1.2 kgf/cm², 17 psi) to unseat the check ball.



HONDA

Oil Pump Overhaul

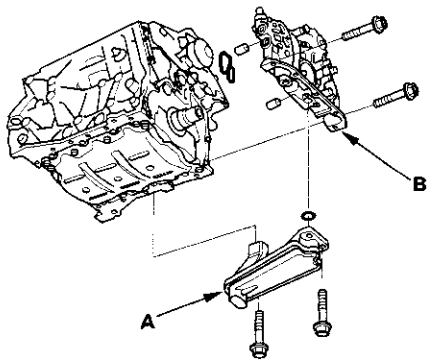
Exploded View



Special Tools Required
Oil seal driver, 64 mm 070AD-RCAA100

Removal

1. Drain the engine oil (see page 8-14).
2. Remove the timing belt:
   - J35Z2 engine (see page 6-16)
   - J35Z3 engine (see page 6-81)
3. Remove the timing belt drive pulley from the crankshaft:
   - J35Z2 engine (see page 6-28)
   - J35Z3 engine (see page 6-93)
4. Attach the chain hoist to the engine hook on the power steering pump bracket (see step 59 on page 5-11).
5. Remove the oil filter base/oil filter assembly (J35Z2 engine) (see step 9 on page 7-12) or rocker arm oil control solenoid/oil filter assembly (J35Z3 engine) (see step 10 on page 7-12).
6. Remove the oil pan (see page 7-11).
7. Remove the oil screen (A).

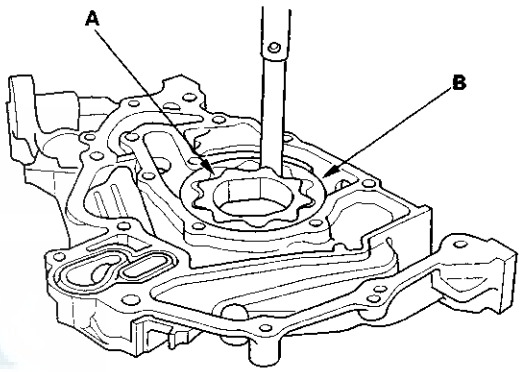


8. Remove the mounting bolts, then remove the oil pump assembly (B).

Inspection

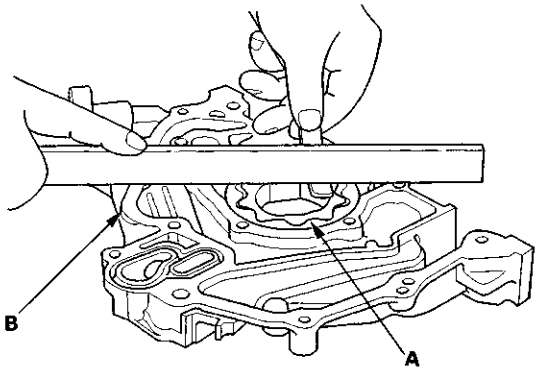
1. Remove the screws from the pump housing, then separate the pump housing and the cover.
2. Check the inner-to-outer rotor radial clearance between the inner rotor (A) and the outer rotor (B). If the inner-to-outer rotor radial clearance exceeds the service limit, replace the oil pump assembly.

Inner Rotor-to-Outer Rotor Radial Clearance
Standard (New): 0.04—0.16 mm (0.002—0.006 in.)
Service Limit: 0.20 mm (0.008 in.)



3. Check the pump housing-to-rotor axial clearance between the rotors (A) and the pump housing (B). If the pump housing-to-rotor axial clearance exceeds the service limit, replace the oil pump assembly.

Pump Housing-to-Rotor Axial Clearance
Standard (New): 0.02—0.07 mm (0.0008—0.003 in.)
Service Limit: 0.12 mm (0.005 in.)

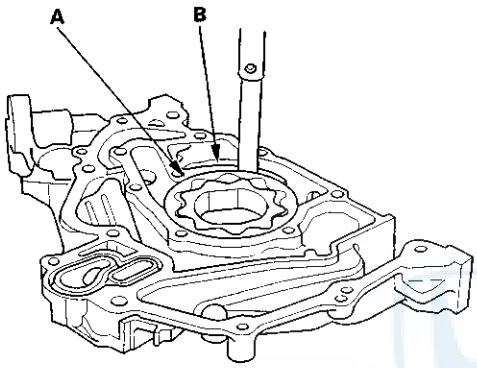


(cont'd)

Oil Pump Overhaul (cont'd)

4. Check the pump housing-to-outer rotor radial clearance between the outer rotor (A) and the pump housing (B). If the pump housing-to-outer rotor radial clearance exceeds the service limit, replace the oil pump assembly.

   Pump Housing-to-Outer Rotor Radial Clearance
   Standard (New): 0.10—0.19 mm (0.004—0.007 in.)
   Service Limit: 0.20 mm (0.008 in.)



5. Inspect both rotors and the pump housing for scoring or other damage. Replace the parts, if necessary.

6. Apply liquid thread lock to the pump housing screws, then install the oil pump cover.

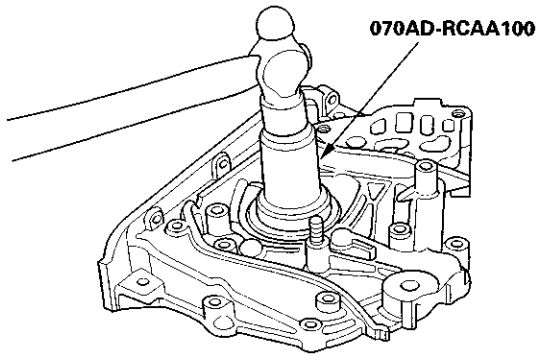
7. Check that the oil pump turns freely.

Installation

1. Remove the old oil seal from the oil pump.

2. Apply a light coat of new engine oil around the crankshaft oil seal.

3. Gently tap in the new oil seal until the oil seal driver bottoms on the pump.

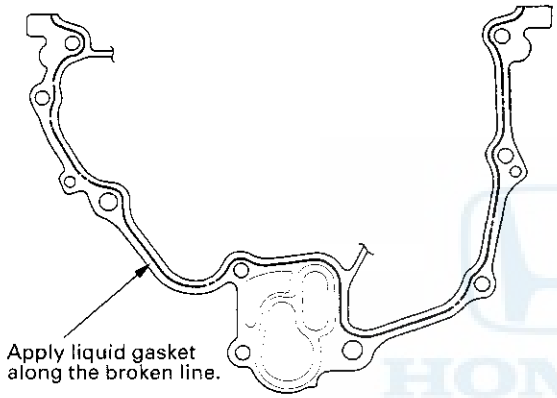


4. Remove all of the old liquid gasket from the oil pump mating surfaces, the bolts, and the bolt holes.

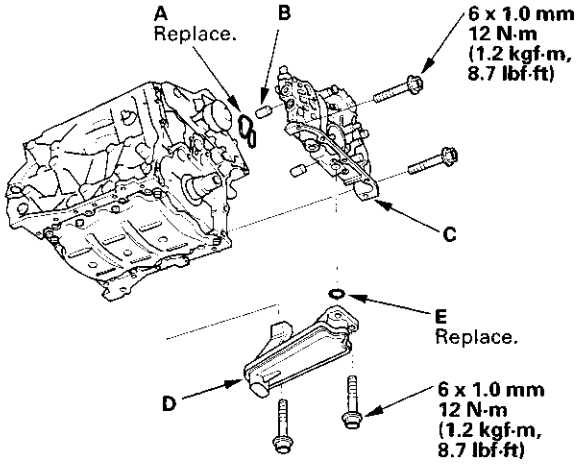
5. Clean and dry the oil pump mating surfaces.

6. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009, evenly to the engine block mating surface of the oil pump and to the inside edge of the threaded bolt holes. Install the component within 5 minutes of applying the liquid gasket.

   NOTE:
   - If you apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
   - If too much time has passed after applying the liquid gasket, remove all of the old liquid gasket and residue, then reapply the new liquid gasket.



7. Apply a light coat of new engine oil to the lip of the crankshaft oil seal, and apply new engine oil to the new O-ring (A).



8. Install the dowel pins (B), then align the inner rotor with the crankshaft, and install the oil pump (C).

9. Clean the excess grease off the crankshaft, and check the seal for distortion.

10. Install the oil screen (D) with a new O-ring (E).

11. Install the oil pan (see page 7-30).

12. Install the oil filter base/oil filter assembly with a new O-ring (J35Z2 engine) (see step 40 on page 7-28) or rocker arm oil control solenoid/oil filter assembly with a new rocker arm oil control solenoid filter (J35Z3 engine) (see step 41 on page 7-29).

13. Install the timing belt drive pulley to the crankshaft:

    - J35Z2 engine (see page 6-28)
    - J35Z3 engine (see page 6-93)

14. Install the timing belt:

    - J35Z2 engine (see page 6-18)
    - J35Z3 engine (see page 6-83)

15. After assembly, wait at least 30 minutes before filling the engine with oil.

HONDA

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Engine Mechanical

Intake Manifold and Exhaust System

Intake Manifold Removal and Installation 9-2
Injector Base Removal and Installation 9-8
Exhaust Pipe and Muffler Replacement 9-10

Outline of Model change

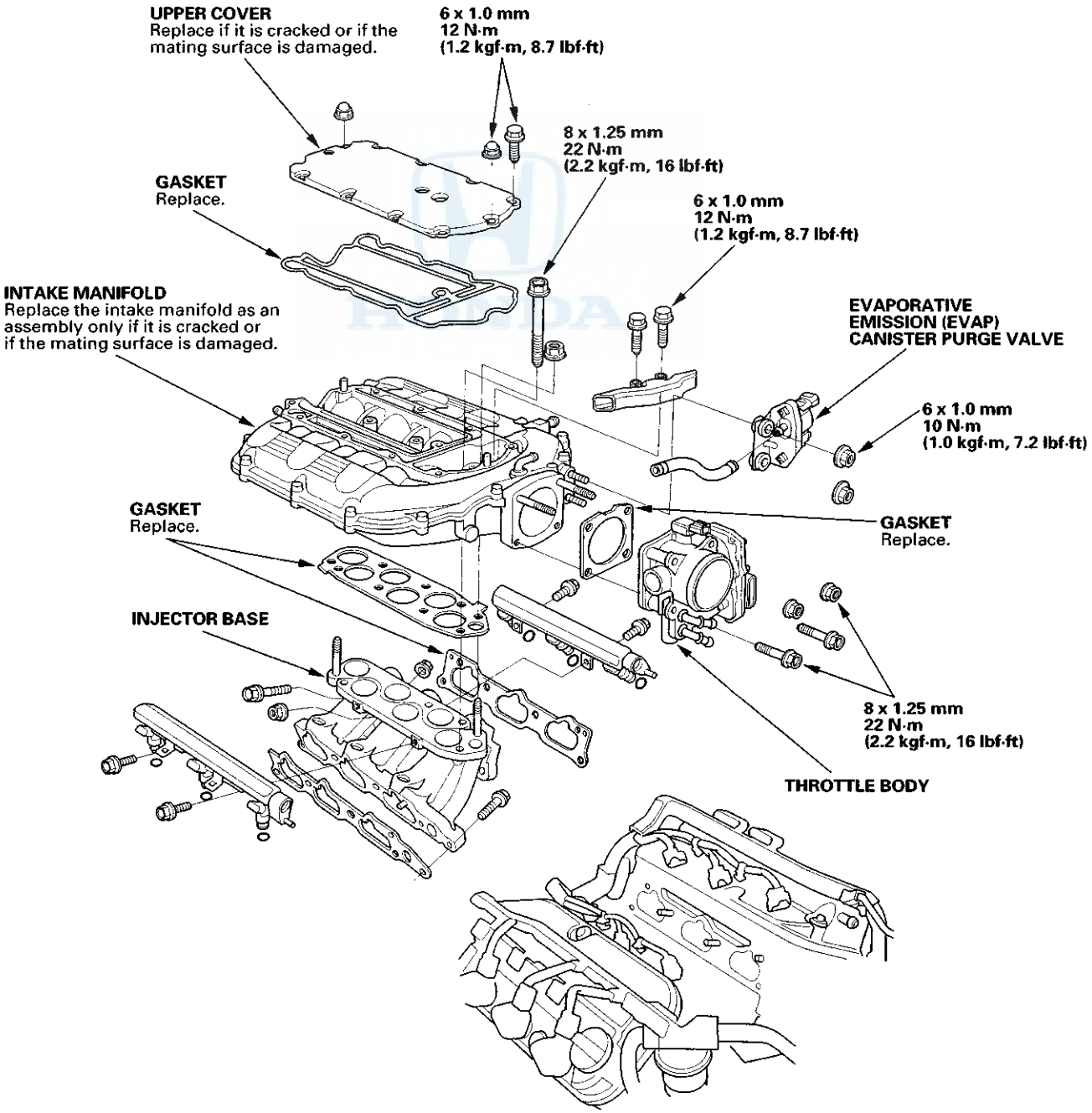
J35Z2 engine and J35Z3 engine have been added.

Intake Manifold and Exhaust System

Intake Manifold Removal and Installation

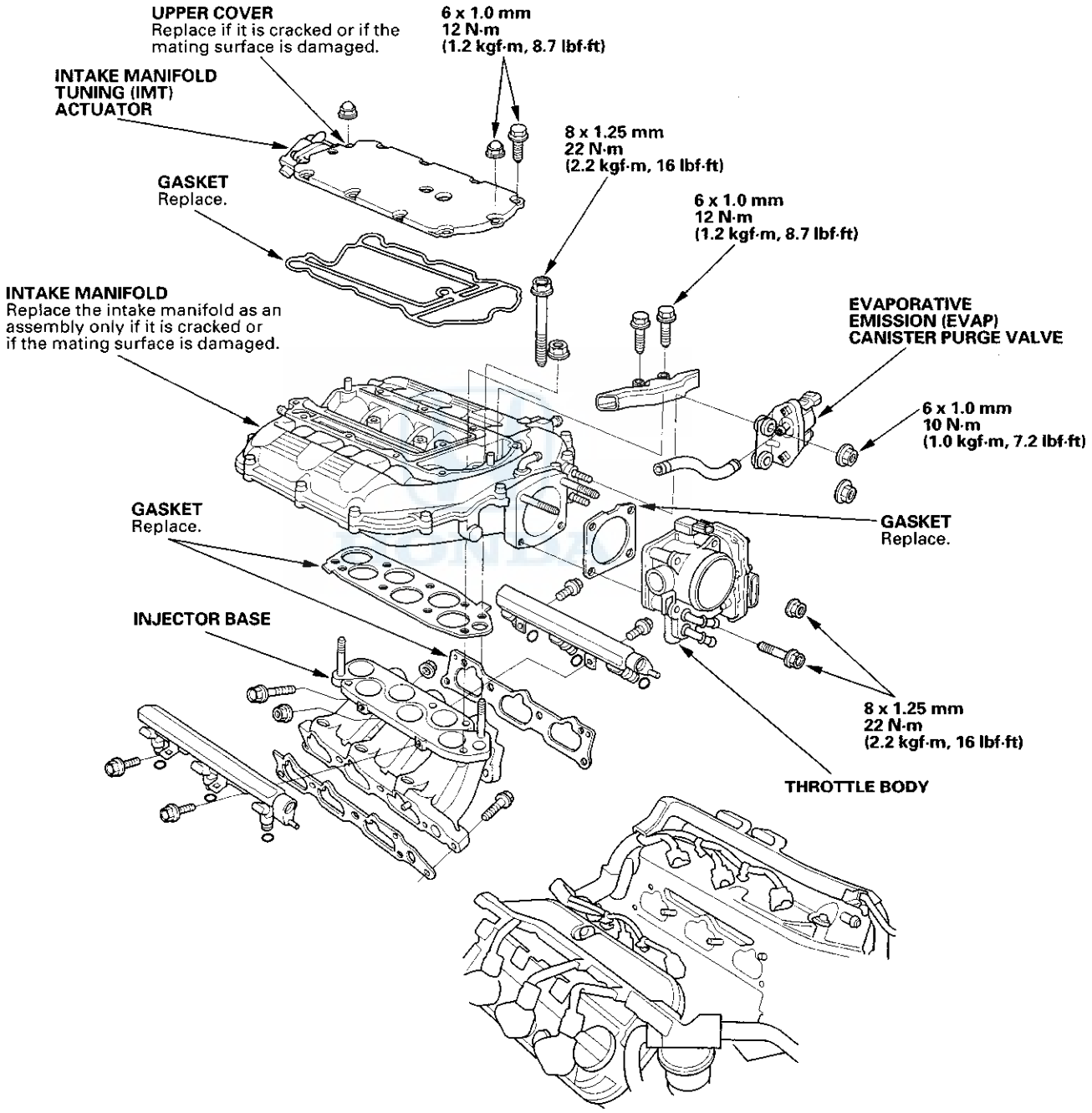
Exploded View

J35Z2 engine



Exploded View

J35Z3 engine



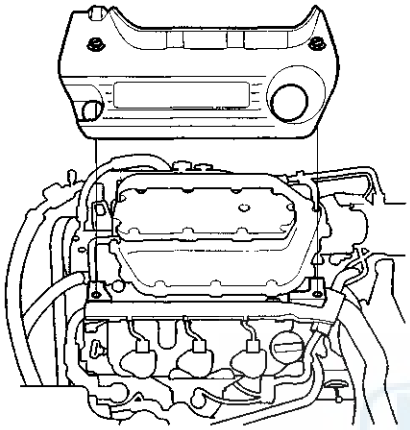
(cont'd)

Intake Manifold Removal and Installation (cont'd)

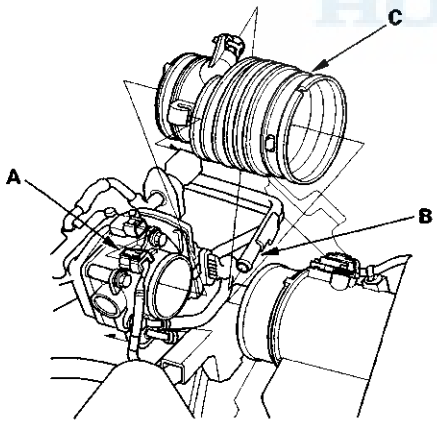
Removal

1. Remove the strut brace, refer to the 2008-2009 Accord Service Manual (see page 20-289).

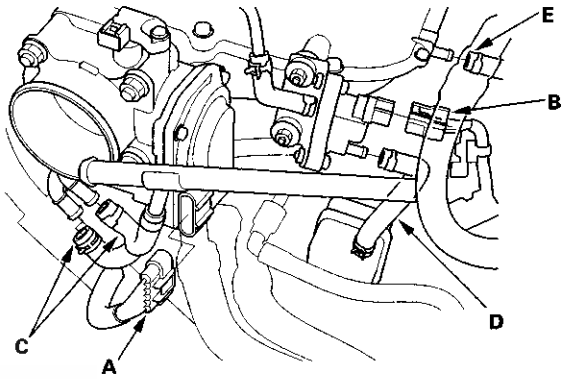
2. Remove the engine cover.



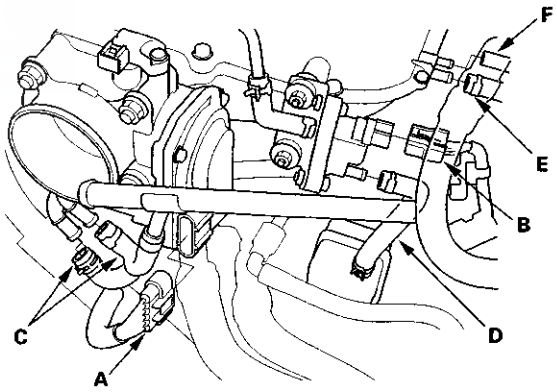
3. Disconnect the manifold absolute pressure (MAP) sensor connector (A) and the breather pipe (B), and remove the intake air duct (C).



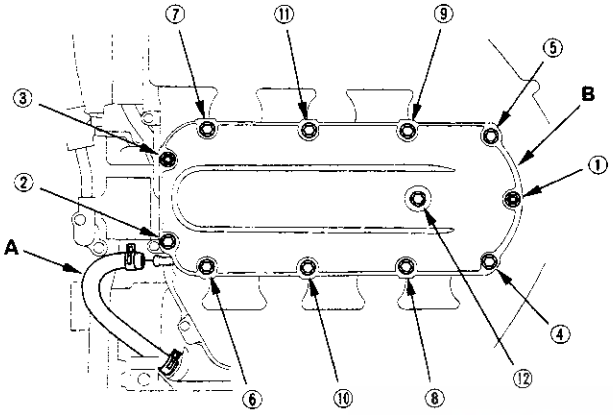
4. J35Z2 engine: Disconnect the throttle actuator connector (A), the evaporative emission (EVAP) canister purge valve connector (B), the water bypass hoses (C), the EVAP hose (D), and the brake booster vacuum hose (E).



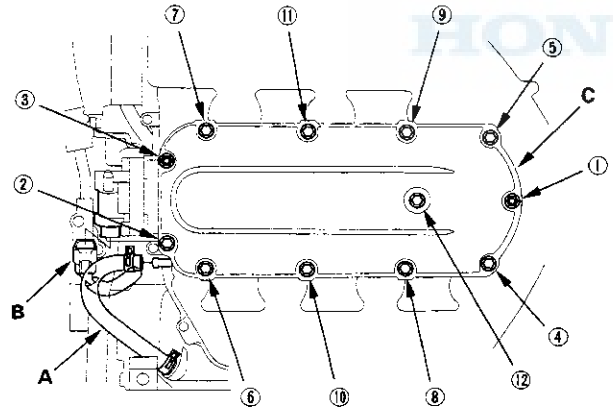
5. J35Z3 engine: Disconnect the throttle actuator connector (A), the EVAP canister purge valve connector (B), the water bypass hoses (C), the EVAP hose (D), the brake booster vacuum hose (E), and the vacuum hose (F).



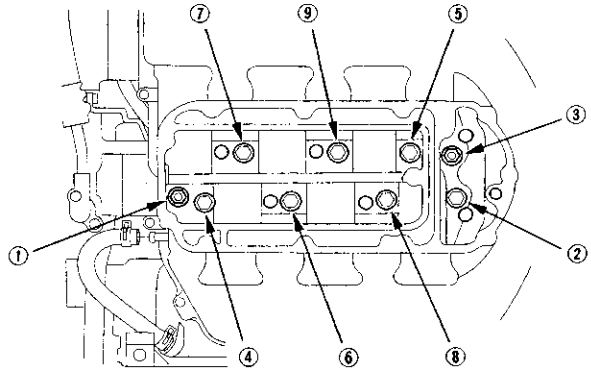
6. J35Z2 engine: Disconnect the positive crankcase ventilation (PCV) hose (A), then remove the upper cover mounting bolts and nuts sequentially in three steps, then remove the upper cover (B).



7. J35Z3 engine: Disconnect the PCV hose (A) and the intake manifold tuning (IMT) actuator connector (B), then remove the upper cover mounting bolts and nuts sequentially in tree steps, then remove the upper cover (C).



8. Remove the intake manifold mounting bolts and nuts sequentially in three steps, then remove the intake manifold.



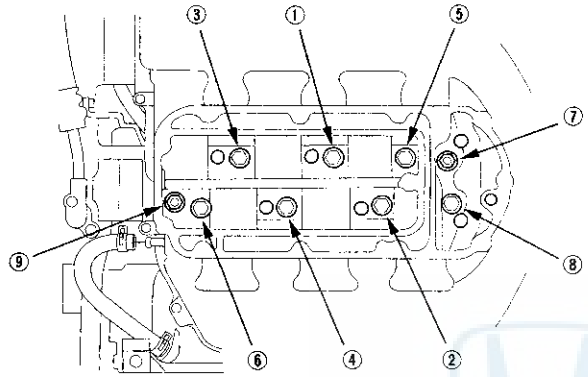
(cont'd)

Intake Manifold Removal and Installation (cont'd)

Installation

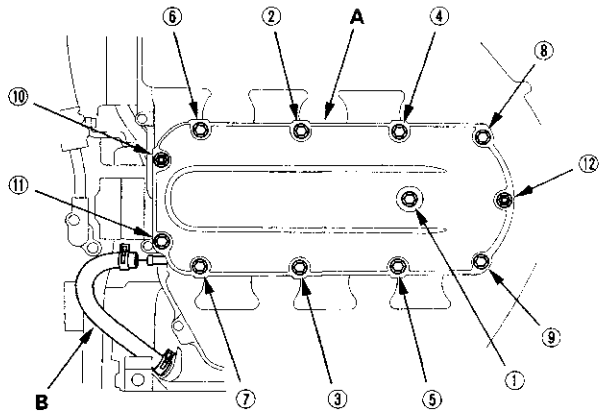
1. Install the intake manifold. Tighten the bolts and nuts sequentially in three steps. Always use a new intake manifold gasket.

Specified Torque
8 x 1.25 mm: 22 N·m (2.2 kgf·m, 16 lbf·ft)



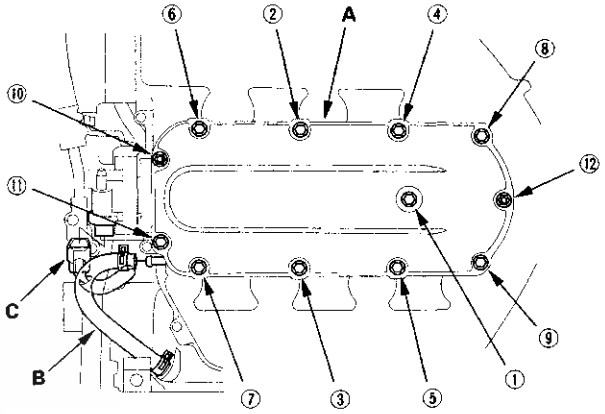
2. J35Z2 engine: Install the upper cover (A). Tighten the bolts and nuts sequentially in three steps. Always use a new gasket, then connect the PCV hose (B).

Specified Torque
6 x 1.0 mm: 12 N·m (1.2 kgf·m, 8.7 lbf·ft)

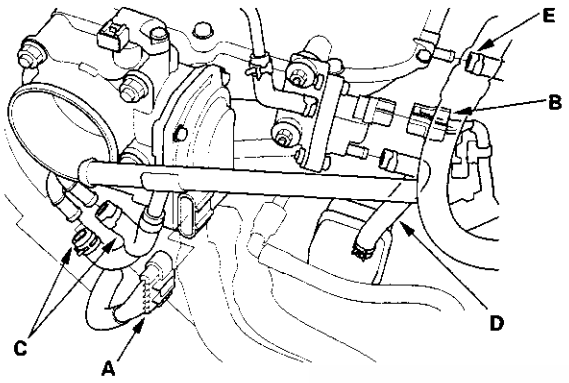


3. J35Z3 engine: Install the upper cover (A). Tighten the bolts and nuts sequentially in three steps. Always use a new gasket, then connect the PCV hose (B) and the IMT actuator connector (C).

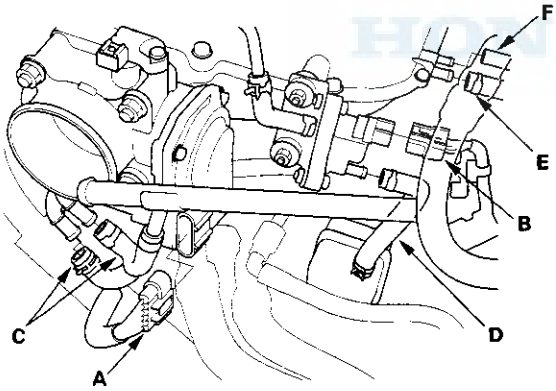
Specified Torque
6 x 1.0 mm: 12 N·m (1.2 kgf·m, 8.7 lbf·ft)



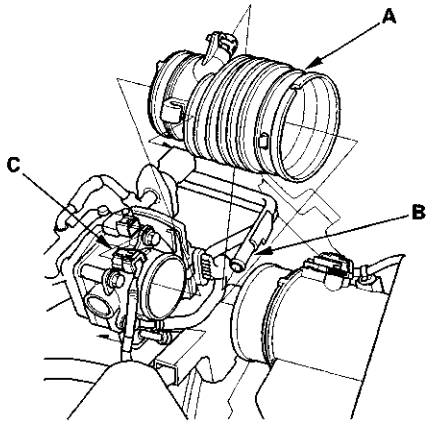
4. J35Z2 engine: Connect the throttle actuator connector (A), the EVAP canister purge valve connector (B), the water bypass hoses (C), the EVAP hose (D), and the brake booster vacuum hose (E).



5. J35Z3 engine: Connect the throttle actuator connector (A), the EVAP canister purge valve connector (B), the water bypass hoses (C), the EVAP hose (D), brake booster vacuum hose (E), and the vacuum hose (F).



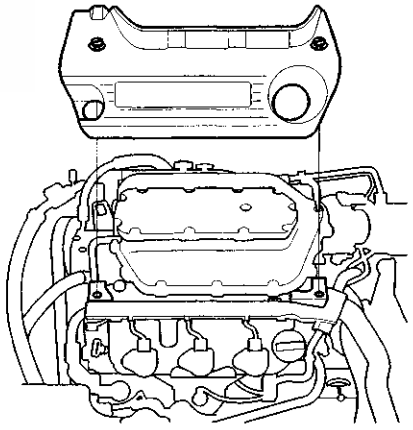
6. Install the intake air duct (A), then connect the breather pipe (B) and the MAP sensor connector (C).



7. Clean up any spilled engine coolant.

8. After installation, check that all tubes, hoses, and connectors are installed correctly.

9. Install the engine cover.



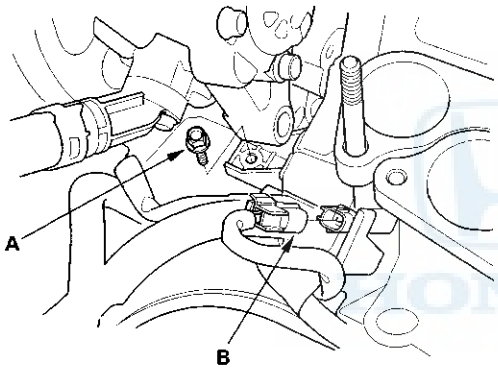
10. Install the strut brace, refer to the 2008-2009 Accord Service Manual (see page 20-289).

11. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).

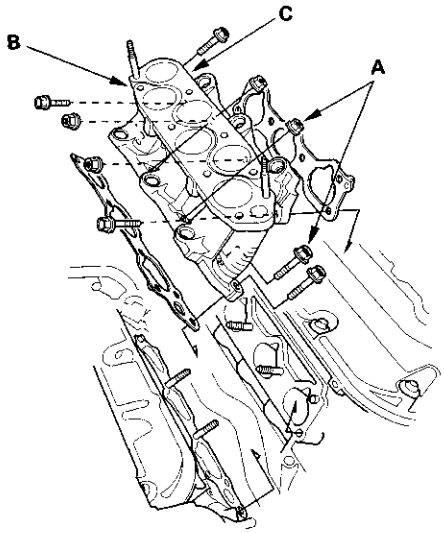
Injector Base Removal and Installation

Removal

1. Relieve the fuel pressure (see page 11-400).
2. Remove the power steering (P/S) pump and the P/S hose bracket:
   - J35Z2 engine (see step 5 on page 6-34)
   - J35Z3 engine (see step 5 on page 6-99)
3. Remove the intake manifold (see page 9-4).
4. Remove the injectors (see page 11-271).
5. Remove the harness holder mounting bolt (A) and disconnect the knock sensor connector (B).



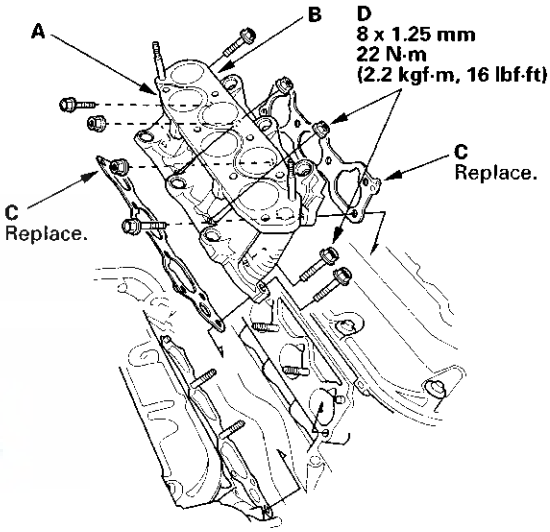
6. Remove the injector base mounting bolts/nuts (A), then remove the front injector base (B) and the rear injector base (C).



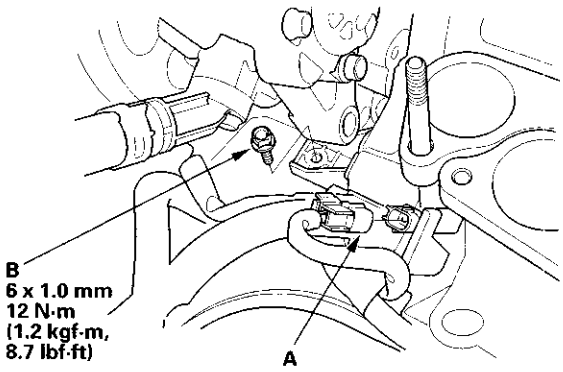
Installation

1. Install the front injector base (A) and the rear injector base (B) with new gaskets (C), and tighten the injector base mounting bolts/nuts (D) in a crisscross pattern in three steps, beginning with the inner nuts.

   NOTE: The front injector base gasket is different from the rear one. Do not mix injector base gasket types.



2. Connect the knock sensor connector (A) and install the harness holder mounting bolt (B).



3. Install the injectors (see page 11-271).

4. Install the intake manifold (see page 9-6).

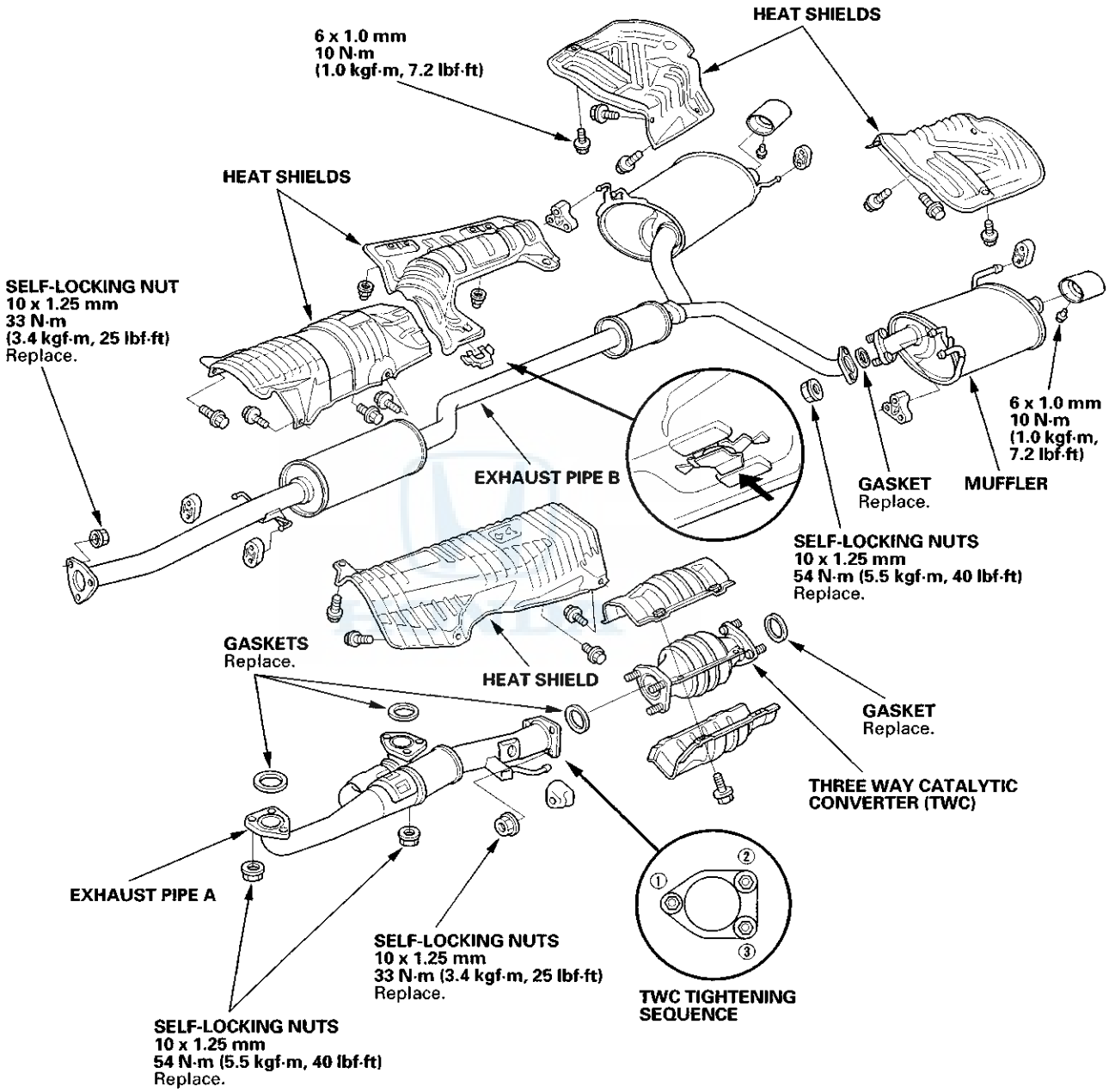
5. Install the P/S pump and the P/S hose bracket:

   - J35Z2 engine (see step 26 on page 6-62)
   - J35Z3 engine (see step 26 on page 6-127)

6. Inspect for fuel leaks. Turn the ignition switch to ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation three times, then check for fuel leakage at any point in the fuel line.

Exhaust Pipe and Muffler Replacement

NOTE: Use new gaskets and self-locking nuts when reassembling.



Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

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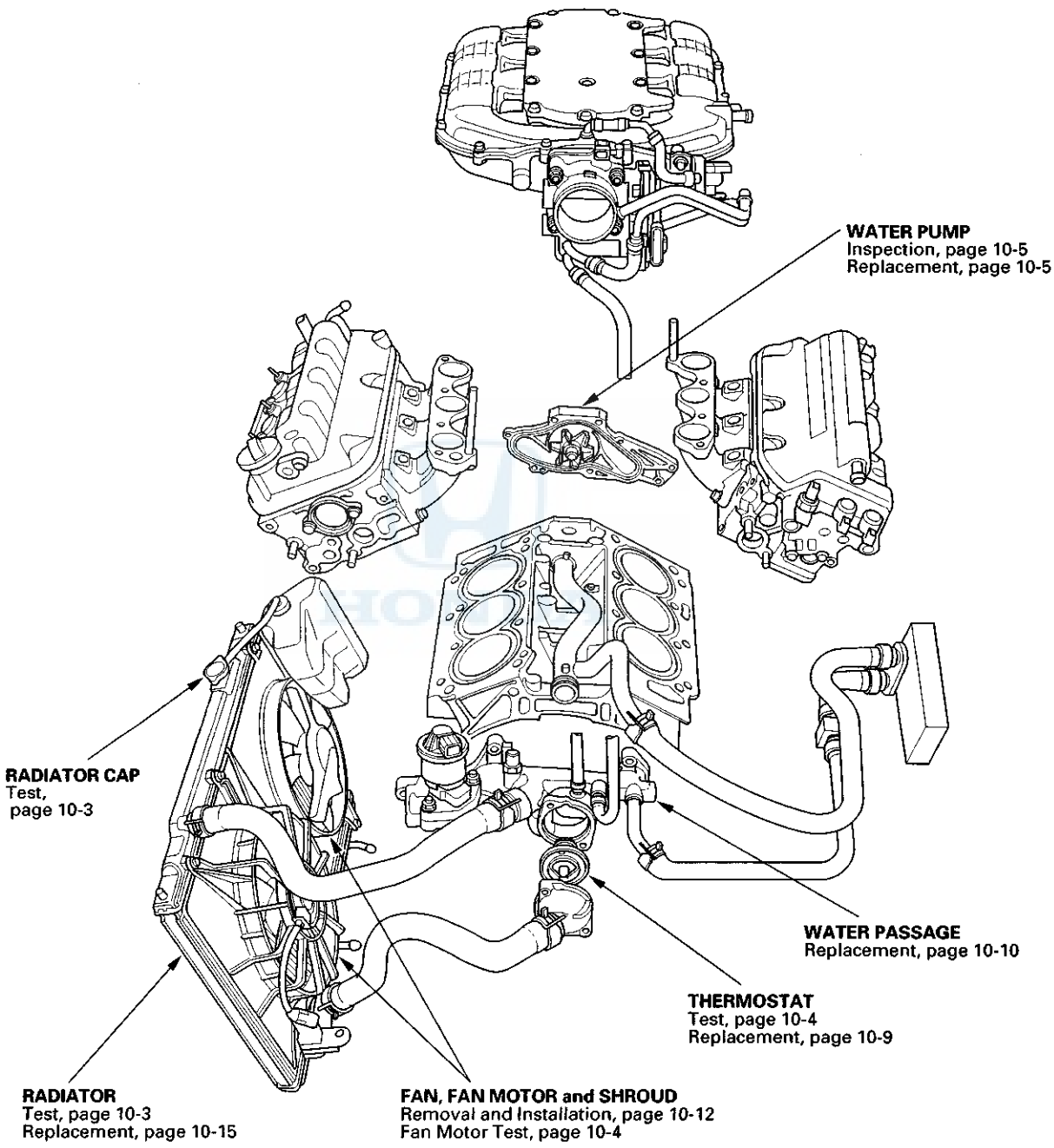
Outline of Model Change

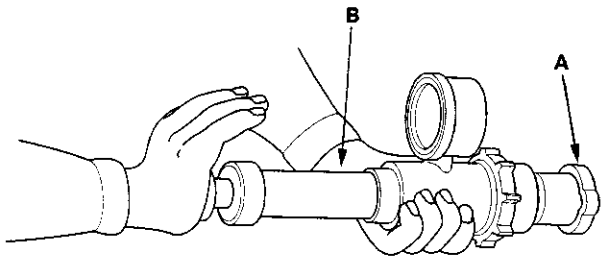
J35Z2 engine and J35Z3 engine have been added.

Component Location Index



Radiator Cap Test

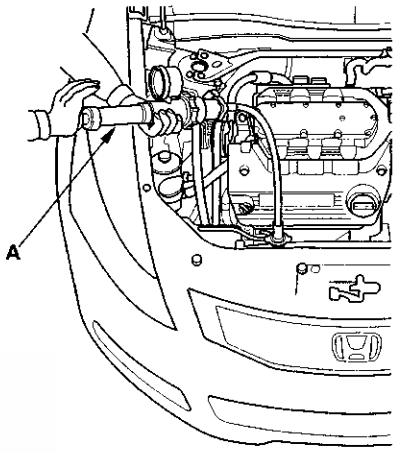
1. Wait until the engine is cool, then carefully remove the radiator cap (A). Wet the radiator cap seal with engine coolant, then install it on a commercially available pressure tester (B).



2. Apply a pressure of 93—123 kPa (0.95—1.25 kgf/cm², 14—18 psi).
3. Check for a drop in pressure.
4. If the pressure drops, replace the radiator cap.

Radiator Test

1. Wait until the engine is cool, then carefully remove the radiator cap, and fill the radiator with engine coolant to the base of the filler neck.
2. Attach a commercially available pressure tester (A) to the radiator, and apply a pressure of 93—123 kPa (0.95—1.25 kgf/cm², 14—18 psi).

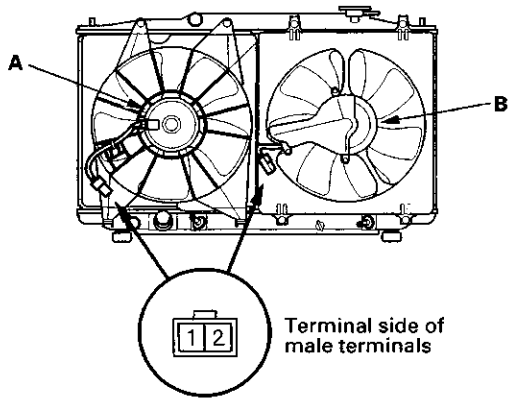


3. Inspect for engine coolant leaks and a drop in pressure.
4. Remove the tester, then reinstall the radiator cap.

HONDA

Fan Motor Test

1. Disconnect the 2P connectors from the radiator fan motor (A) and the A/C condenser fan motor (B).



2. Test each motor by connecting battery power to terminal No. 2 and ground to terminal No. 1.

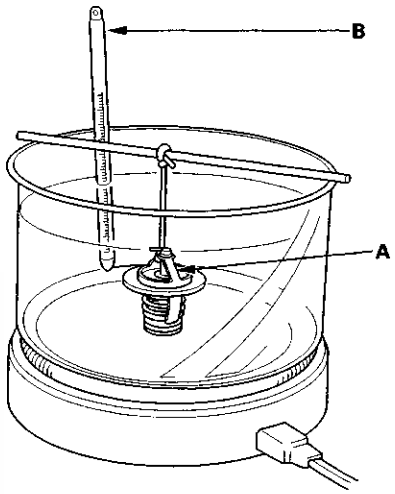
3. If either motor fails to run or does not run smoothly, replace it (see page 10-12).

Thermostat Test

Replace the thermostat if it is stuck in the open position at room temperature.

To test a closed thermostat:

1. Suspend the thermostat (A) in a container of water. Do not let the thermostat and the thermometer (B) touch the bottom of the hot container.



2. Heat the water and check the temperature with a thermometer. Check the temperature at which the thermostat first opens, and at which it is fully open.

3. Measure the lift height of the thermostat when it is fully open.

Standard Thermostat

Lift Height:	**Above 10.0 mm (0.39 in.)**
Starts Opening:	**169—176 °F (76—80 °C)**
Fully Open:	**194 °F (90 °C)**

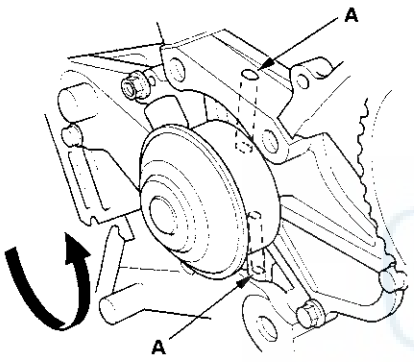
Water Pump Inspection

1. Remove the timing belt:

   - J35Z2 engine (see page 6-16)
   - J35Z3 engine (see page 6-81)

2. Turn the water pump pulley counterclockwise, and check that it turns freely. If it does not turn freely, replace the water pump (see page 10-5).

   NOTE: When you check the water pump, you may see a small amount of "weeping" from the bleed holes (A). This is normal.



3. Install the timing belt:

   - J35Z2 engine (see page 6-18)
   - J35Z3 engine (see page 6-83)

Water Pump Replacement

1. Drain the engine coolant (see page 10-6).

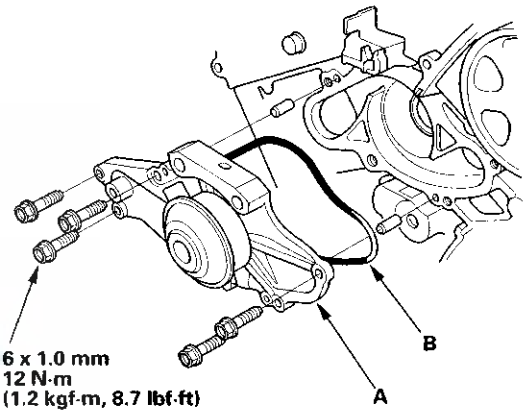
2. Remove the timing belt:

   - J35Z2 engine (see page 6-16)
   - J35Z3 engine (see page 6-81)

3. Remove the timing belt adjuster:

   - J35Z2 engine (see page 6-27)
   - J35Z3 engine (see page 6-92)

4. Remove the five bolts securing the water pump (A), then remove the water pump.



5. Inspect and clean the O-ring groove and the mating surface of the engine block.

6. Install the water pump with a new O-ring (B).

7. Clean up any spilled engine coolant.

8. Install the timing belt adjuster:

   - J35Z2 engine (see page 6-27)
   - J35Z3 engine (see page 6-92)

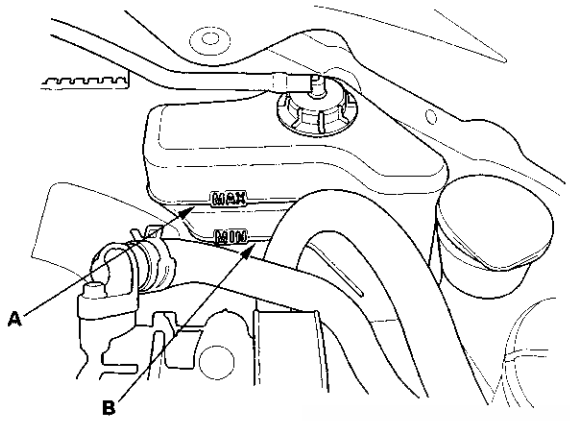
9. Install the timing belt:

   - J35Z2 engine (see page 6-18)
   - J35Z3 engine (see page 6-83)

10. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).

Coolant Check

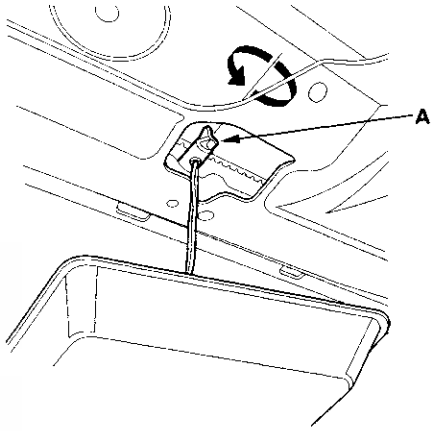
1. Check the coolant level in the coolant reservoir. Make sure it is between the MAX mark (A) and the MIN mark (B).



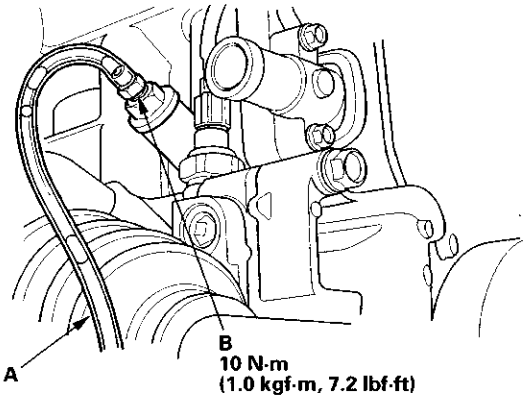
2. If the coolant level in the coolant reservoir is at or below the MIN mark, add coolant to bring it between the MIN and MAX marks, then inspect the cooling system for leaks.

Coolant Replacement

1. Wait until the engine is cool, then carefully remove the radiator cap.
2. Start the engine. Set the heater temperature control to maximum heat, then turn the ignition switch to LOCK (0). Make sure the engine and the radiator are cool to the touch.
3. Loosen the drain plug (A), and drain the coolant.

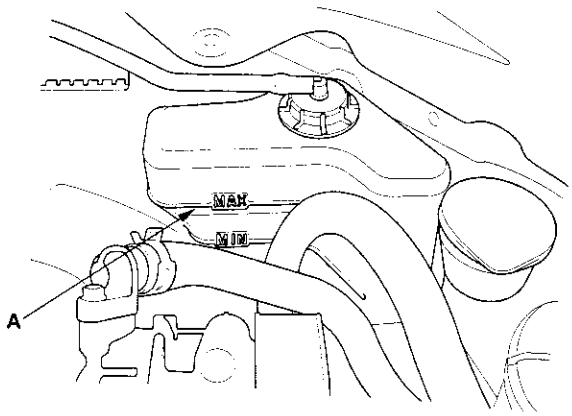


4. Install a rubber hose (A) on the drain bolt (B) located at the rear of the engine block, then loosen the drain bolt.



5. When the coolant stops draining, tighten the drain bolt. Remove the rubber hose.
6. Tighten the radiator drain plug securely.
7. Remove, drain, and reinstall the coolant reservoir.

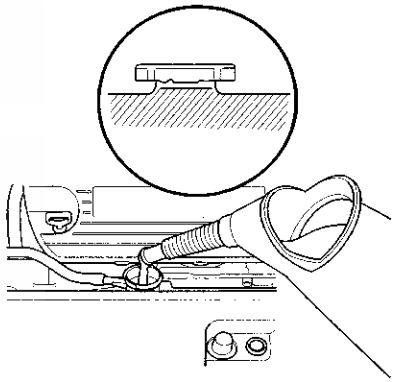
8. Fill the coolant reservoir to the MAX mark (A) with Honda Long Life Antifreeze/Coolant Type 2 (P/N OL999-9011).



9. Pour Honda Long Life Antifreeze/Coolant Type 2 into the radiator up to the base of the filler neck.

NOTE:
- Always use Honda Long Life Antifreeze/Coolant Type 2. Using a non-Honda coolant can result in corrosion, causing the cooling system to malfunction or fail.
- Honda Long Life Antifreeze/Coolant Type 2 is a mixture of 50 % antifreeze and 50 % water. Do not add water.

Engine Coolant Refill Capacities (Including the coolant reservoir capacity of 0.68 L (0.18 US gal))
At Coolant Change:
6.6 L (1.74 US gal)
After Engine Overhaul:
8.6 L (2.27 US gal)



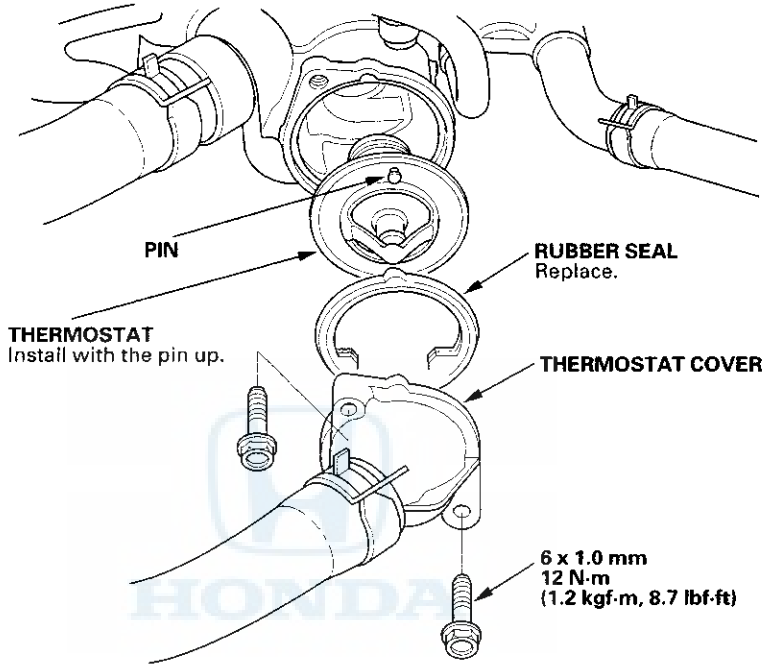
(cont'd)

Coolant Replacement (cont'd)

10. Loosely install the radiator cap.
11. Set the heater temperature control to maximum heat.
12. Start the engine, and let it run until it warms up (the radiator fan comes on at least twice).
13. Turn off the engine. Check the level in the radiator, and add Honda Long Life Antifreeze/Coolant Type 2, if needed.
14. Put the radiator cap on securely, then run the engine again, and check for leaks.
15. Clean up any spilled engine coolant.
16. If the maintenance minder required engine coolant replacement, reset the maintenance minder (see page 3-4), and this procedure is complete. If the maintenance minder did not require engine coolant replacement, go to step 17.
17. Turn the ignition switch to LOCK (0).
18. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).
19. Turn the ignition switch to ON (II).
20. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).
21. Select GAUGES in the BODY ELECTRICAL with the HDS.
22. Select ADJUSTMENT in the GAUGES with the HDS.
23. Select SERVICE REMINDER in the ADJUSTMENT with the HDS.
24. Select RESET in the SERVICE REMINDER with the HDS.
25. Select MAINTENANCE SUB ITEM 5 RESET with the HDS.

Thermostat Replacement

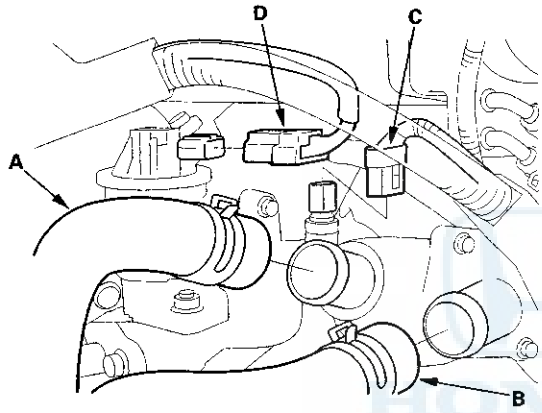
1. Drain the engine coolant (see page 10-6).
2. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
3. Remove the thermostat cover, then remove the thermostat.



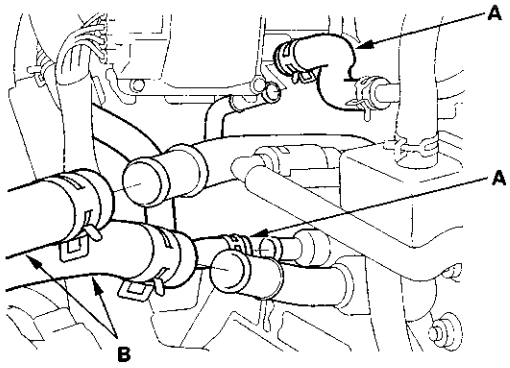
4. Install the new thermostat with a new rubber seal, then install the thermostat cover.
5. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
6. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).
7. Clean up any spilled engine coolant.

Water Passage Replacement

1. Drain the engine coolant (see page 10-6).
2. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
3. Remove the splash separator and the intake air duct (see step 4 on page 11-438).
4. Disconnect the upper radiator hose (A), the lower radiator hose (B), the engine coolant temperature (ECT) sensor 1 connector (C), and the exhaust gas recirculation (EGR) valve connector (D).

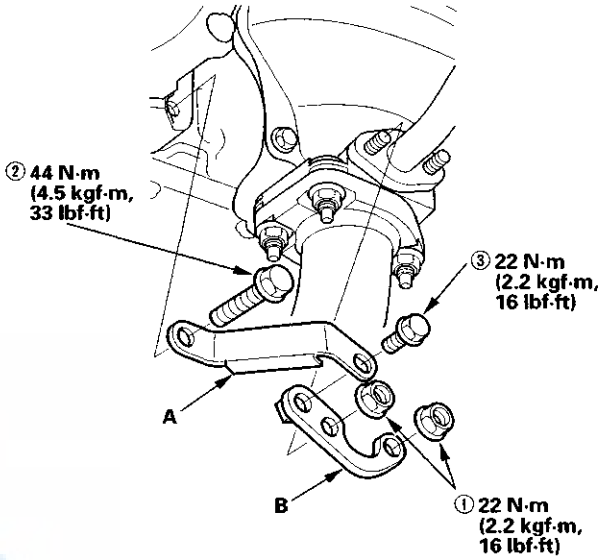


5. Disconnect the water bypass hoses (A) and the heater hoses (B).

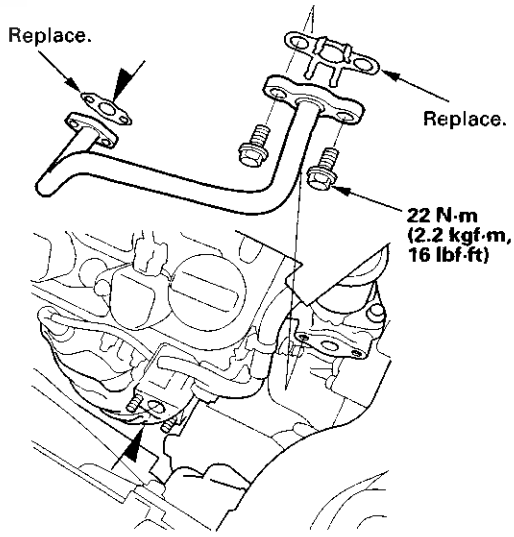


6. Remove the front warm up three way catalytic converter (front WU-TWC) bracket (A), then remove the front WU-TWC bracket joint (B).

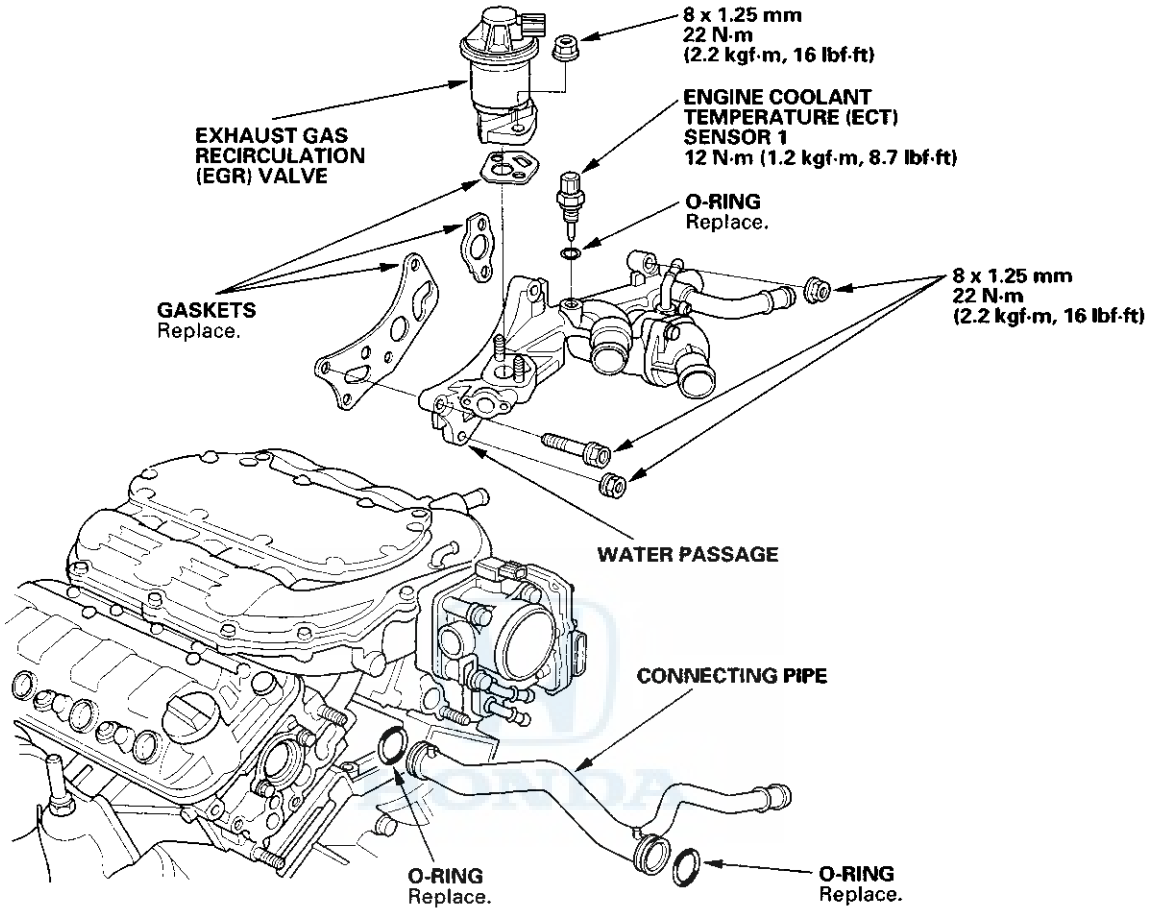
   NOTE: Tighten the mounting bolts and nuts in the numbered seguence shown.



7. Remove the EGR pipe.



8. Remove the water passage and related parts.

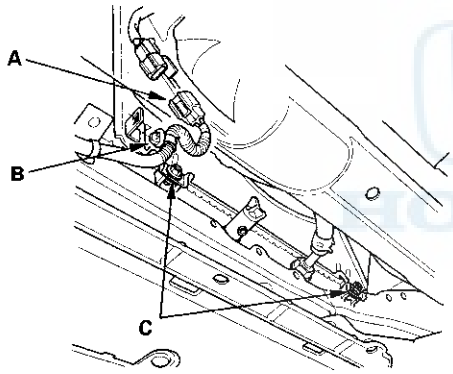


9. Install the water passage in the reverse order of the removal.
10. Install the splash separator and the intake air duct (see step 4 on page 11-438).
11. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
12. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).
13. Clean up any spilled engine coolant.

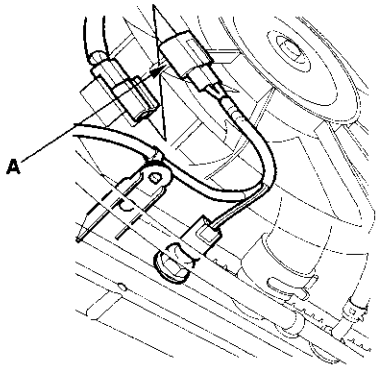
Fan, Fan Motor, and Shroud Removal and Installation

Removal

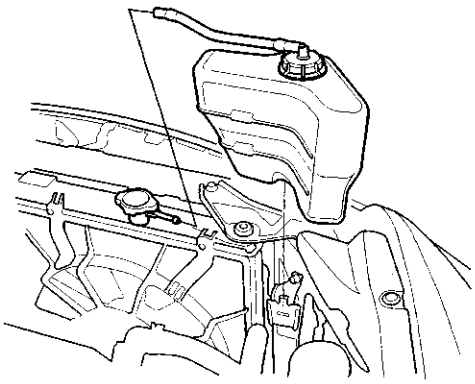
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the battery base (see step 10 on page 5-3).
3. Remove the front grille cover, refer to the 2008-2009 Accord Service Manual (see page 20-257).
4. Remove the splash separator and the intake air duct (see step 4 on page 11-438).
5. Raise the vehicle on the lift.
6. Remove the splash shield (see step 27 on page 5-5).
7. Disconnect the A/C condenser fan motor connector (A), then remove the harness clamp (B).



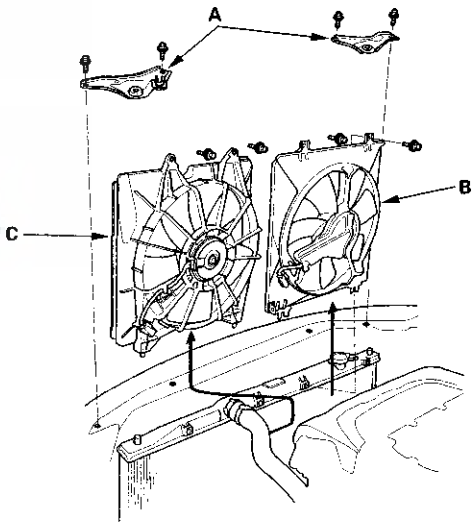
8. Loosen the A/C condenser fan shroud mounting bolts (C).
9. Disconnect the radiator fan motor connector (A).



10. Lower the vehicle on the lift.
11. Remove the coolant reservoir.



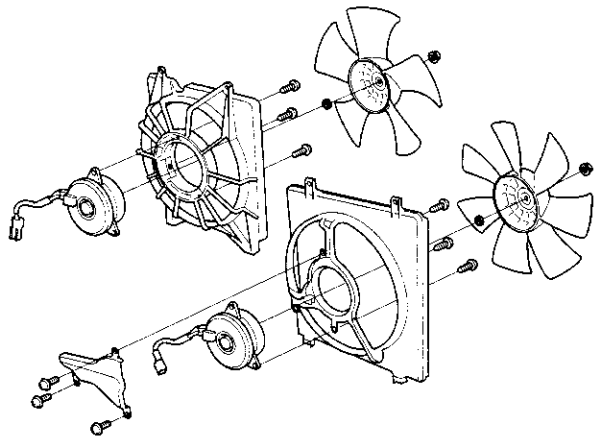
12. Remove the upper brackets (A).



13. Remove the A/C condenser fan shroud assembly (B), then remove the radiator fan shroud assembly (C).

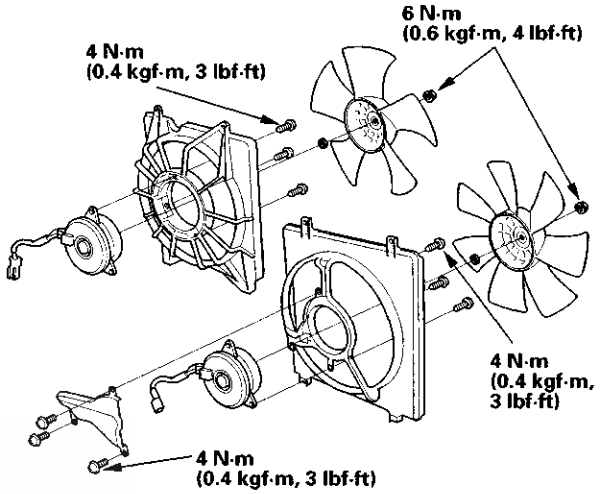
    NOTE: Pull-up the radiator, then move the radiator fan shroud assembly toward the right side of the vehicle to allow for enough space to lift it up and away from the A/C condenser fan shroud assembly.

14. Disassemble the fan shrouds.

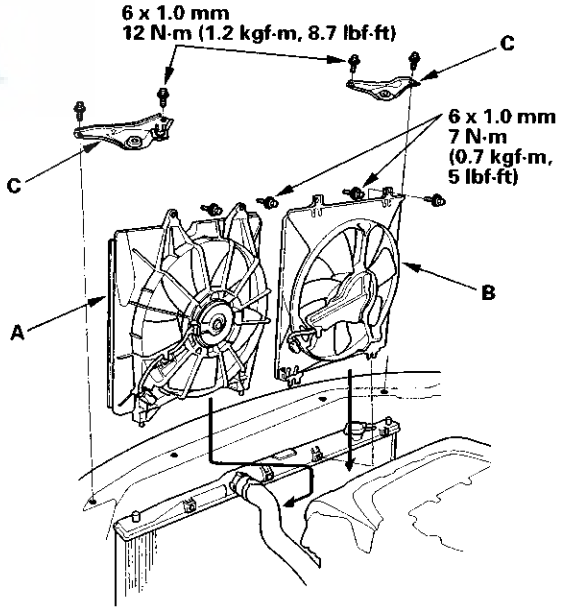


Installation

1. Assemble the fan shrouds.



2. Install the radiator fan shroud assembly (A), then install the A/C condenser fan shroud assembly (B).

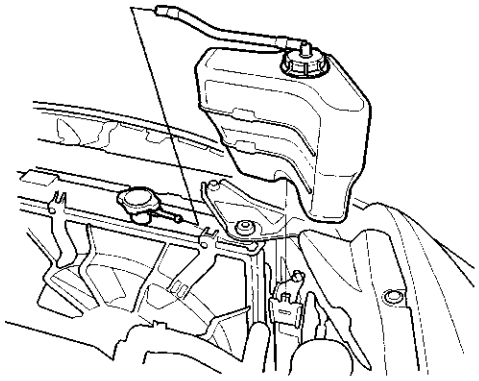


3. Install the upper brackets (C).

(cont'd)

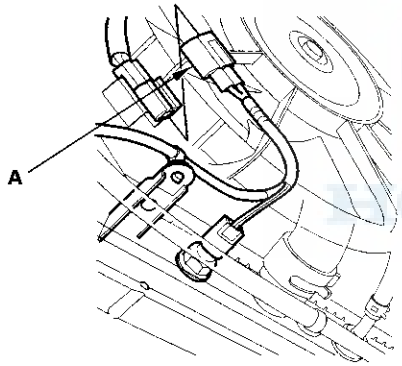
Fan, Fan Motor, and Shroud Removal and Installation (cont'd)

4. Install the coolant reservoir.

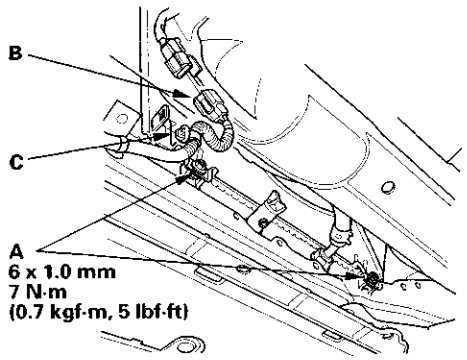


5. Raise the vehicle on the lift.

6. Connector the radiator fan motor connector (A).



7. Tighten the A/C condenser fan shroud mounting bolts (A).



8. Connect the A/C condenser fan motor connector (B), then install the harness clamp (C).

9. Install the splash shield (see step 48 on page 5-22).

10. Lower the vehicle on the lift.

11. Install the splash separator and the intake air duct (see step 4 on page 11-438).

12. Install the front grille cover, refer to the 2008-2009 Accord Service Manual (see page 20-257).

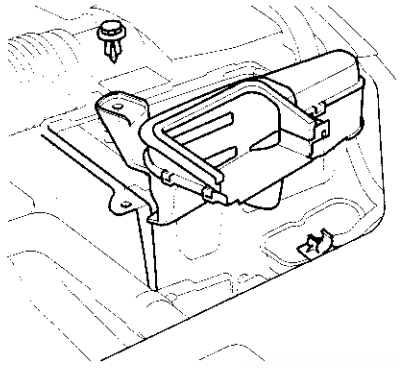
13. Install the battery base (see step 65 on page 5-24).

14. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Radiator Replacement

1. Remove the front grille cover, refer to the 2008-2009 Accord Service Manual (see page 20-257).

2. Remove the splash separator.

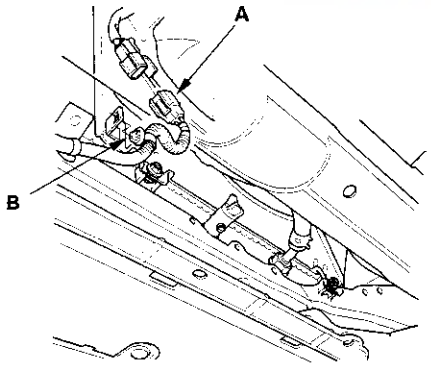


3. Raise the vehicle on the lift.

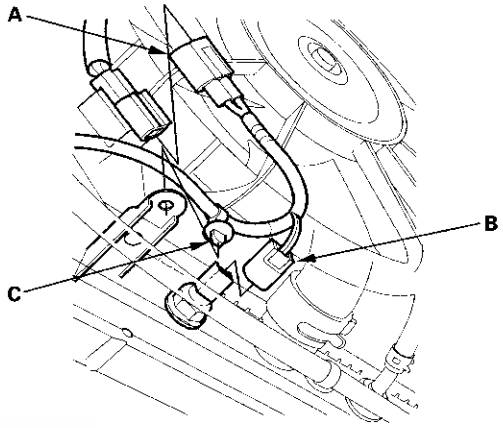
4. Drain the engine coolant (see page 10-6).

5. Remove the splash shield (see step 27 on page 5-5).

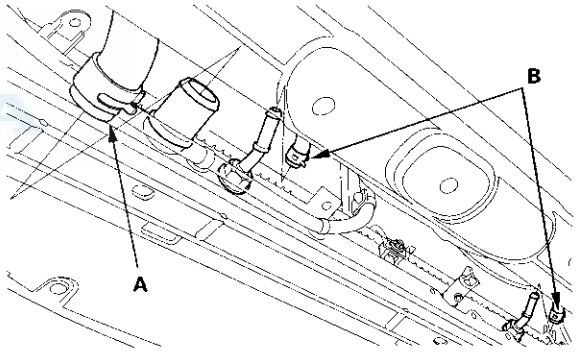
6. Disconnect the A/C condenser fan motor connector (A), then remove the harness clamp (B).



7. Disconnect the radiator fan motor connector (A) and the engine coolant temperature (ECT) sensor 2 connector (B), then remove the harness clamp (C).



8. Disconnect the lower radiator hose (A) from the radiator.



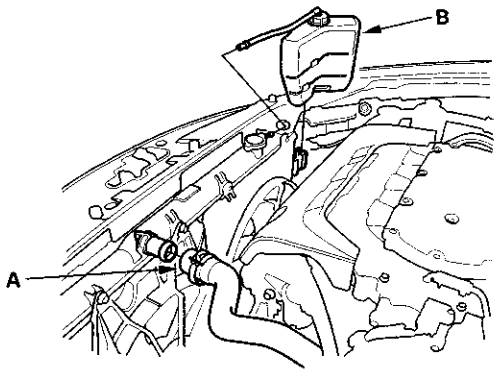
9. A/T model: Disconnect the automatic transmission fluid (ATF) cooler hoses (B) from the radiator (see page 14-258), then plug the cooler hoses and the lines.

(cont'd)

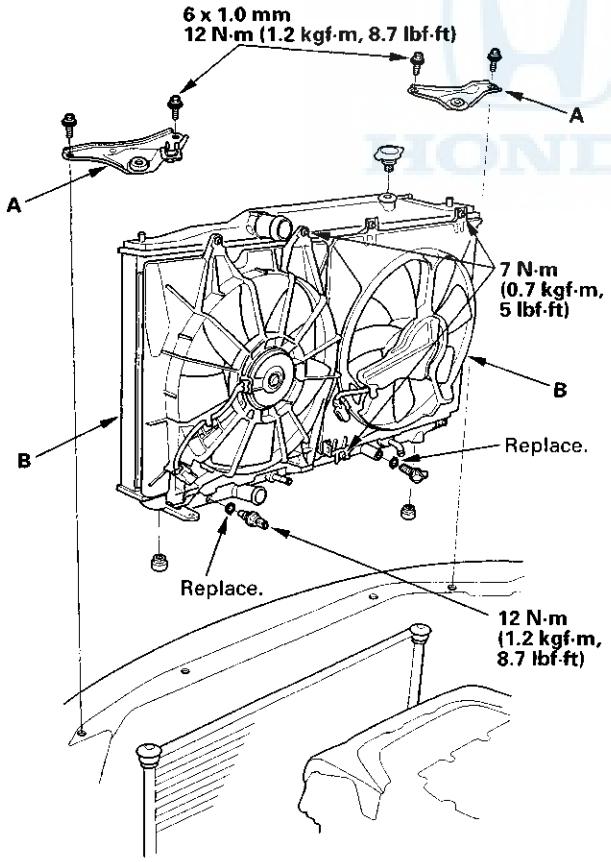
Radiator Replacement (cont'd)

10. Lower the vehicle on the lift.

11. Disconnect the upper radiator hose (A) and remove the coolant reservoir (B).



12. Remove the upper brackets (A), then pull up the radiator with fan shrouds (B).



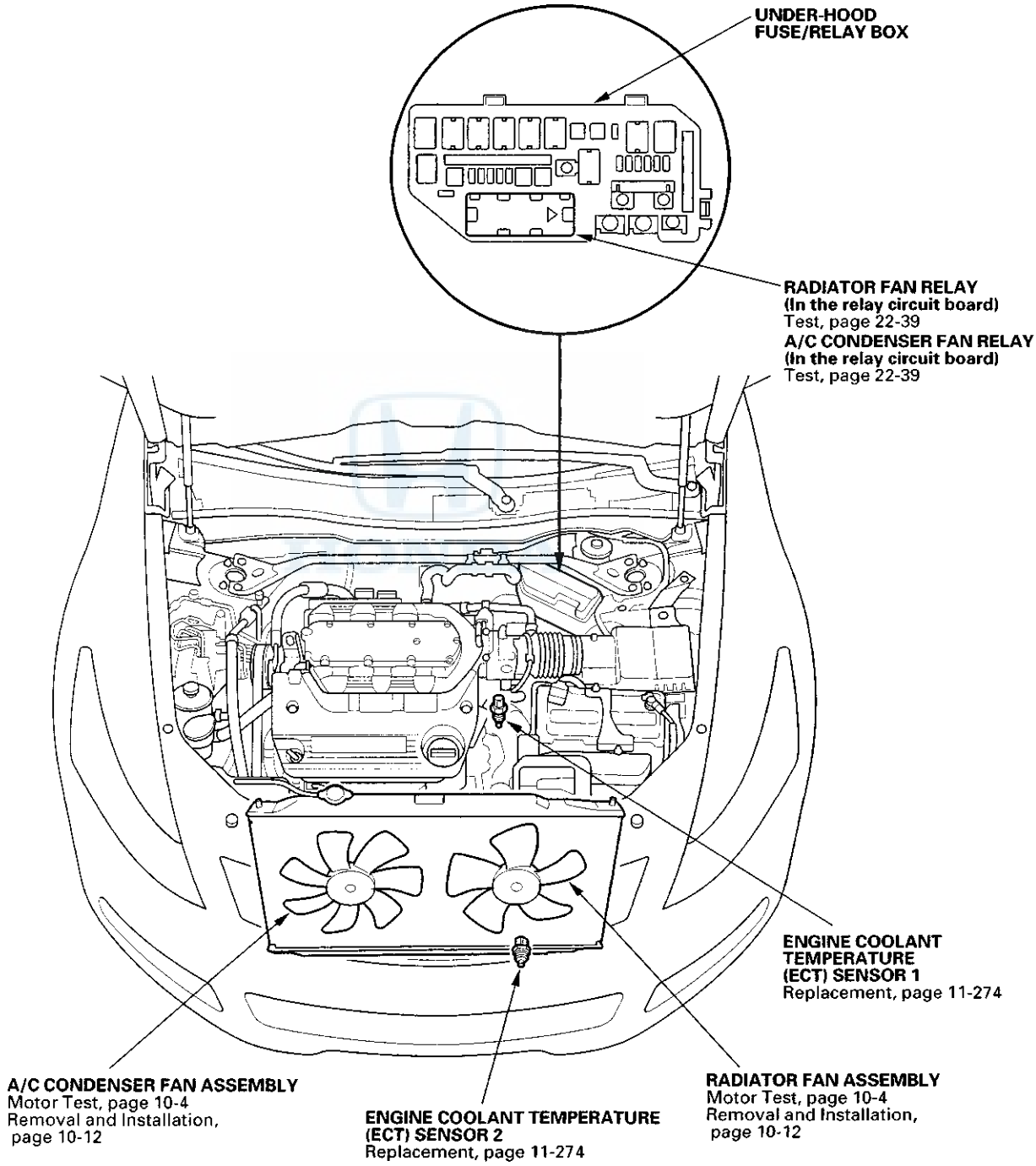
13. Remove the fan shrouds and other parts from the radiator.

14. Install radiator in the reverse order or removal. Make sure the upper and lower cushions are set securely.

15. Fill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on page 10-7).

16. Clean up any spilled engine coolant.

Component Location Index

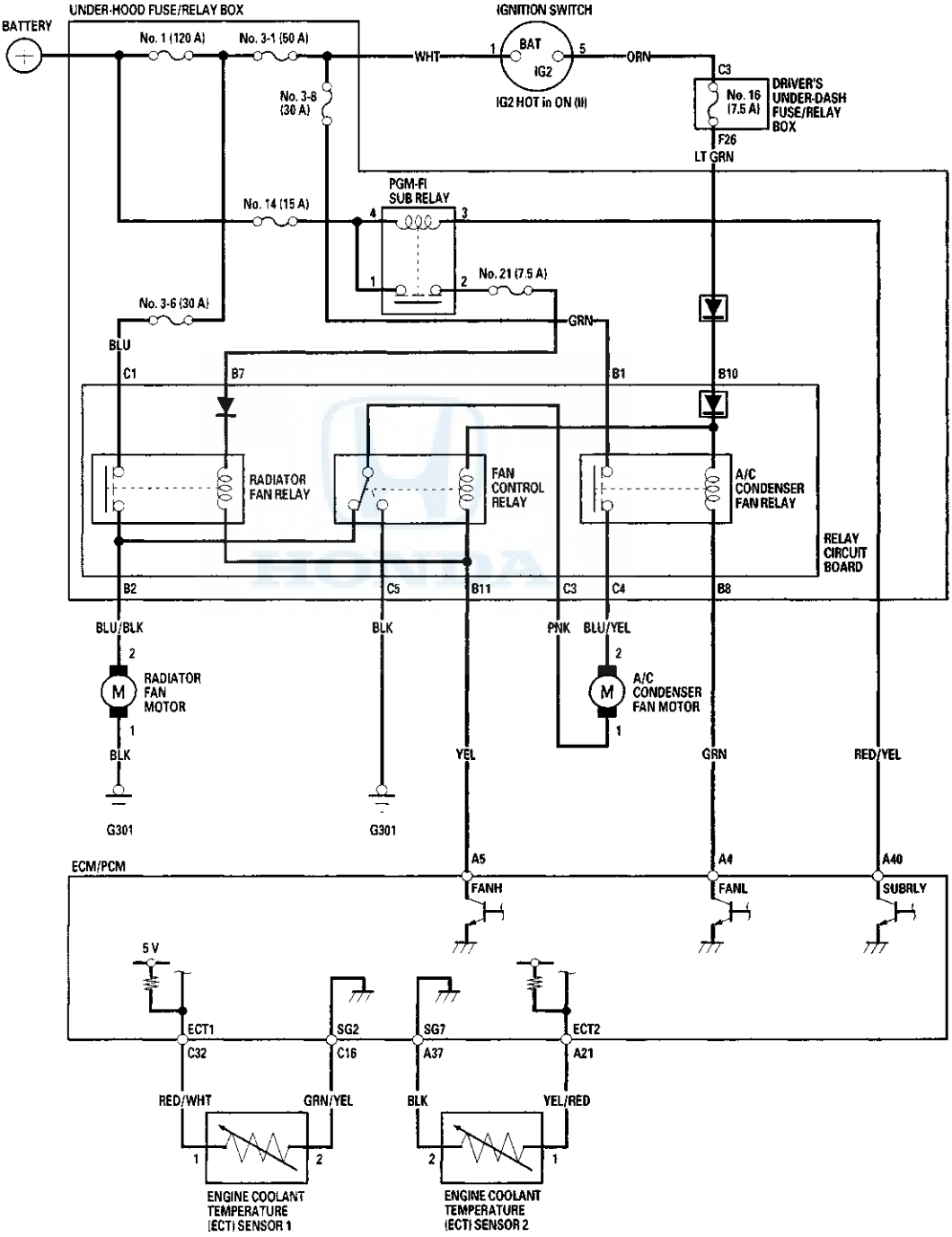


Fan Controls

Symptom Troubleshooting Index

Symptom	Diagnostic Procedure	Also check for
Engine overheats	1. Check the coolant level. 2. Check for any engine coolant leakage (from gaskets, hoses, O-rings, etc.). 3. Check for dirt, leaves, or insects on the radiator and A/C condenser. 4. Check for deteriorated coolant. 5. Check for damaged or deformed fan shrouds. 6. Check the fan motors for proper direction of operation (blowing air toward the engine). 7. Inspect the fan motors (see page 10-4) or fan relays (see page 22-39). 8. Check the radiator cap (see page 10-3). 9. Check the thermostat (see page 10-4). 10. Inspect the water pump (see page 10-5). 11. Check for plugged or deteriorated radiator hoses. 12. Check for plugged heater core or hoses. 13. Check for a damaged cylinder head gasket.	Proper radiator and condenser fan control and operation
The radiator fan does not run at high speed	Radiator fan high speed circuit troubleshooting (see page 10-20).	Cleanliness and tightness of all connectors
Both the radiator fan and the A/C condenser fan do not run at low speed	Radiator and A/C condenser fans low speed circuit troubleshooting (see page 21-22).	Cleanliness and tightness of all connectors
The A/C condenser fan does not run at high speed	A/C condenser fans high speed circuit troubleshooting (see page 21-25).	Cleanliness and tightness of all connectors

Circuit Diagram



Radiator Fan High Speed Circuit Troubleshooting

1. Check the No. 3-6 (30 A) fuse, the No. 14 (15 A) fuse, and the No. 21 (7.5 A) fuse in the under-hood fuse/relay box, and the No. 16 (7.5 A) fuse in the driver's under-dash fuse/relay box.

   Are the fuse(s) OK?

   YES—Reinstall the fuse(s), then go to step 2.

   NO—Replace the fuse(s) and recheck. If the fuse continues to blow, locate and repair the short in the circuit between the under-hood fuse/relay box and the relay circuit board, the under-hood fuse/relay box and the radiator fan motor, the driver's under-dash fuse/relay box connector terminal F26 and the under-hood fuse/relay box connector terminal B10.■

2. Disconnect and remove the relay circuit board from the under-hood fuse/relay box, and test it (see page 22-39).

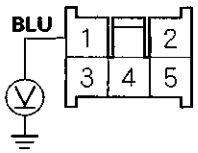
   Is the relay circuit board OK?

   YES—Go to step 3.

   NO—Replace the relay circuit board.■

3. Measure the voltage between under-hood fuse/relay box connector terminal C1 and body ground.

   UNDER-HOOD FUSE/RELAY BOX CONNECTOR C (5P)



   Wire side of female terminals

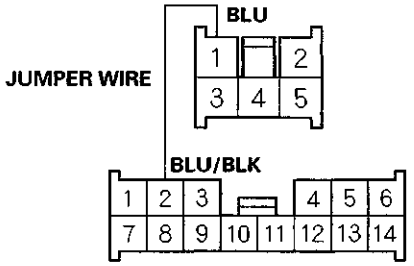
   Is there battery voltage?

   YES—Go to step 4.

   NO—Replace the under-hood fuse/relay box.■

4. Connect under-hood fuse/relay box connector terminals C1 and B2 with a jumper wire.

   UNDER-HOOD FUSE/RELAY BOX CONNECTOR C (5P)
   Wire side of female terminals



   UNDER-HOOD FUSE/RELAY BOX CONNECTOR B (14P)
   Wire side of female terminals

   Does the radiator fan run at high speed?

   YES—Go to step 8.

   NO—Go to step 5.

5. Disconnect the radiator fan motor 2P connector, then test the fan motor (see page 10-4).

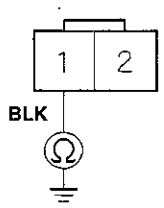
   Is the fan motor OK?

   YES—Go to step 6.

   NO—Replace the radiator fan motor, and retest.

6. Check for continuity between radiator fan motor 2P connector terminal No. 1 and body ground.

RADIATOR FAN MOTOR 2P CONNECTOR



Wire side of female terminals

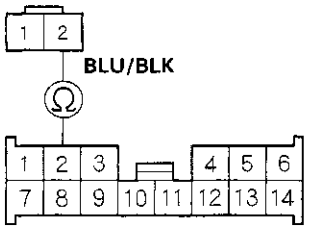
Is there continuity?

YES—Go to step 7.

NO—Repair open in the wire between radiator fan motor 2P connector terminal No. 1 and body ground.■

7. Check for continuity between under-hood fuse/relay box connector terminal B2 and radiator fan motor 2P connector terminal No. 2.

RADIATOR FAN MOTOR 2P CONNECTOR
Wire side of female terminals



UNDER-HOOD FUSE/RELAY BOX CONNECTOR B (14P)
Wire side of female terminals

Is there continuity?

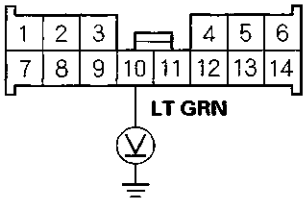
YES—Check for poor connections or loose terminals at the under-hood fuse/relay box and the radiator fan motor, the radiator fan motor and body ground (G301).■

NO—Repair open in the wire between under-hood fuse/relay box connector terminal B2 and radiator fan motor 2P connector terminal No. 2.■

8. Turn the ignition switch to ON (II).

9. Measure the voltage between under-hood fuse/relay box connector terminal B10 and body ground.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR B (14P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 10.

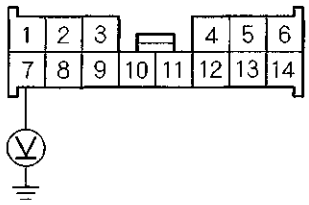
NO—Repair open in the wire between driver's under-dash fuse/relay box connector terminal F26 and under-hood fuse/relay box connector terminal B10.■

(cont'd)

Radiator Fan High Speed Circuit Troubleshooting (cont'd)

10. Measure the voltage between under-hood fuse/relay box connector terminal B7 and body ground.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR B (14P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 11.

NO—Check the PGM-FI subrelay. If the relay is OK, replace the under-hood fuse/relay box.■

11. Turn the ignition switch to LOCK (0).

12. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).

13. Turn the ignition switch to ON (II).

14. Make sure the HDS communicates with the vehicle and the engine control module (ECM)/powertrain control module (PCM). If it does not communicate, troubleshoot the DLC circuit (see page 11-259).

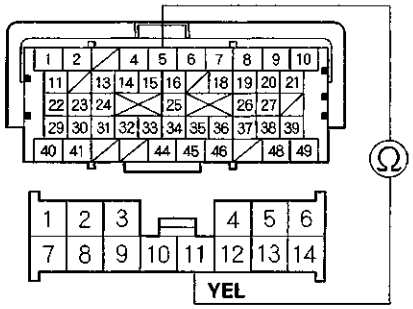
15. Jump the SCS line with the HDS, then turn the ignition switch to LOCK (0).

    NOTE: This step must be done to protect the ECM/PCM from damage.

16. Disconnect ECM/PCM connector A (49P).

17. Check for continuity between ECM/PCM connector terminal A5 and under-hood fuse/relay box connector terminal B11.

ECM/PCM CONNECTOR A (49P)
Terminalside of female terminals



UNDER-HOOD FUSE/RELAY BOX CONNECTOR B (14P)
Wire side of female terminals

Is there continuity?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

NO—Repair open the wire between under-hood fuse/relay box connector B11 and ECM/PCM connector terminal A5.■

HONDA

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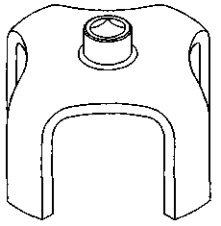
Outline of Model Change

J35Z2, J35Z3 engines have been added.

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07AAA-S0XA100	Fuel Sender Wrench	1
②	07AAJ-S6MA150	Fuel Pressure Gauge Attachment Set	1
③	07JAZ-001000B	Vacuum/Pressure Gauge, 0—4 in.Hg	1
④	07NAJ-P07010A	Pressure Gauge Adapter	1
⑤	07ZAJ-S5AA200	Oil Pressure Hose	1
⑥-1	07406-0020201	A/T Pressure Hose	1
⑥-2	07406-0070301	A/T Low Pressure Gauge W/Panel	1
⑥-3	07MAJ-PY4011A	A/T Pressure Hose, 2,210 mm	1
⑥-4	07MAJ-PY40120	A/T Pressure Adapter	1
⑦	07406-004000B	Fuel Pressure Gauge	1



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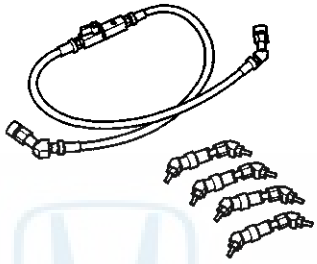

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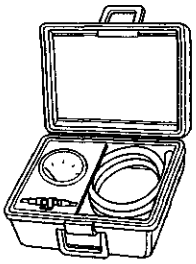

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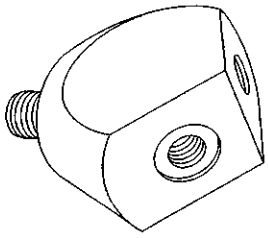

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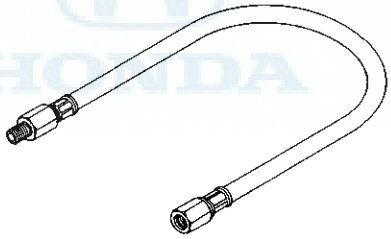

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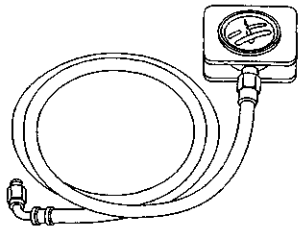


⑥-1, ⑥-2, ⑥-3, ⑥-4

⑦

General Troubleshooting Information

Intermittent Failures

The term intermittent failure means a system may have had a failure, but it checks OK now. If the malfunction indicator lamp (MIL) on the dash does not come on, check for poor connections or loose terminals at all connectors related to the circuit that you are troubleshooting. If the MIL was on but then went out, the original problem may have been intermittent.

Service Information

Periodically, new ECM/PCM software or new service procedures may become available. Always check online for the latest software or service information related to the DTCs or symptoms you are troubleshooting.

Opens and Shorts

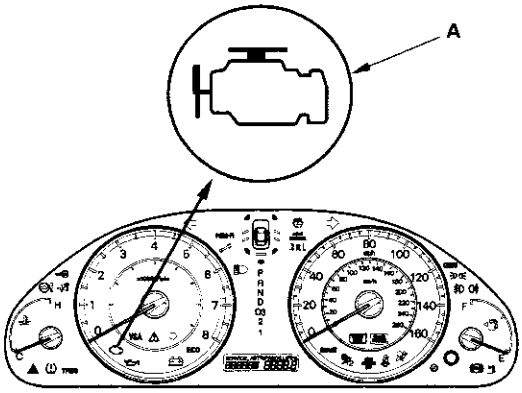
Open and short are common electrical terms. An open is a break in a wire or at a connection. A short is an accidental connection of a wire to ground or to another wire. In simple electronics, this usually means something won't work at all. With complex electronics (such as ECMs or PCMs) this can sometimes mean something works, but not the way it's supposed to.

How to Use the HDS (Honda Diagnostic System)

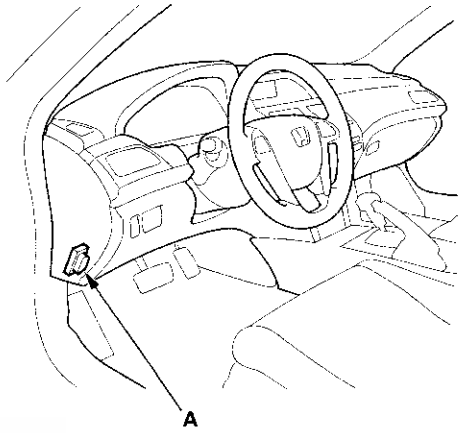
If the MIL (malfunction indicator lamp) has come on

1. Start the engine, and check the MIL (A).

   NOTE: If the ignition switch is turned to ON (II), and the engine is not started, the MIL stays on for 15—20 seconds (see page 11-76).



2. If the MIL stays on, connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



3. Turn the ignition switch to ON (II).

4. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259).

5. Check the diagnostic trouble code (DTC) and note it. Also check the freeze data and/or on-board snapshot data, and download any data found. Then refer to the indicated DTC's troubleshooting, and begin the appropriate troubleshooting procedure.

   NOTE:
   - Freeze data indicates the engine conditions when the first system malfunction, misfire, or fuel trim malfunction that activated the MIL was detected.
   - The HDS can read the DTC, freeze data, on-board snapshot, current data, and other engine control module (ECM) or powertrain control module (PCM) data.
   - For specific operations, refer to the user's manual that came with the HDS.

6. If no DTCs are found, go to MIL troubleshooting (see page 11-258).

(cont'd)

General Troubleshooting Information (cont'd)

If the MIL did not stay on
If the MIL did not stay on but there is a driveability problem, do the symptom troubleshooting.

If you can't duplicate the DTC
Some of the troubleshooting requires you to reset the ECM/PCM and try to duplicate the DTC. If the problem is intermittent and you can't duplicate the code, do not continue through the procedure. To do so will only result in confusion and possibly, a needlessly replaced ECM/PCM.

HDS Clear Command

The ECM/PCM stores various specific data to backup the system even if there is no electrical power such as when the battery negative terminal or No. 19 BACK UP FI ECU (15 A) fuse are disconnected. Stored data based on failed parts should be cleared by using the CLEAR COMMAND of the HDS, if parts are replaced.

The HDS has three kinds of clear commands to meet this purpose. They are DTC clear, ECM/PCM reset, and CKP pattern clear. DTC clear command erases all stored DTC codes, freeze data, on-board snapshot, and readiness codes. This must be done with the HDS after reproducing the DTC during troubleshooting.
The ECM/PCM reset command erases all stored DTC codes, freeze data, on-board snapshot, readiness codes, and all specific data to correct the system except CKP pattern. If the CKP pattern data in the ECM/PCM was cleared, you must do the CKP pattern learn procedure.
The CKP pattern clear command erases only CKP pattern data. This command is for repair of a misfire or the CKP sensor.

Scan Tool Clear Command

If you are using a generic scan tool to clear commands, be aware that there is only one setting for clearing the ECM/PCM, and it clears all commands at the same time (CKP pattern learn, idle learn, readiness codes, freeze data, on-board snapshot, and DTCs). After you clear all commands, you then need to do these procedures, in this order: ECM/PCM idle learn procedure (see page 11-385); CKP pattern learn procedure; test-drive to set readiness codes to complete (see page 11-76).

DTC Clear

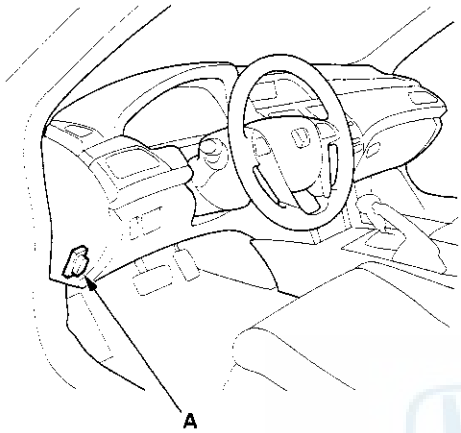
1. Clear the DTC with the HDS while the engine is stopped.
2. Turn the ignition to LOCK (0).
3. Turn the ignition switch to ON (II), and wait 30 seconds.
4. Turn the ignition to LOCK (0), and disconnect the HDS from the DLC.

ECM/PCM Reset

1. Reset the ECM/PCM with the HDS while the engine is stopped.
2. Turn the ignition to LOCK (0).
3. Turn the ignition switch to ON (II), and wait 30 seconds.
4. Turn the ignition to LOCK (0), and disconnect the HDS from the DLC.
5. Do the ECM/PCM idle learn procedure (see page 11-385).

CKP Pattern Clear/CKP Pattern Learn Clear/Learn Procedure (with the HDS)

1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259).
4. Select CRANK PATTERN in the ADJUSTMENT MENU with the HDS.
5. Select CRANK PATTERN LEARNING with the HDS, and follow the screen prompts.

Learn Procedure (without the HDS)

1. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on.
2. Test-drive the vehicle on a level road: Decelerate (with the throttle fully closed) from an engine speed of 2,500 rpm down to 1,000 rpm with the A/T in 2, or the M/T in 2nd.
3. Repeat step 2 several times.
4. Turn the ignition to LOCK (0).
5. Turn the ignition switch to ON (II), and wait 30 seconds.

How to End a Troubleshooting Session (required after any troubleshooting)

1. Reset the ECM/PCM with the HDS.
2. Do the ECM/PCM idle learn procedure (see page 11-385).
3. Turn the ignition to LOCK (0).
4. Disconnect the HDS from the DLC.

NOTE: The ECM/PCM is part of the immobilizer system. If you replace the ECM/PCM, it will have a different immobilizer code. For the engine to start, you must rewrite the immobilizer code with the HDS (immobilizer system section).

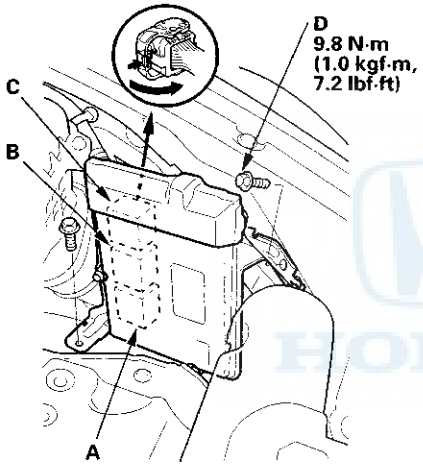
(cont'd)

General Troubleshooting Information (cont'd)

How to Troubleshoot Circuits at the ECM/PCM Connectors

NOTE: The ECM/PCM overwrites data and monitors the EVAP system for up to about 40 minutes after the ignition switch is turned to LOCK (0). Jumping the SCS line after turning the ignition switch to LOCK (0) cancels this function. Disconnecting the ECM/PCM during this function, without jumping the SCS line first, can damage the ECM/PCM.

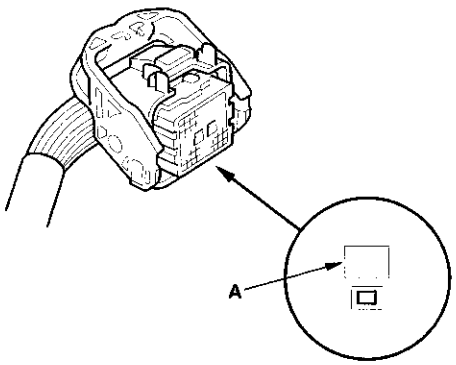
1. Jump the SCS line with the HDS.
2. Remove the bolts (D).



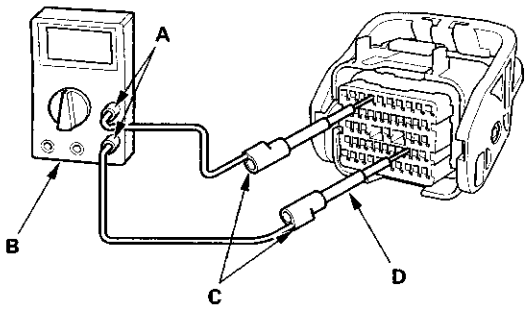
3. Disconnect ECM/PCM connectors A, B, and C.

   NOTE: ECM/PCM connectors A, B, and C have symbols (A=□, B=△, C=○) embossed on them for identification.

4. When diagnosis/troubleshooting is done at the ECM/PCM connector, use the terminal test port (A) above the terminal you need to check.



5. Connect one side of the patch cord's terminals (A) to a commercially available digital multimeter (B), and connect the other side (C) to a commercially available banana jack (Pomona Electronics Tool No. 3563 or equivalent) (D).



6. Gently contact the pin probe (male) at the terminal test port from the terminal side. Do not force the tips into the terminals.

NOTICE

- For accurate results, always use the pin probe (male).
- To prevent damage to the connector terminals, do not insert test equipment probes, paper clips, or other substitutes. Damaged terminals cause a poor connection and an incorrect measurement.
- Do not puncture the insulation on a wire. Punctures can cause poor or intermittent electrical connections.

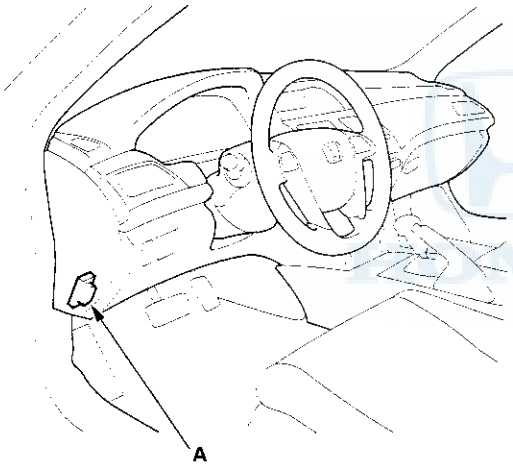
Substituting the ECM/PCM

Special Tools Required
- Honda diagnostic system (HDS) tablet tester
- Honda interface module (HIM) and an iN workstation with HDS and CM update software
- HDS pocket tester
- GNA600 and an iN workstation with HDS and CM update software

Use any one of these update tools.

NOTE: Use this procedure when you have to substitute a known-good ECM/PCM during the troubleshooting procedure.

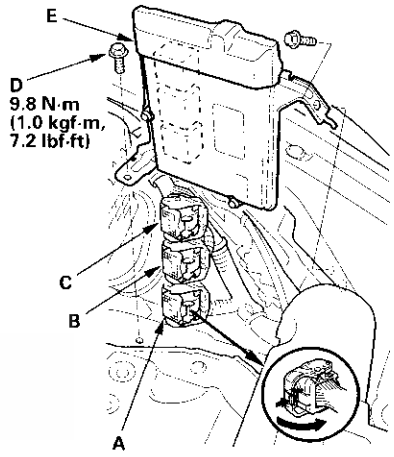
1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259). If you are returning from DLC circuit troubleshooting, skip steps 4 and 5, then clean the throttle body after substituting the ECM/PCM (see page 11-436).
4. Select the INSPECTION MENU with the HDS.
5. Select the ETCS TEST, then select the TP POSITION CHECK, and follow the screen prompts.

   NOTE: If the TP POSITION CHECK indicates FAILED, continue this procedure.

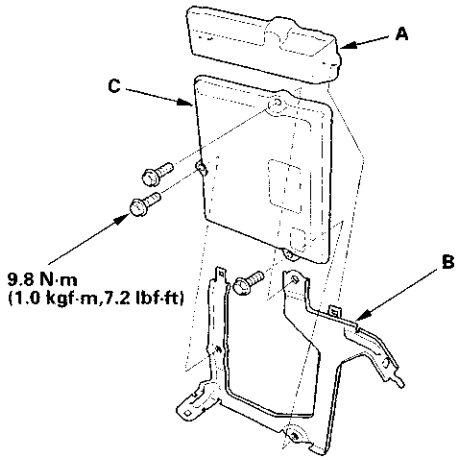
6. Turn the ignition switch to LOCK (0).
7. Jump the SCS line with the HDS.
8. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
9. Remove the bolts (D).



10. Disconnect ECM/PCM connectors A, B, and C, then remove the ECM/PCM assembly (E).

    NOTE: ECM/PCM connectors A, B, and C have symbols (A=□, B=△, C=○) embossed on them for identification.

11. Remove the cover (A) and the bracket (B) from the ECM/PCM (C).



12. Install a known-good ECM/PCM in the reverse order of removal.

(cont'd)

General Troubleshooting Information (cont'd)

13. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

14. Turn the ignition switch to ON (II).

    NOTE: DTC P0630 (VIN Not Programmed or Mismatch) may be stored because the VIN has not been programmed into the ECM/PCM; ignore it, and continue this procedure.

15. Manually input the VIN to the ECM/PCM with the HDS.

16. Select the IMMOBI SYSTEM with the HDS.

17. Enter the immobilizer code that you obtained from iN or ISIS using the ECM/PCM replacement procedure in the HDS; this allows you to start the engine.

18. Reset the ECM/PCM with the HDS.

19. If the TP POSITION CHECK failed in step 5, clean the throttle body (see page 11-436).

20. Update the ECM/PCM if it does not have the latest software (see page 11-281).

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Do the CKP pattern clear/CKP pattern learn procedure (see page 11-5).

OBD Status

The OBD status shows the current system status of each DTC and all of the parameters. This function is used to see if the repair was successfully completed. The results of diagnostic tests for the DTC are displayed as:

- PASSED: The on board diagnosis is successfully finished.
- FAILED: The on board diagnosis has finished but failed.
- EXECUTING: The vehicle is in enable criteria conditions for the DTC and the on board diagnosis is running.
- NOT COMPLETED: The on board diagnosis was running but is out of the enable conditions of the DTC.
- OUT OF CONDITION: The vehicle has stayed out of the enable conditions for the DTC.

DTC Troubleshooting Index

DTC (MIL indication)	Two Drive Cycle Detection	Detection Item	MIL	Note
P0101 (50)	○	Mass Air Flow (MAF) Sensor Circuit Range/Performance Problem	ON	(see page 11-81)
P0102 (50)	—	Mass Air Flow (MAF) Sensor Circuit Low Voltage	ON	(see page 11-82)
P0103 (50)	—	Mass Air Flow (MAF) Sensor Circuit High Voltage	ON	(see page 11-85)
P0107 (3)	—	Manifold Absolute Pressure (MAP) Sensor Circuit Low Voltage	ON	(see page 11-87)
P0108 (3)	—	Manifold Absolute Pressure (MAP) Sensor Circuit High Voltage	ON	(see page 11-89)
P0111 (10)	○	Intake Air Temperature (IAT) Sensor Circuit Range/Performance Problem	ON	(see page 11-92)
P0112 (10)	○	Intake Air Temperature (IAT) Sensor Circuit Low Voltage	ON	(see page 11-93)
P0113 (10)	○	Intake Air Temperature (IAT) Sensor Circuit High Voltage	ON	(see page 11-94)
P0116 (86)	○	Engine Coolant Temperature (ECT) Sensor 1 Circuit Range/ Performance Problem	ON	(see page 11-97)
P0117 (6)	—	Engine Coolant Temperature (ECT) Sensor 1 Circuit Low Voltage	ON	(see page 11-98)
P0118 (6)	—	Engine Coolant Temperature (ECT) Sensor 1 Circuit High Voltage	ON	(see page 11-99)
P0122 (7)	—	Throttle Position (TP) Sensor A Circuit Low Voltage	ON	(see page 11-286)
P0123 (7)	—	Throttle Position (TP) Sensor A Circuit High Voltage	ON	(see page 11-288)
P0125 (86)	○	Engine Coolant Temperature (ECT) Sensor 1 Malfunction/Slow Response	ON	(see page 11-102)
P0128 (87)	○	Cooling System Malfunction	ON	(see page 11-103)
P0133 (157)	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Malfunction/Slow Response	ON	(see page 11-104)
P0134 (151)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Heater System Malfunction	ON	(see page 11-105)
P0134 (151)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Heater System Malfunction	ON	(see page 11-108)
P0135 (151)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Heater Circuit Malfunction	ON	(see page 11-110)
P0135 (151)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Heater Circuit Malfunction	ON	(see page 11-115)
P0137 (161)	○	Rear Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 1, Sensor 2)) Circuit Low Voltage	ON	(see page 11-120)
P0138 (161)	○	Rear Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 1, Sensor 2)) Circuit High Voltage	ON	(see page 11-122)
P0139 (161)	○	Rear Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 1, Sensor 2)) Slow Response	ON	(see page 11-125)
P0141 (163)	○	Rear Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 1, Sensor 2)) Heater Circuit Malfunction	ON	(see page 11-126)
P0153 (158)	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Malfunction/Slow Response	ON	(see page 11-104)
P0154 (152)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Heater System Malfunction	ON	(see page 11-105)
P0154 (152)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Heater System Malfunction	ON	(see page 11-108)
P0155 (152)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Heater Circuit Malfunction	ON	(see page 11-110)
P0155 (152)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Heater Circuit Malfunction	ON	(see page 11-115)
P0157 (162)	○	Front Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 2, Sensor 2)) Circuit Low Voltage	ON	(see page 11-120)
P0158 (162)	○	Front Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 2, Sensor 2)) Circuit High Voltage	ON	(see page 11-122)
P0159 (162)	○	Front Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 2, Sensor 2)) Slow Response	ON	(see page 11-125)
P0161 (164)	○	Front Secondary Heated Oxygen Sensor (Secondary HO2S (Bank 2, Sensor 2)) Heater Circuit Malfunction	ON	(see page 11-126)
P0171 (153)	○	Rear Bank (Bank 1) Fuel System Too Lean	ON	(see page 11-131)
P0172 (153)	○	Rear Bank (Bank 1) Fuel System Too Rich	ON	(see page 11-131)
P0174 (154)	○	Front Bank (Bank 2) Fuel System Too Lean	ON	(see page 11-131)
P0175 (154)	○	Front Bank (Bank 2) Fuel System Too Rich	ON	(see page 11-131)
P0222 (7)	—	Throttle Position (TP) Sensor B Circuit Low Voltage	ON	(see page 11-290)
P0223 (7)	—	Throttle Position (TP) Sensor B Circuit High Voltage	ON	(see page 11-293)

NOTE: The above DTCs are indicated when the PGM-FI system is selected with the HDS.
Some automatic transmission DTCs cause the MIL to come on. If the MIL is on and no DTCs are indicated in the PGM-FI system, select the A/T system, and check for automatic transmission DTCs.

*: These DTCs are indicated by a blinking MIL when the SCS line is jumped with the HDS. Some DTCs do not cause the MIL to blink when the SCS line is jumped. The last four characters of these DTCs are shown in the gauge display.
* 1: All models except PZEV
* 2: PZEV model

(cont'd)

DTC Troubleshooting Index (cont'd)

DTC (MIL indication*)	Two Drive Cycle Detection	Detection Item	MIL	Note
P0300 (77) any combination of following P0301 (71) P0302 (72) P0303 (73) P0304 (74) P0305 (75) P0306 (76)	○	Random Misfire Detected	ON	(see page 11-132)
P0301 (71)	○	No. 1 Cylinder Misfire Detected	ON	(see page 11-136)
P0302 (72)	○	No. 2 Cylinder Misfire Detected	ON	(see page 11-136)
P0303 (73)	○	No. 3 Cylinder Misfire Detected	ON	(see page 11-136)
P0304 (74)	○	No. 4 Cylinder Misfire Detected	ON	(see page 11-136)
P0305 (75)	○	No. 5 Cylinder Misfire Detected	ON	(see page 11-136)
P0306 (76)	○	No. 6 Cylinder Misfire Detected	ON	(see page 11-136)
P0325 (23)	○	Knock Sensor Circuit Malfunction	ON	(see page 11-142)
P0335 (4)	—	Crankshaft Position (CKP) Sensor No Signal	ON	(see page 11-145)
P0339 (4)	—	Crankshaft Position (CKP) Sensor Circuit Intermittent Interruption	ON	(see page 11-148)
P0351 (71)	—	No. 1 Cylinder Ignition Coil Circuit Malfunction	ON	(see page 11-149)
P0352 (72)	—	No. 2 Cylinder Ignition Coil Circuit Malfunction	ON	(see page 11-149)
P0353 (73)	—	No. 3 Cylinder Ignition Coil Circuit Malfunction	ON	(see page 11-149)
P0354 (74)	—	No. 4 Cylinder Ignition Coil Circuit Malfunction	ON	(see page 11-149)
P0355 (75)	—	No. 5 Cylinder Ignition Coil Circuit Malfunction	ON	(see page 11-149)
P0356 (76)	—	No. 6 Cylinder Ignition Coil Circuit Malfunction	ON	(see page 11-149)
P0365 (8)	—	Camshaft Position (CMP) Sensor Circuit No Signal	ON	(see page 11-153)
P0369 (8)	—	Camshaft Position (CMP) Sensor Circuit Intermittent Interruption	ON	(see page 11-156)
P0400 (80)	○	Exhaust Gas Recirculation (EGR) System Leak Detected	ON	(see page 11-449)
P0401 (80)	○	Exhaust Gas Recirculation (EGR) Insufficient Flow	ON	(see page 11-450)
P0404 (12)	○	Exhaust Gas Recirculation (EGR) Valve Circuit Range/Performance Problem	ON	(see page 11-451)
P0406 (12)	○	Exhaust Gas Recirculation (EGR) Valve Position Sensor Circuit High Voltage	ON	(see page 11-454)
P0420 (165)	○	Rear Bank Catalyst System Efficiency Below Threshold (Bank 1)	ON	(see page 11-443)
P0430 (166)	○	Front Bank Catalyst System Efficiency Below Threshold (Bank 2)	ON	(see page 11-443)
P0443 (92)	○	Evaporative Emission (EVAP) Canister Purge Valve Circuit Malfunction	ON	(see page 11-467)
P0451 (91)	○	Fuel Tank Pressure (FTP) Sensor Circuit Range/Performance Problem	ON	(see page 11-471)
P0452 (91)	○	Fuel Tank Pressure (FTP) Sensor Circuit Low Voltage	ON	(see page 11-472)
P0453 (91)	○	Fuel Tank Pressure (FTP) Sensor Circuit High Voltage	ON	(see page 11-475)
P0455 (90)	○	Evaporative Emission (EVAP) System Large Leak Detected	ON	(see page 11-478)
P0456 (90)	○	Evaporative Emission (EVAP) System Very Small Leak Detected	ON	(see page 11-478)
P0457	—	Evaporative Emission (EVAP) System Leak Detected/Fuel Fill Cap Loose or Missing	OFF	(see page 11-482)
P0461	—	Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit Range/ Performance Problem	OFF	(see page 11-388)
P0462	○	Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit Low Voltage	OFF	(see page 11-388)
P0463	○	Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit High Voltage	OFF	(see page 11-390)
P0496 (92)	○	Evaporative Emission (EVAP) System High Purge Flow Detected	ON	(see page 11-484)
P0497 (90)	○	Evaporative Emission (EVAP) System Low Purge Flow Detected	ON	(see page 11-484)
P0498 (117)	○	Evaporative Emission (EVAP) Canister Vent Shut Valve Circuit Low Voltage	ON	(see page 11-488)
P0499 (117)	○	Evaporative Emission (EVAP) Canister Vent Shut Valve Circuit High Voltage	ON	(see page 11-491)

NOTE: The above DTCs are indicated when the PGM-FI system is selected with the HDS.
Some automatic transmission DTCs cause the MIL to come on. If the MIL is on and no DTCs are indicated in the PGM-FI system, select the A/T system, and check for automatic transmission DTCs.

*: These DTCs are indicated by a blinking MIL when the SCS line is jumped with the HDS. Some DTCs do not cause the MIL to blink when the SCS line is jumped. The last four characters of these DTCs are shown in the gauge display.

DTC (MIL indication *)	Two Drive Cycle Detection	Detection Item	MIL	Note
P0506 (14)	○	Idle Control System RPM Lower than Expected	ON	(see page 11-371)
P0507 (14)	○	Idle Control System RPM Higher than Expected	ON	(see page 11-373)
P050A (167)	○	Cold Start Idle Air Control System Performance Problem	ON	(see page 11-157)
P050B (167)	○	Cold Start Ignition Timing Control System Performance Problem	ON	(see page 11-159)
P0522 (22) *3	○	Rocker Arm Oil Pressure Sensor Circuit Low Voltage	ON	(see page 11-341)
P0523 (22) *3	○	Rocker Arm Oil Pressure Sensor Circuit High Voltage	ON	(see page 11-344)
P0532	○	A/C Pressure Sensor Circuit Low Voltage	OFF	(see page 11-374)
P0533	○	A/C Pressure Sensor Circuit High Voltage	OFF	(see page 11-376)
P0560 (34)	—	Engine Control Module (ECM)/Powertrain Control Module (PCM) Power Source Circuit Unexpected Voltage	ON	(see page 11-162)
P0562	—	Charging System Low Voltage	OFF	(see page 11-164)
P0563	○	Engine Control Module (ECM)/Powertrain Control Module (PCM) Power Source Circuit Unexpected Voltage	OFF	(see page 11-165)
P0602 (196)	—	Engine Control Module (ECM)/Powertrain Control Module (PCM) Programming Error	ON	(see page 11-168)
P060A (131)	—	Engine Control Module (ECM)/Powertrain Control Module (PCM) Internal Control Module Malfunction	ON	(see page 11-168)
P062F (131)	—	Engine Control Module (ECM)/Powertrain Control Module (PCM) Internal Control Module Keep Alive Memory (KAM) Error	ON	(see page 11-169)
P0630 (139)	—	VIN Not Programmed or Mismatch	ON	(see page 11-169)
P0641 (133)	—	Sensor Reference Voltage A Malfunction	ON	(see page 11-170)
P0651 (134)	—	Sensor Reference Voltage B Malfunction	ON	(see page 11-173)
P0685 (135)	○	Engine Control Module (ECM)/Powertrain Control Module (PCM) Power Control Circuit/Internal Circuit Malfunction	ON	(see page 11-175)
P0715 *5	○	Input Shaft (Mainshaft) Speed Sensor Circuit Malfunction	OFF	(see page 11-176)
P0720 (122) *5	○	Output Shaft (Countershaft) Speed Sensor Circuit Malfunction	ON	(see page 11-179)
P1077 (106) *4	○	Intake Manifold Tuning (IMT) Valve Stuck in High RPM Position	ON	(see page 11-425)
P1078 (106) *4	○	Intake Manifold Tuning (IMT) Valve Stuck in Low RPM Position	ON	(see page 11-431)
P1116 (86)	○	Engine Coolant Temperature (ECT) Sensor 1 Circuit Range/ Performance Problem	ON	(see page 11-182)
P1128 (5)	○	Manifold Absolute Pressure (MAP) Sensor Signal Lower Than Expected	ON	(see page 11-184)
P1129 (5)	○	Manifold Absolute Pressure (MAP) Sensor Signal Higher Than Expected	ON	(see page 11-185)
P1172 (157)	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Circuit Out of Range High	ON	(see page 11-187)
P1174 (158)	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Circuit Out of Range High	ON	(see page 11-187)
P1297	○	Electrical Load Detector (ELD) Circuit Low Voltage	OFF	(see page 11-188)
P1298	○	Electrical Load Detector (ELD) Circuit High Voltage	OFF	(see page 11-189)
P1454 (91)	○	Fuel Tank Pressure (FTP) Sensor Circuit Range/Performance Problem	ON	(see page 11-492)
P145C (90)	○	Evaporative Emission (EVAP) System Purge Flow Malfunction	ON	(see page 11-494)
P1549	—	Charging System High Voltage	OFF	(see page 11-191)

NOTE: The above DTCs are indicated when the PGM-FI system is selected with the HDS.
Some automatic transmission DTCs cause the MIL to come on. If the MIL is on and no DTCs are indicated in the PGM-FI system, select the A/T system, and check for automatic transmission DTCs.

* : These DTCs are indicated by a blinking MIL when the SCS line is jumped with the HDS. Some DTCs do not cause the MIL to blink when the SCS line is jumped. The last four characters of these DTCs are shown in the gauge display.
* 3: J35Z2 engine
* 4: J35Z3 engine
* 5: M/T

(cont'd)

DTC Troubleshooting Index (cont'd)

DTC (MIL indication*)	Two Drive Cycle Detection	Detection Item	MIL	Note
P1658 (40)	—	Electronic Throttle Control System (ETCS) Control Relay ON Malfunction	ON	(see page 11-295)
P1659 (40)	—	Electronic Throttle Control System (ETCS) Control Relay OFF Malfunction	ON	(see page 11-297)
P1683 (40)	—	Throttle Valve Default Position Spring Performance Problem	ON	(see page 11-301)
P1684 (40)	—	Throttle Valve Return Spring Performance Problem	ON	(see page 11-302)
P16BB	—	Alternator B Terminal Circuit Low Voltage	OFF	(see page 11-192)
P16BC	—	Alternator FR Terminal Circuit/IGP Circuit Low Voltage	OFF	(see page 11-193)
P2101 (40)	—	Electronic Throttle Control System (ETCS) Malfunction	ON	(see page 11-303)
P2118 (40)	—	Throttle Actuator Current Range/Performance Problem	ON	(see page 11-307)
P2122 (37)	—	Accelerator Pedal Position (APP) Sensor A (Throttle Position (TP) Sensor D) Circuit Low Voltage	ON	(see page 11-311)
P2123 (37)	—	Accelerator Pedal Position (APP) Sensor A (Throttle Position (TP) Sensor D) Circuit High Voltage	ON	(see page 11-314)
P2127 (37)	—	Accelerator Pedal Position (APP) Sensor B (Throttle Position (TP) Sensor E) Circuit Low Voltage	ON	(see page 11-316)
P2128 (37)	—	Accelerator Pedal Position (APP) Sensor B (Throttle Position (TP) Sensor E) Circuit High Voltage	ON	(see page 11-319)
P2135 (7)	—	Throttle Position (TP) Sensor A/B Incorrect Voltage Correlation	ON	(see page 11-320)
P2138 (37)	—	Accelerator Pedal Position (APP) Sensor A/B (Throttle Position (TP) Sensor D/E) Incorrect Voltage Correlation	ON	(see page 11-322)
P2176 (40)	—	Throttle Actuator Control System Idle Position Not Learned	ON	(see page 11-324)
P2183 (192)	○	Engine Coolant Temperature (ECT) Sensor 2 Circuit Range/ Performance Problem	ON	(see page 11-196)
P2184 (192)	○	Engine Coolant Temperature (ECT) Sensor 2 Circuit Low Voltage	ON	(see page 11-198)
P2185 (192)	○	Engine Coolant Temperature (ECT) Sensor 2 Circuit High Voltage	ON	(see page 11-199)
P2195 (155)	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Signal Stuck Lean	ON	(see page 11-202)
P2197 (156)	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Signal Stuck Lean	ON	(see page 11-202)
P2227 (13)	○	Barometric Pressure (BARO) Sensor Circuit Range/Performance Problem	ON	(see page 11-203)
P2228 (13)	○	Barometric Pressure (BARO) Sensor Circuit Low Voltage	ON	(see page 11-205)
P2229 (13)	○	Barometric Pressure (BARO) Sensor Circuit High Voltage	ON	(see page 11-205)
P2237 (155)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) IP Circuit High Voltage	ON	(see page 11-206)
P2237 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) IP Circuit High Voltage	ON	(see page 11-208)
P2238 (155)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) IP Circuit Low Voltage	ON	(see page 11-211)
P2238 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) IP Circuit Low Voltage	ON	(see page 11-213)
P2240 (156)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) IP Circuit High Voltage	ON	(see page 11-206)
P2240 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) IP Circuit High Voltage	ON	(see page 11-208)
P2241 (156)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) IP Circuit Low Voltage	ON	(see page 11-211)
P2241 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) IP Circuit Low Voltage	ON	(see page 11-213)

NOTE: The above DTCs are indicated when the PGM-FI system is selected with the HDS.
Some automatic transmission DTCs cause the MIL to come on. If the MIL is on and no DTCs are indicated in the PGM-FI system, select the A/T system, and check for automatic transmission DTCs.

* : These DTCs are indicated by a blinking MIL when the SCS line is jumped with the HDS. Some DTCs do not cause the MIL to blink when the SCS line is jumped. The last four characters of these DTCs are shown in the gauge display.
* 1: All models except PZEV
* 2: PZEV model

DTC (MIL indication *)	Two Drive Cycle Detection	Detection Item	MIL	Note
P2243 (155)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VCENT Circuit High Voltage	ON	(see page 11-216)
P2243 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VCENT Circuit High Voltage	ON	(see page 11-218)
P2245 (155)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VCENT Circuit Low Voltage	ON	(see page 11-221)
P2245 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VCENT Circuit Low Voltage	ON	(see page 11-223)
P2247 (156)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VCENT Circuit High Voltage	ON	(see page 11-216)
P2247 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VCENT Circuit High Voltage	ON	(see page 11-218)
P2249 (156)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VCENT Circuit Low Voltage	ON	(see page 11-221)
P2249 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VCENT Circuit Low Voltage	ON	(see page 11-223)
P2251 (155)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VS Circuit High Voltage	ON	(see page 11-226)
P2251 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VS Circuit High Voltage	ON	(see page 11-228)
P2252 (155)*1	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VS Circuit Low Voltage	ON	(see page 11-231)
P2252 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) VS Circuit Low Voltage	ON	(see page 11-233)
P2254 (156)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VS Circuit High Voltage	ON	(see page 11-226)
P2254 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VS Circuit High Voltage	ON	(see page 11-228)
P2255 (156)*1	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VS Circuit Low Voltage	ON	(see page 11-231)
P2255 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) VS Circuit Low Voltage	ON	(see page 11-233)
P2279 (109)	○	Intake Air System Leak	ON	(see page 11-464)
P2413 (12)	○	Exhaust Gas Recirculation (EGR) System Malfunction	ON	(see page 11-455)
P2422 (117)	○	Evaporative Emission (EVAP) Canister Vent Shut Valve Stuck Closed Malfunction	ON	(see page 11-492)
P2610 (132)	—	Engine Control Module (ECM)/Powertrain Control Module (PCM) Ignition Off Internal Timer Malfunction	ON	(see page 11-236)

NOTE: The above following DTCs are indicated when the PGM-FI system is selected in the HDS.
Some automatic transmission DTCs cause the MIL to come on. If the MIL is on and no DTCs are indicated in the PGM-FI system, select the A/T system, and check for automatic transmission DTCs.

* : These DTCs are indicated by a blinking MIL when the SCS line is jumped with the HDS. Some DTCs do not cause the MIL to blink when the SCS line is jumped. The last four characters of these DTCs are shown in the gauge display.
* 1: All models except PZEV
* 2: PZEV model

(cont'd)

DTC Troubleshooting Index (cont'd)

DTC (MIL indication*)	Two Drive Cycle Detection	Detection Item	MIL	Note
P2627 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) LABEL Circuit Low Voltage	ON	(see page 11-236)
P2628 (155)*2	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) LABEL Circuit High Voltage	ON	(see page 11-238)
P2630 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) LABEL Circuit Low Voltage	ON	(see page 11-236)
P2631 (156)*2	○	Front Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) LABEL Circuit High Voltage	ON	(see page 11-238)
P2646 (22)*4	—	Rocker Arm Oil Pressure Switch Circuit Low Voltage	ON	(see page 11-330)
P2647 (22)*4	—	Rocker Arm Oil Pressure Switch Circuit High Voltage	ON	(see page 11-332)
P2648 (21)*4	—	Rocker Arm Oil Control Solenoid Circuit Low Voltage	ON	(see page 11-335)
P2648 (21)*3	—	Rocker Arm Oil Control Solenoid A (Bank 1) Circuit Low Voltage	ON	(see page 11-347)
P2649 (21)*4	—	Rocker Arm Oil Control Solenoid Circuit High Voltage	ON	(see page 11-337)
P2649 (21)*3	—	Rocker Arm Oil Control Solenoid A (Bank 1) Circuit High Voltage	ON	(see page 11-349)
P2653 (38)*3	—	Rocker Arm Oil Control Solenoid B (Bank 1) Circuit Low Voltage	ON	(see page 11-351)
P2654 (38)*3	—	Rocker Arm Oil Control Solenoid B (Bank 1) Circuit High Voltage	ON	(see page 11-353)
P2658 (130)*3	—	Rocker Arm Oil Control Solenoid A (Bank 2) Circuit Low Voltage	ON	(see page 11-356)
P2659 (130)*3	—	Rocker Arm Oil Control Solenoid A (Bank 2) Circuit High Voltage	ON	(see page 11-358)
P2A00 (157)	○	Rear Air Fuel Ratio (A/F) Sensor (Bank 1, Sensor 1) Circuit Range/ Performance Problem	ON	(see page 11-240)
P2A03 (158)	○	Front Air Fuel Ratio (A/F) Sensor (Bank 2, Sensor 1) Circuit Range/ Performance Problem	ON	(see page 11-240)
P3400 (114)*3	—*6 ○*7	Valve Pause System (VPS) Stuck Off Bank 1	ON	(see page 11-360)
P3497 (114)*3	—*6 ○*7	Valve Pause System (VPS) Stuck Off Bank 2	ON	(see page 11-364)
U0029 (126)	—	F-CAN Malfunction (BUS-OFF (Engine Control Module (ECM)/ Powertrain Control Module (PCM)))	ON	(see page 11-241)
U0122	—	F-CAN Malfunction (Engine Control Module (ECM)/Powertrain Control Module (PCM)-VSA Modulator-Control Unit)	OFF	(see page 11-242)
U0155 (126)	—	F-CAN Malfunction (Engine Control Module (ECM)/Powertrain Control Module (PCM)-Gauge Control Module)	ON	(see page 11-244)
U1101*3	—	F-CAN Malfunction (Powertrain Control Module (PCM)-Active Control Engine Mount (ACM))	OFF	(see page 11-246)

NOTE: The above following DTCs are indicated when the PGM-FI system is selected in the HDS.
Some automatic transmission DTCs cause the MIL to come on. If the MIL is on and no DTCs are indicated in the PGM-FI system, select the A/T system, and check for automatic transmission DTCs.

* : These DTCs are indicated by a blinking MIL when the SCS line is jumped with the HDS. Some DTCs do not cause the MIL to blink when the SCS line is jumped. The last four characters of these DTCs are shown in the gauge display.
* 2: PZEV model
* 3: J35Z2 engine
* 4: J35Z3 engine
* 6: One drive cycle detection when in all cylinder activation mode.
* 7: Two drive cycle detection when in cylinder pause mode.

Symptom Troubleshooting Index

When the vehicle has one of these symptoms, check for a diagnostic trouble code (DTC) with the HDS. If there is no DTC, do the diagnostic procedure for the symptom, in the sequence listed, until you find the cause.

Symptom	Diagnostic procedure	Also check for
Engine will not start (MIL works OK, no DTCs set)	1. Test the battery, refer to the 2008-2009 Accord Service Manual (see page 22-88). 2. Test the starter (see page 4-11). 3. Check the fuel pressure (see page 11-403). 4. Troubleshoot the fuel pump circuit (see page 11-394).	• Low compression • No ignition spark • Intake air leaks • Locked up engine • Broken timing belt • Fuel contamination
Engine will not start (MIL comes on and stays on, no DTCs set)	Troubleshoot the DLC circuit (see page 11-259).	• No power to ECM/PCM • No ground to ECM/PCM
MIL comes on and stays on, or never comes on at all, no DTCs set	Troubleshoot the MIL circuit (see page 11-258).	
Engine will not start (MIL works OK, no DTCs set, immobilizer indicator stays on or flashes)	Check the immobilizer system, refer to the 2008-2009 Accord Service Manual (see page 22-392).	
Engine starts but stalls immediately (MIL works OK, no DTCs set, immobilizer indicator stays on or flashes)	Check the immobilizer system, refer to the 2008-2009 Accord Service Manual (see page 22-392).	• Fuel contamination • Low fuel pressure
Engine is hard to start (MIL works OK, no DTCs set)	1. Test the battery, refer to the 2008-2009 Accord Service Manual (see page 22-88). 2. Check the fuel pressure (see page 11-403). 3. Clean the throttle body (see page 11-436).	• Low compression • Intake air leaks • Fuel contamination • Weak spark
Cold fast idle too low (MIL works OK, no DTCs set)	1. Do the ECM/PCM idle learn procedure (see page 11-385). 2. Check the idle speed (see page 11-384). 3. Clean the throttle body (see page 11-436).	
Cold fast idle too high (MIL works OK, no DTCs set)	1. Do the ECM/PCM idle learn procedure (see page 11-385). 2. Check the idle speed (see page 11-384). 3. Do the throttle position learning check (see page 11-435).	Intake air leaks
Idle speed fluctuates (MIL works OK, no DTCs set)	1. Do the ECM/PCM idle learn procedure (see page 11-385). 2. Check the idle speed (see page 11-384). 3. Do the carbon accumulation check (see page 11-435). 4. Troubleshoot the A/C signal circuit (see page 11-379).	Incorrect valve timing or clearance adjustment

(cont'd)

Symptom Troubleshooting Index (cont'd)

Symptom	Diagnostic procedure	Also check for
After warming up, idle speed is below specification without load (MIL works OK, no DTCs set)	1. Troubleshoot the alternator FR signal circuit (see page 11-380). 2. Do the carbon accumulation check (see page 11-435).	Incorrect valve adjustment
After warming up, idle speed is above specification without load (MIL works OK, no DTCs set)	1. Troubleshoot the alternator FR signal circuit (see page 11-380). 2. Inspect the APP sensor (see page 11-327).	Intake air leaks
After warming up, idle speed drops when steering wheel is turned (MIL works OK, no DTCs set)	1. Do the ECM/PCM idle learn procedure (see page 11-385). 2. Troubleshoot the PSP switch signal circuit (see page 11-380). 3. Do the carbon accumulation check (see page 11-435).	Power steering system problem
Low power (MIL works OK, no DTCs set)	Check the fuel pressure (see page 11-403).	• Low compression • Incorrect camshaft timing • Incorrect engine oil level • Exhaust restriction
Engine stalls (MIL works OK, no DTCs set)	1. Do the ECM/PCM idle learn procedure (see page 11-385). 2. Check the fuel pressure (see page 11-403). 3. Check the idle speed (see page 11-384). 4. Troubleshoot the brake pedal position switch signal circuit (see page 11-382).	• Intake air leaks • Faulty harness and sensor connections
Difficult to refuel (MIL works OK, no DTCs set)	1. Check the fuel vent tube between the EVAP canister and the fuel tank. 2. Check the fuel tank vapor recirculation tube between the fuel pipe and the fuel tank. 3. Replace the fuel tank (see page 11-419).	Malfunctioning gas station filling nozzle.
Fuel overflows during refueling (No DTCs set)	Replace the fuel tank (see page 11-419).	Malfunctioning gas station filling nozzle.
Fuel cap warning message stays on (MIL works OK, no DTCs set)	Troubleshoot the fuel cap warning message system (see page 11-495).	
HDS does not communicate with the ECM/PCM or the vehicle	Troubleshoot the DLC circuit (see page 11-259).	Correct HDS software

System Description

Electronic Control System

The functions of the fuel and emission control systems are managed by the engine control module (ECM) on vehicles with manual transmissions or the powertrain control module (PCM) on vehicles with automatic transmissions.

Self-diagnosis
The ECM/PCM detects the failure of a signal from a sensor or from another control unit and stores a Temporary DTC or a DTC. Depending on the failure, a DTC is stored in either the first or the second drive cycle. When a DTC is stored, the ECM/PCM turns on the malfunction indicator lamp (MIL) by a signal sent to the gauge via F-CAN.

- **One Drive Cycle Detection Method**
  When an abnormality occurs in the signal from a sensor or from another control unit, the ECM/PCM stores a DTC and turns on the MIL immediately.

- **Two Drive Cycle Detection Method**
  When an abnormality occurs in the signal from a sensor or from another control unit in the first drive cycle, the ECM/PCM stores a Temporary DTC. The MIL does not come on at this time. If the failure continues in the second drive cycle, the ECM/PCM stores a DTC and turns on the MIL.

Fail-safe Function
When an abnormality occurs in the signal from a sensor or from another control unit, the ECM/PCM ignores that signal and substitutes a pre-programmed value for them that allows the engine to continue running. This causes a DTC to be stored and the MIL to come on.

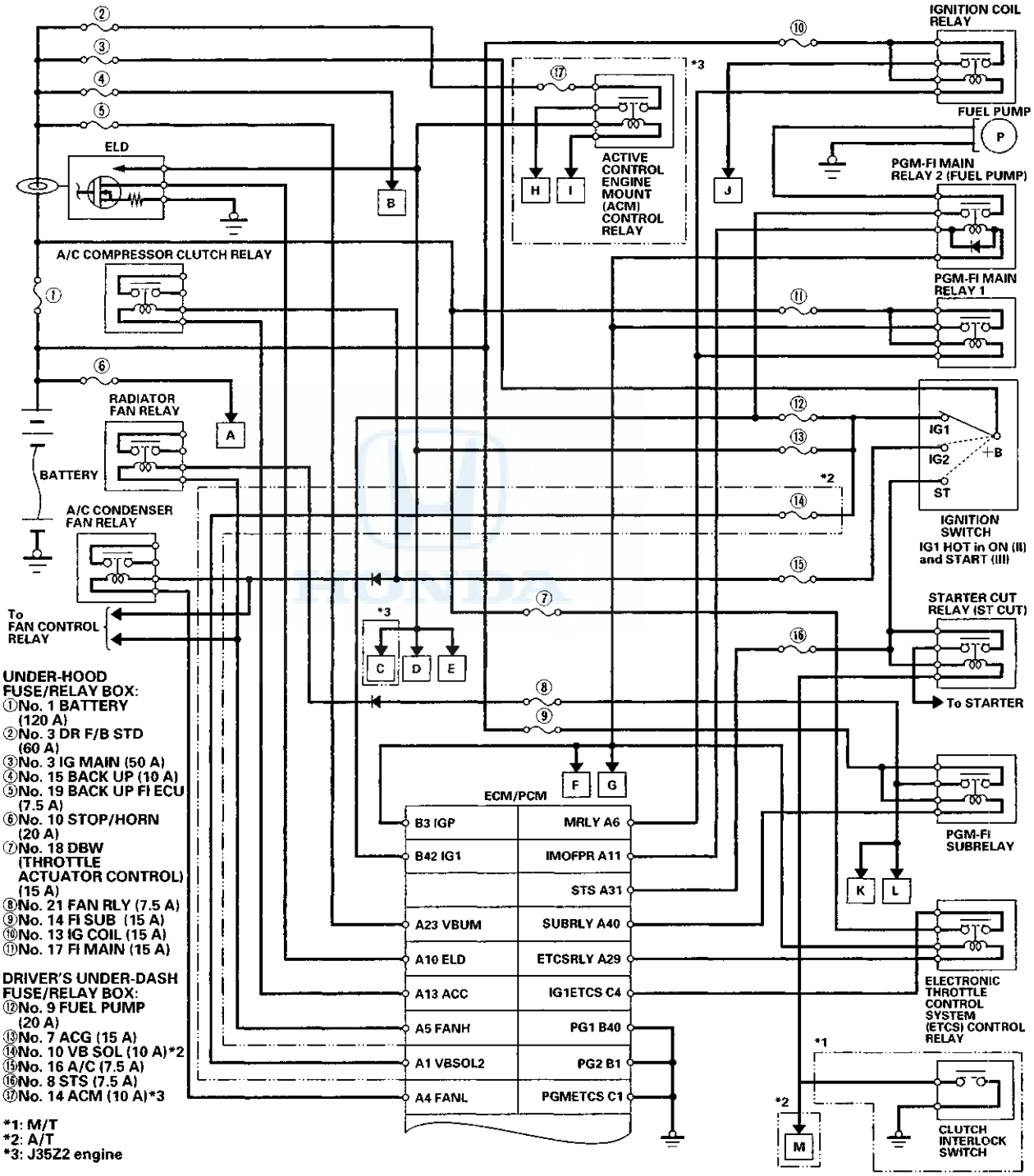
MIL Bulb Check and Readiness Code Condition
When the ignition switch is turned to ON (II), the ECM/PCM turns on the MIL via the F-CAN circuit for about 15 to 20 seconds to check the bulb condition. If any readiness codes are not set to complete, the MIL flashes five times. If all readiness codes are set to complete, the MIL goes off.

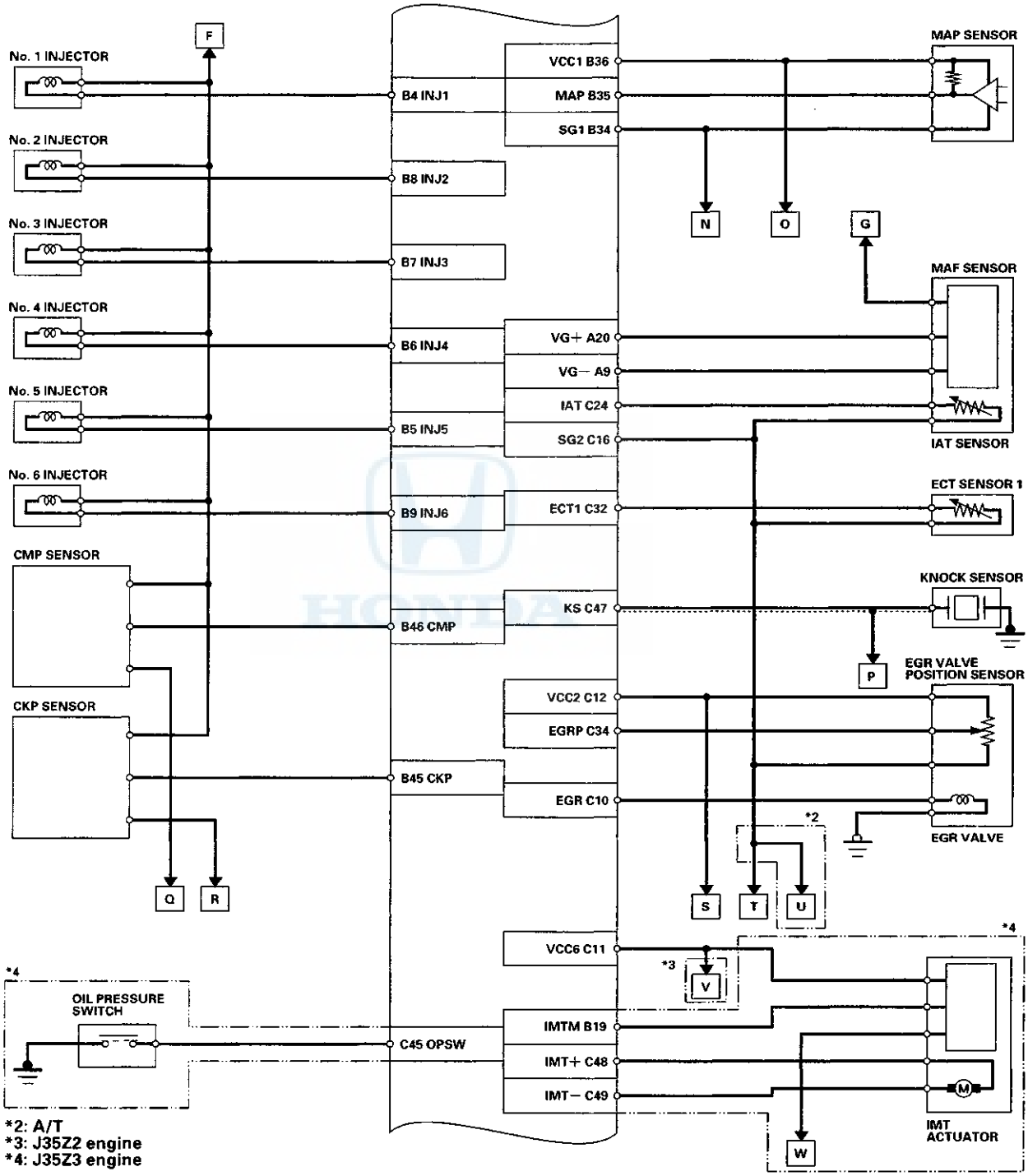
Self Shut Down (SSD) Mode
After the ignition switch is turned to LOCK (0), the ECM/PCM stays on (about 40 minutes). If the ECM/PCM connector is disconnected during this time, the ECM/PCM may be damaged. To cancel this mode, disconnect the negative cable from the battery or jump the SCS line with the HDS after the ignition switch is turned to LOCK (0).

(cont'd)

System Description (cont'd)

ECM/PCM Electrical Connections

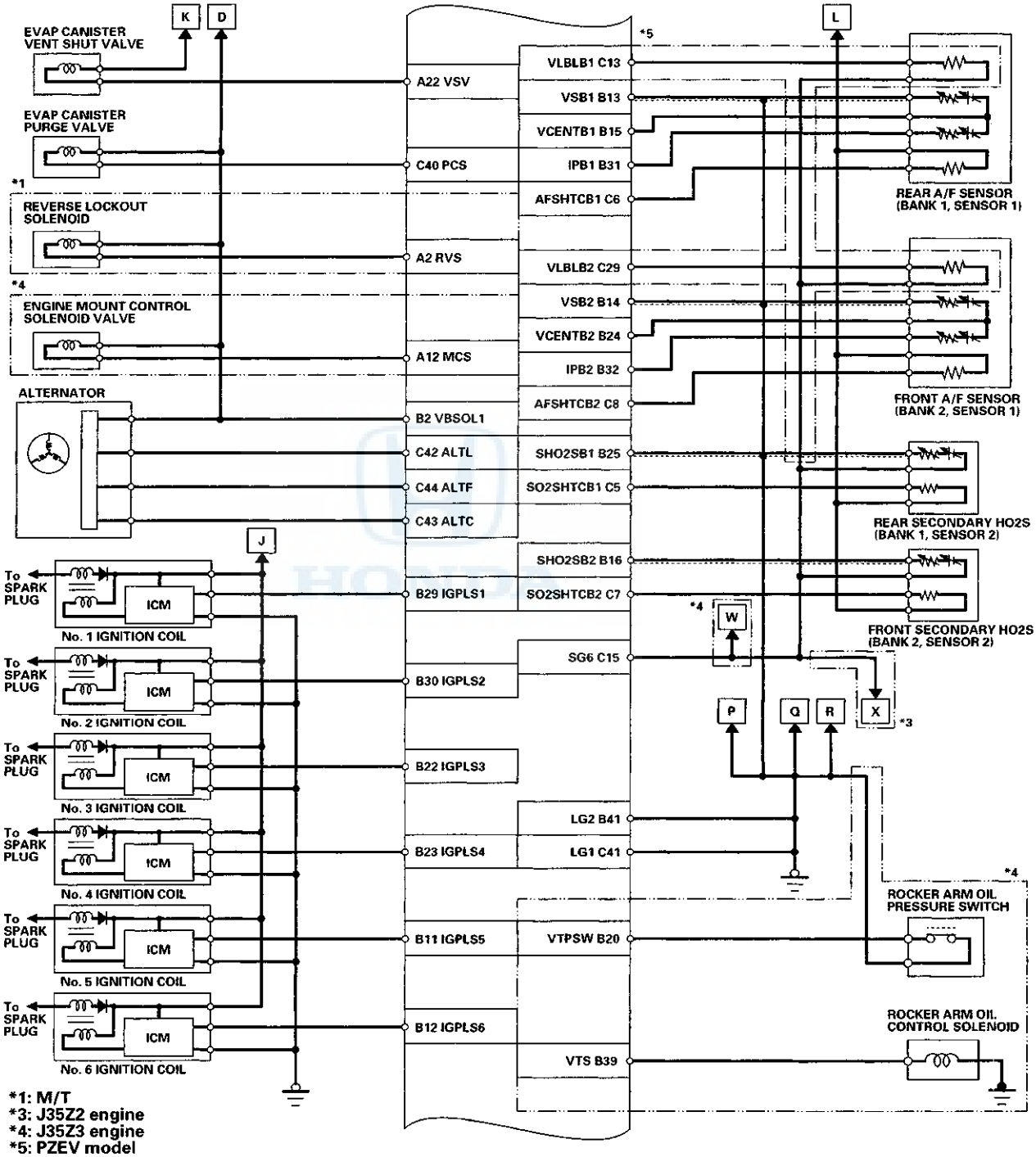



No. 1 INJECTOR
No. 2 INJECTOR
No. 3 INJECTOR
No. 4 INJECTOR
No. 5 INJECTOR
No. 6 INJECTOR
CMP SENSOR
CKP SENSOR
F
Q
R
B4 INJ1
B8 INJ2
B7 INJ3
B6 INJ4
B5 INJ5
B9 INJ6
B46 CMP
B45 CKP
C45 OPSW
VCC1 B36
MAP B35
SG1 B34
VG+ A20
VG− A9
IAT C24
SG2 C16
ECT1 C32
KS C47
VCC2 C12
EGRP C34
EGR C10
VCC6 C11
IMTM B19
IMT+ C48
IMT− C49
MAP SENSOR
N
O
G
MAF SENSOR
IAT SENSOR
ECT SENSOR 1
KNOCK SENSOR
P
EGR VALVE POSITION SENSOR
EGR VALVE
*2
S
T
U
*3
V
*4
OIL PRESSURE SWITCH
IMT ACTUATOR
W
M
*2: A/T
*3: J35Z2 engine
*4: J35Z3 engine

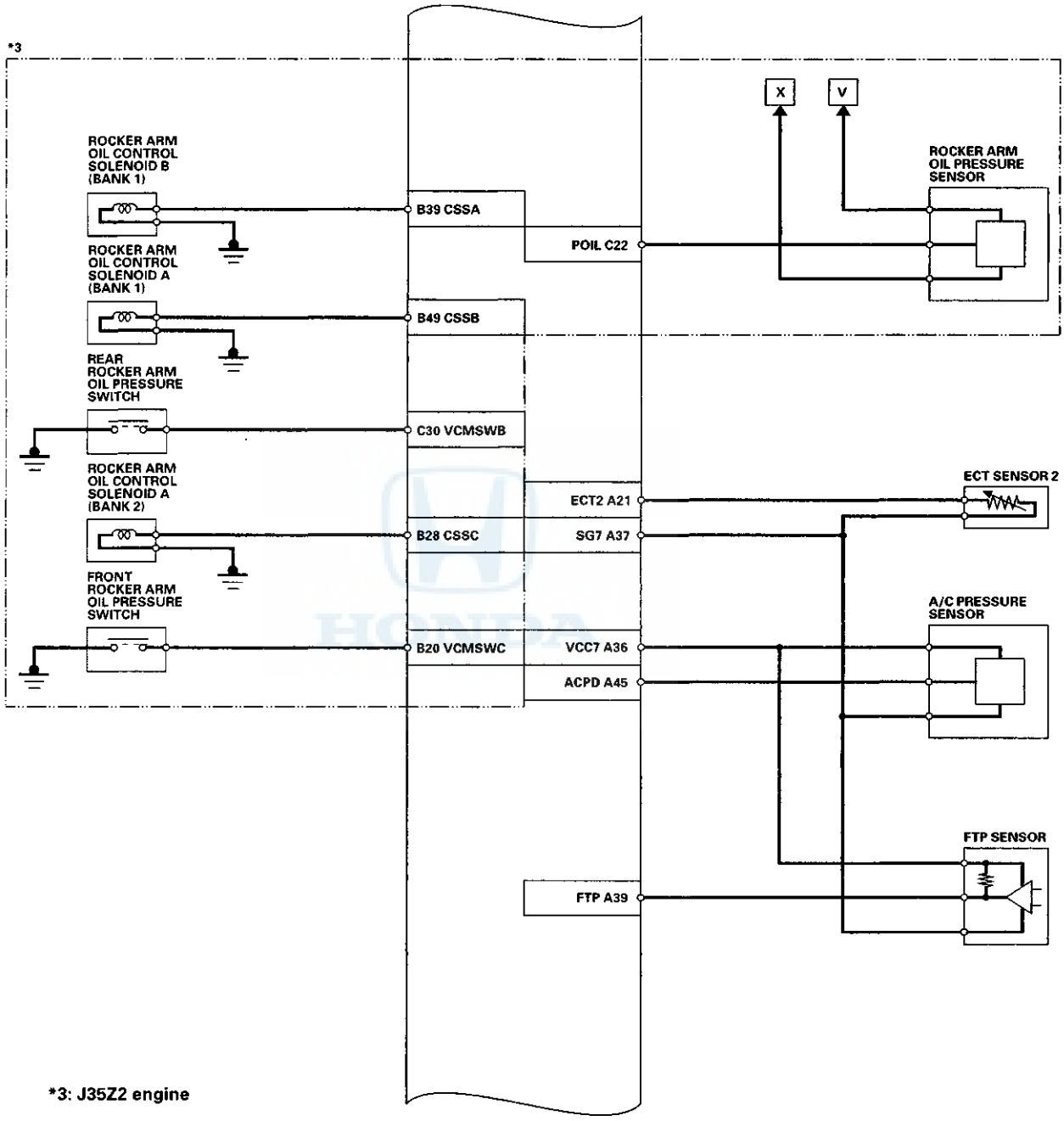
(cont'd)

System Description (cont'd)

ECM/PCM Electrical Connections (cont'd)



*1: M/T
*3: J35Z2 engine
*4: J35Z3 engine
*5: PZEV model

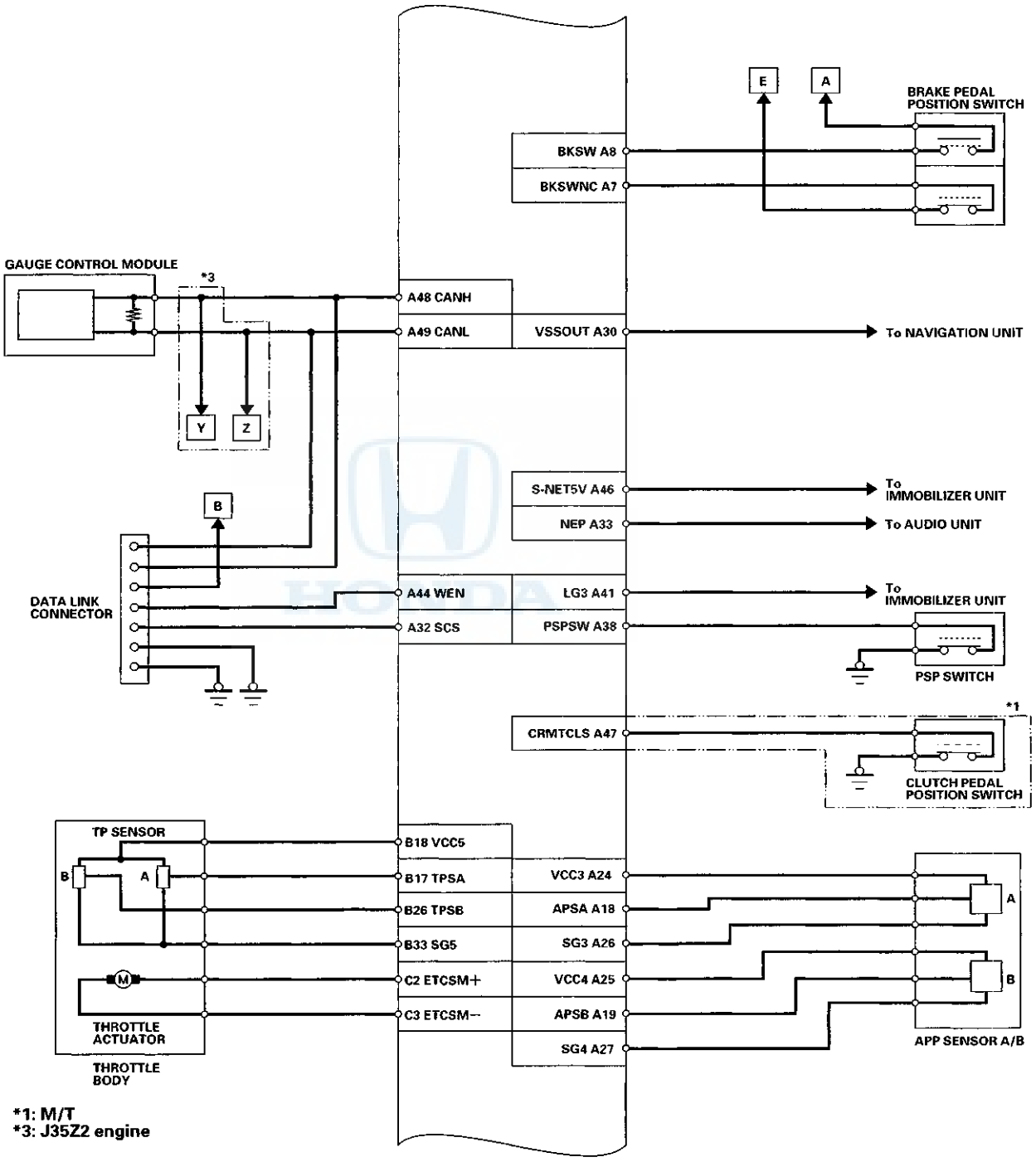


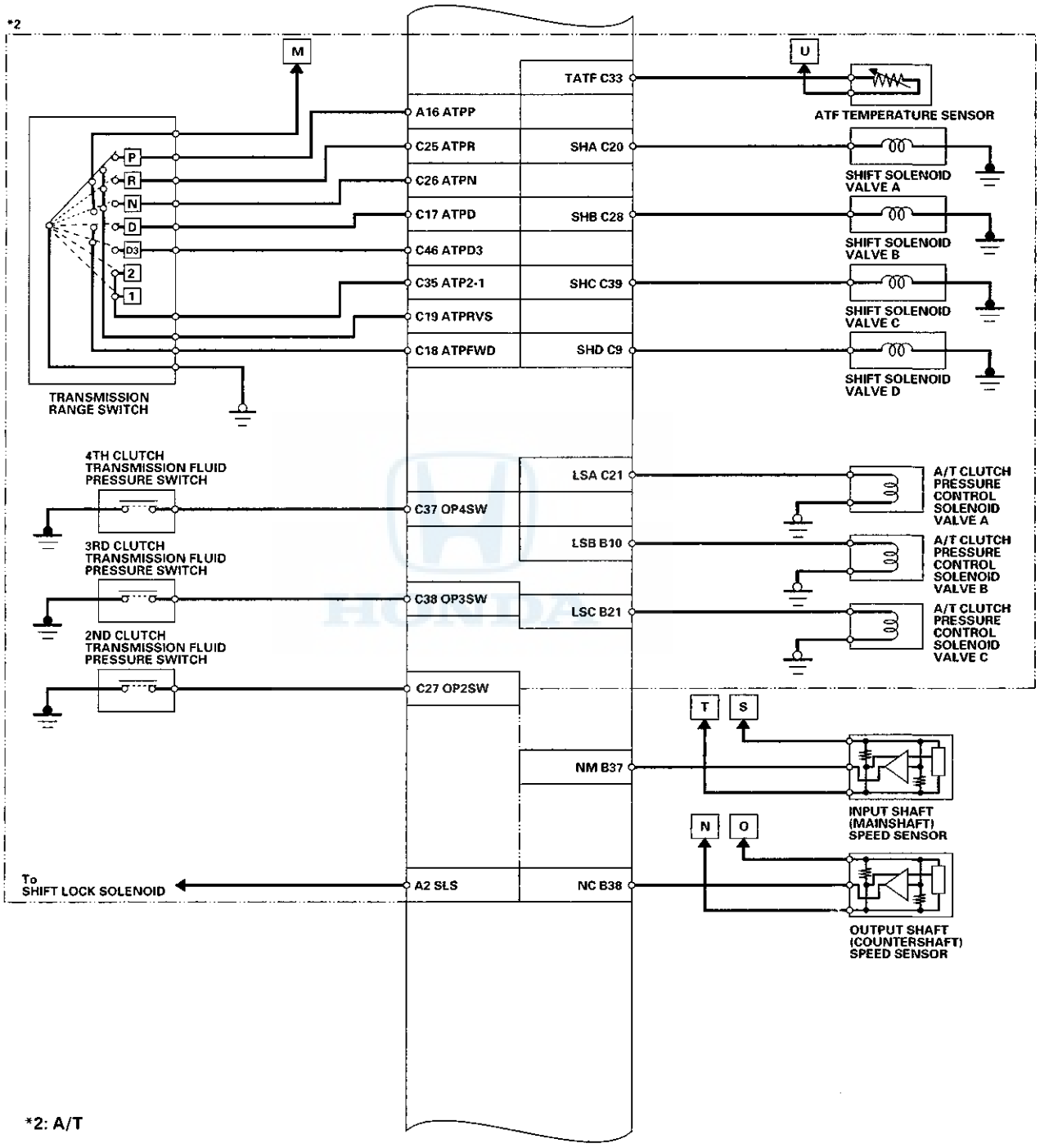
*3: J35Z2 engine

(cont'd)

System Description (cont'd)

ECM/PCM Electrical Connections (cont'd)



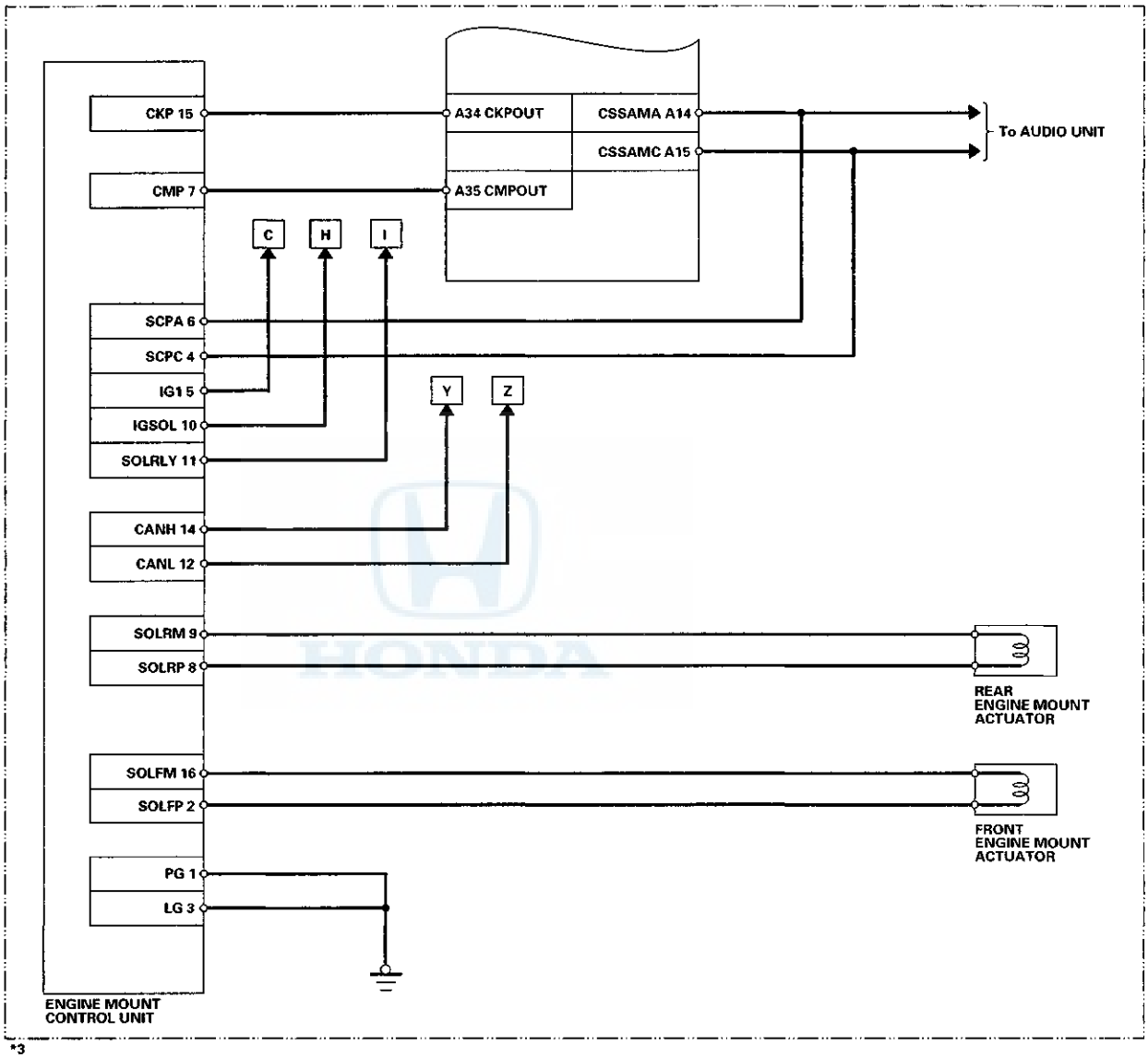

*2
M
U
TATF C33
ATF TEMPERATURE SENSOR
A16 ATPP
C25 ATPR
SHA C20
SHIFT SOLENOID VALVE A
C26 ATPN
C17 ATPD
SHB C28
SHIFT SOLENOID VALVE B
C46 ATPD3
C35 ATP2-1
SHC C39
SHIFT SOLENOID VALVE C
C19 ATPRVS
C18 ATPFWD
SHD C9
SHIFT SOLENOID VALVE D
P
R
N
D
D3
2
1
TRANSMISSION RANGE SWITCH
4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH
C37 OP4SW
LSA C21
A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A
3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH
C38 OP3SW
LSB B10
A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B
2ND CLUTCH TRANSMISSION FLUID PRESSURE SWITCH
C27 OP2SW
LSC B21
A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C
T
S
NM B37
INPUT SHAFT (MAINSHAFT) SPEED SENSOR
N
O
To SHIFT LOCK SOLENOID
A2 SLS
NC B38
OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR

*2: A/T

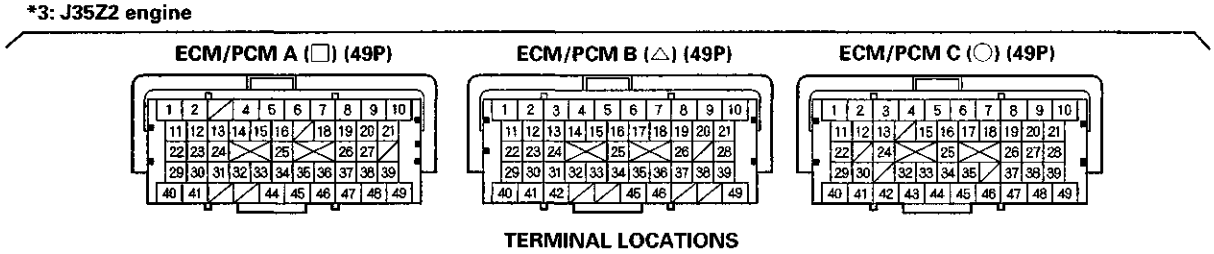
(cont'd)

System Description (cont'd)

ECM/PCM Electrical Connections (cont'd)

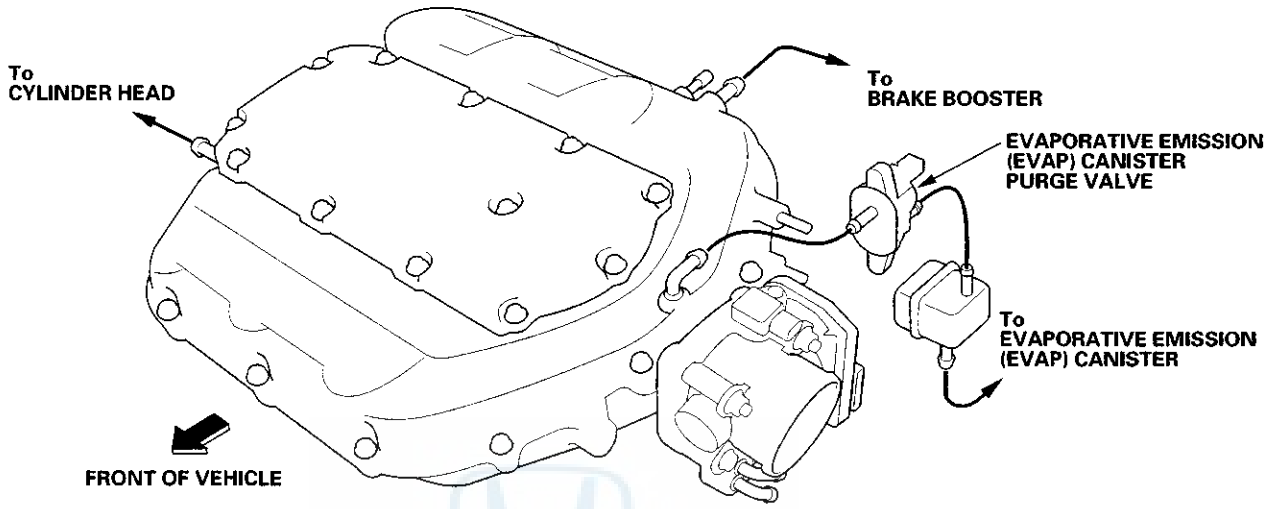


*3: J35Z2 engine

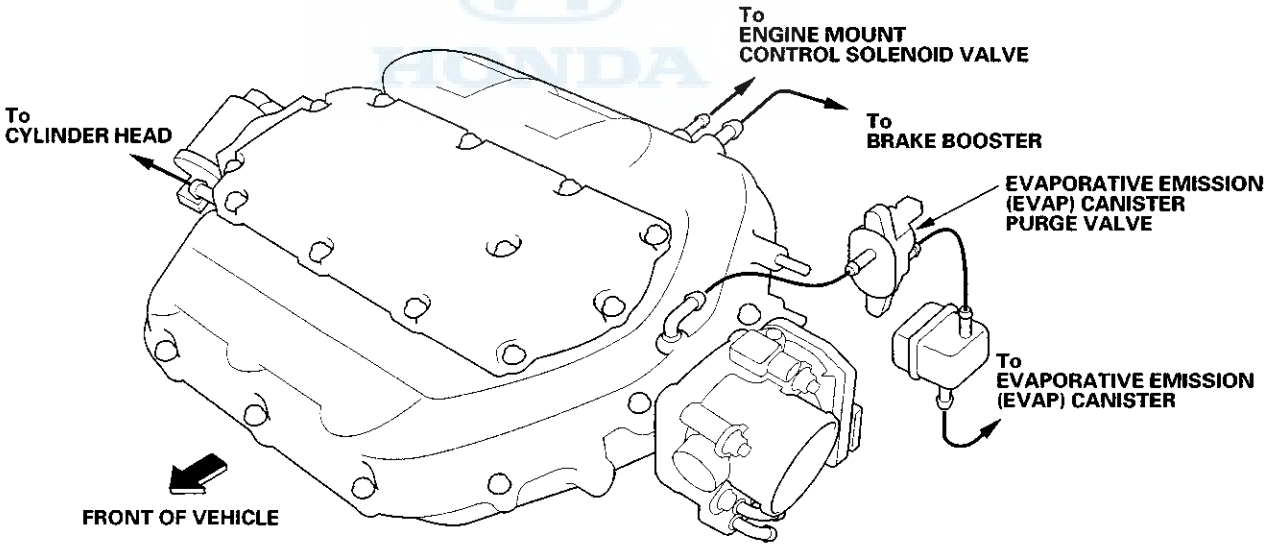


Vacuum Hose Routing

J35Z2 engine



J35Z3 engine

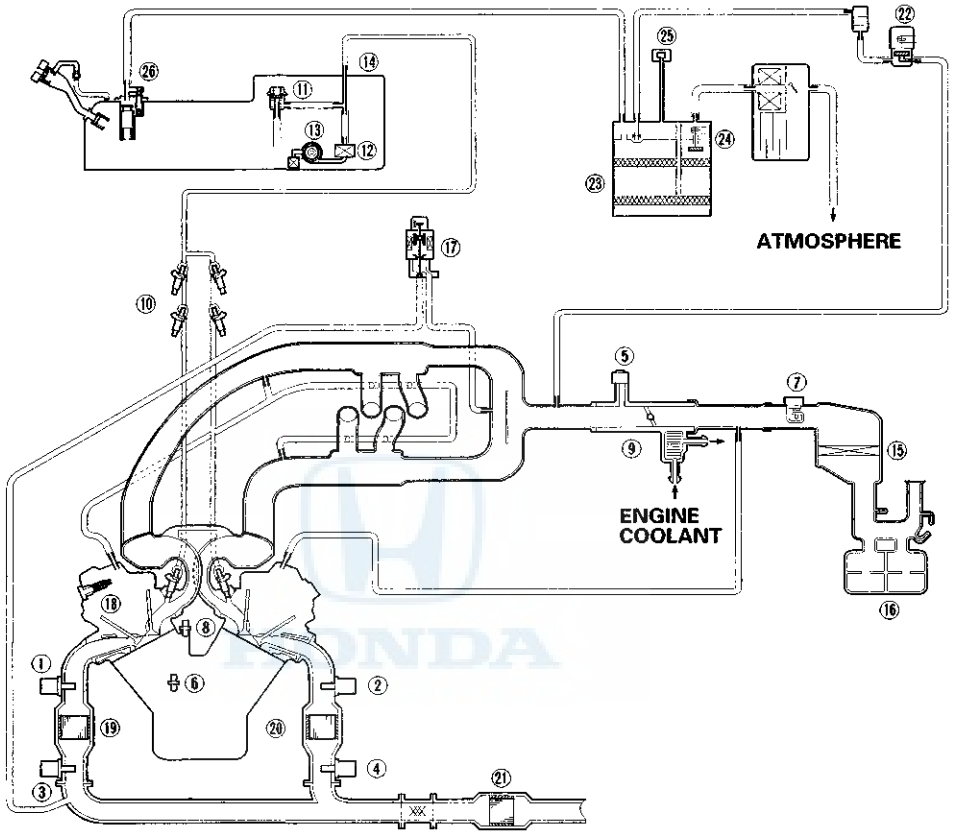


(cont'd)

System Description (cont'd)

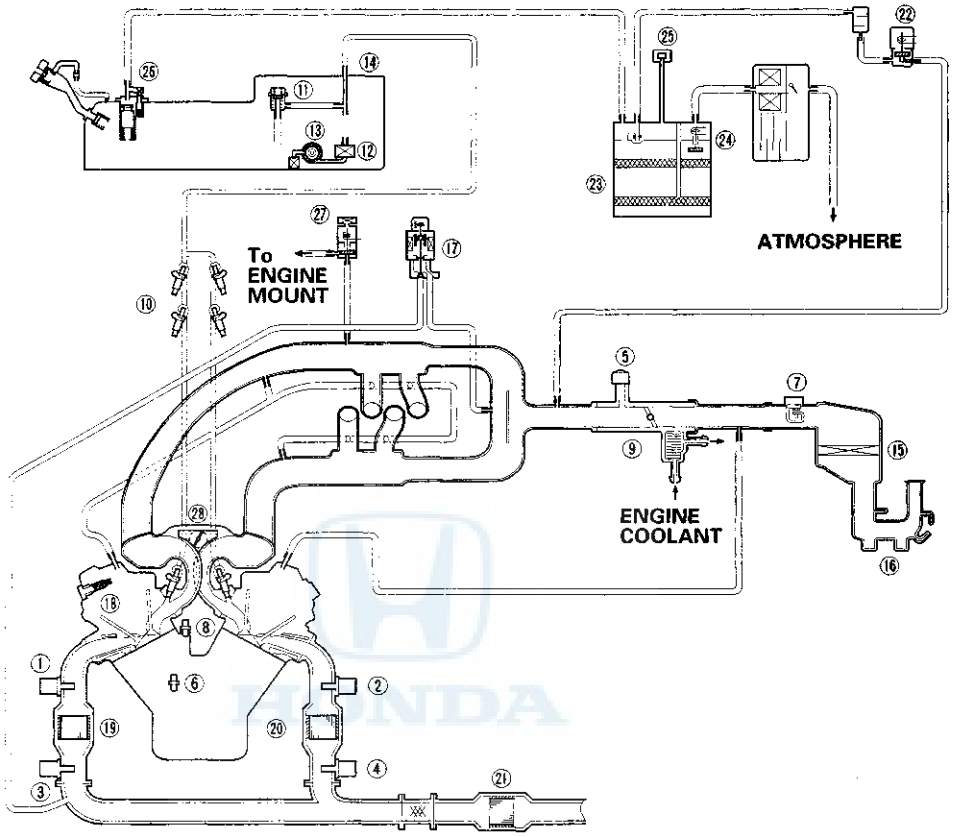
Vacuum Distribution

J35Z2 engine



① FRONT AIR FUEL RATIO (A/F) SENSOR (BANK 2, SENSOR 1)
② REAR AIR FUEL RATIO (A/F) SENSOR (BANK 1, SENSOR 1)
③ FRONT SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S) (BANK 2, SENSOR 2)
④ REAR SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S) (BANK 1, SENSOR 2)
⑤ MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR
⑥ ENGINE COOLANT TEMPERATURE (ECT) SENSOR 1
⑦ MASS AIR FLOW (MAF) SENSOR/ INTAKE AIR TEMPERATURE (IAT) SENSOR
⑧ KNOCK SENSOR
⑨ THROTTLE BODY
⑩ INJECTOR
⑪ FUEL PRESSURE REGULATOR
⑫ FUEL FILTER
⑬ FUEL PUMP
⑭ FUEL TANK
⑮ AIR CLEANER
⑯ INTAKE AIR RESONATOR
⑰ EXHAUST GAS RECIRCULATION (EGR) VALVE and POSITION SENSOR
⑱ POSITIVE CRANKCASE VENTILATION (PCV) VALVE
⑲ FRONT WARM UP THREE WAY CATALYTIC CONVERTER (WU-TWC) (BANK 2)
⑳ REAR WARM UP THREE WAY CATALYTIC CONVERTER (WU-TWC) (BANK 1)
㉑ UNDER-FLOOR THREE WAY CATALYTIC CONVERTER (TWC)
㉒ EVAPORATIVE EMISSION (EVAP) CANISTER PURGE VALVE
㉓ EVAPORATIVE EMISSION (EVAP) CANISTER
㉔ EVAPORATIVE EMISSION (EVAP) CANISTER VENT SHUT VALVE
㉕ FUEL TANK PRESSURE (FTP) SENSOR
㉖ FUEL TANK VAPOR CONTROL VALVE

J35Z3 engine

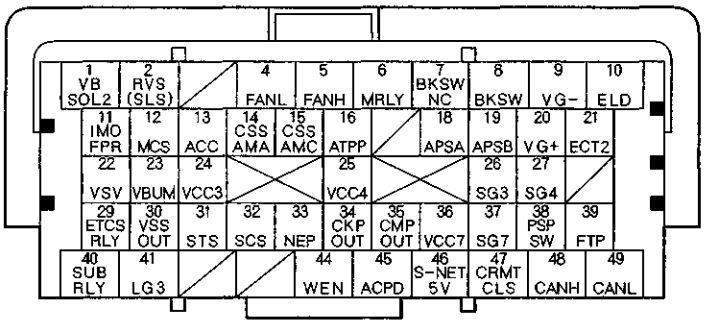


① FRONT AIR FUEL RATIO (A/F) SENSOR (BANK 2, SENSOR 1)
② REAR AIR FUEL RATIO (A/F) SENSOR (BANK 1, SENSOR 1)
③ FRONT SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S) (BANK 2, SENSOR 2)
④ REAR SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S) (BANK 1, SENSOR 2)
⑤ MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR
⑥ ENGINE COOLANT TEMPERATURE (ECT) SENSOR 1
⑦ MASS AIR FLOW (MAF) SENSOR/ INTAKE AIR TEMPERATURE (IAT) SENSOR
⑧ KNOCK SENSOR
⑨ THROTTLE BODY
⑩ INJECTOR
⑪ FUEL PRESSURE REGULATOR
⑫ FUEL FILTER
⑬ FUEL PUMP
⑭ FUEL TANK
⑮ AIR CLEANER
⑯ INTAKE AIR RESONATOR
⑰ EXHAUST GAS RECIRCULATION (EGR) VALVE and POSITION SENSOR
⑱ POSITIVE CRANKCASE VENTILATION (PCV) VALVE
⑲ FRONT WARM UP THREE WAY CATALYTIC CONVERTER (WU-TWC) (BANK 2)
⑳ REAR WARM UP THREE WAY CATALYTIC CONVERTER (WU-TWC) (BANK 1)
㉑ UNDER-FLOOR THREE WAY CATALYTIC CONVERTER (TWC)
㉒ EVAPORATIVE EMISSION (EVAP) CANISTER PURGE VALVE
㉓ EVAPORATIVE EMISSION (EVAP) CANISTER
㉔ EVAPORATIVE EMISSION (EVAP) CANISTER VENT SHUT VALVE
㉕ FUEL TANK PRESSURE (FTP) SENSOR
㉖ FUEL TANK VAPOR CONTROL VALVE
㉗ ENGINE MOUNT CONTROL SOLENOID VALVE
㉘ INTAKE MANIFOLD TUNING (IMT) VALVE

(cont'd)

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector A (□) (49P)



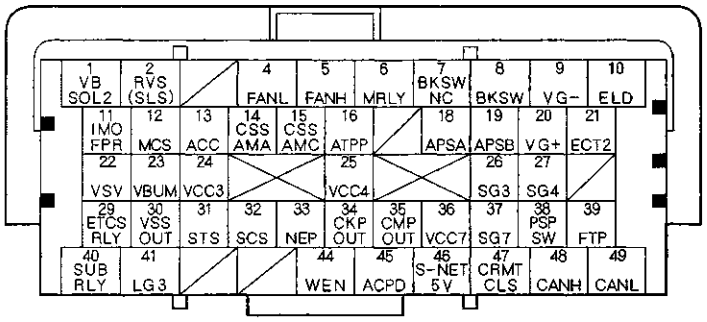
Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1*2	RED	VBSOL2 (POWER SOURCE FOR SOLENOID VALVES)	Power source for solenoid valve	With ignition switch ON (II): battery voltage
2*1	WHT	RVS (REVERSE LOCKOUT SOLENOID)	Drives reverse lockout solenoid	With vehicle speed below 9 mph (15 Km/h): battery voltage With vehicle speed above 12 mph (20 km/h): about 0 V
2*2	PNK	SLS (SHIFT LOCK SOLENOID)	Drives shift lock solenoid	With ignition switch ON (II), in the P, brake pedal pressed, and accelerator released: battery voltage
4	GRN	FANL (RADIATOR FAN CONTROL)	Drives A/C condenser fan relay	With condenser fan running: about 0 V With condenser fan stopped: battery voltage
5	YEL	FANH (RADIATOR FAN CONTROL)	Drives radiator fan relay	With radiator fan running: about 0 V With radiator fan stopped: battery voltage
6	RED/BLK	MRLY (PGM-FI MAIN RELAY 1)	Drives PGM-FI main relay 1	With ignition switch ON (II): about 0 V With ignition switch OFF: battery voltage
7	ORN	BKSWNC (BRAKE PEDAL POSITION SWITCH)	Detects brake pedal position switch signal	With ignition switch ON (II) and brake pedal released: battery voltage With ignition switch ON (II) and brake pedal pressed: about 0 V
8	LT GRN	BKSW (BRAKE PEDAL POSITION SWITCH)	Detects brake pedal position switch signal	With brake pedal released: about 0 V With brake pedal pressed: battery voltage
9	PNK	VG− (MASS AIR FLOW (MAF) SENSOR −SIDE)	Ground for MAF sensor signal	

* 1: M/T
* 2: A/T

ECM/PCM Inputs and Outputs at Connector A (□) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

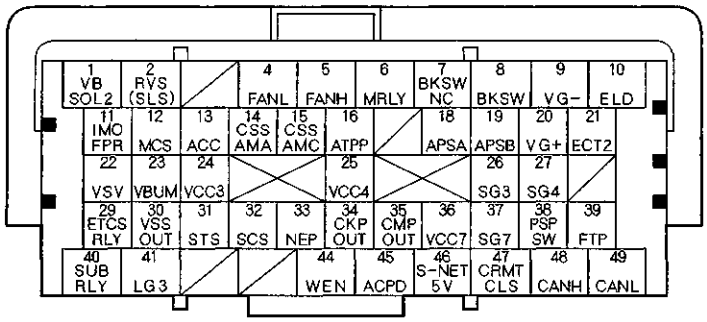
Terminal number	Wire color	Terminal name	Description	Signal
10	BLU/BLK	ELD (ELECTRICAL LOAD DETECTOR (ELD))	Detects ELD signal	With ignition switch ON (II): about 0.1—4.8 V (depending on electrical load)
11	GRY	IMOFPR (IMMOBILIZER FUEL PUMP RELAY)	Drives PGM-FI main relay 2 (FUEL PUMP)	0 V for 2 seconds after turning ignition switch ON (II), then battery voltage
12*4	BLU/YEL	MCS (ENGINE MOUNT CONTROL SOLENOID VALVE)	Drives engine mount control solenoid valve	At idle: about 0 V Above idle: battery voltage
13	PUR	ACC (A/C CLUTCH RELAY)	Drives A/C clutch relay	With compressor ON: about 0 V With compressor OFF: battery voltage
14*3	BRN	CSSAMA (CYLINDER STOP SOLENOID VALVE A)	Outputs rocker arm oil control solenoid B (Bank 1) drive signal	Rocker arm oil control solenoid B (Bank 1) ON: battery voltage Rocker arm oil control solenoid B (Bank 1) OFF: about 0 V
15*3	LT BLU	CSSAMC (CYLINDER STOP SOLENOID VALVE C)	Outputs rocker arm oil control solenoid A (Bank 2) drive signal	Rocker arm oil control solenoid A (Bank 2) ON: battery voltage Rocker arm oil control solenoid A (Bank 2) OFF: about 0 V
16*2	GRN	ATPP (TRANSMISSION RANGE SWITCH P)	Detects transmission range switch P position signal	In P: about 0 V In any position other than P: more than 5.0 V
18	YEL	APSA (ACCELERATOR PEDAL POSITION (APP) SENSOR A)	Detects APP sensor A signal	With ignition switch ON (II) and accelerator pedal pressed: about 4.7 V With ignition switch ON (II) and accelerator pedal released: about 1.0 V

* 2: A/T
* 3: J35Z2 engine
* 4: J35Z3 engine

(cont'd)

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector A (□) (49P)

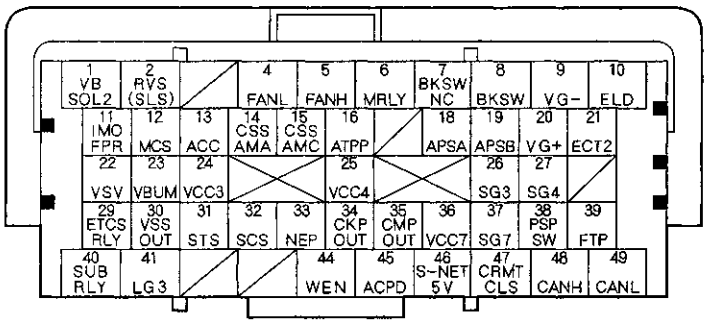


Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
19	ORN	APSB (ACCELERATOR PEDAL POSITION (APP) SENSOR B)	Detects APP sensor B signal	With ignition switch ON (II) and accelerator pedal pressed: about 2.3 V With ignition switch ON (II) and accelerator pedal released: about 0.5 V
20	RED	VG+ (MASS AIR FLOW (MAF) SENSOR +SIDE)	Detects MAF sensor signal	At idle: about 1.1−1.6 V (between VG+ terminal and VG− terminal)
21	YEL/RED	ECT2 (ENGINE COOLANT TEMPERATURE (ECT) SENSOR 2)	Detects ECT sensor 2 signal	With ignition switch ON (II): about 0.1−4.8 V (depending on engine coolant temperature)
22	RED	VSV (EVAPORATIVE EMISSION (EVAP) CANISTER VENT SHUT VALVE)	Drives EVAP canister vent shut valve	With ignition switch ON (II): battery voltage
23	YEL	VBUM (VOLTAGE BACK UP)	Power source for ECM/PCM memory	Battery voltage at all times
24	RED	VCC3 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
25	BRN	VCC4 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
26	BLU	SG3 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
27	GRN	SG4 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
29	WHT	ETCSRLY (ELECTRONIC THROTTLE CONTROL SYSTEM (ETCS) CONTROL RELAY)	Drives electronic throttle control system (ETCS) control relay	With ignition switch ON (II): about 0 V

ECM/PCM Inputs and Outputs at Connector A (□) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

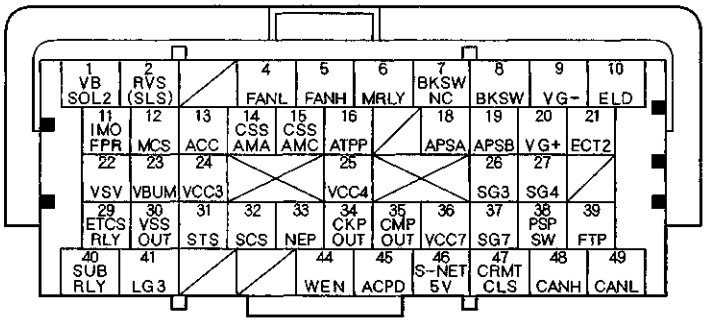
Terminal number	Wire color	Terminal name	Description	Signal
30	BLU	VSSOUT (VEHICLE SPEED SIGNAL OUTPUT)	Sends vehicle speed signal	Depending on vehicle speed: pulses
31	LT GRN	STS (STARTER SWITCH SIGNAL)	Detects starter switch signal	With ignition switch in START (III) position: battery voltage With ignition switch in any position other than START (III): about 0 V
32	ORN	SCS (SERVICE CHECK SIGNAL)	Detects service check signal	With the service check signal shorted with the HDS: about 0 V With the service check signal opened: about 5.0 V
33*3	BLU	NEP (ENGINE SPEED PULSE)	Outputs engine speed pulse	With engine running: pulses
34*3	LT GRN/YEL	CKPOUT (CRANKSHAFT POSITION (CKP) OUTPUT SIGNAL)	Sends CKP signal to engine mount control unit	With engine running: pulses
35*3	RED	CMPOUT (CAMSHAFT POSITION (CMP) OUTPUT SIGNAL)	Sends CMP signal to engine mount control unit	With engine running: pulses
36	YEL	VCC7 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
37	BLK	SG7 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
38	PNK	PSPSW (POWER STEERING PRESSURE SWITCH SIGNAL)	Detects PSP switch signal	At idle with steering wheel in straight ahead position: about 0 V At idle with steering wheel at full lock: battery voltage
39	LT GRN	FTP (FUEL TANK PRESSURE (FTP) SENSOR)	Detects FTP sensor signal	With ignition switch ON (II) and fuel fill cap removed: about 2.5 V

* 3: J35Z2 engine

(cont'd)

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector A (□) (49P)



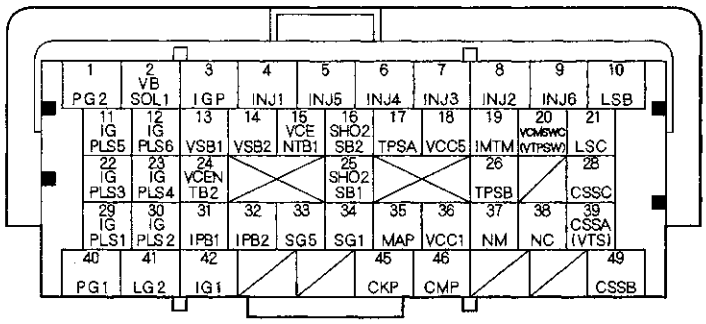
Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
40	RED/YEL	SUBRLY (PGM-FI SUBRELAY (LAF))	Drives PGM-FI subrelay (LAF)	With ignition switch ON (II): about 0 V
41	BRN	LG3 (LOGIC GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
44	RED	WEN (WRITE ENABLE SIGNAL)	Detects write enable signal	With ignition switch ON: about 0 V
45	BLU	ACPD (A/C PRESSURE SENSOR)	Detects A/C pressure sensor signal	With A/C switch ON: about 1.0—4.8 V (depending on A/C pressure)
46	LT GRN	S-NET5V (SERIAL COMMUNICATION FOR IMMOBILIZER)	Sends serial communication signal	With ignition switch ON (II): pulses With ignition switch OFF: about 5.0 V
47*1	BRN	CRMTCLS (CRUISE CLUTCH PEDAL POSITION SIGNAL)	Detects clutch pedal position switch signal	With ignition switch ON (II) and clutch pedal pressed: battery voltage With ignition switch ON (II) and clutch pedal released: about 0 V
48	WHT	CANH (CAN COMMUNICATION SIGNAL HIGH)	Sends communication signal	With ignition switch ON (II): pulses
49	RED	CANL (CAN COMMUNICATION SIGNAL LOW)	Sends communication signal	With ignition switch ON (II): pulses

* 1: M/T

ECM/PCM Inputs and Outputs at Connector B (△) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

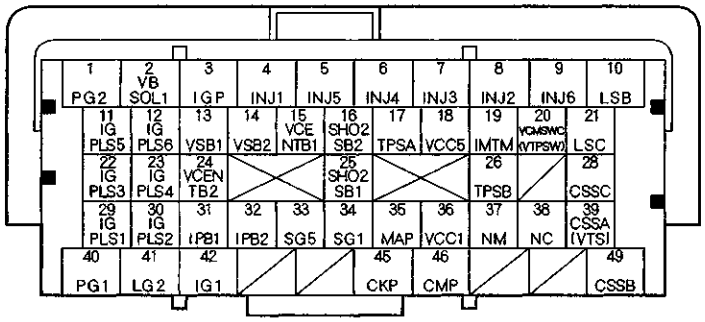
Terminal number	Wire color	Terminal name	Description	Signal
1	BLK	PG2 (POWER GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
2	BLK/YEL	VBSOL1 (POWER SOURCE FOR SOLENOID VALVES)	Power source for solenoid valves	With ignition switch ON (II): battery voltage
3	YEL/BLK	IGP (POWER SOURCE)	Power source for ECM/PCM circuit	With ignition switch ON (II): battery voltage
4	BRN	INJ1 (No. 1 INJECTOR)	Drives No. 1 injector	At idle: duty controlled With ignition switch ON (II): battery voltage
5	BLK/RED	INJ5 (No. 5 INJECTOR)	Drives No. 5 injector	
6	YEL	INJ4 (No. 4 INJECTOR)	Drives No. 4 injector	
7	BLU	INJ3 (No. 3 INJECTOR)	Drives No. 3 injector	
8	RED	INJ2 (No. 2 INJECTOR)	Drives No. 2 injector	
9	WHT/BLU	INJ6 (No. 6 INJECTOR)	Drives No. 6 injector	
10 *2	BRN/WHT	LSB (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B)	Drives A/T clutch pressure control solenoid valve B	With ignition switch ON (II): current controlled

* 2: A/T

(cont'd)

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector B (△) (49P)

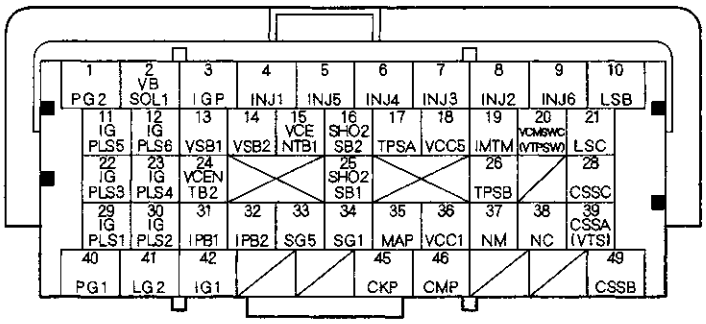


Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
11	BLK/RED	IGPLS5 (No. 5 IGNITION COIL PULSE)	Drives No. 5 ignition coil	With ignition switch ON (II): about 0 V With engine running: pulses
12	BRN/WHT	IGPLS6 (No. 6 IGNITION COIL PULSE)	Drives No. 6 ignition coil	
13	BLU	VSB1 (VS CELL+ BANK 1)	Detects rear A/F sensor (Bank 1, sensor 1) VS CELL signal	With fully warmed up engine running: about 3.4—4.8 V
14	RED/BLU	VSB2 (VS CELL+ BANK 2)	Detects front A/F sensor (Bank 2, sensor 1) VS CELL signal	With fully warmed up engine running: about 3.4—4.8 V
15	RED	VCENTB1 (VIRTUAL GROUND BANK 1)	Reference voltage supply for rear A/F sensor (Bank 1, sensor 1)	With fully warmed up engine at idle: about 3.4—3.8 V
16	WHT	SHO2SB2 (FRONT SECONDARY HEATED OXYGEN SENSOR (FRONT SECONDARY HO2S) (BANK 2, SENSOR 2))	Detects front secondary HO2S (Bank 2, sensor 2) signal	With throttle fully opened from idle with fully warmed up engine: about 0.6 V With throttle quickly closed: below 0.4 V
17	RED/BLK	TPSA (THROTTLE POSITION (TP) SENSOR A)	Detects TP sensor A signal	With throttle fully open: about 3.9 V With throttle fully closed: about 0.9 V
18	BLU	VCC5 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V

ECM/PCM Inputs and Outputs at Connector B (△) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

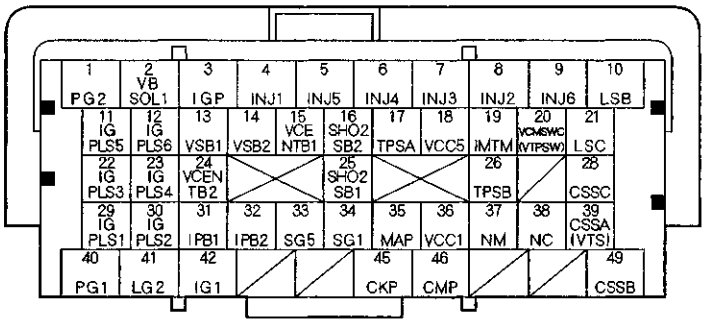
Terminal number	Wire color	Terminal name	Description	Signal
19*4	WHT/BLK	IMTM (INTAKE MANIFOLD TUNING (IMT) VALVE MONITOR)	Detects IMT valve position	With ignition switch ON (II): about 5.0 V With engine speed above 4,000 rpm: about 0 V
20*3	BLU/WHT	VCMSWC (ROCKER ARM OIL PRESSURE SWITCH C)	Detects front rocker arm oil pressure switch signal	With ignition switch ON (II) or at idle: battery voltage
20*4	BLU/BLK	VTPSW (ROCKER ARM OIL PRESSURE SWITCH)	Detects rocker arm oil pressure switch signal	At idle: about 0 V
21*2	GRN/RED	LSC (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C)	Drives A/T clutch pressure control solenoid valve C	With ignition switch ON (II): current controlled
22	WHT/BLU	IGPLS3 (No. 3 IGNITION COIL PULSE)	Drives No. 3 ignition coil	With ignition switch ON (II): about 0 V With engine running: pulses
23	BRN	IGPLS4 (No. 4 IGNITION COIL PULSE)	Drives No. 4 ignition coil	
24	RED/WHT	VCENTB2 (VIRTUAL GROUND BANK 2)	Reference voltage supply for front A/F sensor (Bank 2, sensor 1)	With fully warmed up engine at idle: about 3.4—4.8 V
25	GRN	SHO2SB1 (REAR SECONDARY HEATED OXYGEN SENSOR (REAR SECONDARY HO2S) (BANK 1, SENSOR 2))	Detects rear secondary HO2S (Bank 1, sensor 2) signal	With throttle fully opened from idle with fully warmed up engine: about 0.6 V With throttle quickly closed: below 0.4 V

* 2: A/T
* 3: J35Z2 engine
* 4: J35Z3 engine

(cont'd)

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector B (△) (49P)



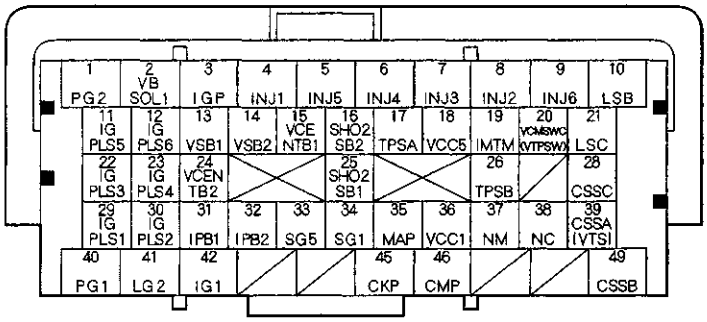
Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
26	RED/BLU	TPSB (THROTTLE POSITION (TP) SENSOR B)	Detects TP sensor B signal	With throttle fully open: about 4.1 V With throttle fully closed: about 1.7 V
28*3	GRN/WHT	CSSC (CYLINDER STOP SOLENOID C)	Drives rocker arm oil control solenoid A (Bank 2)	With ignition switch ON (II) or at idle: about 0 V
29	YEL/GRN	IGPLS1 (No. 1 IGNITION COIL PULSE)	Drives No. 1 ignition coil	With ignition switch ON (II): about 0 V With engine running: pulses
30	BLU/RED	IGPLS2 (No. 2 IGNITION COIL PULSE)	Drives No. 2 ignition coil	
31	GRN	IPB1 (IP CELL+ BANK 1)	Detects rear A/F sensor (Bank 1, sensor 1) pump cell	With engine running: about 2.0—5.6 V
32	GRN/RED	IPB2 (IP CELL+ BANK 2)	Detects front A/F sensor (Bank 2, sensor 1) pump cell	With engine running: about 2.0—5.6 V
33	GRN	SG5 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
34	GRN/WHT	SG1 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
35	GRN/RED	MAP (MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR)	Detects MAP sensor signal	With ignition switch ON (II): about 3.0 V At idle: about 1.0 V (depending on engine speed)
36	YEL/RED	VCC1 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
37	RED	NM (INPUT SHAFT (MAINSHAFT) SPEED SENSOR)	Detects input shaft (mainshaft) speed sensor signals	With ignition switch ON (II): about 0 V or about 5.0 V With engine idling in N: about 2.5 V

* 3: J35Z2 engine

ECM/PCM Inputs and Outputs at Connector B (△) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

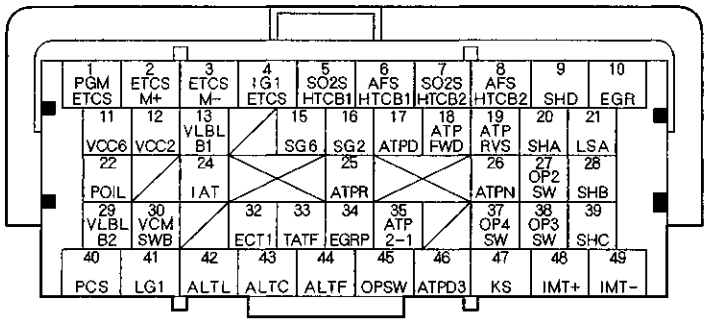
Terminal number	Wire color	Terminal name	Description	Signal
38	BLU	NC (OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR)	Detects output shaft (countershaft) speed sensor signal	With ignition switch ON (II) and front wheels turned by hand: pulses
39*3	GRN/YEL	CSSA (CYLINDER STOP SOLENOID A)	Drives rocker arm oil control solenoid B (Bank 1)	With ignition switch ON (II) or at idle: about 0 V
39*4	GRN/YEL	VTS (ROCKER ARM OIL CONTROL SOLENOID)	Drives rocker arm oil control solenoid)	At idle: about 0 V
40	BLK	PG1 (POWER GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
41	BRN/YEL	LG2 (LOGIC GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
42	BLK/YEL	IG1 (IGNITION SIGNAL)	Detects ignition signal	With ignition switch ON (II): battery voltage
45	BLU	CKP (CRANKSHAFT POSITION (CKP) SENSOR)	Detects CKP sensor signal	With engine running: pulses
46	GRN	CMP (CAMSHAFT POSITION (CMP) SENSOR)	Detects CMP sensor signal	With engine running: pulses
49*3	GRN/RED	CSSB (CYLINDER STOP SOLENOID B)	Drives rocker arm oil control solenoid A (Bank 1)	With ignition switch ON (II) or at idle: about 0 V

* 3: J35Z2 engine
* 4: J35Z3 engine

(cont'd)

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector C (○) (49P)

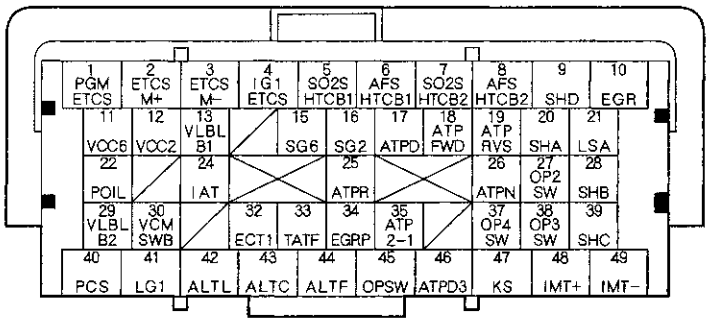


Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1	BLK	PGMETCS (POWER GROUND ETCS)	Ground circuit for ECM/ PCM	Less than 1.0 V at all times
2	BLU	ETCSM+ (THROTTLE ACTUATOR +SIDE)	Drives throttle actuator	With ignition switch ON (II): about 0 V
3	GRN	ETCSM− (THROTTLE ACTUATOR −SIDE)	Ground for throttle actuator	With ignition switch ON (II): about 0 V
4	YEL/GRN	IG1ETCS (IGNITION SIGNAL ETCS)	Detects ignition signal	With ignition switch ON (II): battery voltage
5	BLK/WHT	SO2SHTCB1 (REAR SECONDARY HEATED OXYGEN SENSOR (REAR SECONDARY HO2S) (BANK 1, SENSOR 2) HEATER CONTROL)	Drives rear secondary HO2S heater (Bank 1, sensor 2)	With ignition switch ON (II): battery voltage With fully warmed up engine running: duty controlled
6	BLK/WHT	AFSHTCB1 (REAR AIR FUEL RATIO (REAR A/F) SENSOR (BANK 1, SENSOR 1) HEATER CONTROL)	Drives rear A/F sensor heater (Bank 1, sensor 1)	With ignition switch ON (II): battery voltage With fully warmed up engine running: about 0 V or duty controlled

ECM/PCM Inputs and Outputs at Connector C (○) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
7	GRN/RED	SO2SHTCB2 (FRONT SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S) (BANK 2, SENSOR 2) HEATER CONTROL)	Drives front secondary HO2S heater (Bank 2, sensor 2)	With ignition switch ON (II): battery voltage With fully warmed up engine running: duty controlled
8	GRN/WHT	AFSHTCB2 (FRONT AIR FUEL RATIO (FRONT A/F) SENSOR (BANK 2, SENSOR 1) HEATER CONTROL)	Drives front A/F sensor heater (Bank 2, sensor 1)	With ignition switch ON (II): battery voltage With fully warmed up engine running: about 0 V or duty controlled
9*2	GRN/RED	SHD (SHIFT SOLENOID VALVE D)	Drives shift solenoid valve D	With engine running in N, and in D and D3 during no lock-up condition: about 0 V With engine running in P and R, and in D and D3 during lock-up condition: battery voltage
10	BLU/RED	EGR (EXHAUST GAS RECIRCULATION (EGR) VALVE)	Drives EGR valve	With EGR operating: duty controlled With EGR not operating: about 0 V
11	YEL	VCC6 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
12	YEL/BLU	VCC2 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
13*5	WHT	VLBLB1 (LABEL RESISTER BANK 1)	Detects rear A/F sensor (Bank 1, sensor 1) LABEL signal	With engine running: about 0.4—4.6 V
15	GRN/RED	SG6 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
16	GRN/YEL	SG2 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times

* 2: A/T
* 5: PZEV model

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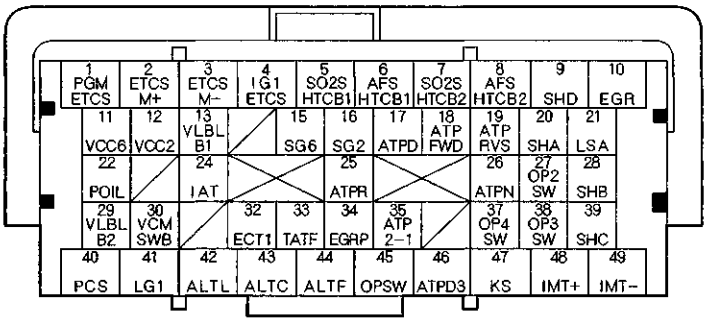
System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector C (○) (49P)



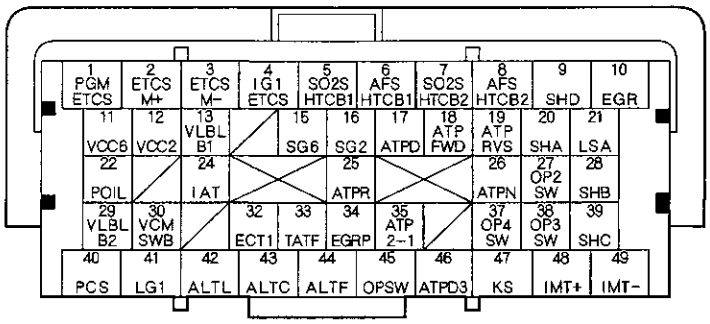
Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
17*2	YEL/GRN	ATPD (TRANSMISSION RANGE SWITCH D)	Detects transmission range switch D position signal input	In D: about 0 V In any position other than D: about 5.0 V
18*2	BLU/YEL	ATPFWD (TRANSMISSION RANGE SWITCH FWD)	Detects transmission range switch FWD position signal	In D, D3, and 2: about 0 V In any position other than D, D3, and 2: about 5.0 V
19*2	RED/WHT	ATPRVS (TRANSMISSION RANGE SWITCH RVS)	Detects transmission range switch RVS position signal input	In P, R, and N: about 0 V In any position other than P, R, and N: about 5.0 V
20*2	BLU/YEL	SHA (SHIFT SOLENOID VALVE A)	Drives shift solenoid valve A	With engine running in R and 2, and D and D3 (in 2nd and 3rd gears): battery voltage With engine running in P and N, D (in 1st, 4th, and 5th gears), and D3 (in 1st gear): about 0 V
21*2	RED	LSA (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A)	Drives A/T clutch pressure control solenoid valve A	With ignition switch ON (II): current controlled
22*3	BLU/YEL	POIL (ENGINE OIL PRESSURE)	Detects rocker arm oil pressure sensor signal	With ignition switch ON (II): about 0.8 V (depending on engine oil pressure)
24	RED/YEL	IAT (INTAKE AIR TEMPERATURE (IAT) SENSOR)	Detects IAT sensor signal	With ignition switch ON (II): about 0.1—4.8 V (depending on intake air temperature)
25*2	WHT	ATPR (TRANSMISSION RANGE SWITCH R)	Detects transmission range switch R position signal input	In R: about 0 V In any position other than R: more than 5.0 V

* 2: A/T
* 3: J35Z2 engine

ECM/PCM Inputs and Outputs at Connector C (○) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

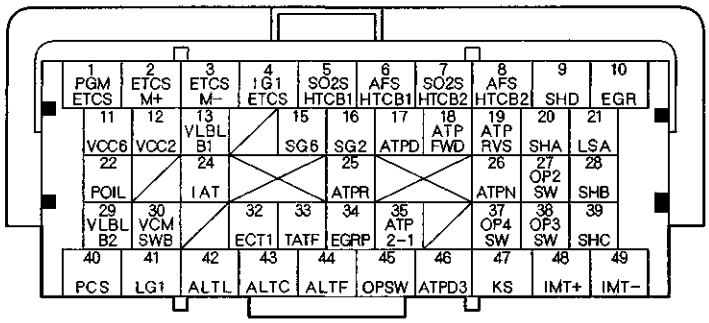
Terminal number	Wire color	Terminal name	Description	Signal
26*2	RED/BLK	ATPN (TRANSMISSION RANGE SWITCH N)	Detects transmission range switch N position signal input	In N: about 0 V In any position other than N: battery voltage
27*2	BLU/BLK	OP2SW (2ND CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 2nd clutch transmission fluid pressure switch input	With ignition switch ON (II): • Without 2nd clutch pressure: battery voltage • With 2nd clutch pressure: about 0 V
28*2	GRN/WHT	SHB (SHIFT SOLENOID VALVE B)	Drives shift solenoid valve B	With engine running in P, R, N, 2, and 1, D (in 1st, 2nd, and 5th gears), and D3 (in 1st and 2nd gears): battery voltage With engine running in D (in 3rd and 4th gears), and D3 (in 3rd gear): about 0 V
29*5	WHT/RED	VLBLB2 (LABEL RESISTER BANK 2)	Detects front A/F sensor (Bank 2, sensor 1) LABEL signal	With engine running: about 0.4—4.6 V
30*3	BLU/YEL	VCMSWB (ROCKER ARM OIL PRESSURE SWITCH B)	Detects rear rocker arm oil pressure switch signal	With ignition switch ON (II) or at idle: battery voltage
32	RED/WHT	ECT1 (ENGINE COOLANT TEMPERATURE SENSOR (ECT) SENSOR 1)	Detects ECT sensor 1 signal	With ignition switch ON (II): about 0.1—4.8 V (depending on engine coolant temperature)
33*2	BLU/YEL	TATF (ATF TEMPERATURE SENSOR)	Detects ATF temperature signal	With ignition switch ON (II): about 0.2—4.0 V (about 1.8 V at operating temperature, depending on ATF temperature)

* 2: A/T
* 3 J35Z2 engine
* 5: PZEV model

(cont'd)

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector C (○) (49P)



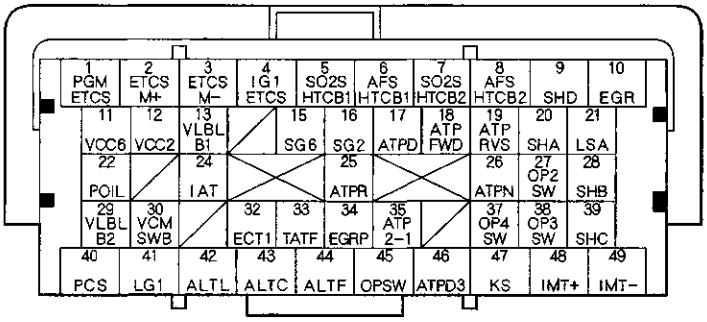
Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
34	WHT/BLK	EGRP (EXHAUST GAS RECIRCULATION (EGR) VALVE POSITION SENSOR)	Detects EGR valve position sensor signal	With engine running: about 1.2—3.0 V (depending on EGR valve lift)
35*2	BLU	ATP2-1 (TRANSMISSION RANGE SWITCH 2-1)	Detects transmission switch 2-1 signal input	In 2 and 1: about 0 V In any position other than 2 and 1: about 5.0 V
37*2	BLU/YEL	OP4SW (4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 4th clutch transmission fluid pressure switch input	With ignition switch ON (II): • Without 4th clutch pressure: battery voltage • With 4th clutch pressure: about 0 V
38*2	BLU/WHT	OP3SW (3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 3rd clutch transmission fluid pressure switch input	With ignition switch ON (II): • Without 3rd clutch pressure: battery voltage • With 3rd clutch pressure: about 0 V
39*2	GRN	SHC (SHIFT SOLENOID VALVE C)	Drives shift solenoid valve C	With engine running in 1, D (in 1st, 3rd, and 5th gears), and D3 (in 1st and 3rd gears): battery voltage With engine running in P, R, N, 2, D (in 2nd and 4th gears), and D3 (in 2nd gear): about 0 V
40	RED/YEL	PCS (EVAPORATIVE EMISSION (EVAP) CANISTER PURGE VALVE)	Drives EVAP canister purge valve	With engine running, engine coolant below 140 °F (60 °C): battery voltage With engine running, engine coolant above 140 °F (60 °C): duty controlled
41	BRN/YEL	LG1 (LOGIC GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times

* 2: A/T

ECM/PCM Inputs and Outputs at Connector C (○) (49P)



Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
42	WHT/BLU	ALTL (ALTERNATOR L SIGNAL)	Detects alternator L signal	With ignition switch ON (II): about 0 V With engine running: battery voltage
43	WHT/GRN	ALTC (ALTERNATOR CONTROL)	Sends alternator control signal	With fully warmed up engine running: about 7.5 V (depending on electrical load)
44	WHT/RED	ALTF (ALTERNATOR FR SIGNAL)	Detects alternator FR signal	With engine running: about 0—5.0 V (depending on electrical load)
45*4	BLU/YEL	OPSW (OIL PRESSURE SWITCH)	Detects engine oil pressure signal	With ignition switch ON (II): about 0 V With engine running: battery voltage
46*2	RED	ATPD3 (TRANSMISSION RANGE SWITCH D3)	Detects transmission switch D3 signal input	In D3: about 0 V In any position other than D3: about 5.0 V
47	RED/BLU	KS (KNOCK SENSOR)	Detects knock sensor signal	With engine knocking: pulses
48*4	WHT/BLU	IMT+ (INTAKE MANIFOLD TUNING (IMT) ACTUATOR +SIDE)	Drives IMT actuator	With ignition switch ON (II): about 0 V
49*4	WHT/RED	IMT− (INTAKE MANIFOLD TUNING (IMT) ACTUATOR −SIDE)	Drives IMT actuator	With ignition switch ON (II): about 0 V

* 2: A/T
* 4 J35Z3 engine

(cont'd)

System Description (cont'd)

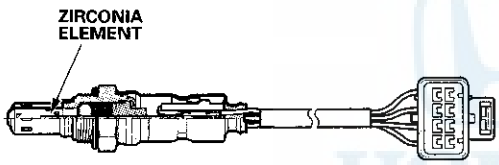
PGM-FI System

The programmed fuel injection (PGM-FI) system is a sequential multiport fuel injection system.

Alternator Control
The alternator signals the ECM/PCM during charging.

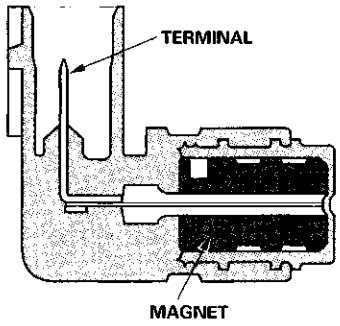
Air Conditioning (A/C) Compressor Clutch Relay
When the ECM/PCM receives a demand for cooling from the A/C system, it delays the compressor from being energized, and enriches the mixture to assure smooth transition to the A/C mode.

Air Fuel Ratio (A/F) Sensor
The A/F sensor operates over a wide air/fuel range. The A/F sensor is installed upstream of the WU-TWC, and sends signals to the ECM/PCM which varies the duration of fuel injection accordingly.

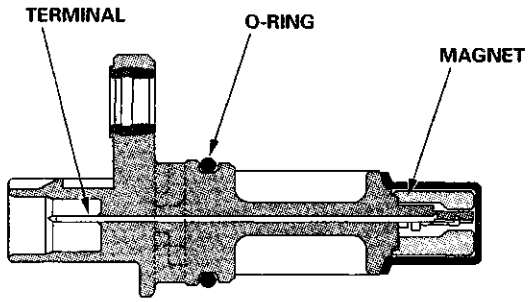


Barometric Pressure (BARO) Sensor
The BARO sensor is inside the ECM/PCM. It converts atmospheric pressure into a voltage signal that is used by the ECM/PCM to modify the basic duration of the fuel injection discharge.

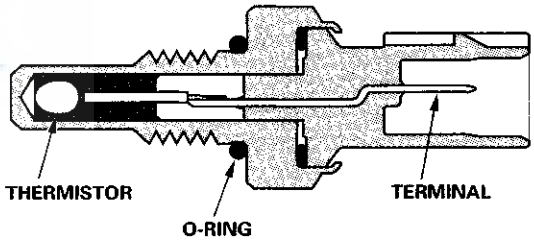
Camshaft Position (CMP) Sensor
The CMP sensor input is used by the ECM/PCM to determine ignition timing at start up (cranking) and when crank angle is abnormal.



Crankshaft Position (CKP) Sensor
The CKP sensor detects crankshaft speed and is used by the ECM/PCM to determine ignition timing, timing for the fuel injection of each cylinder, and engine misfire detection.



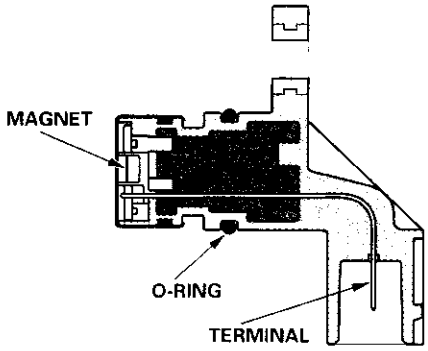
Engine Coolant Temperature (ECT) Sensors 1 and 2
ECT sensors 1 and 2 are temperature dependent resistors (thermistors). The resistance decreases as the engine coolant temperature increases.



Ignition Timing Control
The ECM/PCM contains the memory for basic ignition timing at various engine speeds and manifold absolute pressures. It also adjusts the timing according to engine coolant temperature.

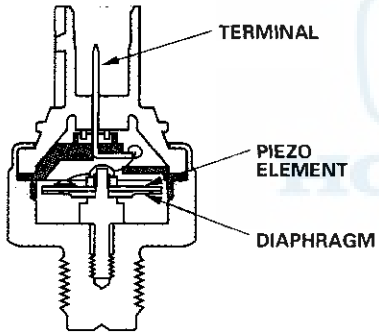
Injector Timing and Duration
The ECM/PCM contains the memory for basic discharge duration at various engine speeds and manifold pressures. The basic discharge duration, after being read out from the memory, is further modified by signals sent from various sensors to obtain the final discharge duration.
By monitoring long term fuel trim, the ECM/PCM can detect long term malfunctions in the fuel system and set DTCs (diagnostic trouble codes) if needed.

Input Shaft (Mainshaft) Speed Sensor
This sensor detects input shaft (mainshaft) speed.



M/T model shown

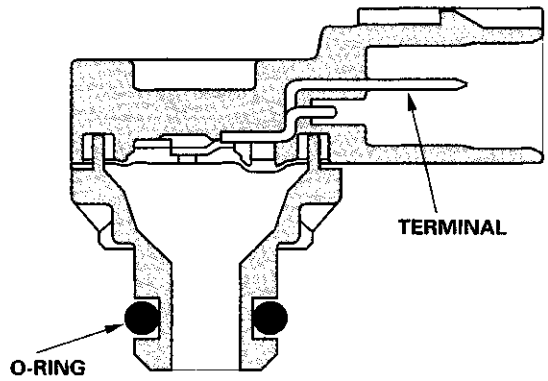
Knock Sensor
The knock control system adjusts the ignition timing to minimize knock.



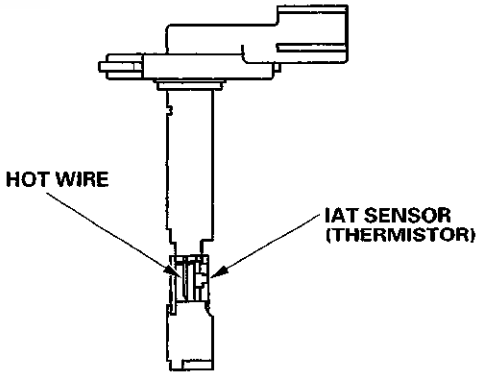
Malfunction Indicator Lamp (MIL) Indication (In relation to Readiness Codes)
The vehicle has certain readiness codes that are part of the on-board diagnostics for the emissions systems. If the vehicle's battery has been disconnected or gone dead, if DTCs have been cleared, or if the ECM/PCM has been reset, these codes are reset. In some states, part of the emissions testing is to make sure these codes are set to complete. If all of them are not set to complete, the vehicle may fail the test, or the test cannot be finished.

To check if the readiness codes are set to complete, turn the ignition switch to ON (II), but do not start the engine. The MIL will come on for 15—20 seconds. If it then goes off, the readiness codes are complete. If it flashes five times, one or more readiness codes are not set to complete. To set each code, drive the vehicle or run the engine as described in the procedures (see page 11-76).

Manifold Absolute Pressure (MAP) Sensor
The MAP sensor converts manifold absolute pressure into electrical signals to the ECM/PCM.



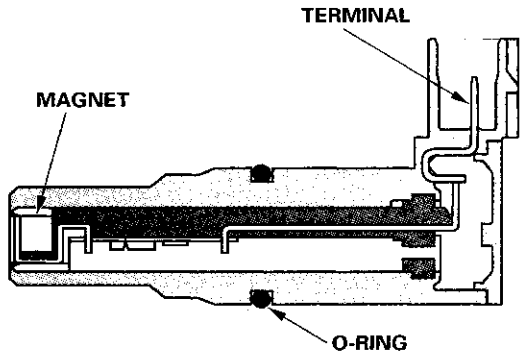
Mass Air Flow (MAF) Sensor/Intake Air Temperature (IAT) Sensor
The mass air flow (MAF) sensor/intake air temperature (IAT) sensor contains a hot wire and a thermistor. It is located in the intake air passage. The resistance of the hot wire and thermistor change due to intake air temperature and air flow. The control circuit in the MAF sensor controls the current to keep the hot wire at a set temperature. The current is converted to voltage in the control circuit, then output to the ECM/PCM.



(cont'd)

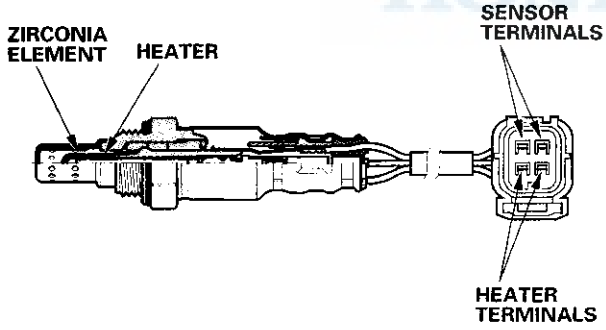
System Description (cont'd)

Output Shaft (Countershaft) Speed Sensor
This sensor detects countershaft speed.



M/T model shown

Secondary Heated Oxygen Sensor (Secondary HO2S)
The secondary HO2S detects the oxygen content in the exhaust gas downstream of the warm up three way catalytic converter (WU-TWC), and sends signals to the ECM/PCM. To stabilize its output, the sensor has an internal heater. The ECM/PCM compares the HO2S output with the A/F sensor output to determine catalyst efficiency. The secondary HO2S is on the WU-TWC.



Electronic Throttle Control System

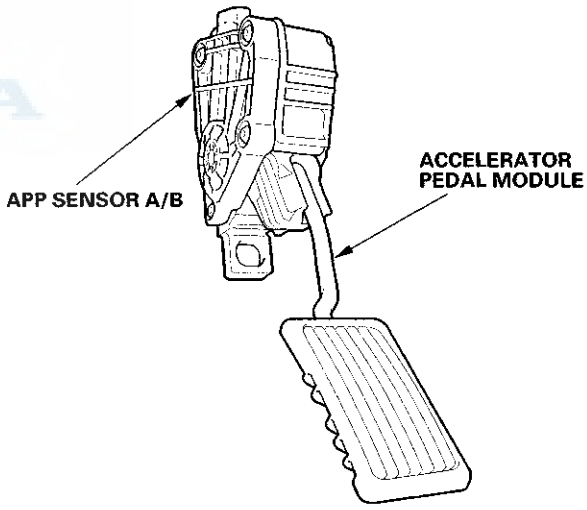
The throttle is electronically controlled by the electronic throttle control system. Refer to the system diagram to see a functional layout of the system.

Idle control: When the engine is idling, the ECM/PCM controls the throttle actuator to maintain the proper idle speed according to engine loads.

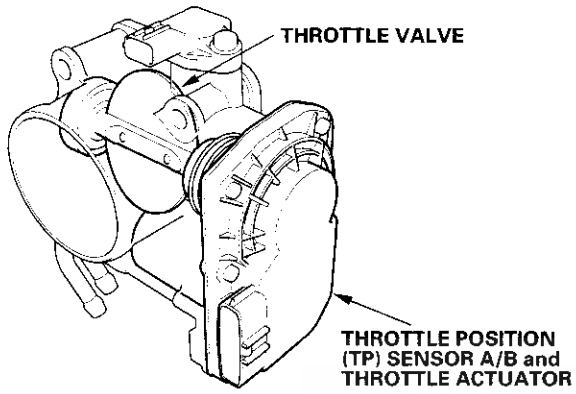
Acceleration control: When the accelerator pedal is pressed, the ECM/PCM opens the throttle valve depending on the accelerator pedal position (APP) sensor signal.

Cruise control: The ECM/PCM controls the throttle actuator to maintain the set speed when cruise control is operating. The throttle actuator takes the place of the cruise control actuator.

Accelerator Pedal Position (APP) Sensor
As the accelerator pedal position changes, the sensor varies the signal voltage to the ECM/PCM.



Throttle Body
The throttle body is a single-barrel side draft type. The lower portion of the throttle valve is heated by engine coolant from the cylinder head to prevent icing of the throttle plate.



Idle Control System

When the engine is cold, the A/C compressor is on, the transmission is in gear, the brake pedal is pressed, the power steering load is high, or the alternator is charging, the ECM/PCM controls current to the throttle actuator to maintain the correct idle speed.

Brake Pedal Position Switch
The brake pedal position switch signals the ECM/PCM when the brake pedal is pressed.

Power Steering Pressure (PSP) Switch
The PSP switch signals the ECM/PCM when the power steering load is high.

Fuel Supply System

Fuel Cutoff Control
During deceleration with the throttle valve closed, current to the injectors is cut off to improve fuel economy at engine speeds over 850 rpm (J35Z3 engine: 950 rpm). Fuel cutoff control also occurs when the engine speed exceeds 6,900 rpm, regardless of the position of the throttle valve, to protect the engine from over-revving. When the vehicle is stopped, the ECM/PCM cuts the fuel at engine speeds over 5,000 rpm (J35Z3 engine: 5,550 rpm). On a cold engine, fuel cut occurs at a lower engine speed.

Fuel Pump Control
When the ignition switch is turned to ON (II), the ECM/PCM grounds PGM-FI main relay 2 (FUEL PUMP) which feeds current to the fuel pump for 2 seconds to pressurize the fuel system. With the engine running, the ECM/PCM grounds PGM-FI main relay 2 (FUEL PUMP) and feeds current to the fuel pump. When the engine is not running and the ignition is ON (II), the ECM/PCM cuts ground to PGM-FI main relay 2 (FUEL PUMP) which cuts current to the fuel pump.

PGM-FI Main Relay 1 and 2
PGM-FI main relay 1 is energized whenever the ignition switch is ON (II) to supply battery voltage to the ECM/PCM, power to the injectors, and power for PGM-FI main relay 2 (FUEL PUMP). PGM-FI main relay 2 (FUEL PUMP) is energized to supply power to the fuel pump for 2 seconds when the ignition switch is turned to ON (II), and when the engine is cranking or running.

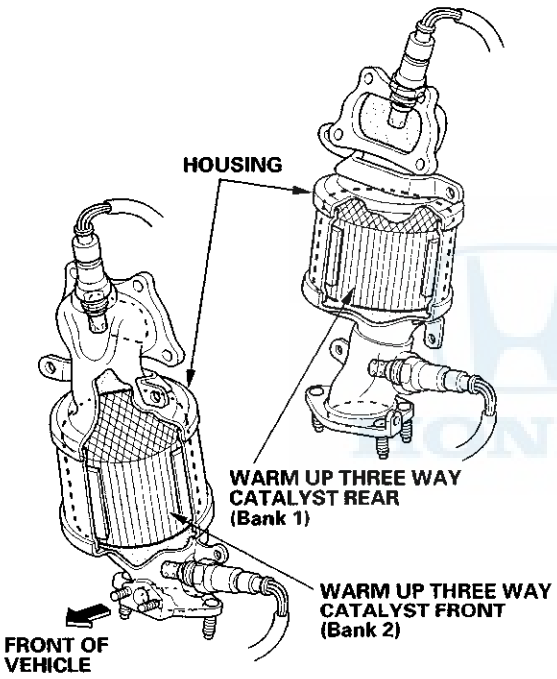
(cont'd)

System Description (cont'd)

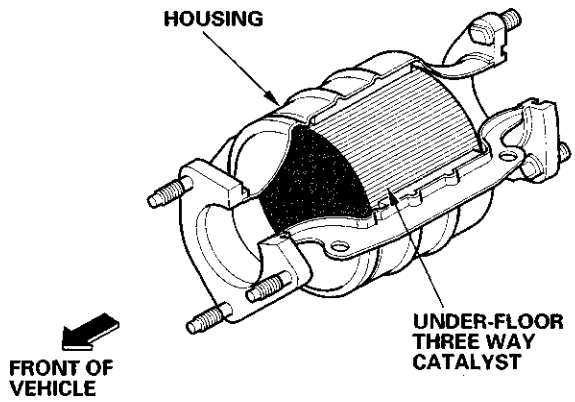
Catalytic Converter System

Warm Up Three Way Catalytic Converter (WU-TWC) and Under-floor Three Way Catalytic Converter (Under-floor TWC)
The WU-TWC/Under-floor TWC converts hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NOx) in the exhaust gas to carbon dioxide (CO_2), nitrogen (N_2), and water vapor.

WU-TWC



UNDER-FLOOR TWC



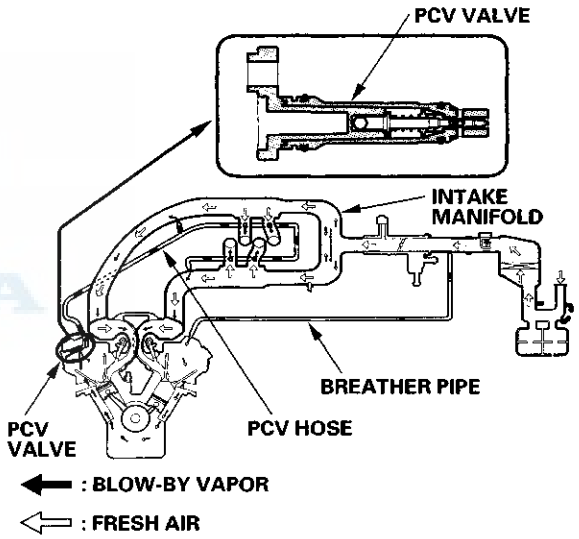
Exhaust Gas Recirculation (EGR) System

Refer to the system diagram to see a functional layout of the system.

EGR Valve
The EGR valve lowers peak combustion temperatures and reduces oxides of nitrogen emissions (NOx) by recirculating exhaust gas through the intake manifold and into the combustion chambers.

Positive Crankcase Ventilation (PCV) System

The PCV valve prevents blow-by gasses from escaping into the atmosphere by venting them into the intake manifold.

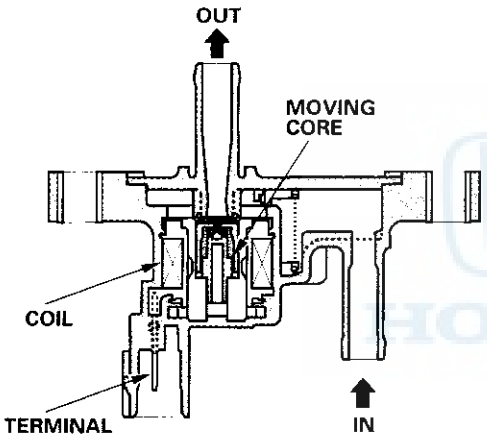


Evaporative Emission (EVAP) Control System

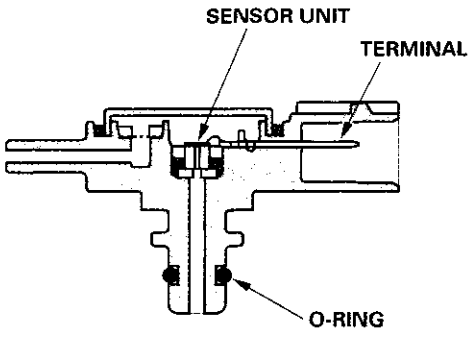
Refer to the system diagram to see a functional layout of the system.

EVAP Canister
The EVAP canister temporarily stores fuel vapor from the fuel tank until it can be purged from the EVAP canister into the engine and burned.

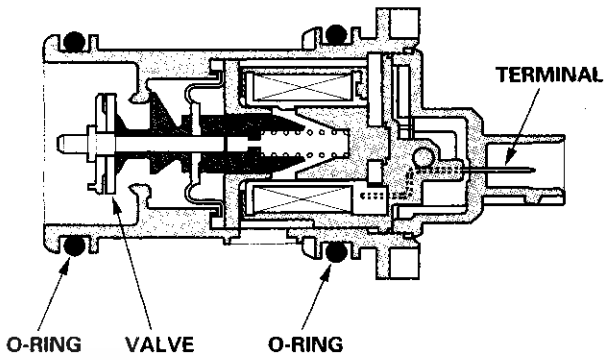
EVAP Canister Purge Valve
When the engine coolant temperature is below 140 °F (60 °C), the ECM/PCM turns off the EVAP canister purge valve which cuts vacuum to the EVAP canister.



Fuel Tank Pressure (FTP) Sensor
The FTP sensor converts fuel tank absolute pressure into an electrical input to the ECM/PCM.



EVAP Canister Vent Shut Valve
The EVAP canister vent shut valve is on the EVAP canister.
The EVAP canister vent shut valve controls the venting of the EVAP canister.



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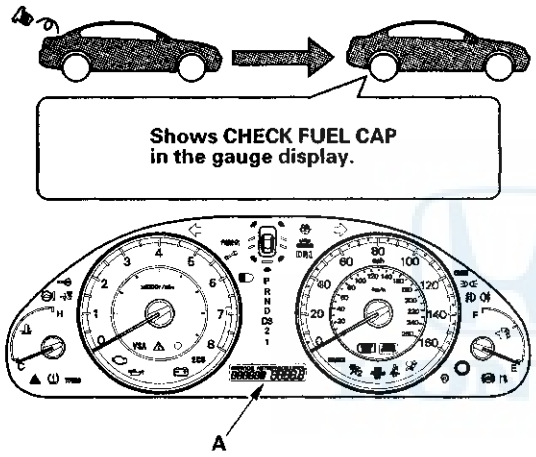
System Description (cont'd)

Fuel Cap Warning Message

The ECM/PCM will detect a loose or missing fuel fill cap as an evaporative system leak and alerts the driver by showing a warning message in the gauge display.

The first time a leak is detected a CHECK FUEL CAP message appears on the gauge display (A). To scroll to another message, press the select/reset button. The "CHECK FUEL CAP" message will appear each time you restart the engine until the system turns the message off. Turn the engine off then replace or tighten the fuel fill cap until it clicks at least once.



To make the message go off (with the HDS)

Procedure

1. Tighten the fuel fill cap until it clicks.
2. Clear the Temporary DTC with the HDS.
3. Verify there is no leak by doing the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

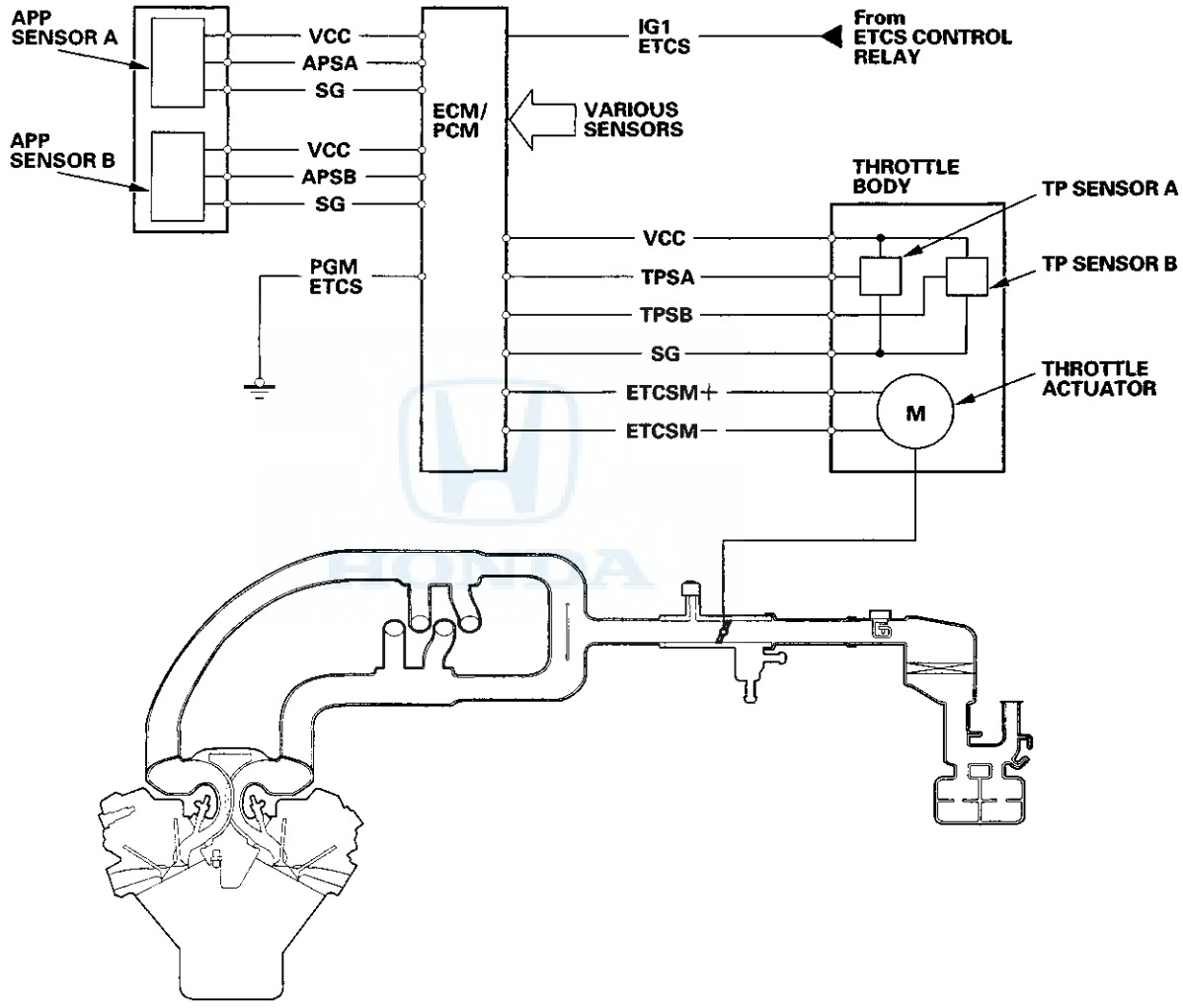
To make the message go off (without the HDS)

Procedure

1. Tighten the fuel fill cap until it clicks.
2. Start the engine, then turn the ignition switch to LOCK (0).
3. Repeat step 2 two more times.

Electronic Throttle Control System Diagram

The electronic throttle control system consists of the throttle actuator, throttle position (TP) sensor A/B, accelerator pedal position (APP) sensor A/B, the electronic throttle control system (ETCS) control relay, and the ECM/PCM.



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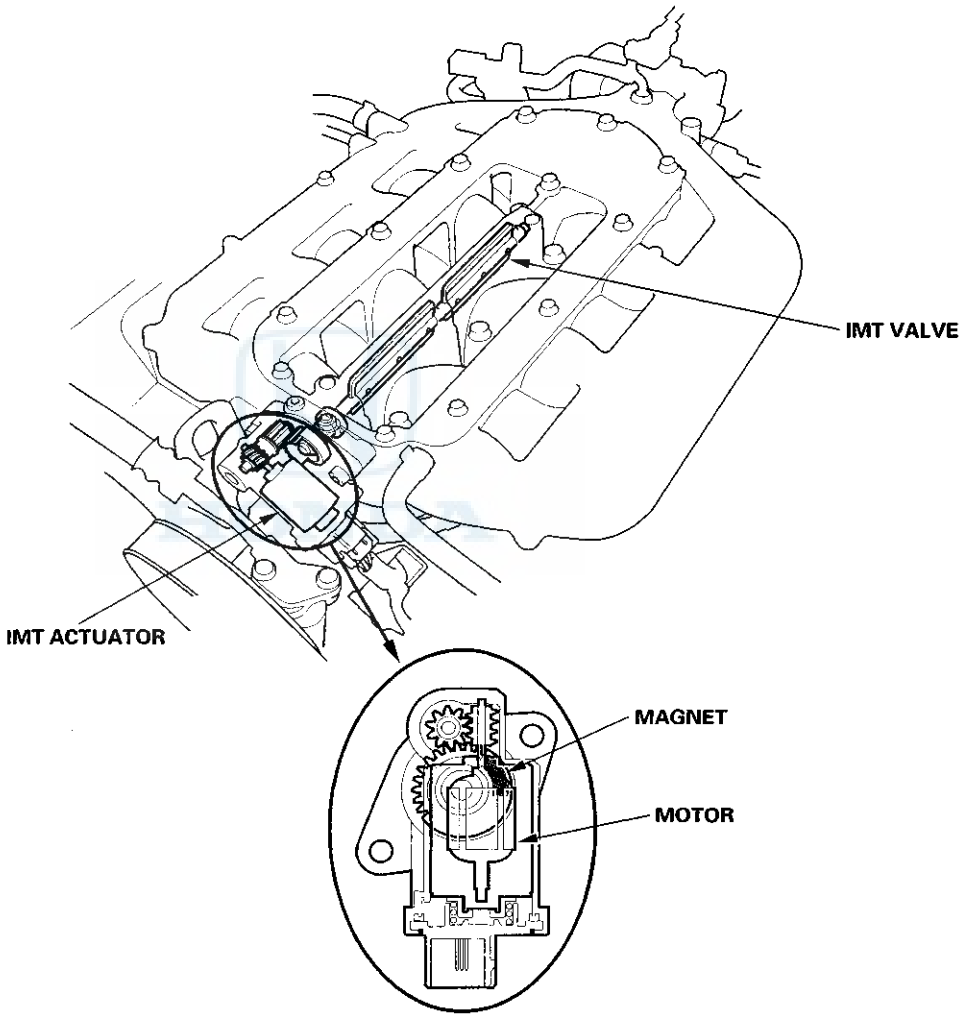
System Description (cont'd)

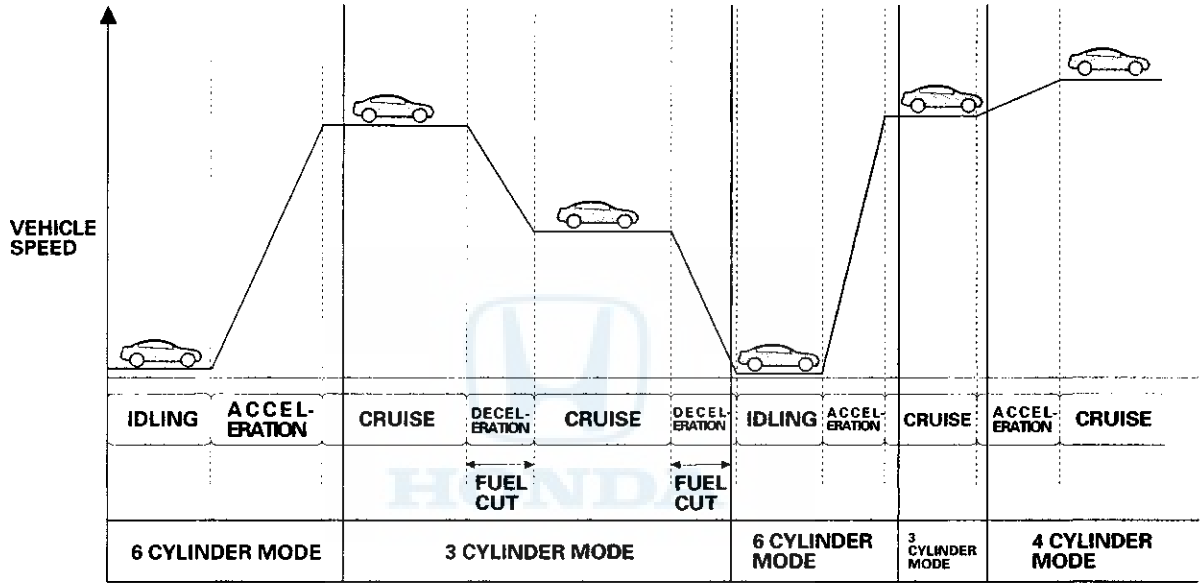
Intake Manifold Tuning (IMT) Valve System (J35Z3 engine)

Engine power is adjusted by opening and closing the intake manifold tuning (IMT) valve. When the valve is closed, there is high torque at low engine speed. When the valve is open, there is high torque at high engine speed.
The intake manifold tuning (IMT) actuator contains a sensor that detects the IMT valve position and sends it to the ECM/PCM.



Variable Cylinder Management (VCM) System (J35Z2 engine)

The VCM system activates the cylinders based on the driving condition. The system has three modes: 6 cylinder (all cylinder activation), 4 cylinder (pauses the No. 3 and No. 4 cylinders), and 3 cylinder (pauses the rear bank of cylinders). On paused cylinders, the intake and exhaust valves are kept closed. Since the valves are closed, the frictional losses from the valve spring compression and pumping are reduced because no air is compressed in the cylinder. This reduces engine drag.



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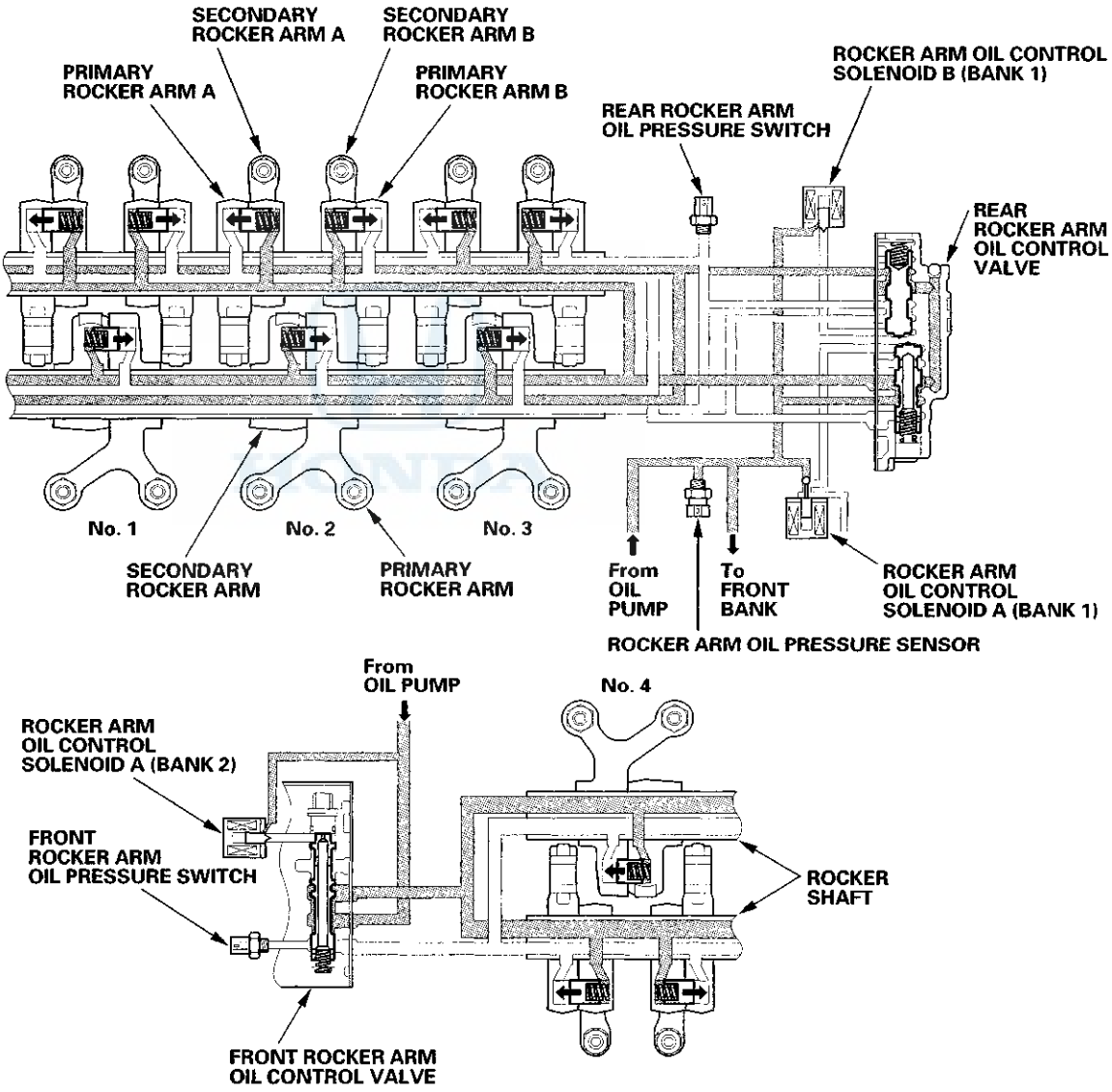
System Description (cont'd)

VCM System-Operation

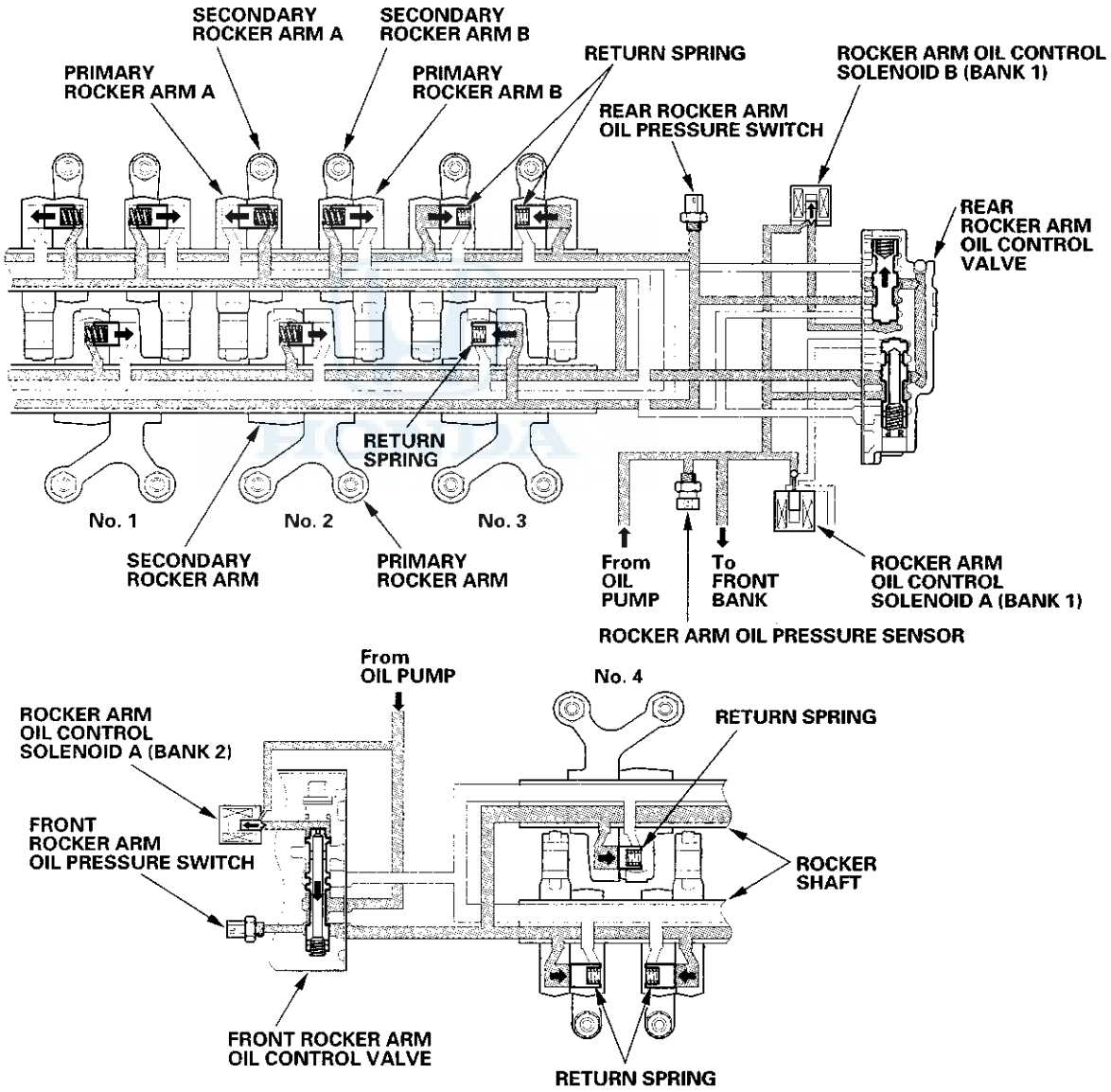
During 6 Cylinder Mode

With rocker arm oil control solenoid A (Bank 1), B (Bank 1), and A (Bank 2) OFF, the rocker arm oil control valves direct oil pressure. Oil pressure enters the secondary rocker arm from the oil passage in the rocker shaft, and it moves the VTEC switching piston, sliding it into the primary rocker arm and locking primary rocker arms and secondary rocker arms together. The rocker arms are lifted by the camshaft, and all cylinders are active.



During 4 Cylinder Mode

With rocker arm oil control solenoid A (Bank 1) and A (Bank 2) turned on by PCM, the front and rear rocker arm oil control valves switch the oil pressure. Oil pressure then enters the No. 3 and No. 4 cylinder's primary rocker arm from the oil passage in the rocker shaft, causing the VTEC switching piston to slide into the secondary rocker arm and against the return spring. This disengages the primary rocker arm from the secondary rocker arm to stop valve activation. The No. 3 and No. 4 cylinder's rocker arms do not move, and No. 3 and No. 4 cylinders are paused. In the other four cylinders, oil pressure from the front and rear rocker arm oil control valves lock the primary rocker arm and secondary rocker arm together. The rocker arms are moved by the camshaft, and the four cylinders are active.

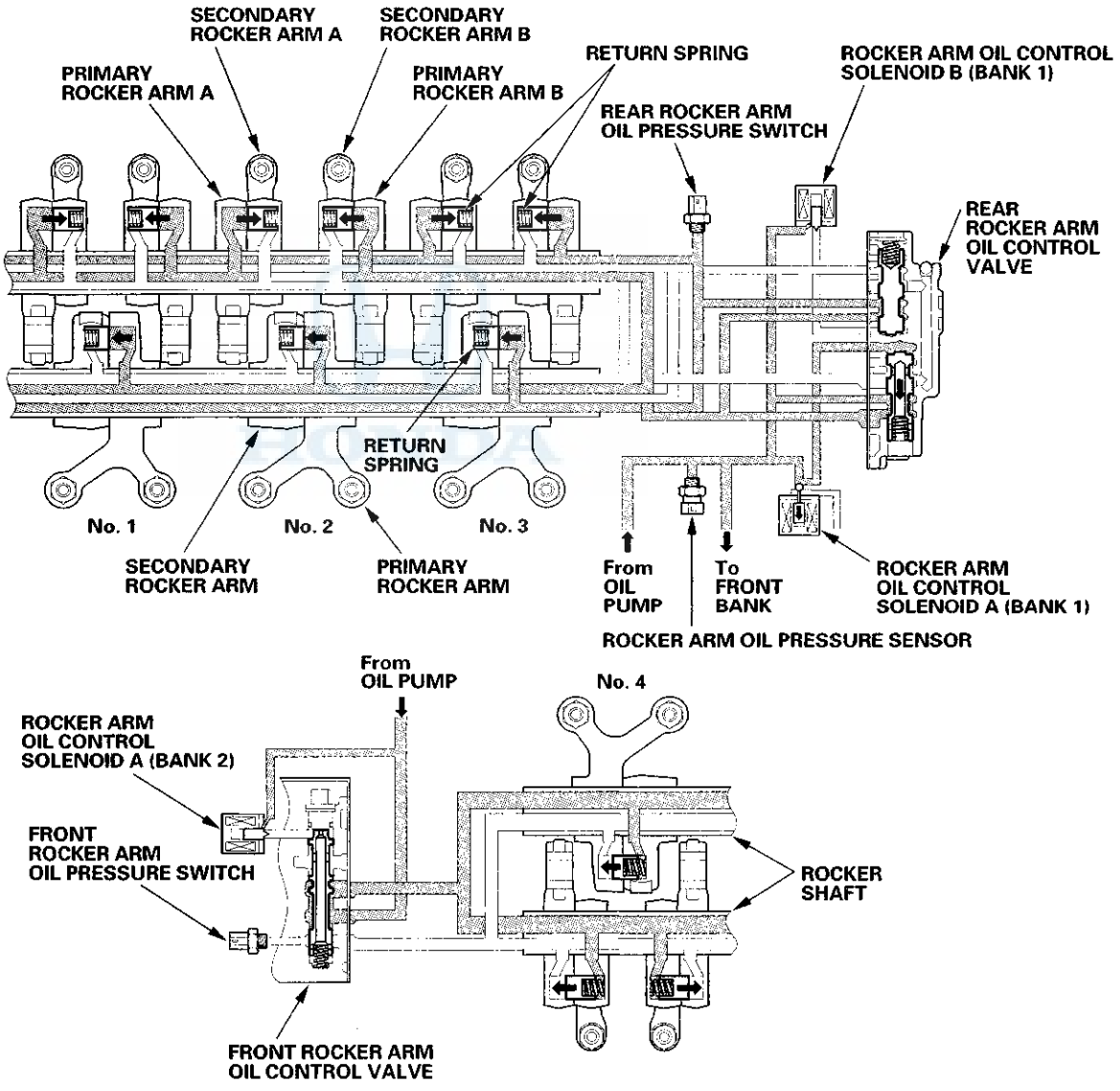


(cont'd)

System Description (cont'd)

During 3 Cylinder Mode

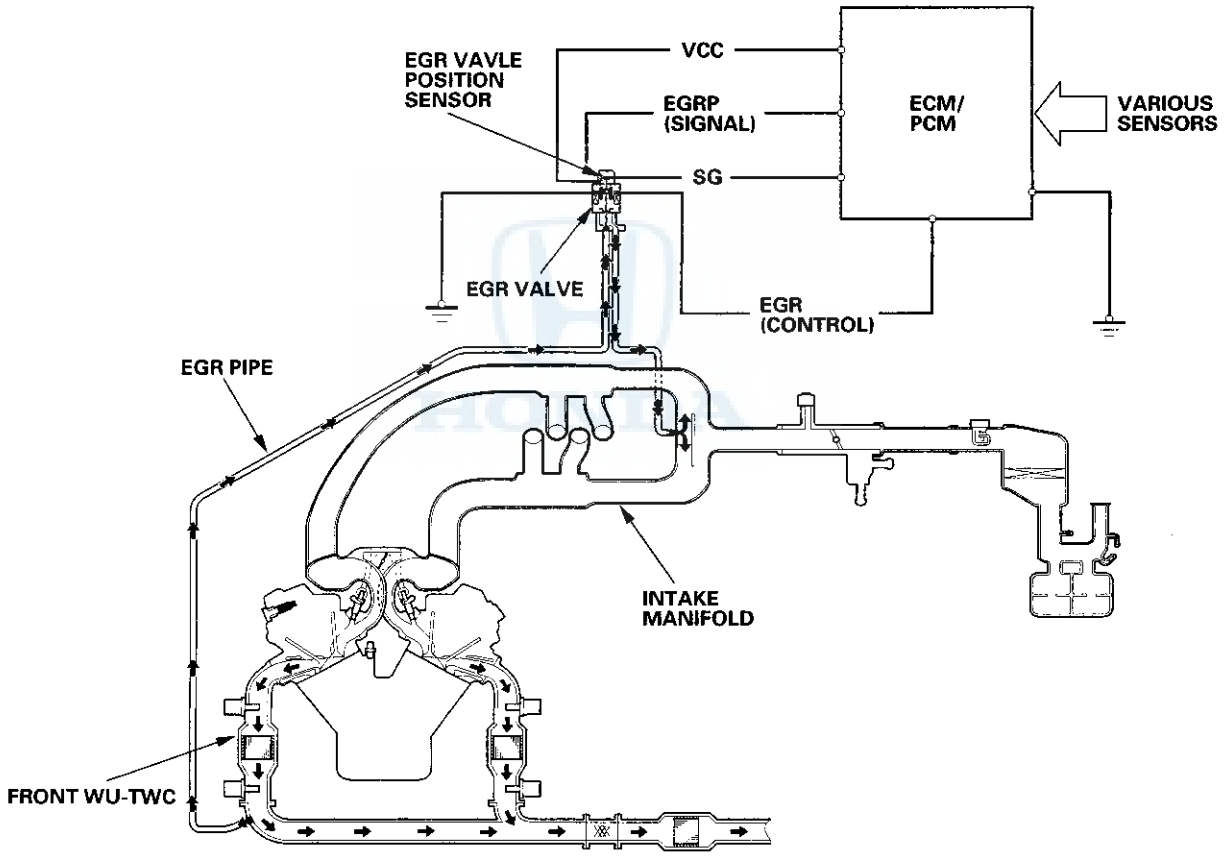
When rocker arm oil control solenoid B (Bank 1) is turned on by the PCM, the rear rocker arm oil control valve switches the oil pressure. Oil pressure then enters the rear bank cylinder's primary rocker arm from the oil passage in the rocker shaft, causing the VTEC switching piston to slide into the secondary rocker arm and against the return spring. This disengages the primary rocker arm from the secondary rocker arm to stop valve activation. The rear bank cylinder's rocker arms do not move, and rear bank cylinders are paused. At the front bank, oil pressure from the front rocker arm oil control valve locks the No. 4 cylinder's primary and secondary rocker arms together. The No. 4 cylinder's rocker arms are moved by the camshaft, and the all front bank cylinders are active.



Exhaust Gas Recirculation (EGR) System Diagram

The EGR system reduces oxides of nitrogen (NOx) emissions by recirculating exhaust gas through the EGR pipe and the intake manifold, and into the combustion chambers. Routing the exhaust gas through the EGR pipe helps to prevent carbon deposits from forming in the intake manifold and the throttle body. The ECM/PCM memory includes the ideal EGR valve position for varying operating conditions.

The EGR valve position sensor detects the amount of EGR valve lift and sends it to the ECM/PCM. The ECM/PCM then compares it with the ideal lift in its memory (based on signals sent from other sensors). If there is any difference between the two, the ECM/PCM cuts current to the EGR valve.



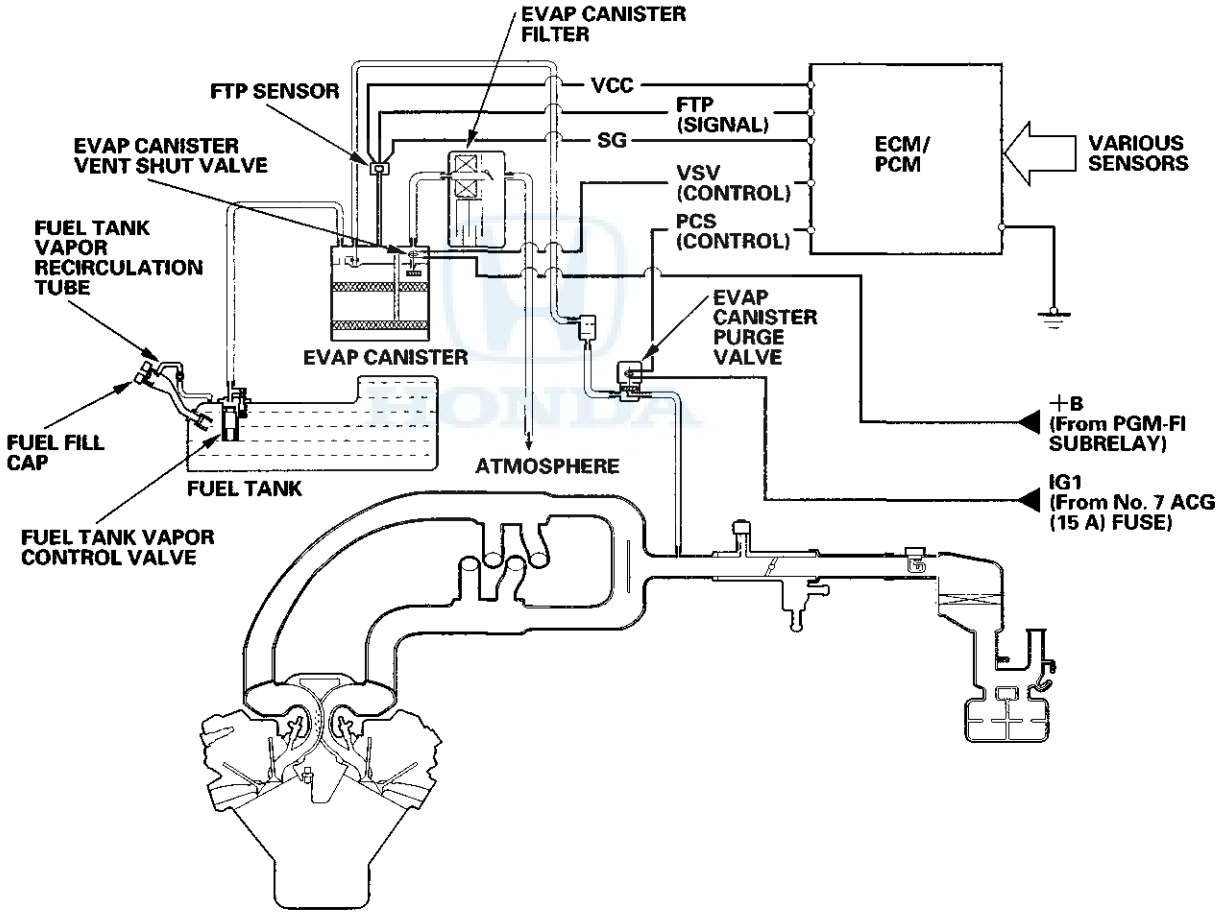
(cont'd)

System Description (cont'd)

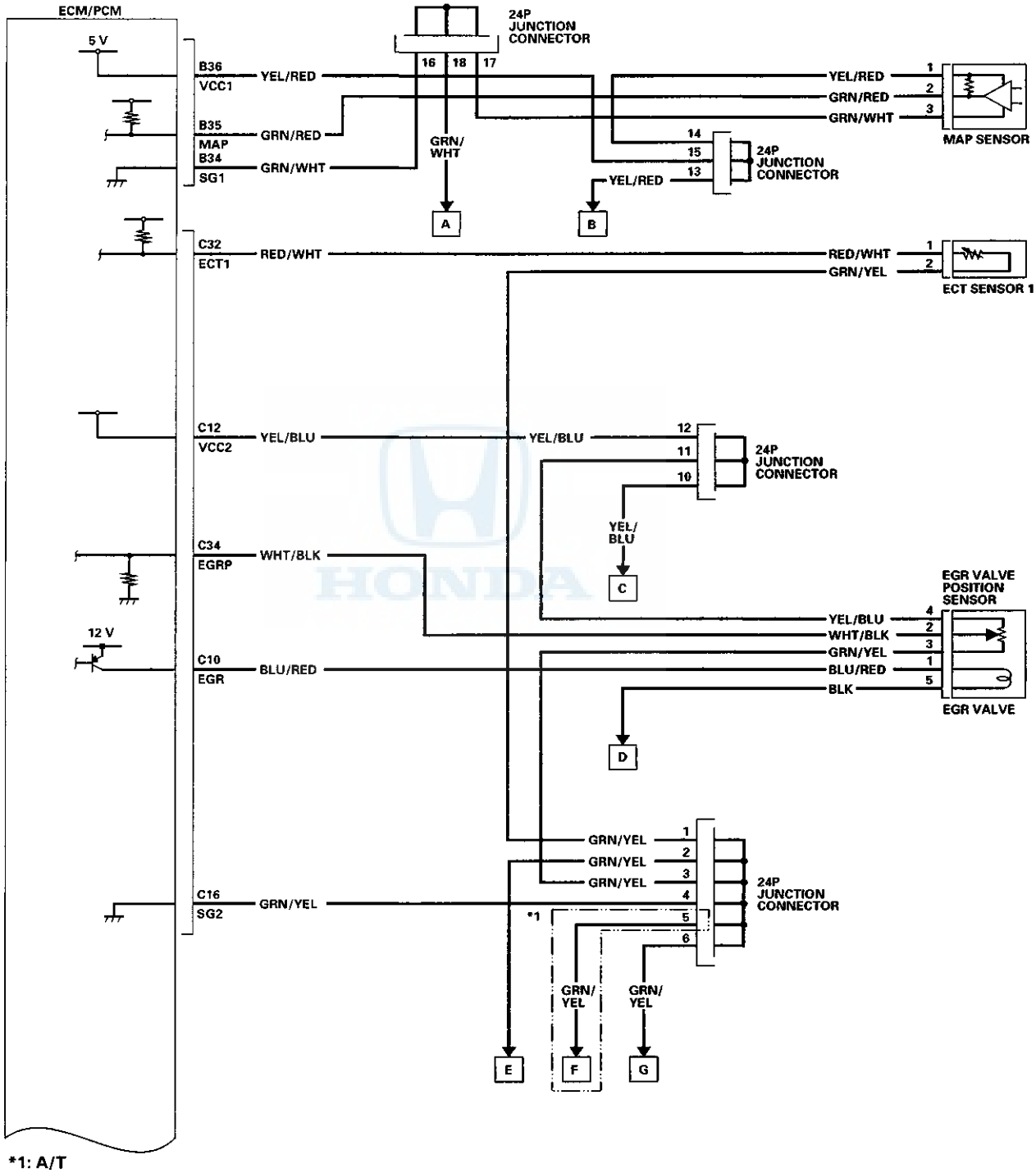
Evaporative Emission (EVAP) Control Diagram

The EVAP controls minimize the amount of fuel vapor escaping to the atmosphere. Vapor from the fuel tank is temporarily stored in the EVAP canister until it can be purged from the canister into the engine and burned.

- The EVAP canister is purged by drawing fresh air through it and into a port on the intake manifold. The purging vacuum is controlled by the EVAP canister purge valve, which operates whenever engine coolant temperature is above 140 °F (60 °C).
- During refueling, the fuel tank vapor control valve opens from pressure in the fuel tank, and feeds the fuel vapor to the EVAP canister.



ECM/PCM Circuit Diagram

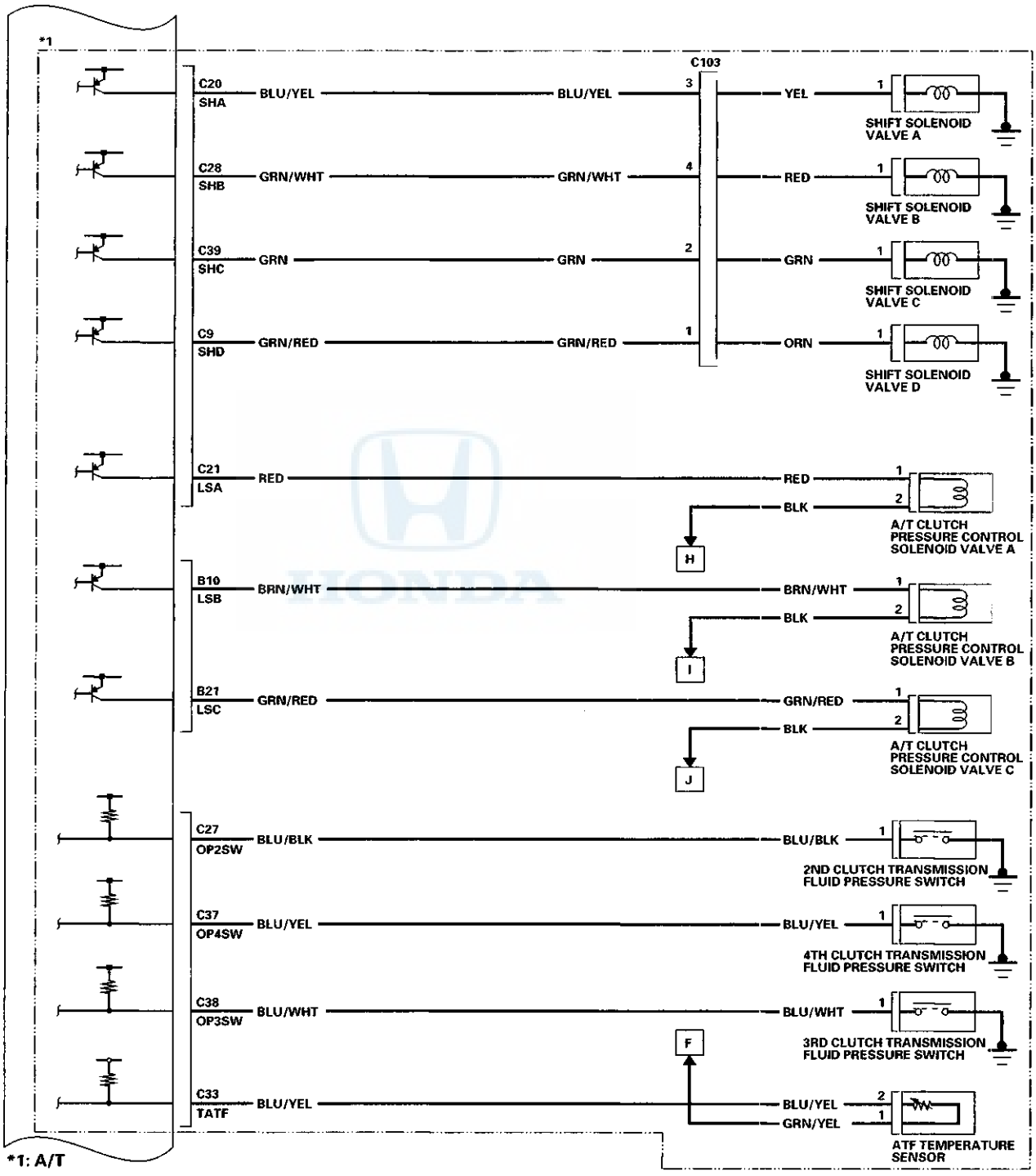


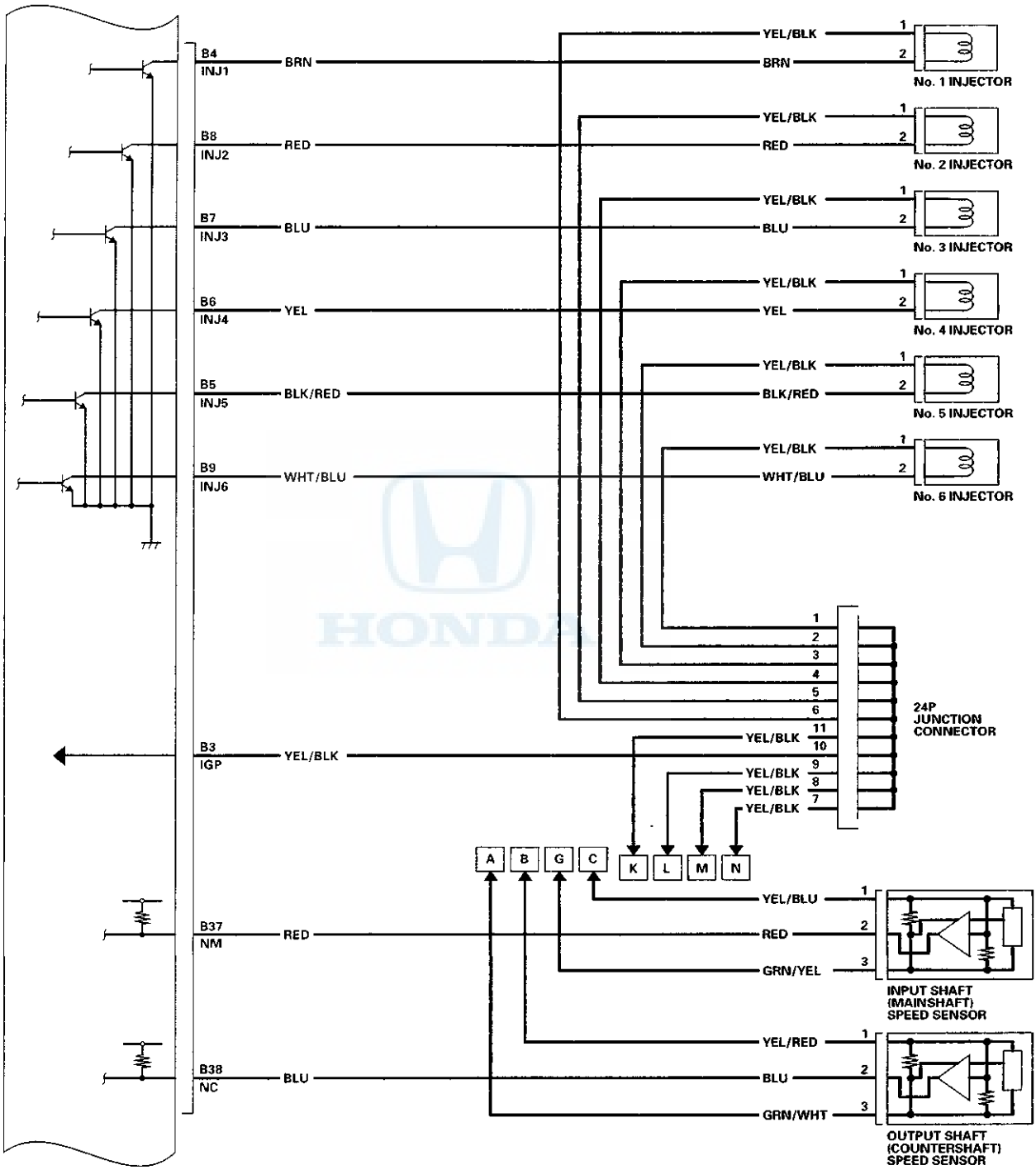
*1: A/T

(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)

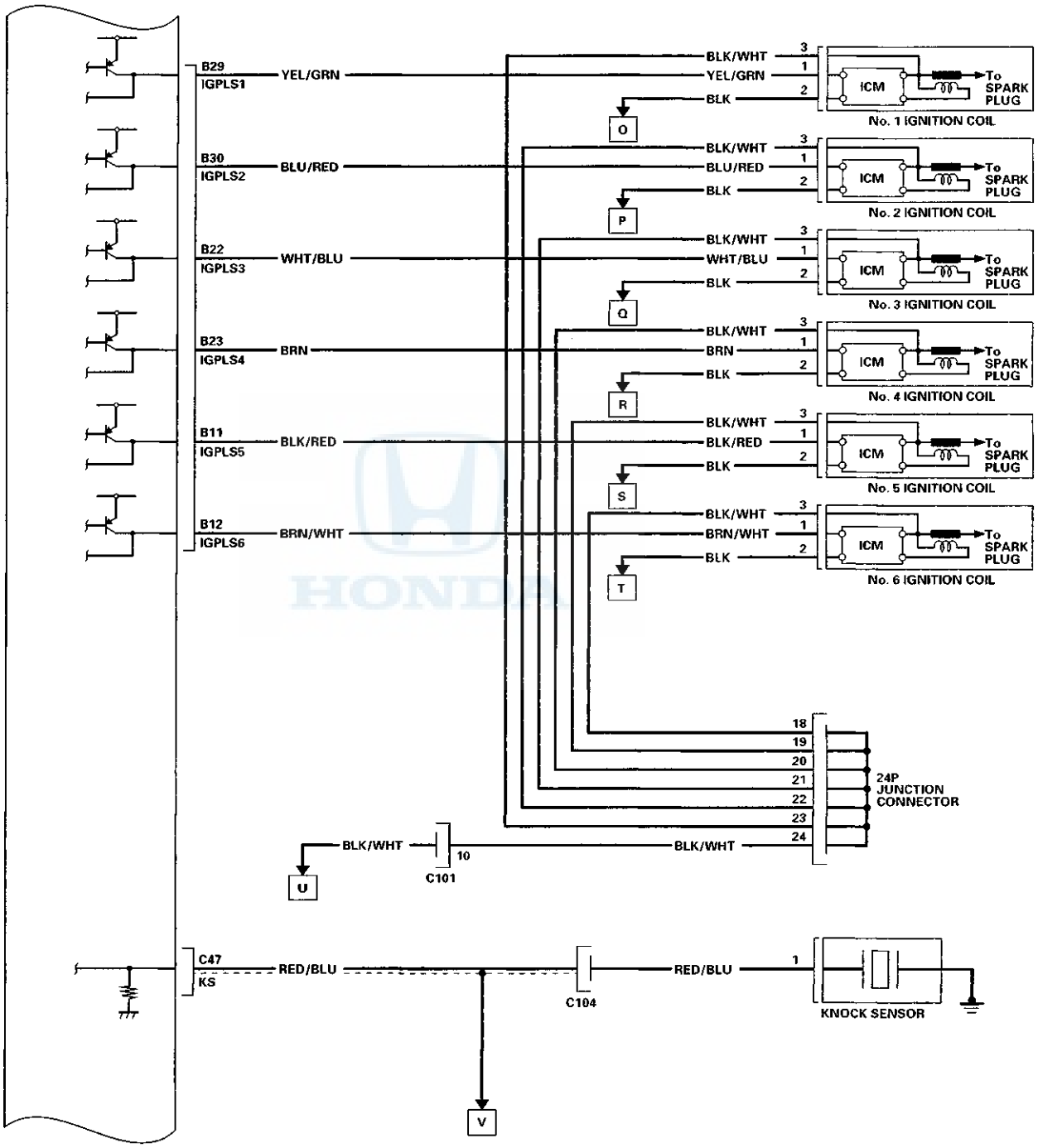


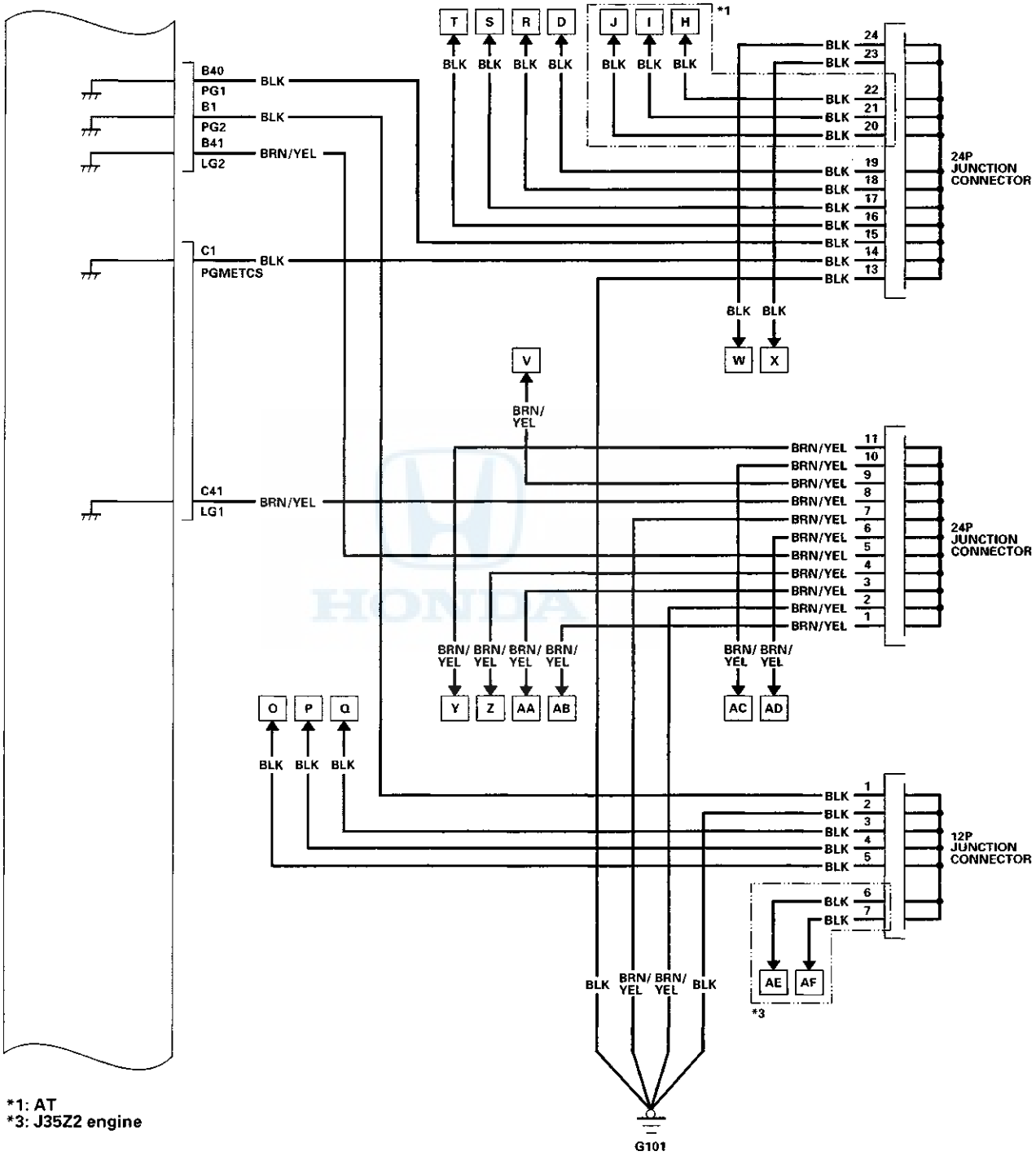

B4
INJ1
BRN
B8
INJ2
RED
B7
INJ3
BLU
B6
INJ4
YEL
B5
INJ5
BLK/RED
B9
INJ6
WHT/BLU
B3
IGP
YEL/BLK
B37
NM
RED
B38
NC
BLU
YEL/BLK
BRN
No. 1 INJECTOR
YEL/BLK
RED
No. 2 INJECTOR
YEL/BLK
BLU
No. 3 INJECTOR
YEL/BLK
YEL
No. 4 INJECTOR
YEL/BLK
BLK/RED
No. 5 INJECTOR
YEL/BLK
WHT/BLU
No. 6 INJECTOR
24P
JUNCTION
CONNECTOR
A
B
G
C
K
L
M
N
YEL/BLU
RED
GRN/YEL
INPUT SHAFT
(MAINSHAFT)
SPEED SENSOR
YEL/RED
BLU
GRN/WHT
OUTPUT SHAFT
(COUNTERSHAFT)
SPEED SENSOR

(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)



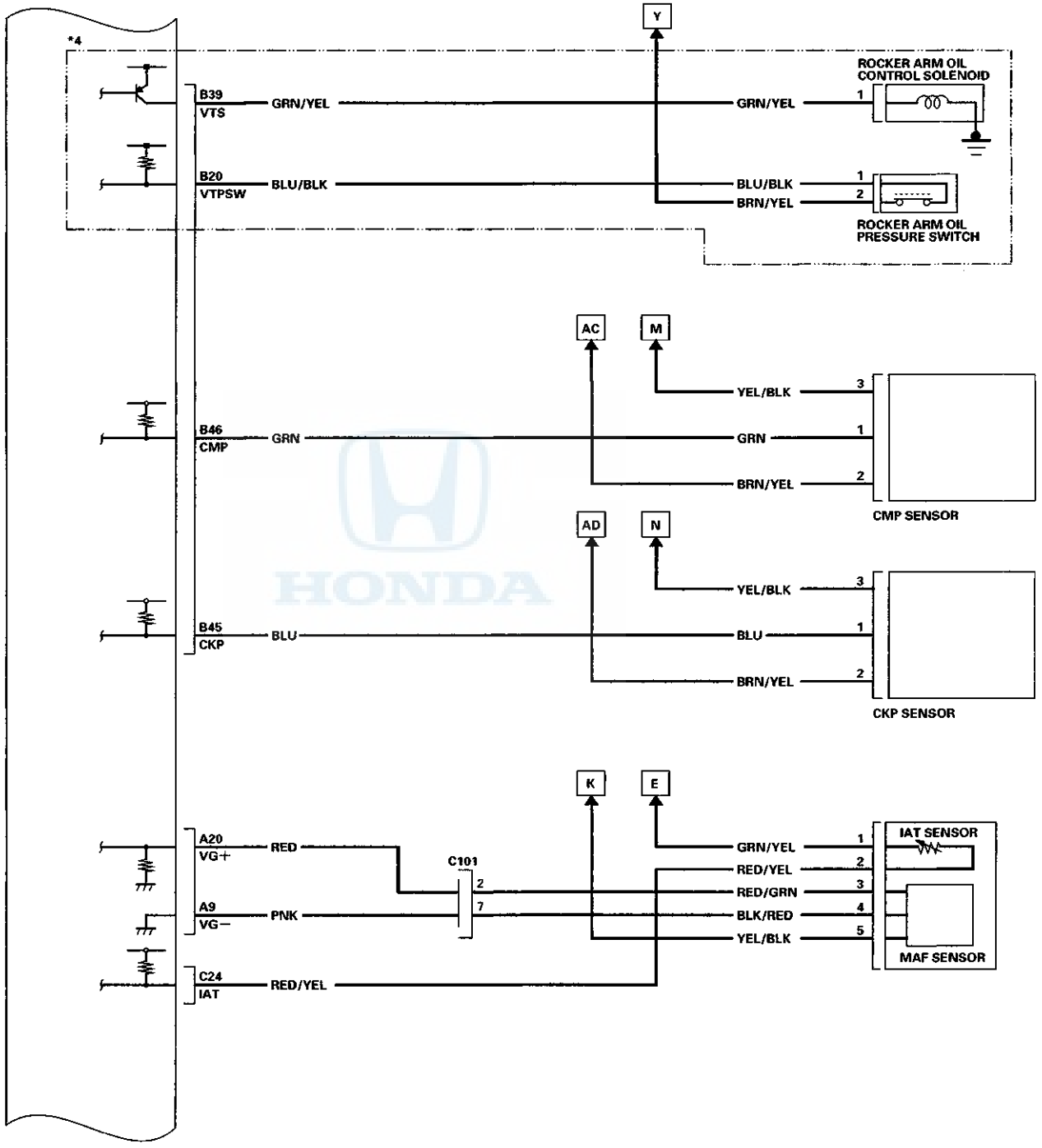


*1: AT
*3: J35Z2 engine

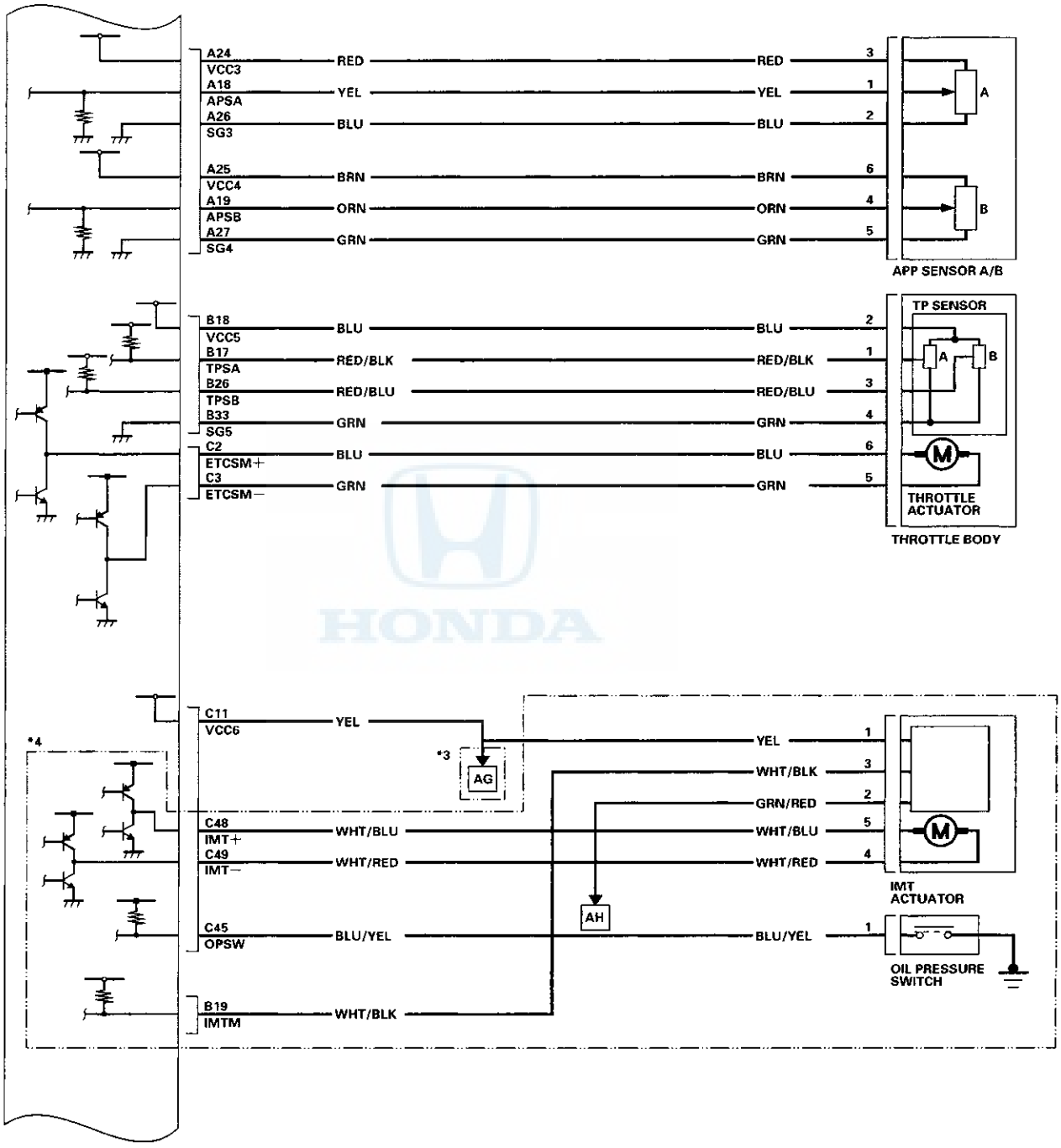
(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)



*4: J35Z3 engine

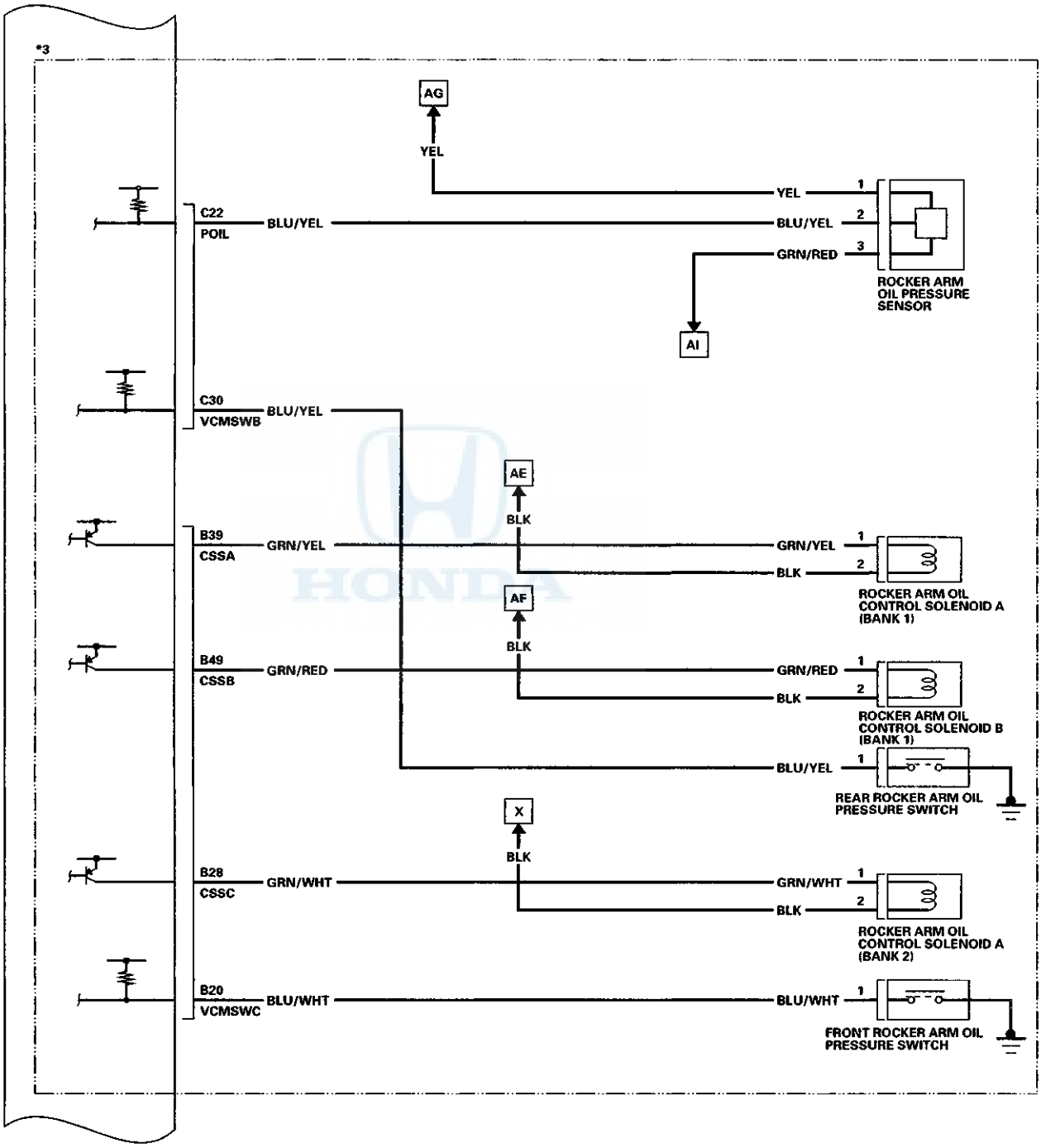


*3: J35Z2 engine
*4: J35Z3 engine

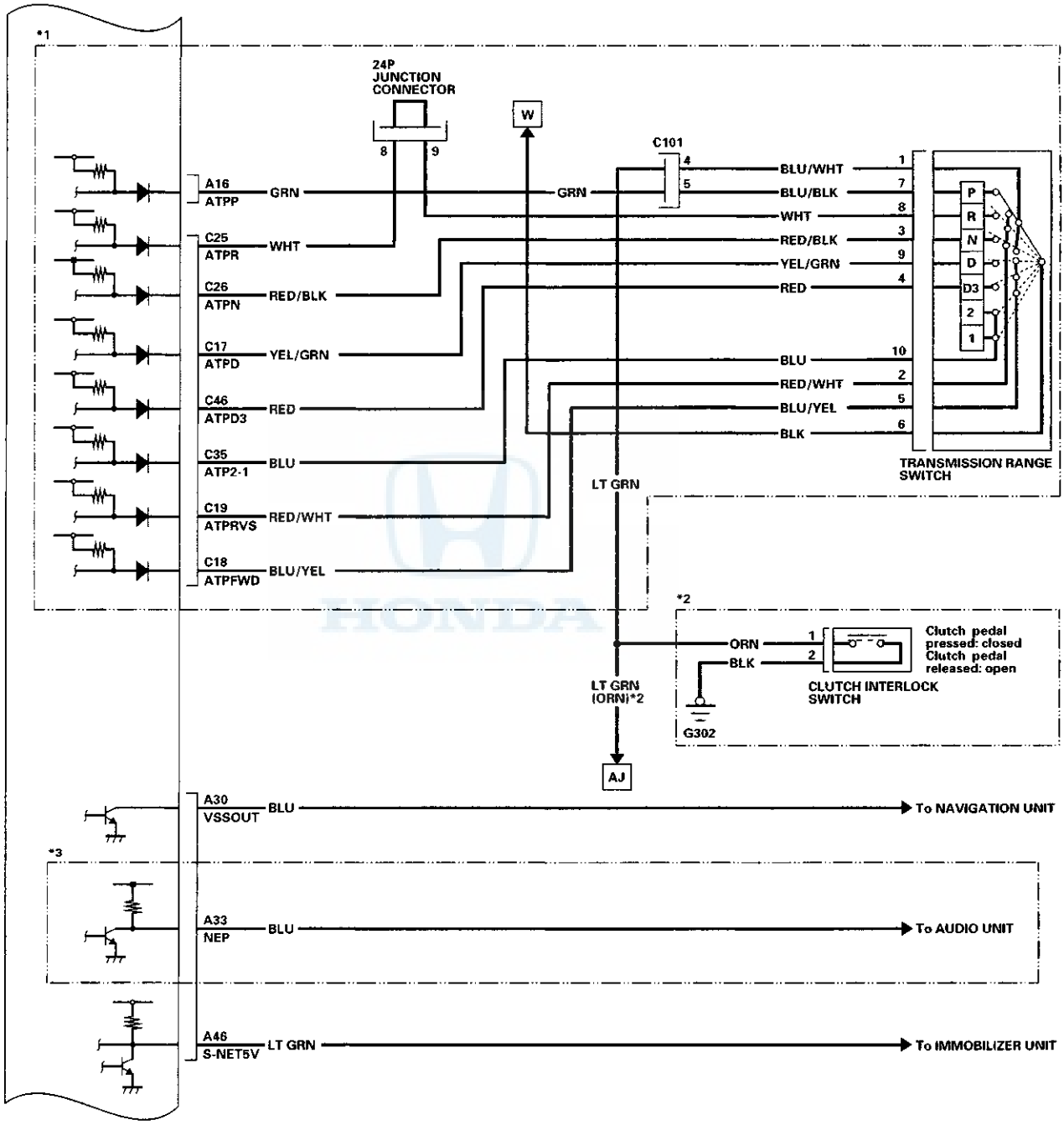
(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)



*3: J35Z2 engine

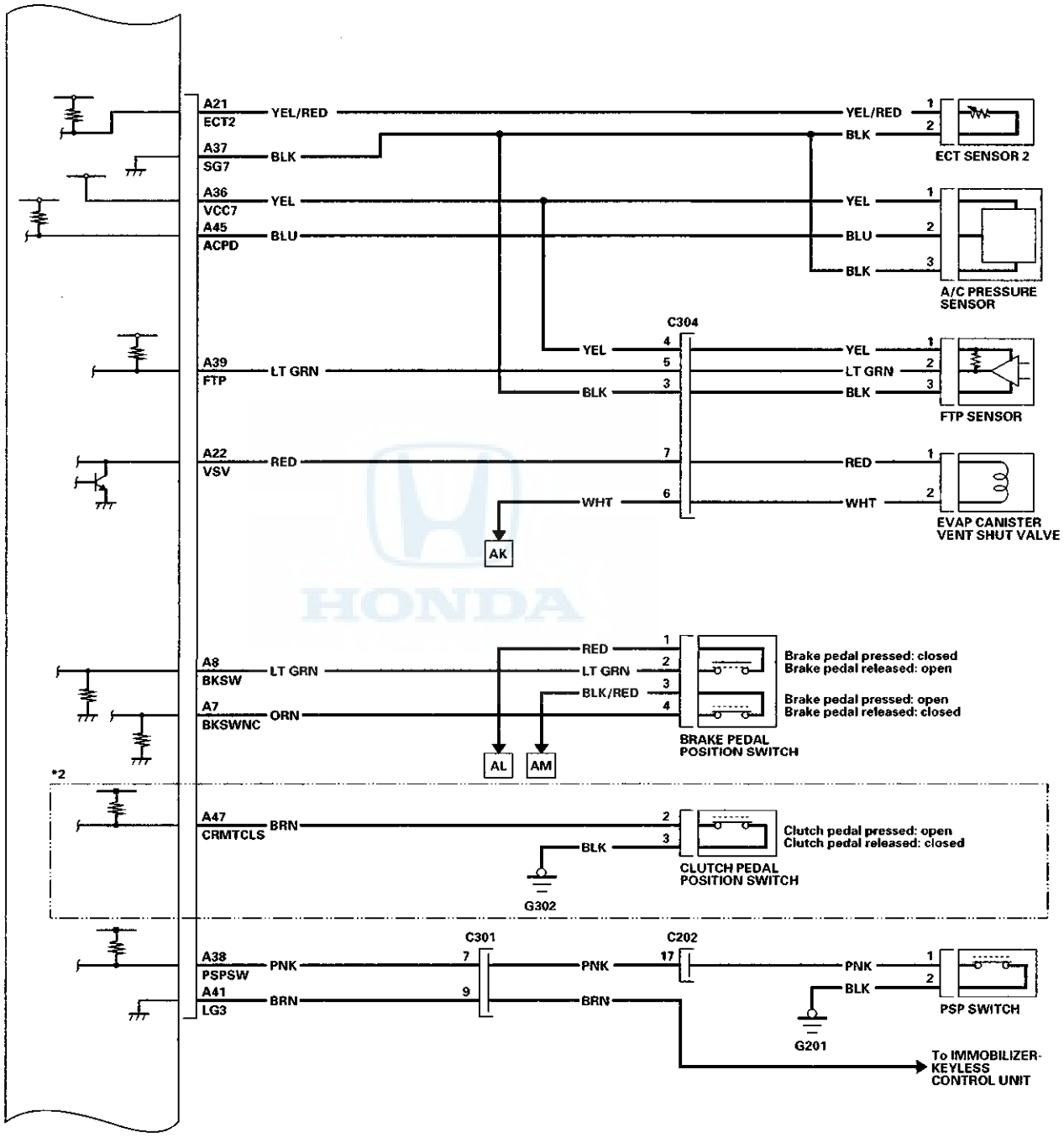


*1: A/T
*2: M/T
*3: J35Z2 engine

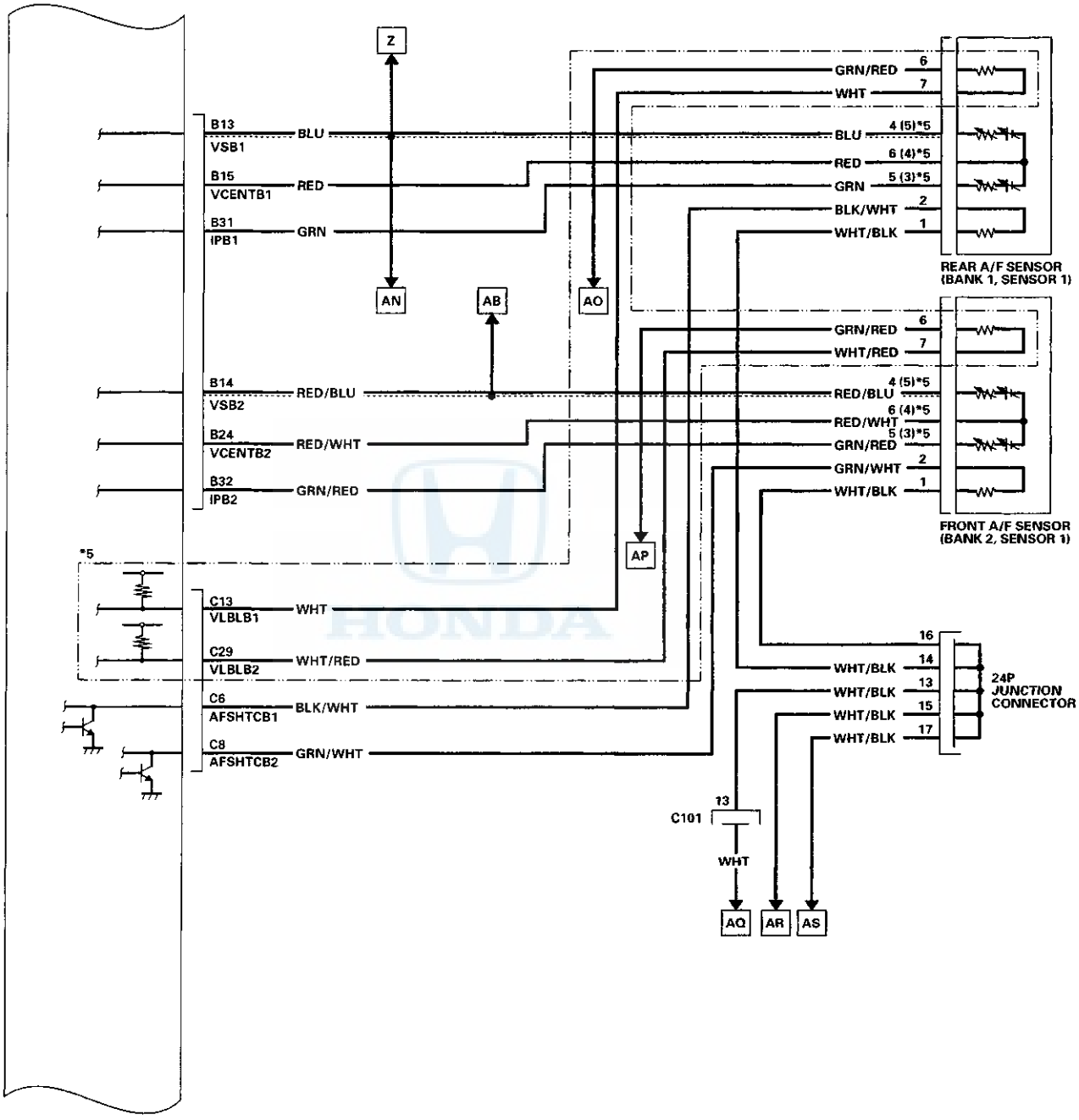
(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)



*2: M/T

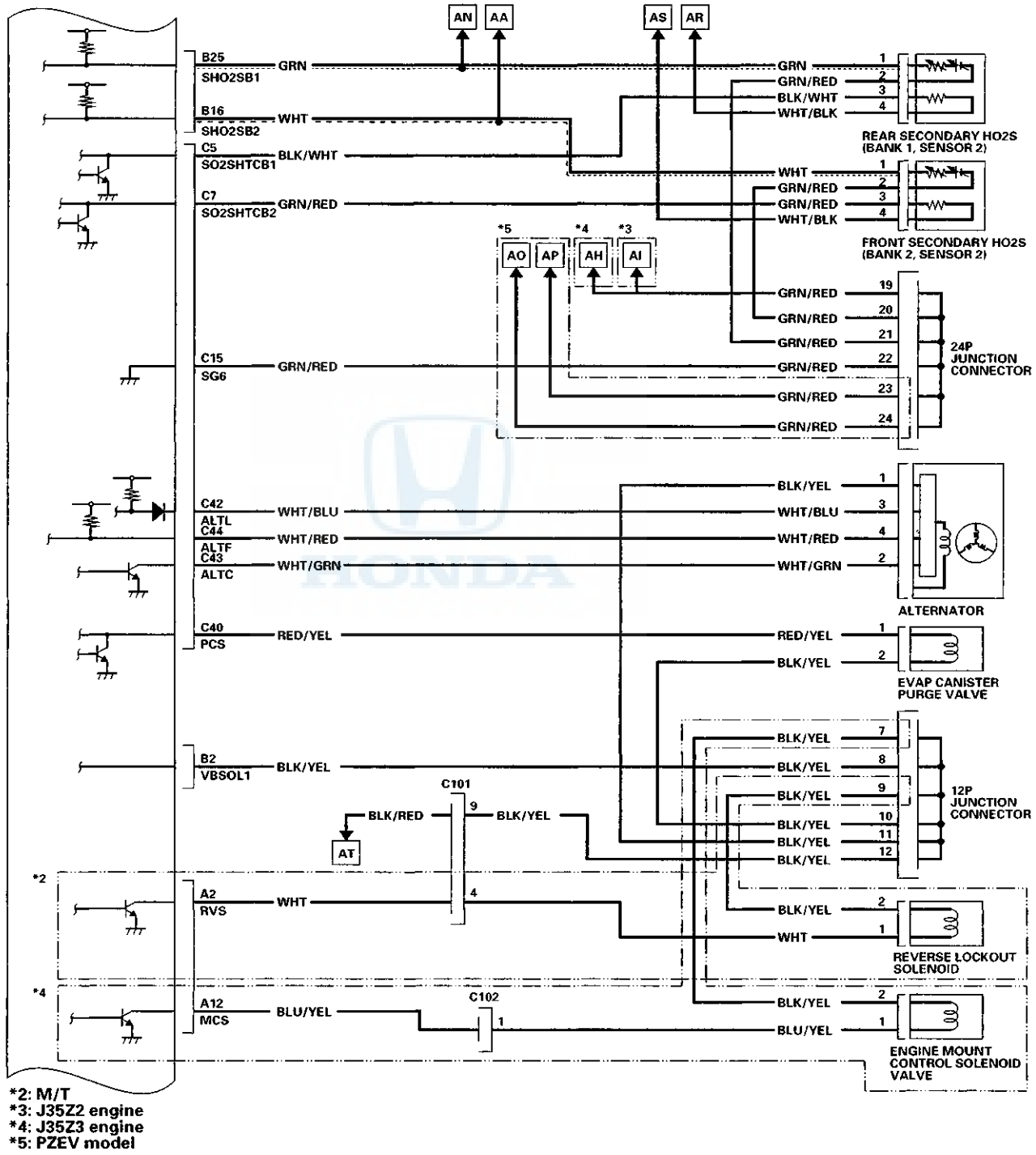


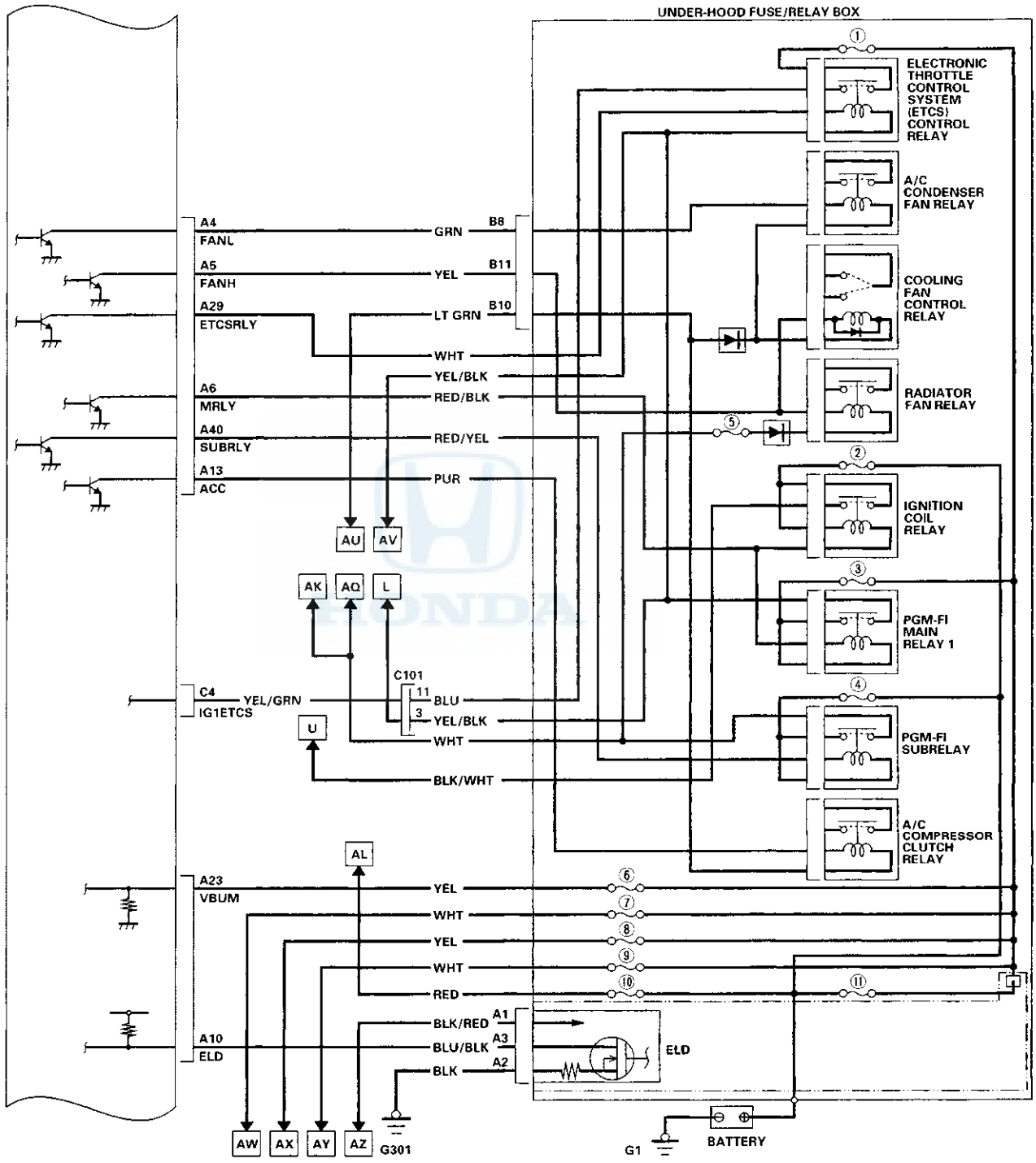
*5: PZEV model

(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)

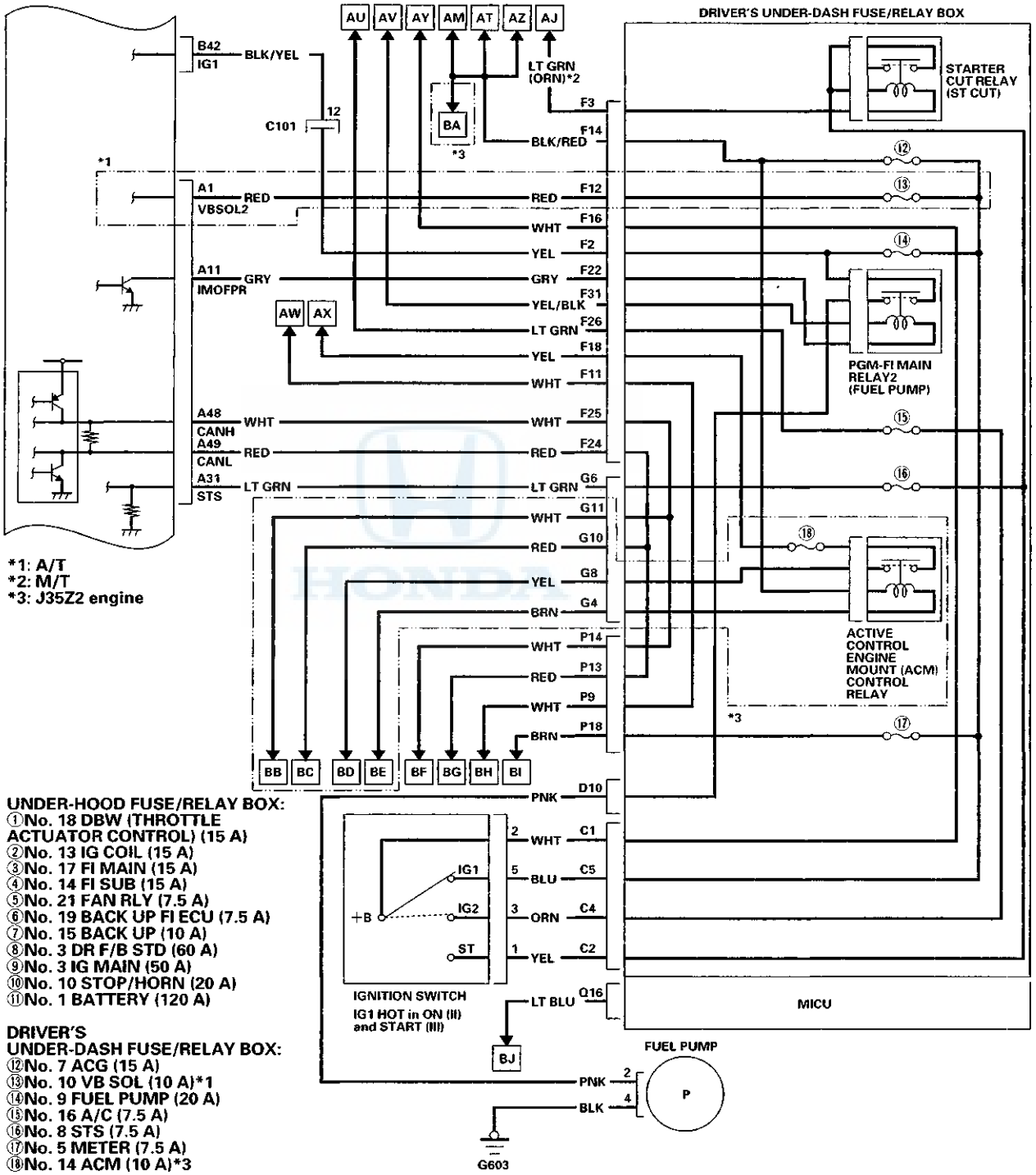


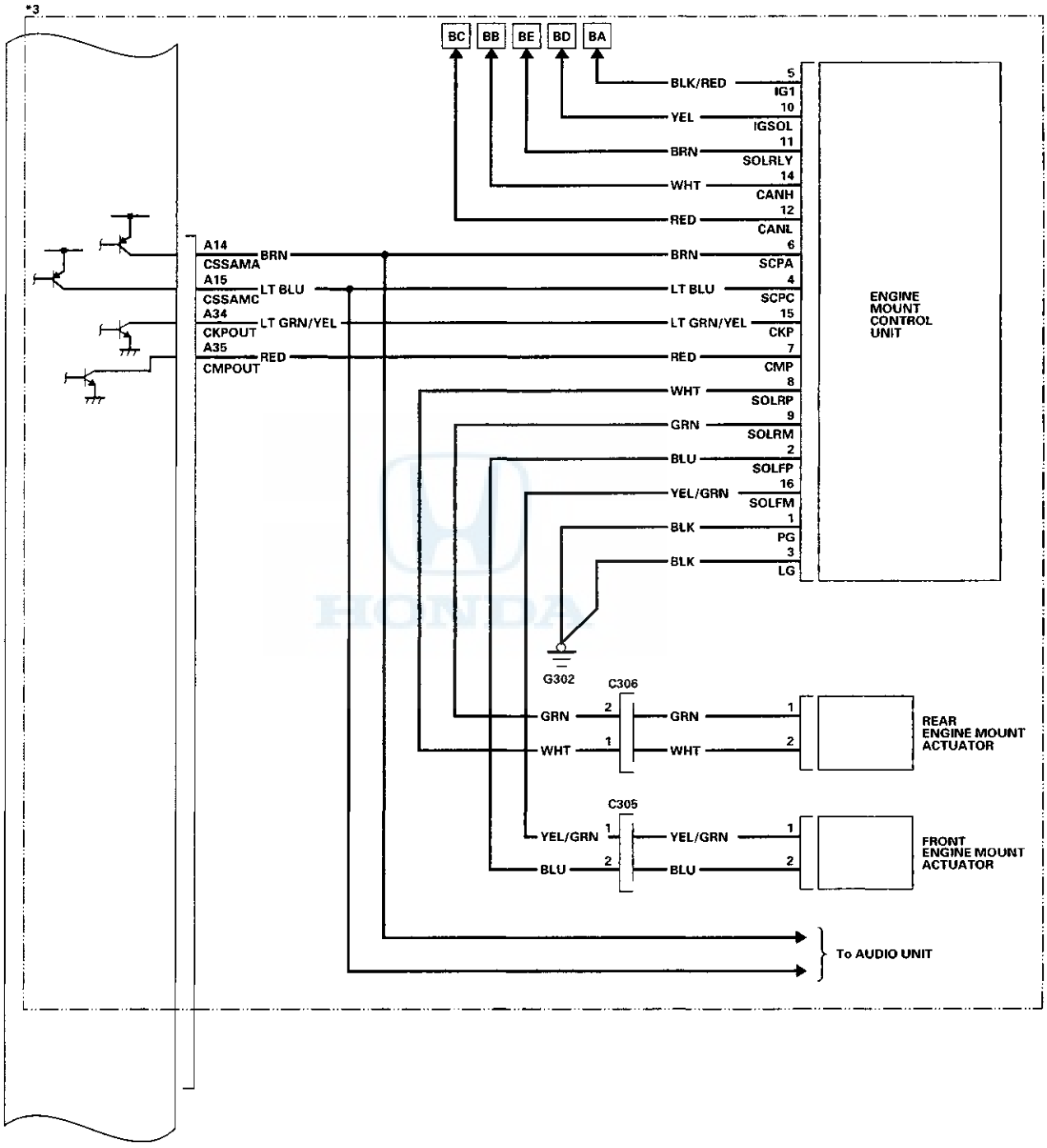

UNDER-HOOD FUSE/RELAY BOX
ELECTRONIC THROTTLE CONTROL SYSTEM (ETCS) CONTROL RELAY
A/C CONDENSER FAN RELAY
COOLING FAN CONTROL RELAY
RADIATOR FAN RELAY
IGNITION COIL RELAY
PGM-FI MAIN RELAY 1
PGM-FI SUBRELAY
A/C COMPRESSOR CLUTCH RELAY
ELD
BATTERY
A4 FANL
A5 FANH
A29 ETCSRLY
A6 MRLY
A40 SUBRLY
A13 ACC
GRN
YEL
LT GRN
WHT
YEL/BLK
RED/BLK
RED/YEL
PUR
B8
B11
B10
AU
AV
AK
AQ
L
C101
C4 IG1ETCS
YEL/GRN
BLU
YEL/BLK
WHT
U
BLK/WHT
AL
A23 VBUM
A10 ELD
BLK/RED
BLU/BLK
BLK
A1
A3
A2
AW
AX
AY
AZ
G301
G1

(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)



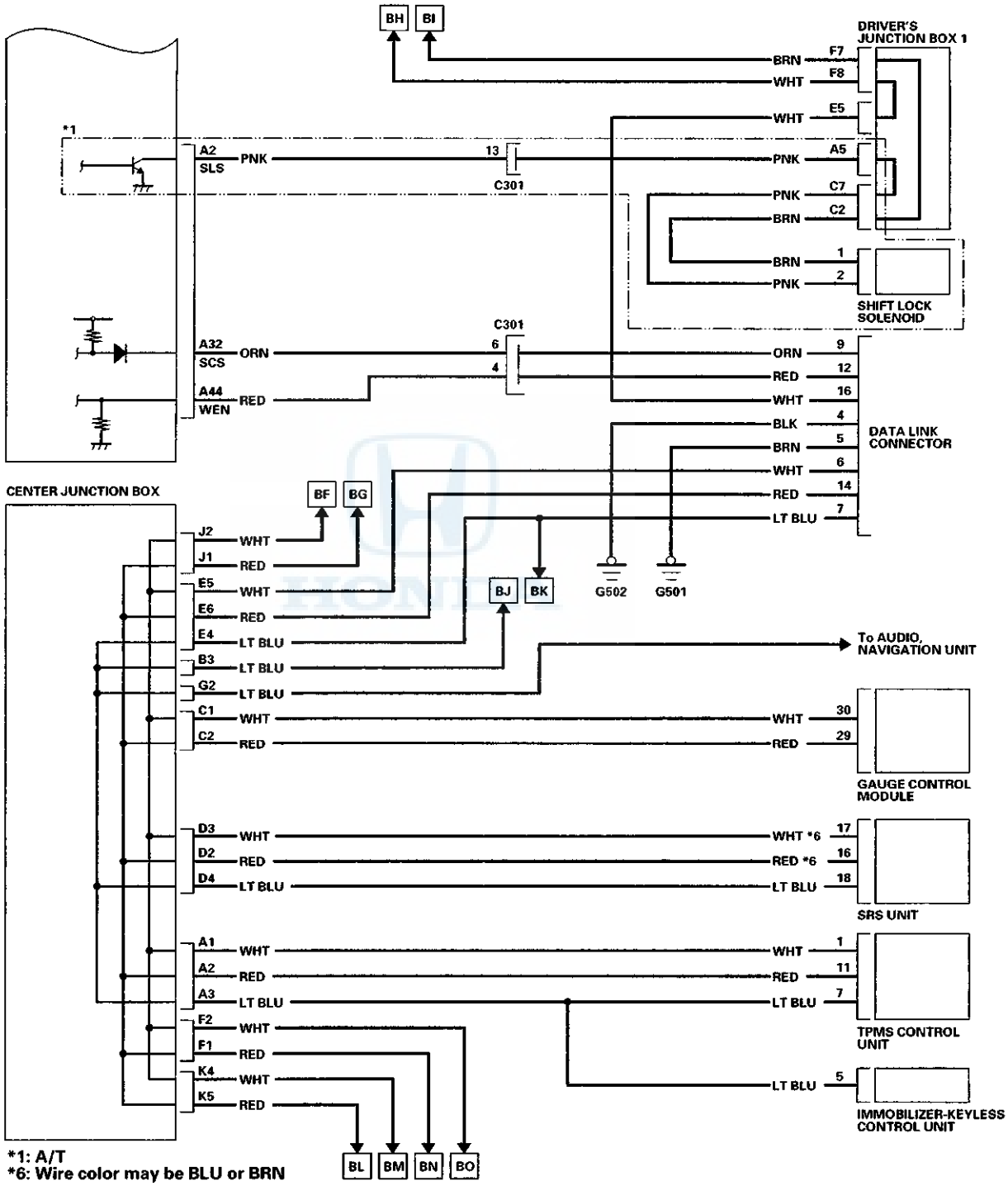


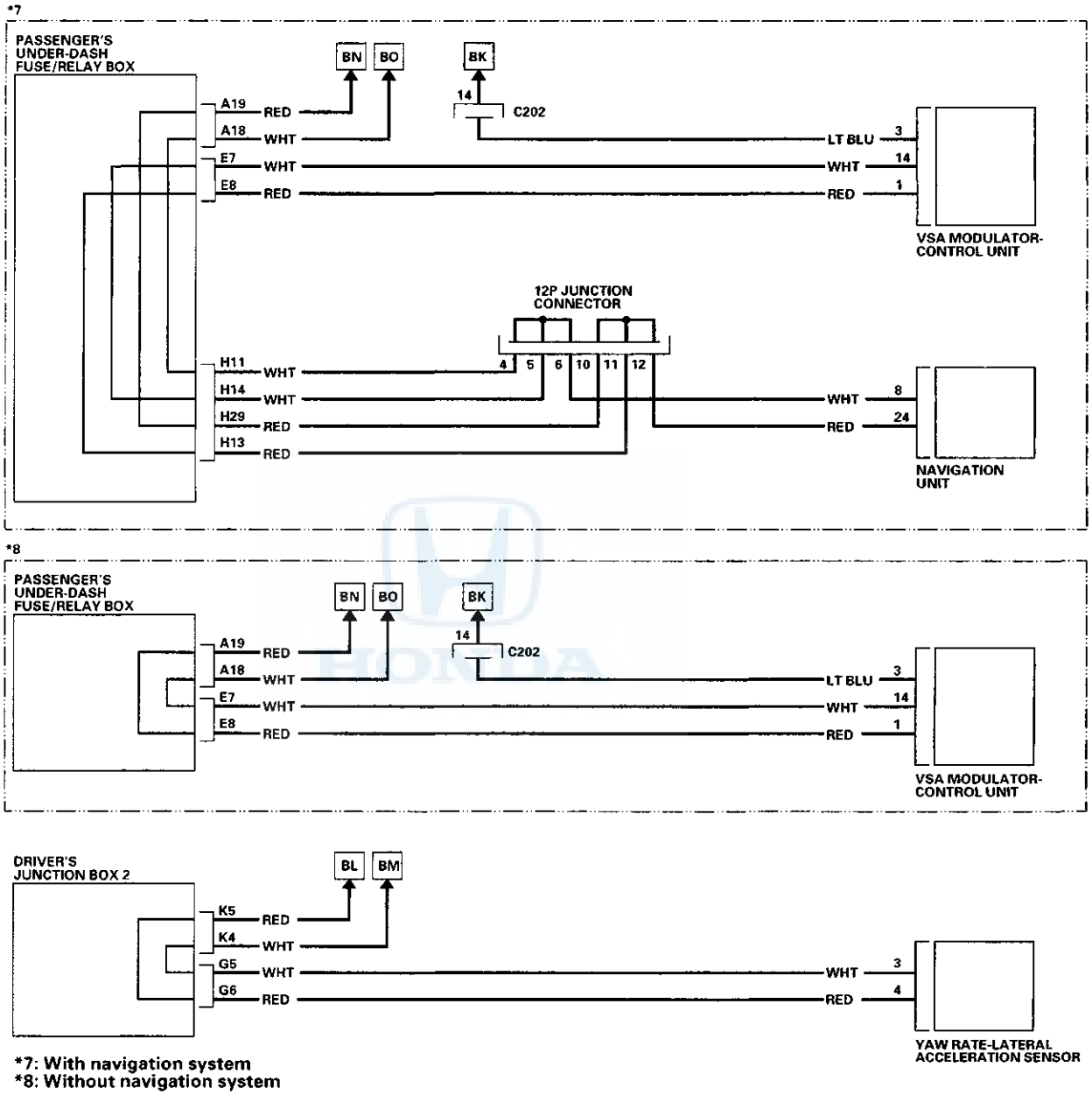
*3: J35Z2 engine

(cont'd)

System Description (cont'd)

ECM/PCM Circuit Diagram (cont'd)





*7: With navigation system
*8: Without navigation system

How to Set Readiness Codes

Malfunction Indicator Lamp (MIL) Indication (In relation to Readiness Codes)

The vehicle has certain readiness codes that are part of the on-board diagnostics for the emissions systems. If the vehicle's battery has been disconnected or gone dead, if the DTCs have been cleared, or if the ECM/PCM has been reset, these readiness codes are reset to incomplete. In some states, part of the emissions testing is to make sure these codes are set to complete. If all of them are not set to complete, the vehicle may fail the emission test, or the test cannot be finished.

To check if the readiness codes are set to complete, turn the ignition switch to ON (II), but do not start the engine. The MIL will come on for 15—20 seconds. If it then goes off, the readiness codes are set to complete. If it flashes five times, one or more readiness codes are not set to complete. To set readiness codes from incomplete to complete, do the procedure for the appropriate code.

To check the status of a specific DTC system, check the OBD status in the DTC MENU with the HDS (see page 11-8). This screen displays the code, the current data list of the enable criteria, and the status of the readiness testing.

Catalytic Converter Monitor and Readiness Code

NOTE:
- Do not turn the ignition switch to LOCK (0) during the procedure.
- All readiness codes are cleared when the battery is disconnected, if the DTCs have been cleared, or if the ECM/PCM is reset with the HDS.
- Low ambient temperatures or excessive stop-and-go traffic may increase the drive time needed to switch the readiness code from incomplete to complete.
- The readiness code will not switch to complete until all the enable criteria are met.
- If a fault in the secondary HO2S system caused the MIL to come on, the readiness code cannot be set to complete until you correct the fault.

Enable Criteria

- ECT SENSOR 1 at 158 °F (70 °C) or more.
- IAT SENSOR at 20 °F (—7 °C) or more.
- Vehicle speed above 25 mph (40 km/h).

Procedure

1. Connect the HDS to the vehicle's data link connector (DLC), and bring up the READINESS CODEs screen for Catalyst in the DTCs MENU.
2. Start the engine.
3. Test-drive the vehicle under stop-and-go conditions with short periods of steady cruise. After about 5 miles (8 km), the readiness code should switch to complete.
4. If the readiness code is still not set to complete, check for a Temporary DTC with the HDS. If there is no DTC, one or more of the enable criteria were probably not met; repeat the procedure.

Evaporative Emission (EVAP) Control System Monitor and Readiness Code

NOTE: All readiness codes are cleared when the battery is disconnected, if the DTCs have been cleared, or if the ECM/PCM is reset with the HDS.

Enable Criteria

- Battery voltage is more than 10.5 V.
- Engine at idle.
- ECT SENSOR 1 and 2 between 176 °F (80 °C) and 212 °F (100 °C).
- MAP sensor less than 46.6 kPa (14 in.Hg, 350 mmHg).
- Vehicle speed 0 mph (0 km/h).
- IAT SENSOR between 32 °F (0 °C) and 212 °F (100 °C).

Procedure

1. Connect the HDS to the DLC.
2. Start the engine.
3. Select EVAP TEST in the INSPECTION MENU with the HDS, then select the FUNCTION TEST in the EVAP TEST MENU.
   - If the result is normal, readiness is complete.
   - If the result is not normal, go to the next step.
4. Check for a Temporary DTC. If there is no DTC, one or more of the enable criteria were probably not met; repeat the procedure.

Air Fuel Ratio (A/F) Sensor Monitor and Readiness Code

NOTE:
- Do not turn the ignition switch off during the procedure.
- All readiness codes are cleared when the battery is disconnected, if the DTCs have been cleared, or if the ECM/PCM is reset with the HDS.

Enable Criteria

ECT SENSOR 1 at 140 °F (60 °C) or more.

Procedure

1. Start the engine.
2. Test-drive the vehicle under stop-and-go conditions with short periods of steady cruise. During the drive, decelerate (with the throttle fully closed) for 5 seconds. After about 3.5 miles (5.6 km), the readiness code should switch from incomplete to complete.
3. Check the readiness codes screen for the AIR FUEL RATIO (A/F) SENSOR in the DTCs MENU with the HDS.
   - If the screen shows complete, readiness is complete.
   - If the screen shows not complete, go to the next step.
4. Check for a Temporary DTC. If there is no DTC, the enable criteria was probably not met. Select the DATA LIST Menu. Check the ECT SENSOR in the ALL DATA LIST with the HDS. If the ECT is less than 140 °F (60 °C), run the engine until it is more than 140 °F (60 °C), then repeat the procedure.

(cont'd)

How to Set Readiness Codes (cont'd)

Air Fuel Ratio (A/F) Sensor Heater Monitor Readiness Code

NOTE: All readiness codes are cleared when the battery is disconnected, if the DTCs have been cleared, or if the ECM/PCM is reset with the HDS.

Procedure

1. Start the engine, and let it idle for 1 minute. The readiness code should switch from incomplete to complete.
2. If the readiness code is still not set to complete, check for a Temporary DTC. If there is no DTC, repeat the procedure.

Misfire Monitor and Readiness Code

- This readiness code is always set to available because misfiring is continuously monitored.
- Monitoring pauses, and the misfire counter resets, if the vehicle is driven over a rough road.
- Monitoring also pauses, and the misfire counter holds at its current value, if the throttle position changes more than a predetermined value, or if driving conditions fall outside the range of any related enable criteria.

Fuel System Monitor and Readiness Code

- This readiness code is always set to available because the fuel system is continuously monitored during closed loop operation.
- Monitoring pauses when the catalytic converter, EVAP control system, and A/F sensor monitors are active.
- Monitoring also pauses when any related enable criteria are not being met. Monitoring resumes when the enable criteria is again being met.

Comprehensive Component Monitor and Readiness Code

This readiness code is always set to available because the comprehensive component monitor is continuously running whenever the engine is cranking or running.

EGR Monitor and Readiness Code

NOTE:
- Do not turn the ignition switch off during the procedure.
- All readiness codes are cleared when the battery is disconnected, if the DTCs have been cleared, or if the ECM/PCM is reset with the HDS.

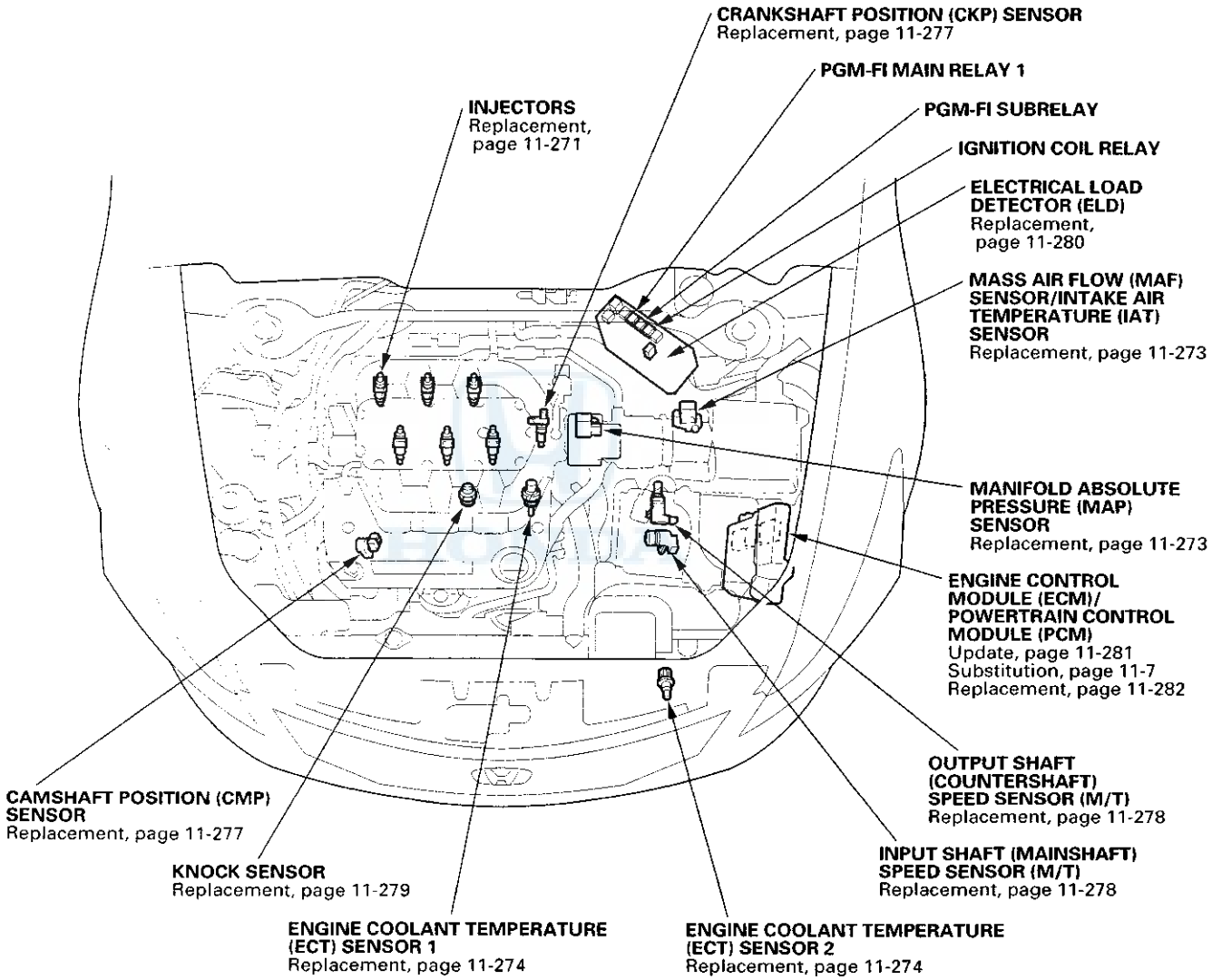
Enable Criteria

ECT SENSOR 1 at 176 °F (80 °C) or more.

Procedure

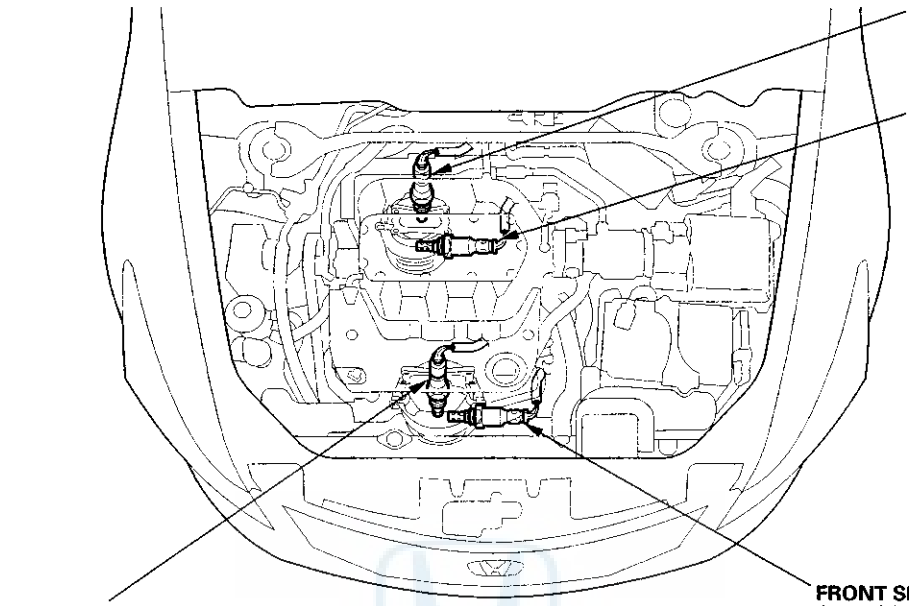
1. Connect the HDS to the DLC.
2. Start the engine.
3. Drive at a steady speed with the transmission in D position, at 50—62 mph (80—100 km/h) or above for more than 10 seconds.
4. With the transmission in D, decelerate from 62 mph (100 km/h) or above by completely releasing the throttle for at least 5 seconds. If the engine is stopped during this procedure, go to step 3 and do the procedure again.
5. Check the OBD status screen for DTC P0401 in the DTC's MENU with the HDS.
   - If it is passed, readiness is complete.
   - If it is not passed, go to step 3 and retest.

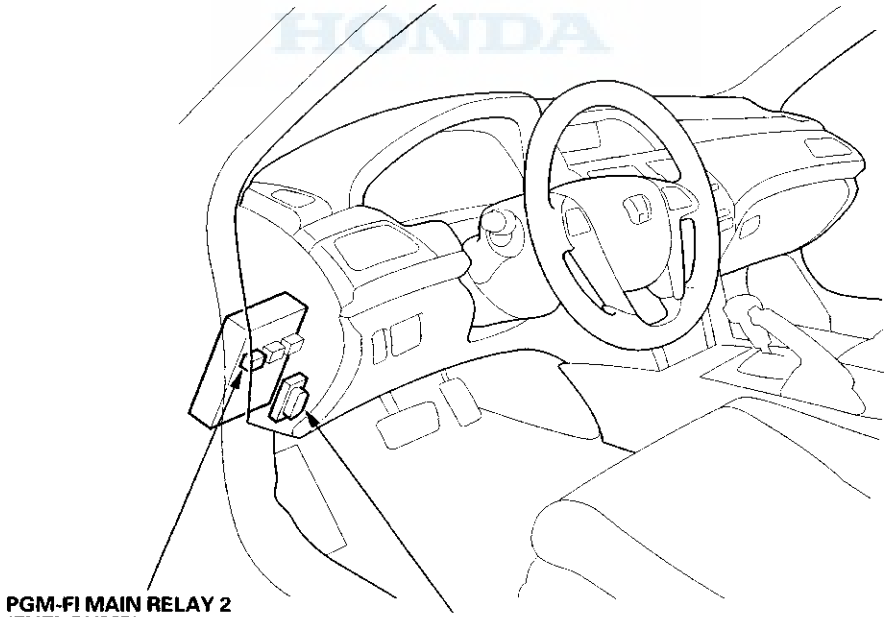
Component Location Index



(cont'd)

Component Location Index (cont'd)





DTC Troubleshooting

DTC P0101: MAF Sensor Circuit Range/ Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P1128, P1129, P2228, and/or P2229 are stored at the same time as DTC P0101, troubleshoot those DTCs first, then recheck for DTC P0101.

1. Check for poor connections or damage to these parts:

   - PCV hose
   - Intake air duct
   - Air cleaner
   - Purge (PCS) line
   - Brake booster
   - Brake booster hose

   Are the parts OK?

   YES—Go to step 2.

   NO—Repair or replace the damaged parts, then go to step 15.

2. Check for damage or looseness at the air duct in the air cleaner.

   Is it OK?

   YES—Go to step 3.

   NO—Reconnect or replace the air duct, then go to step 15.

3. Check for a dirty air cleaner element.

   Is it dirty?

   YES—Replace the air cleaner element (see page 11-437), then go to step 15.

   NO—Go to step 4.

4. Turn the ignition switch to LOCK (0).

5. Turn the ignition switch to ON (II).

6. Check the MAF SENSOR in the DATA LIST with the HDS.

   Is there about 0.2 gm/s or 0.5 V?

   YES—Go to step 7.

   NO—Go to step 13.

7. Start the engine.

8. Vary the engine speed between 2,000 and 3,000 rpm.

9. Check the MAF SENSOR in the DATA LIST with the HDS.

   Does the reading change?

   YES—Go to step 10.

   NO—Go to step 13.

10. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

11. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - MAP SENSOR
    - MAF SENSOR

12. Monitor the OBD STATUS for DTC P0101 in the DTCs MENU with the HDS.

    Does the screen indicate FAILED?

    YES—Go to step 13.

    NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. If the screen indicates NOT COMPLETED, go to step 11 and recheck.

(cont'd)

DTC Troubleshooting (cont'd)

13. Turn the ignition switch to LOCK (0).
14. Replace the MAF sensor/IAT sensor (see page 11-273).
15. Turn the ignition switch to ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see page 11-385).
18. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - ENGINE SPEED
    - VSS
    - MAP SENSOR
    - MAF SENSOR
19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0101 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM, then go to step 1.

    NO—Go to step 20.
20. Monitor the OBD STATUS for DTC P0101 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 18.

DTC P0102: MAF Sensor Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II), and wait 2 seconds.
2. Check the MAF SENSOR in the DATA LIST with the HDS.

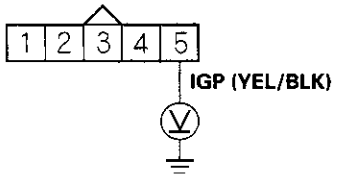
   Is about 0 gm/s, or 0.1 V or less indicated?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM.■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the MAF sensor/IAT sensor 5P connector.
5. Turn the ignition switch to ON (II).

6. Measure the voltage between MAF sensor/IAT sensor 5P connector terminal No. 5 and body ground.

MAF SENSOR/IAT SENSOR 5P CONNECTOR



Wire side of female terminals

Is there battery voltage?

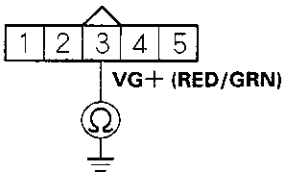
YES—Go to step 7.

NO—Repair open in the wire between PGM-FI main relay 1 and the MAF sensor/IAT sensor, then go to step 19.

7. Turn the ignition switch to LOCK (0).

8. Measure the resistance between MAF sensor/IAT sensor 5P connector terminal No. 3 and body ground.

MAF SENSOR/IAT SENSOR 5P CONNECTOR



Wire side of female terminals

Is there 190—210 kΩ ?

YES—Go to step 13.

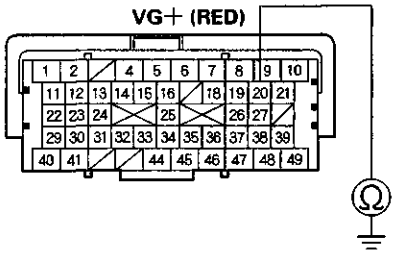
NO—Go to step 9.

9. Jump the SCS line with the HDS.

10. Disconnect ECM/PCM connector A (49P).

11. Check for continuity between ECM/PCM connector terminal A20 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

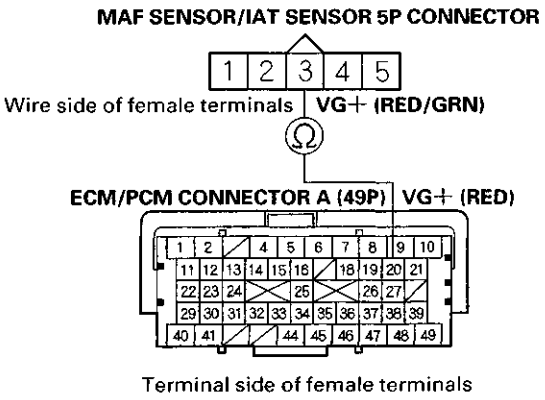
YES—Repair short in the wire between the ECM/PCM (A20) and the MAF sensor/IAT sensor, then go to step 20.

NO—Go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

12. Check for continuity between MAF sensor/IAT sensor 5P connector terminal No. 3 and ECM/PCM connector terminal A20.



Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between the ECM/PCM (A20) and the MAF sensor/IAT sensor, then go to step 20.

13. Substitute a known-good MAF sensor/IAT sensor (see page 11-273).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Clear the DTC with the HDS.
17. Start the engine. Hold the engine speed at 2,000 rpm without load (A/T in P or N, M/T in neutral).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0102 indicated?

    YES—Reinstall the original MAF sensor/IAT sensor, then go to step 26.

    NO—Replace the original MAF sensor/IAT sensor (see page 11-273), then go to step 19.
19. Turn the ignition switch to LOCK (0).
20. Reconnect all connectors.
21. Turn the ignition switch to ON (II).
22. Reset the ECM/PCM with the HDS.
23. Do the ECM/PCM idle learn procedure (see page 11-385).
24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0102 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

25. Reconnect all connectors.

26. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0102 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0103: MAF Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II), and wait 2 seconds.

2. Check the MAF SENSOR in the DATA LIST with the HDS.

   Is about 202 gm/s, or 4.89 V or more indicated?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. ■

3. Turn the ignition switch to LOCK (0).

4. Jump the SCS line with the HDS.

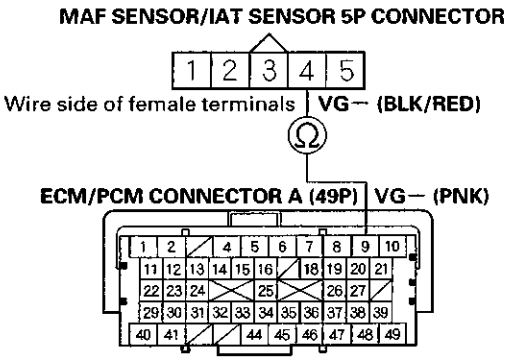
5. Disconnect the MAF sensor/IAT sensor 5P connector.

6. Disconnect ECM/PCM connector A (49P).

(cont'd)

DTC Troubleshooting (cont'd)

7. Check for continuity between MAF sensor/IAT sensor 5P connector terminal No. 4 and ECM/PCM connector terminal A9.



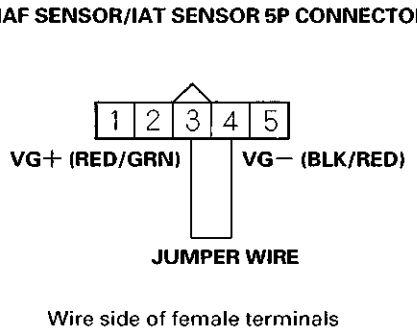
Is there continuity?

YES—Go to step 8.

NO—Repair open in the wire between the ECM/PCM (A9) and the MAF sensor/IAT sensor, then go to step 15.

8. Reconnect ECM/PCM connector A (49P).

9. Connect MAF sensor/IAT sensor 5P connector terminals No. 3 and No. 4 with a jumper wire.



10. Turn the ignition switch to ON (II).

11. Clear the DTC with the HDS.

12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0103 indicated?

    YES—Go to step 20.

    NO—Go to step 13.

13. Turn the ignition switch to LOCK (0).

14. Replace the MAF sensor/IAT sensor (see page 11-273).

15. Reconnect all connectors.

16. Turn the ignition switch to ON (II).

17. Reset the ECM/PCM with the HDS.

18. Do the ECM/PCM idle learn procedure (see page 11-385).

19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0103 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0103 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0107: MAP Sensor Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Check the MAP SENSOR in the DATA LIST with the HDS.

    Is about 3 kPa (1.0 in.Hg, 26 mmHg), or 0.23 V or less indicated?

    YES—Go to step 3.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM. ■

3. Turn the ignition switch to LOCK (0).

4. Disconnect the MAP sensor 3P connector.

5. Turn the ignition switch to ON (II).

6. Check the MAP SENSOR in the DATA LIST with the HDS.

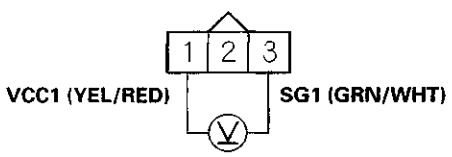
    Is about 3 kPa (1.0 in.Hg, 26 mmHg), or 0.23 V or less indicated?

    YES—Go to step 12.

    NO—Go to step 7.

7. Measure the voltage between MAP sensor 3P connector terminals No. 1 and No. 3.

MAP SENSOR 3P CONNECTOR



Wire side of female terminals

(cont'd)

DTC Troubleshooting (cont'd)

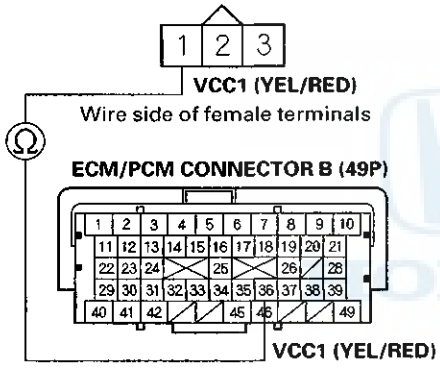
Is there about 5 V?

YES—Go to step 16.

NO—Go to step 8.

8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect ECM/PCM connector B (49P).
11. Check for continuity between ECM/PCM connector terminal B36 and MAP sensor 3P connector terminal No. 1.

MAP SENSOR 3P CONNECTOR



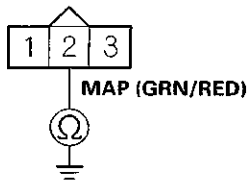
Is there continuity?

YES—Go to step 23.

NO—Repair open in the wire between the ECM/PCM (B36) and the MAP sensor, then go to step 18.

12. Turn the ignition switch to LOCK (0).
13. Jump the SCS line with the HDS.
14. Disconnect ECM/PCM connector B (49P).
15. Check for continuity between MAP sensor 3P connector terminal No. 2 and body ground.

MAP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (B35) and the MAP sensor, then go to step 18.

NO—Go to step 23.

16. Turn the ignition switch to LOCK (0).
17. Replace the MAP sensor (see page 11-273).
18. Reconnect all connectors.
19. Turn the ignition switch to ON (II).
20. Reset the ECM/PCM with the HDS.
21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0107 indicated?

    YES—Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

23. Reconnect all connectors.

24. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0107 indicated?

    YES—Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0108: MAP Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Check the MAP SENSOR in the DATA LIST with the HDS.

    Is about 160 kPa (47.1 in.Hg, 1,197 mmHg), or 4.49 V or more indicated?

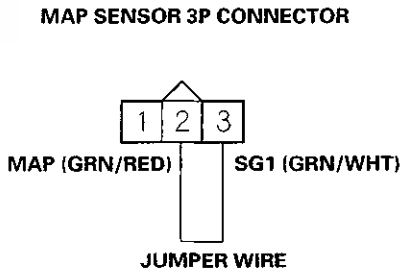
    YES—Go to step 3.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM.■

3. Turn the ignition switch to LOCK (0).

4. Disconnect the MAP sensor 3P connector.

5. Connect MAP sensor 3P connector terminals No. 2 and No. 3 with a jumper wire.



Wire side of female terminals

6. Turn the ignition switch to ON (II).

7. Check the MAP SENSOR in the DATA LIST with the HDS.

    Is about 160 kPa (47.1 in.Hg, 1,197 mmHg), or 4.49 V or more indicated?

    YES—Go to step 8.

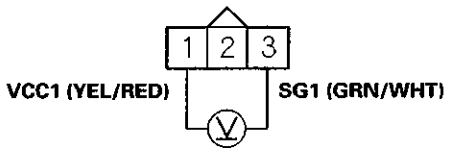
    NO—Go to step 18.

(cont'd)

DTC Troubleshooting (cont'd)

8. Remove the jumper wire from the MAP sensor 3P connector.
9. Measure the voltage between MAP sensor 3P connector terminals No. 1 and No. 3.

MAP SENSOR 3P CONNECTOR



Wire side of female terminals

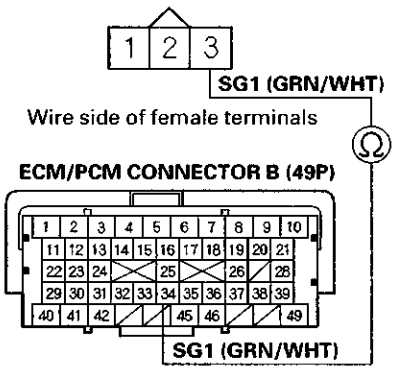
Is there about 5 V?

YES—Go to step 14.

NO—Go to step 10.

10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect ECM/PCM connector B (49P).
13. Check for continuity between ECM/PCM connector terminal B34 and MAP sensor 3P connector terminal No. 3.

MAP SENSOR 3P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 25.

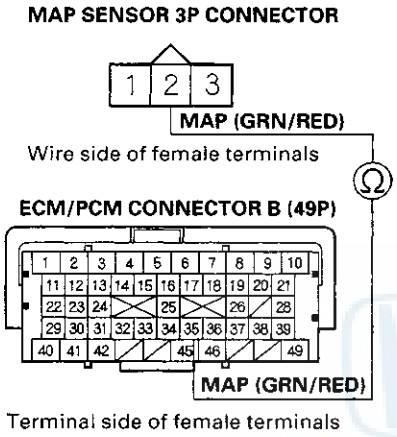
NO—Repair open in the wire between the ECM/PCM (B34) and the MAP sensor, then go to step 20.

14. Turn the ignition switch to LOCK (0).

15. Jump the SCS line with the HDS.

16. Disconnect ECM/PCM connector B (49P).

17. Check for continuity between ECM/PCM connector terminal B35 and MAP sensor 3P connector terminal No. 2.



Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between the ECM/PCM (B35) and the MAP sensor, then go to step 20.

18. Turn the ignition switch to LOCK (0).

19. Replace the MAP sensor (see page 11-273).

20. Reconnect all connectors.

21. Turn the ignition switch to ON (II).

22. Reset the ECM/PCM with the HDS.

23. Do the ECM/PCM idle learn procedure (see page 11-385).

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0108 indicated?

    YES—Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

25. Reconnect all connectors.

26. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0108 indicated?

    YES—Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0111: IAT Sensor Circuit Range/ Performance Problem

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check for poor connections or loose terminals at ECT sensors 1 and 2, and the MAF sensor/IAT sensor.

   Are the connections and terminals OK?

   YES—Go to step 2.

   NO—Repair the connections or terminals, then go to step 15.

2. Remove the MAF sensor/IAT sensor (see page 11-273).
3. Allow the MAF sensor/IAT sensor to cool to ambient temperature.
4. Note the ambient temperature.
5. Connect the MAF sensor/IAT sensor to its 5P connector, but do not install the sensor onto the air cleaner.
6. Turn the ignition switch to ON (II).
7. Note the value of the IAT SENSOR quickly in the DATA LIST with the HDS.
8. Compare the value of the IAT SENSOR to the ambient temperature.

   Does the value of the IAT SENSOR differ 5.4 °F (3 °C) or more?

   YES—Go to step 13.

   NO—Go to step 9.

9. Disconnect the MAF sensor/IAT sensor from its 5P connector.
10. Using a heat gun, blow hot air on the MAF sensor/ IAT sensor for a few seconds. Do not apply the heat longer than a few seconds or you will damage the sensor.
11. Connect the MAF sensor/IAT sensor to its 5P connector, but do not install the sensor onto the air cleaner.
12. Check the IAT SENSOR in the DATA LIST with the HDS.

    Does the IAT SENSOR change 68 °F (38 °C) or more?

    YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. ■

    NO—Go to step 13.

13. Turn the ignition switch to LOCK (0).
14. Replace the MAF sensor/IAT sensor (see page 11-273).
15. Turn the ignition switch to ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0111 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0112: IAT Sensor Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check the IAT SENSOR in the DATA LIST with the HDS.

   Is about 356 °F (180 °C) or more, or 0.08 V or less indicated?

   YES—Go to step 3.

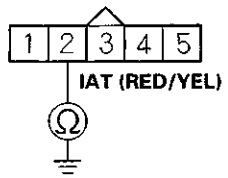
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the MAF sensor/IAT sensor 5P connector.
5. Turn the ignition switch to ON (II).
6. Check the IAT SENSOR in the DATA LIST with the HDS.

   Is about 356 °F (180 °C) or more, or 0.08 V or less indicated?

   YES—Go to step 7.

   NO—Go to step 11.
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector C (49P).
10. Check for continuity between MAF sensor/IAT sensor 5P connector terminal No. 2 and body ground.

MAF SENSOR/IAT SENSOR 5P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the MAF sensor/IAT sensor and the ECM/PCM (C24), then go to step 13.

NO—Go to step 18.

11. Turn the ignition switch to LOCK (0).
12. Replace the MAF sensor/IAT sensor (see page 11-273).
13. Reconnect all connectors.
14. Turn the ignition switch to ON (II).
15. Reset the ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see page 11-385).
17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0112 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

(cont'd)

DTC Troubleshooting (cont'd)

18. Reconnect all connectors.
19. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0112 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0113: IAT Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

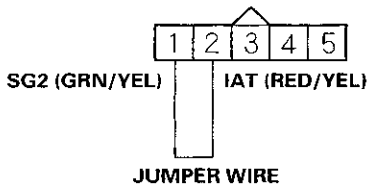
1. Turn the ignition switch to ON (II).
2. Check the IAT SENSOR in the DATA LIST with the HDS.

    Is about −40 °F (−40 °C) or less, or 4.92 V or more indicated?

    YES—Go to step 3.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the MAF sensor/IAT sensor 5P connector.
5. Connect MAF sensor/IAT sensor 5P connector terminals No. 1 and No. 2 with a jumper wire.

MAF SENSOR/IAT SENSOR 5P CONNECTOR



Wire side of female terminals

6. Turn the ignition switch to ON (II).

7. Check the IAT SENSOR in the DATA LIST with the HDS.

   Is about −40 °F (−40 °C) or less, or 4.92 V or more indicated?

   YES—Go to step 8.

   NO—Go to step 20.

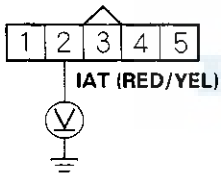
8. Turn the ignition switch to LOCK (0).

9. Remove the jumper wire from the MAF sensor/IAT sensor 5P connector.

10. Turn the ignition switch to ON (II).

11. Measure the voltage between MAF sensor/IAT sensor 5P connector terminal No. 2 and body ground.

MAF SENSOR/IAT SENSOR 5P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 12.

NO—Go to step 16.

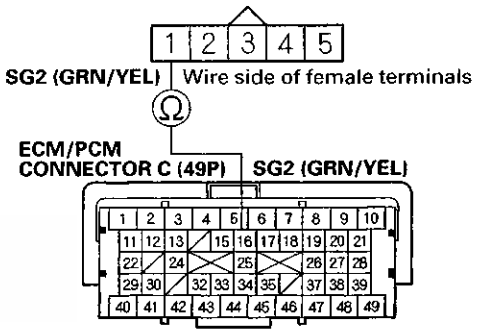
12. Turn the ignition switch to LOCK (0).

13. Jump the SCS line with the HDS.

14. Disconnect ECM/PCM connector C (49P).

15. Check for continuity between ECM/PCM connector terminal C16 and MAF sensor/IAT sensor 5P connector terminal No. 1.

MAF SENSOR/IAT SENSOR 5P CONNECTOR



Terminal side of female terminals

Is there continuity?

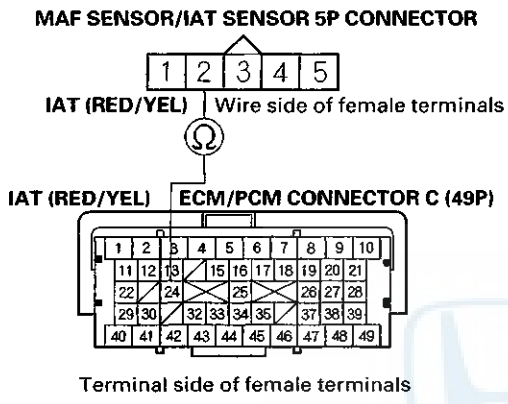
YES—Go to step 27.

NO—Repair open in the wire between the ECM/PCM (C16) and the MAF sensor/IAT sensor, then go to step 22.

(cont'd)

DTC Troubleshooting (cont'd)

16. Turn the ignition switch to LOCK (0).
17. Jump the SCS line with the HDS.
18. Disconnect ECM/PCM connector C (49P).
19. Check for continuity between ECM/PCM connector terminal C24 and MAF sensor/IAT sensor 5P connector terminal No. 2.



Is there continuity?

YES—Go to step 27.

NO—Repair open in the wire between the ECM/PCM (C24) and the MAF sensor/IAT sensor, then go to step 22.

20. Turn the ignition switch to LOCK (0).
21. Replace the MAF sensor/IAT sensor (see page 11-273).
22. Reconnect all connectors.
23. Turn the ignition switch to ON (II).
24. Reset the ECM/PCM with the HDS.
25. Do the ECM/PCM idle learn procedure (see page 11-385).
26. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0113 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
27. Reconnect all connectors.
28. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0113 indicated?

    YES—Check for poor connections or loose terminals at the MAF sensor/IAT sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0116: ECT Sensor 1 Circuit Range/ Performance Problem

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check ECT SENSOR 1 in the DATA LIST with the HDS.

   Is about 176 °F (80 °C) or more, or 0.78 V or less indicated?

   YES—Go to step 6.

   NO—Go to step 3.
3. Note the value of ECT SENSOR 1 in the DATA LIST with the HDS.
4. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
5. Check ECT SENSOR 1 in the DATA LIST with the HDS.

   Does ECT SENSOR 1 change 18 °F (10 °C) or more?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM. ■

   NO—Go to step 11.
6. Note the value of ECT SENSOR 1 in the DATA LIST with the HDS.
7. Turn the ignition switch to LOCK (0).
8. Open the hood, and let the engine cool for 3 hours.
9. Turn the ignition switch to ON (II).
10. Check ECT SENSOR 1 in the DATA LIST with the HDS.

    Does ECT SENSOR 1 change 18 °F (10 °C) or more?

    YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM. ■

    NO—Go to step 11.
11. Turn the ignition switch to LOCK (0).
12. Replace ECT sensor 1 (see page 11-274).
13. Turn the ignition switch to ON (II).
14. Reset the ECM/PCM with the HDS.
15. Do the ECM/PCM idle learn procedure (see page 11-385).
16. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0116 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0117: ECT Sensor 1 Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check ECT SENSOR 1 in the DATA LIST with the HDS.

   Is about 356 °F (180 °C) or more, or 0.08 V or less indicated?

   YES—Go to step 3.

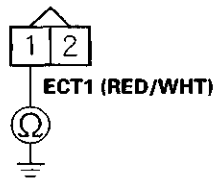
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the ECT sensor 1 2P connector.
5. Turn the ignition switch to ON (II).
6. Check ECT SENSOR 1 in the DATA LIST with the HDS.

   Is about 356 °F (180 °C) or more, or 0.08 V or less indicated?

   YES—Go to step 7.

   NO—Go to step 11.
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector C (49P).
10. Check for continuity between ECT sensor 1 2P connector terminal No. 1 and body ground.

ECT SENSOR 1 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between ECT sensor 1 and the ECM/PCM (C32), then go to step 13.

NO—Go to step 18.

11. Turn the ignition switch to LOCK (0).
12. Replace ECT sensor 1 (see page 11-274).
13. Reconnect all connectors.
14. Turn the ignition switch to ON (II).
15. Reset the ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see page 11-385).

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0117 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

18. Reconnect all connectors.

19. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0117 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0118: ECT Sensor 1 Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Check ECT SENSOR 1 in the DATA LIST with the HDS.

    Is about −40 °F (−40 °C) or less, or 4.92 V or more indicated?

    YES—Go to step 3.

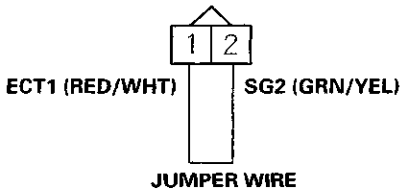
    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM.■

3. Turn the ignition switch to LOCK (0).

4. Disconnect the ECT sensor 1 2P connector.

5. Connect ECT sensor 1 2P connector terminals No. 1 and No. 2 with a jumper wire.

ECT SENSOR 1 2P CONNECTOR



Wire side of female terminals

6. Turn the ignition switch to ON (II).

7. Check ECT SENSOR 1 in the DATA LIST with the HDS.

    Is about −40 °F (−40 °C) or less, or 4.92 V or more indicated?

    YES—Go to step 8.

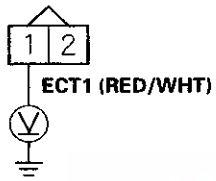
    NO—Go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

8. Turn the ignition switch to LOCK (0).
9. Remove the jumper wire from the ECT sensor 1 2P connector.
10. Turn the ignition switch to ON (II).
11. Measure the voltage between ECT sensor 1 2P connector terminal No. 1 and body ground.

ECT SENSOR 1 2P CONNECTOR



Wire side of female terminals

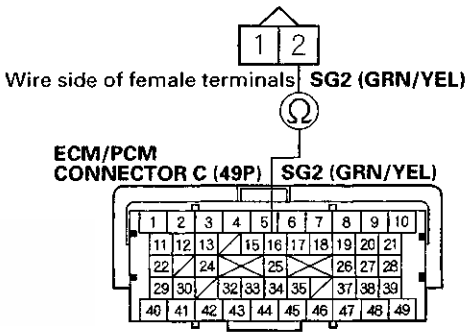
Is there about 5 V?

YES—Go to step 12.

NO—Go to step 16.

12. Turn the ignition switch to LOCK (0).
13. Jump the SCS line with the HDS.
14. Disconnect ECM/PCM connector C (49P).
15. Check for continuity between ECM/PCM connector terminal C16 and ECT sensor 1 2P connector terminal No. 2.

ECT SENSOR 1 2P CONNECTOR



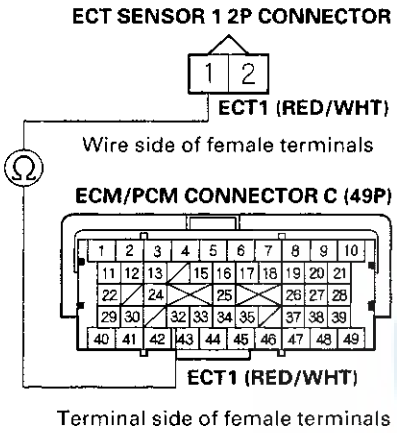
Terminal side of female terminals

Is there continuity?

YES—Go to step 27.

NO—Repair open in the wire between the ECM/PCM (C16) and ECT sensor 1, then go to step 22.

16. Turn the ignition switch to LOCK (0).
17. Jump the SCS line with the HDS.
18. Disconnect ECM/PCM connector C (49P).
19. Check for continuity between ECM/PCM connector terminal C32 and ECT sensor 1 2P connector terminal No. 1.



Is there continuity?

YES—Go to step 27.

NO—Repair open in the wire between the ECM/PCM (C32) and ECT sensor 1, then go to step 22.

20. Turn the ignition switch to LOCK (0).
21. Replace ECT sensor 1 (see page 11-274).
22. Reconnect all connectors.
23. Turn the ignition switch to ON (II).
24. Reset the ECM/PCM with the HDS.
25. Do the ECM/PCM idle learn procedure (see page 11-385).
26. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0118 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■
27. Reconnect all connectors.
28. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0118 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1 and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0125: ECT Sensor 1 Malfunction/Slow Response

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Start the engine, and let it idle for 5 minutes or more.
2. Check ECT SENSOR 1 in the DATA LIST with the HDS.

   Is about 0 °F (−18 °C) or less indicated?

   YES—Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. If they are OK, replace ECT sensor 1 (see page 11-274), then go to step 8.

   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Allow the engine to cool to 104 °F (40 °C) or less.
5. Make sure the temperature difference between ECT SENSOR 1 and ECT SENSOR 2 is about 50 °F (10 °C) in the DATA LIST with the HDS.
6. Start the engine, and let it idle until ECT SENSOR 1 goes up to about 158 °F (70 °C).

   Does ECT sensor 2 also show about 158 °F (70 °C)?

   YES—Go to step 7.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. ■
7. Check the thermostat (see page 10-4).

   Is the thermostat OK?

   YES—Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. If they are OK, replace ECT sensor 1 (see page 11-274), then go to step 8.

   NO—Replace the thermostat (see page 10-9), then go to step 8.
8. Turn the ignition switch to LOCK (0).
9. Allow the engine to cool to 104 °F (40 °C) or less.
10. Make sure the temperature difference between ECT SENSOR 1 and ECT SENSOR 2 is about 50 °F (10 °C) in the DATA LIST with the HDS.
11. Start the engine, and let it idle until ECT SENSOR 1 goes up to about 158 °F (70 °C).

    Does ECT sensor 2 also show about 158 °F (70 °C)?

    YES—Go to step 1 and recheck.

    NO—Troubleshooting is complete. ■

DTC P0128: Cooling System Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Make sure the blower switch is OFF.
4. Check the FAN CTRL in the DATA LIST with the HDS.

   Is it OFF?

   YES—Go to step 5.

   NO—Wait until the FAN CTRL is off, then go to step 5.
5. Check the radiator fan operation.

   Does the radiator fan keep running?

   YES—Check the radiator fan high speed circuit (see page 10-20), and the radiator fan relay (see page 22-38). If the circuits and the relay are OK, go to step 19.

   NO—Go to step 6.
6. Let the engine cool until the coolant temperature is 104 °F (40 °C) or less.
7. Note the value of ECT SENSOR 1 and ECT SENSOR 2 in the DATA LIST with the HDS.
8. Start the engine, and let it idle.
9. Let the engine idle until ECT SENSOR 1 goes up 34 °F (19 °C) or more from the recorded temperature.
10. Check ECT SENSOR 2 in the DATA LIST with the HDS.
11. Compare the recorded value of ECT SENSOR 2 and the present value of ECT SENSOR 2.

    Did the temperature rise 9 °F (5 °C) or more?

    YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. ■

    NO—Test the thermostat (see page 10-4), then go to step 12.
12. Turn the ignition switch to ON (II).
13. Reset the ECM/PCM with the HDS.
14. Let the engine cool until the coolant temperature is between 21 °F (−6 °C) and 104 °F (40 °C).
15. Do the ECM/PCM idle learn procedure (see page 11-385).
16. Test-drive at a steady speed between 15—75 mph (24—120 km/h) for 10 minutes.
17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0128 indicated?

    YES—Check the cooling the system, then go to step 19.

    NO—Go to step 18.
18. Monitor the OBD STATUS for DTC P0128 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check the cooling the system, then go to step 19. If the screen indicates NOT COMPLETED, go to step 14.

(cont'd)

DTC Troubleshooting (cont'd)

19. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

20. Let the engine cool until the coolant temperature is between 21 °F (−6 °C) and 104 °F (40 °C).

21. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

22. Test-drive at a steady speed between 15—75 mph (24—120 km/h) for 10 minutes.

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0128 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 20. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 24.

24. Monitor the OBD STATUS for DTC P0128 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 20. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 20.

DTC P0133: Rear A/F Sensor (Bank 1, Sensor 1) Malfunction/Slow Response

DTC P0153: Front A/F Sensor (Bank 2, Sensor 1) Malfunction/Slow Response

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P0139 and/or P0159' is stored at the same time as DTC P0133 and/or P0153', troubleshoot DTC P0139 and/or P0159' first, then recheck for DTC P0133 and/or P0153'.
- Information marked with an asterisk (') applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

4. Test-drive under these conditions:

   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 5th
   - Engine speed between 1,250—2,500 rpm
   - Drive the vehicle at 25 mph (40 km/h) or less for 5 minutes, then drive at a steady speed about 35 mph (57 km/h) or more

5. Monitor the OBD STATUS for DTC P0133 and/or P0153' in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 6.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 3 and recheck.

6. Turn the ignition switch to LOCK (0).

7. Replace the A/F sensor (Sensor 1) (see page 11-275).

8. Turn the ignition switch to ON (II).

9. Reset the ECM/PCM with the HDS.

10. Do the ECM/PCM idle learn procedure (see page 11-385).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

12. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 5th
    - Engine speed between 1,250—2,500 rpm
    - Drive the vehicle at 25 mph (40 km/h) or less for 5 minutes, then drive at a steady speed about 35 mph (57 km/h) or more

13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0133 and/or P0153 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

    NO—Go to step 14.

14. Monitor the OBD STATUS for DTC P0133 and/or P0153* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 11.

DTC P0134: Rear A/F Sensor (Bank 1, Sensor 1) Heater System Malfunction

DTC P0154: Front A/F Sensor (Bank 2, Sensor 1) Heater System Malfunction

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P2251 and/or P2254* is stored at the same time as DTC P0134 and/or P0154*, troubleshoot DTC P2251 and/or P2254* first, then recheck for P0134 and/or P0154*.
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) for at least 1 minute.

4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0134 and/or P0154 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM. ■

5. Turn the ignition switch to LOCK (0).

6. Jump the SCS line with the HDS.

7. Disconnect the A/F sensor (Sensor 1) 6P connector.

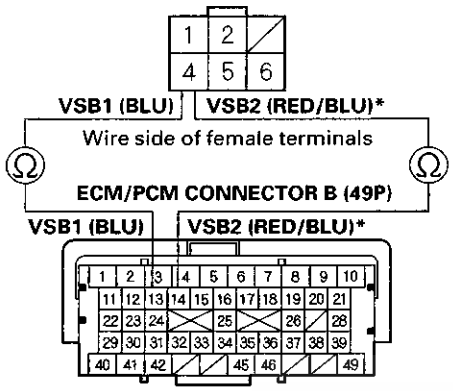
8. Disconnect ECM/PCM connector B (49P).

(cont'd)

DTC Troubleshooting (cont'd)

9. Check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 4 and ECM/PCM connector terminal B13 (B14)*.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Terminal side of female terminals

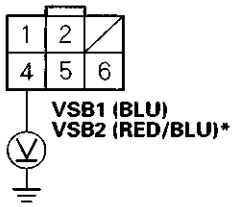
Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between the ECM/PCM (B13 (B14)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect ECM/PCM connector B (49P).
11. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) for at least 1 minute.
12. Measure the voltage between A/F sensor (Sensor 1) 6P connector terminal No. 4 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0134 and/or P0154 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P0134 and/or P0154* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) for at least 1 minute.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0134 and/or P0154 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P0134 and/or P0154* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P0134: Rear A/F Sensor (Bank 1, Sensor 1) Heater System Malfunction

DTC P0154: Front A/F Sensor (Bank 2, Sensor 1) Heater System Malfunction

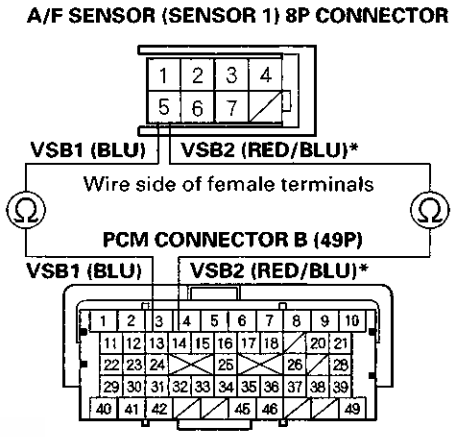
NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P2251 and/or P2254 * is stored at the same time as DTC P0134 and/or P0154*, troubleshoot DTC P2251 and/or P2254* first, then recheck for P0134 and/or P0154*.
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle without load (in P or N) for at least 1 minute.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0134 and/or P0154 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (49P).
9. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 5 and PCM connector terminal B13 (B14)*.



Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

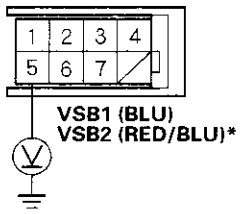
NO—Repair open in the wire between the PCM (B13 (B14)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect PCM connector B (49P).

11. Start the engine, and let it idle without load (in P or N) for at least 1 minute.

12. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 5 and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the PCM with the HDS.

17. Do the PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0134 and/or P0154 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM, then go to step 1.

NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P0134 and/or P0154* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

(cont'd)

DTC Troubleshooting (cont'd)

22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

23. Start the engine, and let it idle without load (in P or N) for at least 1 minute.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0134 and/or P0154 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P0134 and/or P0154* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P0135: Rear A/F Sensor (Bank 1, Sensor 1) Heater Circuit Malfunction

DTC P0155: Front A/F Sensor (Bank 2, Sensor 1) Heater Circuit Malfunction

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine.

4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0135 and/or P0155 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the systems is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM.■

5. Turn the ignition switch to LOCK (0).

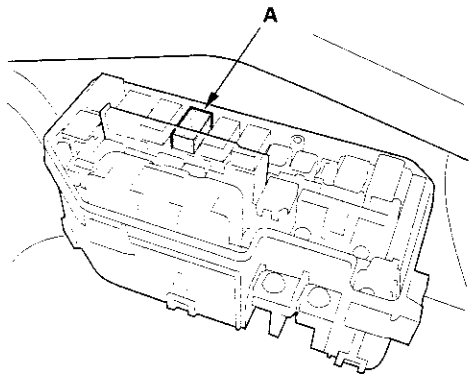
6. Check the No. 14 FI SUB (15 A) fuse in the under-hood fuse/relay box.

   Is the fuse OK?

   YES—Go to step 7.

   NO—Go to step 20.

7. Remove the PGM-FI subrelay (A) from the underhood fuse/relay box.



8. Test the PGM-FI subrelay (see page 22-38).

   Is the relay OK?

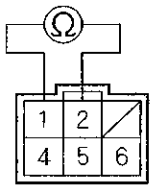
   YES—Go to step 9.

   NO—Replace the PGM-FI subrelay, then go to step 26.

9. Disconnect the A/F sensor (Sensor 1) 6P connector.

10. At the sensor side, measure the resistance between A/F sensor (Sensor 1) 6P connector terminals No. 1 and No. 2.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Terminal side of male terminals

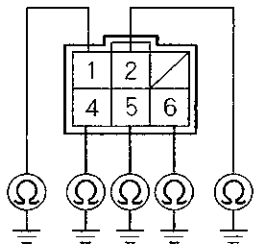
Is there 2.5—4.0 Ω at the room temperature?

YES—Go to step 11.

NO—Go to step 25.

11. At the sensor side, check for continuity between each terminals at the A/F sensor (Sensor 1) 6P connector and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Terminal side of male terminals

Is there continuity to ground on any line?

YES—Go to step 25.

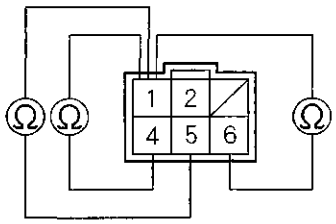
NO—Go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

12. At the sensor side, check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 1 and each of the other terminals in the connectors individually.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Terminal side of male terminals

Is there continuity?

YES—Go to step 25.

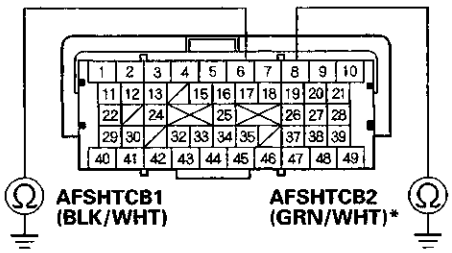
NO—Go to step 13.

13. Jump the SCS line with the HDS.

14. Disconnect ECM/PCM connector C (49P).

15. Check for continuity between ECM/PCM connector terminal C6 (C8)* and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

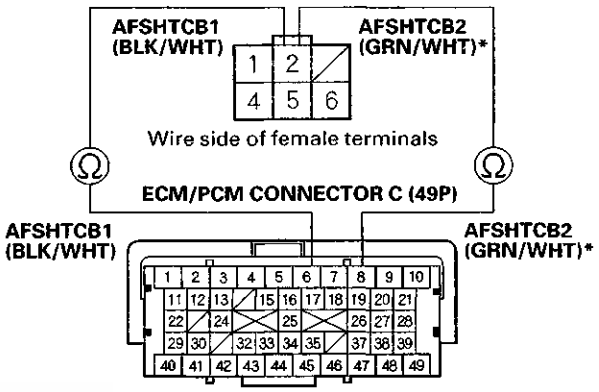
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C6 (C8)*) and the A/F sensor (Sensor 1), then go to step 26.

NO—Go to step 16.

16. Check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 2 and ECM/PCM connector C6 (C8)*.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



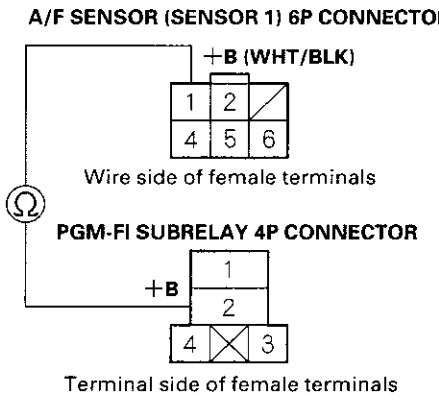
Terminal side of female terminals

Is there continuity?

YES—Go to step 17.

NO—Repair open in the wire between the ECM/PCM (C6 (C8)*) and the A/F sensor (Sensor 1), then go to step 26.

17. Check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 1 and PGM-FI subrelay 4P connector terminal No. 2.



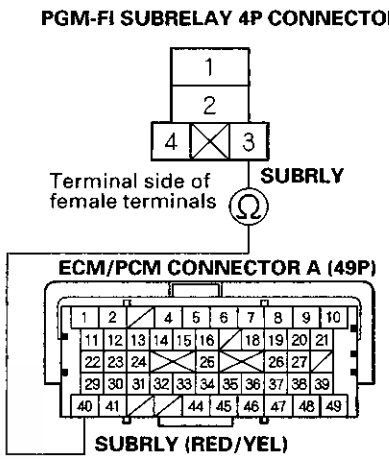
Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the A/F sensor (Sensor 1) and the PGM-FI subrelay, then go to step 26.

18. Disconnect ECM/PCM connector A (49P).

19. Check for continuity between PGM-FI subrelay 4P connector terminal No. 3 and ECM/PCM connector terminal A40.



Is there continuity?

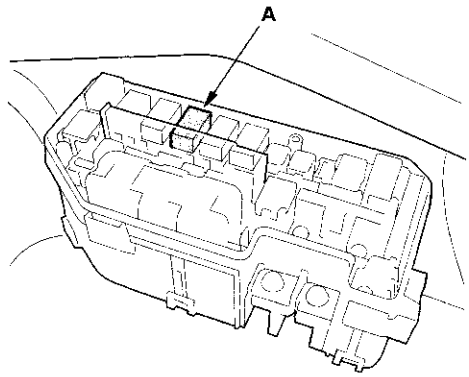
YES—Go to step 32.

NO—Repair open in the wire between the PGM-FI subrelay, and the ECM/PCM (A40), then go to step 26.

(cont'd)

DTC Troubleshooting (cont'd)

20. Remove the PGM-FI subrelay (A) from the under-hood fuse/relay box.



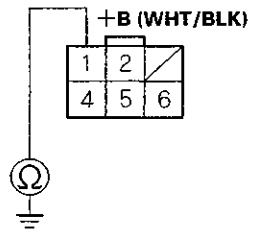
21. Disconnect the front and rear A/F sensor (Sensor 1) 6P connectors.

22. Disconnect the front and rear secondary HO2S (Sensor 2) 4P connectors.

23. Disconnect the EVAP canister vent shut valve 2P connector.

24. Check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 1 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the PGM-FI subrelay and the A/F sensor (Sensor 1), then go to step 26.

NO—Check the under-hood fuse/relay box, and replace it if needed, refer to the 2008-2009 Accord Service Manual (see page 22-83). Also replace the No. 14 FI SUB (15 A) fuse, then go to step 26.

25. Replace the A/F sensor (Sensor 1) (see page 11-275).

26. Reconnect all connectors.

27. Turn the ignition switch to ON (II).

28. Reset the ECM/PCM with the HDS.

29. Do the ECM/PCM idle learn procedure (see page 11-385).

30. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0135 and/or P0155 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM, then go to step 1.

NO—Go to step 31.

31. Monitor the OBD STATUS for DTC P0135 and/or P0155* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

32. Reconnect all connectors.

33. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

34. Start the engine, and let it idle.

35. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0135 and/or P0155' indicated?

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 36.

36. Monitor the OBD STATUS for DTC P0135 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 35, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P0135: Rear A/F Sensor (Bank 1, Sensor 1) Heater Circuit Malfunction

DTC P0155: Front A/F Sensor (Bank 2, Sensor 1) Heater Circuit Malfunction

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (') applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine.

4. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0135 and/or P0155' indicated?

    YES—Go to step 5.

    NO—Intermittent failure, the systems is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM.■

5. Turn the ignition switch to LOCK (0).

6. Check the No. 14 FI SUB (15 A) fuse in the under-hood fuse/relay box.

    Is the fuse OK?

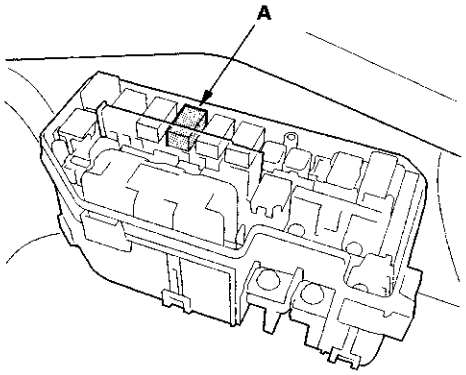
    YES—Go to step 7.

    NO—Go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

7. Remove the PGM-FI subrelay (A) from the underhood fuse/relay box.



8. Test the PGM-FI subrelay (see page 22-38).

Is the relay OK?

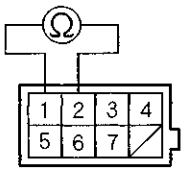
YES—Go to step 9.

NO—Replace the PGM-FI subrelay, then go to step 26.

9. Disconnect the A/F sensor (Sensor 1) 8P connector.

10. At the sensor side, measure the resistance between A/F sensor (Sensor 1) 8P connector terminals No. 1 and No. 2.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of male terminals

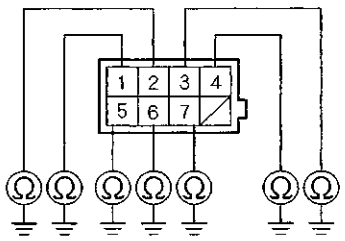
Is there 2.5—4.0 Ω at the room temperature?

YES—Go to step 11.

NO—Go to step 25.

11. At the sensor side, check for continuity between each terminals at the A/F sensor (Sensor 1) 8P connector and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of male terminals

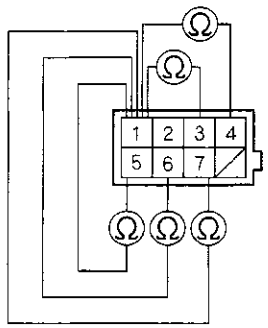
Is there continuity?

YES—Go to step 25.

NO—Go to step 12.

12. At the sensor side, check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. **1** and each of the other terminals in the connectors individually.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of male terminals

Is there continuity?

YES—Go to step 25.

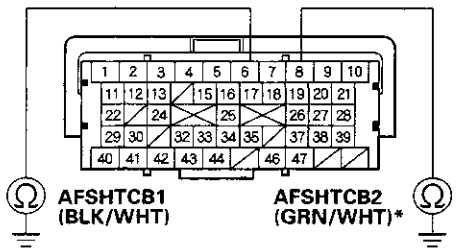
NO—Go to step 13.

13. Jump the SCS line with the HDS.

14. Disconnect PCM connector C (49P).

15. Check for continuity between PCM connector terminal C6 (C8)* and body ground.

PCM CONNECTOR C (49P)



Terminal side of female terminals

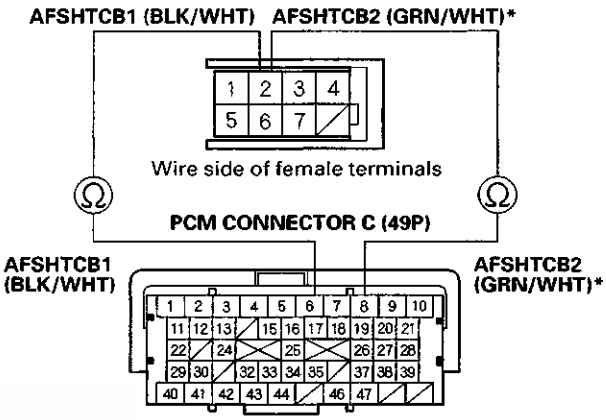
Is there continuity?

YES—Repair short in the wire between the PCM (C6 (C8)*) and the A/F sensor (Sensor 1), then go to step 26.

NO—Go to step 16.

16. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 2 and PCM connector C6 (C8)*.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of female terminals

Is there continuity?

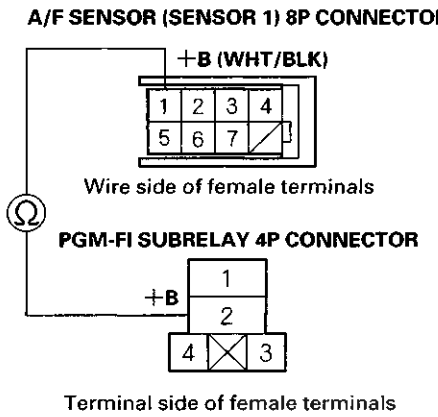
YES—Go to step 17.

NO—Repair open in the wire between the PCM (C6 (C8)*) and the A/F sensor (Sensor 1), then go to step 26.

(cont'd)

DTC Troubleshooting (cont'd)

17. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 1 and PGM-FI subrelay 4P connector terminal No. 2.



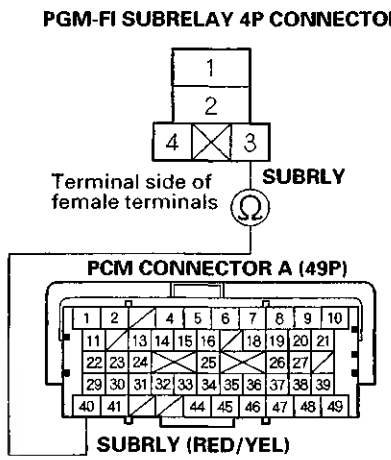
Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the A/F sensor (Sensor 1) and the PGM-FI subrelay, then go to step 26.

18. Disconnect PCM connector A (49P).

19. Check for continuity between PGM-FI subrelay 4P connector terminal No. 3 and PCM connector terminal A40.

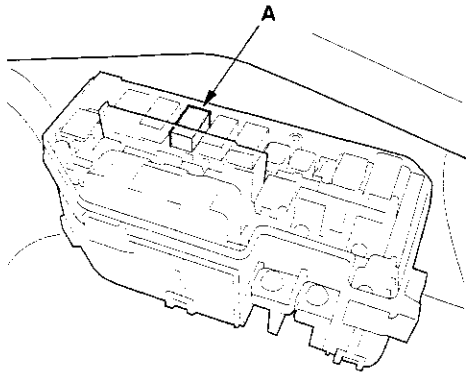


Is there continuity?

YES—Go to step 32.

NO—Repair open in the wire between the PGM-FI subrelay, and the PCM (A40), then go to step 26.

20. Remove the PGM-FI subrelay (A) from the under-hood fuse/relay box.



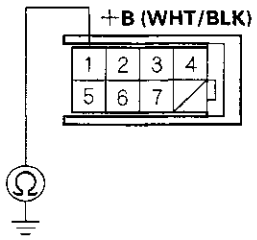
21. Disconnect the front and rear A/F sensor (Sensor 1) 8P connectors.

22. Disconnect the front and rear secondary HO2S (Sensor 2) 4P connectors.

23. Disconnect the EVAP canister vent shut valve 2P connector.

24. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 1 and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the PGM-FI subrelay and the A/F sensor (Sensor 1), then go to step 26.

NO—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). Also replace the No. 14 FI SUB (15 A) fuse, then go to step 26.

25. Replace the A/F sensor (Sensor 1) (see page 11-275).

26. Reconnect all connectors.

27. Turn the ignition switch to ON (II).

28. Reset the PCM with the HDS.

29. Do the PCM idle learn procedure (see page 11-385).

30. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0135 and/or P0155' indicated?

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM, then go to step 1.

NO—Go to step 31.

31. Monitor the OBD STATUS for DTC P0135 and/or P0155' in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

(cont'd)

DTC Troubleshooting (cont'd)

32. Reconnect all connectors.

33. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

34. Start the engine, and let it idle.

35. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0135 and/or P0155 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 34. If the PCM was substituted, go to step 1.

    NO—Go to step 36.

36. Monitor the OBD STATUS for DTC P0135 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 35, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the PGM-FI subrelay, and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 34. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P0137: Rear Secondary HO2S (Bank 1, Sensor 2) Circuit Low Voltage

DTC P0157: Front Secondary HO2S (Bank 2, Sensor 2) Circuit Low Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

4. Check the HO2S S2 in the DATA LIST with the HDS.

   Does the voltage stay at 0.05 V or less?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM.■

5. Turn the ignition switch to LOCK (0).

6. Disconnect the secondary HO2S (Sensor 2) 4P connector.

7. Turn the ignition switch to ON (II).

8. Check the HO2S S2 in the DATA LIST with the HDS.

   Does the voltage stay at 0.05 V or less?

   YES—Go to step 9.

   NO—Go to step 13.

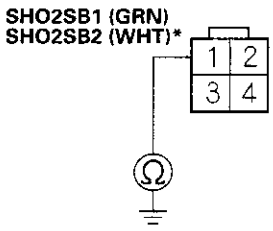
9. Turn the ignition switch to LOCK (0).

10. Jump the SCS line with the HDS.

11. Disconnect ECM/PCM connector B (49P).

12. Check for continuity between secondary HO2S (Sensor 2) 4P connector terminal No. 1 and body ground.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (B25 (B16)*) and the secondary HO2S (Sensor 2), then go to step 15.

NO—Go to step 23.

13. Turn the ignition switch to LOCK (0).
14. Replace the secondary HO2S (Sensor 2) (see page 11-276).
15. Reconnect all connectors.
16. Turn the ignition switch to ON (II).
17. Reset the ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see page 11-385).
19. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) until the radiator fan comes on.
20. Test-drive under these conditions:
    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Engine speed between 1,500—3,000 rpm
    - Drive 1 minute or more
21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0137 and/or P0157 indicated?*

    YES—Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1.

    NO—Go to step 22.
22. Monitor the OBD STATUS for DTC P0137 and/or P0157* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 19.
23. Reconnect all connectors.
24. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
25. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) until the radiator fan comes on.

(cont'd)

DTC Troubleshooting (cont'd)

26. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Engine speed between 1,500—3,000 rpm
    - Drive 1 minute or more

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0137 and/or P0157 indicated?*

    YES—Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 25. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 28.

28. Monitor the OBD STATUS for DTC P0137 and/or P0157* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 25. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 25.

DTC P0138: Rear Secondary HO2S (Bank 1, Sensor 2) Circuit High Voltage

DTC P0158: Front Secondary HO2S (Bank 2, Sensor 2) Circuit High Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

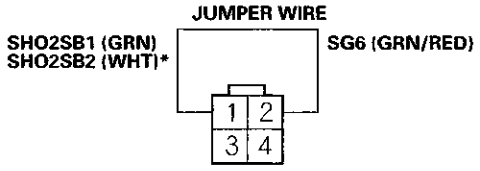
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Check the HO2S S2 in the DATA LIST with the HDS.

   Does the voltage stay at 1.27 V or more?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the secondary HO2S (Sensor 2) 4P connector.
7. Connect secondary HO2S (Sensor 2) 4P connector terminals No. 1 and No. 2 with a jumper wire.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

8. Turn the ignition switch to ON (II).

9. Check the HO2S S2 in the DATA LIST with the HDS.

   Does the voltage stay at 1.27 V or more?

   YES—Go to step 10.

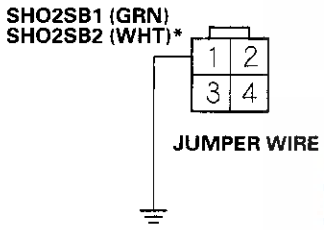
   NO—Go to step 19.

10. Turn the ignition switch to LOCK (0).

11. Remove the jumper wire from the secondary HO2S (Sensor 2) 4P connector.

12. Connect secondary HO2S (Sensor 2) 4P connector terminal No. 1 to body ground with a jumper wire.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

13. Turn the ignition switch to ON (II).

14. Check the HO2S S2 in the DATA LIST with the HDS.

    Does the voltage stay at 1.27 V or more?

    YES—Go to step 15.

    NO—Repair open in the wire between the ECM/PCM (C15) and the secondary HO2S (Sensor 2), then go to step 21.

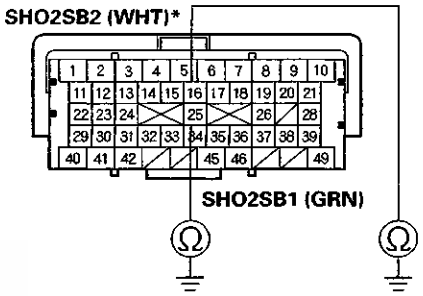
15. Turn the ignition switch to LOCK (0).

16. Jump the SCS line with the HDS.

17. Disconnect ECM/PCM connector B (49P).

18. Check for continuity between ECM/PCM connector terminal B25 (B16)* and body ground.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 29.

NO—Repair open in the wire between the ECM/PCM (B25 (B16)*) and the secondary HO2S (Sensor 2), then go to step 21.

19. Turn the ignition switch to LOCK (0).

20. Replace the secondary HO2S (Sensor 2) (see page 11-276).

21. Reconnect all connectors.

22. Turn the ignition switch to ON (II).

23. Reset the ECM/PCM with the HDS.

24. Do the ECM/PCM idle learn procedure (see page 11-385).

25. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) until the radiator fan comes on.

(cont'd)

DTC Troubleshooting (cont'd)

26. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Engine speed between 1,500—3,000 rpm
    - Drive 1 minute or more

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0138 and/or P0158 indicated?*

    YES—Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1.

    NO—Go to step 28.

28. Monitor the OBD STATUS for DTC P0138 and/or P0158* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 25.

29. Reconnect all connectors.

30. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

31. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

32. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Engine speed between 1,500—3,000 rpm
    - Drive 1 minute or more

33. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0138 and/or P0158 indicated?*

    YES—Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 31. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 34.

34. Monitor the OBD STATUS for DTC P0138 and/or P0158* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 33, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 31. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 31.

DTC P0139: Rear Secondary HO2S (Bank 1, Sensor 2) Slow Response

DTC P0159: Front Secondary HO2S (Bank 2, Sensor 2) Slow Response

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:
   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 4th
   - Drive at a steady speed between 55—75 mph (88—120 km/h) for 1 minute, then decelerate (with throttle fully closed) for 10 seconds.
5. Monitor the OBD STATUS for DTC P0139 and/or P0159* in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 6.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 3 and recheck.
6. Turn the ignition switch to LOCK (0).
7. Replace the secondary HO2S (Sensor 2) (see page 11-276).
8. Turn the ignition switch to ON (II).
9. Reset the ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see page 11-385).
11. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) until the radiator fan comes on.
12. Test-drive under these conditions:
    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Drive at a steady speed between 55—75 mph (88—120 km/h) for 1 minute, then decelerate (with throttle fully closed) for 10 seconds.
13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0139 and/or P0159 indicated?*

    YES—Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1.

    NO—Go to step 14.
14. Monitor the OBD STATUS for DTC P0139 and/or P0159* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 11.

DTC Troubleshooting (cont'd)

DTC P0141: Rear Secondary HO2S (Bank 1, Sensor 2) Heater Circuit Malfunction

DTC P0161: Front Secondary HO2S (Bank 2, Sensor 2) Heater Circuit Malfunction

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0141 and/or P0161 indicated?*

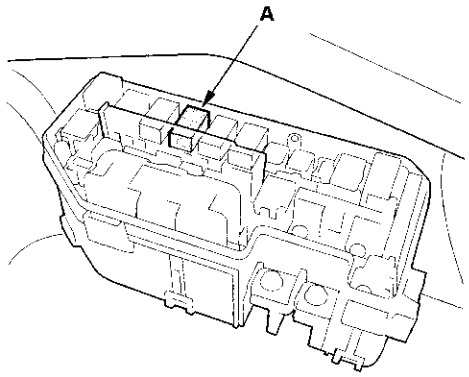
   YES—Go to step 5.

   NO—Intermittent failure, the systems is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the PGM-FI subrelay, and the ECM/PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Check the No. 14 FI SUB (15 A) fuse in the under-hood fuse/relay box.

   Is the fuse OK?

   YES—Go to step 7.

   NO—Go to step 19.
7. Remove the PGM-FI subrelay (A) from the under-hood fuse/relay box.



8. Test the PGM-FI subrelay (see page 22-38).

   Is the relay OK?

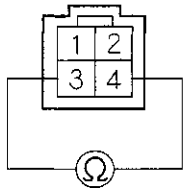
   YES—Go to step 9.

   NO—Replace the PGM-FI subrelay, then go to step 25.

9. Disconnect the secondary HO2S (Sensor 2) 4P connector.

10. At the sensor side, measure the resistance between secondary HO2S (Sensor 2) 4P connector terminals No. 3 and No. 4.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Terminal side of male terminals

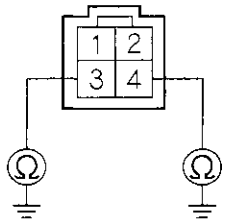
Is there 5.4—7.3 Ω at room temperature?

YES—Go to step 11.

NO—Go to step 24.

11. At the sensor side, check for continuity between body ground and secondary HO2S (Sensor 2) 4P connector terminals No. 3 and No. 4 individually.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Terminal side of male terminals

Is there continuity?

YES—Go to step 24.

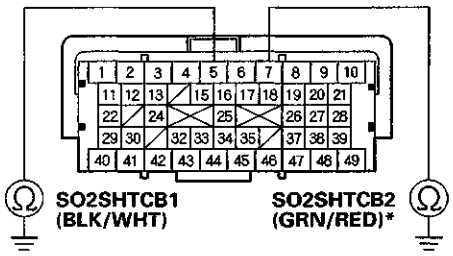
NO—Go to step 12.

12. Jump the SCS line with the HDS.

13. Disconnect ECM/PCM connector C (49P).

14. Check for continuity between ECM/PCM connector terminal C5 (C7)* and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C5 (C7)*) and the secondary HO2S (Sensor 2), then go to step 25.

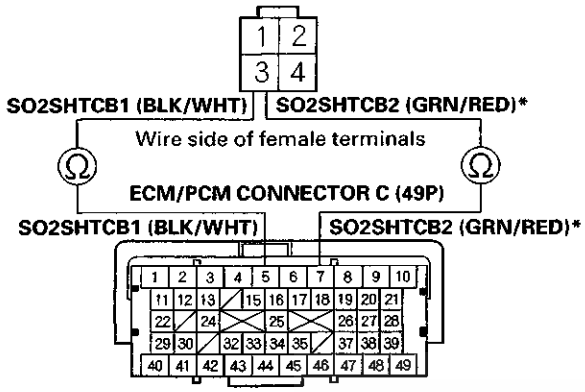
NO—Go to step 15.

(cont'd)

DTC Troubleshooting (cont'd)

15. Check for continuity between secondary HO2S (Sensor 2) 4P connector terminal No. 3 and ECM/PCM connector C5 (C7)*.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Terminal side of female terminals

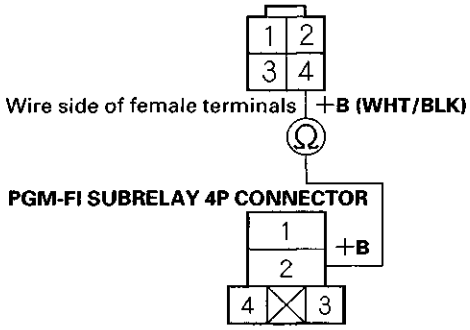
Is there continuity?

YES—Go to step 16.

NO—Repair open in the wire between the ECM/PCM (C5 (C7)*) and the secondary HO2S (Sensor 2), then go to step 25.

16. Check for continuity between secondary HO2S (Sensor 2) 4P connector terminal No. 4 and PGM-FI subrelay 4P connector terminal No. 2.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

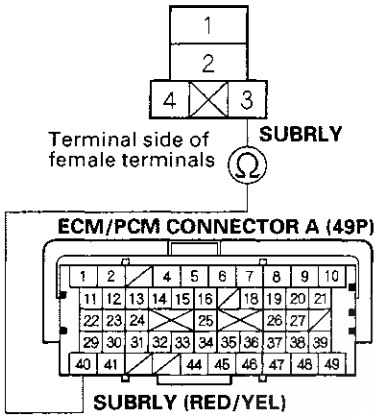
YES—Go to step 17.

NO—Repair open in the wire between the secondary HO2S (Sensor 2) and the PGM-FI subrelay, then go to step 25.

17. Disconnect ECM/PCM connector A (49P).

18. Check for continuity between PGM-FI subrelay 4P connector terminal No. 3 and ECM/PCM connector terminal A40.

PGM-FI SUBRELAY 4P CONNECTOR



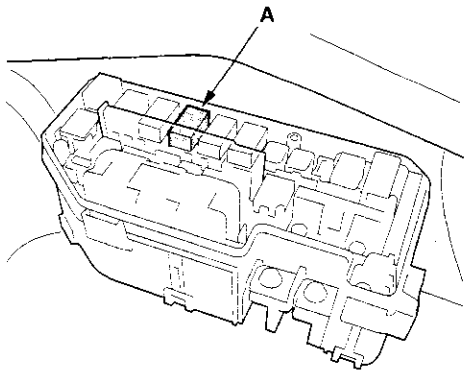
Terminal side of female terminals

Is there continuity?

YES—Go to step 31.

NO—Repair open in the wire between the PGM-FI subrelay, and the ECM/PCM (A40), then go to step 25.

19. Remove the PGM-FI subrelay (A) from the under-hood fuse/relay box.



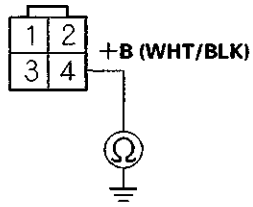
20. Disconnect the front and rear secondary HO2S (Sensor 2) 4P connectors.

21. Disconnect the front and rear A/F sensor (Sensor 1) 6P (PZEV model: 8P) connectors.

22. Disconnect the EVAP canister vent shut valve 2P connector.

23. Check for continuity between secondary HO2S (Sensor 2) 4P connector terminal No. 4 and body ground.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the PGM-FI subrelay and the secondary HO2S (Sensor 2), then go to step 25.

NO—Check the under-hood fuse/relay box, and replace it if needed, refer to the 2008-2009 Accord Service Manual (see page 22-83). Also replace the No. 14 FI SUB (15 A) fuse, then go to step 25.

(cont'd)

DTC Troubleshooting (cont'd)

24. Replace the secondary HO2S (Sensor 2) (see page 11-276).

25. Reconnect all connectors.

26. Turn the ignition switch to ON (II).

27. Reset the ECM/PCM with the HDS.

28. Do the ECM/PCM idle learn procedure (see page 11-385).

29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0141 and/or P0161' indicated?

    YES—Check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the PGM-FI subrelay, and the ECM/PCM, then go to step 1.

    NO—Go to step 30.

30. Monitor the OBD STATUS for DTC P0141 and/or P0161' in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 29, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the PGM-FI subrelay, and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

31. Reconnect all connectors.

32. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

33. Start the engine, and let it idle.

34. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0141 and/or P0161' indicated?

    YES—Check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the PGM-FI subrelay, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 33. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 35.

35. Monitor the OBD STATUS for DTC P0141 and/or P0161' in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 34, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the PGM-FI subrelay, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 33. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P0171: Rear Bank (Bank 1) Fuel System Too Lean

DTC P0172: Rear Bank (Bank 1) Fuel System Too Rich

DTC P0174: Front Bank (Bank 2) Fuel System Too Lean

DTC P0175: Front Bank (Bank 2) Fuel System Too Rich

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If some of the DTCs listed below are stored at the same time as DTC P0171, P0172, P0174, and/or P0175, troubleshoot those DTCs first, then recheck for P0171, P0172, P0174, and/or P0175.

P0101, P0102, P0103: Mass air flow (MAF) sensor
P0107, P0108, P1128, P1129: Manifold absolute pressure (MAP) sensor
P0133, P0153, P1172, P1174, P2195, P2197, P2237, P2238, P2240, P2241, P2243, P2245, P2247, P2249, P2251, P2252, P2254, P2255, P2A00, P2A03: Air fuel ratio (A/F) sensor (Sensor 1)
P0134, P0135, P0154, P0155: Air fuel ratio (A/F) sensor (Sensor 1) heater
P0137, P0138, P0139, P0157, P0158, P0159, P2270, P2271, P2272, P2273: Secondary HO2S (Sensor 2)
P0141, P0161: Secondary HO2S (Sensor 2) heater
P2646, P2647, P2648, P2649: VTEC system (J35Z2 engine)
P0401, P0404, P0406, P2413: Exhaust gas recirculation (EGR) system
P2279: Intake air leakage

1. Check the fuel pressure (see page 11-403).

   Is the fuel pressure OK?

   YES—Go to step 2.

   NO—Check these items:

   - If the pressure is too high, replace the fuel pressure regulator (see page 11-417), then go to step 2.
   - If the pressure is too low, check the fuel pump, the fuel pressure regulator, the fuel filter, and the fuel lines for restrictions, then go to step 6.

2. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

3. Check for these conditions:

   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in P or N, M/T in neutral
   - All electrical loads off

4. Monitor the ENGINE SPEED in the DATA LIST with the HDS, and hold the engine speed at 2,500 rpm. Once the engine speed is met, hold the accelerator pedal steady for more than 10 seconds.

   Did the engine speed vary more than 100 rpm from 2,500 rpm?

   YES—Repeat step 4.

   NO—Go to step 5.

5. While holding the engine speed at 2,500 rpm, check the MAF SENSOR in the DATA LIST with the HDS.

   Is there about 9.1– 12.9 gm/s?

   YES—Check the engine valve clearances, and adjust them if necessary (see page 6-10). If the valve clearances are OK, replace the injectors (see page 11-271), then go to step 6.

   NO—Replace the MAF sensor/IAT sensor (see page 11-273), then go to step 6.

(cont'd)

DTC Troubleshooting (cont'd)

6. Turn the ignition switch to ON (II).
7. Reset the ECM/PCM with the HDS.
8. Do the ECM/PCM idle learn procedure (see page 11-385).
9. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
10. Test-drive under these conditions:
    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Drive at a steady speed between 15—75 mph (24—120 km/h) for 15 minutes.

    NOTE: DTC P0171, P0172, P0174, and/or P0175 may take up to 80 minutes of test driving to set. Using the HDS, monitor the long term fuel trim (LT FUEL TRIM). If the LT FUEL TRIM stays within 0.8—1.21, there is no problem at this time.
11. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0171, P0172, P0174, or P0175 indicated?

    YES—Go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0300: Random Misfire and Any Combination of the Following:

DTC P0301: No. 1 Cylinder Misfire Detected

DTC P0302: No. 2 Cylinder Misfire Detected

DTC P0303: No. 3 Cylinder Misfire Detected

DTC P0304: No. 4 Cylinder Misfire Detected

DTC P0305: No. 5 Cylinder Misfire Detected

DTC P0306: No. 6 Cylinder Misfire Detected

Special Tools Required
- Pressure gauge adapter 07NAJ-P07010A
- A/T low pressure gauge w/panel 07406-0070301
- A/T pressure hose 07406-0020201
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure adapter 07MAJ-PY40120
- Oil pressure hose 07ZAJ-S5AA200

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If the misfire is frequent enough to trigger detection of increased emissions during two consecutive driving cycles, the MIL will come on, and DTC P0300 (and some combination of P0301 through P0306) will be stored.
- If the misfire is frequent enough to damage the catalyst, the MIL will blink whenever the misfire occurs, and DTC P0300 (and some combination of P0301 through P0306) will be stored. When the misfire stops, the MIL will remain on.
- Troubleshoot the following DTCs first, if any of them were stored along with the random misfire DTC(s) (Because parts can sometimes fail without setting DTC's you should also do a physical inspection of the systems listed below):

  P0101, P0102, P0103: MAF sensor
  P0107, P0108, P1128, P1129: MAP sensor
  P0171, P0172, P0174, P0175: Fuel system
  P0335, P0339: CKP sensor
  P0506, P0507: Idle control system
  P0365, P0369: CMP sensor
  P2646, P2647, P2648, P2649: VTEC system (J35Z2 engine)
  P0401, P0404, P0406, P2413: EGR system

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral).

4. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 9.

   NO—If the screen indicates PASSED, go to step 5. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, wait for several minutes, then recheck.

5. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

   Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

   YES—Go to step 9.

   NO—Go to step 6.

6. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

   - ENGINE SPEED
   - VSS
   - REL TP SENSOR
   - CLV (calculated load value)
   - ECT SENSOR 1
   - APP SENSOR

7. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 9.

   NO—If the screen indicates PASSED, go to step 8. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 6 and recheck.

8. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

   Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

   YES—Go to step 9.

   NO—Intermittent failure, the system is OK at this time. ■

9. Turn the ignition switch to LOCK (0).

10. Check the fuel quality.

    Is the quality good?

    YES—Go to step 11.

    NO—Drain the tank, and fill it with known-good fuel, then go to step 23.

11. Inspect the spark plugs (see page 4-30). If the spark plugs are fouled or worn, replace them.

(cont'd)

DTC Troubleshooting (cont'd)

12. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - REL TP SENSOR
    - CLV (calculated load value)
    - ECT SENSOR 1
    - APP SENSOR

13. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

    Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

    YES—Go to step 14.

    NO—Go to step 23.

14. Check the fuel pressure (see page 11-403).

    Is the fuel pressure OK?

    YES—Go to step 15.

    NO—
    - If the pressure is too high, replace the fuel pressure regulator (see page 11-417), then go to step 23.
    - If the pressure is too low, check the fuel pump, the fuel feed lines, and the fuel filter. If they are OK, replace the fuel pressure regulator (see page 11-417), then go to step 23.

15. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

16. Check for these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 176 °F (80 °C)
    - A/T in P or N, M/T in neutral
    - All electrical loads off

17. Monitor the ENGINE SPEED in the DATA LIST with the HDS, and hold the engine speed at 2,500 rpm. Once the engine speed is met, hold the accelerator pedal steady for more than 10 seconds.

    Did the engine speed vary more than 100 rpm from 2,500 rpm?

    YES—Repeat step 17.

    NO—Go to step 18.

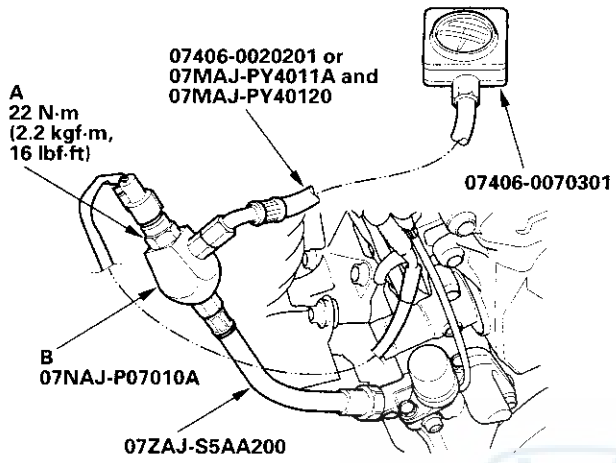
18. While holding the engine speed at 2,500 rpm, check the MAF SENSOR in the DATA LIST with the HDS.

    Is there about 9.1– 12.9 gm/s?

    YES—
    - J35Z2 engine: Check for air in the fuel line, then go to step 23.
    - J35Z3 engine: Go to step 19.

    NO—Replace the MAF sensor/IAT sensor (see page 11-273), then go to step 23.

19. Remove the rocker arm oil pressure switch (A), and attach the special tools as shown, then attach the rocker arm oil pressure switch to the pressure gauge adapter (B).



20. Reconnect the rocker arm oil pressure switch 2P connector.

21. Start the engine. Hold the engine speed at 3,000 rpm without load (in neutral) until the radiator fan comes on.

22. Check the oil pressure at engine speeds of 1,000 and 2,000 rpm. Keep the measuring time as short as possible (less than 1 minute) because the engine is running without load.

    Is the oil pressure below 49 kPa (0.5 kgf/cm², 7 psi)?

    YES—Check for air in the fuel line, then go to step 23.

    NO—Inspect the VTEC system, then go to step 23.

23. Turn the ignition switch to ON (II).

24. Reset the ECM/PCM with the HDS.

25. Clear the CKP pattern with the HDS.

26. Do the ECM/PCM idle learn procedure (see page 11-385).

27. Do the CKP pattern learn procedure (see page 11-5).

28. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - REL TP SENSOR
    - CLV (calculated load value)
    - ECT SENSOR 1
    - APP SENSOR

29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0300 and any combination of DTC P0301, P0302, P0303, P0304, P0305, or P0306 indicated?

    YES—Check for poor connections or loose terminals at the ignition coils, the injectors, and the ECM/PCM, then go to the DTC P0301, P0302, P0303, P0304, P0305, or P0306 troubleshooting (see page 11-136).

    NO—Go to step 30.

30. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 29, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connection or loose terminals at the ignitions coil, the injector, and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 28.

DTC Troubleshooting (cont'd)

DTC P0301: No. 1 Cylinder Misfire Detected

DTC P0302: No. 2 Cylinder Misfire Detected

DTC P0303: No. 3 Cylinder Misfire Detected

DTC P0304: No. 4 Cylinder Misfire Detected

DTC P0305: No. 5 Cylinder Misfire Detected

DTC P0306: No. 6 Cylinder Misfire Detected

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle without load for 2 minutes (A/T in P or N, M/T in neutral).
4. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 9.

   NO—If the screen indicates PASSED, go to step 5. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, wait for several minutes, and recheck.
5. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

   Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

   YES—Go to step 9.

   NO—Go to step 6.
6. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

   - ENGINE SPEED
   - VSS
   - REL TP SENSOR
   - CLV (calculated load value)
   - GEAR POSITION
   - ECT SENSOR 1
7. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 9.

   NO—If the screen indicates PASSED, go to step 8. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 6.
8. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

   Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

   YES—Go to step 9.

   NO—Intermittent failure, the system is OK at this time. Check the fuel and ignition system circuit connectors for loose wires or poor connections. ■
9. Turn the ignition switch to LOCK (0).
10. Exchange the ignition coil from the problem cylinder with one from another cylinder.

11. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - REL TP SENSOR
    - CLV (calculated load value)
    - GEAR POSITION
    - ECT SENSOR 1

12. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

    Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

    YES—Go to step 13.

    NO—Intermittent failure due to poor contact at the ignition coil contactor (no misfire at this time). Make sure that the ignition coil connectors are secure. ■

13. Determine which cylinder had the misfire.

    Does the misfire occur in the cylinder where the ignition coil was moved?

    YES—Replace the faulty ignition coil (see page 4-29), then go to step 44.

    NO—Go to step 14.

14. Turn the ignition switch to LOCK (0).

15. Exchange the spark plug from the problem cylinder with the one from another cylinder.

16. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - REL TP SENSOR
    - CLV (calculated load value)
    - GEAR POSITION
    - ECT SENSOR 1

17. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

    Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

    YES—Go to step 18.

    NO—Intermittent failure due to spark plug fouling (no misfire at this time). ■

18. Determine which cylinder had the misfire.

    Does the misfire occur in the cylinder where the spark plug was moved?

    YES—Replace the faulty spark plug, then go to step 44.

    NO—Go to step 19.

19. Turn the ignition switch to LOCK (0).

20. Jump the SCS line with the HDS.

21. Disconnect ECM/PCM connector B (49P).

(cont'd)

DTC Troubleshooting (cont'd)

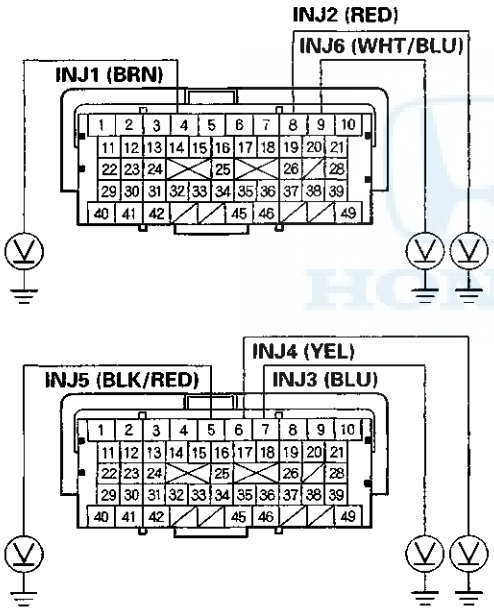
22. Remove the intake manifold (see page 9-4).

23. Turn the ignition switch to ON (II).

24. Measure the voltage between body ground and the ECM/PCM connector terminal (see table).

PROBLEM CYLINDER	DTC	ECM/PCM TERMINAL	WIRE COLOR
No. 1	P0301	B4	BRN
No. 2	P0302	B8	RED
No. 3	P0303	B7	BLU
No. 4	P0304	B6	YEL
No. 5	P0305	B5	BLK/RED
No. 6	P0306	B9	WHT/BLU

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 32.

NO—Go to step 25.

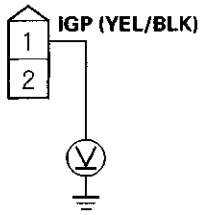
25. Turn the ignition switch to LOCK (0).

26. Disconnect the injector 2P connector from the problem cylinder.

27. Turn the ignition switch to ON (II).

28. Measure the voltage between injector 2P connector terminal No. 1 and body ground.

INJECTOR 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 29.

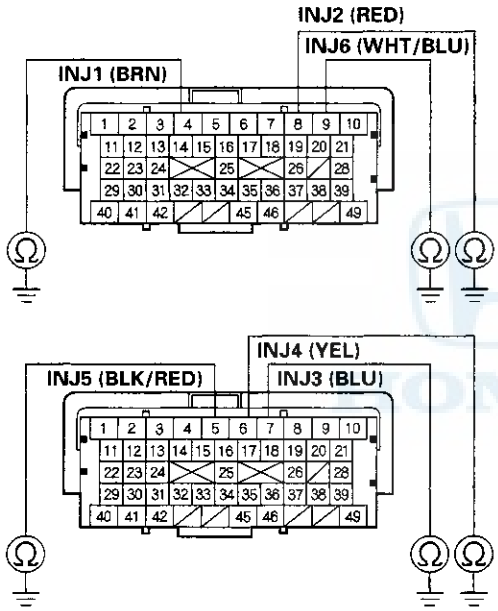
NO—Repair open in the wire between the injector and PGM-FI main relay 1, then go to step 44.

29. Turn the ignition switch to LOCK (0).

30. Check for continuity between body ground and the ECM/PCM connector terminal (see table).

PROBLEM CYLINDER	DTC	ECM/PCM TERMINAL	WIRE COLOR
No. 1	P0301	B4	BRN
No. 2	P0302	B8	RED
No. 3	P0303	B7	BLU
No. 4	P0304	B6	YEL
No. 5	P0305	B5	BLK/RED
No. 6	P0306	B9	WHT/BLU

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

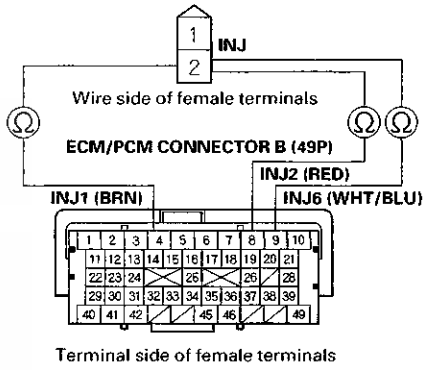
YES—Repair short in the wire between the ECM/PCM and the injector, then go to step 44.

NO—Go to step 31.

31. Check for continuity between appropriate injector 2P connector terminal No. 2 and the ECM/PCM connector terminal of the problem cylinder (see table).

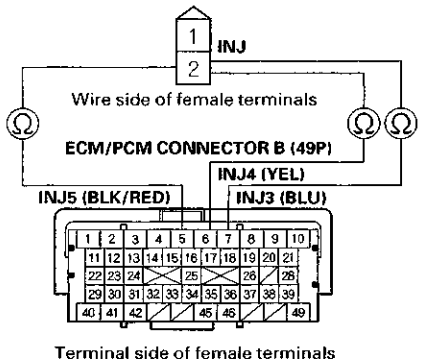
PROBLEM CYLINDER	DTC	ECM/PCM TERMINAL	WIRE COLOR
No. 1	P0301	B4	BRN
No. 2	P0302	B8	RED
No. 3	P0303	B7	BLU
No. 4	P0304	B6	YEL
No. 5	P0305	B5	BLK/RED
No. 6	P0306	B9	WHT/BLU

INJECTOR 2P CONNECTOR



Terminal side of female terminals

INJECTOR 2P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Check for poor connections or loose terminals at the injector and PGM-FI main relay 1, then go to step 32.

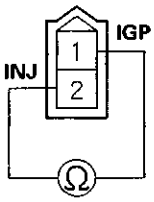
NO—Repair open in the wire between the ECM/PCM and the injector, then go to step 44.

(cont'd)

DTC Troubleshooting (cont'd)

32. At the injector side, measure the resistance between injector 2P connector terminals No. 1 and No. 2.

INJECTOR 2P CONNECTOR



Terminal side of male terminals

Is there 10– 13 Ω ?

YES—Go to step 33.

NO—Replace the injector (see page 11-271), then go to step 44.

33. Exchange the injector from the problem cylinder with the one from another cylinder. Also check the injector fuel inlet screen for debris, and clean if needed.

34. Reconnect all connectors, and install the intake manifold (see page 9-6).

35. Turn the ignition switch to ON (II).

36. Clear the DTCs with the HDS.

37. Start the engine, and let it idle without load (A/T in P or N, M/T in neutral) for 2 minutes.

38. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

- ENGINE SPEED
- VSS
- REL TP SENSOR
- CLV (calculated load value)
- GEAR POSITION
- ECT SENSOR 1

39. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

YES—Go to step 40.

NO—Intermittent failure due to poor contact in the injector connector (no misfire at this time). Check for poor connections or loose terminals at the injector. ■

40. Determine which cylinder had the misfire.

Does the misfire occur in the cylinder where the injector was moved?

YES—Replace the faulty injector (see page 11-271), then go to step 44.

NO—Go to step 41.

41. Turn the ignition switch to LOCK (0).

42. Do an engine compression and a cylinder leakdown test (see page 6-7).

Did the engine pass both tests?

YES—
- J35Z2 engine: Go to step 52.
- J35Z3 engine: Go to step 43.

NO—Repair the engine, then go to step 44.

43. Do the VTEC rocker arm test (see page 6-74).

    Did the engine pass the test?

    YES—Go to step 52.

    NO—Repair the VTEC rocker arm, then go to step 44.

44. Reconnect all connectors.

45. Reset the ECM/PCM with the HDS.

46. Clear the CKP pattern with the HDS.

47. Do the ECM/PCM idle learn procedure (see page 11-385).

48. Do the CKP pattern learn procedure (see page 11-5).

49. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - REL TP SENSOR
    - CLV (calculated load value)
    - GEAR POSITION
    - ECT SENSOR 1

50. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0301, P0302, P0303, P0304, P0305, or P0306 indicated?

    YES—Check for poor connections or loose terminals at the ignition coils, the injectors, and the ECM/PCM, then go to step 1.

    NO—Go to step 51.

51. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 50, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the ignition coils, the injectors, and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 49.

52. Reconnect all connectors.

53. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

54. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - REL TP SENSOR
    - CLV (calculated load value)
    - GEAR POSITION
    - ECT SENSOR 1

55. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0301, P0302, P0303, P0304, P0305, or P0306 indicated?

    YES—Check for poor connections or loose terminals at the ignition coils, the injectors, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 54. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 56.

(cont'd)

DTC Troubleshooting (cont'd)

56. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 55, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the ignition coils, the injectors, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 54. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 54.

DTC P0325: Knock Sensor Circuit Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Hold the engine speed at 3,000—4,000 rpm for at least 10 seconds.
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0325 indicated?

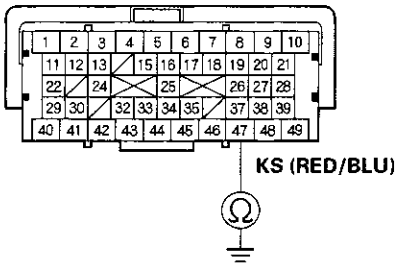
   YES—Go to step 6.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the knock sensor and the ECM/PCM.■

6. Turn the ignition switch to LOCK (0).
7. Jump the SCS line with the HDS.
8. Disconnect the knock sensor subharness 1P connector.
9. Disconnect ECM/PCM connector C (49P).

10. Check for continuity between ECM/PCM connector terminal C47 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

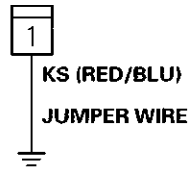
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C47) and the knock sensor subharness, then go to step 20.

NO—Go to step 11.

11. Connect the knock sensor subharness 1P connector terminal to body ground with a jumper wire.

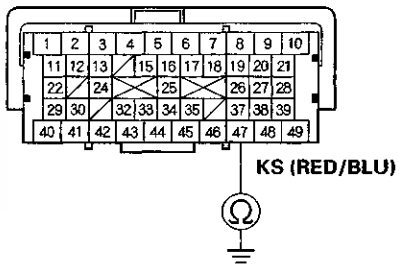
KNOCK SENSOR SUBHARNESS 1P CONNECTOR



Wire side of female terminals

12. Check for continuity between ECM/PCM connector terminal C47 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 13.

NO—Repair open in the wire between the ECM/PCM (C47) and the knock sensor subharness, then go to step 20.

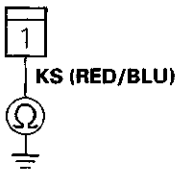
13. Remove the jumper wire from the knock sensor subharness.

(cont'd)

DTC Troubleshooting (cont'd)

14. Remove the intake manifold (see page 9-4), and the injector base (see page 9-8).
15. Disconnect the knock sensor 1P connector.
16. Check for continuity between the knock sensor subharness 1P connector terminal and body ground.

KNOCK SENSOR SUBHARNESS 1P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the knock sensor subharness, then go to step 19.

NO—Go to step 17.

17. Check for an open in the knock sensor subharness.

Is the harness OK?

YES—Go to step 18.

NO—Repair open in the knock sensor subharness, then go to step 19.

18. Replace the knock sensor (see page 11-279).
19. Install the injector base (see page 9-8), and the intake manifold (see page 9-6).
20. Reconnect all connectors.
21. Turn the ignition switch to ON (II).
22. Reset the ECM/PCM with the HDS.
23. Do the ECM/PCM idle learn procedure (see page 11-385).
24. Hold the engine speed at 3,000—4,000 rpm for at least 10 seconds.
25. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0325 indicated?

YES—Check for poor connections or loose terminals at the knock sensor and the ECM/PCM, then go to step 27.

NO—Go to step 26.

26. Monitor the OBD STATUS for DTC P0325 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting.■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the knock sensor and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 24.

27. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

28. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

29. Hold the engine speed at 3,000—4,000 rpm for at least 10 seconds.

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0325 indicated?

    YES—Check for poor connections or loose terminals at the knock sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 28. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 31.

31. Monitor the OBD STATUS for DTC P0325 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the knock sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 28. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 28.

DTC P0335: CKP Sensor No Signal

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine.

4. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0335 indicated?

    YES—Go to step 5.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CKP sensor and the ECM/PCM. ■

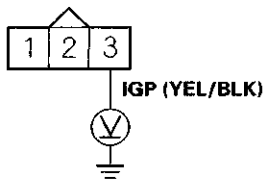
5. Turn the ignition switch to LOCK (0).

6. Disconnect the CKP sensor 3P connector.

7. Turn the ignition switch to ON (II).

8. Measure the voltage between CKP sensor 3P connector terminal No. 3 and body ground.

CKP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 9.

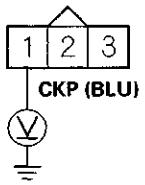
NO—Repair open in the wire between the CKP sensor and PGM-FI main relay 1, then go to step 19.

(cont'd)

DTC Troubleshooting (cont'd)

9. Measure the voltage between CKP sensor 3P connector terminal No. 1 and body ground.

CKP SENSOR 3P CONNECTOR



Wire side of female terminals

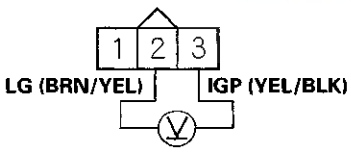
Is there about 5 V?

YES—Go to step 10.

NO—Go to step 11.

10. Measure the voltage between CKP sensor 3P connector terminals No. 2 and No. 3.

CKP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 17.

NO—Repair open in the wire between the CKP sensor and G101 (see page 22-13), then go to step 19.

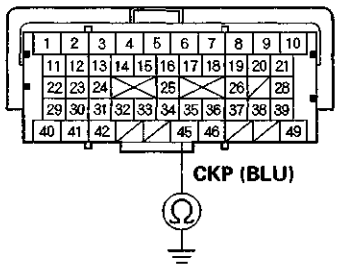
11. Turn the ignition switch to LOCK (0).

12. Jump the SCS line with the HDS.

13. Disconnect ECM/PCM connector B (49P).

14. Check for continuity between ECM/PCM connector terminal B45 and body ground.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

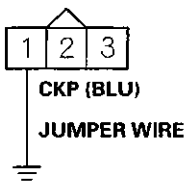
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (B45) and the CKP sensor, then go to step 19.

NO—Go to step 15.

15. Connect CKP sensor 3P connector terminal No. 1 to body ground with a jumper wire.

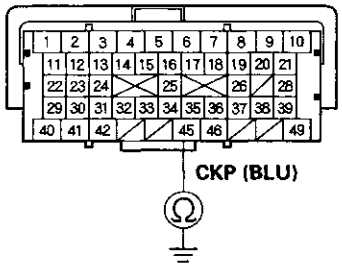
CKP SENSOR 3P CONNECTOR



Wire side of female terminals

16. Check for continuity between ECM/PCM connector terminal B45 and body ground.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 26.

NO—Repair open in the wire between the ECM/PCM (B45) and the CKP sensor, then go to step 19.

17. Turn the ignition switch to LOCK (0).
18. Replace the CKP sensor (see page 11-277).
19. Reconnect all connectors.
20. Turn the ignition switch to ON (II).
21. Reset the ECM/PCM with the HDS.
22. Clear the CKP pattern with the HDS.
23. Do the ECM/PCM idle learn procedure (see page 11-385).
24. Do the CKP pattern learn procedure (see page 11-5).
25. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0335 indicated?

YES—Check for poor connections or loose terminals at the CKP sensor and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

26. Reconnect all connectors.
27. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
28. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0335 indicated?

YES—Check for poor connections or loose terminals at the CKP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0339: CKP Sensor Circuit Intermittent Interruption

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle for 10 seconds.
4. Check the CKP NOISE in the DATA LIST with the HDS.

   Are 0 counts indicated?

   YES—Go to step 7.

   NO—Go to step 5.
5. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

   • ENGINE SPEED
   • VSS
6. Check the CKP NOISE in the DATA LIST with the HDS.

   Are 0 counts indicated?

   YES—Go to step 7.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CKP sensor and the ECM/PCM. ■
7. Check for poor or loose connections and terminals at these locations:

   • CKP sensor
   • ECM/PCM
   • Engine ground
   • Body ground

   Are the connections and terminals OK?

   YES—Go to step 8.

   NO—Repair the connections or terminals, then go to step 11.
8. Remove the oil pan (see page 7-11), and check for damage to the CKP sensor pulser plate.

   Is the pulser plate damaged?

   YES—Replace the CKP sensor pulser plate, then go to step 11.

   NO—Go to step 9.
9. Turn the ignition switch to LOCK (0).
10. Replace the CKP sensor (see page 11-277).
11. Turn the ignition switch to ON (II).
12. Reset the ECM/PCM with the HDS.
13. Clear the CKP pattern with the HDS.
14. Do the ECM/PCM idle learn procedure (see page 11-385).
15. Do the CKP pattern learn procedure (see page 11-5).
16. Start the engine, and let it idle for 10 seconds.
17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0339 indicated?

    YES—Check for poor connections or loose terminals at the CKP sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0351: No. 1 Cylinder Ignition Coil Circuit Malfunction

DTC P0352: No. 2 Cylinder Ignition Coil Circuit Malfunction

DTC P0353: No. 3 Cylinder Ignition Coil Circuit Malfunction

DTC P0354: No. 4 Cylinder Ignition Coil Circuit Malfunction

DTC P0355: No. 5 Cylinder Ignition Coil Circuit Malfunction

DTC P0356: No. 6 Cylinder Ignition Coil Circuit Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0351, P0352, P0353, P0354, P0355, and/or P0356 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ignition coil and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Exchange the ignition coil from the problem cylinder with one from another cylinder.
7. Start the engine.
8. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC indicated at the exchanged cylinder?

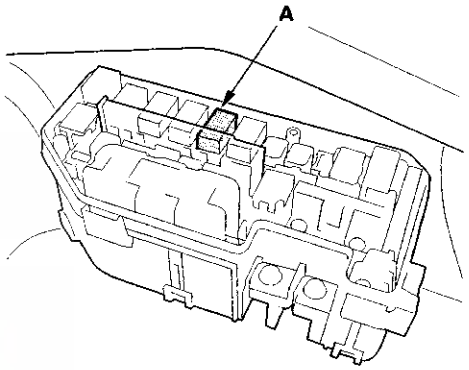
   YES—Replace the faulty ignition coil (see page 4-29), then go to step 27.

   NO—Go to step 9.
9. Turn the ignition switch to LOCK (0).
10. Check the No. 13 IG COIL (15 A) fuse in the under-hood fuse/relay box.

    Is the fuse OK?

    YES—Go to step 11.

    NO—Go to step 13.
11. Remove the ignition coil relay (A) from the under-hood fuse/relay box.



12. Test the ignition coil relay (see page 22-38).

    Is the relay OK?

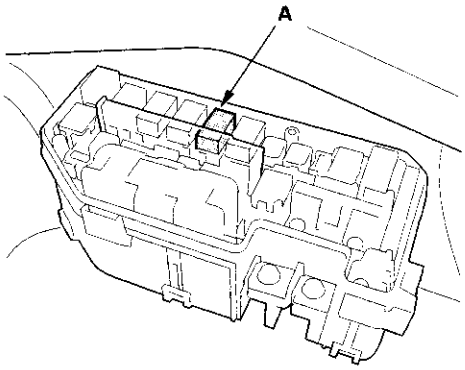
    YES—Go to step 16.

    NO—Replace the ignition coil relay, then go to step 26.

(cont'd)

DTC Troubleshooting (cont'd)

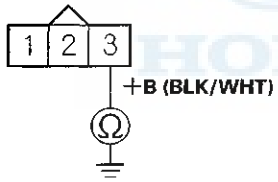
13. Remove the ignition coil relay (A) from the under-hood fuse/relay box.



14. Disconnect all ignition coil 3P connectors.

15. Check for continuity between No. 1 ignition coil 3P connector terminal No. 3 and body ground.

No. 1 IGNITION COIL 3P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the ignition coils and the ignition coil relay. Also replace the No. 13 IG COIL (15 A) fuse, then go to step 26.

NO—Check the under-hood fuse/relay box, and replace it if needed, refer to the 2008-2009 Accord Service Manual (see page 22-83), then go to step 26.

16. Reinstall the ignition coil relay.

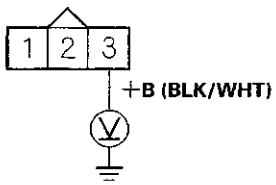
17. Disconnect the ignition coil 3P connector from the problem cylinder.

18. Turn the ignition switch to ON (II).

19. Measure the voltage between ignition coil 3P connector terminal No. 3 of the problem cylinder and body ground (see table).

PROBLEM CYLINDER	DTC
No. 1	P0351
No. 2	P0352
No. 3	P0353
No. 4	P0354
No. 5	P0355
No. 6	P0356

IGNITION COIL 3P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 20.

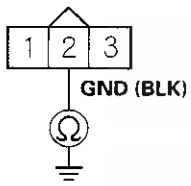
NO—Repair open in the wire between the ignition coil and the ignition coil relay, then go to step 26.

20. Turn the ignition switch to LOCK (0).

21. Check for continuity between ignition coil 3P connector terminal No. 2 of the problem cylinder and body ground (see table).

PROBLEM CYLINDER	DTC
No. 1	P0351
No. 2	P0352
No. 3	P0353
No. 4	P0354
No. 5	P0355
No. 6	P0356

IGNITION COIL 3P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 22.

NO—Repair open in the wire between the ignition coil and G101, then go to step 26.

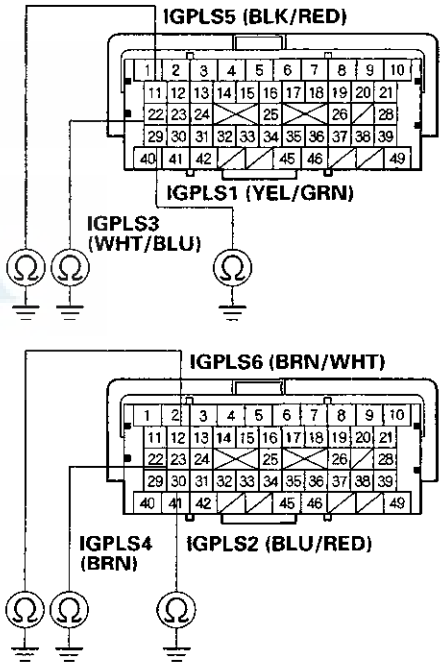
22. Jump the SCS line with the HDS.

23. Disconnect ECM/PCM connector B (49P).

24. Check for continuity between body ground and the ECM/PCM connector terminal (see table).

PROBLEM CYLINDER	DTC	ECM/PCM TERMINAL	WIRE COLOR
No. 1	P0351	B29	YEL/GRN
No. 2	P0352	B30	BLU/RED
No. 3	P0353	B22	WHT/BLU
No. 4	P0354	B23	BRN
No. 5	P0355	B11	BLK/RED
No. 6	P0356	B12	BRN/WHT

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM and the ignition coil, then go to step 26.

NO—Go to step 25.

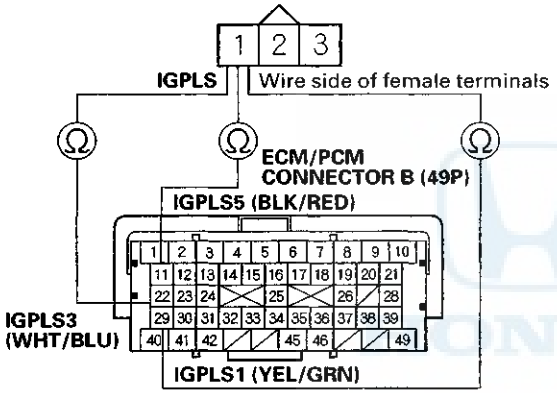
(cont'd)

DTC Troubleshooting (cont'd)

25. Check for continuity between appropriate ignition coil 3P connector terminal No. 1 and the ECM/PCM connector terminal of the problem cylinder (see table).

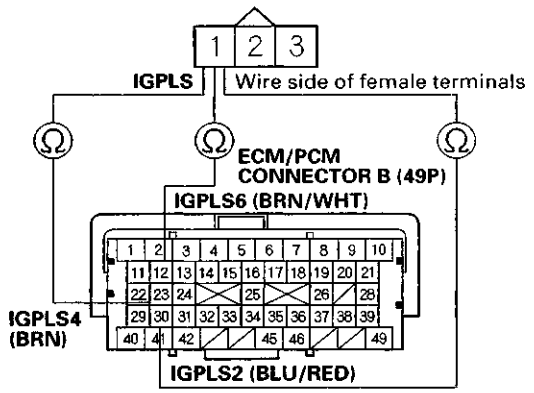
PROBLEM CYLINDER	DTC	ECM/PCM TERMINAL	WIRE COLOR
No. 1	P0351	B29	YEL/GRN
No. 2	P0352	B30	BLU/RED
No. 3	P0353	B22	WHT/BLU
No. 4	P0354	B23	BRN
No. 5	P0355	B11	BLK/RED
No. 6	P0356	B12	BRN/WHT

IGNITION COIL 3P CONNECTOR



Terminal side of female terminals

IGNITION COIL 3P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 32.

NO—Repair open in the wire between the ECM/PCM and the ignition coil, then go to step 26.

26. Turn the ignition switch to LOCK (0).
27. Reconnect all connectors.
28. Turn the ignition switch to ON (II).
29. Reset the ECM/PCM with the HDS.
30. Do the ECM/PCM idle learn procedure (see page 11-385).
31. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0351, P0352, P0353, P0354, P0355, and/or P0356 indicated?

YES—Check for poor connections or loose terminals at the ignition coil and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

32. Reconnect all connectors.

33. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

34. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0351, P0352, P0353, P0354, P0355, and/or P0356 indicated?

    YES—Check for poor connections or loose terminals at the ignition coil and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0365: CMP Sensor Circuit No Signal

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check for Temporary DTCs or DTCs with the HDS.

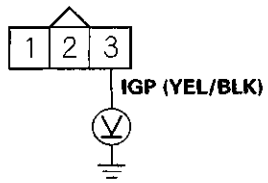
    Is DTC P0365 indicated?

    YES—Go to step 5.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CMP sensor and the ECM/PCM. ■

5. Turn the ignition switch to LOCK (0).
6. Disconnect the CMP sensor 3P connector.
7. Turn the ignition switch to ON (II).
8. Measure the voltage between CMP sensor 3P connector terminal No. 3 and body ground.

CMP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 9.

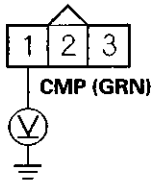
NO—Repair open in the wire between the CMP sensor and PGM-FI main relay 1, then go to step 18.

(cont'd)

DTC Troubleshooting (cont'd)

9. Measure the voltage between CMP sensor 3P connector terminal No. 1 and body ground.

CMP SENSOR 3P CONNECTOR



Wire side of female terminals

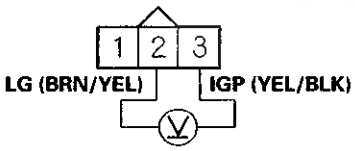
Is there about 5 V?

YES—Go to step 10.

NO—Go to step 11.

10. Measure the voltage between CMP sensor 3P connector terminals No. 2 and No. 3.

CMP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 16.

NO—Repair open in the wire between the CMP sensor and G101 (see page 22-13), then go to step 18.

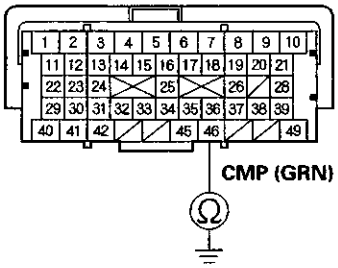
11. Turn the ignition switch to LOCK (0).

12. Jump the SCS line with the HDS.

13. Disconnect ECM/PCM connector B (49P).

14. Check for continuity between ECM/PCM connector terminal B46 and body ground.

ECM/PCM CONNECTOR B (49P)



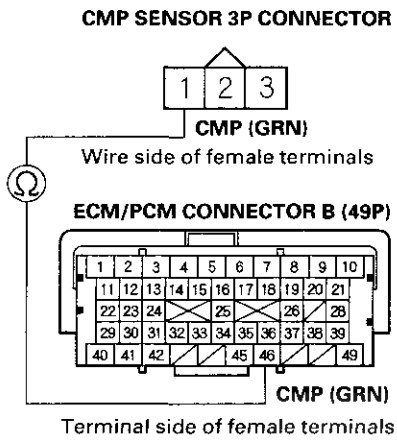
Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (B46) and the CMP sensor, then go to step 18.

NO—Go to step 15.

15. Check for continuity between CMP sensor 3P connector terminal No. 1 and ECM/PCM connector terminal B46.



Is there continuity?

YES—Go to step 23.

NO—Repair open in the wire between the ECM/PCM (B46) and the CMP sensor, then go to step 18.

16. Turn the ignition switch to LOCK (0).

17. Replace the CMP sensor (see page 11-277).

18. Reconnect all connectors.

19. Turn the ignition switch to ON (II).

20. Reset the ECM/PCM with the HDS.

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0365 indicated?

YES—Check for poor connections or loose terminals at the CMP sensor and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

23. Reconnect all connectors.

24. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

25. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0365 indicated?

YES—Check for poor connections or loose terminals at the CMP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0369: CMP Sensor Circuit Intermittent Interruption

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle for 10 seconds.
4. Check the CMP B NOISE in the DATA LIST with the HDS.

   Are 0 counts indicated?

   YES—Go to step 7.

   NO—Go to step 5.
5. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

   • ENGINE SPEED
   • VSS
6. Check the CMP B NOISE in the DATA LIST with the HDS.

   Are 0 counts indicated?

   YES—Go to step 7.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CMP sensor and the ECM/PCM. ■
7. Check for poor or loose connections and terminals at these locations:

   • CMP sensor
   • ECM/PCM
   • Engine ground
   • Body ground

   Are the connections and terminals OK?

   YES—Go to step 8.

   NO—Repair the connectors or terminals, then go to step 11.
8. Check for damage to the front camshaft pully (CMP sensor pulser plate) (see page 11-277).

   Is the pulser plate damaged?

   YES—Replace the front camshaft pully (CMP sensor pulser plate), then go to step 11.

   NO—Go to step 9.
9. Turn the ignition switch to LOCK (0).
10. Replace the CMP sensor (see page 11-277).
11. Turn the ignition switch to ON (II).
12. Reset the ECM/PCM with the HDS.
13. Do the ECM/PCM idle learn procedure (see page 11-385).
14. Start the engine, and let it idle for 10 seconds.
15. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0369 indicated?

    YES—Check for poor connections or loose terminals at the CMP sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P050A: Cold Start Idle Air Control System Performance Problem

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check for Temporary DTCs or DTCs with the HDS.

   Are any Temporary DTCs or DTCs other than P050A indicated?

   YES—Go to the indicated DTC's troubleshooting. ■

   NO—Go to step 3.
3. Check for poor connections or a blockage at the intake air duct.

   Is it OK?

   YES—Go to step 4.

   NO—Reconnect or repair the intake air duct, then go to step 20.
4. Check for damage at the air cleaner housing.

   Is it OK?

   YES—Go to step 5.

   NO—Replace the air cleaner housing (see page 11-436), then go to step 20.
5. Check for dirt or debris in the air cleaner element.

   Is it dirty?

   YES—Replace the air cleaner element or remove the debris (see page 11-437), then go to step 20.

   NO—Go to step 6.
6. Let the engine cool until the value of ECT SENSOR 1 is 122 °F (50 °C) or less.
7. Clear the DTC with the HDS.
8. Start the engine, and let it idle for 10 seconds or more.
9. Monitor the OBD STATUS for DTC P050A in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 10.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body, the MAF sensor/IAT sensor, and the ECM/PCM. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 6.
10. Do the ETCS TEST in the INSPECTION MENU with the HDS.

    Is the THROTTLE ACTUATOR CONTROL VALVE normal?

    YES—Go to step 11.

    NO—Replace the throttle body (see page 11-441), then go to step 20.
11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

(cont'd)

DTC Troubleshooting (cont'd)

12. Monitor the ENGINE SPEED in the DATA LIST with the HDS, and hold the engine speed at 2,500 rpm for at least 30 seconds.

13. While holding the engine speed at 2,500 rpm, check the MAF SENSOR in the DATA LIST with the HDS.

    Is there about 9.1— 12.9 gm/s?

    YES—Go to step 14.

    NO—Replace the MAF sensor/IAT sensor (see page 11-273), then go to step 20.

14. Turn the ignition switch to LOCK (0).

15. Allow the engine to cool to ambient temperature.

16. Note the ambient temperature.

17. Turn the ignition switch to ON (II).

18. Note the value of IAT SENSOR quickly in the DATA LIST with the HDS.

19. Compare the value of the IAT SENSOR and the ambient temperature.

    Does the value of the IAT SENSOR differ 5.4 °F (3 °C) or more?

    YES—Replace the MAF sensor/IAT sensor (see page 11-273), then go to step 20.

    NO—Check for dirt, carbon, or damage in the throttle bore. If there is dirt or carbon, clean the throttle body (see page 11-436), then go to step 20. If there is damage in the throttle bore, replace the throttle body (see page 11-441), then go to step 20.

20. Turn the ignition switch to ON (II).

21. Reset the ECM/PCM with the HDS.

22. Do the ECM/PCM idle learn procedure (see page 11-385).

23. Let the engine cool until the value of ECT SENSOR 1 is 122 °F (50 °C) or less.

24. Start the engine, and let it idle for 10 seconds or more.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P050A indicated?

    YES—Check for poor connections or loose terminals at the throttle body, the MAF sensor/IAT sensor, and the ECM/PCM, then go to step 1.

    NO—Go to step 26.

26. Monitor the OBD STATUS for DTC P050A in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the throttle body, the MAF sensor/IAT sensor, and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 23.

DTC P050B: Cold Start Ignition Timing Control System Performance Problem

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check for Temporary DTCs or DTCs with the HDS.

   Are any Temporary DTCs or DTCs other than P050B indicated?

   YES—Go to the indicated DTC's troubleshooting. ■

   NO—Go to step 3.
3. Check for poor connections or a blockage at the intake air duct.

   Is it OK?

   YES—Go to step 4.

   NO—Reconnect or repair the intake air duct, then go to step 25.
4. Check for damage at the air cleaner housing.

   Is it OK?

   YES—Go to step 5.

   NO—Replace the air cleaner housing (see page 11-436), then go to step 25.
5. Check for dirt or debris in the air cleaner element.

   Is it dirty?

   YES—Replace the air cleaner element or remove the debris (see page 11-437), then go to step 25.

   NO—Go to step 6.
6. Let the engine cool until the value of ECT SENSOR 1 is 122 °F (50 °C) or less.
7. Clear the DTC with the HDS.
8. Start the engine, and let it idle for 10 seconds or more.
9. Monitor the OBD STATUS for DTC P050B in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 10.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the CKP sensor, the throttle body, the MAF sensor/IAT sensor, ECT sensor 1, ECT sensor 2, and the ECM/PCM. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 6.
10. Inspect the ignition timing (see page 4-28).

    Is the ignition timing OK?

    YES—Go to step 12.

    NO—Go to step 11.
11. Check for damage at the CKP sensor (see page 11-277) and the CKP sensor pulser plate (see page 7-29).

    Is the CKP sensor and/or the CKP sensor pulser plate damaged?

    YES—Replace the CKP sensor (see page 11-277) and/or the CKP sensor pulser plate (see page 7-29), then go to step 25.

    NO—Go to step 31.

(cont'd)

DTC Troubleshooting (cont'd)

12. Do the ETCS TEST in the INSPECTION MENU with the HDS.

    Is the THROTTLE ACTUATOR CONTROL VALVE normal?

    YES—Go to step 13.

    NO—Replace the throttle body (see page 11-441), then go to step 25.

13. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

14. Monitor the ENGINE SPEED in the DATA LIST with the HDS, and hold the engine speed at 2,500 rpm for at least 30 seconds.

15. While holding the engine speed at 2,500 rpm, check the MAF SENSOR in the DATA LIST with the HDS.

    Is there about 9.1– 12.9 gm/s?

    YES—Go to step 16.

    NO—Replace the MAF sensor/IAT sensor (see page 11-273), then go to step 25.

16. Turn the ignition switch to LOCK (0).

17. Drain the coolant (see page 10-6).

18. Remove ECT sensor 1 (see page 11-274), and ECT sensor 2 (see page 11-274).

19. Allow the sensors to cool to ambient temperature.

20. Note the ambient temperature.

21. Connect ECT sensor 1 and ECT sensor 2 to their 2P connectors, but do not install them.

22. Turn the ignition switch to ON (II).

23. Note the value of ECT SENSOR 1 and ECT SENSOR 2 quickly in the DATA LIST with the HDS.

24. Compare the value of ECT SENSOR 1 and the ambient temperature, and the value of ECT SENSOR 2 and the ambient temperature individually.

    Does either sensor differ more than 5.4 °F (3 °C) from the ambient temperature?

    YES—Replace the sensor that differed more than 5.4 °F (3 °C) from the ambient temperature, then go to step 25.

    NO—Check and repair any problems with the following items. Repair or replace them if needed, then go to step 25. If all of the items are OK, go to step 32.

    - Engine compression and cylinder leakdown
    - VTEC system
    - Engine oil
    - A/C system
    - Power steering

25. Turn the ignition switch to ON (II).

26. Reset the ECM/PCM with the HDS.

27. Do the ECM/PCM idle learn procedure (see page 11-385).

28. Let the engine cool until the value of ECT SENSOR 1 is 122 °F (50 °C) or less.

29. Start the engine, and let it idle for 10 seconds or more.

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P050B indicated?

    YES—Check for poor connections or loose terminals at the CKP sensor, the throttle body, the MAF sensor/IAT sensor, ECT sensor 1, ECT sensor 2, and the ECM/PCM, then go to step 1.

    NO—Go to step 31.

31. Monitor the OBD STATUS for DTC P050B in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the CKP sensor, the throttle body, the MAF sensor/IAT sensor, ECT sensor 1, ECT sensor 2, and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 28.

32. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

33. Do the ECM/PCM idle learn procedure (see page 11-385).

34. Let the engine cool until the value of ECT SENSOR 1 is 122 °F (50 °C) or less.

35. Start the engine, and let it idle for 10 seconds or more.

36. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P050B indicated?

    YES—Check for poor connections or loose terminals at the CKP sensor, the throttle body, the MAF sensor/IAT sensor, ECT sensor 1, ECT sensor 2, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 37.

37. Monitor the OBD STATUS for DTC P050B in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 36, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the CKP sensor, the throttle body, the MAF sensor/IAT sensor, ECT sensor 1, ECT sensor 2, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 34.

DTC Troubleshooting (cont'd)

DTC P0560: ECM/PCM Power Source Circuit Unexpected Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0560 indicated?

   YES—Go to step 5.

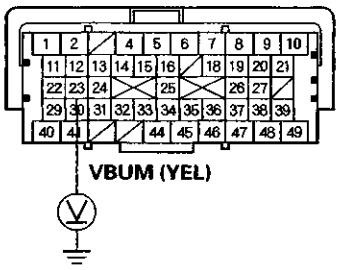
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the No. 19 BACK UP FI ECU (7.5 A) fuse in the under-hood fuse relay box and the ECM/PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Check the No. 19 BACK UP FI ECU (7.5 A) fuse in the under-hood fuse relay box.

   Is the fuse OK?

   YES—Go to step 7.

   NO—Go to step 10.
7. Jump the SCS line with the HDS.
8. Disconnect ECM/PCM connector A (49P).
9. Measure the voltage between ECM/PCM connector terminal A23 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 19.

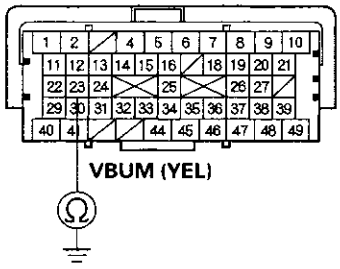
NO—Repair open in the wire between the ECM/PCM (A23) and the No. 19 BACK UP FI ECU (7.5 A) fuse, then go to step 13.

10. Jump the SCS line with the HDS.

11. Disconnect ECM/PCM connector A (49P).

12. Check for continuity between ECM/PCM connector terminal A23 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A23) and the No. 19 BACK UP FI ECU (7.5 A) fuse. Also replace the No. 19 BACK UP FI ECU (7.5 A) fuse, then go to step 13.

NO—Check the under-hood fuse/relay box, and replace it if needed, refer to the 2008-2009 Accord Service Manual (see page 22-83). Also replace the No. 19 BACK UP FI ECU (7.5 A) fuse, then go to step 13.

13. Reconnect all connectors.

14. Turn the ignition switch to ON (II).

15. Reset the ECM/PCM with the HDS.

16. Do the ECM/PCM idle learn procedure (see page 11-385).

17. Start the engine, and let it idle.

18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0560 indicated?

YES—Check for poor connections or loose terminals at the No. 19 BACK UP FI ECU (7.5 A) fuse and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

19. Reconnect all connectors.

20. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

21. Start the engine, and let it idle.

22. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0560 indicated?

YES—Check for poor connections or loose terminals at the No. 19 BACK UP FI ECU (7.5 A) fuse and the ECM/PCM. If the ECM/PCM updated, substitute a known-good ECM/PCM, then go to step 21. If the ECM/PCM was substituted, go to step 1.

NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0562: Charging System Low Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If any high current load accessories are installed, this DTC can be set.
- If DTC P16BB and/or P16BC is stored at the same time as DTC P0562, troubleshoot DTC P16BB and/or P16BC first, then recheck for DTC P0562.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check under these conditions:
   - A/C on
   - Temperature control at maximum cool
   - Blower fan at maximum speed
   - Headlights on high beam
5. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) for 1 minute.
6. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0562 indicated?

   YES—Replace the alternator (see page 4-45), then go to step 7.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, and check the battery performance, refer to the 2008-2009 Accord Service Manual (see page 22-88). ■
7. Turn the ignition switch to ON (II).
8. Reset the ECM/PCM with the HDS.
9. Do the ECM/PCM idle learn procedure (see page 11-385).
10. Start the engine.
11. Check under these conditions:
    - A/C on
    - Temperature control at maximum cool
    - Blower fan at maximum speed
    - Headlights on high beam
12. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) for 1 minute.
13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0562 indicated?

    YES—Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0563: ECM/PCM Power Source Circuit Unexpected Voltage

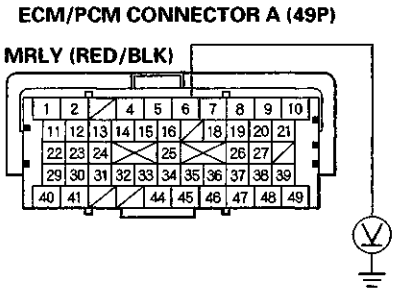
NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0).
4. Wait 10 seconds.
5. Turn the ignition switch to ON (II).
6. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0563 indicated?

   YES—Go to step 7.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at PGM-FI main relay 1 and the ECM/PCM. ■
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Measure the voltage between ECM/PCM connector terminal A6 and body ground.



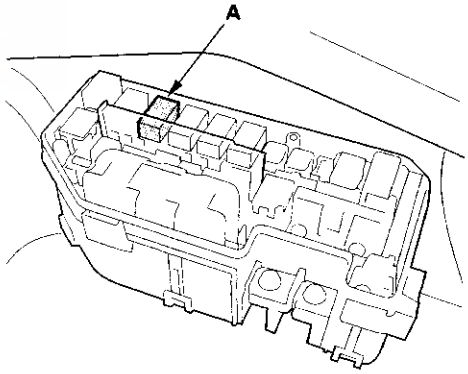
Terminal side of female terminals

Is there battery voltage?

YES—Go to step 13.

NO—Go to step 11.

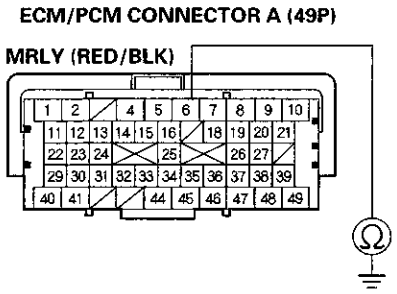
11. Remove PGM-FI main relay 1 (FI MAIN) (A) from the under-hood fuse/relay box.



(cont'd)

DTC Troubleshooting (cont'd)

12. Check for continuity between ECM/PCM connector terminal A6 and body ground.



Terminal side of female terminals

Is there continuity?

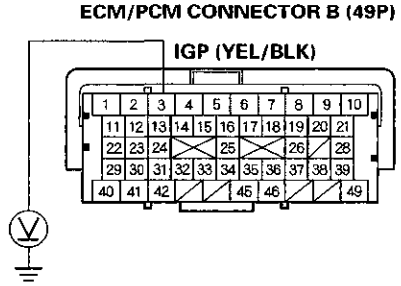
YES—Repair short in the wire between the ECM/PCM (A6) and PGM-FI main relay 1, then go to step 19.

NO—Go to step 18.

13. Reconnect ECM/PCM connector A (49P).

14. Disconnect ECM/PCM connector B (49P).

15. Measure the voltage between ECM/PCM connector terminal B3 and body ground.



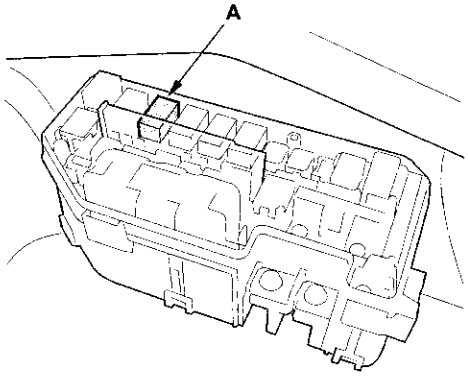
Terminal side of female terminals

Is there battery voltage?

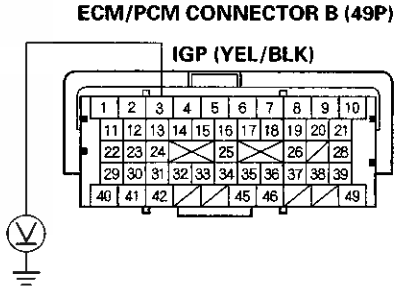
YES—Go to step 16.

NO—Go to step 26.

16. Remove PGM-FI main relay 1 (FI MAIN) (A) from the under-hood fuse/relay box.



17. Measure the voltage between ECM/PCM connector terminal B3 and body ground.



Terminal side of female terminals

Is there battery voltage?

YES—Repair short to power in the wire between the ECM/PCM (B3) and PGM-FI main relay 1, then go to step 19.

NO—Go to step 18.

18. Test PGM-FI main relay 1 (see page 22-38).

    Is the relay OK?

    YES—Go to step 26.

    NO—Replace PGM-FI main relay 1, then go to step 19.

19. Reconnect all connectors.

20. Turn the ignition switch to ON (II).

21. Reset the ECM/PCM with the HDS.

22. Turn the ignition switch to LOCK (0).

23. Wait 10 seconds.

24. Do the ECM/PCM idle learn procedure (see page 11-385).

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0563 indicated?

    YES—Check for poor connections or loose terminals at PGM-FI main relay 1 and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

26. Turn the ignition switch to LOCK (0).

27. Reconnect all connectors.

28. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0563 indicated?

    YES—Check for poor connections or loose terminals at PGM-FI main relay 1 and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0602: ECM/PCM Programming Error

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- This DTC is indicated when an ECM/PCM update is not completed.
- Do not turn the ignition switch to LOCK (0) or ACC (I) while updating the ECM/PCM. If you turn the ignition switch to LOCK (0) or ACC (I) before completion, the ECM/PCM can be damaged.

1. Do the ECM/PCM update procedure (see page 11-281).
2. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0602 indicated?

   YES—Replace the original ECM/PCM (see page 11-385).■

   NO—The update is complete.■

DTC P060A: ECM/PCM Internal Control Module Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P060A indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time.■

4. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P060A indicated?

   YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

   NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P062F: ECM/PCM Internal Control Module Keep Alive Memory (KAM) Error

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

   Are any Temporary DTCs or DTCs indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time.■
4. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0603 indicated?

   YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

   NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0630: VIN Not Programmed or Mismatch

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- This DTC is stored only when the ECM/PCM does not have the VIN information of the vehicle. Use the HDS to input the missing VIN information.

1. Turn the ignition switch to ON (II).
2. Check the VIN with the HDS.

   Does the HDS show the vehicle's VIN?

   YES—Go to step 5.

   NO—Go to step 3.
3. Input the VIN to the ECM/PCM with the HDS.

   Does the screen show COMPLETE?

   YES—Go to step 5.

   NO—Go to step 4.
4. Check for DTCs with the HDS.

   Is DTC P062F indicated?

   YES—Go to the DTC P062F troubleshooting (see page 11-169).■

   NO—Go to step 9.
5. Clear the DTC with the HDS.
6. Turn the ignition switch to LOCK (0).
7. Turn the ignition switch to ON (II), and wait 5 seconds.

(cont'd)

DTC Troubleshooting (cont'd)

8. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0630 indicated?

   YES—Go to step 9.

   NO—Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

9. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

10. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0630 indicated?

    YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0641: Sensor Reference Voltage A Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0641 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ECM/PCM and these connectors:■

   - Throttle body
   - EGR valve
   - Input shaft (mainshaft) speed sensor
   - APP sensor

4. Turn the ignition switch to LOCK (0).

5. Disconnect these connectors:

   - Throttle body
   - EGR valve
   - Input shaft (mainshaft) speed sensor
   - APP sensor

6. Turn the ignition switch ON (II).

7. Clear the DTC with the HDS.

8. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0641 indicated?

   YES—Go to step 10.

   NO—Go to step 9.

9. Check for Temporary DTCs or DTCs with the HDS while connecting each these connectors:

   - Throttle body
   - EGR valve
   - Input shaft (mainshaft) speed sensor
   - APP sensor

   Is DTC P0641 indicated?

   YES—Replace the parts connected when the DTC is indicated, then go to step 14.

   NO—Check for poor connections or loose terminals at the ECM/PCM and these connectors:

   - Throttle body
   - EGR valve
   - Input shaft (mainshaft) speed sensor
   - APP sensor

   If the connections and terminals are OK, go to step 1 and recheck.

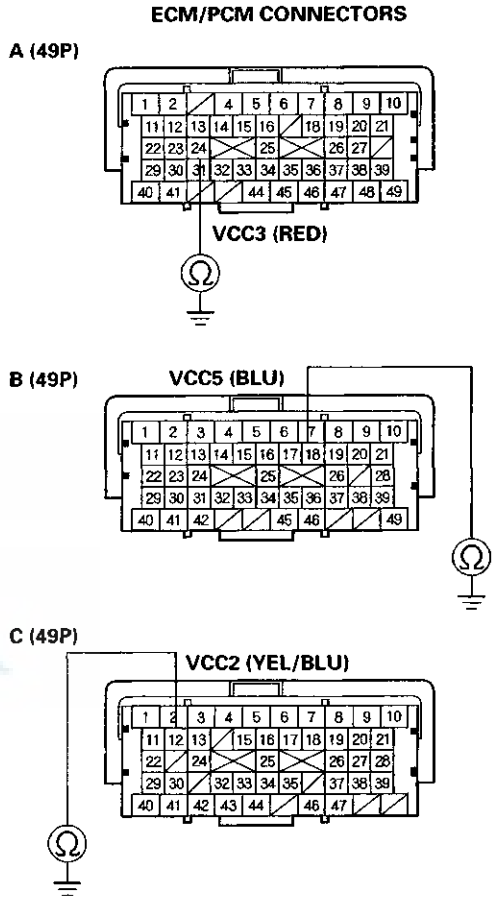
10. Turn the ignition switch to LOCK (0).

11. Jump the SCS line with the HDS.

12. Disconnect ECM/PCM connectors A (49P), B (49P), and C (49P).

13. Check for continuity between body ground and ECM/PCM connector terminals A24, B18, and C12 individually.

ECM/PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A24, B18, or C12) and each sensor, then go to step 14.

NO—Go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

14. Turn the ignition switch to LOCK (0).
15. Reconnect all connectors.
16. Turn the ignition switch to ON (II).
17. Reset the ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see page 11-385).
19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0641 indicated?

    YES—Check for poor connections or loose terminals at the ECM/PCM and these connectors:

    - Throttle body
    - EGR valve
    - Input shaft (mainshaft) speed sensor
    - APP sensor

    If the connections and the terminals are OK, go to step 1 and recheck.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

20. Reconnect all connectors.
21. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0641 indicated?

    YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, check for poor connections or loose terminals at the ECM/PCM and these connectors:

    - Throttle body
    - EGR valve
    - Input shaft (mainshaft) speed sensor
    - APP sensor

    If the connections and the terminals are OK, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0651: Sensor Reference Voltage B Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0651 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ECM/PCM and these connectors:■

   - MAP sensor
   - Output shaft (countershaft) speed sensor
   - Rocker arm oil pressure sensor (J35Z2 engine)
   - IMT actuator (J35Z3 engine)
   - A/C pressure sensor
   - APP sensor
   - FTP sensor

4. Turn the ignition switch to LOCK (0).
5. Disconnect these connectors:

   - MAP sensor
   - Output shaft (countershaft) speed sensor
   - Rocker arm oil pressure sensor (J35Z2 engine)
   - IMT actuator (J35Z3 engine)
   - A/C pressure sensor
   - APP sensor
   - FTP sensor

6. Turn the ignition switch to ON (II).
7. Clear the DTC with the HDS.
8. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0651 indicated?

   YES—Go to step 10.

   NO—Go to step 9.

9. Check for Temporary DTCs or DTCs with the HDS while connecting each these connectors:

   - MAP sensor
   - Output shaft (countershaft) speed sensor
   - Rocker arm oil pressure sensor (J35Z2 engine)
   - IMT actuator (J35Z3 engine)
   - A/C pressure sensor
   - APP sensor
   - FTP sensor

   Is DTC P0651 indicated?

   YES—Replace the parts connected when the DTC is indicated, then go to step 14.

   NO—Check for poor connections or loose terminals at the PCM and these connectors:

   - MAP sensor
   - Output shaft (countershaft) speed sensor
   - Rocker arm oil pressure sensor (J35Z2 engine)
   - IMT actuator (J35Z3 engine)
   - A/C pressure sensor
   - APP sensor
   - FTP sensor

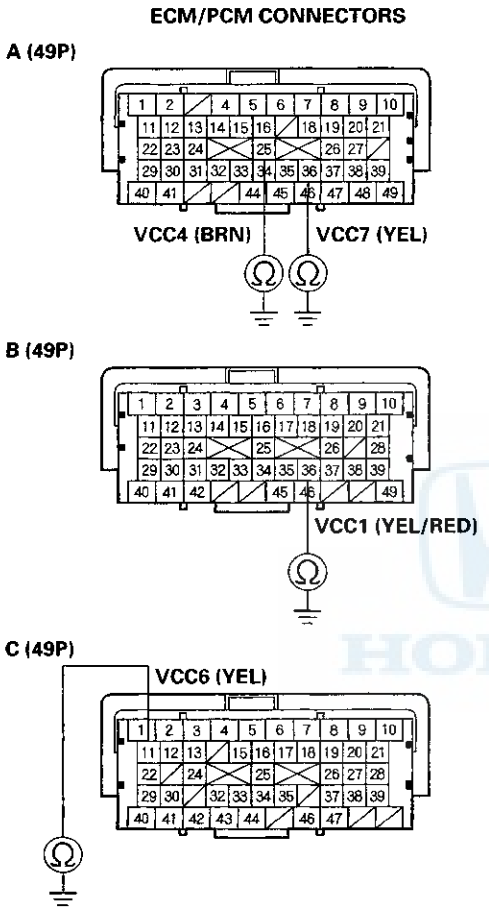
   If the connections and terminals are OK, go to step 1 and recheck.

10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect ECM/PCM connectors A (49P), B (49P), and C (49P).

(cont'd)

DTC Troubleshooting (cont'd)

13. Check for continuity between body ground and ECM/PCM connector terminals A25, A36, B36, and C11 individually.



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A25, A36, B36, or C11) and each sensor, then go to step 14.

NO—Go to step 20.

14. Turn the ignition switch to LOCK (0).
15. Reconnect all connectors.
16. Turn the ignition switch to ON (II).
17. Reset the ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see page 11-385).
19. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0651 indicated?

YES—Check for poor connections or loose terminals at the ECM/PCM and these connectors:

- MAP sensor
- Output shaft (countershaft) speed sensor
- Rocker arm oil pressure sensor (J35Z2 engine)
- IMT actuator (J35Z3 engine)
- A/C pressure sensor
- APP sensor
- FTP sensor

If the connections and the terminals are OK, go to step 1 and recheck.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

20. Reconnect all connectors.

21. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0651 indicated?

    YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, check for poor connections or loose terminals at the ECM/PCM and these connectors:

    - MAP sensor
    - Output shaft (countershaft) speed sensor
    - Rocker arm oil pressure sensor (J35Z2 engine)
    - IMT actuator (J35Z3 engine)
    - A/C pressure sensor
    - APP sensor
    - FTP sensor

    If the connections and the terminals are OK, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0685: ECM/PCM Power Control Circuit/ Internal Circuit Malfunction

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If the problem doesn't return after you clear the DTC, or it this DTC is stored intermittently, check for loose terminals at the IGP line connectors before replacing the ECM/PCM.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, then let it idle for 30 seconds.
4. Turn the ignition switch to LOCK (0).
5. Start the engine, then let it idle for 30 seconds.
6. Turn the ignition switch to LOCK (0).
7. Turn the ignition switch to ON (II).
8. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0685 indicated?

   YES—Go to step 9.

   NO—Intermittent failure, the system is OK at this time. ■

9. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
10. Start the engine, then let it idle for 30 seconds.
11. Turn the ignition switch to LOCK (0).
12. Start the engine, then let it idle for 30 seconds.
13. Turn the ignition switch to LOCK (0).
14. Turn the ignition switch to ON (II).

(cont'd)

DTC Troubleshooting (cont'd)

15. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0685 indicated?

    YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 10. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P0715: Input Shaft (Mainshaft) Speed Sensor Circuit Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Start the engine. Hold the engine speed at 3,000 rpm without load (in neutral) until the radiator fan comes on, then let it idle.
2. Test-drive several minutes.
3. Check the M SHAFT SPD in the DATA LIST with the HDS.

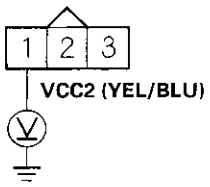
   Is any vehicle speed indicated?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and the ECM. ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect the input shaft (mainshaft) speed sensor 3P connector.
6. Turn the ignition switch to ON (II).

7. Measure the voltage between input shaft (mainshaft) speed sensor 3P connector terminal No. 1 and body ground.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

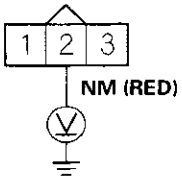
Is there about 5 V?

YES—Go to step 8.

NO—Repair open in the wire between the ECM (C12) and the input shaft (mainshaft) speed sensor, then go to step 18.

8. Measure the voltage between input shaft (mainshaft) speed sensor 3P connector terminal No. 2 and body ground.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

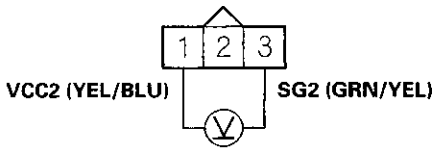
Is there about 5 V?

YES—Go to step 9.

NO—Go to step 10.

9. Measure the voltage between input shaft (mainshaft) speed sensor 3P connector terminals No. 1 and No. 3.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 16.

NO—Repair open in the wire between the ECM (C16) and the input shaft (mainshaft) speed sensor, then go to step 18.

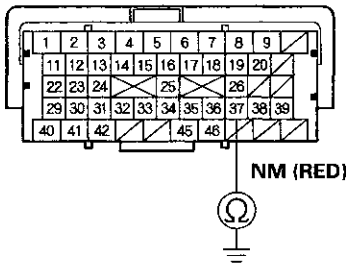
10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect ECM connector B (49P).

(cont'd)

DTC Troubleshooting (cont'd)

13. Check for continuity between ECM connector terminal B37 and body ground.

ECM CONNECTOR B (49P)



Terminal side of female terminals

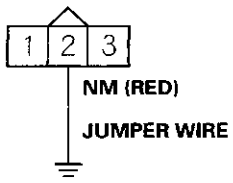
Is there continuity?

YES—Repair short in the wire between the ECM (B37) and the input shaft (mainshaft) speed sensor, then go to step 18.

NO—Go to step 14.

14. Connect input shaft (mainshaft) speed sensor 3P connector terminal No. 2 to body ground with a jumper wire.

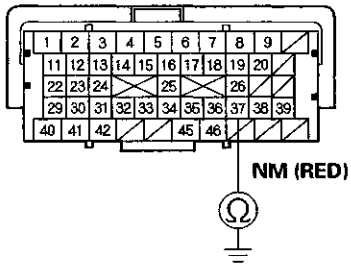
INPUT SHAFT (MAINSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

15. Check for continuity between ECM connector terminal B37 and body ground.

ECM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the ECM (B37) and the input shaft (mainshaft) speed sensor, then go to step 18.

16. Turn the ignition switch to LOCK (0).

17. Replace the input shaft (mainshaft) speed sensor (see page 11-278).

18. Reconnect all connectors.

19. Turn the ignition switch to ON (II).

20. Reset the ECM with the HDS.

21. Do the ECM idle learn procedure (see page 11-385).

22. Test-drive under these conditions:

- Engine coolant temperature (ECT SENSOR 1) above 176 °F (80 °C)
- Transmission in 5th
- Engine speed between 2,000—3,000 rpm
- Drive for several minutes, then decelerate (with the throttle fully closed) for 8 seconds

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0715 indicated?

    YES—Check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and the ECM, then go to step 1.

    NO—Go to step 24.

24. Monitor the OBD STATUS for DTC P0715 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and the ECM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 22.

DTC P0720: Output Shaft (Countershaft) Speed Sensor Circuit Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Start the engine. Hold the engine speed at 3,000 rpm without load (in neutral) until the radiator fan comes on, then let it idle.
2. Test-drive several minutes.
3. Check the C SHAFT SPD in the DATA LIST with the HDS.

    Is any vehicle speed indicated?

    YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the output shaft (countershaft) speed sensor and the ECM.■

    NO—Go to step 4.

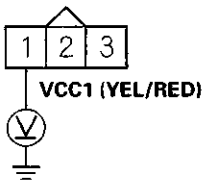
4. Turn the ignition switch to LOCK (0).
5. Disconnect the output shaft (countershaft) speed sensor 3P connector.
6. Turn the ignition switch to ON (II).

(cont'd)

DTC Troubleshooting (cont'd)

7. Measure the voltage between output shaft (countershaft) speed sensor 3P connector terminal No. 1 and body ground.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

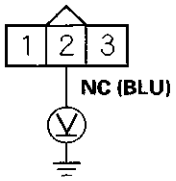
Is there about 5 V?

YES—Go to step 8.

NO—Repair open in the wire between the ECM (B36) and the output shaft (countershaft) speed sensor, then go to step 18.

8. Measure the voltage between output shaft (countershaft) speed sensor 3P connector terminal No. 2 and body ground.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

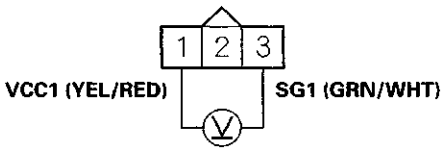
Is there about 5 V?

YES—Go to step 9.

NO—Go to step 10.

9. Measure the voltage between output shaft (countershaft) speed sensor 3P connector terminals No. 1 and No. 3.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

Is there about 5 V?

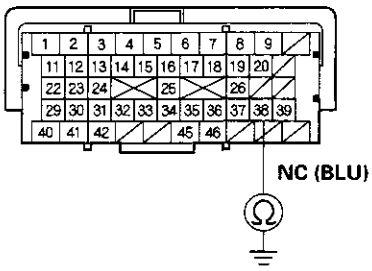
YES—Go to step 16.

NO—Repair open in the wire between the ECM (B34) and the output shaft (countershaft) speed sensor, then go to step 18.

10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect ECM connector B (49P).

13. Check for continuity between ECM connector terminal B38 and body ground.

ECM CONNECTOR B (49P)



Terminal side of female terminals

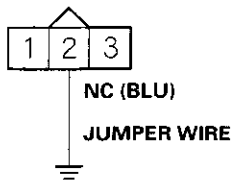
Is there continuity?

YES—Repair short in the wire between the ECM (B38) and the output shaft (countershaft) speed sensor, then go to step 18.

NO—Go to step 14.

14. Connect output shaft (countershaft) speed sensor 3P connector terminal No. 2 to body ground with a jumper wire.

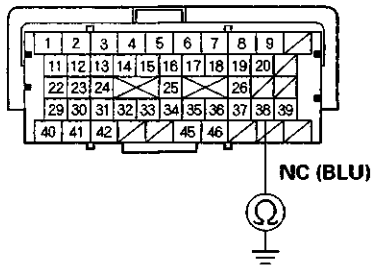
OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR 3P CONNECTOR



Wire side of female terminals

15. Check for continuity between ECM connector terminal B38 and body ground.

ECM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the ECM (B38) and the output shaft (countershaft) speed sensor, then go to step 18.

16. Turn the ignition switch to LOCK (0).

17. Replace the output shaft (countershaft) speed sensor (see page 11-278).

18. Reconnect all connectors.

19. Turn the ignition switch to ON (II).

20. Reset the ECM with the HDS.

21. Do the ECM idle learn procedure (see page 11-385).

22. Test-drive under these conditions:

- Engine coolant temperature (ECT SENSOR 1) above 176 °F (80 °C)
- Transmission in 5th
- Engine speed between 2,000—3,000 rpm
- Drive for several minutes, then decelerate (with the throttle fully closed) for 8 seconds

(cont'd)

DTC Troubleshooting (cont'd)

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0720 indicated?

    YES—Check for poor connections or loose terminals at the output shaft (countershaft) speed sensor and the ECM, then go to step 1.

    NO—Go to step 24.

24. Monitor the OBD STATUS for DTC P0720 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the output shaft (countershaft) speed sensor and the ECM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 22.

DTC P1116: ECT Sensor 1 Circuit Range/ Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P0111 is stored at the same time as DTC P1116, troubleshoot DTC P0111 first, then recheck for DTC P1116.

1. Check for poor connections or loose terminals at ECT sensor 1 and ECT sensor 2.

   Are the connections and terminals OK?

   YES—Go to step 2.

   NO—Repair the connectors or terminals, then go to step 27.

2. Turn the ignition switch to ON (II).

3. Check for Temporary DTCs or DTCs with the HDS.

   Are DTC P1116 and P2183 indicated at the same time?

   YES—Go to step 15.

   NO—Go to step 4.

4. Start the engine, and let it idle for 10 minutes.

5. Check ECT SENSOR 1 in the DATA LIST with the HDS.

   Is about 108 °F (42 °C) or less indicated?

   YES—Replace ECT sensor 1 (see page 11-274), then go to step 27.

   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).
7. Drain the coolant (see page 10-6).
8. Remove ECT sensor 1 (see page 11-274).
9. Allow ECT sensor 1 to cool to ambient temperature.
10. Note the ambient temperature.
11. Connect ECT sensor 1 to its 2P connector, but do not install it on the engine.
12. Turn the ignition switch to ON (II).
13. Note the value of ECT SENSOR 1 quickly in the DATA LIST with the HDS.
14. Compare the value of ECT SENSOR 1 and the ambient temperature.

    Does the value of ECT SENSOR 1 differ 5.4 °F (3 °C) or more?

    YES—Replace ECT sensor 1 (see page 11-274), then go to step 27.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. ■
15. Start the engine, and let it idle for 10 minutes.
16. Check ECT SENSOR 1 in the DATA LIST with the HDS.

    Is about 108 °F (42 °C) or less indicated?

    YES—Replace ECT sensor 1 (see page 11-274), then go to step 27.

    NO—Go to step 17.
17. Let the engine idle 10 minutes.
18. Check ECT SENSOR 2 in the DATA LIST with the HDS.

    Is about 108 °F (42 °C) or less indicated?

    YES—Replace ECT sensor 2 (see page 11-274), then go to step 27.

    NO—Go to step 19.
19. Turn the ignition switch to LOCK (0).
20. Drain the coolant (see page 10-6).
21. Remove ECT sensor 1 (see page 11-274), and ECT sensor 2 (see page 11-274).
22. Allow the sensors to cool to ambient temperature.
23. Note the ambient temperature.
24. Connect ECT sensor 1 and ECT sensor 2 to their 2P connectors, but do not install them.

(cont'd)

DTC Troubleshooting (cont'd)

25. Note the value of ECT SENSOR 1 and ECT SENSOR 2 quickly in the DATA LIST with the HDS.

26. Compare the value of ECT SENSOR 1 and the ambient temperature, and the value of ECT SENSOR 2 and the ambient temperature individually.

    Does one of the sensors differ more than 5.4 °F (3 °C) from the ambient temperature?

    YES—Replace the sensor that differed more than 5.4 °F (3 °C) from the ambient temperature, then go to step 27.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. ■

27. Turn the ignition switch to ON (II).

28. Reset the ECM/PCM with the HDS.

29. Do the ECM/PCM idle learn procedure (see page 11-385).

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1116 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P1128: MAP Sensor Signal Lower Than Expected

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Before starting this troubleshooting check for poor connections or blockage at the intake air duct.

1. Turn the ignition switch to ON (II).

2. Check the MAP SENSOR in the DATA LIST with the HDS.

   Is less than 54.1 kPa (16.0 in.Hg, 406 mmHg), or 1.61 V held for more than 5 seconds?

   YES—Go to step 7.

   NO—Go to step 3.

3. Clear the DTC with the HDS.

4. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

5. Test-drive under these conditions:

   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - ENGINE SPEED between 1,200—5,400 rpm
   - A/T in D, M/T in 3rd
   - Vehicle speed accelerated from 16—31 mph (25—50 km/h) under half throttle

6. Monitor the OBD STATUS for DTC P1128 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 7.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM. If the screen indicates NOT COMPLETED, go to step 4 and recheck.

7. Turn the ignition switch to LOCK (0).

8. Replace the MAP sensor (see page 11-273).

9. Turn the ignition switch to ON (II).

10. Reset the ECM/PCM with the HDS.

11. Do the ECM/PCM idle learn procedure (see page 11-385).

12. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

13. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - ENGINE SPEED between 1,200—5,400 rpm
    - A/T in D, M/T in 3rd
    - Vehicle speed accelerated from 16—31 mph (25—50 km/h) under half throttle

14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1128 indicated?

    YES—Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM, then go to step 1.

    NO—Go to step 15.

15. Monitor the OBD STATUS for DTC P1128 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the MAP sensor and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 12.

DTC P1129: MAP Sensor Signal Higher than Expected

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check for vacuum leaks at these parts:

    - PCV valve
    - PCV hose
    - EVAP canister purge valve
    - Throttle body
    - Intake manifold
    - Brake booster
    - Brake booster hose

    Are there any vacuum leaks?

    YES—Repair or replace the part(s) with vacuum leaks, then go to step 9.

    NO—Go to step 2.

2. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

3. Check the MAP SENSOR in the DATA LIST with the HDS.

    Is there more than 36.9 kPa (11.0 in.Hg, 277 mmHg), or 1.14 V held for more than 5 seconds?

    YES—Go to step 7.

    NO—Go to step 4.

4. Clear the DTC with the HDS.

(cont'd)

DTC Troubleshooting (cont'd)

5. Test-drive under these conditions:

   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - Engine speed between 1,400 and 5,500 rpm
   - A/T in D, M/T in 5th
   - Drive at a steady speed between 55—75 mph (88—120 km/h) for 10 seconds, then decelerate (with throttle fully closed) for 5 seconds

6. Monitor the OBD STATUS for DTC P1129 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 7.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM. If the screen indicates NOT COMPLETED, go to step 5 and recheck.

7. Turn the ignition switch to LOCK (0).

8. Replace the MAP sensor (see page 11-273).

9. Turn the ignition switch to ON (II).

10. Reset the ECM/PCM with the HDS.

11. Do the ECM/PCM idle learn procedure (see page 11-385).

12. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

13. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - Engine speed between 1,400 and 5,500 rpm
    - A/T in D, M/T in 5th
    - Drive at a steady speed between 55—75 mph (88—120 km/h) for 10 seconds, then decelerate (with throttle fully closed) for 5 seconds

14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1129 indicated?

    YES—Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM, then go to step 1.

    NO—Go to step 15.

15. Monitor the OBD STATUS for DTC P1129 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the MAP sensor and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 12.

DTC P1172: Rear A/F Sensor (Bank 1, Sensor 1) Circuit Out of Range High

DTC P1174: Front A/F Sensor (Bank 2, Sensor 1) Circuit Out of Range High

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Monitor the OBD STATUS for P1172 and/or P1174* in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 5.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 3 and recheck.
5. Turn the ignition switch to LOCK (0).
6. Replace the A/F sensor (Sensor 1) (see page 11-275).
7. Turn the ignition switch to ON (II).
8. Reset the ECM/PCM with the HDS.
9. Do the ECM/PCM idle learn procedure (see page 11-385).
10. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
11. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1172 and/or P1174 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

    NO—Go to step 12.
12. Monitor the OBD STATUS for DTC P1172 and/or P1174* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 11, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 10.

DTC Troubleshooting (cont'd)

DTC P1297: ELD Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check the ELD in the DATA LIST with the HDS.

   Is 72 A or more indicated?

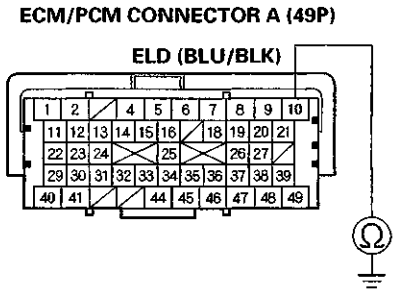
   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ELD and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the ELD 3P connector.
5. Turn the ignition switch to ON (II).
6. Check the ELD in the DATA LIST with the HDS.

   Is 72 A or more indicated?

   YES—Go to step 7.

   NO—Go to step 11.
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Check for continuity between ECM/PCM connector terminal A10 and body ground.



Terminal side of female terminals

   Is there continuity?

   YES—Repair short in the wire between the ECM/PCM (A10) and the ELD, then go to step 13.

   NO—Go to step 20.
11. Turn the ignition switch to LOCK (0).
12. Replace the ELD (see page 11-280).
13. Reconnect all connectors.
14. Turn the ignition switch to ON (II).
15. Reset the ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see page 11-385).
17. Start the engine.
18. Turn on the headlights.

19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1297 indicated?

    YES—Check for poor connections or loose terminals at the ELD and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

20. Reconnect all connectors.

21. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

22. Start the engine.

23. Turn on the headlights.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1297 indicated?

    YES—Check for poor connections or loose terminals at the ELD and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 22. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P1298: ELD Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Start the engine, and let it idle.

2. Check the ELD in the DATA LIST with the HDS.

    Is 0.2 A or less indicated?

    YES—Go to step 3.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ELD and the ECM/PCM. ■

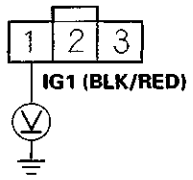
3. Turn the ignition switch to LOCK (0).

4. Disconnect the ELD 3P connector.

5. Turn the ignition switch to ON (II).

6. Measure the voltage between ELD 3P connector terminal No. 1 and body ground.

ELD 3P CONNECTOR



Wire side of female terminals

Is there battery voltage?

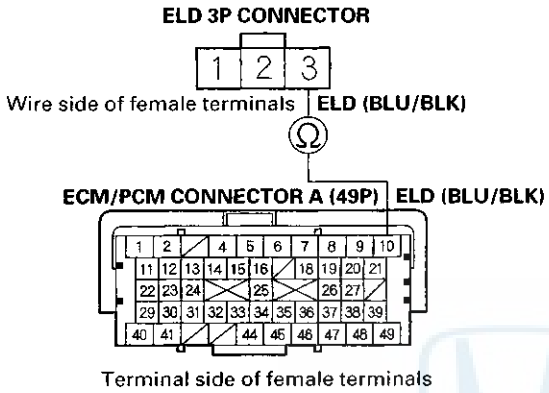
YES—Go to step 7.

NO—Repair open in the wire between the No. 7 ACG (15 A) fuse in the driver's under-dash fuse/relay box and the ELD, then go to step 13.

(cont'd)

DTC Troubleshooting (cont'd)

7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Check for continuity between ECM/PCM connector terminal A10 and ELD 3P connector terminal No. 3.

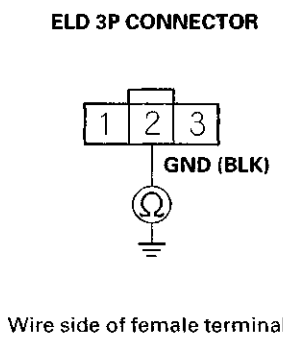


Is there continuity?

YES—Go to step 11.

NO—Repair open in the wire between the ECM/PCM (A10) and the ELD, then go to step 13.

11. Check for continuity between ELD 3P connector terminal No. 2 and body ground.



Is there continuity?

YES—Go to step 12.

NO—Repair open in the wire between the ELD and G202, then go to step 13.

12. Replace the ELD (see page 11-280).
13. Turn the ignition switch to ON (II).
14. Reset the ECM/PCM with the HDS.
15. Do the ECM/PCM idle learn procedure (see page 11-385).
16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1298 indicated?

YES—Check for poor connections or loose terminals at the ELD and the ECM/PCM, then go to step 17.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

17. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1298 indicated?

    YES—Check for poor connections or loose terminals at the ELD and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P1549: Charging System High Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If a high voltage battery (24 V, etc.) is connected to the vehicle, this DTC can be stored.

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine.

4. Check under these conditions:

   - A/C off
   - Headlights off
   - Rear window defogger off

5. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) 1 minute.

6. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P1549 indicated?

   YES—Replace the alternator (see page 4-45), then go to step 7.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box. ■

(cont'd)

DTC Troubleshooting (cont'd)

7. Turn the ignition switch to ON (II).
8. Reset the ECM/PCM with the HDS.
9. Do the ECM/PCM idle learn procedure (see page 11-385).
10. Start the engine.
11. Check under these conditions:
    - A/C off
    - Headlights off
    - Rear window defogger off
12. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) 1 minute.
13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1549 indicated?

    YES—Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P16BB: Alternator B Terminal Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check under these conditions:
    - A/C on
    - Temperature control at maximum cool
    - Blower fan at maximum speed
    - Headlights on high beam
    - Rear window defogger on
5. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) 1 minute.
6. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P16BB indicated?

    YES—Go to step 7.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, and check the battery performance, refer to the 2008-2009 Accord Service Manual (see page 22-88). ■
7. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box (+B line).

    Are the connections and terminals OK?

    YES—Go to step 8.

    NO—Repair the connectors or terminals, then go to step 9.

8. Check for an open in the wire between the alternator and under-hood fuse/relay box at the engine harness.

   Is the harness OK?

   YES—Replace the alternator (see page 4-45), then go to step 9.

   NO—Repair open in the wire between the alternator and the under-hood fuse/relay box, then go to step 9.

9. Turn the ignition switch to ON (II).

10. Reset the ECM/PCM with the HDS.

11. Do the ECM/PCM idle learn procedure (see page 11-385).

12. Start the engine.

13. Check under these conditions:

    - A/C on
    - Temperature control at maximum cool
    - Blower fan at maximum speed
    - Headlights on high beam
    - Rear window defogger on

14. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) 1 minute.

15. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P16BB indicated?

    YES—Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P16BC: Alternator FR Terminal Circuit/ IGP Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check for poor connections or loose terminals at the alternator 4P connector.

   Are the connections and terminals OK?

   YES—Go to step 2.

   NO—Repair the connections or terminals, then go to step 18.

2. Turn the ignition switch to ON (II).

3. Clear the DTC with the HDS.

4. Start the engine.

5. Check under these conditions:

   - A/C on
   - Temperature control at maximum cool
   - Blower fan at maximum speed
   - Headlights on high beam
   - Rear window defogger on

6. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) for 1 minute.

7. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P16BC indicated?

   YES—Go to step 8.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the alternator.■

8. Turn the ignition switch to LOCK (0).

9. Disconnect the alternator 4P connector.

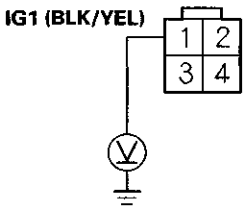
10. Turn the ignition switch to ON (II).

(cont'd)

DTC Troubleshooting (cont'd)

11. Measure the voltage between alternator 4P connector terminal No. 1 and body ground.

ALTERNATOR 4P CONNECTOR



Wire side of female terminals

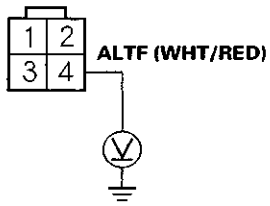
Is there battery voltage?

YES—Go to step 12.

NO—Repair open in the wire between the alternator (IG1 line) and the No. 7 ACG (15 A) fuse in the driver's under-dash fuse/relay box, then go to step 17.

12. Measure the voltage between alternator 4P connector terminal No. 4 and body ground.

ALTERNATOR 4P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Replace the alternator (see page 4-45), then go to step 17.

NO—Go to step 13.

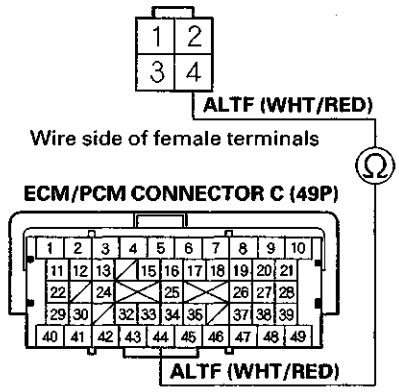
13. Turn the ignition switch to LOCK (0).

14. Jump the SCS line with the HDS.

15. Disconnect ECM/PCM connector C (49P).

16. Check for continuity between alternator 4P connector terminal No. 4 and ECM/PCM connector terminal C44.

ALTERNATOR 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 26.

NO—Repair open in the wire between the ECM/PCM (C44) and the alternator, then go to step 18.

17. Turn the ignition switch to LOCK (0).

18. Reconnect all connectors.

19. Turn the ignition switch to ON (II).

20. Reset the ECM/PCM with the HDS.

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Start the engine.

23. Check under these conditions:

    - A/C on
    - Temperature control at maximum cool
    - Blower fan at maximum speed
    - Headlights on high beam
    - Rear window defogger on

24. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) for 1 minute.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P16BC indicated?

    YES—Check for poor connections or loose terminals at the alternator and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

26. Reconnect all connectors.

27. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

28. Start the engine.

29. Check under these conditions:

    - A/C on
    - Temperature control at maximum cool
    - Blower fan at maximum speed
    - Headlights on high beam
    - Rear window defogger on

30. Hold the engine speed at 2,000 rpm (A/T in P or N, M/T in neutral) 1 minute.

31. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P16BC indicated?

    YES—Check for poor connections or loose terminals at the alternator and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 28. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P2183: ECT Sensor 2 Circuit Range/ Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P0111 is stored at the same time as DTC P2183, troubleshoot DTC P0111 first, then recheck for DTC P2183.

1. Check for poor connections or loose terminals at ECT sensor 1 and ECT sensor 2.

   Are the connections and terminals OK?

   YES—Go to step 2.

   NO—Repair the connectors or terminals, then go to step 27.

2. Turn the ignition switch to ON (II).
3. Check for Temporary DTCs or DTCs with the HDS.

   Are DTC P1116 and P2183 indicated at the same time?

   YES—Go to step 15.

   NO—Go to step 4.

4. Start the engine, and let it idle for 10 minutes.
5. Check ECT SENSOR 2 in the DATA LIST with the HDS.

   Is about 120 °F (49 °C) or less indicated?

   YES—Replace ECT sensor 2 (see page 11-274), then go to step 27.

   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).
7. Drain the coolant (see page 10-6).
8. Remove ECT sensor 2 (see page 11-274).
9. Allow ECT sensor 2 to cool to ambient temperature.
10. Note the ambient temperature.
11. Connect ECT sensor 2 to its 2P connector, but do not install it on the engine.
12. Turn the ignition switch to ON (II).
13. Note the value of ECT SENSOR 2 quickly in the DATA LIST with the HDS.
14. Compare the value of ECT SENSOR 2 and the ambient temperature.

    Does ECT SENSOR 2 differ 5.4 °F (3 °C) or more?

    YES—Replace ECT sensor 2 (see page 11-274), then go to step 27.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM. ■
15. Start the engine, and let it idle for 10 minutes.
16. Check ECT SENSOR 1 in the DATA LIST with the HDS.

    Is about 120 °F (49 °C) or less indicated?

    YES—Replace ECT sensor 1 (see page 11-274), then go to step 27.

    NO—Go to step 17.

17. Let the engine idle 10 minutes.
18. Check ECT SENSOR 2 in the DATA LIST with the HDS.

    Is about 120 °F (49 °C) or less indicated?

    YES—Replace ECT sensor 2 (see page 11-274), then go to step 27.

    NO—Go to step 19.

19. Turn the ignition switch to LOCK (0).

20. Drain the coolant (see page 10-6).

21. Remove ECT sensor 1 (see page 11-274), and ECT sensor 2 (see page 11-274).

22. Allow the sensors to cool to ambient temperature.

23. Note the ambient temperature.

24. Connect ECT sensor 1 and ECT sensor 2 to their 2P connectors, but do not install them.

25. Note the value of ECT SENSOR 1 and ECT SENSOR 2 quickly in the DATA LIST with the HDS.

26. Compare the value of ECT SENSOR 1 and the ambient temperature, and the value of ECT SENSOR 2 and the ambient temperature individually.

    Does one of the sensor differ more than 5.4 °F (3 °C) from the ambient temperature?

    YES—Replace the sensor that differed more than 5.4 °F (3 °C) from the ambient temperature, then go to step 27.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM.■

27. Turn the ignition switch to ON (II).

28. Reset the ECM/PCM with the HDS.

29. Do the ECM/PCM idle learn procedure (see page 11-385).

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2183 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC Troubleshooting (cont'd)

DTC P2184: ECT Sensor 2 Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check ECT SENSOR 2 in the DATA LIST with the HDS.

   Is about 356 °F (180 °C) or more, or 0.08 V or less indicated?

   YES—Go to step 3.

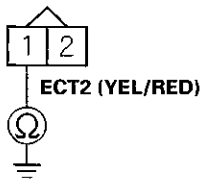
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 2 and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the ECT sensor 2 2P connector.
5. Turn the ignition switch to ON (II).
6. Check ECT SENSOR 2 in the DATA LIST with the HDS.

   Is about 356 °F (180 °C) or more, or 0.08 V or less indicated?

   YES—Go to step 7.

   NO—Go to step 11.
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Check for continuity between ECT sensor 2 2P connector terminal No. 1 and body ground.

ECT SENSOR 2 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between ECT sensor 2 and the ECM/PCM (A21), then go to step 13.

NO—Go to step 18.

11. Turn the ignition switch to LOCK (0).
12. Replace ECT sensor 2 (see page 11-274).
13. Reconnect all connectors.
14. Turn the ignition switch to ON (II).
15. Reset the ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see page 11-385).
17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2184 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 2 and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

18. Reconnect all connectors.

19. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2184 indicated?

    YES—Check for poor connections or loose terminals at ECT sensor 2 and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2185: ECT Sensor 2 Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Check ECT SENSOR 2 in the DATA LIST with the HDS.

    Is about −40 °F (−40 °C) or less, or 4.92 V or more indicated?

    YES—Go to step 3.

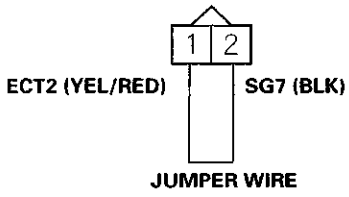
    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 2 and the ECM/PCM.■

3. Turn the ignition switch to LOCK (0).

4. Disconnect the ECT sensor 2 2P connector.

5. Connect ECT sensor 2 2P connector terminals No. 1 and No. 2 with a jumper wire.

ECT SENSOR 2 2P CONNECTOR



Wire side of female terminals

6. Turn the ignition switch to ON (II).

7. Check ECT SENSOR 2 in the DATA LIST with the HDS.

    Is about −40 °F (−40 °C) or less, or 4.92 V or more indicated?

    YES—Go to step 8.

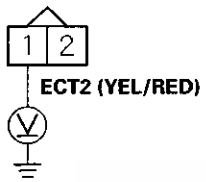
    NO—Go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

8. Turn the ignition switch to LOCK (0).
9. Remove the jumper wire from the ECT sensor 2 2P connector.
10. Turn the ignition switch to ON (II).
11. Measure the voltage between ECT sensor 2 2P connector terminal No. 1 and body ground.

ECT SENSOR 2 2P CONNECTOR



Wire side of female terminals

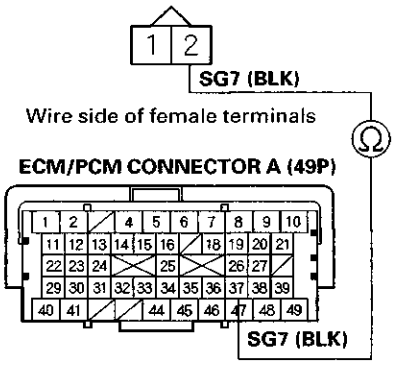
Is there about 5 V?

YES—Go to step 12.

NO—Go to step 16.

12. Turn the ignition switch to LOCK (0).
13. Jump the SCS line with the HDS.
14. Disconnect ECM/PCM connector A (49P).
15. Check for continuity between ECM/PCM connector terminal A37 and ECT sensor 2 2P connector terminal No. 2.

ECT SENSOR 2 2P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 27.

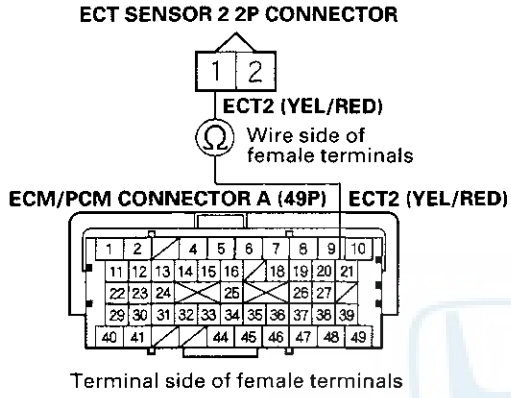
NO—Repair open in the wire between the ECM/PCM (A37) and ECT sensor 2, then go to step 22.

16. Turn the ignition switch to LOCK (0).

17. Jump the SCS line with the HDS.

18. Disconnect ECM/PCM connector A (49P).

19. Check for continuity between ECM/PCM connector terminal A21 and ECT sensor 2 2P connector terminal No. 1.



Terminal side of female terminals

Is there continuity?

YES—Go to step 27.

NO—Repair open in the wire between the ECM/PCM (A21) and ECT sensor 2, then go to step 22.

20. Turn the ignition switch to LOCK (0).

21. Replace ECT sensor 2 (see page 11-274).

22. Reconnect all connectors.

23. Turn the ignition switch to ON (II).

24. Reset the ECM/PCM with the HDS.

25. Do the ECM/PCM idle learn procedure (see page 11-385).

26. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2185 indicated?

YES—Check for poor connections or loose terminals at ECT sensor 2 and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

27. Reconnect all connectors.

28. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

29. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2185 indicated?

YES—Check for poor connections or loose terminals at ECT sensor 2 and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC Troubleshooting (cont'd)

DTC P2195: Rear A/F Sensor (Bank 1, Sensor 1) Signal Stuck Lean

DTC P2197: Front A/F Sensor (Bank 2, Sensor 1) Signal Stuck Lean

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).
- If the vehicle was out of fuel and the engine stalled before this DTC was stored, refuel, and clear the DTC with the HDS.
- If DTC P2101, P2118, P2135, P2138, P2176, or a combination of P2122 and P2127, P2122 and P2138 or P2127 and P2138 is stored at the same time as DTC P2195 (P2197)*, troubleshoot those DTCs first, then recheck for DTC P2195 (P2197)*.

1. Check the installation of the A/F sensor (Sensor 1).

   Is the A/F sensor loose or disconnected from the exhaust pipe?

   YES—Go to step 6.

   NO—Go to step 2.

2. Turn the ignition switch to ON (II).
3. Clear the DTC with the HDS.
4. Start the engine, and let it idle for 2 minutes.
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2195 and/or P2197 indicated?*

   YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 13.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

6. Turn the ignition switch to LOCK (0).
7. Reinstall the A/F sensor (Sensor 1) (see page 11-275).
8. Turn the ignition switch to ON (II).
9. Reset the ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see page 11-385).
11. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2195 and/or P2197 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

    NO—Go to step 12.

12. Monitor the OBD STATUS for DTC P2195 and/or P2197* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 11, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

13. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

14. Start the engine, and let it idle for 2 minutes.

15. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2195 and/or P2197 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 14. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 16.

16. Monitor the OBD STATUS for DTC P2195 and/or P2197* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 15, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 14. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2227: BARO Sensor Circuit Range/ Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P0107, P0108, P1128, and/or P1129 are stored at the same time as DTC P2227, troubleshoot those DTCs first, then recheck for DTC P2227.

1. Turn the ignition switch to ON (II), and wait 2 seconds.

2. Check the BARO SENSOR in the DATA LIST with the HDS.

   Is about 101 kPa (29.9 in.Hg, 760 mmHg), or about 2.9 V at sea level indicated?

   YES—Go to step 3.

   NO—Go to step 7.

3. Clear the DTC with the HDS.

4. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

5. Test-drive under these conditions:

   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 4th
   - Throttle position between 14 and 29 degrees for at least 3 seconds

(cont'd)

DTC Troubleshooting (cont'd)

6. Monitor the OBD STATUS for DTC P2227 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 7.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. If the screen indicates NOT COMPLETED, go to step 4 and recheck.

7. Check the intake air system for clogging or the restrictions (foreign material, dirty air cleaner element, etc).

   Is the intake air system clogged or restricted?

   YES—Remove the clog or restriction, then go to step 9.

   NO—Go to step 8.

8. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

9. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

10. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Throttle position between 14 and 29 degrees for at least 3 seconds

11. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2227 indicated?

    YES—Check for poor connections or loose terminals at the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 9. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 12.

12. Monitor the OBD STATUS for DTC P2227 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 11, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 9. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 9.

DTC P2228: BARO Sensor Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check the BARO SENSOR in the DATA LIST with the HDS.

   Is about 53 kPa (15.6 in.Hg, 397 mmHg), or 1.58 V or less indicated?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. ■
3. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2228 indicated?

   YES—Check for poor connections or loose terminals at the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

   NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P2229: BARO Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check the BARO SENSOR in the DATA LIST with the HDS.

   Is about 160 kPa (47.2 in.Hg, 1,200 mmHg), or 4.49 V, or more indicated?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. ■
3. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2229 indicated?

   YES—Check for poor connections or loose terminals at the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

   NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P2237: Rear A/F Sensor (Bank 1, Sensor 1) IP Circuit High Voltage

DTC P2240: Front A/F Sensor (Bank 2, Sensor 1) IP Circuit High Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

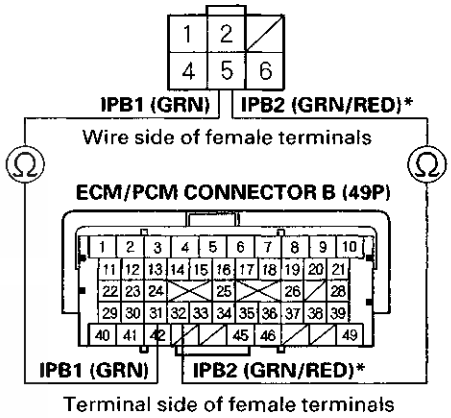
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2237 and/or P2240 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 6P connector.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 5 and ECM/PCM connector terminal B31 (B32)*.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Is there continuity?

YES—Go to step 10.

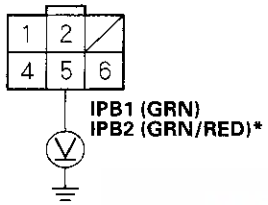
NO—Repair open in the wire between the ECM/PCM (B31 (B32)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect ECM/PCM connector B (49P).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.

12. Measure the voltage between A/F sensor (Sensor 1) 6P connector terminal No. 5 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the ECM/PCM with the HDS.

17. Do the ECM/PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2237 and/or P2240 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2237 and/or P2240* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

(cont'd)

DTC Troubleshooting (cont'd)

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2237 and/or P2240' indicated?

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2237 and/or P2240' in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2237: Rear A/F Sensor (Bank 1, Sensor 1) IP Circuit High Voltage

DTC P2240: Front A/F Sensor (Bank 2, Sensor 1) IP Circuit High Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (') applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

4. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2237 and/or P2240' indicated?

    YES—Go to step 5.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM.■

5. Turn the ignition switch to LOCK (0).

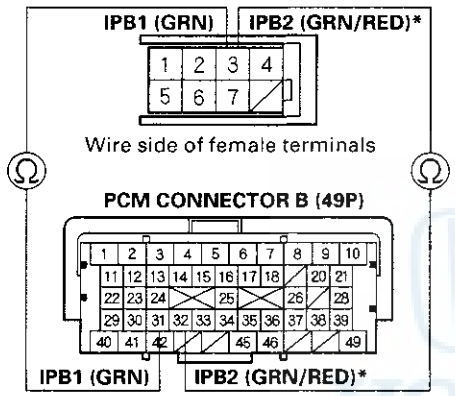
6. Jump the SCS line with the HDS.

7. Disconnect the A/F sensor (Sensor 1) 8P connector.

8. Disconnect PCM connector B (49P).

9. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 3 and PCM connector terminal B31 (B32)*.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

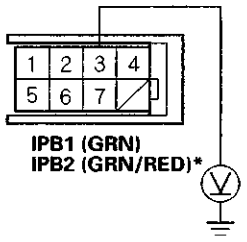
NO—Repair open in the wire between the PCM (B31 (B32)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect PCM connector B (49P).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle 2 minutes.

12. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 3 and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

(cont'd)

DTC Troubleshooting (cont'd)

13. Replace the A/F sensor (Sensor 1) (see page 11-275).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2237 and/or P2240' indicated?

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2237 and/or P2240' in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).
21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
23. Start the engine, and let it idle.
24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2237 and/or P2240' indicated?

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2237 and/or P2240' in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2238: Rear A/F Sensor (Bank 1, Sensor 1) IP Circuit Low Voltage

DTC P2241: Front A/F Sensor (Bank 2, Sensor 1) IP Circuit Low Voltage

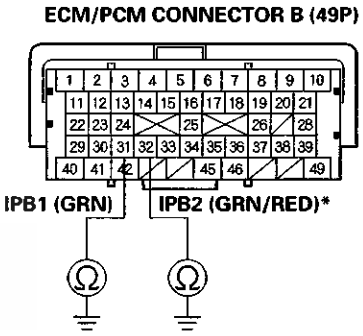
NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2238 and/or P2241 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 6P connector.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between ECM/PCM connector terminal B31 (B32)* and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (B31 (B32)*) and the A/F sensor (Sensor 1), then go to step 14.

NO—Go to step 10.

(cont'd)

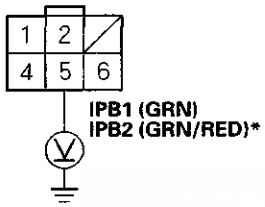
DTC Troubleshooting (cont'd)

10. Reconnect ECM/PCM connector B (49P).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.

12. Measure the voltage between A/F sensor (Sensor 1) 6P connector terminal No. 5 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the ECM/PCM with the HDS.

17. Do the ECM/PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2238 and/or P2241 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2238 and/or P2241* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2238 and/or P2241 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2238 and/or P2241* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2238: Rear A/F Sensor (Bank 1, Sensor 1) IP Circuit Low Voltage

DTC P2241: Front A/F Sensor (Bank 2, Sensor 1) IP Circuit Low Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2238 and/or P2241 indicated?*

   YES—Go to step 5.

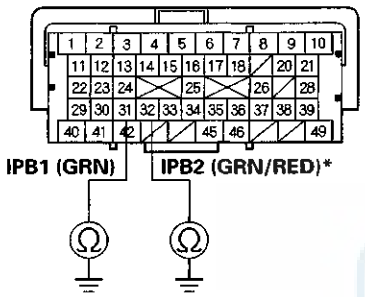
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. ■

(cont'd)

DTC Troubleshooting (cont'd)

5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (49P).
9. Check for continuity between PCM connector terminal B31 (B32)* and body ground.

PCM CONNECTOR B (49P)



Terminal side of female terminals

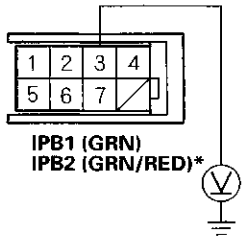
Is there continuity?

YES—Repair short in the wire between the PCM (B31 (B32)*) and the A/F sensor (Sensor 1), then go to step 14.

NO—Go to step 10.

10. Reconnect PCM connector B (49P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 3 and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the PCM with the HDS.

17. Do the PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2238 and/or P2241 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2238 and/or P2241* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2238 and/or P2241 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2238 and/or P2241* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P2243: Rear A/F Sensor (Bank 1, Sensor 1) VCENT Circuit High Voltage

DTC P2247: Front A/F Sensor (Bank 2, Sensor 1) VCENT Circuit High Voltage

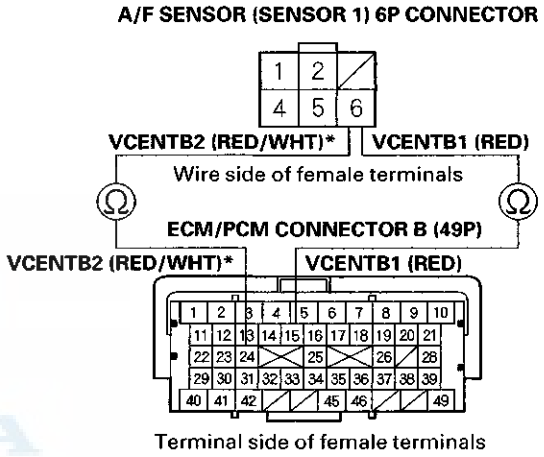
NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2243 and/or P2247 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 6P connector.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 6 and ECM/PCM connector terminal B15 (B24)*.



Is there continuity?

YES—Go to step 10.

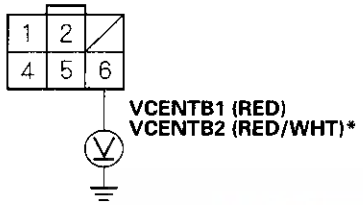
NO—Repair open in the wire between the ECM/PCM (B15 (B24)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect ECM/PCM connector B (49P).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.

12. Measure the voltage between A/F sensor (Sensor 1) 6P connector terminal No. 6 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the ECM/PCM with the HDS.

17. Do the ECM/PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2243 and/or P2247 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2243 and/or P2247* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

(cont'd)

DTC Troubleshooting (cont'd)

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    If DTC P2243 and/or P2247 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2243 and/or P2247* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2243: Rear A/F Sensor (Bank 1, Sensor 1) VCENT Circuit High Voltage

DTC P2247: Front A/F Sensor (Bank 2, Sensor 1) VCENT Circuit High Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

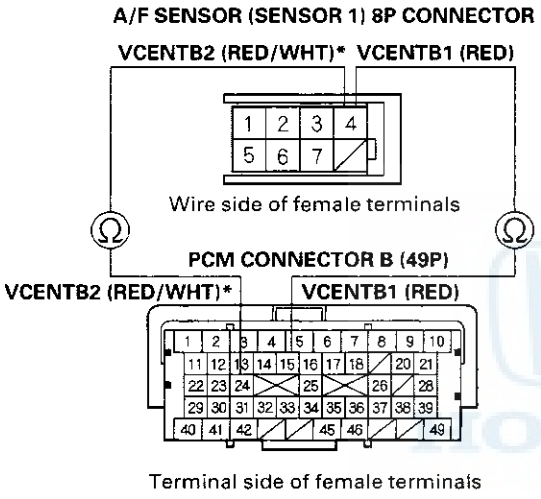
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2243 and/or P2247 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. ■

5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (49P).
9. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 4 and PCM connector terminal B15 (B24)*.

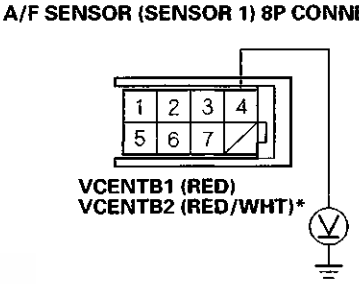


Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between the PCM (B15 (B24)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect PCM connector B (49P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 4 and body ground.



Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

(cont'd)

DTC Troubleshooting (cont'd)

13. Replace the A/F sensor (Sensor 1) (see page 11-275).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2243 and/or P2247 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2243 and/or P2247* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).
21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
23. Start the engine, and let it idle.
24. Check for Temporary DTCs or DTCs with the HDS.

    If DTC P2243 and/or P2247 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2243 and/or P2247* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2245: Rear A/F Sensor (Bank 1, Sensor 1) VCENT Circuit Low Voltage

DTC P2249: Front A/F Sensor (Bank 2, Sensor 1) VCENT Circuit Low Voltage

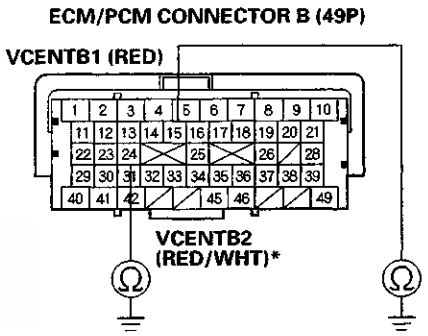
NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2245 and/or P2249 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 6P connector.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between ECM/PCM connector terminal B15 (B24)* and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (B15 (B24)*) and the A/F sensor (Sensor 1), then go to step 14.

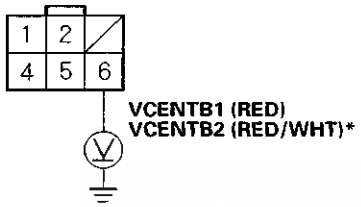
NO—Go to step 10.

(cont'd)

DTC Troubleshooting (cont'd)

10. Reconnect ECM/PCM connector B (49P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure the voltage between A/F sensor (Sensor 1) 6P connector terminal No. 6 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2245 and/or P2249 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2245 and/or P2249* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    If DTC P2245 and/or P2249 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2245 and/or P2249* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2245: Rear A/F Sensor (Bank 1, Sensor 1) VCENT Circuit Low Voltage

DTC P2249: Front A/F Sensor (Bank 2, Sensor 1) VCENT Circuit Low Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

4. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2245 and/or P2249 indicated?*

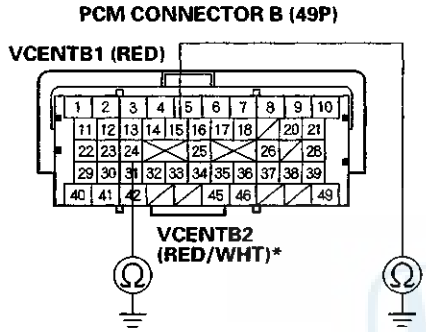
    YES—Go to step 5.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM.■

(cont'd)

DTC Troubleshooting (cont'd)

5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (49P).
9. Check for continuity between PCM connector terminal B15 (B24)* and body ground.



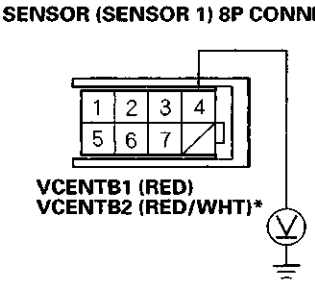
Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the PCM (B15 (B24)*) and the A/F sensor (Sensor 1), then go to step 14.

NO—Go to step 10.

10. Reconnect PCM connector B (49P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 4 and body ground.



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the PCM with the HDS.

17. Do the PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2245 and/or P2249 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2245 and/or P2249* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    If DTC P2245 and/or P2249 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2245 and/or P2249* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P2251: Rear A/F Sensor (Bank 1, Sensor 1) VS Circuit High Voltage

DTC P2254: Front A/F Sensor (Bank 2, Sensor 1) VS Circuit High Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P2251 and/or P2254* is stored at the same time as DTC P0134 and/or P0154*, troubleshoot DTC P2251 and/or P2254* first, then recheck for P0134 and/or P0154*.
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

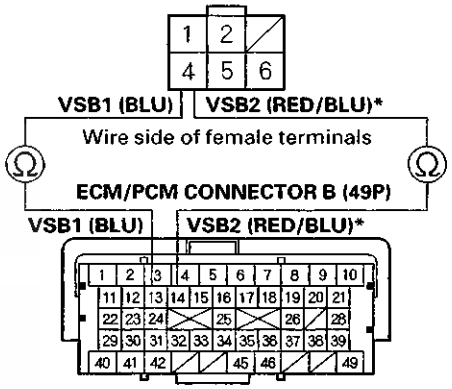
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2251 and/or P2254 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 6P connector.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between A/F sensor (Sensor 1) 6P connector terminal No. 4 and ECM/PCM connector terminal B13 (B14)*.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

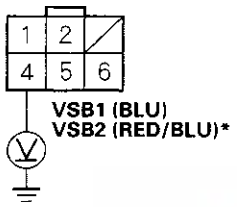
NO—Repair open in the wire between the ECM/PCM (B13 (B14)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect ECM/PCM connector B (49P).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.

12. Measure the voltage between A/F sensor (Sensor 1) 6P connector terminal No. 4 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the ECM/PCM with the HDS.

17. Do the ECM/PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2251 and/or P2254 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2251 and/or P2254* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

(cont'd)

DTC Troubleshooting (cont'd)

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2251 and/or P2254 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2251 and/or P2254* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2251: Rear A/F Sensor (Bank 1, Sensor 1) VS Circuit High Voltage

DTC P2254: Front A/F Sensor (Bank 2, Sensor 1) VS Circuit High Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P2251 and/or P2254* is stored at the same time as DTC P0134 and/or P0154*, troubleshoot DTC P2251 and/or P2254* first, then recheck for P0134 and/or P0154*.
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2251 and/or P2254 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM.■

5. Turn the ignition switch to LOCK (0).

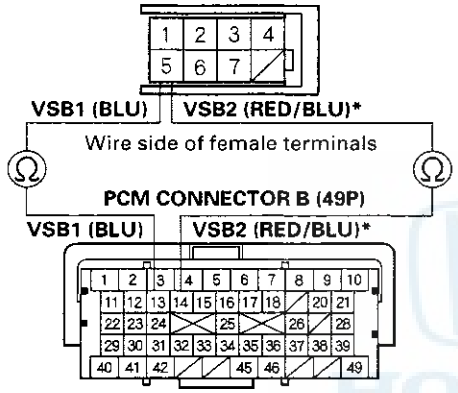
6. Jump the SCS line with the HDS.

7. Disconnect the A/F sensor (Sensor 1) 8P connector.

8. Disconnect PCM connector B (49P).

9. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 5 and PCM connector terminal B13 (B14)*.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

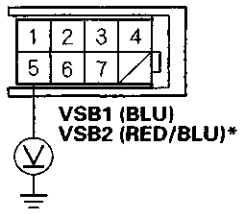
NO—Repair open in the wire between the PCM (B13 (B14)*) and the A/F sensor (Sensor 1), then go to step 14.

10. Reconnect PCM connector B (49P).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

12. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 5 and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

(cont'd)

DTC Troubleshooting (cont'd)

13. Replace the A/F sensor (Sensor 1) (see page 11-275).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2251 and/or P2254 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

    NO—Go to step 19.
19. Monitor the OBD STATUS for DTC P2251 and/or P2254* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.
20. Turn the ignition switch to LOCK (0).
21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
23. Start the engine, and let it idle.
24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2251 and/or P2254 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1.

    NO—Go to step 25.
25. Monitor the OBD STATUS for DTC P2251 and/or P2254* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2252: Rear A/F Sensor (Bank 1, Sensor 1) VS Circuit Low Voltage

DTC P2255: Front A/F Sensor (Bank 2, Sensor 1) VS Circuit Low Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

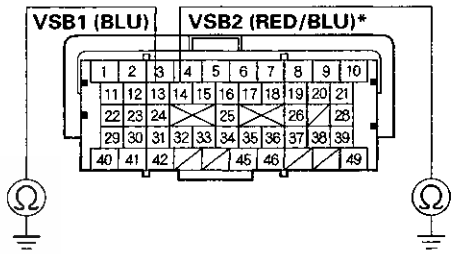
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2252 and/or P2255 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 6P connector.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between ECM/PCM connector terminal B13 (B14)* and body ground.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (B13 (B14)*) and the A/F sensor (Sensor 1), then go to step **14**.

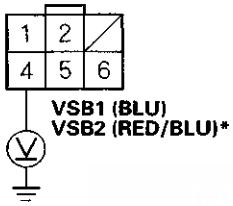
NO—Go to step **10**.

(cont'd)

DTC Troubleshooting (cont'd)

10. Reconnect ECM/PCM connector B (49P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure the voltage between A/F sensor (Sensor 1) 6P connector terminal No. 4 and body ground.

A/F SENSOR (SENSOR 1) 6P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2252 and/or P2255 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2252 and/or P2255* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2252 and/or P2255' indicated?

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2252 and/or P2255' in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2252: Rear A/F Sensor (Bank 1, Sensor 1) VS Circuit Low Voltage

DTC P2255: Front A/F Sensor (Bank 2, Sensor 1) VS Circuit Low Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (') applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2252 and/or P2255' indicated?

   YES—Go to step 5.

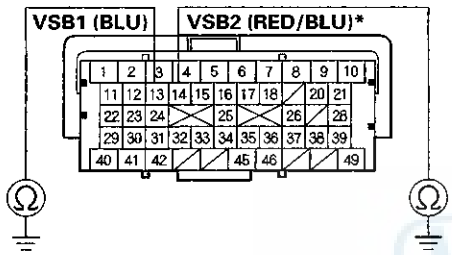
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM.■

(cont'd)

DTC Troubleshooting (cont'd)

5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (49P).
9. Check for continuity between PCM connector terminal B13 (B14)* and body ground.

PCM CONNECTOR B (49P)



Terminal side of female terminals

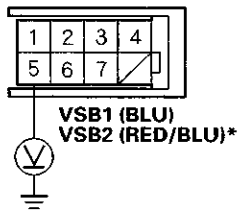
Is there continuity?

YES—Repair short in the wire between the PCM (B13 (B14)*) and the A/F sensor (Sensor 1), then go to step 14.

NO—Go to step 10.

10. Reconnect PCM connector B (49P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 5 and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Is there about 0.2 V or less?

YES—Go to step 20.

NO—Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see page 11-275).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the PCM with the HDS.

17. Do the PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2252 and/or P2255 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P2252 and/or P2255* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch to LOCK (0).

21. Reconnect all connectors.

22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

23. Start the engine, and let it idle.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2252 and/or P2255 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P2252 and/or P2255* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 23. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P2610: ECM/PCM Ignition Off Internal Timer Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2610 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
4. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2610 indicated?

   YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

   NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2627: Rear A/F Sensor (Bank 1, Sensor 1) LABEL Circuit Low Voltage

DTC P2630: Front A/F Sensor (Bank 2, Sensor 1) LABEL Circuit Low Voltage

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

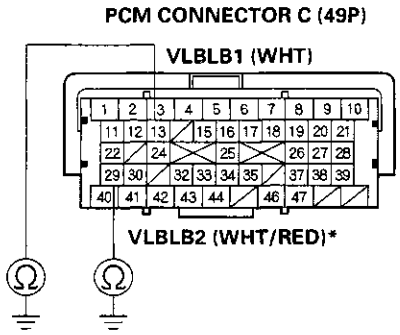
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2627 and/or P2630 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM.■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect PCM connector C (49P).

8. Check for continuity between PCM connector terminal C13 (C29)* and body ground.



Terminal side of female terminals

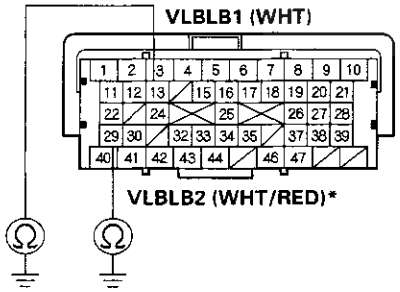
Is there continuity?

YES—Go to step 9.

NO—Go to step 17.

9. Disconnect the A/F sensor (Sensor 1) 8P connector.

10. Check for continuity between PCM connector terminal C13 (C29)* and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the PCM (C13 (C29)*) and the A/F sensor (Sensor 1), then go to step 12.

NO—Go to step 11.

11. Replace the A/F sensor (Sensor 1) (see page 11-275).

12. Reconnect all connectors.

13. Turn the ignition switch to ON (II).

14. Reset the PCM with the HDS.

15. Do the PCM idle learn procedure (see page 11-385).

16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2627 and/or P2630 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

17. Reconnect all connectors.

18. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

19. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2627 and/or P2630 indicated?*

YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1.

NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC Troubleshooting (cont'd)

DTC P2628: Rear A/F Sensor (Bank 1, Sensor 1) LABEL Circuit High Voltage

DTC P2631: Front A/F Sensor (Bank 2, Sensor 1) LABEL Circuit High Voltage

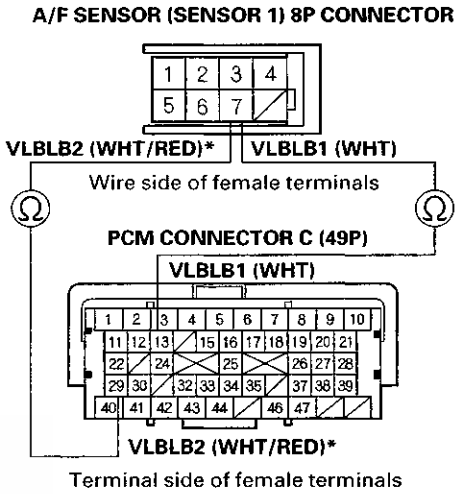
NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2628 and/or P2631 indicated?*

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector C (49P).
9. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 7 and PCM connector terminal C13 (C29)*.



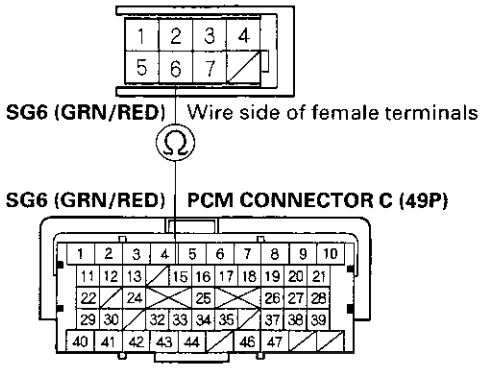
Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between the PCM (C13 (C29)*) and the A/F sensor (Sensor 1), then go to step 15.

10. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 6 and PCM connector terminal C15.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 11.

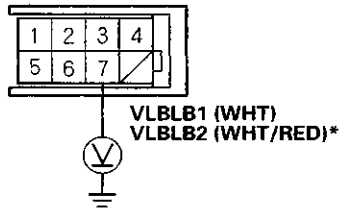
NO—Repair open in the wire between the PCM (C15) and the A/F sensor (Sensor 1), then go to step 15.

11. Reconnect PCM connector C (49P).

12. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle for 2 minutes.

13. Measure the voltage between A/F sensor (Sensor 1) 8P connector terminal No. 7 to body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 14.

NO—Go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

14. Replace the A/F sensor (Sensor 1) (see page 11-275).
15. Reconnect all connectors.
16. Turn the ignition switch to ON (II).
17. Reset the PCM with the HDS.
18. Do the PCM idle learn procedure (see page 11-385).
19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2628 and/or P2631 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
20. Turn the ignition switch to LOCK (0).
21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2628 and/or P2631 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1.

    NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2A00: Rear A/F Sensor (Bank 1, Sensor 1) Circuit Range/Performance Problem

DTC P2A03: Front A/F Sensor (Bank 2, Sensor 1) Circuit Range/Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:
   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 3rd
   - Vehicle speed between 25—55 mph (40—88 km/h) for 5 minutes
   - Drive at a steady speed between 55—75 mph (88—120 km/h) for 10 seconds, then decelerate (with the throttle fully closed) for 8 seconds
5. Monitor the OBD STATUS for DTC P2A00 and/or P2A03* in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 6.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 3 and recheck.

6. Turn the ignition switch to LOCK (0).

7. Replace the A/F sensor (Sensor 1) (see page 11-275).

8. Turn the ignition switch to ON (II).

9. Reset the ECM/PCM with the HDS.

10. Do the ECM/PCM idle learn procedure (see page 11-385).

11. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 3rd
    - Vehicle speed between 25—55 mph (40—88 km/h) for 5 minutes
    - Drive at a steady speed between 55—75 mph (88—120 km/h) for 10 seconds, then decelerate (with the throttle fully closed) for 8 seconds

12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2A00 and/or P2A03 indicated?*

    YES—Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1.

    NO—Go to step 13.

13. Monitor the OBD STATUS for DTC P2A00 and/or P2A03* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 11.

DTC U0029: F-CAN Malfunction (BUS-OFF (ECM/PCM))

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC U0029 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. ■

4. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC U0029 indicated?

   YES—If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

   NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC U0122: F-CAN Malfunction (ECM/PCM-VSA Modulator-Control Unit)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check for Temporary DTCs or DTCs with the HDS.

   Are DTC U0029 and U0122 indicated at the same time?

   YES—Go to troubleshooting for DTC U0029 (see page 11-241).■

   NO—Go to step 3.
3. Clear the DTC with the HDS.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC U0122 indicated?

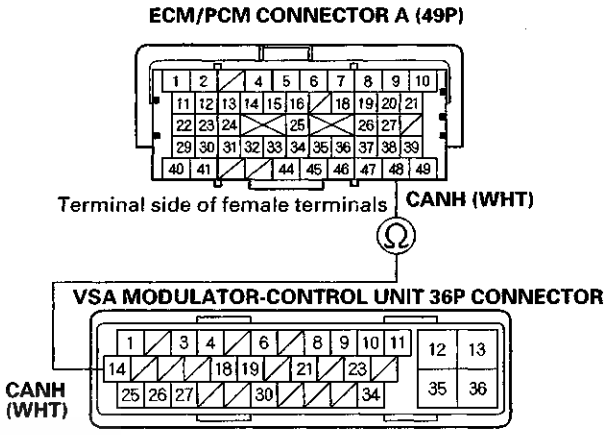
   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the VSA modulator-control unit and the ECM/PCM.■
5. Check for communication to the VSA system with the HDS.

   Does the HDS communicate with the VSA modulator-control unit?

   YES—Go to step 6.

   NO—Go to the DLC circuit troubleshooting (see page 11-259).■
6. Turn the ignition switch to LOCK (0).
7. Jump the SCS line with the HDS.
8. Disconnect the VSA modulator-control unit 36P connector.
9. Disconnect ECM/PCM connector A (49P).
10. Check for continuity between ECM/PCM connector terminal A48 and VSA modulator-control unit 46P connector terminal No. 14.

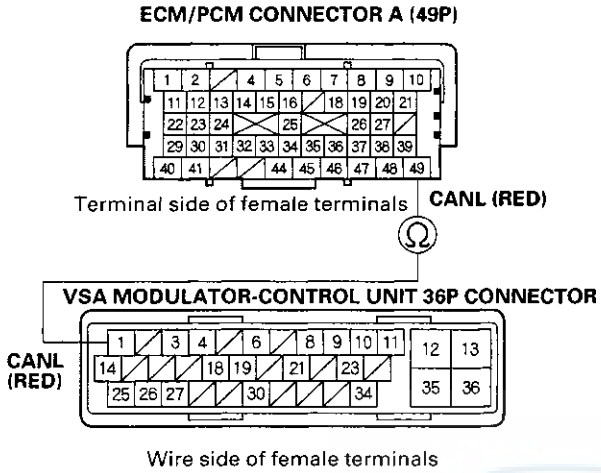


Is there continuity?

YES—Go to step 11.

NO—Repair open in the wire between the ECM/PCM (A48) and the VSA modulator-control unit, then go to step 12.

11. Check for continuity between ECM/PCM connector terminal A49 and VSA modulator-control unit 36P connector terminal No. 1.



Is there continuity?

YES—Update the VSA modulator-control unit if it does not have the latest software, refer to the 2008-2009 Accord Service Manual (see page 19-140), or substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141), then go to step 12 and recheck. If DTC U0122 is not indicated after substitution, replace the original VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141), then go to step 12.

NO—Repair open in the wire between the ECM/PCM (A49) and the VSA modulator-control unit, then go to step 12.

12. Reconnect all connectors.

13. Turn the ignition switch to ON (II).

14. Reset the ECM/PCM with the HDS.

15. Do the ECM/PCM idle learn procedure (see page 11-385).

16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0122 indicated?

YES—Check for poor connections or loose terminals at the VSA modulator unit and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC Troubleshooting (cont'd)

DTC U0155: F-CAN Malfunction (ECM/PCM-Gauge Control Module)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC U0155 indicated?

   YES—Go to step 4.

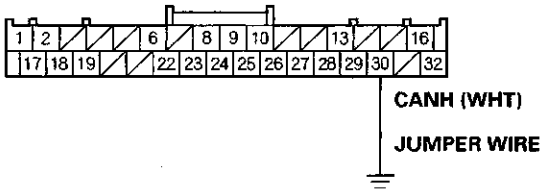
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module and the ECM/PCM. ■
4. Check for body electrical DTCs in the DTCs MENU with the HDS.

   Is DTC B1168, B1169, and/or B1178 indicated?

   YES—Go to step 5.

   NO—Do the gauge control module input test, refer to the 2008-2009 Accord Service Manual (see page 22-320). ■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Remove the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).
8. Disconnect the gauge control module 32P connector.
9. Disconnect ECM/PCM connector A (49P).
10. Connect gauge control module 32P connector terminal No. 30 to body ground with a jumper wire.

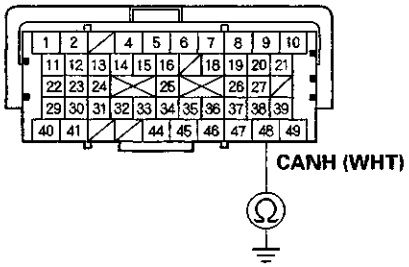
GAUGE CONTROL MODULE 32P CONNECTOR



Wire side of female terminals

11. Check for continuity between ECM/PCM connector terminal A48 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

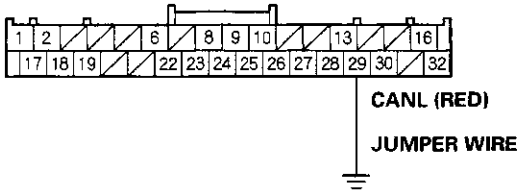
Is there continuity?

YES—Go to step 12.

NO—Repair open in the wire between the ECM/PCM (A48) and gauge control module, then go to step 14.

12. Connect gauge control module 32P connector terminal No. 29 to body ground with a jumper wire.

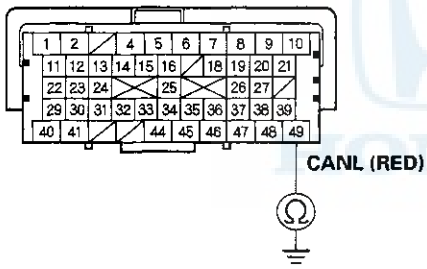
GAUGE CONTROL MODULE 32P CONNECTOR



Wire side of female terminals

13. Check for continuity between ECM/PCM connector terminal A49 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Substitute a known-good gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324), then go to step 14 and recheck. If DTC U0155 is not indicated after substitution, replace the original gauge control module, then go to step 14.

NO—Repair open in the wire between the ECM/PCM (A49) and the gauge control module, then go to step 14.

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the ECM/PCM with the HDS.

17. Do the ECM/PCM idle learn procedure (see page 11-385).

18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0155 indicated?

YES—Check for poor connections or loose terminals at the gauge control module and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC U1101: F-CAN Malfunction (PCM-ACM)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC U1101 indicated?

   YES—Go to step 4.

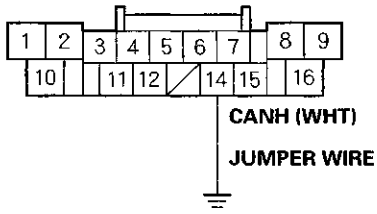
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the engine mount control unit and the PCM. ■
4. Check for ACM system DTCs in the DTCs MENU with the HDS.

   Is DTC P15AB indicated?

   YES—Go to the ACM system's DTC P15AB troubleshooting (see page 4-76).

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the engine mount control unit 16P connector.
8. Disconnect PCM connector A (49P).
9. Connect engine mount control unit 16P connector terminal No. 14 to body ground with a jumper wire.

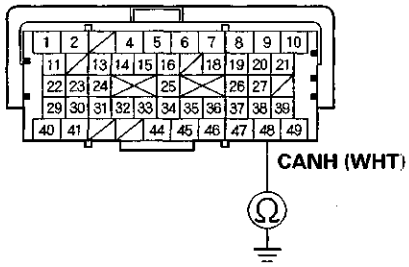
ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

10. Check for continuity between PCM connector terminal A48 and body ground.

PCM CONNECTOR A (49P)



Terminal side of female terminals

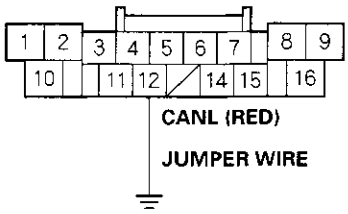
Is there continuity?

YES—Go to step 11.

NO—Repair open in the wire between the PCM (A48) and the engine mount control unit, then go to step 13.

11. Connect engine mount control unit 16P connector terminal No. 12 to body ground with a jumper wire.

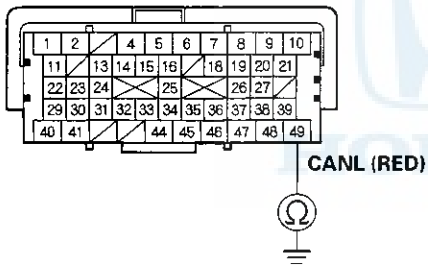
ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

12. Check for continuity between PCM connector terminal A49 and body ground.

PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Substitute a known-good engine mount control unit (see page 4-100), then go to step 13 and recheck. If DTC U1101 is not indicated after substitution, replace the original engine mount control unit (see page 4-100), then go to step 13.

NO—Repair open in the wire between the PCM (A49) and the engine mount control unit, then go to step 14.

13. Reconnect all connectors.

14. Turn the ignition switch to ON (II).

15. Reset the PCM with the HDS.

16. Do the PCM idle learn procedure (see page 11-385).

17. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U1101 indicated?

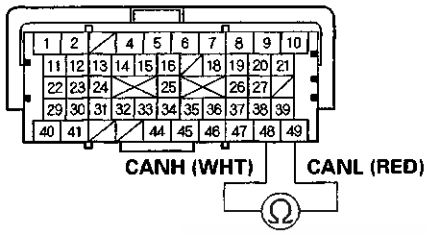
YES—Check for poor connections or loose terminals at the engine mount control unit and the PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

F-CAN Circuit Troubleshooting

1. Turn the ignition switch to LOCK (0).
2. Jump the SCS line with the HDS.
3. Disconnect ECM/PCM connector A (49P).
4. Measure the resistance between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

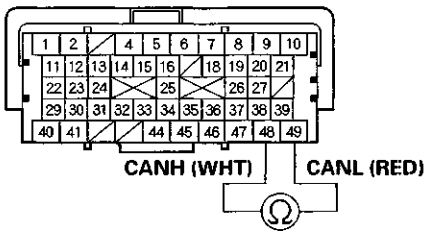
Is there about 88– 111 Ω ?

YES—Go to step 37.

NO—Go to step 5.

5. Disconnect these connectors:
   - Gauge control module 32P, refer to the 2008-2009 Accord Service Manual (see page 22-324).
   - VSA modulator-control unit 36P, refer to the 2008-2009 Accord Service Manual (see page 19-141).
   - Engine mount control unit 16P connector (J35Z2 engine) (see page 4-100).
   - Yaw rate-lateral acceleration sensor 5P, refer to the 2008-2009 Accord Service Manual (see page 19-138).
   - SRS unit A (39P), refer to the 2008-2009 Accord Service Manual (see page 24-221).
   - TPMS control unit 20P (see page 18-25).
   - Navigation unit A (32P) (if equipped), refer to the 2008-2009 Accord Service Manual (see page 23-240).
6. Check for continuity between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

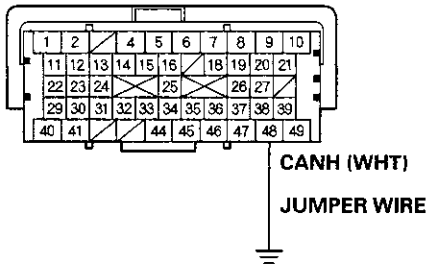
Is there continuity?

YES—Repair short in the wires between ECM/PCM connector terminals A48 and A49. ■

NO—Go to step 7.

7. Connect ECM/PCM connector terminal A48 to body ground with a jumper wire.

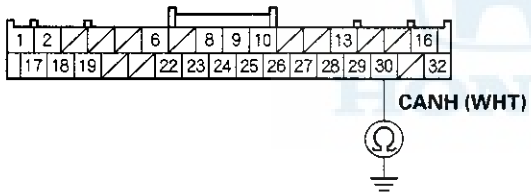
ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

8. Check for continuity between gauge control module 32P connector terminal No. 30 and body ground.

GAUGE CONTROL MODULE 32P CONNECTOR



Wire side of female terminals

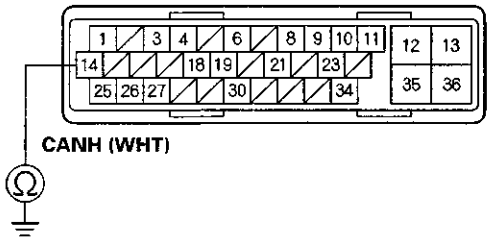
Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the ECM/PCM (A48) and the gauge control module.■

9. Check for continuity between VSA modulator-control unit 36P connector terminal No. 14 and body ground.

VSA MODULATOR-CONTROL UNIT 36P CONNECTOR



Wire side of female terminals

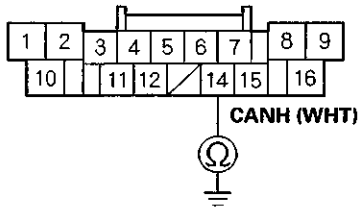
Is there continuity?

YES—
- J35Z2 engine: Go to step 10.
- J35Z3 engine: Go to step 11.

NO—Repair open in the wire between the ECM/PCM (A48) and the VSA modulator-control unit.■

10. Check for continuity between engine mount control unit 16P connector terminal No. 14 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 11.

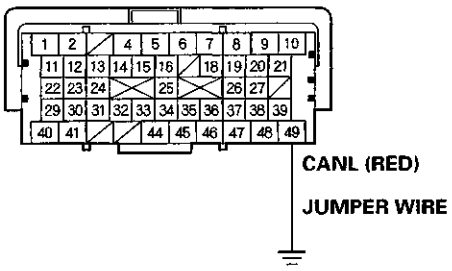
NO—Repair open in the wire between the ECM/PCM (A48) and the engine mount control unit.■

(cont'd)

F-CAN Circuit Troubleshooting (cont'd)

11. Connect ECM/PCM connector terminal A49 to body ground with a jumper wire.

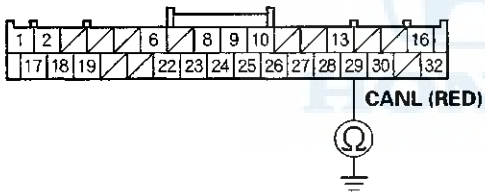
ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

12. Check for continuity between gauge control module 32P connector terminal No. 29 and body ground.

GAUGE CONTROL MODULE 32P CONNECTOR



Wire side of female terminals

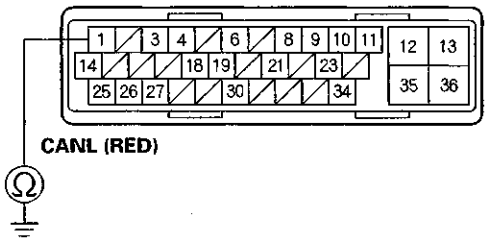
Is there continuity?

YES—Go to step 13.

NO—Repair open in the wire between the ECM/PCM (A49) and the gauge control module. ■

13. Check for continuity between VSA modulator-control unit 36P connector terminal No. 1 and body ground.

VSA MODULATOR-CONTROL UNIT 36P CONNECTOR



Wire side of female terminals

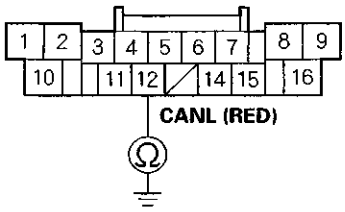
Is there continuity?

YES—
- J35Z2 engine: Go to step 14.
- J35Z3 engine: Go to step 15.

NO—Repair open in the wire between the ECM/PCM (A49) and the VSA modulator-control unit. ■

14. Check for continuity between engine mount control unit 16P connector terminal No. 12 and body ground.

ENGINE MOUNT CONTROL UNIT 16P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 15.

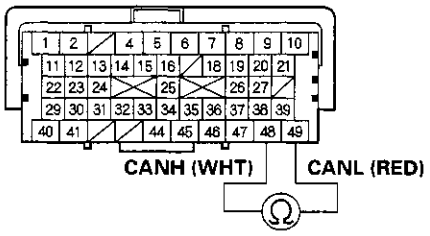
NO—Repair open in the wire between the PCM (A49) and the engine mount control unit. ■

15. Remove the jumper wire from the ECM/PCM connector.

16. Reconnect the gauge control module 32P connector.

17. Measure the resistance between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 2.34—2.86 kΩ ?

YES—Go to step 18.

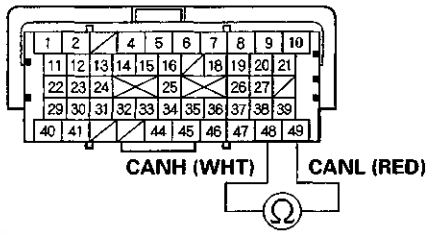
NO—Substitute a known-good gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324), and reconnect ECM/PCM connector A. If the HDS identifies the vehicle, replace the original gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324). ■

18. Disconnect the gauge control module 32P connector.

19. Reconnect the VSA modulator-control unit 36P connector.

20. Measure the resistance between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 108—132 Ω ?

YES—
- J35Z2 engine: Go to step 21.
- J35Z3 engine: Go to step 25.

NO—Substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141), and reconnect ECM/PCM connector A. If the HDS identifies the vehicle, replace the original VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141). ■

(cont'd)

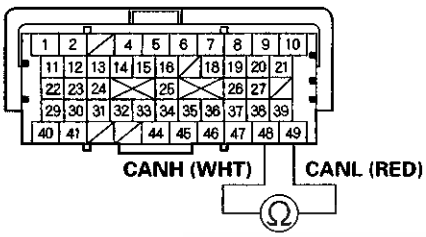
F-CAN Circuit Troubleshooting (cont'd)

21. Disconnect the VSA modulator-control unit 36P connector.

22. Reconnect the engine mount control unit 16P connector.

23. Measure the resistance between PCM connector terminals A48 and A49.

PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 2.34—2.86 kΩ ?

YES—Go to step 24.

NO—Substitute a known-good engine mount control unit (see page 4-100), and reconnect PCM connector A. If the HDS identifies the vehicle, replace the original engine mount control unit (see page 4-100).■

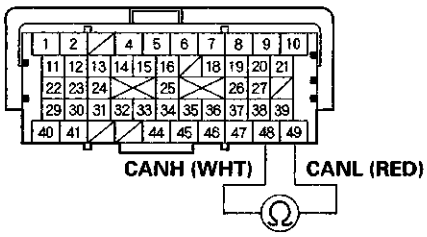
24. Disconnect the engine mount control unit 16P connector.

25. J35Z3 engine: Disconnect the VSA modulator-control unit 36P connector.

26. Reconnect the yaw rate-lateral acceleration sensor 5P connector.

27. Measure the resistance between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 2.34—2.86 kΩ ?

YES—Go to step 28.

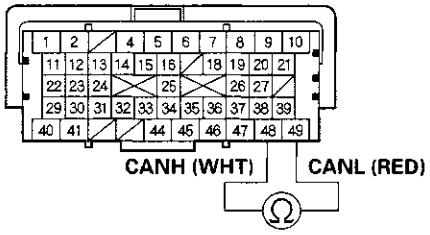
NO—Substitute a known-good yaw rate-lateral acceleration sensor, refer to the 2008-2009 Accord Service Manual (see page 19-138), and reconnect ECM/PCM connector A. If the HDS identifies the vehicle, replace the original yaw rate-lateral acceleration sensor, refer to the 2008-2009 Accord Service Manual (see page 19-138).■

28. Disconnect the yaw-rate lateral acceleration sensor 5P connector.

29. Reconnect SRS unit connector A (39P).

30. Measure the resistance between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 2.34—2.86 kΩ ?

YES—Go to step 31.

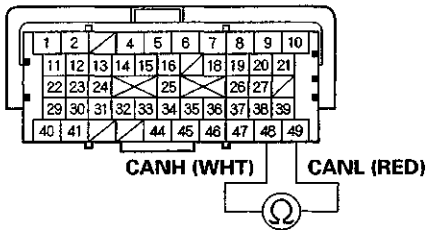
NO—Substitute a known-good SRS unit, refer to the 2008-2009 Accord Service Manual (see page 24-221), and reconnect ECM/PCM connector A. If the HDS identifies the vehicle, replace the original SRS unit, refer to the 2008-2009 Accord Service Manual (see page 24-221).■

31. Disconnect SRS unit connector A (39P).

32. Reconnect the TPMS control unit 20P connector.

33. Measure the resistance between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 2.34—2.86 kΩ ?

YES—
- With navigation system: Go to step 34.
- Without navigation system: Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the HDS identifies the vehicle with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

NO—Substitute a known-good TPMS control unit (see page 18-25), and reconnect ECM/PCM connector A. If the HDS identifies the vehicle, replace the original TPMS control unit (see page 18-25).■

(cont'd)

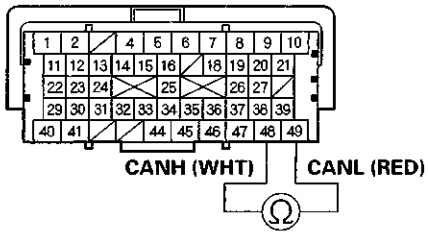
F-CAN Circuit Troubleshooting (cont'd)

34. Disconnect the TPMS control unit 20P connector.

35. Reconnect navigation unit connector A (32P).

36. Measure the resistance between ECM/PCM connector terminals A48 and A49.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there about 2.34 – 2.86 kΩ ?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the HDS identifies the vehicle with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

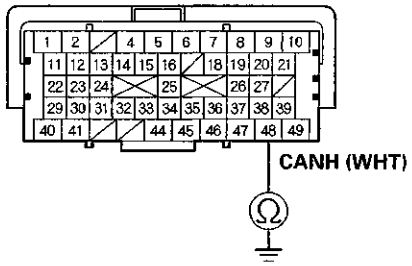
NO—Substitute a known-good navigation unit, refer to the 2008-2009 Accord Service Manual (see page 23-240), and reconnect ECM/PCM connector A. If the HDS identifies the vehicle, replace the original navigation unit, refer to the 2008-2009 Accord Service Manual (see page 23-240).■

37. Disconnect these connectors:

- Gauge control module 32P, refer to the 2008-2009 Accord Service Manual (see page 22-324).
- VSA modulator-control unit 36P, refer to the 2008-2009 Accord Service Manual (see page 19-141).
- Engine mount control unit 16P connector (J35Z2 engine) (see page 4-100).
- Yaw rate-lateral acceleration sensor 5P, refer to the 2008-2009 Accord Service Manual (see page 19-138).
- SRS unit A (39P), refer to the 2008-2009 Accord Service Manual (see page 24-221).
- TPMS control unit 20P (see page 18-25).
- Navigation unit A (32P) (if equipped), refer to the 2008-2009 Accord Service Manual (see page 23-240).

38. Check for continuity between ECM/PCM connector terminal A48 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

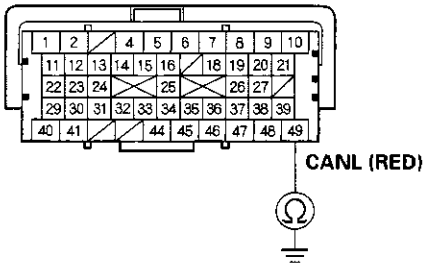
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A48) and the gauge control module, the VSA modulator-control unit, the engine mount control unit, the yaw rate-lateral acceleration sensor, the SRS unit, the TPMS control unit, the navigation unit, or the DLC.■

NO—Go to step 39.

39. Check for continuity between ECM/PCM connector terminal A49 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A49) and the gauge control module, the VSA modulator-control unit, the engine mount control unit, the yaw rate-lateral acceleration sensor, the SRS unit, the TPMS control unit, the navigation unit, or the DLC. ■

NO—Go to step 40.

40. Reconnect all connectors.

41. Connect the HDS to the DLC (see page 11-3).

42. Disconnect the gauge control module 32P connector.

43. Turn the ignition switch to ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324). ■

NO—Go to step 44.

44. Turn the ignition switch to LOCK (0).

45. Reconnect the gauge control module 32P connector.

46. Disconnect the VSA modulator-control unit 36P connector.

47. Turn the ignition switch to ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES—Replace the VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141). ■

NO—
- J35Z2 engine: Go to step 48.
- J35Z3 engine: Go to step 54.

(cont'd)

F-CAN Circuit Troubleshooting (cont'd)

48. Turn the ignition switch to LOCK (0).

49. Reconnect the VSA modulator-control unit 36P connector.

50. Disconnect the engine mount control unit 16P connector.

51. Turn the ignition switch to ON (II), and read the HDS.

    Does the HDS identify the vehicle?

    YES—Replace the engine mount control unit (see page 4-100).■

    NO—Go to step 52.

52. Turn the ignition switch to LOCK (0).

53. Reconnect the engine mount control unit 16P connector.

54. J35Z3 engine: Reconnect the VSA modulator-control unit 36P connector.

55. Disconnect the yaw rate-lateral acceleration sensor 5P connector.

56. Turn the ignition switch to ON (II), and read the HDS.

    Does the HDS identify the vehicle?

    YES—Replace the yaw rate-lateral acceleration sensor, refer to the 2008-2009 Accord Service Manual (see page 19-138).■

    NO—Go to step 57.

57. Turn the ignition switch to LOCK (0).

58. Reconnect the yaw rate-lateral acceleration sensor 5P connector.

59. Disconnect SRS unit connector A (39P).

60. Turn the ignition switch to ON (II), and read the HDS.

    Does the HDS identify the vehicle?

    YES—Replace the SRS unit, refer to the 2008-2009 Accord Service Manual (see page 24-221).■

    NO—Go to step 61.

61. Turn the ignition switch to LOCK (0).

62. Reconnect SRS unit connector A (39P).

63. Disconnect the TPMS control unit 20P connector.

64. Turn the ignition switch to ON (II), and read the HDS.

    Does the HDS identify the vehicle?

    YES—Replace the TPMS control unit (see page 18-25).■

    NO—
    - With navigation system: Go to step 65.
    - Without navigation system: Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the HDS identifies the vehicle with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

65. Turn the ignition switch to LOCK (0).

66. Reconnect the TPMS control unit 20P connector.

67. Disconnect navigation unit connector A (32P).

68. Turn the ignition switch to ON (II), and read the HDS.

    Does the HDS identify the vehicle?

    YES—Replace the navigation unit, refer to the 2008-2009 Accord Service Manual (see page 23-240). ■

    NO—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the HDS identifies the vehicle with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). ■

HONDA

MIL Circuit Troubleshooting

1. Turn the ignition switch to ON (II).
2. Do the gauge self-diagnostic function (see page 22-68).

   Does the MIL indicator flash?

   YES—Go to step 3.

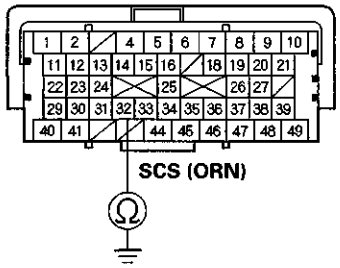
   NO—Substitute a known-good gauge control module, and recheck. If the symptom/indication goes away with a known-good gauge control module, replace the original gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).■
3. Connect the HDS to the DLC (see page 11-3).
4. Check the SCS in the DATA LIST with the HDS.

   Is a short indicated?

   YES—Go to step 5.

   NO—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■
5. Turn the ignition switch to LOCK (0).
6. Disconnect ECM/PCM connector A (49P), then disconnect the HDS.
7. Check for continuity between ECM/PCM connector terminal A32 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A32) and the DLC.■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

DLC Circuit Troubleshooting

NOTE: Make sure the HDS and the HDS DLC cable are not defective.

1. Turn the ignition switch to LOCK (0).
2. Connect the HDS to the DLC (see page 11-3).

   NOTE: Make sure the HDS is properly connected to the DLC.
3. Turn the ignition switch to ON (II), and read the HDS.

   Does the HDS identify the vehicle?

   YES—Go to step 4.

   NO—Go to step 21.
4. Check for Temporary DTCs or DTCs in the PGM-FI system with the HDS.

   Are any Temporary DTCs or DTCs indicated?

   YES—Go to the indicated DTC's troubleshooting.■

   NO—
   - If the HDS does not communicate with the SRS system, go to step 5.
   - If the HDS does not communicate with the VSA system, go to step 7.
   - If the HDS does not communicate with the TPMS, go to step 9.
   - If the HDS does not communicate with the IMMOBI (immobilizer) system, go to step 11.
   - If the HDS does not communicate with the BODY ELECTRICAL system, go to step 13.
5. Turn the ignition switch to LOCK (0).
6. Turn the ignition switch to ON (II), and watch the SRS indicator.

   Does the SRS indicator stay on?

   YES—Go to the SRS system's general troubleshooting information, refer to the 2008-2009 Accord Service Manual (see page 24-34).■

   NO—Go to step 15.
7. Turn the ignition switch to LOCK (0).
8. Turn the ignition switch to ON (II), and watch the VSA indicator.

   Does the VSA indicator stay on?

   YES—Go to the VSA system's general troubleshooting information, refer to the 2008-2009 Accord Service Manual (see page 19-46).■

   NO—Go to step 15.
9. Turn the ignition switch to LOCK (0).
10. Turn the ignition switch to ON (II), and watch the TPMS indicator.

    Does the TPMS indicator stay on?

    YES—Go to the TPMS general troubleshooting information, refer to the 2008-2009 Accord Service Manual (see page 18-57).■

    NO—Go to step 15.

(cont'd)

DLC Circuit Troubleshooting (cont'd)

11. Turn the ignition switch to LOCK (0).

12. Turn the ignition switch to ON (II), and watch the immobilizer indicator.

    Does the immobilizer indicator stay on or flash?

    YES—Go to the immobilizer system's troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 22-388).■

    NO—Go to step 15.

13. Do the gauge self-diagnostic function (see page 22-68).

14. Check the gauge display.

    Is Error 2 indicated?

    YES—Check for B-CAN system DTC's, refer to the 2008-2009 Accord Service Manual (see page 22-125).■

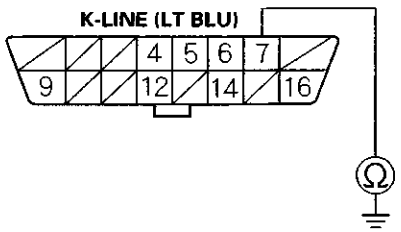
    NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).

16. Disconnect the HDS from the DLC.

17. Check for continuity between DLC terminal No. 7 and body ground.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Is there continuity?

YES—Go to step 18.

NO—Go to step 19.

18. Continue to check for continuity between DLC terminal No. 7 and body ground, while disconnecting these connectors, one at a time:

    - SRS unit connector A (39P)
    - VSA modulator-control unit 36P connector
    - TPMS control unit 20P connector
    - Immobilizer-keyless control unit 7P connector
    - Audio unit connector A (24P)
    - Driver's under-dash fuse/relay box connector Q (20P)

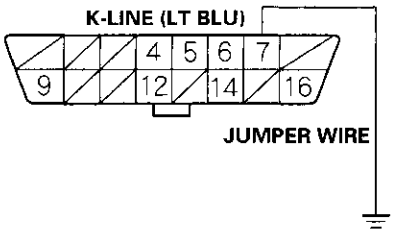
    Does continuity go away when one of the above connectors is disconnected?

    YES—Replace the part that caused continuity go away when it was disconnected.■

    NO—Repair short in the wire between the DLC (K-line) and the VSA modulator-control unit, the SRS unit, the TPMS control unit, the immobilizer-keyless control unit, the audio unit, or the driver's under-dash fuse/relay box.■

19. Connect DLC terminal No. 7 to body ground with a jumper wire.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

20. Check for continuity between body ground and these connector terminals:

Connector	Terminal
SRS unit A (39P)	No. 18 (LT BLU)
VSA modulator-control unit 36P	No. 3 (LT BLU)
TPMS control unit 20P	No. 7 (LT BLU)
Immobilizer-keyless control unit 7P	No. 5 (LT BLU)
Audio unit A (24P)	No. 3 (LT BLU)
Driver's under-dash fuse/ relay box Q (20P)	No. 16 (LT BLU)

Is there continuity between the body ground and each of the terminals in the chart?

YES—Replace the part that does not communicate with the HDS. ■

NO—Repair open in the wire between the DLC (K-line) and the appropriate connector. ■

21. Check for B-CAN system DTCs without the HDS, refer to the 2008-2009 Accord Service Manual (see page 22-125).

Is DTC U0029 and/or U0100 indicated?

YES—Go to step 34.

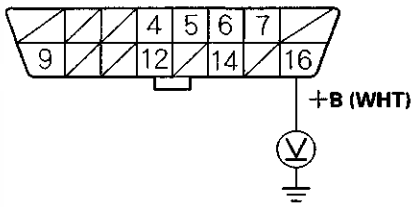
NO—Go to step 22.

22. Turn the ignition switch to LOCK (0).

23. Disconnect the HDS from the DLC.

24. Measure the voltage between DLC terminal No. 16 and body ground.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 25.

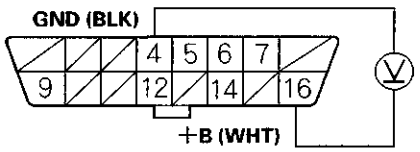
NO—Repair open in the wire between DLC terminal No. 16 and the No. 15 BACK UP (10 A) fuse in the under-hood fuse/relay box. ■

(cont'd)

DLC Circuit Troubleshooting (cont'd)

25. Measure the voltage between DLC terminals No. 4 and No. 16.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

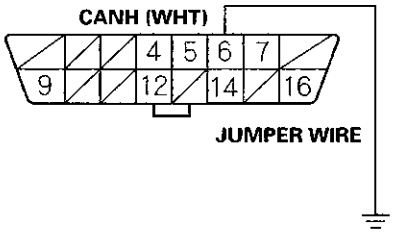
Is there battery voltage?

YES—Go to step 26.

NO—Repair open in the wire between DLC terminal No. 4 and body ground (G502), refer to the 2008-2009 Accord Service Manual (see page 22-32). ■

26. Connect the HDS to the DLC (see page 11-3).
27. Jump the SCS line with the HDS.
28. Disconnect ECM/PCM connector A (49P).
29. Disconnect the HDS from the DLC.
30. Connect DLC terminal No. 6 to body ground with a jumper wire.

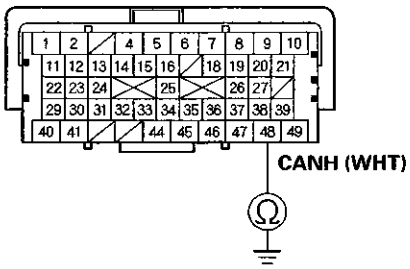
DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

31. Check for continuity between ECM/PCM connector terminal A48 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

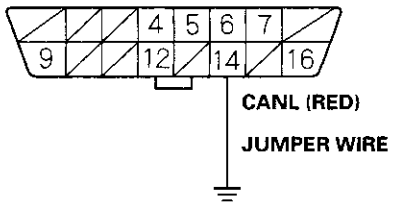
Is there continuity?

YES—Go to step 32.

NO—Repair open in the wire between the ECM/PCM (A48) and DLC terminal No. 6. ■

32. Connect DLC terminal No. 14 to body ground with a jumper wire.

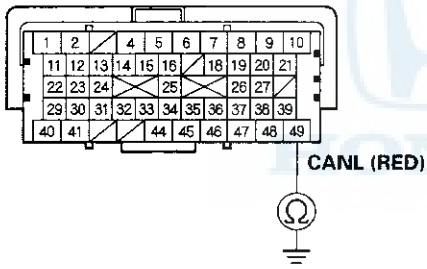
DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

33. Check for continuity between ECM/PCM connector terminal A49 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

NO—Repair open in the wire between the ECM/PCM (A49) and DLC terminal No. 14.■

34. Try to start the engine.

Does the engine start and idle smoothly?

YES—Go to the F-CAN circuit troubleshooting (see page 11-248).■

NO—Go to step 35.

35. Turn the ignition switch to LOCK (0).

36. Check the No. 3 IG MAIN (50 A) fuse in the under-hood fuse/relay box.

Is the fuse OK?

YES—Repair open in the wire between the No. 3 IG MAIN (50 A) fuse and the ignition switch. If the wire is OK, go to step 37.

NO—Repair short in the wire between the No. 3 IG MAIN (50 A) fuse and the ignition switch. Also replace the No. 3 IG MAIN (50 A) fuse.■

(cont'd)

DLC Circuit Troubleshooting (cont'd)

37. Inspect the No. 17 FI MAIN (15 A) fuse in the under-hood fuse/relay box.

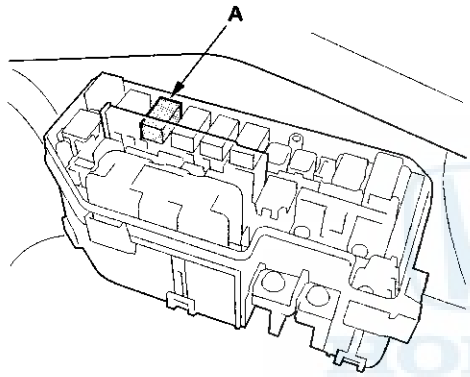
    Is the fuse OK?

    YES—Go to step 44.

    NO—Go to step 38.

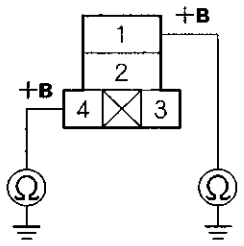
38. Remove the blown No. 17 FI MAIN (15 A) fuse from the under-hood fuse/relay box.

39. Remove PGM-FI main relay 1 (A) from the under-hood fuse/relay box.



40. Check for continuity between body ground and PGM-FI main relay 1 4P connector terminals No. 1 and No. 4 individually.

PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

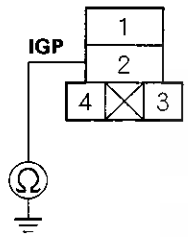
YES—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). Also replace the No. 17 FI MAIN (15 A) fuse.■

NO—Go to step 41.

41. While disconnecting each of the parts or connectors below, one at a time, check for continuity between PGM-FI main relay 1 4P connector terminal No. 2 and body ground:

    - PGM-FI main relay 2 (FUEL PUMP)
    - ECM/PCM connector B (49P)
    - Each injector 2P connector
    - Camshaft position (CMP) sensor 3P connector
    - Crankshaft position (CKP) sensor 3P connector
    - MAF/IAT sensor 5P connector
    - Electronic throttle control system (ETCS) control relay

PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

Does continuity go away when one of the above parts or connectors is disconnected?

YES—Replace the part that made the short to body ground go away when disconnected. If the part is the ECM/PCM, update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). Also replace the No. 17 FI MAIN (15 A) fuse.■

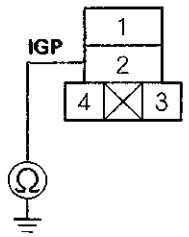
NO—Go to step 42.

42. Disconnect these parts or connectors:

    - PGM-FI main relay 2 (FUEL PUMP)
    - ECM/PCM connector B (49P)
    - Injectors
    - Camshaft position (CMP) sensor
    - MAF/IAT sensor 5P connector
    - Crankshaft position (CKP) sensor
    - Electronic throttle control system (ETCS) control relay

43. Check for continuity between PGM-FI main relay 1 4P connector terminal No. 2 and body ground.

PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between PGM-FI main relay 1 and each part. Also replace the No. 17 FI MAIN (15 A) fuse.■

NO—Replace PGM-FI main relay 1. Also replace the No. 17 FI MAIN (15 A) fuse.■

44. Inspect the No. 9 FUEL PUMP (20 A) fuse in the driver's under-dash fuse/relay box.

Is the fuse OK?

YES—Go to step 56.

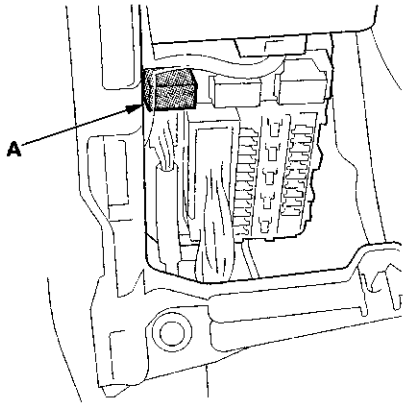
NO—Go to step 45.

45. Remove the blown No. 9 FUEL PUMP (20 A) fuse from the driver's under-dash fuse/relay box.

(cont'd)

DLC Circuit Troubleshooting (cont'd)

46. Remove PGM-FI main relay 2 (FUEL PUMP) (A) from the driver's under-dash fuse/relay box.



47. Test PGM-FI main relay 2 (FUEL PUMP) (see page 22-38).

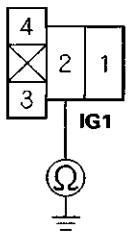
Is the relay OK?

YES—Go to step 48.

NO—Replace PGM-FI main relay 2 (FUEL PUMP). Also replace the No. 9 FUEL PUMP (20 A) fuse. ■

48. Check for continuity between PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 2 and body ground.

PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 49.

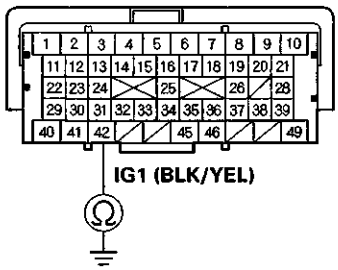
NO—Go to step 52.

49. Jump the SCS line with the HDS.

50. Disconnect ECM/PCM connector B (49P).

51. Check for continuity between ECM/PCM connector terminal B42 and body ground.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the No. 9 FUEL PUMP (20 A) fuse and the ECM/PCM (B42), between the No. 9 FUEL PUMP (20 A) fuse and PGM-FI main relay 2 (FUEL PUMP), or between the No. 9 FUEL PUMP (20 A) fuse and the immobilizer control unit. Also replace the No. 9 FUEL PUMP (20 A) fuse. ■

NO—Replace the No. 9 FUEL PUMP (20 A) fuse, and update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). ■

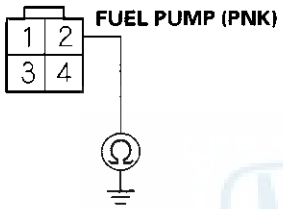
52. Remove the rear seat cushion, refer to the 2008-2009 Accord Service Manual (see page 20-225).

53. Remove the access panel from the floor (see page 11-415).

54. Disconnect the fuel pump 4P connector.

55. Check for continuity between fuel pump 4P connector terminal No. 2 and body ground.

FUEL PUMP 4P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the fuel pump and PGM-FI main relay 2 (FUEL PUMP). Also replace the No. 9 FUEL PUMP (20 A) fuse. ■

NO—Check the fuel pump, and replace it if necessary (see page 11-418). Also replace the No. 9 FUEL PUMP (20 A) fuse. ■

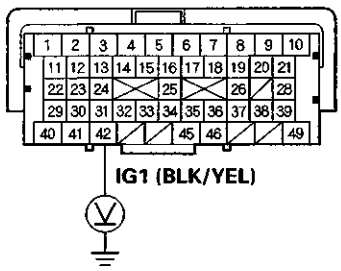
56. Jump the SCS line with the HDS.

57. Disconnect ECM/PCM connectors A (49P) and B (49P).

58. Turn the ignition switch to ON (II).

59. Measure the voltage between ECM/PCM connector terminal B42 and body ground.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

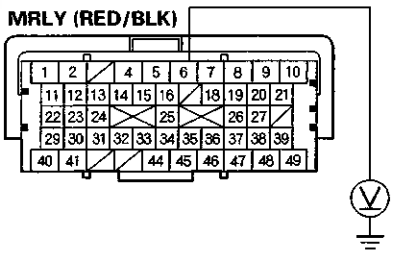
Is there battery voltage?

YES—Go to step 60.

NO—Repair open in the wire between the No. 9 FUEL PUMP (20 A) fuse and the ECM/PCM (B42). ■

60. Measure the voltage between ECM/PCM connector terminal A6 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 65.

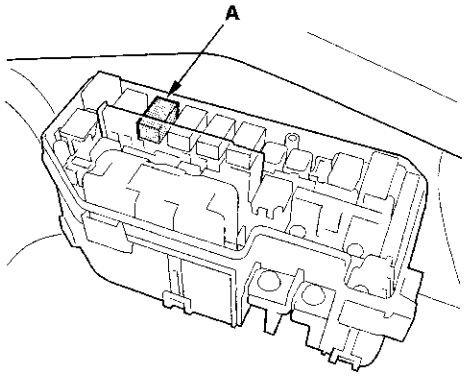
NO—Go to step 61.

61. Turn the ignition switch to LOCK (0).

(cont'd)

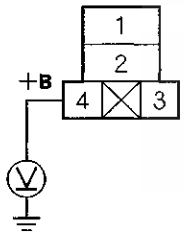
DLC Circuit Troubleshooting (cont'd)

62. Remove PGM-FI main relay 1 (A) from the under-hood fuse/relay box.



63. Measure the voltage between PGM-FI main relay 1 4P connector terminal No. 4 and body ground.

PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

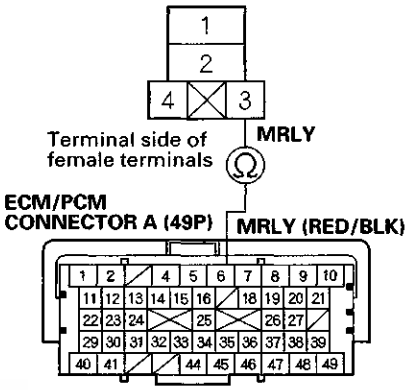
Is there battery voltage?

YES—Go to step 64.

NO—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83).■

64. Check for continuity between PGM-FI main relay 1 4P connector terminal No. 3 and ECM/PCM connector terminal A6.

PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

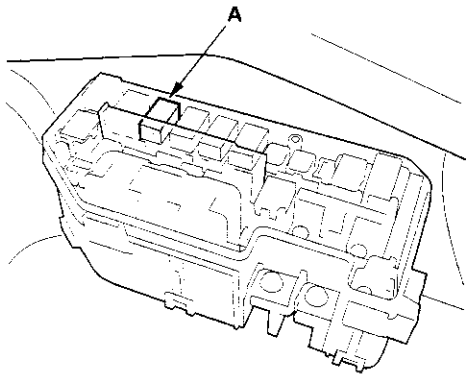
Is there continuity?

YES—Test PGM-FI main relay 1 (see page 22-38). If the relay is OK, update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

NO—Repair open in the wire between the ECM/PCM (A6) and PGM-FI main relay 1.■

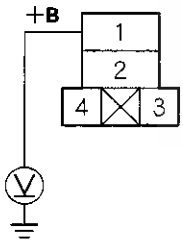
65. Turn the ignition switch to LOCK (0).

66. Remove PGM-FI main relay 1 (A) from the under-hood fuse/relay box.



67. Measure the voltage between PGM-FI main relay 1 4P connector terminal No. 1 and body ground.

PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

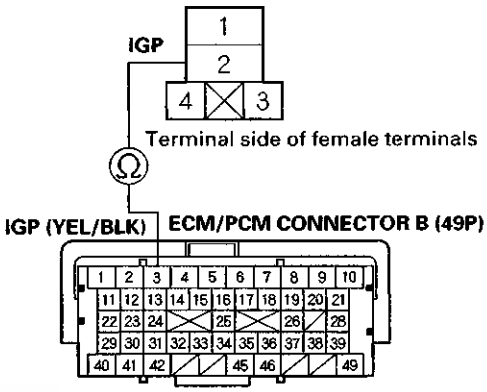
Is there battery voltage?

YES—Go to step 68.

NO—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). ■

68. Check for continuity between PGM-FI main relay 1 4P connector terminal No. 2 and ECM/PCM connector terminal B3.

PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 69.

NO—Repair open in the wire between the ECM/PCM (B3) and PGM-FI main relay 1. ■

69. Test PGM-FI main relay 1 (see page 22-38).

Is PGM-FI main relay 1 OK?

YES—Go to step 70.

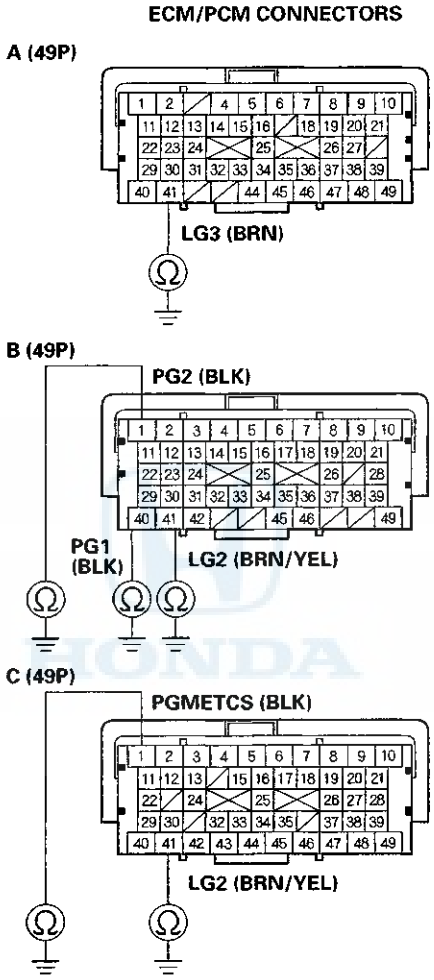
NO—Replace PGM-FI main relay 1. ■

70. Disconnect ECM/PCM connectors A (49P), B (49P), and C (49P).

(cont'd)

DLC Circuit Troubleshooting (cont'd)

71. Check for continuity between body ground and ECM/PCM connector terminals A41, B1, B40, B41, C1, and C41 individually.



Terminal side of female terminals

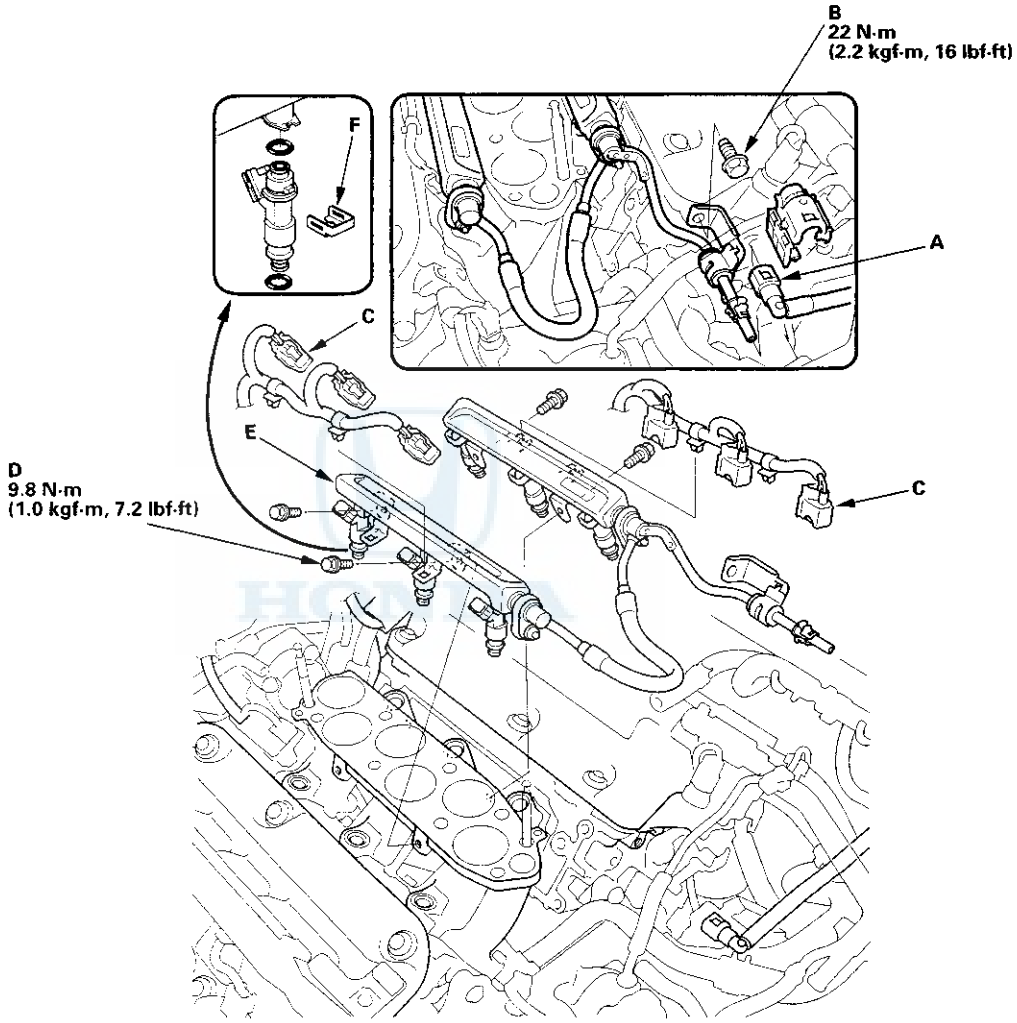
Is there continuity?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

NO—Repair open in the wire(s) between the ECM/PCM (A41, B1, B40, B41, C1, C41) and body ground (G101).■

Injector Replacement

1. Relieve the fuel pressure (see page 11-400).
2. Remove the intake manifold (see page 9-4).
3. Disconnect the quick-connect fitting (A).

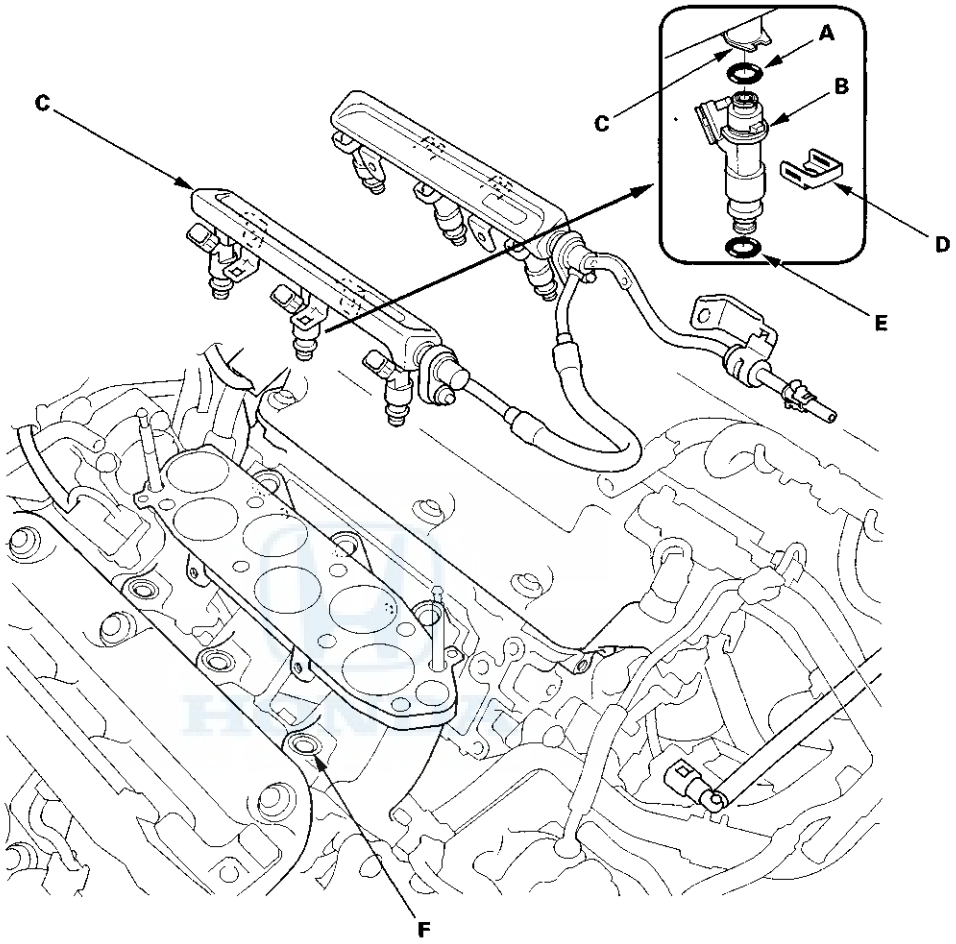


4. Remove the fuel joint hose mounting bolt (B).
5. Disconnect the connectors (C) from the injectors.
6. Remove the fuel rail mounting bolts (D) from the fuel rails (E).
7. Remove the fuel rails and the injectors from the injector base.
8. Remove the injector clips (F) form the fuel rails.
9. Remove the injectors from the fuel rails.

(cont'd)

Injector Replacement (cont'd)

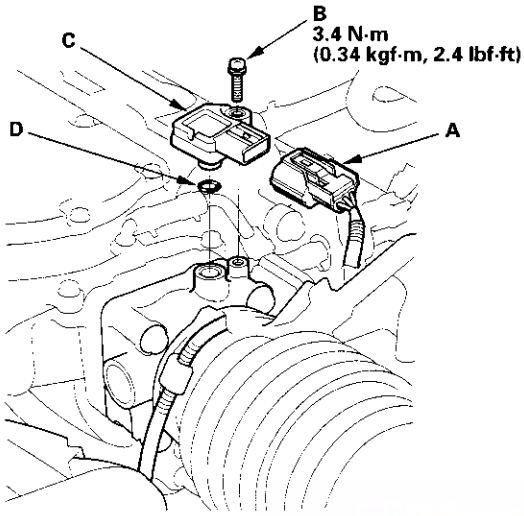
10. Coat the new O-rings (black) (A) with clean engine oil, and insert the injectors (B) into the fuel rails (C).



11. Install the injector clips (D).
12. Coat the new injector O-rings (green) (E) with clean engine oil.
13. Install the fuel rails and injectors in the injector base (F).
14. Install the fuel rail mounting bolts, and connect the connectors on the injectors.
15. Install the fuel joint hose mounting bolt.
16. Connect the quick-connect fitting (see page 11-411).
17. Turn the ignition switch to ON (II), but do not operate the starter. After the fuel pump runs for about 2 seconds, the fuel rail will be pressurized. Repeat this two or three times, then check the fuel leakage.
18. Install the intake manifold with a new gasket (see page 9-6).

MAP Sensor Replacement

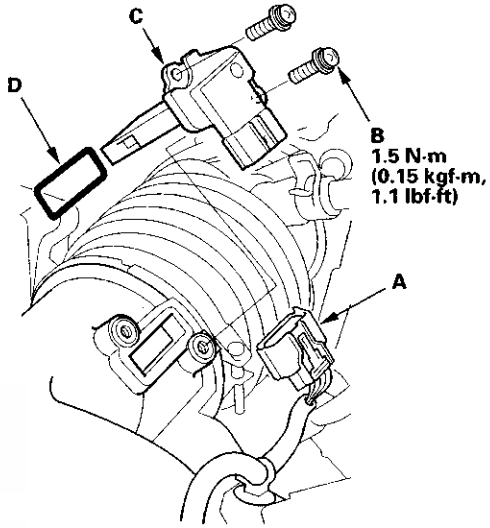
1. Disconnect the MAP sensor connector (A).



2. Remove the screw (B).
3. Remove the MAP sensor (C).
4. Install the parts in the reverse order of removal with a new O-ring (D).

MAF Sensor/IAT Sensor Replacement

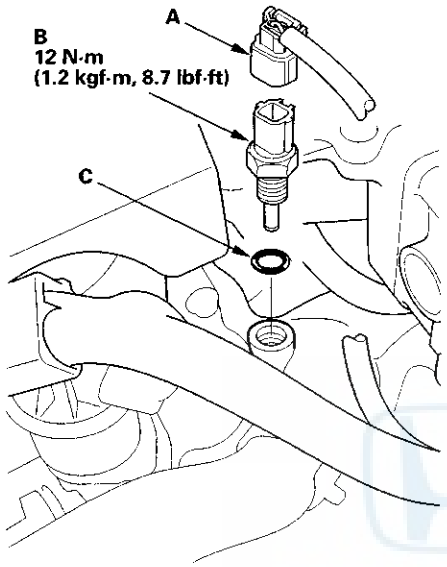
1. Disconnect the MAF sensor/IAT senor 5P connector (A).



2. Remove the screw (B).
3. Remove the MAF sensor/IAT sensor (C).
4. Install the parts in the reverse order of removal with a new O-ring (D).

ECT Sensor 1 Replacement

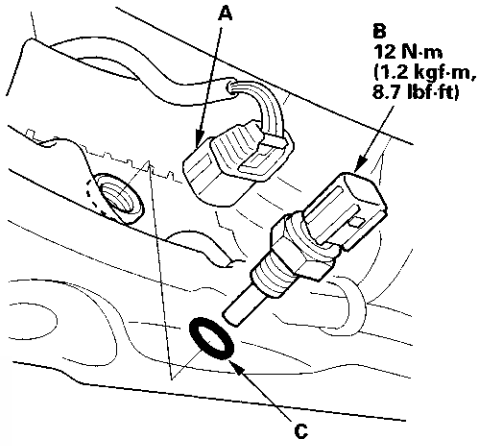
1. Drain the engine coolant (see page 10-6).
2. Remove the engine cover (see step 2 on page 9-4).
3. Disconnect the ECT sensor 1 2P connector (A).



4. Remove ECT sensor 1 (B).
5. Install the parts in the reverse order of removal with a new O-ring (C), then refill the radiator with engine coolant (see page 10-6).

ECT Sensor 2 Replacement

1. Remove the splash shield.
2. Drain the engine coolant (see page 10-6).
3. Disconnect the ECT sensor 2 2P connector (A).



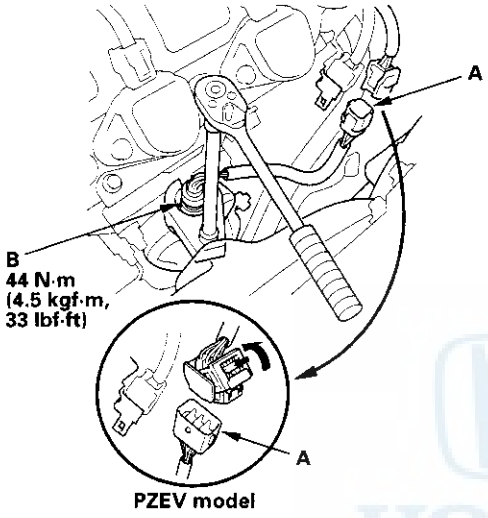
4. Remove ECT sensor 2 (B).
5. Install the parts in the reverse order of removal with a new O-ring (C), then refill the radiator with engine coolant (see page 10-6).

A/F Sensor Replacement

Special Tools Required
O2 sensor wrench, Snap-on YA8875 or SWR2, or equivalent, commercially available

Front Bank (Bank2)

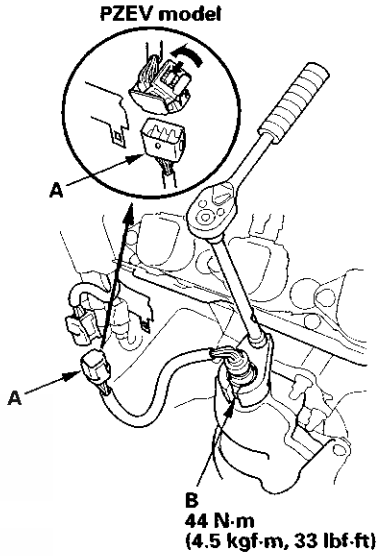
1. Disconnect the front A/F sensor 6P (PZEV model: 8P) connector (A), then remove the A/F sensor (B).



2. Install the parts in the reverse order of removal.

Rear Bank (Bank1)

1. Disconnect the rear A/F sensor 6P (PZEV model: 8P) connector (A), then remove the A/F sensor (B).



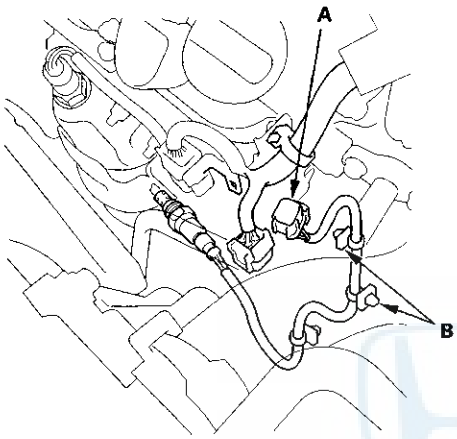
2. Install the parts in the reverse order of removal.

Secondary HO2S Replacement

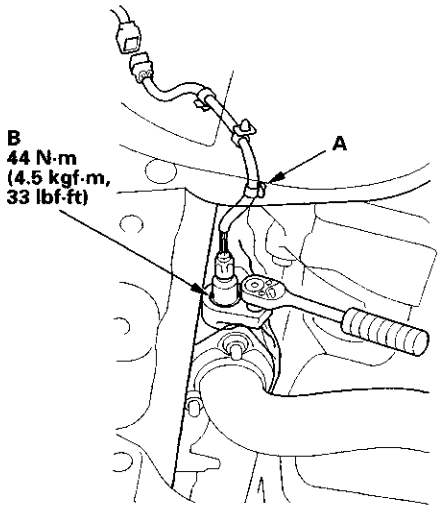
Special Tools Required
O2 sensor wrench, Snap-on YA8875 or SWR2, or equivalent, commercially available

Front Bank (Bank2)

1. Disconnect the front secondary HO2S 4P connector (A), and remove the harness clamps (B).



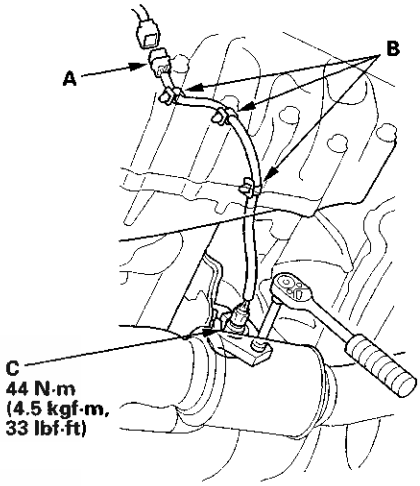
2. Raise the vehicle on a lift.
3. Remove the harness clamp (A), then remove the front secondary HO2S (B).



4. Install the parts in the reverse order of removal.

Rear Bank (Bank 1)

1. Raise the vehicle on a lift.
2. Disconnect the rear secondary HO2S 4P connector (A), and remove the harness clamps (B).

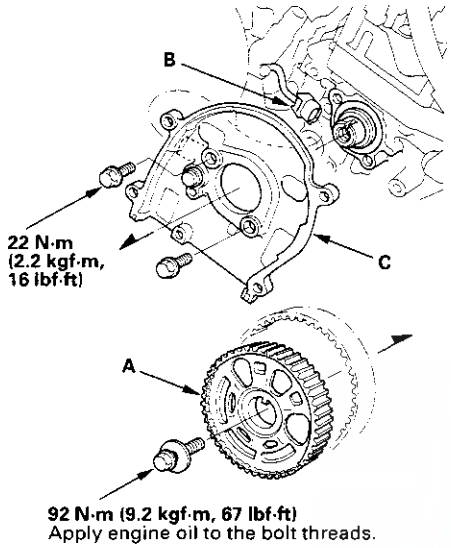


3. Remove the rear secondary HO2S (C).
4. Install the parts in the reverse order of removal.

CMP Sensor Replacement

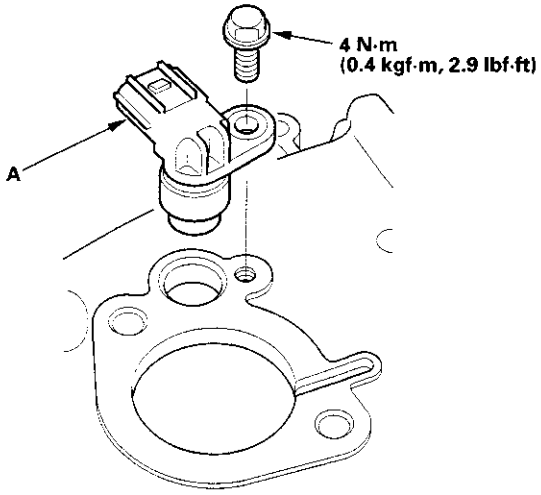
1. Remove the timing belt; J35Z2 engine (see page 6-16), J35Z3 engine (see page 6-81).

2. Remove the front camshaft pulley (CMP sensor pulse plate) (A).



3. Disconnect the CMP sensor connector (B), then remove the back cover (C).

4. Remove the CMP sensor (A) from the back cover.



5. Install the parts in the reverse order of removal. Install the timing belt; J35Z2 engine (see page 6-18), J35Z3 engine (see page 6-83).

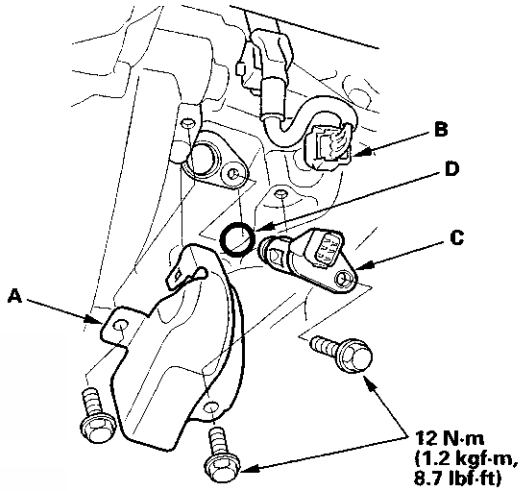
6. Do the CKP pattern clear/CKP pattern learn procedure (see page 11-5).

CKP Sensor Replacement

1. Raise the vehicle on a lift.

   NOTE: Make the vehicle the horizontal because engine oil comes out when the sensor removed.

2. Remove the CKP sensor cover (A).



3. Disconnect the CKP sensor connector (B).

4. Remove the CKP sensor (C).

5. Install the parts in the reverse order of removal with a new O-ring (D).

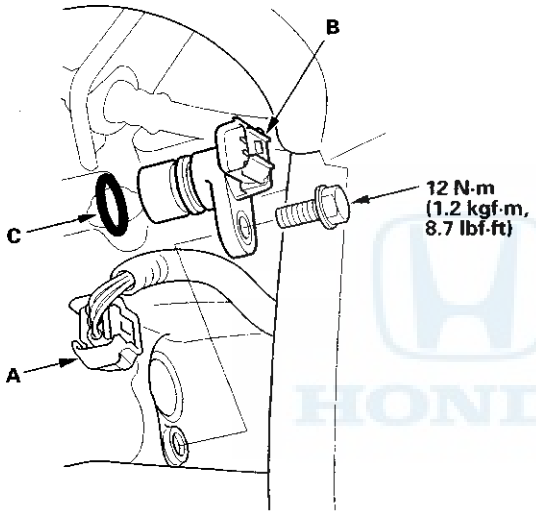
6. Do the CKP pattern clear/CKP pattern learn procedure (see page 11-5).

Input Shaft (Mainshaft) Speed Sensor Replacement

NOTE: For A/T models (see page 14-227).

M/T

1. Lift the vehicle, and support it with jackstands.
2. Remove the splash shield.
3. Disconnect the input shaft (mainshaft) speed sensor connector (A).



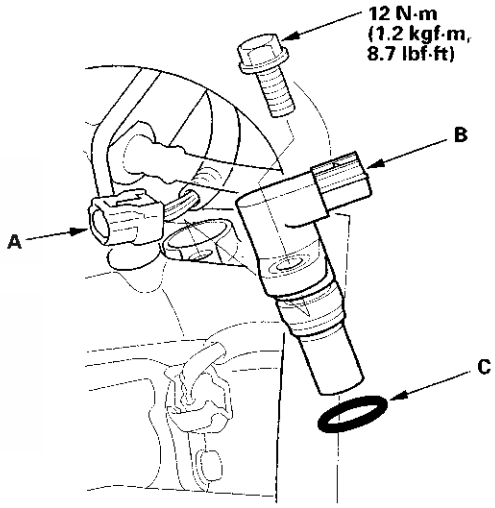
4. Remove the input shaft (mainshaft) speed sensor (B).
5. Install the parts in the reverse order of removal with a new O-ring (C).
6. If needed, refill the manual transmission fluid (see page 13-14).

Output Shaft (Countershaft) Speed Sensor Replacement

NOTE: For A/T models (see page 14-228).

M/T

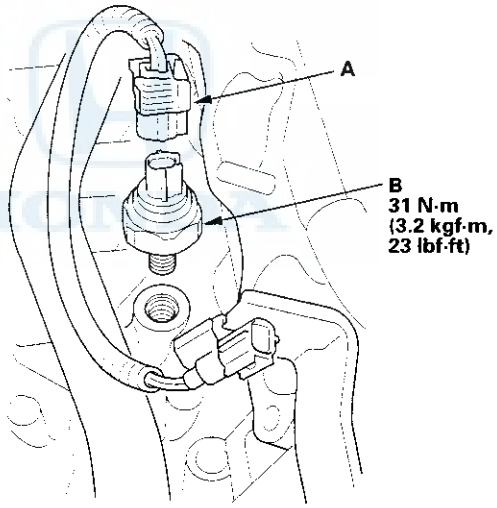
1. Lift the vehicle, and support it with jackstands.
2. Remove the splash shield.
3. Disconnect the output shaft (countershaft) speed sensor connector (A).



4. Remove the output shaft (countershaft) speed sensor (B).
5. Install the parts in the reverse order of removal with a new O-ring (C).

Knock Sensor Replacement

1. Remove the intake manifold (see page 9-4).
2. Remove the injector base (see page 9-8).
3. Disconnect the knock sensor connector (A).

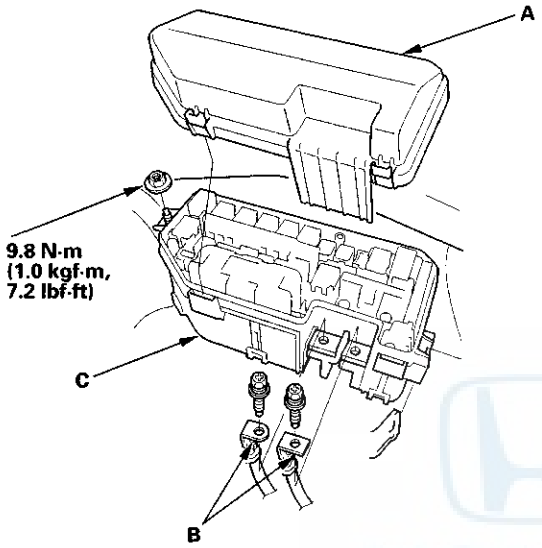


4. Remove the knock sensor (B).
5. Install the parts in the reverse order of removal.

ELD Replacement

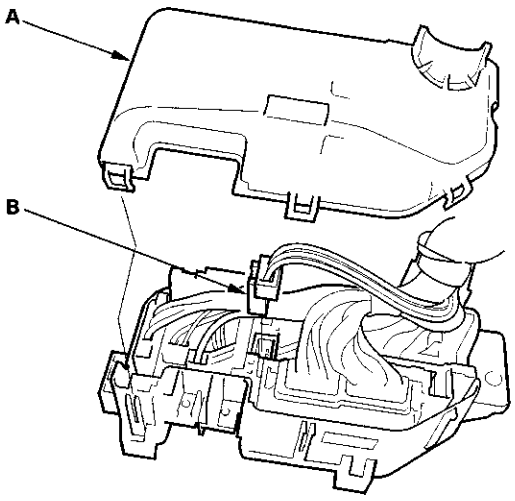
1. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

2. Remove the upper cover (A), then remove the two positive (+) terminals (B).



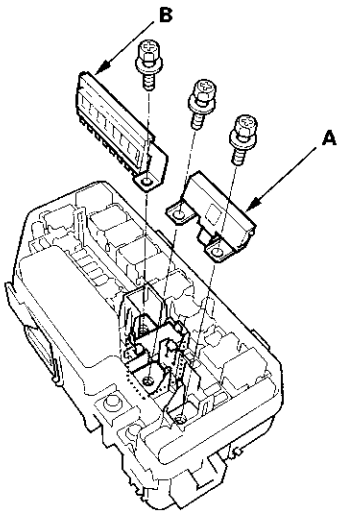
3. Remove the under-hood fuse/relay box (C) from the bracket.

4. Remove the lower cover (A).

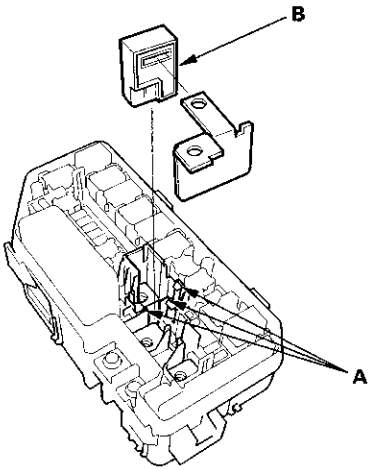


5. Disconnect the ELD 3P connector (B).

6. Remove the fuses (A) and (B).



7. Release the three lock tabs (A), then remove the ELD (B).



8. Install the parts in the reverse order of removal.

9. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

ECM/PCM Update

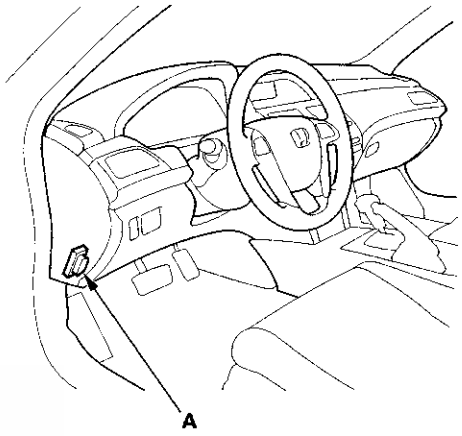
Special Tools Required
- Honda diagnostic system (HDS) tablet tester
- Honda interface module (HIM) and an iN workstation with HDS and CM update software
- HDS pocket tester
- GNA600 and an iN workstation with HDS and CM update software

Use any one of these update tools

NOTE:
- Use this procedure when you need to update the ECM/PCM at any time.
- Make sure the HDS/HIM has the latest software version downloaded from the iN (interactive network).
- Before you update the ECM/PCM, make sure the battery in the vehicle is fully charged, and connect a jumper battery (not a battery charger) to maintain system voltage.
- Never turn the ignition switch to LOCK (0) or ACC (I) during the update. If there is a problem with the update, leave the ignition switch ON (II).
- To prevent ECM/PCM damage, do not operate anything electrical (headlights, audio system, brakes, A/C, power windows, moonroof (if equipped), door locks, etc.) during the update.
- To ensure the latest program is installed, do an ECM/PCM update whenever the ECM/PCM is substituted or replaced.
- You cannot update an ECM/PCM with a program it already has. It will only accept a new program.
- High temperature in the engine compartment might cause the ECM/PCM to become too hot to run the update. If the engine has been running before this procedure, open the hood and cool the engine compartment.
- If you need to diagnose the Honda interface module (HIM) because the HIM's red (#3) light came on or was flashing during the update, leave the ignition switch in ON (II) when you disconnect the HIM from the data link connector (DLC). This will prevent ECM/PCM damage.

1. Turn the ignition switch to ON (II), but do not start the engine.

2. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



3. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259). If you are returning from the DLC circuit troubleshooting, skip steps 4 and 5, and clean the throttle body after updating the ECM/PCM (see page 11-436).

4. Select the INSPECTION MENU with the HDS.

5. Select the ETCS TEST, then select the TP POSITION CHECK, and follow the HDS screen prompts.

   NOTE: If the TP POSITION CHECK indicates FAILED, continue this procedure.

6. Exit the HDS diagnostic system, then select the update mode, and follow the screen prompts to update the ECM/PCM.

(cont'd)

ECM/PCM Update (cont'd)

7. If the software in the ECM/PCM is the latest, disconnect the HDS/HIM from the DLC, and go back to the procedure that you were doing. If the software in the ECM/PCM is not the latest, follow the instructions on the screen. If prompted to choose the PGM-FI system or the A/T system, make sure you update both.

   NOTE: If the ECM/PCM update system requires you to cool the ECM/PCM, follow the instructions on screen. If you run into a problem during the update procedure (programming takes over 15 minutes, status bar goes over 100 %, D or immobilizer light flashes, HDS tablet freezes, etc.), follow these steps to minimize the chance of damaging the ECM/PCM:
   - Leave the ignition switch in the ON (II) position.
   - Connect a jumper battery (do not connect a battery charger).
   - Shut down the HDS.
   - Disconnect the HDS from the DLC.
   - Reboot the HDS.
   - Reconnect the HDS to the DLC, and try the update procedure again.

8. If the TP POSITION CHECK failed in step 5, clean the throttle body (see page 11-436).

9. Do the ECM/PCM idle learn procedure (see page 11-385).

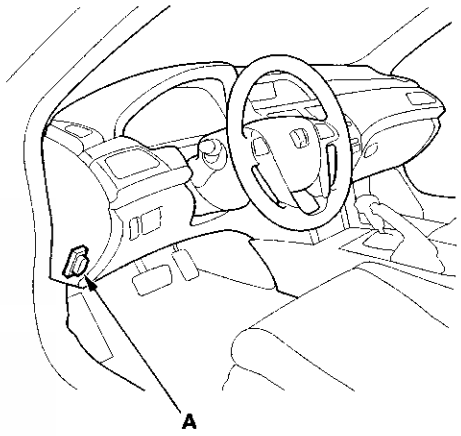
10. Do the CKP pattern learn procedure.

ECM/PCM Replacement

Special Tools Required
- Honda diagnostic system (HDS) tablet tester
- Honda interface module (HIM) and an iN workstation with HDS and CM update software
- HDS pocket tester
- GNA600 and an iN workstation with HDS and CM update software

Use any one of these update tools

1. Connect HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).

3. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259). If you are returning from the DLC circuit troubleshooting, skip steps 4 through 9, 20 through 25, and 28 through 30, and do this after replacing the ECM/PCM:

   - Replace the engine oil (see page 8-14) and the engine oil filter (see page 8-15).
   - Replace the ATF (A/T model) (see page 14-232).
   - Clean the throttle body (see page 11-436).

4. Select the PGM-FI system with the HDS.

5. Select the INSPECTION MENU with the HDS.

6. Select the ETCS TEST, then select the TP POSITION CHECK, and follow the screen prompts.

   NOTE: If the TP POSITION CHECK indicates FAILED, continue with this procedure.

7. Select the REPLACE ECM/PCM MENU, then select READ DATA, and follow the screen prompts.

   NOTE:
   - Doing this step copies (READS) the engine oil life data from the original ECM/PCM so you can later download (WRITES) it into the new ECM/PCM.
   - If READ DATA indicates FAILED, continue with this procedure.

8. A/T models: Select the A/T system with the HDS.

9. A/T models: Select the REPLACE TCM/PCM MENU, then select READ DATA, and follow the screen prompts.

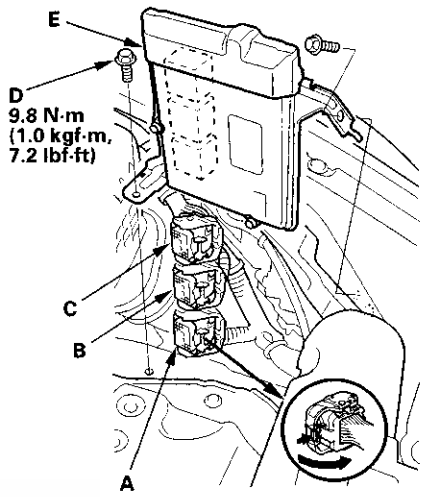
   NOTE:
   - Doing this step copies (READS) the ATF life data from the original PCM so you can later download (WRITES) it into the new PCM.
   - If READ DATA indicates FAILED, continue with this procedure.

10. Turn the ignition switch to LOCK (0).

11. Jump the SCS line with the HDS.

12. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

13. Remove the bolts (D).



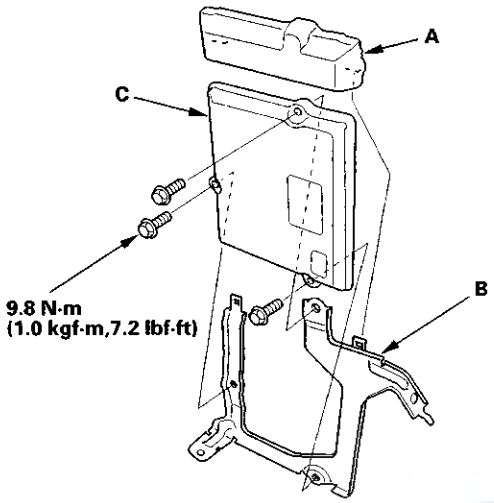
14. Disconnect ECM/PCM connectors A, B, and C, then remove the ECM/PCM assembly (E).

    NOTE: ECM/PCM connectors A, B, and C have symbols (A=□, B=△, C=○) embossed on them for identification.

(cont'd)

ECM/PCM Replacement (cont'd)

15. Disconnect the cover (A) and the bracket (B) from the ECM/PCM (C).



16. Install the ECM/PCM in the reverse order of removal.

17. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

18. Turn the ignition switch to ON (II).

19. Manually input the VIN to the ECM/PCM with the HDS.

    NOTE: DTC P0630 "VIN Not Programmed or Mismatch" may be stored because the VIN has not been programmed into the ECM/PCM; ignore it, and continue this procedure.

20. If the READ DATA (engine oil life) failed in step 7, go to step 23 (A/T model) or step 26 (M/T model). Otherwise, go to step 21.

21. Select the PGM-FI system with the HDS.

22. Select the REPLACE ECM/PCM MENU, then select WRITE DATA, and follow the screen prompts.

    NOTE: If the WRITE DATA indicates FAILED, continue with this procedure.

23. A/T models: If the READ DATA (ATF life) failed in step 9, go to step 26. Otherwise go to step 24.

24. A/T models: Select the A/T SYSTEM with the HDS.

25. A/T models: Select the REPLACE TCM/PCM MENU, then select WRITE DATA, and follow the screen prompts.

    NOTE: If the WRITE DATA indicates FAILED, continue with this procedure.

26. Select IMMOBI system with the HDS.

27. Enter the immobilizer code with the ECM/PCM replacement procedure in the HDS; it allows you to start the engine.

28. If the TP POSITION CHECK failed in step 6 clean the throttle body (see page 11-436), then go to step 29.

29. If the READ DATA failed in step 7 or the WRITE DATA failed in step 22, replace the engine oil (see page 8-14) and engine oil filter (see page 8-15), then go to step 30 (A/T model) or step 31 (M/T model).

30. If the READ DATA failed in step 9 or the WRITE DATA failed in step 25, replace the ATF (see page 14-232), then go to step 31.

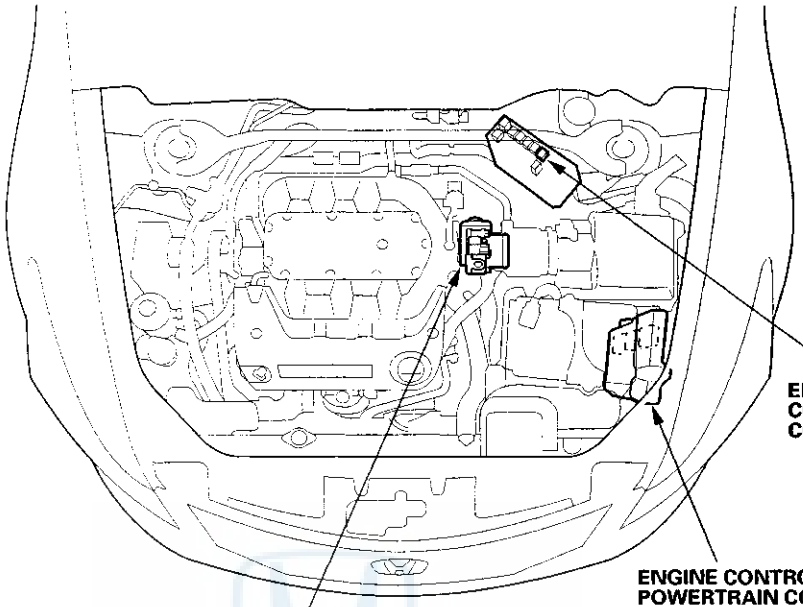
31. Select PGM-FI system, and reset the ECM/PCM with the HDS.

32. Update the ECM/PCM if it does not have the latest software (see page 11-281).

33. Do the ECM/PCM idle learn procedure (see page 11-385).

34. Do the CKP pattern learn procedure (see page 11-5).

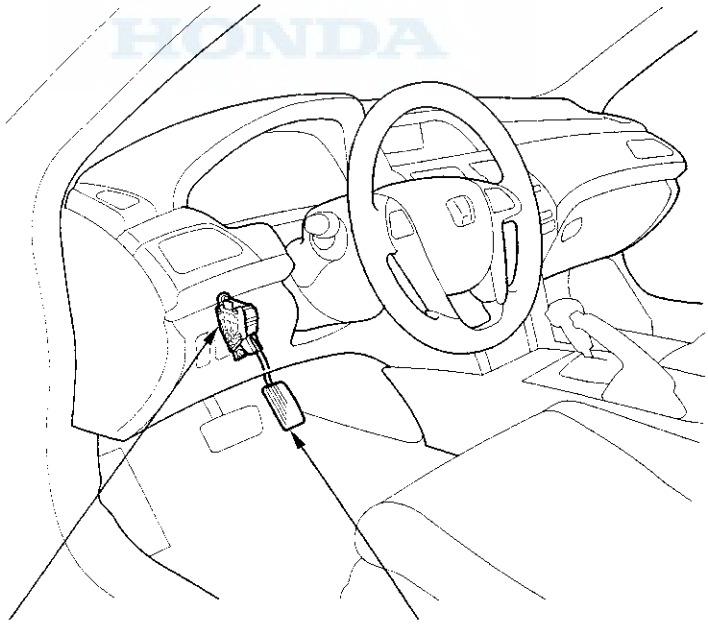
Component Location Index



ELECTRONIC THROTTLE CONTROL SYSTEM (ETCS) CONTROL RELAY

ENGINE CONTROL MODULE (ECM)/ POWERTRAIN CONTROLE MODULE (PCM)
Update, page 11-281
Substitution, page 11-7
Replacement, page 11-282

THROTTLE ACTUATOR and THROTTLE POSITION (TP) SENSOR



ACCELERATOR PEDAL POSITION (APP) SENSOR
Signal Inspection, page 11-327

ACCELERATOR PEDAL MODULE
Removal/Installation, page 11-328

DTC Troubleshooting

DTC P0122: TP Sensor A Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check TP SENSOR A in the DATA LIST with the HDS.

   Is there about 0.3 V or less?

   YES—Go to step 4.

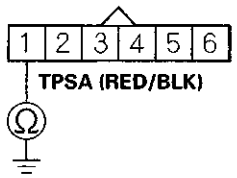
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM. ■
4. Check for Temporary DTCs or DTCs with the HDS.

   Are DTC P0122 and P0222 indicated at the same time?

   YES—Go to step 10.

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Disconnect the throttle body 6P connector.
7. Jump the SCS line with the HDS.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between throttle body 6P connector terminal No. 1 and body ground.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

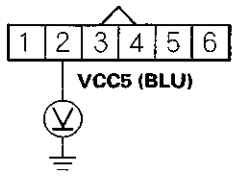
Is there continuity?

YES—Repair short in the wire between the throttle body and the ECM/PCM (B17), then go to step 18.

NO—Go to step 23.

10. Measure the voltage between throttle body 6P connector terminal No. 2 and body ground.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 16.

NO—Go to step 11.

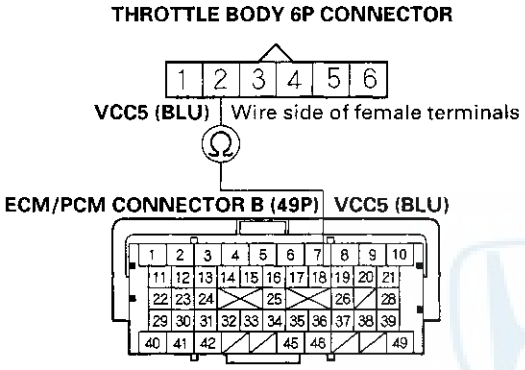
11. Turn the ignition switch to LOCK (0).

12. Jump the SCS line with the HDS.

13. Disconnect ECM/PCM connector B (49P).

14. Disconnect the throttle body 6P connector.

15. Check for continuity between ECM/PCM connector terminal B18 and throttle body 6P connector terminal No. 2.



Is there continuity?

YES—Go to step 23.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B18), then go to step 18.

16. Turn the ignition switch to LOCK (0).

17. Replace the throttle body (see page 11-441).

18. Reconnect all connectors.

19. Turn the ignition switch to ON (II).

20. Reset the ECM/PCM with the HDS.

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0122 indicated?

YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

23. Reconnect all connectors.

24. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

25. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0122 indicated?

YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0123: TP Sensor A Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check TP SENSOR A in the DATA LIST with the HDS.

   Is there about 4.8 V or more?

   YES—Go to step 4.

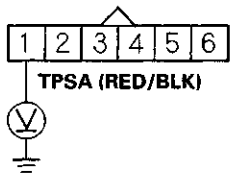
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM.■
4. Check for Temporary DTCs or DTCs with the HDS.

   Are DTC P0123 and P0223 indicated at the same time?

   YES—Go to step 13.

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Disconnect the throttle body 6P connector.
7. Turn the ignition switch to ON (II).
8. Measure the voltage between throttle body 6P connector terminal No. 1 and body ground.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

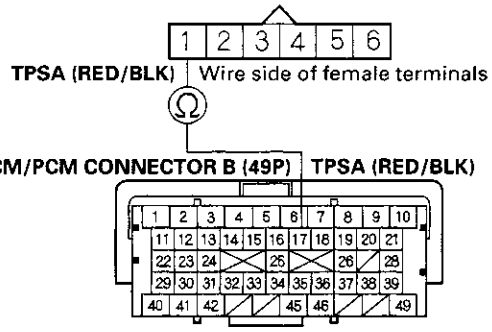
   Is there about 5 V?

   YES—Go to step 18.

   NO—Go to step 9.
9. Turn the ignition switch to LOCK (0).
10. Jump the SCS line with the HDS.
11. Disconnect ECM/PCM connector B (49P).

12. Check for continuity between ECM/PCM connector terminal B17 and throttle body 6P connector terminal No. 1.

THROTTLE BODY 6P CONNECTOR



Terminal side of female terminals

Is there continuity?

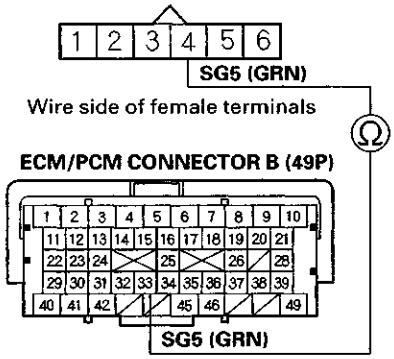
YES—Go to step 25.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B17), then go to step 20.

13. Turn the ignition switch to LOCK (0).
14. Disconnect the throttle body 6P connector.
15. Jump the SCS line with the HDS.
16. Disconnect ECM/PCM connector B (49P).

17. Check for continuity between ECM/PCM connector terminal B33 and throttle body 6P connector terminal No. 4.

THROTTLE BODY 6P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B33), then go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

18. Turn the ignition switch to LOCK (0).
19. Replace the throttle body (see page 11-441).
20. Reconnect all connectors.
21. Turn the ignition switch to ON (II).
22. Reset the ECM/PCM with the HDS.
23. Do the ECM/PCM idle learn procedure (see page 11-385).
24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0123 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
25. Reconnect all connectors.
26. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0123 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0222: TP Sensor B Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check TP SENSOR B in the DATA LIST with the HDS.

   Is there about 0.3 V or less?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM.■
4. Check for Temporary DTCs or DTCs with the HDS.

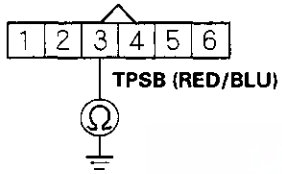
   Are DTC P0122 and P0222 indicated at the same time?

   YES—Go to step 10.

   NO—Go to step 5.

5. Turn the ignition switch to LOCK (0).
6. Disconnect the throttle body 6P connector.
7. Jump the SCS line with the HDS.
8. Disconnect ECM/PCM connector B (49P).
9. Check for continuity between throttle body 6P connector terminal No. 3 and body ground.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

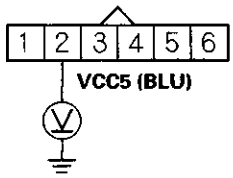
Is there continuity?

YES—Repair short in the wire between the throttle body and the ECM/PCM (B26), then go to step 18.

NO—Go to step 23.

10. Measure the voltage between throttle body 6P connector terminal No. 2 and body ground.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 16.

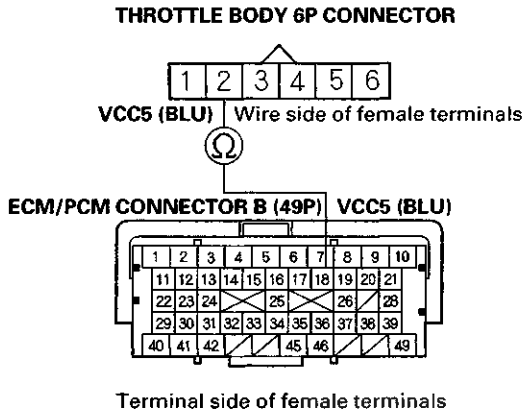
NO—Go to step 11.

11. Turn the ignition switch to LOCK (0).
12. Jump the SCS line with the HDS.
13. Disconnect ECM/PCM connector B (49P).
14. Disconnect the throttle body 6P connector.

(cont'd)

DTC Troubleshooting (cont'd)

15. Check for continuity between ECM/PCM connector terminal B18 and throttle body 6P connector terminal No. 2.



Terminal side of female terminals

Is there continuity?

YES—Go to step 23.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B18), then go to step 18.

16. Turn the ignition switch to LOCK (0).

17. Replace the throttle body (see page 11-441).

18. Reconnect all connectors.

19. Turn the ignition switch to ON (II).

20. Reset the ECM/PCM with the HDS.

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0222 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

23. Reconnect all connectors.

24. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0222 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0223: TP Sensor B Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check TP SENSOR B in the DATA LIST with the HDS.

   Is there about 4.8 V or more?

   YES—Go to step 4.

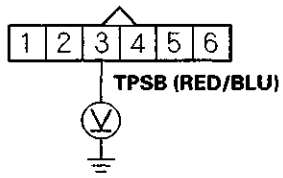
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM. ■
4. Check for Temporary DTCs or DTCs with the HDS.

   Are DTC P0123 and P0223 indicated at the same time?

   YES—Go to step 13.

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Disconnect the throttle body 6P connector.
7. Turn the ignition switch to ON (II).
8. Measure the voltage between throttle body 6P connector terminal No. 3 and body ground.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

   Is there about 5 V?

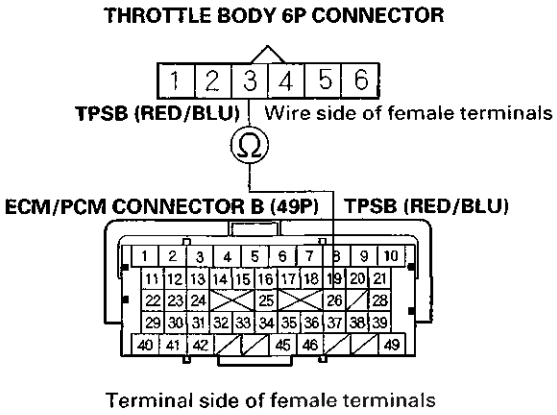
   YES—Go to step 18.

   NO—Go to step 9.
9. Turn the ignition switch to LOCK (0).
10. Jump the SCS line with the HDS.
11. Disconnect ECM/PCM connector B (49P).

(cont'd)

DTC Troubleshooting (cont'd)

12. Check for continuity between ECM/PCM connector terminal B26 and throttle body 6P connector terminal No. 3.

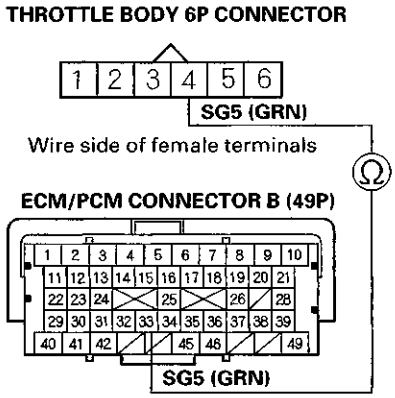


Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B26), then go to step 20.

13. Turn the ignition switch to LOCK (0).
14. Disconnect the throttle body 6P connector.
15. Jump the SCS line with the HDS.
16. Disconnect ECM/PCM connector B (49P).
17. Check for continuity between ECM/PCM connector terminal B33 and throttle body 6P connector terminal No. 4.



Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B33), then go to step 20.

18. Turn the ignition switch to LOCK (0).

19. Replace the throttle body (see page 11-441).

20. Reconnect all connectors.

21. Turn the ignition switch to ON (II).

22. Reset the ECM/PCM with the HDS.

23. Do the ECM/PCM idle learn procedure (see page 11-385).

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0223 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

25. Reconnect all connectors.

26. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0223 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P1658: ETCS Control Relay ON Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Do the ETCS TEST in the INSPECTION MENU with the HDS.

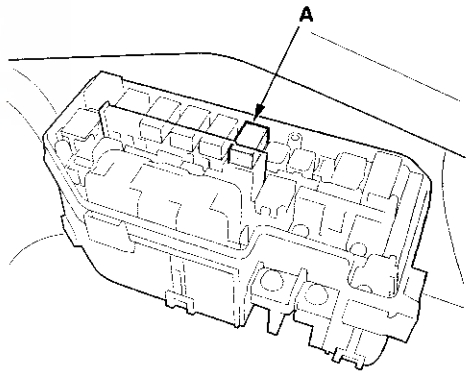
   Is the RELAY circuit OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ETCS control relay and the ECM/PCM.■

   NO—Go to step 3.

3. Turn the ignition switch to LOCK (0).

4. Remove the ETCS control relay (A) from the under-hood fuse/relay box.



(cont'd)

DTC Troubleshooting (cont'd)

5. Test the ETCS control relay (see page 22-38).

   Is the ETCS control relay OK?

   YES—Go to step 6.

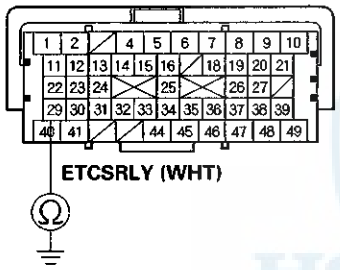
   NO—Replace the ETCS control relay, then go to step 13.

6. Jump the SCS line with the HDS.

7. Disconnect ECM/PCM connector A (49P).

8. Check for continuity between ECM/PCM connector terminal A29 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A29) and the ETCS control relay, then go to step 13.

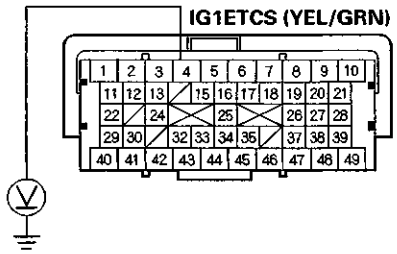
NO—Go to step 9.

9. Disconnect ECM/PCM connector C (49P).

10. Turn the ignition switch to ON (II).

11. Measure the voltage between ECM/PCM connector terminal C4 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

Is there battery voltage?

YES—Repair short to power in the wire between the ECM/PCM (C4) and the ETCS control relay, then go to step 12.

NO—Go to step 18.

12. Turn the ignition switch to LOCK (0).

13. Reconnect all connectors.

14. Turn the ignition switch to ON (II).

15. Reset the ECM/PCM with the HDS.

16. Do the ECM/PCM idle learn procedure (see page 11-385).

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1658 indicated?

    YES—Check for poor connections or loose terminals at the ETCS control relay and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

18. Turn the ignition switch to LOCK (0).

19. Reconnect all connectors.

20. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1658 indicated?

    YES—Check for poor connections or loose terminals at the ETCS control relay and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P1659: ETCS Control Relay OFF Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1659 indicated?

    YES—Go to step 4.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ETCS control relay and the ECM/PCM.■

4. Turn the ignition switch to LOCK (0).

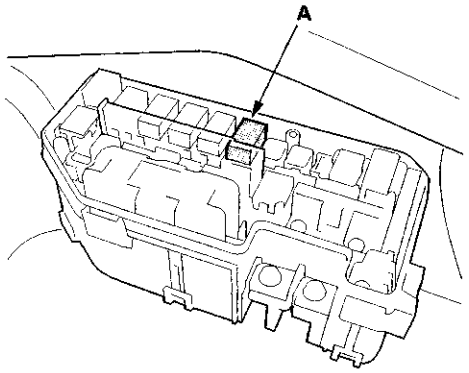
5. Check the No. 18 DBW (THROTTLE ACTUATOR CONTROL) (15 A) fuse in the under-hood fuse/relay box.

    Is the fuse OK?

    YES—Go to step 6.

    NO—Go to step 17.

6. Remove the ETCS control relay (A) from the under-hood fuse/relay box.



(cont'd)

DTC Troubleshooting (cont'd)

7. Test the ETCS control relay (see page 22-38).

   Is the ETCS control relay OK?

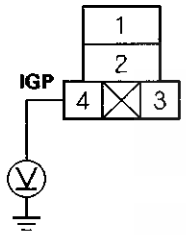
   YES—Go to step 8.

   NO—Replace the ETCS control relay, then go to step 23.

8. Turn the ignition switch to ON (II).

9. Measure the voltage between ETCS control relay 4P connector terminal No. 4 and body ground.

ETCS CONTROL RELAY 4P CONNECTOR



Terminal side of female terminals

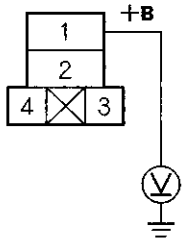
Is there battery voltage?

YES—Go to step 10.

NO—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83), then go to step 22.

10. Measure the voltage between ETCS control relay 4P connector terminal No. 1 and body ground.

ETCS CONTROL RELAY 4P CONNECTOR



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 11.

NO—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83), then go to step 22.

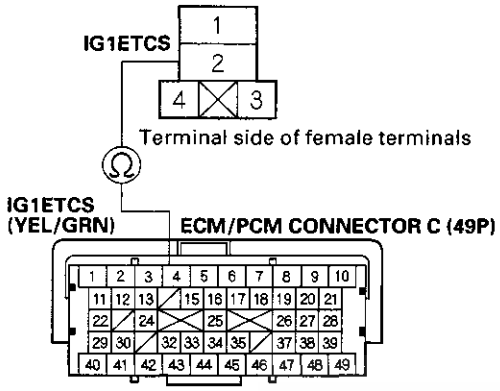
11. Turn the ignition switch to LOCK (0).

12. Jump the SCS line with the HDS.

13. Disconnect ECM/PCM connector C (49P).

14. Check for continuity between ETCS control relay 4P connector terminal No. 2 and ECM/PCM connector terminal C4.

ETCS CONTROL RELAY 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

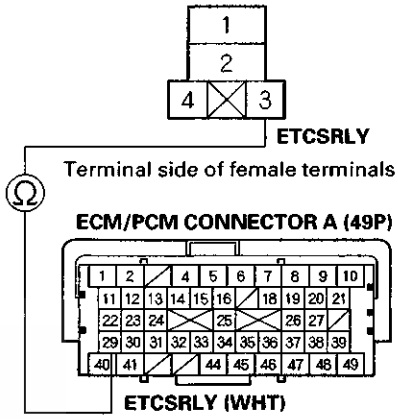
YES—Go to step 15.

NO—Repair open in the wire between the ECM/PCM (C4) and the ETCS control relay, then go to step 23.

15. Disconnect ECM/PCM connector A (49P).

16. Check for continuity between ETCS control relay 4P connector terminal No. 3 and ECM/PCM connector terminal A29.

ETCS CONTROL RELAY 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

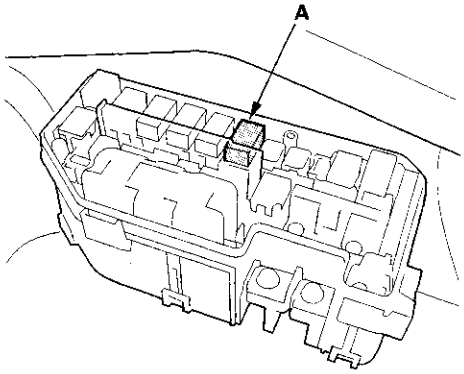
YES—Go to step 28.

NO—Repair open in the wire between the ECM/PCM (A29) and the ETCS control relay, then go to step 23.

(cont'd)

DTC Troubleshooting (cont'd)

17. Remove the ETCS control relay (A) from the under-hood fuse/relay box.

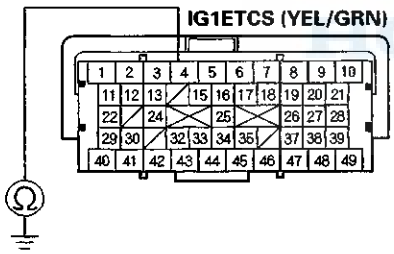


18. Jump the SCS line with the HDS.

19. Disconnect ECM/PCM connector C (49P).

20. Check for continuity between ECM/PCM connector terminal C4 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

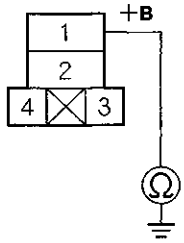
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C4) and the ETCS control relay, then go to step 23.

NO—Go to step 21.

21. Check for continuity between ETCS control relay 4P connector terminal No. 1 and body ground.

ETCS CONTROL RELAY 4P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83), then go to step 23.

NO—Go to step 28.

22. Turn the ignition switch to LOCK (0).

23. Reconnect all connectors.

24. Turn the ignition switch to ON (II).

25. Reset the ECM/PCM with the HDS.

26. Do the ECM/PCM idle learn procedure (see page 11-385).

27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1659 indicated?

YES—Check for poor connections or loose terminals at the ETCS control relay and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

28. Reconnect all connectors.

29. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1659 indicated?

    YES—Check for poor connections or loose terminals at the ETCS control relay and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P1683: Throttle Valve Default Position Spring Performance Problem

⚠CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

4. Turn the ignition switch to LOCK (0), and wait 10 seconds.

5. Turn the ignition switch to ON (II).

6. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1683 indicated?

    YES—Go to step 7.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM. ■

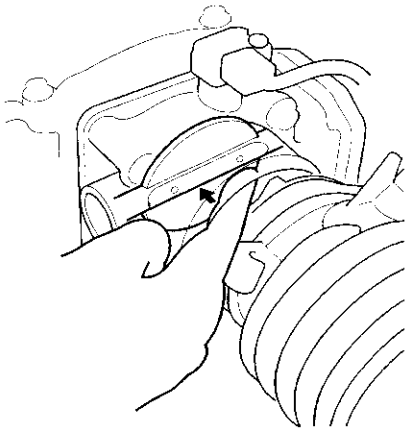
7. Turn the ignition switch to LOCK (0).

8. Disconnect the intake air duct from the throttle body.

(cont'd)

DTC Troubleshooting (cont'd)

9. Push the throttle valve closed as shown.



10. Release the throttle valve.

    Does the throttle valve return?

    YES—Clean the throttle body (see page 11-436), then go to step 12 and recheck. If DTC P1683 is indicated, go to step 11.

    NO—Go to step 11.

11. Replace the throttle body (see page 11-441).

12. Turn the ignition switch to ON (II).

13. Reset the ECM/PCM with the HDS.

14. Do the ECM/PCM idle learn procedure (see page 11-385).

15. Turn the ignition switch to LOCK (0), and wait 10 seconds.

16. Turn the ignition switch to ON (II).

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1683 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P1684: Throttle Valve Return Spring Performance Problem

⚠CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

4. Turn the ignition switch to LOCK (0), and wait 10 seconds.

5. Turn the ignition switch to ON (II).

6. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1684 indicated?

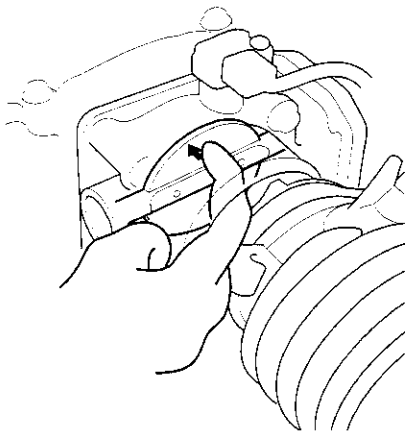
    YES—Go to step 7.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM.■

7. Turn the ignition switch to LOCK (0).

8. Disconnect the intake air duct from the throttle body.

9. Push the throttle valve open as shown.



10. Release the throttle valve.

    Does the throttle valve return?

    YES—Clean the throttle body (see page 11-436), then go to step 12 and recheck. If DTC P1684 is indicated, go to step 11.

    NO—Go to step 11.

11. Replace the throttle body (see page 11-441).

12. Turn the ignition switch to ON (II).

13. Reset the ECM/PCM with the HDS.

14. Do the ECM/PCM idle learn procedure (see page 11-385).

15. Turn the ignition switch to LOCK (0), and wait 10 seconds.

16. Turn the ignition switch to ON (II).

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1684 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2101: ETCS Malfunction

⚠CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Do the ETCS TEST in the INSPECTION MENU with the HDS.

4. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2101 indicated?

    YES—Go to step 7.

    NO—Go to step 5.

5. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    - ENGINE SPEED
    - VSS
    - APP SENSOR

6. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2101 indicated?

    YES—Go to step 7.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and at the ECM/PCM, then clean the throttle body (see page 11-436).■

(cont'd)

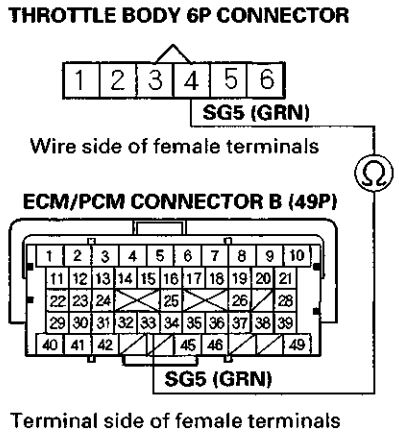
DTC Troubleshooting (cont'd)

7. Turn the ignition switch to LOCK (0).
8. Disconnect the intake air duct from the throttle body.
9. Turn the ignition switch to ON (II).
10. Clear the DTC with the HDS.
11. Do the ETCS TEST in the INSPECTION MENU with the HDS.
12. Visually check the throttle valve operation.

    Does the throttle valve operate smoothly?

    YES—Clean the throttle body (see page 11-436), then go to step 24 and recheck. If DTC P2101 is indicated, go to step 22.

    NO—Go to step 13.
13. Turn the ignition switch to LOCK (0).
14. Disconnect the throttle body 6P connector.
15. Jump the SCS line with the HDS.
16. Disconnect ECM/PCM connector B (49P).
17. Check for continuity between ECM/PCM connector terminal B33 and throttle body 6P connector terminal No. 4.



Is there continuity?

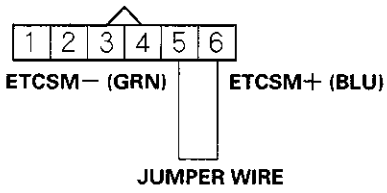
YES—Go to step 18.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B33), then go to step 24.

18. Disconnect ECM/PCM connector C (49P).

19. Connect throttle body 6P connector terminals No. 5 and No. 6 with a jumper wire.

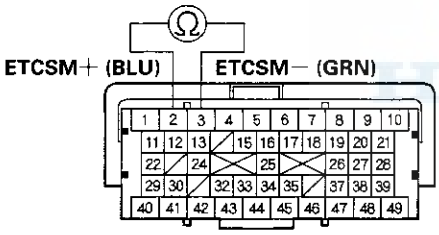
THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

20. Check for continuity between ECM/PCM connector terminals C2 and C3.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

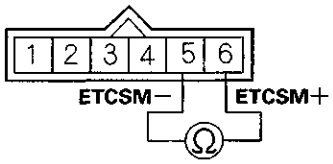
Is there continuity?

YES—Go to step 21.

NO—Repair open in the wires between the throttle body and the ECM/PCM (C2, C3), then go to step 24.

21. At the throttle body side, measure the resistance between throttle body 6P connector terminals No. 5 and No. 6 with the throttle fully closed.

THROTTLE BODY 6P CONNECTOR



Terminal side of male terminals

Is there about 1.0 kΩ or more?

YES—Go to step 23.

NO—Go to step 30.

22. Turn the ignition switch to LOCK (0).

23. Replace the throttle body (see page 11-441).

24. Reconnect all connectors.

25. Turn the ignition switch to ON (II).

26. Reset the ECM/PCM with the HDS.

27. Do the ECM/PCM idle learn procedure (see page 11-385).

(cont'd)

DTC Troubleshooting (cont'd)

28. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    • ENGINE SPEED
    • VSS
    • APP SENSOR

29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2101 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then clean the throttle body (see page 11-436), and go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

30. Reconnect all connectors.

31. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

32. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

    • ENGINE SPEED
    • VSS
    • APP SENSOR

33. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2101 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then clean the throttle body (see page 11-436). If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 32. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2118: Throttle Actuator Current Range/ Performance Problem

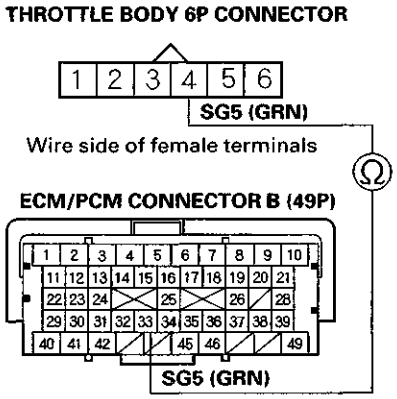
NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Slowly press the accelerator pedal to the floor.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2118 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect the throttle body 6P connector.
8. Disconnect PCM connector B (49P).
9. Check for continuity between ECM/PCM connector terminal B33 and throttle body 6P connector terminal No. 4.



Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between the throttle body and the ECM/PCM (B33), then go to step 18.

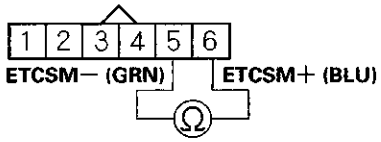
(cont'd)

DTC Troubleshooting (cont'd)

10. Disconnect ECM/PCM connector C (49P).

11. Check for continuity between throttle body 6P connector terminals No. 5 and No. 6.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

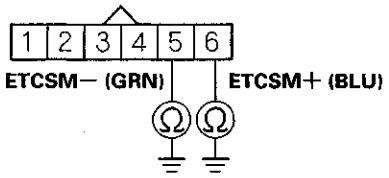
Is there continuity?

YES—Repair short in the wires between throttle body 6P connector terminal No. 5 (ETCS– line) and No. 6 (ETCS+ line), then go to step 18.

NO—Go to step 12.

12. Check for continuity between body ground and throttle body 6P connector terminals No. 5 and No. 6 individually.

THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

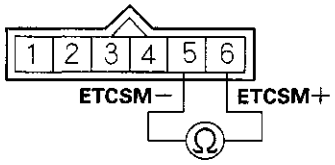
Is there continuity?

YES—Repair short in the wire between throttle body 6P connector and body ground, then go to step 18.

NO—Go to step 13.

13. At the throttle body side, measure the resistance between throttle body 6P connector terminals No. 5 and No. 6 with the throttle fully closed.

THROTTLE BODY 6P CONNECTOR



Terminal side of male terminals

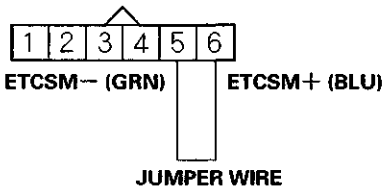
Is there about 1.0 Ω or less?

YES—Go to step 14.

NO—Go to step 17.

14. Connect throttle body 6P connector terminals No. 5 and No. 6 with a jumper wire.

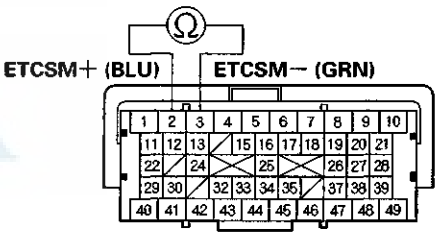
THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

15. Check for continuity between ECM/PCM connector terminals C2 and C3.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 16.

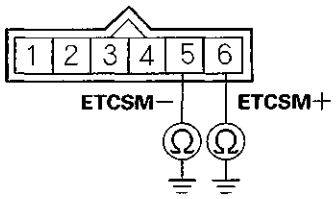
NO—Repair open in the wire between the throttle body and the ECM/PCM (C2, C3), then go to step 18.

(cont'd)

DTC Troubleshooting (cont'd)

16. At the throttle body side, check for continuity between body ground and throttle body 6P connector terminals No. 5 and No. 6 individually.

THROTTLE BODY 6P CONNECTOR



Terminal side of male terminals

Is there continuity?

YES—Go to step 17.

NO—Go to step 26.

17. Replace the throttle body (see page 11-441).
18. Reconnect all connectors.
19. Turn the ignition switch to ON (II).
20. Reset the ECM/PCM with the HDS.
21. Do the ECM/PCM idle learn procedure (see page 11-385).
22. Turn the ignition switch to LOCK (0).
23. Turn the ignition switch to ON (II).
24. Slowly press the accelerator pedal to the floor.
25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2118 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

26. Reconnect all connectors.

27. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

28. Turn the ignition switch to LOCK (0).

29. Turn the ignition switch to ON (II).

30. Slowly press the accelerator pedal to the floor.

31. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2118 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 27. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2122: APP Sensor A (TP Sensor D) Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Check APP SENSOR A in the DATA LIST with the HDS.

    Is there about 0.2 V or less?

    YES—Go to step 3.

    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the APP sensor and the ECM/PCM.■

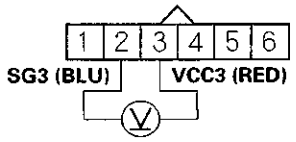
3. Turn the ignition switch to LOCK (0).

4. Disconnect the APP sensor 6P connector.

5. Turn the ignition switch to ON (II).

6. Measure the voltage between APP sensor 6P connector terminals No. 2 and No. 3.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 7.

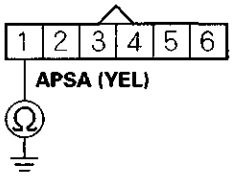
NO—Go to step 17.

(cont'd)

DTC Troubleshooting (cont'd)

7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Check for continuity between APP sensor 6P connector terminal No. 1 and body ground.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

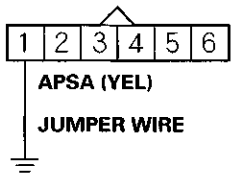
Is there continuity?

YES—Repair short in the wire between the APP sensor and the ECM/PCM (A18), then go to step 24.

NO—Go to step 11.

11. Connect APP sensor 6P connector terminal No. 1 to body ground with a jumper wire.

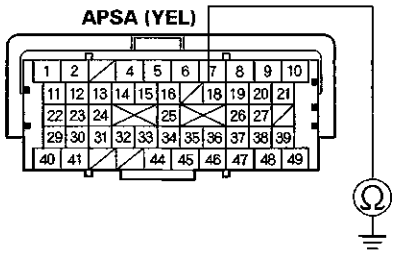
APP SENSOR 6P CONNECTOR



Wire side of female terminals

12. Check for continuity between ECM/PCM connector terminal A18 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

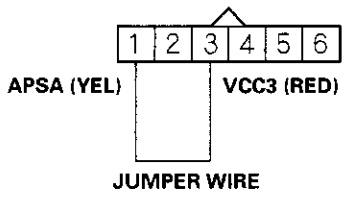
YES—Go to step 13.

NO—Repair open in the wire between the APP sensor and the ECM/PCM (A18), then go to step 24.

13. Reconnect ECM/PCM connector A (49P).

14. Connect APP sensor 6P connector terminals No. 1 and No. 3 with a jumper wire.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

15. Turn the ignition switch to ON (II).

16. Check APP SENSOR A in the DATA LIST with the HDS.

Is there 0.2 V or less?

YES—Go to step 29.

NO—Go to step 22.

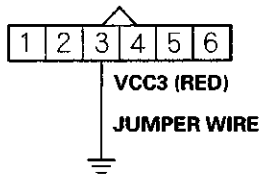
17. Turn the ignition switch to LOCK (0).

18. Jump the SCS line with the HDS.

19. Disconnect ECM/PCM connector A (49P).

20. Connect APP sensor 6P connector terminal No. 3 to body ground with a jumper wire.

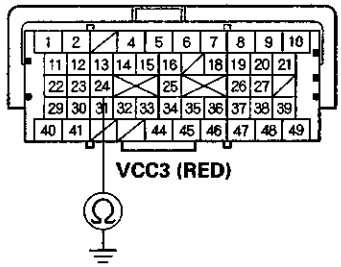
APP SENSOR 6P CONNECTOR



Wire side of female terminals

21. Check for continuity between ECM/PCM connector terminal A24 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 29.

NO—Repair open in the wire between the APP sensor and the ECM/PCM (A24), then go to step 24.

(cont'd)

DTC Troubleshooting (cont'd)

22. Turn the ignition switch to LOCK (0).
23. Replace the accelerator pedal module (see page 11-328).
24. Reconnect all connectors.
25. Turn the ignition switch to ON (II).
26. Reset the ECM/PCM with the HDS.
27. Do the ECM/PCM idle learn procedure (see page 11-385).
28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2122 indicated?

    YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
29. Turn the ignition switch to LOCK (0).
30. Reconnect all connectors.
31. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
32. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2122 indicated?

    YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2123: APP Sensor A (TP Sensor D) Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

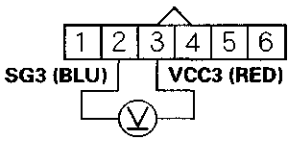
1. Turn the ignition switch to ON (II).
2. Check APP SENSOR A in the DATA LIST with the HDS.

   Is there about 4.9 V or more?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the APP sensor and the ECM/PCM.■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the APP sensor 6P connector.
5. Turn the ignition switch to ON (II).
6. Measure the voltage between APP sensor 6P connector terminals No. 2 and No. 3.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

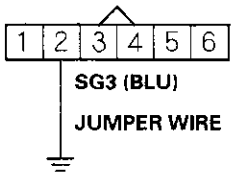
Is there about 5 V?

YES—Go to step 12.

NO—Go to step 7.

7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Connect APP sensor 6P connector terminal No. 2 to body ground with a jumper wire.

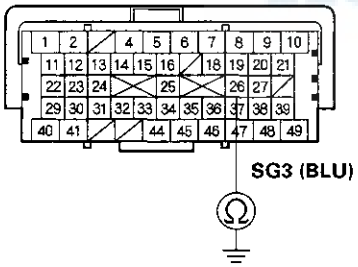
APP SENSOR 6P CONNECTOR



Wire side of female terminals

11. Check for continuity between ECM/PCM connector terminal A26 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 19.

NO—Repair open in the wire between the APP sensor and the ECM/PCM (A26), then go to step 14.

12. Turn the ignition switch to LOCK (0).
13. Replace the accelerator pedal module (see page 11-328).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2123 indicated?

    YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■
19. Reconnect all connectors.
20. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-281).
21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2123 indicated?

    YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM, then go to step 1. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-281), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P2127: APP Sensor B (TP Sensor E) Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

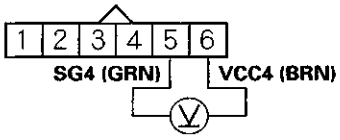
1. Turn the ignition switch to ON (II).
2. Check APP SENSOR B in the DATA LIST with the HDS.

   Is there about 0.2 V or less?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the APP sensor and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the APP sensor 6P connector.
5. Turn the ignition switch to ON (II).
6. Measure the voltage between APP sensor 6P connector terminals No. 5 and No. 6.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

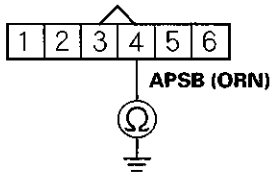
Is there about 5 V?

YES—Go to step 7.

NO—Go to step 17.

7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Check for continuity between APP sensor 6P connector terminal No. 4 and body ground.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

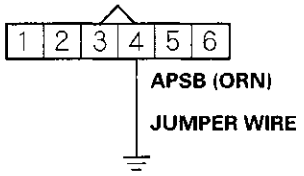
Is there continuity?

YES—Repair short in the wire between the APP sensor and the ECM/PCM (A19), then go to step 24.

NO—Go to step 11.

11. Connect APP sensor 6P connector terminal No. 4 to body ground with a jumper wire.

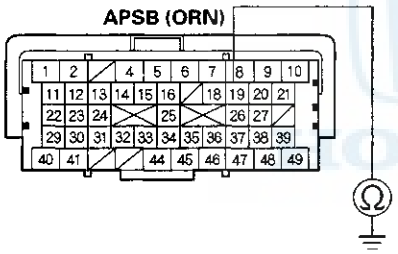
APP SENSOR 6P CONNECTOR



Wire side of female terminals

12. Check for continuity between ECM/PCM connector terminal A19 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

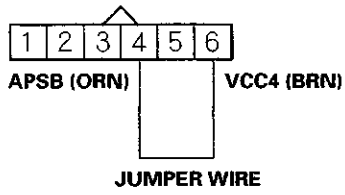
YES—Go to step 13.

NO—Repair open in the wire between the APP sensor and the ECM/PCM (A19), then go to step 24.

13. Reconnect ECM/PCM connector A (49P).

14. Connect APP sensor 6P connector terminals No. 4 and No. 6 with a jumper wire.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

15. Turn the ignition switch to ON (II).

16. Check APP SENSOR B in the DATA LIST with the HDS.

Is there about 0.2 V or less?

YES—Go to step 29.

NO—Go to step 22.

17. Turn the ignition switch to LOCK (0).

18. Jump the SCS line with the HDS.

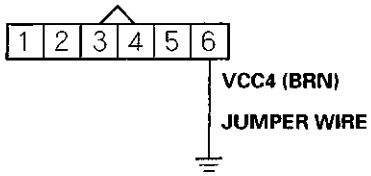
19. Disconnect ECM/PCM connector A (49P).

(cont'd)

DTC Troubleshooting (cont'd)

20. Connect APP sensor 6P connector terminal No. 6 to body ground with a jumper wire.

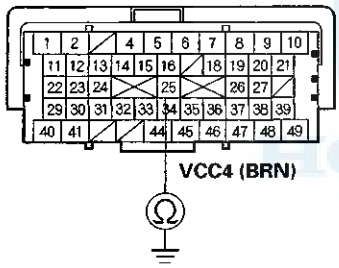
APP SENSOR 6P CONNECTOR



Wire side of female terminals

21. Check for continuity between ECM/PCM connector terminal A25 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 30.

NO—Repair open in the wire between the APP sensor and the ECM/PCM (A25), then go to step 24.

22. Turn the ignition switch to LOCK (0).

23. Replace the accelerator pedal module (see page 11-328).

24. Reconnect all connectors.

25. Turn the ignition switch to ON (II).

26. Reset the ECM/PCM with the HDS.

27. Do the ECM/PCM idle learn procedure (see page 11-385).

28. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2127 indicated?

YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

29. Turn the ignition switch to LOCK (0).

30. Reconnect all connectors.

31. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

32. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2127 indicated?

YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM, then go to step 1. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P2128: APP Sensor B (TP Sensor E) Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

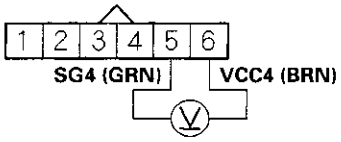
1. Turn the ignition switch to ON (II).
2. Check APP SENSOR B in the DATA LIST with the HDS.

   Is there about 4.0 V or more?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the APP sensor and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the APP sensor 6P connector.
5. Turn the ignition switch to ON (II).
6. Measure the voltage between APP sensor 6P connector terminals No. 5 and No. 6.

APP SENSOR 6P CONNECTOR



Wire side of female terminals

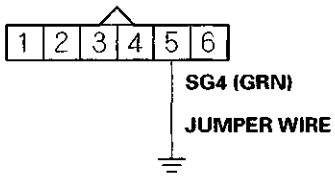
Is there about 5 V?

YES—Go to step 12.

NO—Go to step 7.

7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector A (49P).
10. Connect APP sensor 6P connector terminal No. 5 to body ground with a jumper wire.

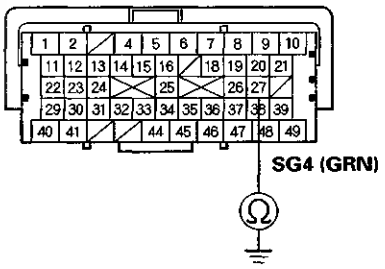
APP SENSOR 6P CONNECTOR



Wire side of female terminals

11. Check for continuity between ECM/PCM connector terminal A27 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 19.

NO—Repair open in the wire between the APP sensor and the ECM/PCM (A27), then go to step 14.

(cont'd)

DTC Troubleshooting (cont'd)

12. Turn the ignition switch to LOCK (0).
13. Replace the accelerator pedal module (see page 11-328).
14. Reconnect all connectors.
15. Turn the ignition switch to ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see page 11-385).
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2128 indicated?

    YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
19. Reconnect all connectors.
20. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2128 indicated?

    YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2135: TP Sensor A/B Incorrect Voltage Correlation

⚠CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Do the ETCS TEST in the INSPECTION MENU with the HDS.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2135 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the intake air duct from the throttle body.
7. Turn the ignition switch to ON (II).
8. Visually check the throttle valve operation while you clear the DTC with the HDS.

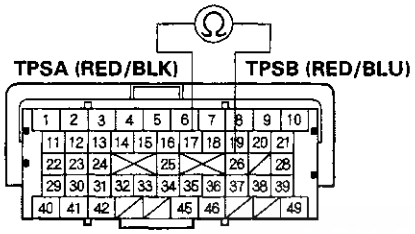
   Does the valve temporarily move to its fully closed position?

   YES—Go to step 15.

   NO—Go to step 9.

9. Turn the ignition switch to LOCK (0).
10. Jump the SCS line with the HDS.
11. Disconnect ECM/PCM connector B (49P).
12. Check for continuity between ECM/PCM connector terminals B17 and B26.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

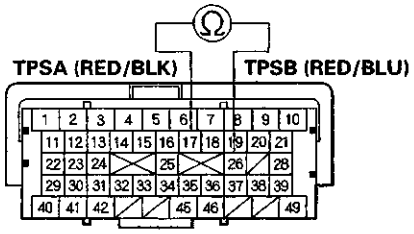
Is there continuity?

YES—Go to step 13.

NO—Go to step 22.

13. Disconnect the throttle body 6P connector.
14. Check for continuity between ECM/PCM connector terminals B17 and B26.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM B17 (TPSA line) and the B26 (TPSB line), then go to step 17.

NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).
16. Replace the throttle body (see page 11-441).
17. Reconnect all connectors.
18. Turn the ignition switch to ON (II).
19. Reset the ECM/PCM with the HDS.
20. Do the ECM/PCM idle learn procedure (see page 11-385).
21. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2135 indicated?

YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

(cont'd)

DTC Troubleshooting (cont'd)

22. Reconnect all connectors.

23. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2135 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P2138: APP Sensor A/B (TP Sensor D/E) Incorrect Voltage Correlation

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with HDS.

3. Press the accelerator pedal to the floor.

4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2138 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the APP sensor and the ECM/PCM. ■

5. Check APP SENSOR A and APP SENSOR B in the DATA LIST with the HDS.

   Are they the same voltage?

   YES—Go to step 6.

   NO—Go to step 12.

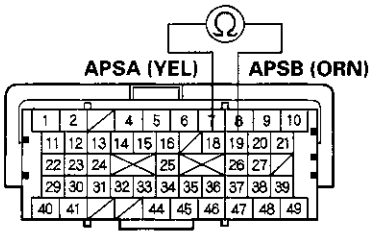
6. Turn the ignition switch to LOCK (0).

7. Jump the SCS line with the HDS.

8. Disconnect ECM/PCM connector A (49P).

9. Check for continuity between ECM/PCM connector terminals A18 and A19.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

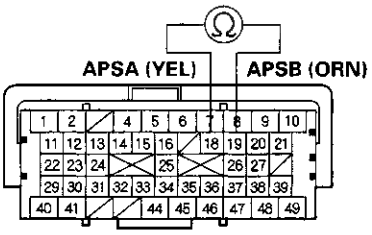
YES—Go to step 10.

NO—Go to step 22.

10. Disconnect the APP sensor 6P connector.

11. Check for continuity between ECM/PCM connector terminals A18 and A19.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wires between ECM/PCM connector terminals A18 (APSA line) and A19 (APSB line), then go to step 14.

NO—Go to step 13.

12. Turn the ignition switch to LOCK (0).

13. Replace the accelerator pedal module (see page 11-328).

14. Reconnect all connectors.

15. Turn the ignition switch to ON (II).

16. Reset the ECM/PCM with the HDS.

17. Do the ECM/PCM idle learn procedure (see page 11-385).

18. Turn the ignition switch to LOCK (0).

19. Turn the ignition switch to ON (II).

20. Press the accelerator pedal to the floor.

21. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2138 indicated?

YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

22. Reconnect all connectors.

23. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

24. Turn the ignition switch to LOCK (0).

25. Turn the ignition switch to ON (II).

26. Press the accelerator pedal to the floor.

(cont'd)

DTC Troubleshooting (cont'd)

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2138 indicated?

    YES—Check for poor connections or loose terminals at the APP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 24. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P2176: Throttle Actuator Control System Idle Position Not Learned

⚠CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P2135 is stored at the same time as DTC P2176, troubleshoot DTC P2135 first, then recheck for DTC P2176.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0).
4. Turn the ignition switch to ON (II), and wait 10 seconds.
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2176 indicated?

   YES—Go to step 6.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then clean the throttle body (see page 11-436).■
6. Turn the ignition switch to LOCK (0).
7. Disconnect the intake air duct from the throttle body.
8. Turn the ignition switch to ON (II).
9. Clear the DTC with the HDS.

10. Visually check the throttle valve operation while performing the ETCS TEST in the INSPECTION MENU with the HDS.

    Does the throttle valve move to its fully closed position?

    YES—Go to step 11.

    NO—Go to step 12.

11. Check for sludge or carbon on the throttle valve.

    Is there sludge or carbon on the throttle valve?

    YES—Clean the throttle body (see page 11-436), then go to step 21.

    NO—Go to step 18.

12. Turn the ignition switch to LOCK (0).

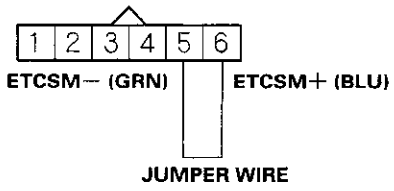
13. Disconnect the throttle body 6P connector.

14. Jump the SCS line with the HDS.

15. Disconnect ECM/PCM connector C (49P).

16. Connect throttle body 6P connector terminals No. 5 and No. 6 with a jumper wire.

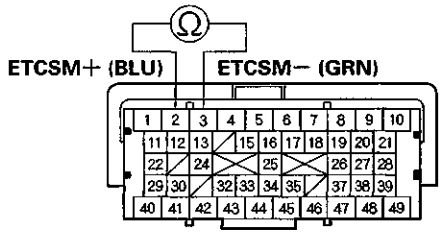
THROTTLE BODY 6P CONNECTOR



Wire side of female terminals

17. Check for continuity between ECM/PCM connector terminals C2 and C3.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 28.

NO—Repair open in the wires between the throttle body and the ECM/PCM (C2, C3), then go to step 21.

18. Turn the ignition switch to LOCK (0).

19. Replace the throttle body (see page 11-441).

20. Reconnect all connectors.

21. Turn the ignition switch to ON (II).

22. Reset the ECM/PCM with the HDS.

23. Do the ECM/PCM idle learn procedure (see page 11-385).

24. Turn the ignition switch to LOCK (0).

25. Turn the ignition switch to ON (II), and wait 10 seconds.

(cont'd)

DTC Troubleshooting (cont'd)

26. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2176 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then clean the throttle body (see page 11-436), and go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

27. Reconnect all connectors.

28. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

29. Turn the ignition switch to LOCK (0).

30. Turn the ignition switch to ON (II), and wait 10 seconds.

31. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2176 indicated?

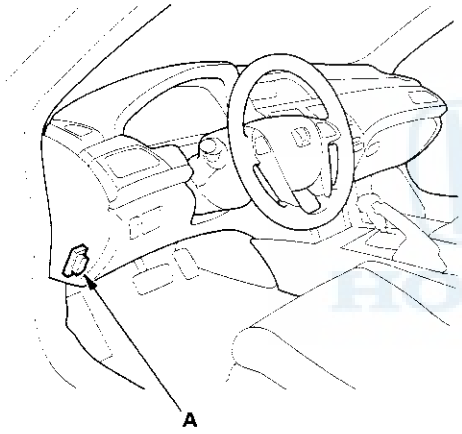
    YES—Check for poor connections or loose terminals at throttle body and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 29. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

APP Sensor Signal Inspection

NOTE:
- This procedure checks the APP sensor in its fully closed position. In any other position, the APP sensor stores DTCs which are covered in other troubleshooting procedures.
- Check for Temporary DTCs or DTCs with the HDS before doing this procedure. If any DTCs are indicated, troubleshoot them first, then do this procedure.
- Press the accelerator pedal several times, to check its operation. If it does not operate smoothly, check the pedal. If you find a problem, replace the accelerator pedal module (see page 11-328).

1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).

3. Make sure the HDS communicates with the ECM/PCM. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259).

4. Make sure the accelerator pedal is not pressed, then check the APP SENSOR in the DATA LIST with the HDS.

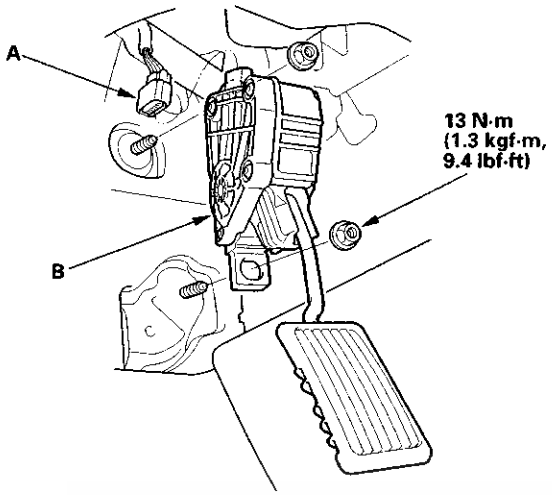
   - If it is 0 %, the APP sensor is OK.
   - If it is not 0 %, update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then go to step 5.

5. Make sure the accelerator pedal is not pressed, then check the APP SENSOR in the DATA LIST with the HDS.

   - If it is 0 %, the APP sensor is OK.
   - If it is not 0 %, replace the accelerator pedal module (see page 11-328), then go to step 1.

Accelerator Pedal Module Removal/Installation

1. Disconnect the APP sensor connector (A).

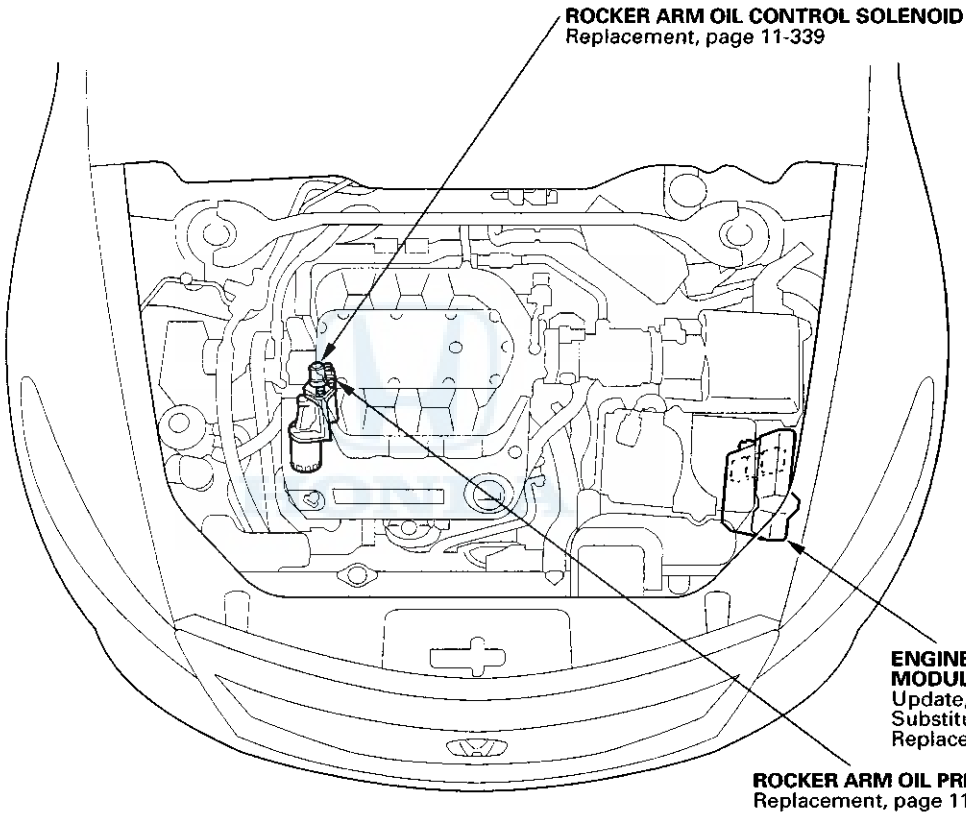


2. Remove the accelerator pedal module (B).

   NOTE: The APP sensor is not available separately. Do not disassemble the accelerator pedal module.

3. Install the parts in the reverse order of removal.

Component Location Index



DTC Troubleshooting

DTC P2646: Rocker Arm Oil Pressure Switch Circuit Low Voltage

Special Tools Required
- Pressure gauge adapter 07NAJ-P07010A
- A/T low pressure gauge w/panel 07406-0070301
- A/T pressure hose 07406-0020201
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure adapter 07MAJ-PY40120
- Oil pressure hose 07ZAJ-S5AA200

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check the engine oil level.

   Is the engine oil level OK?

   YES—Go to step 2.

   NO—Adjust the engine oil to the proper level, then go to step 19.

2. Turn the ignition switch to ON (II).
3. Clear the DTC with the HDS.
4. Do the VTEC TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the rocker arm oil pressure switch, the rocker arm oil control solenoid, and the ECM.■

   NO—Go to step 5.

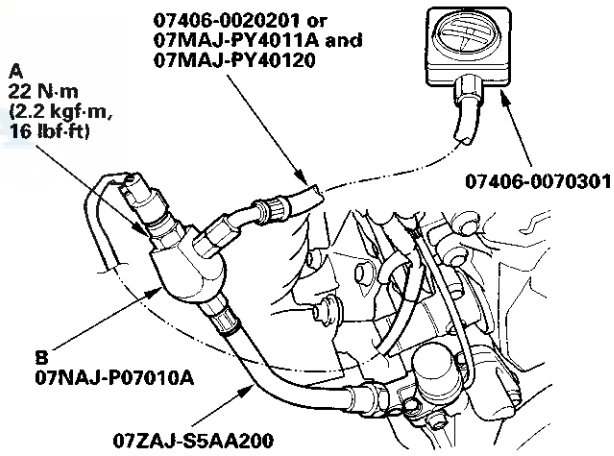
5. Turn the ignition switch to LOCK (0).
6. Disconnect the rocker arm oil pressure switch 2P connector.
7. Turn the ignition switch to ON (II).
8. Check the VTEC PRES SW in the DATA LIST with the HDS.

   Is switch ON indicated?

   YES—Go to step 14.

   NO—Go to step 9.

9. Turn the ignition switch to LOCK (0).
10. Remove the rocker arm oil pressure switch (A), attach the special tools as shown, then attach the rocker arm oil pressure switch to the oil pressure gauge adapter (B).



11. Start the engine.

12. Do the VTEC TEST in the INSPECTION MENU with the HDS.

13. Check the oil pressure.

    Does the oil pressure increase to at least 392 kPa (4.0 kgf/cm², 56.9 psi)?

    YES—Replace the rocker arm oil pressure switch (see page 11-339), then go to step 18.

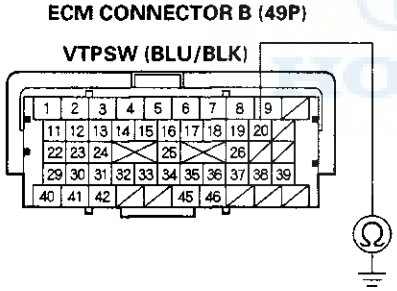
    NO—Inspect the VTEC system. If it is OK, replace the rocker arm oil control solenoid (see page 11-339), then go to step 18.

14. Turn the ignition switch to LOCK (0).

15. Jump the SCS line with the HDS.

16. Disconnect ECM connector B (49P).

17. Check for continuity between ECM connector terminal B20 and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM (B20) and the rocker arm oil pressure switch, then go to step 18.

NO—Go to step 24.

18. Reconnect all connectors.

19. Turn the ignition switch to ON (II).

20. Reset the ECM with the HDS.

21. Do the ECM idle learn procedure (see page 11-385).

22. Do the VTEC TEST in the INSPECTION MENU with the HDS.

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2646 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure switch and the ECM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

24. Reconnect all connectors.

25. Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7).

26. Do the VTEC TEST in the INSPECTION MENU with the HDS.

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2646 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure switch and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then go to step 26. If the ECM was substituted, go to step 1.

    NO—If the ECM was updated, troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC Troubleshooting (cont'd)

DTC P2647: Rocker Arm Oil Pressure Switch Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check the engine oil level.

   Is the engine oil level OK?

   YES—Go to step 2.

   NO—Adjust the engine oil to the proper level, then go to step 17.

2. Turn the ignition switch to ON (II).

3. Clear the DTC with the HDS.

4. Do the VTEC TEST in the INSPECTION MENU with the HDS.

   NOTE: If the DTC is stored during VTEC TEST, check for DTC's MENU. If DTC P2647 indicated, go to step 6. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the rocker arm oil pressure switch, the rocker arm oil control solenoid, and the ECM. ■

   NO—Go to step 5.

5. Check the result of step 4.

   - VTEC Switch Failure
   - VTEC Switch Open
   - VTEC Switch SIG Line Open
   - VTEC Switch GND Line Open

   Is the test result any of the above?

   YES—Go to step 6.

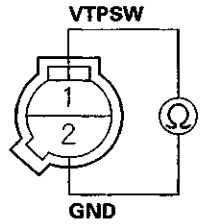
   NO—Check for poor connections or loose terminals at the rocker arm oil pressure switch. If it is OK, replace the rocker arm oil control solenoid (see page 11-339), then go to step 15.

6. Turn the ignition switch to LOCK (0).

7. Disconnect the rocker arm oil pressure switch 2P connector.

8. At the rocker arm oil pressure switch side, check for continuity between rocker arm oil pressure switch 2P connector terminals No. 1 and No. 2.

ROCKER ARM OIL PRESSURE SWITCH 2P CONNECTOR



Terminal side of male terminals

Is there continuity?

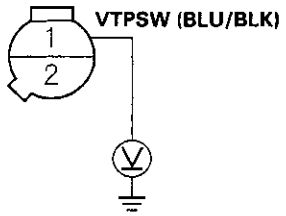
YES—Go to step 9.

NO—Replace the rocker arm oil pressure switch (see page 11-339), then go to step 16.

9. Turn the ignition switch to ON (II).

10. Measure the voltage between rocker arm oil pressure switch 2P connector terminal No. 1 and body ground.

ROCKER ARM OIL PRESSURE SWITCH 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Repair open in the wire between the rocker arm oil pressure switch and G101, then go to step 15.

NO—Go to step 11.

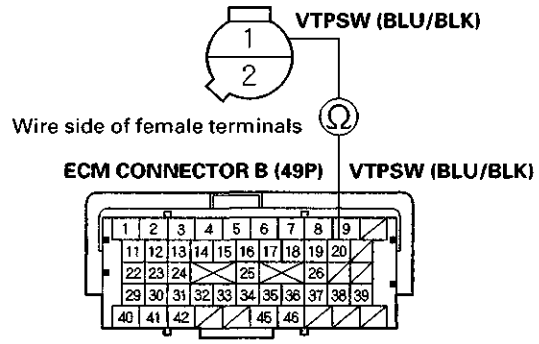
11. Turn the ignition switch to LOCK (0).

12. Jump the SCS line with the HDS.

13. Disconnect ECM connector B (49P).

14. Check for continuity between ECM connector terminal B20 and rocker arm oil pressure switch 2P connector terminal No. 1.

ROCKER ARM OIL PRESSURE SWITCH 2P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 22.

NO—Repair open in the wire between the ECM (B20) and the rocker arm oil pressure switch, then go to step 16.

15. Turn the ignition switch to LOCK (0).

16. Reconnect all connectors.

17. Turn the ignition switch to ON (II).

18. Reset the ECM with the HDS.

19. Do the ECM idle learn procedure (see page 11-385).

(cont'd)

DTC Troubleshooting (cont'd)

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2647 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure switch and the ECM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD STATUS for DTC P2647 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil pressure switch and the ECM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

22. Reconnect all connectors.

23. Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7).

24. Start the engine, and let it idle.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2647 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure switch, the rocker arm oil control solenoid, and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then go to step 24. If the ECM was substituted, go to step 1.

    NO—Go to step 26.

26. Monitor the OBD STATUS for DTC P2647 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM was updated, troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil pressure switch and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then go to step 24. If the ECM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2648: Rocker Arm Oil Control Solenoid Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

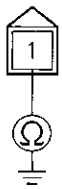
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Do the VTEC TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM. ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect the rocker arm oil control solenoid 1P connector.
6. At the solenoid side, measure the resistance between the rocker arm oil control solenoid 1P connector terminal and the solenoid valve body.

ROCKER ARM OIL CONTROL SOLENOID 1P CONNECTOR



Terminal side of male terminals

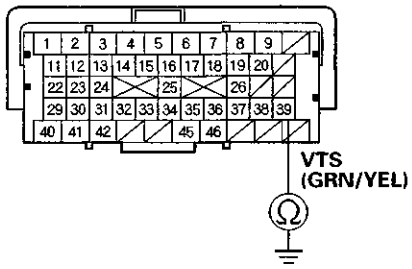
Is there 14—30 Ω at room temperature?

YES—Go to step 7.

NO—Go to step 10.

7. Jump the SCS line with the HDS.
8. Disconnect ECM connector B (49P).
9. Check for continuity between ECM connector terminal B39 and body ground.

ECM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM (B39) and the rocker arm oil control solenoid, then go to step 11.

NO—Go to step 18.

10. Replace the rocker arm oil control solenoid (see page 11-339).
11. Reconnect all connectors.
12. Turn the ignition switch ON (II).
13. Reset the ECM with the HDS.
14. Do the ECM idle learn procedure (see page 11-385).
15. Do the VTEC TEST in the INSPECTION MENU with the HDS.
16. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2648 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM, then go to step 1.

    NO—Go to step 17.

(cont'd)

DTC Troubleshooting (cont'd)

17. Monitor the OBD STATUS for DTC P2648 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 15.

18. Reconnect all connectors.

19. Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7).

20. Do the VTEC TEST in the INSPECTION MENU with the HDS.

21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2648 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then recheck. If the ECM was substituted, go to step 1.

    NO—Go to step 22.

22. Monitor the OBD STATUS for DTC P2648 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM was updated, troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then recheck. If the ECM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 20.

DTC P2649: Rocker Arm Oil Control Solenoid Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in neutral) until the radiator fan comes on, then let it idle.
4. Check for Temporary DTCs or DTCs with the HDS.

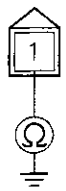
   Is DTC P2649 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM.■

5. Turn the ignition switch to LOCK (0).
6. Disconnect the rocker arm oil control solenoid 1P connector.
7. At the solenoid side, measure the resistance between the rocker arm oil control solenoid 1P connector terminal and the solenoid valve body.

ROCKER ARM OIL CONTROL SOLENOID 1P CONNECTOR



Terminal side of male terminals

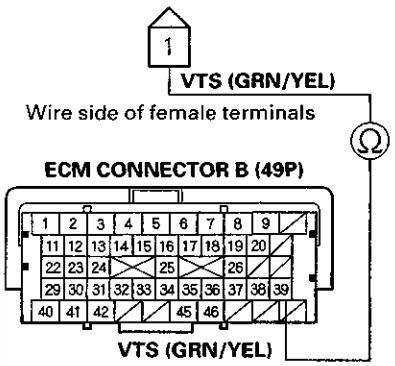
Is there 14– 30 Ω at room temperature?

YES—Go to step 8.

NO—Go to step 11.

8. Jump the SCS line with the HDS.
9. Disconnect ECM connector B (49P).
10. Check for continuity between ECM connector terminal B39 and the rocker arm oil control solenoid 1P connector terminal.

ROCKER ARM OIL CONTROL SOLENOID 1P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the ECM (B39) and the rocker arm oil control solenoid, then go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

11. Replace the rocker arm oil control solenoid (see page 11-339).
12. Reconnect all connectors.
13. Turn the ignition switch to ON (II).
14. Reset the ECM with the HDS.
15. Do the ECM idle learn procedure (see page 11-385).
16. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2649 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM, then go to step 1.

    NO—Go to step 17.
17. Monitor the OBD STATUS for DTC P2649 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates NOT COMPLETED, keep idling until a result comes on.
18. Reconnect all connectors.
19. Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7).
20. Start the engine, and let it idle.
21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2649 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then recheck. If the ECM was substituted, go to step 1.

    NO—Go to step 22.
22. Monitor the OBD STATUS for DTC P2649 in the DTCs MENU with the HDS.

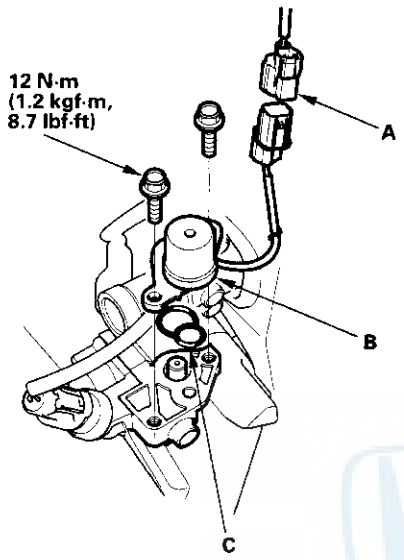
    Does the screen indicate PASSED?

    YES—If the ECM was updated, troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil control solenoid and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then recheck. If the ECM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

Rocker Arm Oil Control Solenoid Replacement

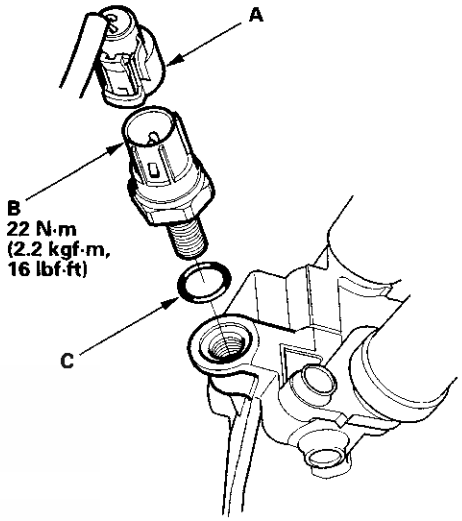
1. Disconnect the rocker arm oil control solenoid connector (A).



2. Remove the rocker arm oil control solenoid (B).
3. Install the parts in the reverse order of removal with a new O-ring (C).

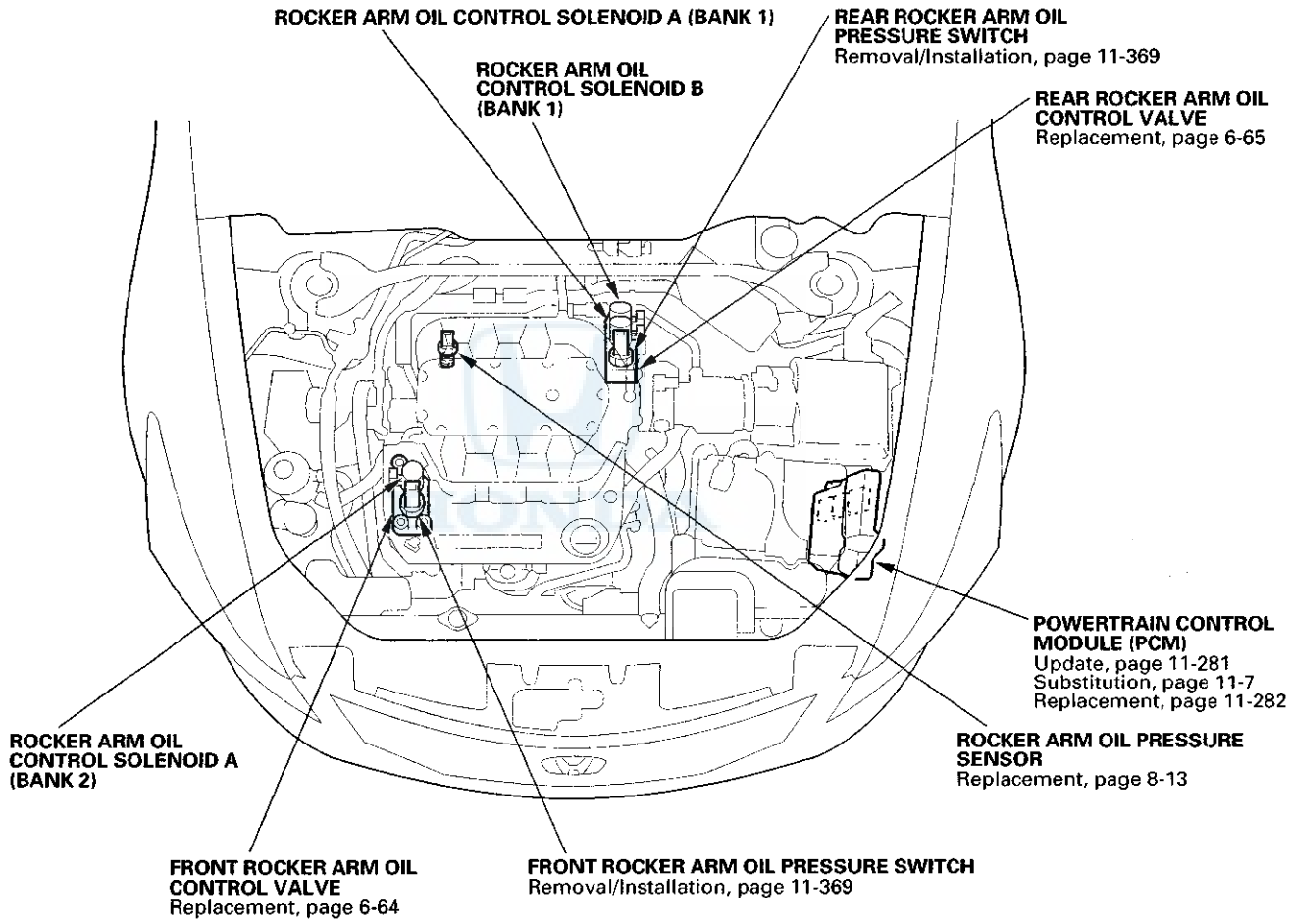
Rocker Arm Oil Pressure Switch Removal/Installation

1. Disconnect the rocker arm oil pressure switch connector (A), then remove the rocker arm oil pressure switch (B).



2. Install the parts in the reverse order of removal with a new O-ring (C).

Component Location Index



DTC Troubleshooting

DTC P0522: Rocker Arm Oil Pressure Sensor Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Check the ROCKER ARM OIL PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 0.18 V or less?

   YES—Go to step 3.

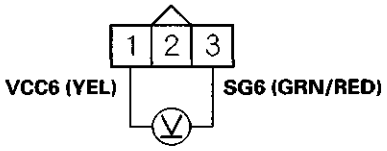
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM.■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the rocker arm oil pressure sensor 3P connector.
5. Turn the ignition switch to ON (II).
6. Check the ROCKER ARM OIL PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 0.18 V or less?

   YES—Go to step 8.

   NO—Go to step 7.
7. Measure the voltage between rocker arm oil pressure sensor 3P connector terminals No. 1 and No. 3.

   ROCKER ARM OIL PRESSURE SENSOR 3P CONNECTOR



   Wire side of female terminals

   Is there about 5 V?

   YES—Go to step 16.

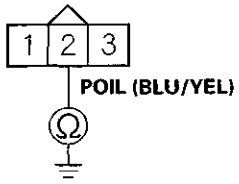
   NO—Go to step 12.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connector C (49P).

(cont'd)

DTC Troubleshooting (cont'd)

11. Check for continuity between rocker arm oil pressure sensor 3P connector terminal No. 2 and body ground.

ROCKER ARM OIL PRESSURE SENSOR 3P CONNECTOR



Wire side of female terminals

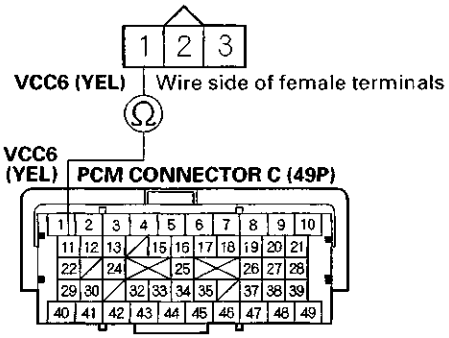
Is there continuity?

YES—Repair short in the wire between the PCM (C22) and the rocker arm oil pressure sensor, then go to step 18.

NO—Go to step 24.

12. Turn the ignition switch to LOCK (0).
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector C (49P).
15. Check for continuity between PCM connector terminal C11 and rocker arm oil pressure sensor 3P connector terminal No. 1.

ROCKER ARM OIL PRESSURE SENSOR 3P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 24.

NO—Repair open in the wire between the PCM (C11) and the rocker arm oil pressure sensor, then go to step 18.

16. Turn the ignition switch to LOCK (0).
17. Replace the rocker arm oil pressure sensor (see page 8-13).
18. Reconnect all connectors.
19. Turn the ignition switch to ON (II).

20. Reset the PCM with the HDS.

21. Do the PCM idle learn procedure (see page 11-385).

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0522 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM, then go to step 1.

    NO—Go to step 23.

23. Monitor the OBD STATUS for DTC P0522 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

24. Reconnect all connectors.

25. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

26. Start the engine, and let it idle.

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0522 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 26. If the PCM was substituted, go to step 1.

    NO—Go to step 28.

28. Monitor the OBD STATUS for DTC P0522 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 26. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P0523: Rocker Arm Oil Pressure Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

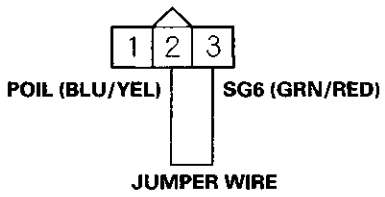
1. Turn the ignition switch to ON (II).
2. Check the ROCKER ARM OIL PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 4.79 V or more?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM.■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the rocker arm oil pressure sensor 3P connector.
5. Connect rocker arm oil pressure sensor 3P connector terminals No. 2 and No. 3 with a jumper wire.

ROCKER ARM OIL PRESSURE SENSOR 3P CONNECTOR



Wire side of female terminals

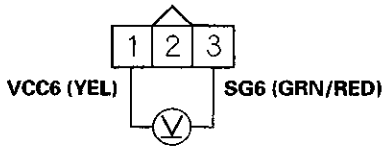
6. Turn the ignition switch to ON (II).
7. Check the ROCKER ARM OIL PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 4.79 V or more?

   YES—Go to step 8.

   NO—Go to step 18.
8. Remove the jumper wire.
9. Measure the voltage between rocker arm oil pressure sensor 3P connector terminals No. 1 and No. 3.

ROCKER ARM OIL PRESSURE SENSOR 3P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 14.

NO—Go to step 10.

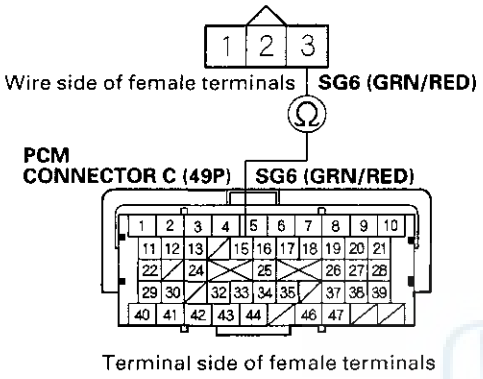
10. Turn the ignition switch to LOCK (0).

11. Jump the SCS line with the HDS.

12. Disconnect PCM connector C (49P).

13. Check for continuity between PCM connector terminal C15 and rocker arm oil pressure sensor 3P connector terminal No. 3.

ROCKER ARM OIL PRESSURE SENSOR 3P CONNECTOR



Is there continuity?

YES—Go to step 26.

NO—Repair open in the wire between the PCM (C15) and the rocker arm oil pressure sensor, then go to step 20.

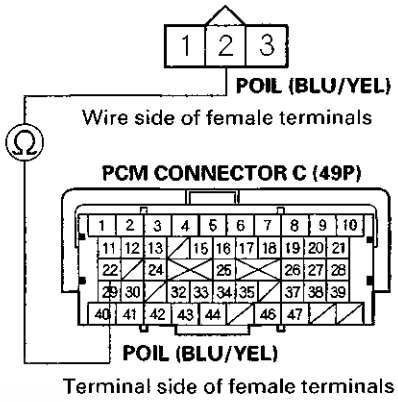
14. Turn the ignition switch to LOCK (0).

15. Jump the SCS line with the HDS.

16. Disconnect PCM connector C (49P).

17. Check for continuity between PCM connector terminal C22 and rocker arm oil pressure sensor 3P connector terminal No. 2.

ROCKER ARM OIL PRESSURE SENSOR 3P CONNECTOR



Is there continuity?

YES—Go to step 26.

NO—Repair open in the wire between the PCM (C22) and the rocker arm oil pressure sensor, then go to step 20.

18. Turn the ignition switch to LOCK (0).

19. Replace the rocker arm oil pressure sensor (see page 8-13).

20. Reconnect all connectors.

(cont'd)

DTC Troubleshooting (cont'd)

21. Turn the ignition switch to ON (II).

22. Reset the PCM with the HDS.

23. Do the PCM idle learn procedure (see page 11-385).

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0523 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM, then go to step 1.

    NO—Go to step 25.

25. Monitor the OBD STATUS for DTC P0523 in the DTCs MENU with the HDS.

    Does the screen indicated PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

26. Reconnect all connectors.

27. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

28. Start the engine, and let it idle.

29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0523 indicated?

    YES—Check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 28. If the PCM was substituted, go to step 1.

    NO—Go to step 30.

30. Monitor the OBD STATUS for DTC P0523 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 29, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil pressure sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 28. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2648: Rocker Arm Oil Control Solenoid A (Bank 1) Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

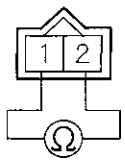
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL A (B1).
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2648 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the rocker arm oil control solenoid A (Bank 1) 2P connector.
7. Measure the resistance between rocker arm oil control solenoid A (Bank 1) 2P connector terminals No. 1 and No. 2.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 1) 2P CONNECTOR



Terminal side of male terminals

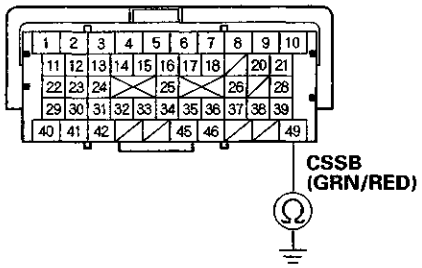
Is there 13.6— 16.9 Ω at room temperature?

YES—Go to step 8.

NO—Go to step 11.

8. Jump the SCS line with the HDS.
9. Disconnect PCM connector B (49P).
10. Check for continuity between PCM connector terminal B49 and body ground.

PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the PCM (B49) and rocker arm oil control solenoid A (Bank 1), then go to step 12.

NO—Check for poor connections or loose terminals at PCM and rocker arm oil control solenoid A (Bank 1), then go to step 19.

(cont'd)

DTC Troubleshooting (cont'd)

11. Replace the rear rocker arm oil control valve (see page 6-65).
12. Reconnect all connectors.
13. Turn the ignition switch to ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see page 11-385).
16. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL A (B1).
17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2648 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM, then go to step 1.

    NO—Go to step 18.
18. Monitor the OBD STATUS for DTC P2648 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates NOT COMPLETED, go to step 16.
19. Reconnect all connectors.
20. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).
21. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL A (B1).
22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2648 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1.

    NO—Go to step 23.
23. Monitor the OBD STATUS for DTC P2648 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 21.

DTC P2649: Rocker Arm Oil Control Solenoid A (Bank 1) Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

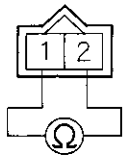
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2649 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM.■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the rocker arm oil control solenoid A (Bank 1) 2P connector.
7. Measure the resistance between rocker arm oil control solenoid A (Bank 1) 2P connector terminals No. 1 and No.2.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 1) 2P CONNECTOR



Terminal side of male terminals

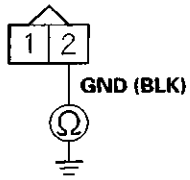
Is there 13.6— 16.9 Ω at room temperature?

YES—Go to step 8.

NO—Go to step 12.

8. Check for continuity between rocker arm oil control solenoid A (Bank 1) 2P connector terminal No. 2 and body ground.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 1) 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 9.

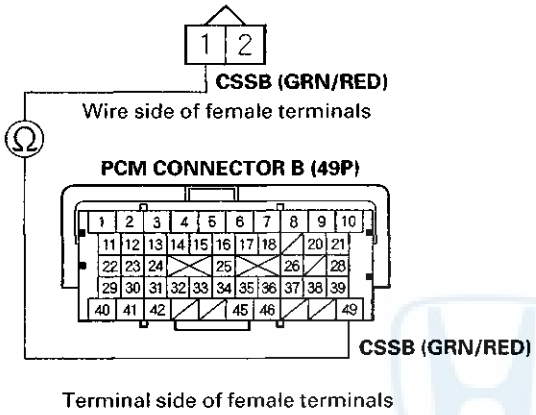
NO—Repair open in the wire between rocker arm oil control solenoid A (Bank 1) terminal No. 2 and G101, then go to step 13.

(cont'd)

DTC Troubleshooting (cont'd)

9. Jump the SCS line with the HDS.
10. Disconnect PCM connector B (49P).
11. Check for continuity between PCM connector terminal B49 and rocker arm oil control solenoid A (Bank 1) 2P connector terminal No. 1.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 1) 2P CONNECTOR



Is there continuity?

YES—Go to step 19.

NO—Repair open in the wire between the PCM (B49) and the rocker arm oil control solenoid A (Bank 1), then go to step 13.

12. Replace the rear rocker arm oil control valve (see page 6-65).
13. Reconnect all connectors.
14. Turn the ignition switch to ON (II).
15. Reset the PCM with the HDS.
16. Do the PCM idle learn procedure (see page 11-385).
17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2649 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM, then go to step 1.

    NO—Go to step 18.

18. Monitor the OBD STATUS for DTC P2649 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

19. Reconnect all connectors.

20. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

21. Start the engine, and let it idle.

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2649 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1.

    NO—Go to step 23.

23. Monitor the OBD STATUS for DTC P2649 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2653: Rocker Arm Oil Control Solenoid B (Bank 1) Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL B (B1).

4. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2653 indicated?

    YES—Go to step 5.

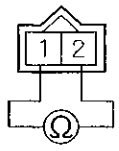
    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid B (Bank 1) and the PCM.■

5. Turn the ignition switch to LOCK (0).

6. Disconnect the rocker arm oil control solenoid B (Bank 1) 2P connector.

7. Measure the resistance between rocker arm oil control solenoid B (Bank 1) 2P connector terminals No. 1 and No. 2.

ROCKER ARM OIL CONTROL SOLENOID B (BANK 1) 2P CONNECTOR



Terminal side of male terminals

Is there 13.6 – 16.9 Ω at room temperature?

YES—Go to step 8.

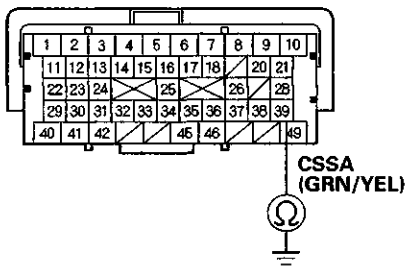
NO—Go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

8. Jump the SCS line with the HDS.
9. Disconnect PCM connector B (49P).
10. Check for continuity between PCM connector terminal B39 and body ground.

PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the PCM (B39) and rocker arm oil control solenoid B (Bank 1), then go to step 12.

NO—Check for poor connections or loose terminals at the PCM and rocker arm oil control solenoid B (Bank 1), then go to step 19.

11. Replace the rear rocker arm oil control valve (see page 6-65).
12. Reconnect all connectors.
13. Turn the ignition switch to ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see page 11-385).
16. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL B (B1).
17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2653 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid B (Bank 1) and the PCM, then go to step 1.

    NO—Go to step 18.

18. Monitor the OBD STATUS for DTC P2653 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates NOT COMPLETED, go to step 16.

19. Reconnect all connectors.

20. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

21. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL B (B1).

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2653 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid B (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1.

    NO—Go to step 23.

23. Monitor the OBD STATUS for DTC P2653 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the rocker arm oil control solenoid B (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 21.

DTC P2654: Rocker Arm Oil Control Solenoid B (Bank 1) Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle.

4. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2654 indicated?

    YES—Go to step 5.

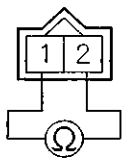
    NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid B (Bank 1) and the PCM.■

5. Turn the ignition switch to LOCK (0).

6. Disconnect the rocker arm oil control solenoid B (Bank 1) 2P connector.

7. Measure the resistance rocker arm oil control solenoid B (Bank 1) 2P connector terminals No. 1 and No. 2.

ROCKER ARM OIL CONTROL SOLENOID B (BANK 1) 2P CONNECTOR



Terminal side of male terminals

Is there 13.6– 16.9 Ω at room temperature?

YES—Go to step 8.

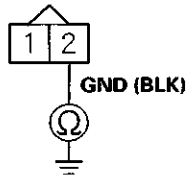
NO—Go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

8. Check for continuity between rocker arm oil control solenoid B (Bank 1) 2P connector terminal No. 2 and body ground.

ROCKER ARM OIL CONTROL SOLENOID B (BANK 1) 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 9.

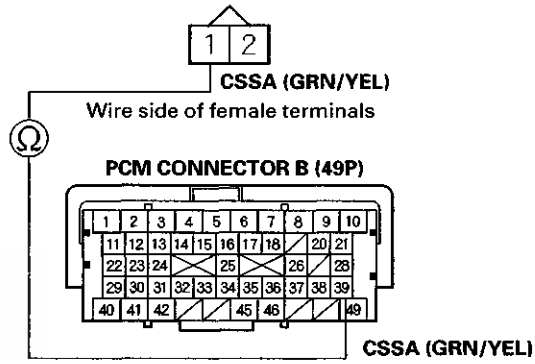
NO—Repair open in the wire between rocker arm oil control solenoid B (Bank 1) terminal No. 2 and G101, then go to step 19.

9. Jump the SCS line with the HDS.

10. Disconnect PCM connector B (49P).

11. Check for continuity between PCM connector terminal B39 and rocker arm oil control solenoid B (Bank 1) 2P connector terminal No. 1.

ROCKER ARM OIL CONTROL SOLENOID B (BANK 1) 2P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 19.

NO—Repair open in the wire between the PCM (B39) and the rocker arm oil control solenoid B (Bank 1), then go to step 13.

12. Replace the rear rocker arm oil control valve (see page 6-65).

13. Reconnect all connectors.

14. Turn the ignition switch to ON (II).

15. Reset the PCM with the HDS.

16. Do the PCM idle learn procedure (see page 11-385).

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2654 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid B (Bank 1) and the PCM, then go to step 1.

    NO—Go to step 18.

18. Monitor the OBD STATUS for DTC P2654 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

19. Reconnect all connectors.

20. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

21. Start the engine, and let it idle.

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2654 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid B (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1.

    NO—Go to step 23.

23. Monitor the OBD STATUS for DTC P2654 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at rocker arm oil control solenoid B (Bank 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P2658: Rocker Arm Oil Control Solenoid A (Bank 2) Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

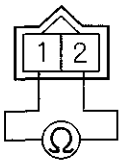
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL A (B2).
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2658 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the rocker arm oil control solenoid A (Bank 2) 2P connector.
7. Measure the resistance between rocker arm oil control solenoid A (Bank 2) 2P connector terminals No. 1 and No. 2.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 2) 2P CONNECTOR



Terminal side of male terminals

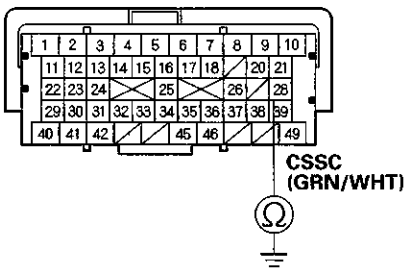
Is there 13.6—16.9 Ω at room temperature?

YES—Go to step 8.

NO—Go to step 11.

8. Jump the SCS line with the HDS.
9. Disconnect PCM connector B (49P).
10. Check for continuity between PCM connector terminal B28 and body ground.

PCM CONNECTOR B (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the PCM (B28) and rocker arm oil control solenoid A (Bank 2), then go to step 12.

NO—Check for poor connections or loose terminals at the PCM and rocker arm oil control solenoid A (Bank 2), then go to step 19.

11. Replace the front rocker arm oil control valve (see page 6-64).

12. Reconnect all connectors.

13. Turn the ignition switch to ON (II).

14. Reset the PCM with the HDS.

15. Do the PCM idle learn procedure (see page 11-385).

16. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL A (B2).

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2658 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM, then go to step 1.

    NO—Go to step 18.

18. Monitor the OBD STATUS for DTC P2658 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates NOT COMPLETED, go to step 16.

19. Reconnect all connectors.

20. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

21. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the Solenoid Valve ACTIVATION of the ROCKER ARM OIL CONTROL SOL A (B2).

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2658 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1.

    NO—Go to step 23.

23. Monitor the OBD STATUS for DTC P2658 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 21.

DTC Troubleshooting (cont'd)

DTC P2659: Rocker Arm Oil Control Solenoid A (Bank 2) Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

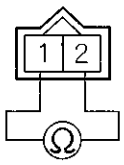
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in P or N) until the radiator fan comes on, then let it idle.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2659 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM.■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the rocker arm oil control solenoid A (Bank 2) 2P connector.
7. Measure the resistance between rocker arm oil control solenoid A (Bank 2) 2P connector terminals No. 1 and No. 2.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 2) 2P CONNECTOR



Terminal side of male terminals

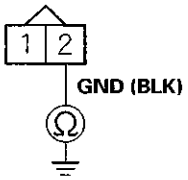
Is there 13.6– 16.9 Ω at room temperature?

YES—Go to step 8.

NO—Go to step 12.

8. Check for continuity between rocker arm oil control solenoid A (Bank 2) 2P connector terminal No. 2 and body ground.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 2) 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 9.

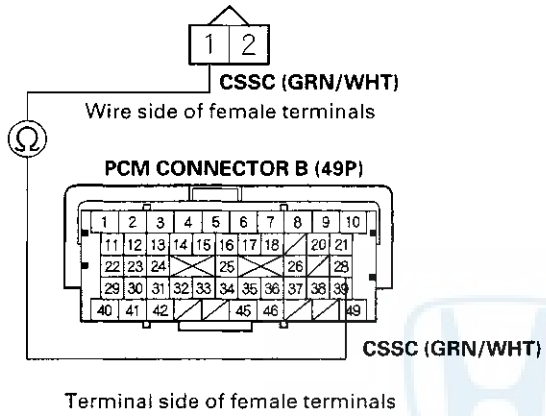
NO—Repair open in the wire between rocker arm oil control solenoid A (Bank 2) terminal No. 2 and G101, then go to step 13.

9. Jump the SCS line with the HDS.

10. Disconnect PCM connector B (49P).

11. Check for continuity between PCM connector terminal B28 and rocker arm oil control solenoid A (Bank 2) 2P connector terminal No. 1.

ROCKER ARM OIL CONTROL SOLENOID A (BANK 2) 2P CONNECTOR



Is there continuity?

YES—Go to step 19.

NO—Repair open in the wire between the PCM (B28) and the rocker arm oil control solenoid A (Bank 2), then go to step 13.

12. Replace the rear rocker arm oil control valve (see page 6-65).

13. Reconnect all connectors.

14. Turn the ignition switch to ON (II).

15. Reset the PCM with the HDS.

16. Do the PCM idle learn procedure (see page 11-385).

17. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2659 indicated?

YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM, then go to step 1.

NO—Go to step 18.

18. Monitor the OBD STATUS for DTC P2659 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting. ■

NO—If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

(cont'd)

DTC Troubleshooting (cont'd)

19. Reconnect all connectors.

20. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

21. Start the engine, and let it idle.

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2659 indicated?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1.

    NO—Go to step 23.

23. Monitor the OBD STATUS for DTC P2659 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see page 11-7), then go to step 21. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P3400: VPS Stuck Off Bank 1

Special Tools Required
- Pressure gauge adapter 07NAJ-P07010A
- A/T low pressure gauge w/panel 07406-0070301
- A/T pressure hose 07406-0020201
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure adapter 07MAJ-PY40120
- Oil pressure hose 07ZAJ-S5AA200

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check the engine oil level and quality.

   Is it OK?

   YES—Go to step 2.

   NO—Adjust the engine oil level to the proper level, or replace the engine oil if needed, then go to step 31.

2. Turn the ignition switch to ON (II).

3. Clear the DTC with the HDS.

4. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

   Are VCMB1-0 and VCMB2-0 indicated?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1), rocker arm oil control solenoid B (Bank 1), the rear rocker arm oil pressure switch, and the PCM. ■

   NO—If the result is

   - VCMB1-1: Go to step 5.
   - VCMB1-3: Go to step 13.
   - VCMB1-2, VCMB1-4: Check the oil passage for the rear bank cylinder pause system. If it is OK, replace the rear rocker arm oil control valve (see page 6-65), then go to step 30.
   - VCMB2-1, 2-2, 2-3, 2-4: The front bank cylinder pause system is faulty. Go to the troubleshooting for P3497 (see page 11-364).

5. Turn the ignition switch to LOCK (0).

6. Disconnect the rear rocker arm oil pressure switch 1P connector.

7. Turn the ignition switch to ON (II).

8. Check the ROCKER ARM OIL PRESSURE SWITCH B in the DATA LIST with the HDS.

   Is SWITCH ON indicated?

   YES—Go to step 9.

   NO—Replace the rear rocker arm oil pressure switch (see page 11-369), then go to step 30.

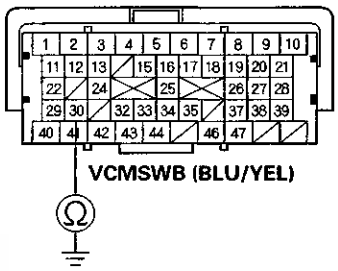
9. Turn the ignition switch to LOCK (0).

10. Jump the SCS line with the HDS.

11. Disconnect PCM connector C (49P).

12. Check for continuity between PCM connector terminal C30 and body ground.

PCM CONNECTOR C (49P)



Terminal side of female terminals

   Is there continuity?

   YES—Repair short in the wire between the PCM (C30) and the rear rocker arm oil pressure switch, then go to step 30.

   NO—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1), rocker arm oil control solenoid B (Bank 1), the rear rocker arm oil pressure switch, and the PCM, then go to step 36.

13. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

(cont'd)

DTC Troubleshooting (cont'd)

14. Check the ROCKER ARM OIL PRESSURE SENSOR with the HDS during the 3 CYLINDER ACTIVATION (TEST 3 and 6) and the 4 CYLINDER ACTIVATION (TEST 5 and 7).

    Is there about 217.0 kPa (2.2 kgf/cm², 31.5 psi) or more?

    YES—Go to step 15.

    NO—Check these parts:

    - Engine oil filter
    - Engine oil screen
    - Engine oil pump
    - Engine oil passage

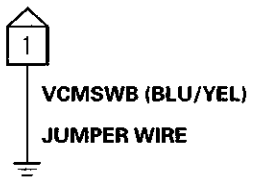
    If needed, clean or replace these parts, then go to step 31.

15. Turn the ignition switch to LOCK (0).

16. Disconnect the rear rocker arm oil pressure switch 1P connector.

17. Connect the rear rocker arm oil pressure switch 1P connector terminal to body ground with a jumper wire.

REAR ROCKER ARM OIL PRESSURE SWITCH 1P CONNECTOR



Wire side of female terminals

18. Turn the ignition switch to ON (II).

19. Check ROCKER ARM OIL PRESSURE SWITCH B in the DATA LIST with the HDS.

    Is SWITCH ON indicated?

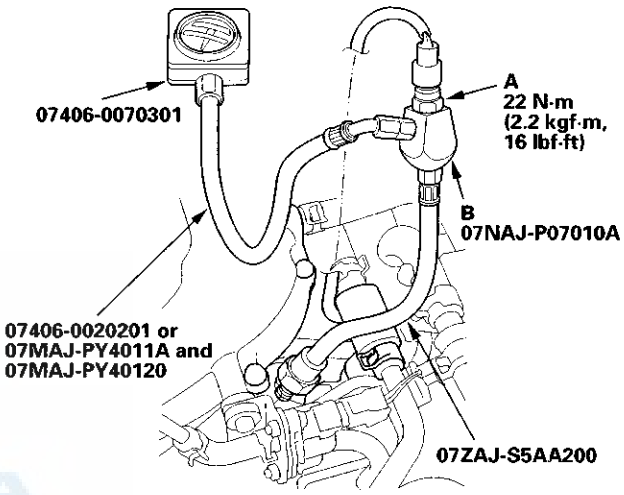
    YES—Go to step 20.

    NO—Go to step 26.

20. Turn the ignition switch to LOCK (0).

21. Remove the rear rocker arm oil pressure switch (see page 11-369).

22. Attach the special tools to the rear rocker arm oil control valve as shown, then attach the rear rocker arm oil pressure switch (A) to the pressure gauge adapter (B).



23. Reconnect the rear rocker arm oil pressure switch 1P connector.

24. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

25. Check the oil pressure during the 3 CYLINDER ACTIVATION (TEST 3 and 6) and the 4 CYLINDER ACTIVATION (TEST 5 and 7).

    Does the oil pressure increase to at least 56.4 kPa (0.58 kgf/cm², 8.2 psi)?

    YES—Replace the rear rocker arm oil pressure switch (see page 11-369), then go to step 30.

    NO—Check the rear cylinder pause system oil passage. If it is OK, replace the rear rocker arm oil control valve (see page 6-65), then go to step 30.

26. Turn the ignition switch to LOCK (0).

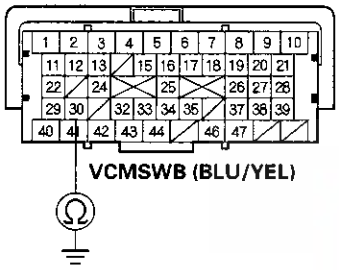
27. Jump the SCS line with the HDS.

28. Disconnect the PCM connector C (49P).

29. Check for continuity between PCM connector terminal C30 and body ground.

    NOTE: Do not remove the jumper wire from the rear rocker arm oil pressure switch.

    PCM CONNECTOR C (49P)



    Terminal side of female terminals

    Is there continuity?

    YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1), rocker arm oil control solenoid B (Bank 1), the rear rocker arm oil pressure switch, and the PCM. If the connections and terminals are OK, go to step 36.

    NO—Repair open in the wire between the rear rocker arm oil pressure switch and the PCM (C30), then go to step 30.

30. Reconnect all connectors.

31. Turn the ignition switch to ON (II).

32. Reset the PCM with the HDS.

33. Do the PCM idle learn procedure (see page 11-385).

34. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

    Are VCMB1-0 and VCMB2-0 indicated?

    YES—Go to step 35.

    NO—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1), rocker arm oil control solenoid B (Bank 1), the rear rocker arm oil pressure switch, and the PCM, then go to step 1.

35. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES—If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

    NO—Troubleshooting is complete.■

(cont'd)

DTC Troubleshooting (cont'd)

36. Reconnect all connectors.

37. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

38. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

    Are VCMB1-0 and VCMB2-0 indicated?

    YES—Go to step 39.

    NO—If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1.

39. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES—If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

    NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282).■

DTC P3497: VPS Stuck Off Bank 2

Special Tools Required
- Pressure gauge adapter 07NAJ-P07010A
- A/T low pressure gauge w/panel 07406-0070301
- A/T pressure hose 07406-0020201
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure adapter 07MAJ-PY40120
- Oil pressure hose 07ZAJ-S5AA200

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check the engine oil level and quality.

   Is it OK?

   YES—Go to step 2.

   NO—Adjust the engine oil level to the proper level, or replace the engine oil if needed, then go to step 31.

2. Turn the ignition switch to ON (II).

3. Clear the DTC with the HDS.

4. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

   Are VCMB2-0 and VCMB1-0 indicated?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2), the front rocker arm oil pressure switch, and the PCM. ■

   NO—If the result is

   - VCMB2-1: Go to step 5.
   - VCMB2-3: Go to step 13.
   - VCMB2-2, VCMB2-4: Check the oil passage for the front bank cylinder pause system. If it is OK, replace the front rocker arm oil control valve (see page 6-64), then go to step 30.
   - VCMB1-1, 1-2, 1-3, 1-4: The rear bank cylinder pause system is faulty. Go to the troubleshooting for P3400 (see page 11-360).

5. Turn the ignition switch to LOCK (0).

6. Disconnect the front rocker arm oil pressure switch 1P connector.

7. Turn the ignition switch to ON (II).

8. Check ROCKER ARM OIL PRESSURE SWITCH C in the DATA LIST with the HDS.

   Is SWITCH ON indicated?

   YES—Go to step 9.

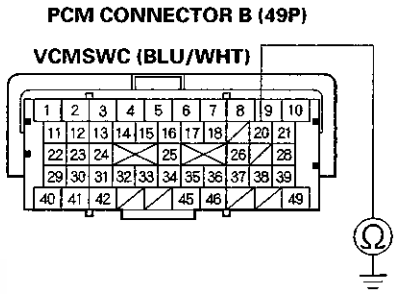
   NO—Replace the front rocker arm oil pressure switch (see page 11-369), then go to step 30.

9. Turn the ignition switch to LOCK (0).

10. Jump the SCS line with the HDS.

11. Disconnect PCM connector B (49P).

12. Check for continuity between PCM connector terminal B20 and body ground.



Terminal side of female terminals

   Is there continuity?

   YES—Repair short in the wire between the PCM (B20) and the front rocker arm oil pressure switch, then go to step 30.

   NO—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 2), the front rocker arm oil pressure switch, and the PCM, then go to step 36.

13. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

(cont'd)

DTC Troubleshooting (cont'd)

14. Check the ROCKER ARM OIL PRESSURE SENSOR with the HDS during the 3 CYLINDER ACTIVATION (TEST 3 and 6) and the 4 CYLINDER ACTIVATION (TEST 5 and 7).

    Is there about 217.0 kPa (2.2 kgf/cm², 31.5 psi) or more?

    YES—Go to step 15.

    NO—Check these parts:

    - Engine oil filter
    - Engine oil screen
    - Engine oil pump
    - Engine oil passage

    If needed, clean or replace these parts, then go to step 31.

15. Turn the ignition switch to LOCK (0).

16. Disconnect the front rocker arm oil pressure switch 1P connector.

17. Connect the front rocker arm oil pressure switch 1P connector terminal to body ground with a jumper wire.

FRONT ROCKER ARM OIL PRESSURE SWITCH 1P CONNECTOR

Wire side of female terminals

18. Turn the ignition switch to ON (II).

19. Check ROCKER ARM OIL PRESSURE SWITCH C in the DATA LIST with the HDS.

    Is SWITCH ON indicated?

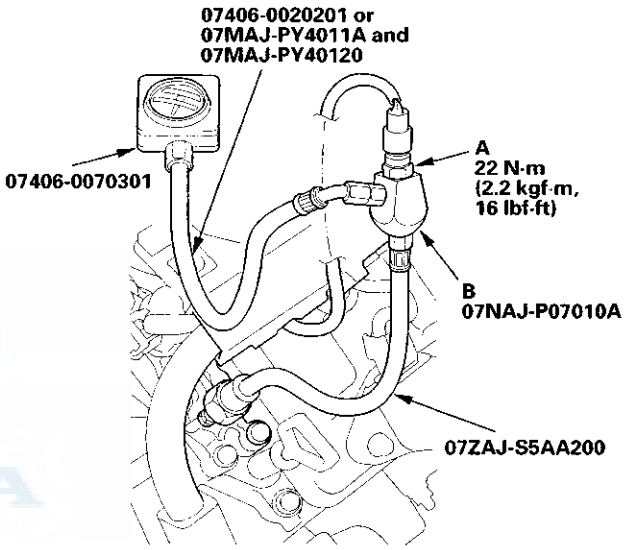
    YES—Go to step 20.

    NO—Go to step 26.

20. Turn the ignition switch to LOCK (0).

21. Remove the front rocker arm oil pressure switch (see page 11-369).

22. Attach the special tools to the front rocker arm oil control valve as shown, then attach the front rocker arm oil pressure switch (A) to the pressure gauge adapter (B).



23. Reconnect the front rocker arm oil pressure switch 1P connector.

24. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

25. Check the oil pressure during the 4 CYLINDER ACTIVATION (TEST 5 and 7).

    Does the oil pressure increase to at least 56.4 kPa (0.58 kgf/cm², 8.2 psi)?

    YES—Replace the front rocker arm oil pressure switch (see page 11-369), then go to step 30.

    NO—Check the front cylinder pause system oil passage. If it is OK, replace the front rocker arm oil control valve (see page 6-64), then go to step 30.

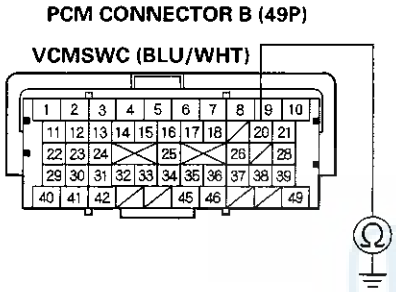
26. Turn the ignition switch to LOCK (0).

27. Jump the SCS line with the HDS.

28. Disconnect PCM connector B (49P).

29. Check for continuity between PCM connector terminal B20 and body ground.

    NOTE: Do not remove the jumper wire from the front rocker arm oil pressure switch.



Terminal side of female terminals

Is there continuity?

YES—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1), the front rocker arm oil pressure switch, and the PCM. If the connections and terminals are OK, go to step 36.

NO—Repair open in the wire between the front rocker arm oil pressure switch and the PCM (B20), then go to step 30.

30. Reconnect all connectors.

31. Turn the ignition switch to ON (II).

32. Reset the PCM with the HDS.

33. Do the PCM idle learn procedure (see page 11-385).

34. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

    Are VCMB2-0 and VCMB1-0 indicated?

    YES—Go to step 35.

    NO—Check for poor connections or loose terminals at rocker arm oil control solenoid A (Bank 1), the front rocker arm oil pressure switch, and the PCM, then go to step 1.

35. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES—If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

    NO—Troubleshooting is complete.■

(cont'd)

DTC Troubleshooting (cont'd)

36. Reconnect all connectors.

37. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 11-7).

38. Select the VTEC TEST in the INSPECTION MENU with the HDS, and do the VPS TEST.

    Are VCMB2-0 and VCMB1-0 indicated?

    YES—Go to step 39.

    NO—If the PCM was updated, substitute a known-good PCM (see page 11-7), then recheck. If the PCM was substituted, go to step 1.

39. Check for Temporary DTCs or DTCs with the HDS.

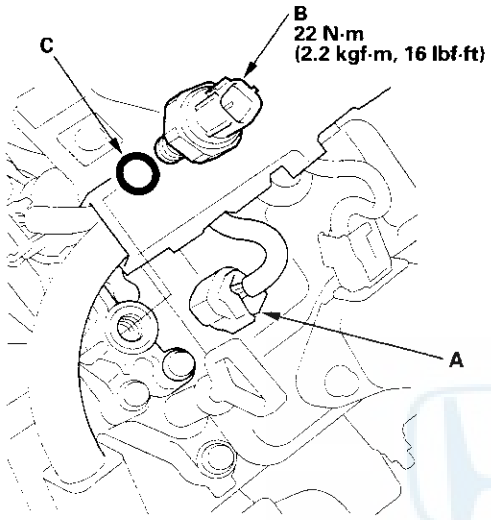
    Are any Temporary DTCs or DTCs indicated?

    YES—If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

    NO—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282).■

Front Rocker Arm Oil Pressure Switch Removal/Installation

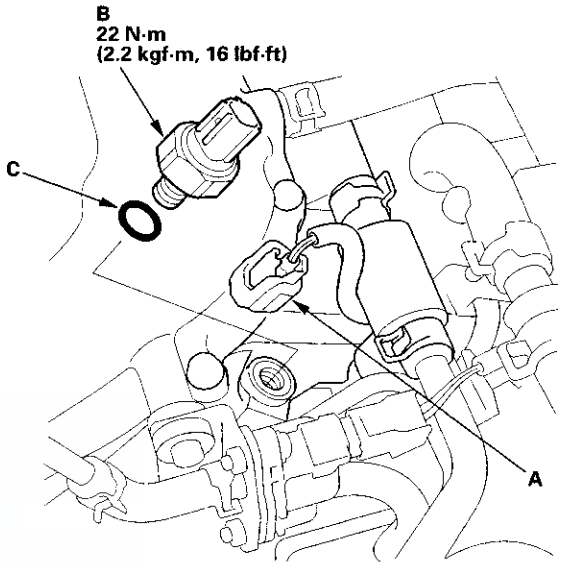
1. Remove the engine cover.
2. Disconnect the front rocker arm oil pressure switch 1P connector (A).



3. Remove the front rocker arm oil pressure switch (B).
4. Install the parts in the reverse order of removal with a new O-ring (C).

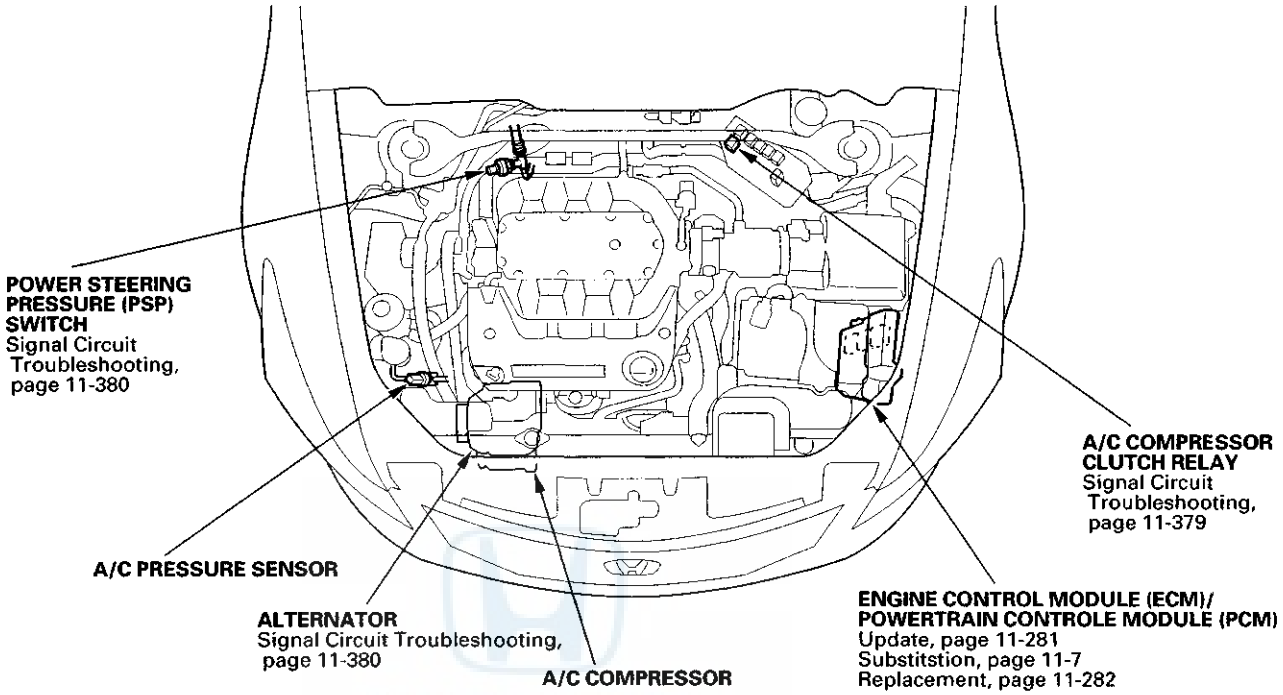
Rear Rocker Arm Oil Pressure Switch Removal/Installation

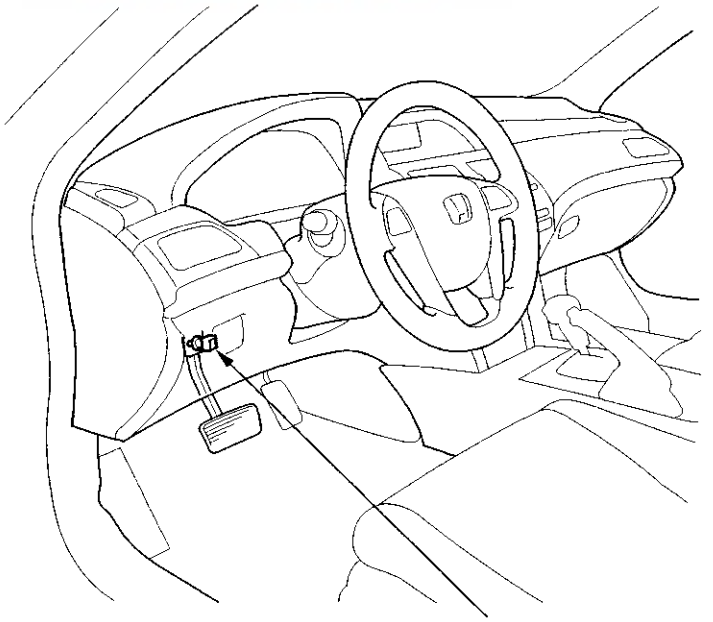
1. Disconnect the rear rocker arm oil pressure switch 1P connector (A).



2. Remove the rear rocker arm oil pressure switch (B).
3. Install the parts in the reverse order of removal with a new O-ring (C).

Component Location Index





DTC Troubleshooting

DTC P0506: Idle Control System RPM Lower Than Expected

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 20 seconds or more.
4. Check for these conditions in the DATA LIST with the HDS:

   - ECT SENSOR 1 above 158 °F (70 °C)
   - IAT SENSOR above 32 °F (0 °C)
   - VSS is 0 mph (0 km/h)
   - ST FUEL TRIM between 0.73 and 1.47
   - FSS is CLOSED

5. Monitor the OBD STATUS for DTC P0506 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 6.

   NO—If the screen indicates PASSED, go to step 15. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 4 and recheck.

6. Remove the intake air duct from the throttle body.
7. Check for dirt, carbon, or damage in the throttle bore.

   Is there dirt, carbon, or damage in the throttle bore?

   YES—If there is dirt or carbon, clean the throttle body (see page 11-436). Also check for damage at the air cleaner element (see page 11-437), then go to step 9. If there is damage in the throttle bore, go to step 8.

   NO—Check the A/C system or power steering system, then go to step 17.

8. Replace the throttle body (see page 11-441).
9. Reset the ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see page 11-385).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 20 seconds or more.
12. Check for these conditions in the DATA LIST with the HDS:

    - ECT SENSOR 1 above 158 °F (70 °C)
    - IAT SENSOR above 32 °F (0 °C)
    - VSS is 0 mph (0 km/h)
    - ST FUEL TRIM between 0.73 and 1.47
    - FSS is CLOSED

(cont'd)

DTC Troubleshooting (cont'd)

13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0506 indicated?

    YES—Go to step 1 and recheck.

    NO—Go to step 14.

14. Monitor the OBD STATUS for DTC P0506 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check the A/C system and/or power steering system, then go to step 1. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 12.

15. Remove the intake air duct from the throttle body.

16. Check for dirt, carbon, or damage in the throttle bore.

    Is there dirt, carbon, or damage in the throttle bore?

    YES—If there is dirt or carbon, clean the throttle body (see page 11-436). Also check for damage at the air cleaner element (see page 11-437), then go to step 9. If there is damage in the throttle bore, go to step 8.

    NO—Go to step 17.

17. Recheck with different load conditions (turn on the headlights, blower motor, rear window defogger and/or A/C, change the gear position, etc.).

18. Monitor the OBD STATUS for DTC P0506 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Intermittent failure, the system is OK at this time.■

    NO—If the screen indicates FAILED, check the A/C system and/or power steering system, then go to step 1. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 12.

DTC P0507: Idle Control System RPM Higher Than Expected

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Monitor the OBD STATUS for DTC P0507 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 5.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, recheck with different load conditions (electrical, A/C, gear position, etc.), then go to step 3.

5. Check for vacuum leaks at these parts:

   - PCV valve
   - PCV hose
   - EVAP canister purge valve
   - Throttle body
   - Intake manifold
   - Brake booster hose
   - Brake booster

   Are there any leaks?

   YES—Repair or replace the leaking part(s), then go to step 6.

   NO—Go to step 6.

6. Turn the ignition switch to ON (II).
7. Reset the ECM/PCM with the HDS.
8. Do the ECM/PCM idle learn procedure (see page 11-385).
9. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
10. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0507 indicated?

    YES—Check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1.

    NO—Go to step 11.

11. Monitor the OBD STATUS for DTC P0507 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 10, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the throttle body and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, recheck with different load conditions (turn on the headlights, blower motor, or A/C; change the gear position, etc.), then go to step 9.

DTC Troubleshooting (cont'd)

DTC P0532: A/C Pressure Sensor Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Start the engine, and let it idle.
2. Turn the blower switch on.
3. Turn the A/C switch on.
4. Check the A/C PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 0.3 V or less?

   YES—Go to step 5.

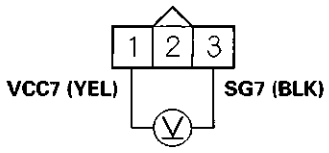
   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/C pressure sensor and the ECM/PCM. ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the A/C pressure sensor 3P connector.
7. Turn the ignition switch to ON (II).
8. Check the A/C PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 0.3 V or less?

   YES—Go to step 10.

   NO—Go to step 9.
9. Measure the voltage between A/C pressure sensor 3P connector terminals No. 1 and No. 3.

A/C PRESSURE SENSOR 3P CONNECTOR



Wire side of female terminals

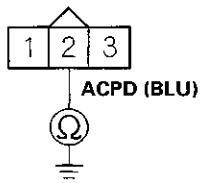
Is there about 5 V?

YES—Go to step 18.

NO—Go to step 14.

10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect ECM/PCM connector A (49P).
13. Check for continuity between A/C pressure sensor 3P connector terminal No. 2 and body ground.

A/C PRESSURE SENSOR 3P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A45) and the A/C pressure sensor, then go to step 20.

NO—Go to step 28.

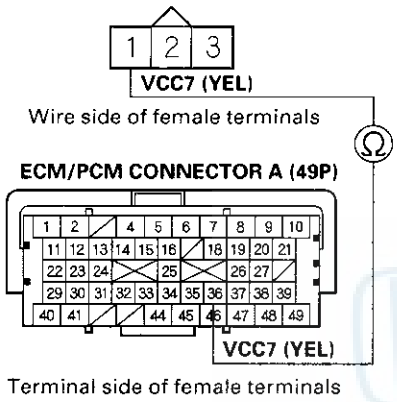
14. Turn the ignition switch to LOCK (0).

15. Jump the SCS line with the HDS.

16. Disconnect ECM/PCM connector A (49P).

17. Check for continuity between A/C pressure sensor 3P connector terminal No. 1 and ECM/PCM connector terminal A36.

A/C PRESSURE SENSOR 3P CONNECTOR



Is there continuity?

YES—Go to step 28.

NO—Repair open in the wire between the ECM/PCM (A36) and the A/C pressure sensor, then go to step 20.

18. Turn the ignition switch to LOCK (0).

19. Replace the A/C pressure sensor (see page 21-6).

20. Reconnect all connectors.

21. Turn the ignition switch to ON (II).

22. Reset the ECM/PCM with the HDS.

23. Do the ECM/PCM idle learn procedure (see page 11-385).

24. Start the engine, and let it idle.

25. Turn the blower switch on.

26. Turn the A/C switch on.

27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0532 indicated?

YES—Check for poor connections or loose terminals at the A/C pressure sensor and the ECM/PCM, then go to step 1.

NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

28. Reconnect all connectors.

29. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

30. Start the engine, and let it idle.

31. Turn the blower switch on.

32. Turn the A/C switch on.

33. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0532 indicated?

YES—Check for poor connections or loose terminals at the A/C pressure sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 30. If the ECM/PCM was substituted, go to step 1.

NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC Troubleshooting (cont'd)

DTC P0533: A/C Pressure Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

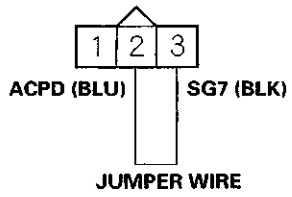
1. Start the engine, and let it idle.
2. Turn the blower switch on.
3. Turn the A/C switch on.
4. Check the A/C PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 4.75 V or more?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/C pressure sensor and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Disconnect the A/C pressure sensor 3P connector.
7. Connect A/C pressure sensor 3P connector terminals No. 2 and No. 3 with a jumper wire.

A/C PRESSURE SENSOR 3P CONNECTOR



Wire side of female terminals

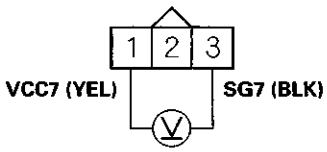
8. Turn the ignition switch to ON (II).
9. Check the A/C PRESSURE SENSOR in the DATA LIST with the HDS.

   Is there about 4.75 V or more?

   YES—Go to step 10.

   NO—Go to step 22.
10. Turn the ignition switch to LOCK (0).
11. Remove the jumper wire from the A/C pressure sensor 3P connector.
12. Turn the ignition switch to ON (II).
13. Measure the voltage between A/C pressure sensor 3P connector terminal No. 1 and No. 3.

A/C PRESSURE SENSOR 3P CONNECTOR



Wire side of female terminals

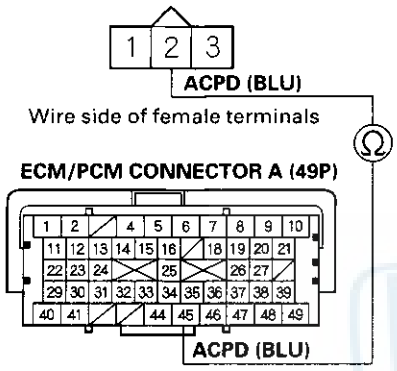
Is there about 5 V?

YES—Go to step 14.

NO—Go to step 18.

14. Turn the ignition switch to LOCK (0).
15. Jump the SCS line with the HDS.
16. Disconnect ECM/PCM connector A (49P).
17. Check for continuity between A/C pressure sensor 3P connector terminal No. 2 and ECM/PCM connector terminal A45.

A/C PRESSURE SENSOR 3P CONNECTOR



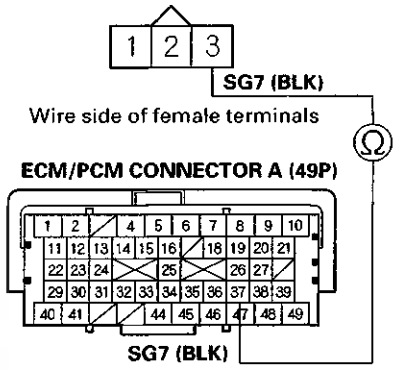
Is there continuity?

YES—Go to step 32.

NO—Repair open in the wire between the ECM/PCM (A45) and the A/C pressure sensor, then go to step 24.

18. Turn the ignition switch to LOCK (0).
19. Jump the SCS line with the HDS.
20. Disconnect ECM/PCM connector A (49P).
21. Check for continuity between A/C pressure sensor 3P connector terminal No. 3 and ECM/PCM connector terminal A37.

A/C PRESSURE SENSOR 3P CONNECTOR



Is there continuity?

YES—Go to step 32.

NO—Repair open in the wire between the ECM/PCM (A37) and the A/C pressure sensor, then go to step 24.

(cont'd)

DTC Troubleshooting (cont'd)

22. Turn the ignition switch to LOCK (0).
23. Replace the A/C pressure sensor (see page 21-6).
24. Reconnect all connectors.
25. Turn the ignition switch to ON (II).
26. Reset the ECM/PCM with the HDS.
27. Do the ECM/PCM idle learn procedure (see page 11-385).
28. Start the engine, and let it idle.
29. Turn the blower switch on.
30. Turn the A/C switch on.
31. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0533 indicated?

    YES—Check for poor connections or loose terminals at the A/C pressure sensor and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■
32. Reconnect all connectors.
33. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
34. Start the engine, and let it idle.
35. Turn the blower switch on.
36. Turn the A/C switch on.
37. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0533 indicated?

    YES—Check for poor connections or loose terminals at the A/C pressure sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

A/C Signal Circuit Troubleshooting

1. Start the engine.
2. Turn the blower switch on.
3. Turn the A/C switch on.
4. Check the A/C CLUTCH in the DATA LIST with the HDS.

   Does it indicate ON?

   YES—Go to step 5.

   NO—Do the A/C pressure switch circuit troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 21-52).

5. Check the A/C system.

   Does the A/C system operate?

   YES—The air conditioning system circuit is OK. ■

   NO—Go to step 6.

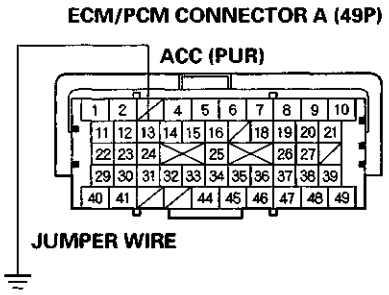
6. Turn the ignition switch to LOCK (0).
7. Turn the ignition switch to ON (II).
8. Activate the A/C CLUTCH in the INSPECTION MENU with the HDS.

   Is there a clicking noise from the A/C compressor clutch?

   YES—Do the A/C system test, refer to the 2008-2009 Accord Service Manual (see page 21-88).

   NO—Go to step 9.

9. Turn the ignition switch to LOCK (0).
10. Jump the SCS line with the HDS.
11. Disconnect ECM/PCM connector A (49P).
12. Turn the ignition switch to ON (II).
13. Momentarily connect ECM/PCM connector terminal A13 to body ground with a jumper wire several times.



Terminal side of female terminals

Is there a clicking noise from the A/C compressor clutch?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). ■

NO—Check for poor connections or loose terminals at the A/C clutch relay and the ECM/PCM. If the connections are OK, check the A/C clutch relay (see page 22-38), repair open in the wire between the ECM/PCM (A13) and the A/C clutch relay and the other A/C systems.

Alternator FR Signal Circuit Troubleshooting

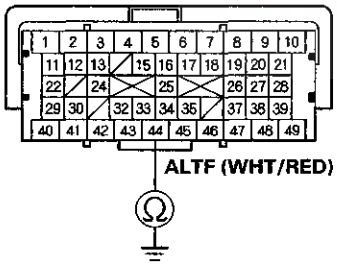
1. Start the engine, and let it idle.
2. Monitor the ALTERNATOR in the DATA LIST with the HDS.
3. Check if the indicated percentage varies when the headlight switch is turned on.

   Does the percentage vary?

   YES—The alternator signal circuit is OK. ■

   NO—Go to step 4.
4. Turn the headlight switch and ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Disconnect the alternator 4P connector.
7. Disconnect ECM/PCM connector C (49P).
8. Check for continuity between ECM/PCM connector terminal C44 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C44) and the alternator. ■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). ■

PSP Switch Signal Circuit Troubleshooting

1. Start the engine, and let it idle.
2. Align the steering wheel straight ahead.
3. Check the PSP SWITCH in the DATA LIST with the HDS.

   Does it indicate ON?

   YES—Go to step 4.

   NO—Go to step 14.
4. Turn the steering wheel to the full lock position.
5. Check the PSP SWITCH in the DATA LIST with the HDS.

   Does it change to OFF?

   YES—The PSP switch signal circuit is OK. ■

   NO—Go to step 6.
6. Turn the ignition switch to LOCK (0).
7. Disconnect the PSP switch 2P connector.
8. Start the engine.
9. Check the PSP SWITCH in the DATA LIST with the HDS.

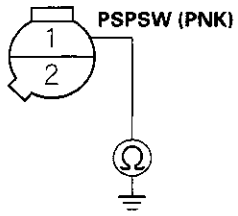
   Does it change to OFF?

   YES—Replace the PSP switch. ■

   NO—Go to step 10.
10. Turn the ignition switch to LOCK (0).
11. Jump the SCS line with the HDS.
12. Disconnect ECM/PCM connector A (49P).

13. Check for continuity between PSP switch 2P connector terminal No. 1 and body ground.

PSP SWITCH 2P CONNECTOR



Wire side of female terminals

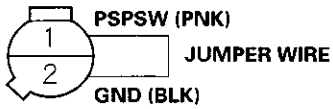
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A38) and the PSP switch.■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

14. Turn the ignition switch to LOCK (0).
15. Disconnect the PSP switch 2P connector.
16. Connect PSP switch 2P connector terminals No. 1 and No. 2 with a jumper wire, then start the engine.

PSP SWITCH 2P CONNECTOR



Wire side of female terminals

17. Check the PSP SWITCH in the DATA LIST with the HDS.

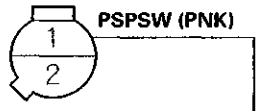
Does it change to ON?

YES—Replace the PSP switch.■

NO—Go to step 18.

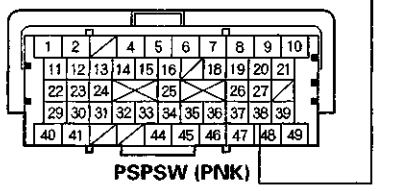
18. Turn the ignition switch to LOCK (0).
19. Remove the jumper wire from the PSP switch 2P connector.
20. Jump the SCS line with the HDS.
21. Disconnect ECM/PCM connector A (49P).
22. Check for continuity between ECM/PCM connector terminal A38 and PSP switch 2P connector terminal No. 1.

PSP SWITCH 2P CONNECTOR



Terminal side of female terminals

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 23.

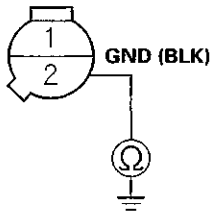
NO—Repair open in the wire between the PSP switch and the ECM/PCM (A38).■

(cont'd)

PSP Switch Signal Circuit Troubleshooting (cont'd)

23. Check for continuity between PSP switch 2P connector terminal No. 2 and body ground.

PSP SWITCH 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282).■

NO—Repair open in the wire between the PSP switch and G201.■

Brake Pedal Position Switch Signal Circuit Troubleshooting

1. Turn the ignition switch to ON (II).
2. Check the BRAKE SWITCH in the DATA LIST with the HDS.

   Does it indicate OFF?

   YES—Go to step 3.

   NO—Inspect the brake pedal position switch (see page 19-3).■
3. Press the brake pedal, and check the BRAKE SWITCH in the DATA LIST with the HDS.

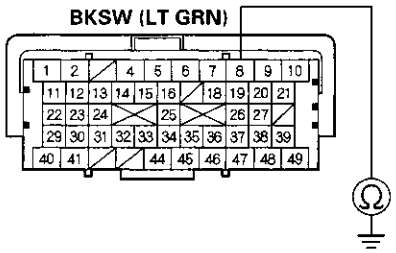
   Does it change to ON?

   YES—The brake pedal position switch signal circuit (BKSW line) is OK.■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Jump the SCS line with the HDS.
6. Disconnect the brake pedal position switch 4P connector.
7. Disconnect ECM/PCM connector A (49P).

8. Check for continuity between ECM/PCM connector terminal A8 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

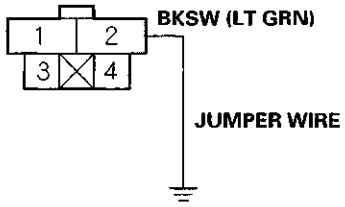
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A8) and the brake pedal position switch. Replace the No. 10 STOP/HORN (20 A) fuse. ■

NO—Go to step 9.

9. Connect brake pedal position switch 4P connector terminal No. 2 to body ground with a jumper wire.

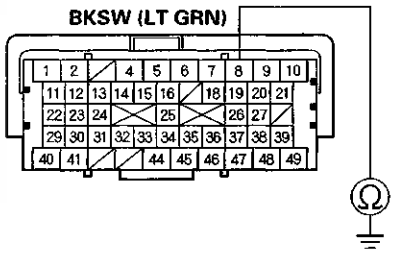
BRAKE PEDAL POSITION SWITCH 4P CONNECTOR



Wire side of female terminals

10. Check for continuity between ECM/PCM connector terminal A8 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Repair open in the wire between the brake pedal position switch and the No. 10 STOP/HORN (20 A) fuse. Inspect the brake pedal position switch (see page 19-3). ■

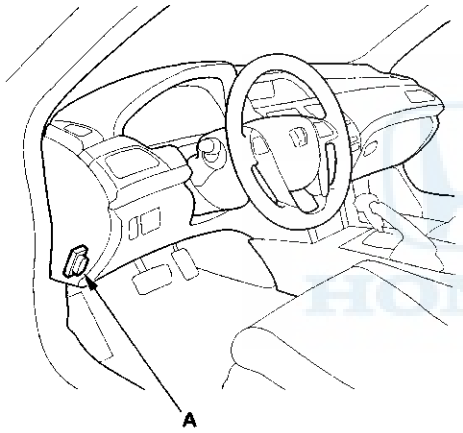
NO—Repair open in the wire between the ECM/PCM (A8) and the brake pedal position switch. ■

Idle Speed Inspection

NOTE:
- Before checking the idle speed, check these items:
  - The malfunction indicator lamp (MIL) has not been reported on, and there are no DTCs.
  - Ignition timing
  - Spark plugs
  - Air cleaner
  - PCV system
- Apply the parking brake, and make sure the headlights are off.

1. Disconnect the evaporative emission (EVAP) canister purge valve connector.

2. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



3. Make sure the HDS communicates with the ECM/PCM. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259).

4. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

5. Check the idle speed without load conditions: headlights, blower fan, radiator fan, and air conditioner off.

Idle speed should be:

J35Z2 engine	**650±50 rpm**
J35Z3 engine	**750±50 rpm**

6. Let the engine idle for 1 minute with high electric load (A/C switch on, temperature set to max cool, blower fan on high, and headlights on high beam).

Idle speed should be:

J35Z2 engine	**700±50 rpm**
J35Z3 engine	**750±50 rpm**

NOTE: If the idle speed is not within specification, do the ECM/PCM idle learn procedure (see page 11-385). If the idle speed is still not within specification, go to symptom troubleshooting.

7. Reconnect the EVAP canister purge valve connector.

ECM/PCM Idle Learn Procedure

The idle learn procedure must be done so the ECM/PCM can learn the engine idle characteristics.

Do the idle learn procedure whenever you do any of these actions:

- Replace ECM/PCM.
- Reset ECM/PCM.
- Update ECM/PCM.
- Replace or clean the throttle body.
- Disassemble the engine or the transmission.

NOTE: Erasing DTCs with the HDS does not require you to do the idle learn procedure.

Procedure

1. Make sure all electrical items (A/C, audio, lights, etc.) are off.

2. Reset the ECM/PCM with the HDS.

3. Turn the ignition switch to ON (II), and wait 2 seconds.

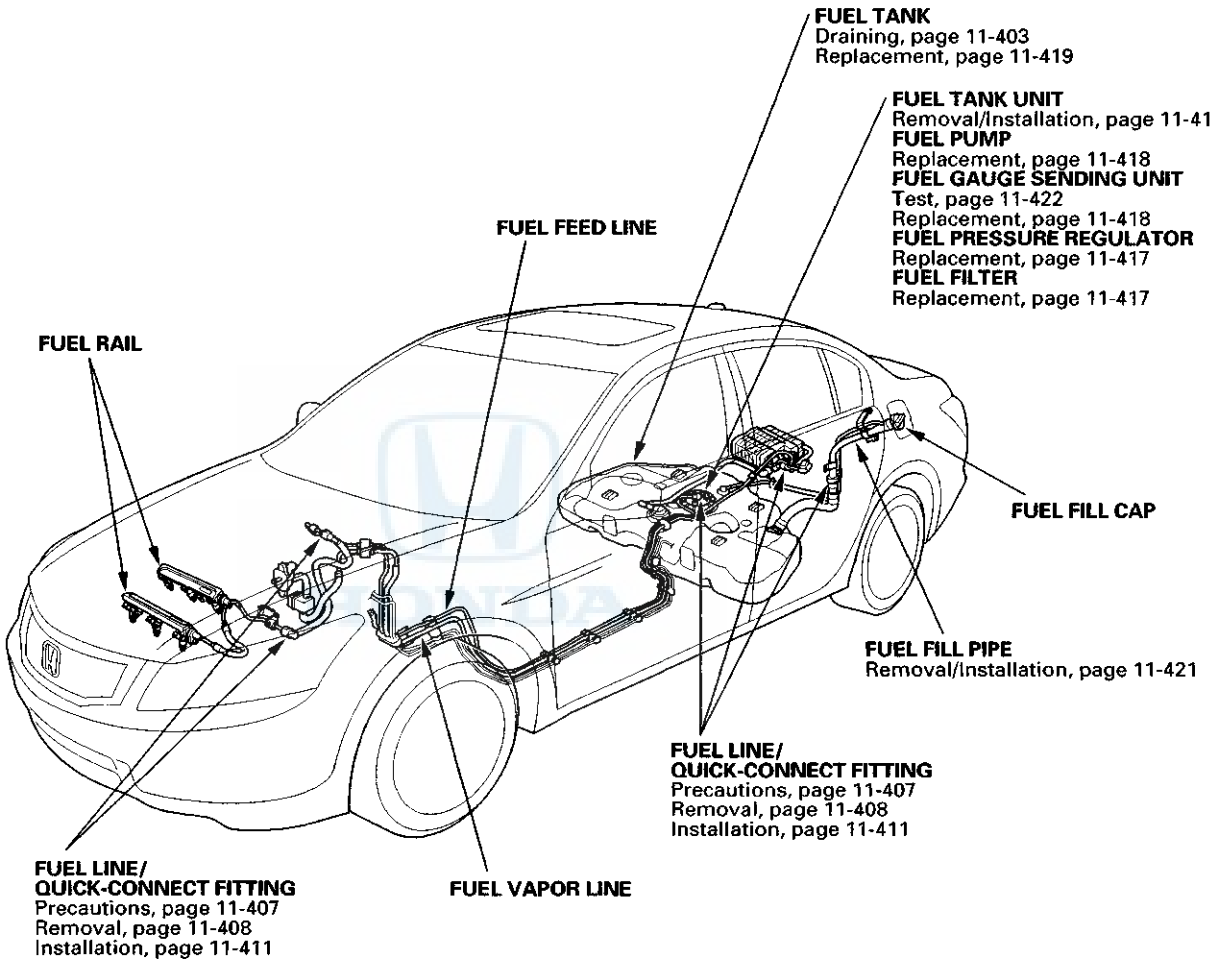
4. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, or until the engine coolant temperature reaches 194 °F (90 °C).

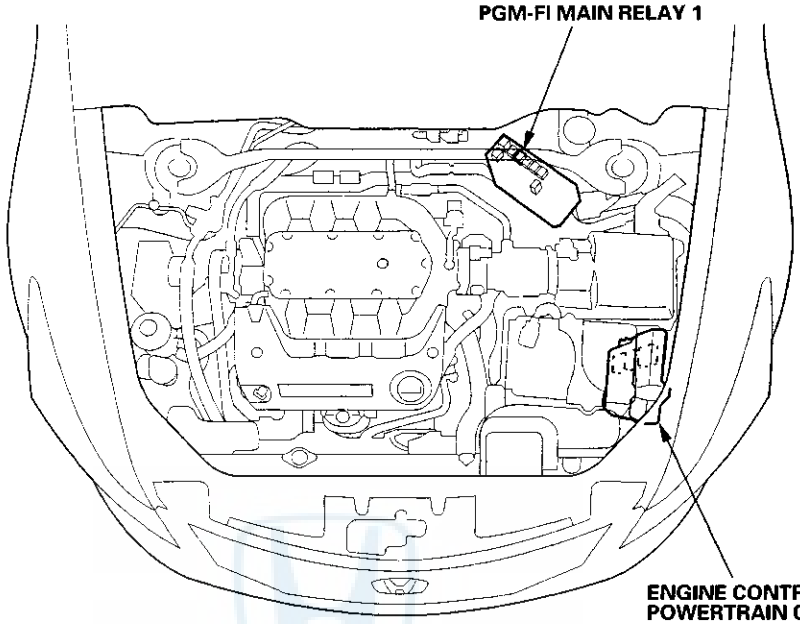
5. Let the engine idle for about 5 minutes with the throttle fully closed.

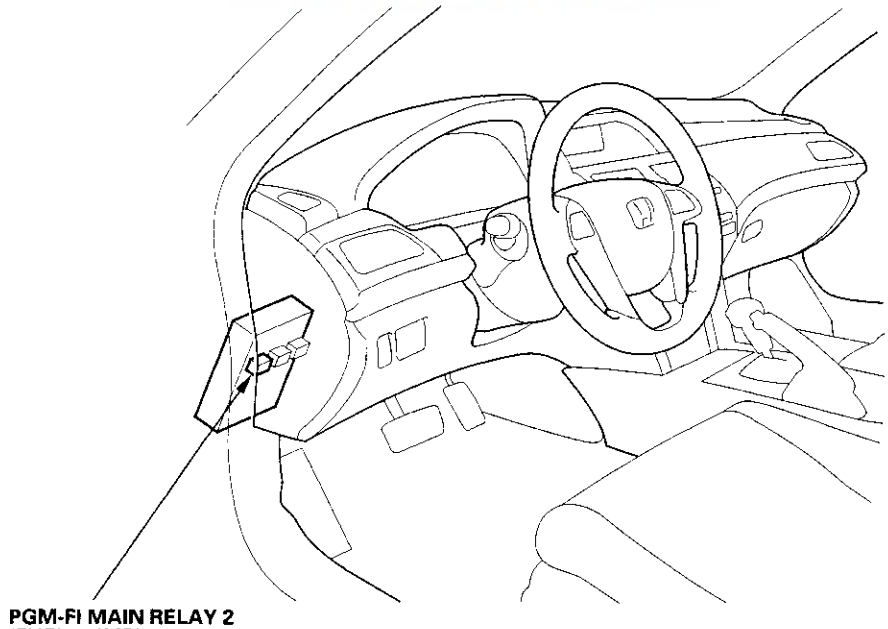
   NOTE: If the radiator fan comes on, do not include its running time in the 5 minutes.

Fuel Supply System

Component Location Index




PGM-FI MAIN RELAY 1
ENGINE CONTROL MODULE (ECM)/
POWERTRAIN CONTROL MODULE (PCM)
Update, page 11-281
Substitution, page 11-7
Replacement, page 11-282


PGM-FI MAIN RELAY 2
(FUEL PUMP)

DTC Troubleshooting

DTC P0461: Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit Range/Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Because it requires 162 miles (260 km) of driving without refueling to complete this diagnosis, this DTC P0461 cannot be duplicated during this troubleshooting.

1. Test the fuel gauge sending unit (see page 11-422).

   Is the fuel gauge sending unit OK?

   YES—Check for poor connections or loose terminals at the fuel gauge sending unit and the gauge control module. ■

   NO—Replace the fuel gauge sending unit (see page 11-418), then go to step 2.

2. Turn the ignition switch to ON (II).
3. Reset the ECM/PCM with the HDS.
4. Do the ECM/PCM idle learn procedure (see page 11-385).
5. Check for Temporary DTCs or DTCs with the HDS.

   Are any Temporary DTCs or DTCs indicated?

   YES—Go to the indicated DTC's troubleshooting.

   NO—Troubleshooting is complete. ■

DTC P0462: Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS, and wait 5 seconds.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0462 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module and the fuel gauge sending unit. ■

4. Turn the ignition switch to LOCK (0).
5. Remove the rear seat cushion, refer to the 2008-2009 Accord Service Manual (see page 20-225).
6. Remove the access panel from the floor.
7. Disconnect the fuel tank unit 4P connector.
8. Turn the ignition switch to ON (II).
9. Clear the DTC with the HDS, and wait 5 seconds.
10. Check for Temporary DTCs or DTCs with the HDS.

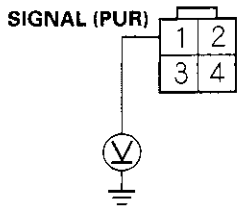
    Is DTC P0463 indicated?

    YES—Replace the fuel gauge sending unit (see page 11-418), then go to step 23.

    NO—Go to step 11.

11. Measure the voltage between fuel tank unit 4P connector terminal No. 1 and body ground.

FUEL TANK UNIT 4P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 16.

NO—Go to step 12.

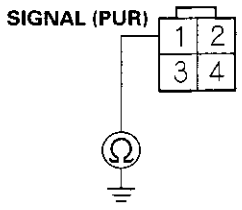
12. Turn the ignition switch to LOCK (0).

13. Remove the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).

14. Disconnect the gauge control module 32P connector.

15. Check for continuity between fuel tank unit 4P connector terminal No. 1 and body ground.

FUEL TANK UNIT 4P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the gauge control module (signal line) and the fuel gauge sending unit, then go to step 24.

NO—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324), then go to step 24.

16. Turn the ignition switch to LOCK (0).

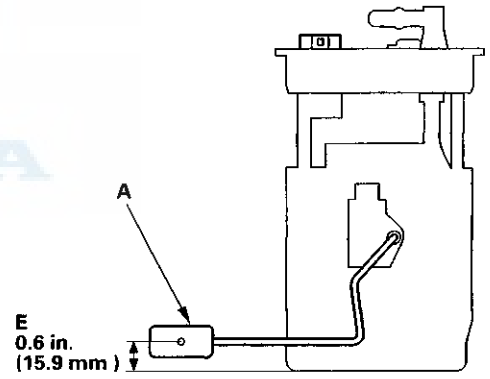
17. Remove the fuel tank unit (see page 11-415).

18. Connect the fuel tank unit 4P connector.

19. Turn the ignition switch to ON (II).

20. Clear the DTC with the HDS.

21. Set the float (A) to the E position.



22. Check the fuel gauge.

Does the fuel gauge move to the empty position?

YES—Go to step 30.

NO—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324), then go to step 23.

(cont'd)

DTC Troubleshooting (cont'd)

23. Turn the ignition switch to LOCK (0).
24. Reconnect all connectors.
25. Install the parts in the reverse order of removal.
26. Turn the ignition switch to ON (II).
27. Reset the ECM/PCM with the HDS.
28. Do the ECM/PCM idle learn procedure (see page 11-385).
29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0462 indicated?

    YES—Check for poor connections or loose terminals at the fuel gauge sending unit and the gauge control module, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■
30. Turn the ignition switch to LOCK (0).
31. Install the parts in the reverse order of removal.
32. Reconnect all connectors.
33. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
34. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0462 indicated?

    YES—Check for poor connections or loose terminals at the fuel gauge sending unit and the gauge control module. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.■

DTC P0463: Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS, and wait 5 seconds.
3. Check for Temporary DTCs or DTCs in the DTCs MENU with the HDS.

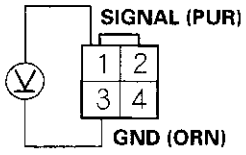
   Is DTC P0463 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module and the fuel gauge sending unit.■
4. Turn the ignition switch to LOCK (0).
5. Remove the rear seat cushion, refer to the 2008-2009 Accord Service Manual (see page 20-225).
6. Remove the access panel from the floor.
7. Disconnect the fuel tank unit 4P connector.
8. Turn the ignition switch to ON (II).

9. Measure the voltage between fuel tank unit 4P connector terminals No. 1 and No. 3.

FUEL TANK UNIT 4P CONNECTOR



Wire side of female terminals

Is there battery voltage?

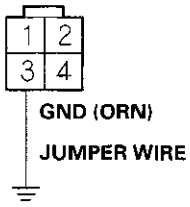
YES—Go to step 17.

NO—Go to step 10.

10. Turn the ignition switch to LOCK (0).

11. Connect fuel tank unit 4P connector terminal No. 3 to body ground with a jumper wire.

FUEL TANK UNIT 4P CONNECTOR



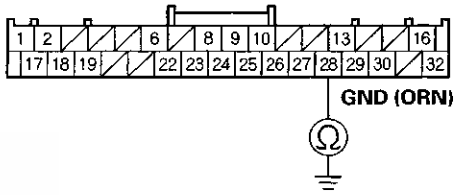
Wire side of female terminals

12. Remove the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).

13. Disconnect the gauge control module 32P connector.

14. Check for continuity between gauge control module 32P connector terminal No. 28 and body ground.

GAUGE CONTROL MODULE 32P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 15.

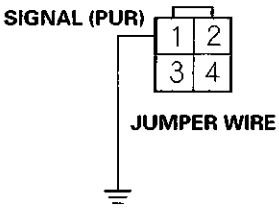
NO—Repair open in the wire between the gauge control module (GND line) and the fuel gauge sending unit, then go to step 27.

(cont'd)

DTC Troubleshooting (cont'd)

15. Connect fuel tank unit 4P connector terminal No. 1 to body ground with a jumper wire.

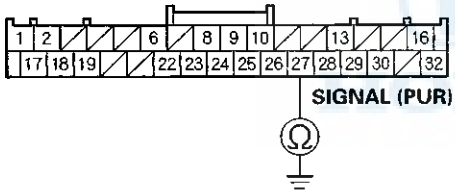
FUEL TANK UNIT 4P CONNECTOR



Wire side of female terminals

16. Check for continuity between gauge control module 32P connector terminal No. 27 and body ground.

GAUGE CONTROL MODULE 32P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Remove the jumper wire, then go to step 18.

NO—Repair open in the wire between the gauge control module (signal line) and the fuel gauge sending unit, then go to step 27.

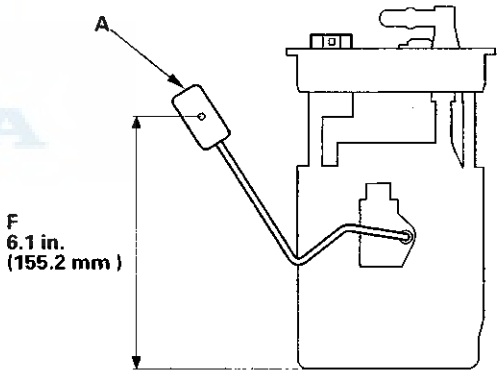
17. Turn the ignition switch to LOCK (0).
18. Remove the fuel tank unit (see page 11-415).
19. Test the fuel gauge sending unit (see page 11-422).

Is the fuel gauge sending unit OK?

YES—Go to step 20.

NO—Replace the fuel gauge sending unit (see page 11-418), then go to step 26.

20. Connect the fuel tank unit 4P connector.
21. Reconnect the gauge control module 32P connector.
22. Turn the ignition switch to ON (II).
23. Clear the DTC with the HDS.
24. Set the float (A) to the F position.



25. Check the fuel gauge.

Does the gauge move to the full position?

YES—Go to step 33.

NO—Replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324), then go to step 26.

26. Turn the ignition switch to LOCK (0).

27. Reconnect all connectors.

28. Install the parts in the reverse order of removal.

29. Turn the ignition switch to ON (II).

30. Reset the ECM/PCM with the HDS.

31. Do the ECM/PCM idle learn procedure (see page 11-385).

32. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0463 indicated?

    YES—Check for poor connections or loose terminals at the gauge control module and fuel gauge sending unit, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

33. Turn the ignition switch to LOCK (0).

34. Install the parts in the reverse order of removal.

35. Reconnect all connectors.

36. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

37. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0463 indicated?

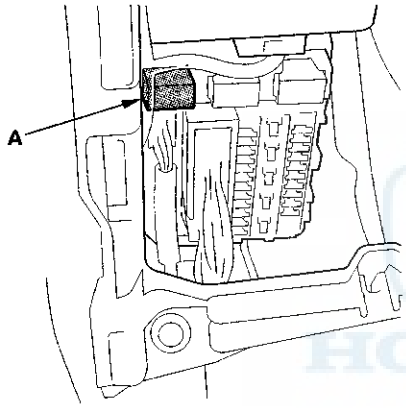
    YES—Check for poor connections or loose terminals at the gauge control module and the fuel gauge sending unit. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

Fuel Pump Circuit Troubleshooting

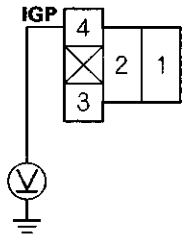
If you suspect a problem with the fuel pump, check that the fuel pump actually runs; when it is on, you will hear some noise if you listen to the fuel fill port with the fuel fill cap removed. The fuel pump should run for 2 seconds when the ignition switch is turned on. If the fuel pump does not make noise, check as follows:

1. Turn the ignition switch to LOCK (0).
2. Remove the driver's dashboard lower cover (see page 20-5).
3. Remove PGM-FI main relay 2 (FUEL PUMP) (A) from the driver's under-dash fuse/relay box.



4. Turn the ignition switch to ON (II).
5. Measure the voltage between PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 4 and body ground.

PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR



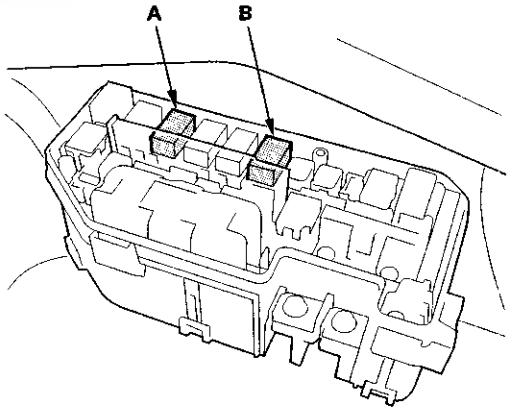
Terminal side of female terminals

Is there battery voltage?

YES—Go to step 13.

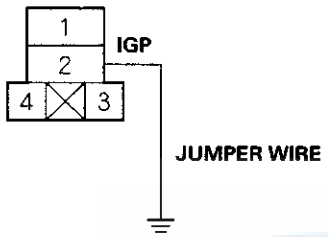
NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).
7. Remove PGM-FI main relay 1 (A) and ETCS control relay (B) from the under-hood fuse/relay box.



8. Jump the SCS line with the HDS.
9. Disconnect the engine wire harness 13P connector.
10. Disconnect the driver's under-dash fuse/relay box connector F (33P).
11. Connect PGM-FI main relay 1 4P connector terminal No. 2 to body ground with a jumper wire.

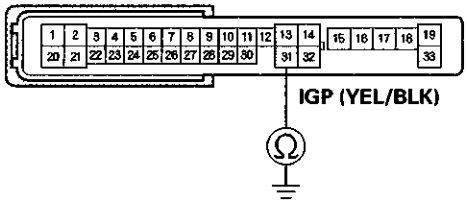
PGM-FI MAIN RELAY 1 4P CONNECTOR



Terminal side of female terminals

12. Check for continuity between driver's under-dash fuse/relay box connector F (33P) terminal No. 31 and body ground.

DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR F (33P)



Wire side of female terminals

Is there continuity?

YES—Replace the driver's under-dash fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-84). ■

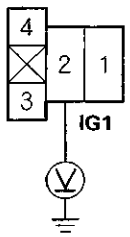
NO—
- Repair open in the wire between the under-hood fuse/relay box and the driver's under-dash fuse/relay box. ■
- If the wire is OK, replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). ■

(cont'd)

Fuel Pump Circuit Troubleshooting (cont'd)

13. Measure the voltage between PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 2 and body ground.

PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR



Terminal side of female terminals

Is there battery voltage?

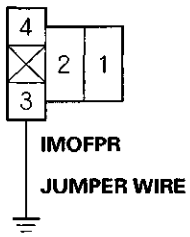
YES—Go to step 14.

NO—
- Check the No. 9 FUEL PUMP (20 A) fuse in the driver's under-dash fuse/relay box.■
- If the fuse is OK, replace the driver's under-dash fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-84).■

14. Turn the ignition switch to LOCK (0).

15. Connect PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 3 to body ground with a jumper wire.

PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR



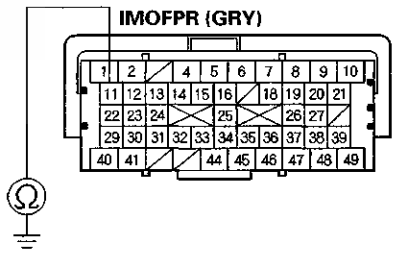
Terminal side of female terminals

16. Jump the SCS line with the HDS.

17. Disconnect ECM/PCM connector A (49P).

18. Check for continuity between body ground and ECM/PCM connector terminal A11.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

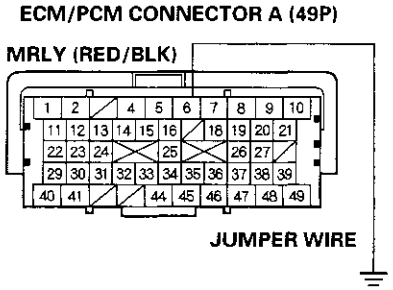
Is there continuity?

YES—Go to step 19.

NO—Repair open in the wire between PGM-FI main relay 2 (FUEL PUMP) and the ECM/PCM (A11).■

19. Reinstall PGM-FI main relay 2 (FUEL PUMP).

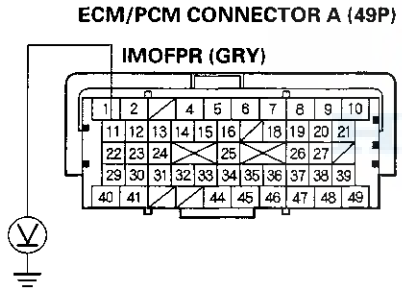
20. Connect ECM/PCM connector terminal A6 to body ground with a jumper wire.



Terminal side of female terminals

21. Turn the ignition switch to ON (II).

22. Measure the voltage between ECM/PCM connector terminal A11 and body ground.



Terminal side of female terminals

Is there battery voltage?

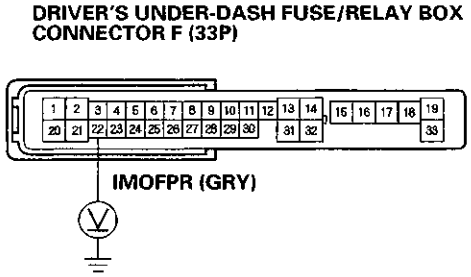
YES—Go to step 23.

NO—Replace PGM-FI main relay 2 (FUEL PUMP). ■

23. Turn the ignition switch to LOCK (0).

24. Reconnect ECM/PCM connector A (49P).

25. Turn the ignition switch to ON (II), and measure voltage between driver's under-dash fuse/relay box connector F (33P) terminal No. 22 and body ground within 2 seconds.



Wire side of female terminals

Is there battery voltage?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see page 11-282). ■

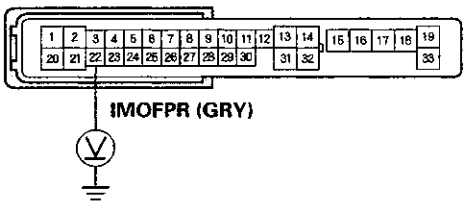
NO—Go to step 26.

(cont'd)

Fuel Pump Circuit Troubleshooting (cont'd)

26. Turn the ignition switch to ON (II), and measure the voltage between driver's under-dash fuse/relay box connector F (33P) terminal No. 22 and body ground after 2 seconds.

DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR F (33P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 27.

NO—If needed, replace the driver's under-dash fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-84), then go to step 27.

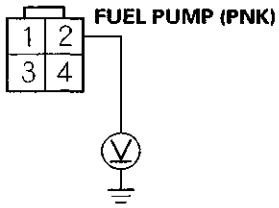
27. Turn the ignition switch to LOCK (0).

28. Remove the rear seat cushion, refer to the 2008-2009 Accord Service Manual (see page 20-225).

29. Remove the access panel from the floor (see page 11-415).

30. Turn the ignition switch to ON (II), and measure voltage between fuel tank unit 4P connector terminal No. 2 and body ground within 2 seconds.

FUEL TANK UNIT 4P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 35.

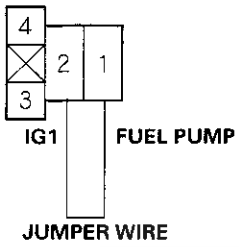
NO—Go to step 31.

31. Turn the ignition switch to LOCK (0).

32. Remove PGM-FI main relay 2 (FUEL PUMP).

33. Connect PGM-FI main relay 2 (FUEL PUMP) 4P connector terminals No. 1 and No. 2 with a jumper wire.

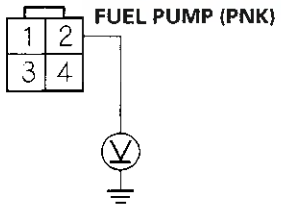
PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR



Terminal side of female terminals

34. Turn the ignition switch to ON (II), and measure the voltage between fuel tank unit 4P connector terminal No. 2 and body ground.

FUEL TANK UNIT 4P CONNECTOR



Wire side of female terminals

Is there battery voltage?

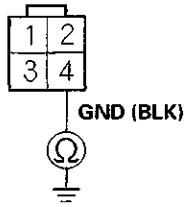
YES—Replace PGM-FI main relay 2 (FUEL PUMP). ■

NO—
- Repair open in the wire between the driver's under-dash fuse/relay box (D10) and the fuel tank unit 4P connector. ■
- If the wire is OK, replace the driver's under-dash fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-84). ■

35. Turn the ignition switch to LOCK (0).

36. Check for continuity between fuel tank unit 4P connector terminal No. 4 and body ground.

FUEL TANK UNIT 4P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Replace the fuel pump (see page 11-418). ■

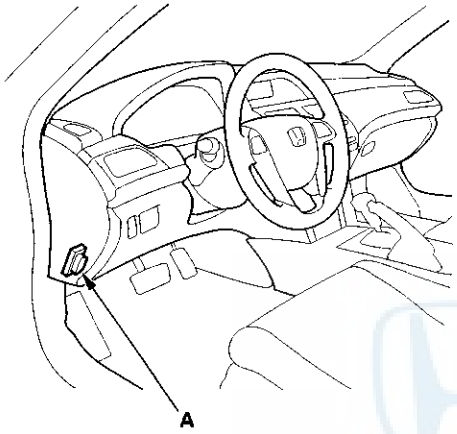
NO—Repair open in the wire between the fuel tank unit 4P connector and G603; 4-door (see page 22-23), 2-door (see page 22-25). ■

Fuel Pressure Relieving

Before disconnecting fuel lines or hoses, relieve pressure from the system by disabling the fuel pump and disconnecting the fuel line/quick connect fitting in the engine compartment.

With the HDS

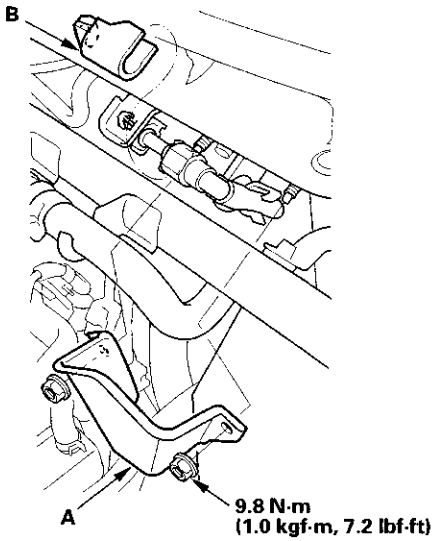
1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



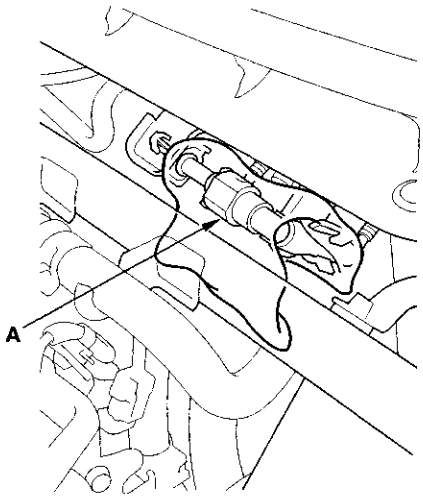
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the ECM/PCM. If it doesn't, go to the DLC circuit troubleshooting (see page 11-259).
4. Turn the ignition switch to LOCK (0).
5. Remove the fuel fill cap to relieve the pressure in the fuel tank.
6. Turn the ignition switch to ON (II).
7. From the INSPECTION MENU of the HDS, select Fuel Pump OFF, then start the engine, and let it idle until it stalls.

   NOTE:
   - Do not allow the engine to idle above 1,000 rpm or the ECM/PCM will continue to operate the fuel pump.
   - A DTC or a Temporary DTC may be set during this procedure. Check for DTCs, and clear them as needed (see page 11-4).

8. Turn the ignition switch to LOCK (0).
9. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
10. Remove the cover (A) and quick-connect fitting cover (B) (see page 11-408).

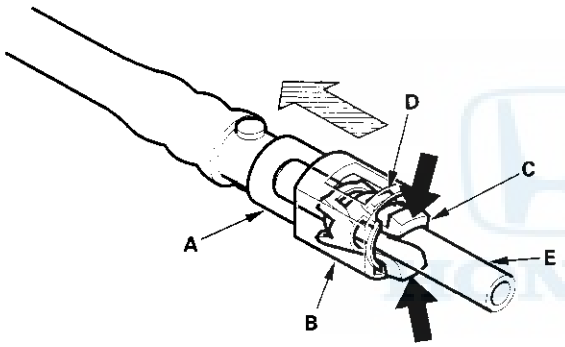


11. Check the fuel quick-connect fitting for dirt, and clean it if needed.
12. Place a rag or shop towel over the quick-connect fitting (A).



13. Disconnect the quick-connect fitting (A): Hold the connector (B) with one hand, and squeeze the retainer tabs (C) with the other hand to release them from the locking tabs (D). Pull the connector off.

    NOTE:
    - Be careful not to damage the line (E) or other parts.
    - Do not use tools.
    - If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.
    - Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.



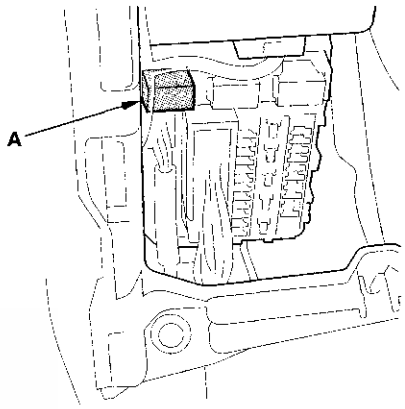
14. After disconnecting the quick-connect fitting, check it for dirt or damage (see step 5 on page 11-410).

15. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

Without the HDS

1. Remove the driver's dashboard lower cover (see page 20-5).

2. Remove PGM-FI main relay 2 (FUEL PUMP) (A) from the driver's under-dash fuse/relay box.



3. Start the engine, and let it idle until it stalls.

    NOTE: If any DTCs are stored, clear and ignore them.

4. Turn the ignition switch to LOCK (0).

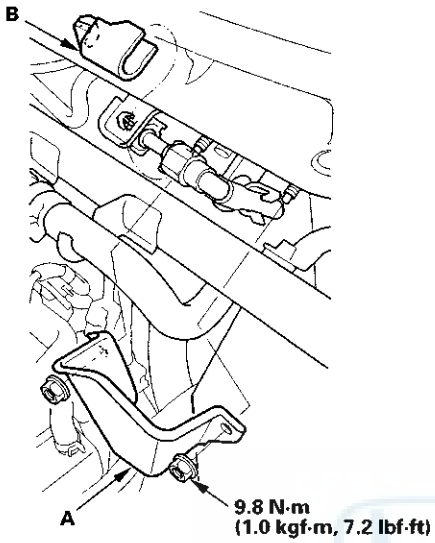
5. Remove the fuel fill cap to relieve the pressure in the fuel tank.

6. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

(cont'd)

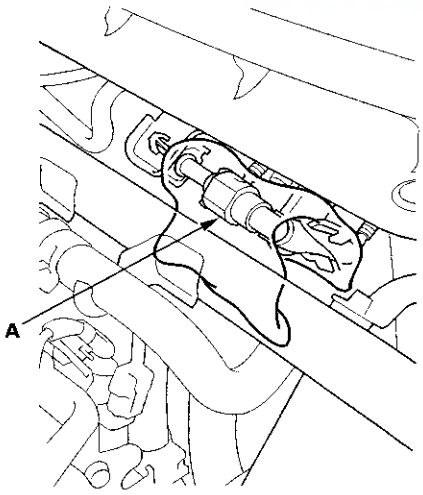
Fuel Pressure Relieving (cont'd)

7. Remove the cover (A) and quick-connect fitting cover (B) (see page 11-408).



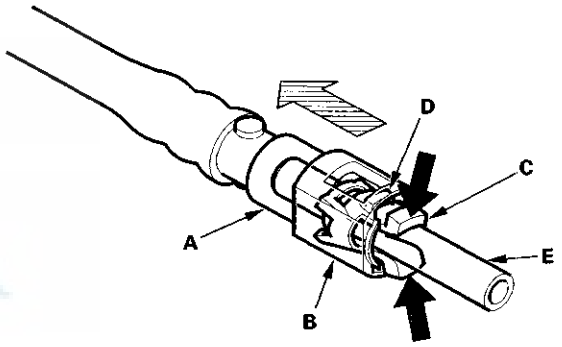
8. Check the fuel quick-connect fitting for dirt, and clean it if needed.

9. Place a rag or shop towel over the quick-connect fitting (A).



10. Disconnect the quick-connect fitting (A): Hold the connector (B) with one hand, and squeeze the retainer tabs (C) with the other hand to release them from the locking tabs (D). Pull the connector off.

NOTE:
- Be careful not to damage the line (E) or other parts.
- Do not use tools.
- If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.
- Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.



11. After disconnecting the quick-connect fitting, check it for dirt or damage (see step 5 on page 11-410).

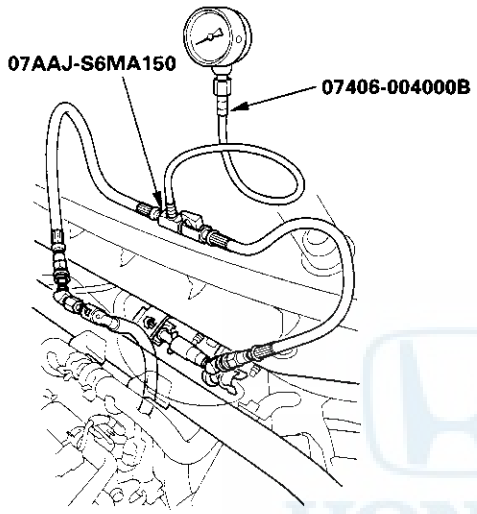
12. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

Fuel Pressure Test

Special Tools Required
- Fuel pressure gauge 07406-004000B
- Fuel pressure gauge attachment set 07AAJ-S6MA150

1. Relieve the fuel pressure (see page 11-400).

2. Attach the fuel pressure gauge set and the fuel pressure gauge.



3. Start the engine, and let it idle.

   - If the engine starts, go to step 5.
   - If the engine does not start, go to step 4.

4. Check to see if the fuel pump is running: Listen to the fuel filler port with the fuel fill cap removed. The fuel pump should run for 2 seconds when the ignition switch is first turned on.

   - If the pump runs, go to step 5.
   - If the pump does not run, do the fuel pump circuit troubleshooting (see page 11-394).

5. Read the fuel pressure gauge. The pressure should be 390—440 kPa (4.0—4.5 kgf/cm^2, 57—64 psi).

   - If the pressure is OK, the test is complete.
   - If the pressure is out of specification, replace the fuel pressure regulator (see page 11-417) and the fuel filter (see page 11-417), then recheck the fuel pressure.

Fuel Tank Draining

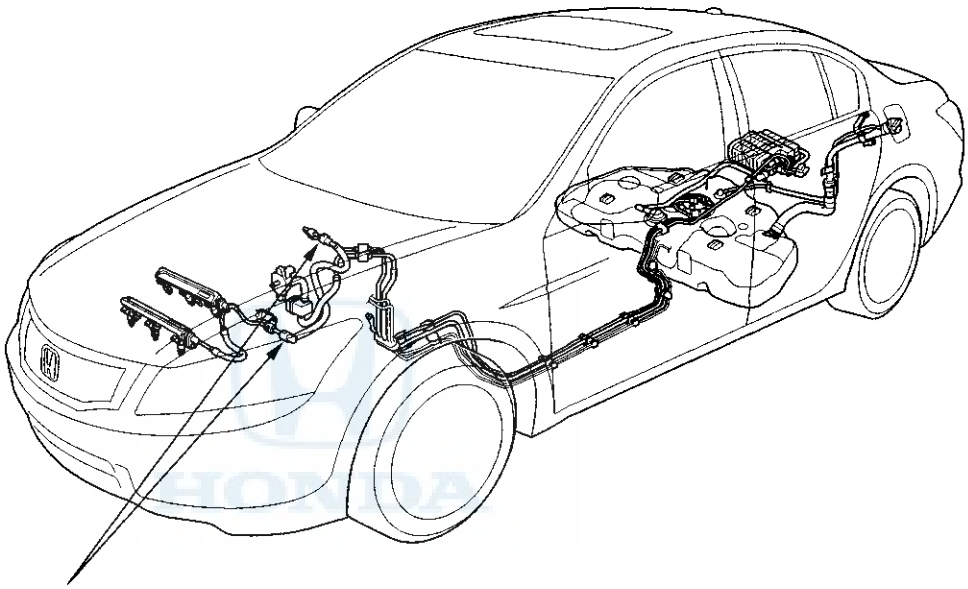
1. Remove the fuel tank unit (see page 11-415).

2. Using a hand pump, a hose, and a container suitable for fuel, draw the fuel from the fuel tank.

3. Reinstall the fuel tank unit (see page 11-416).

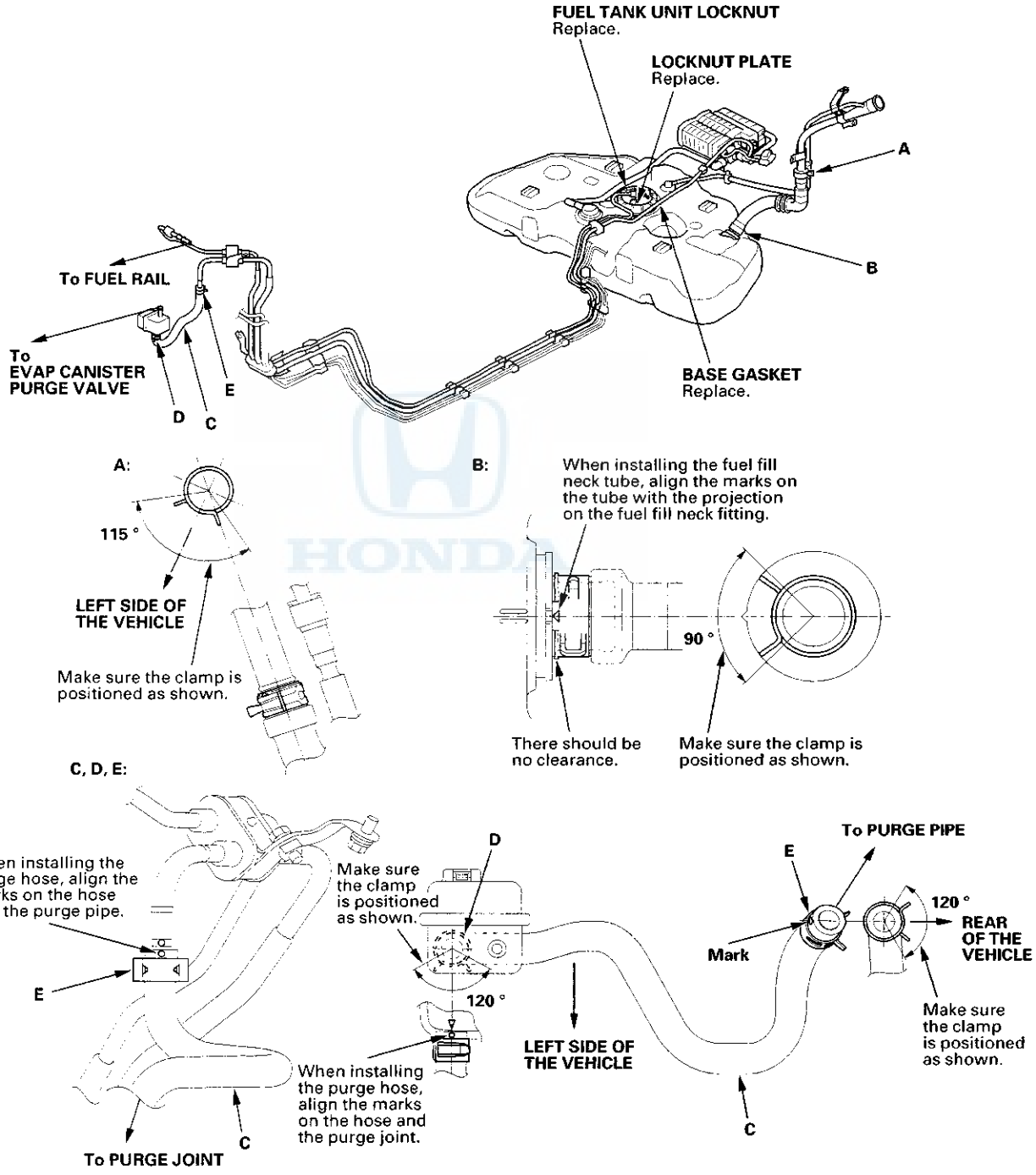
Fuel Line Inspection

Check the fuel system lines and hoses for damage, leaks, and deterioration. Replace any damaged parts.



Check all clamps, and make sure they are properly positioned and tightened.

All models except PZEV



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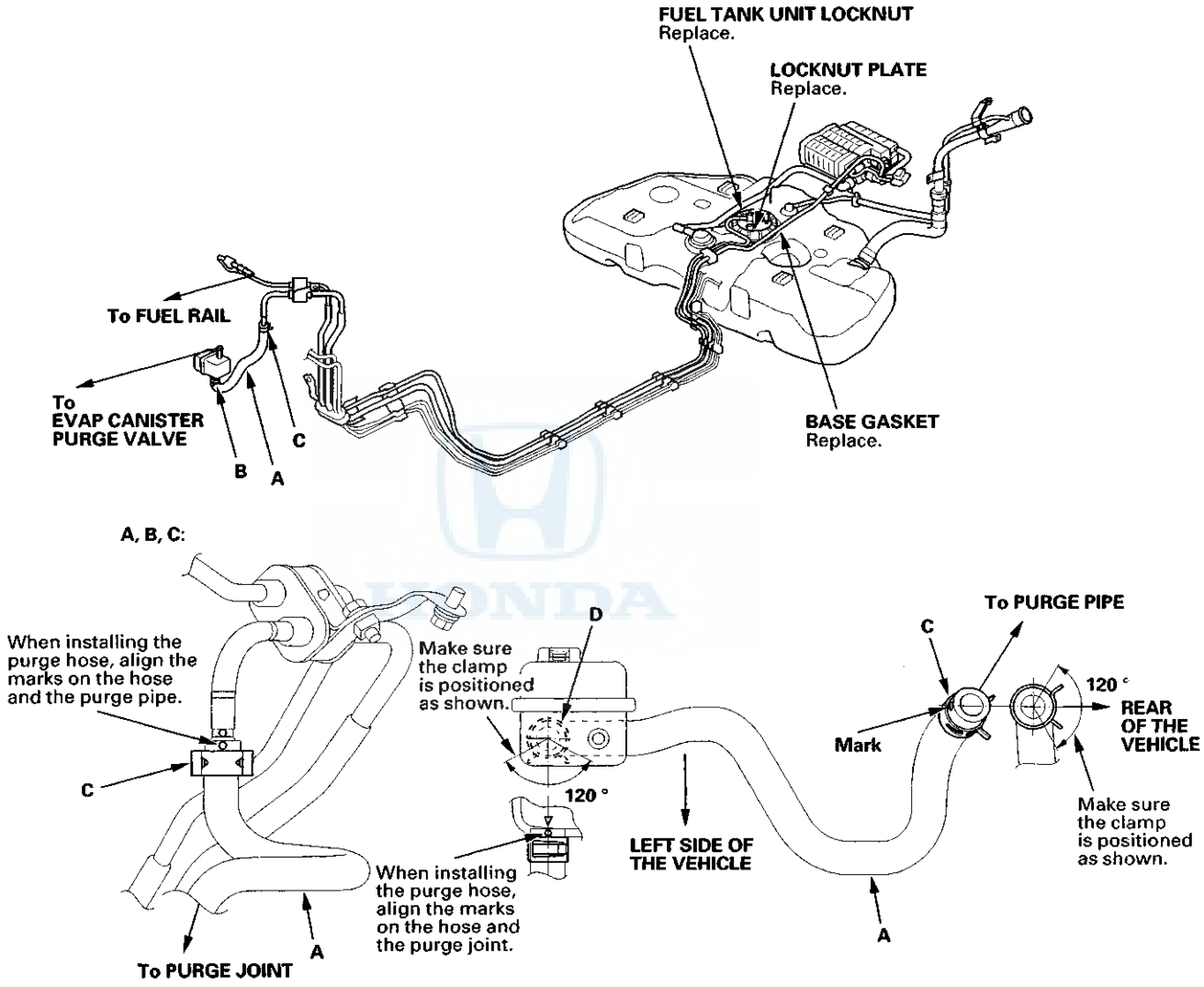
Fuel Line Inspection (cont'd)

Check all clamps, and make sure they are properly positioned and tightened.

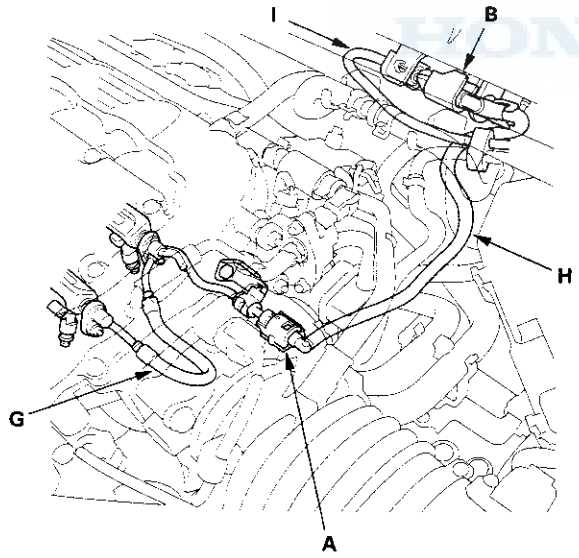
PZEV model

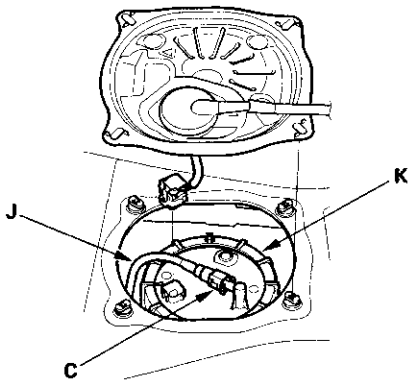


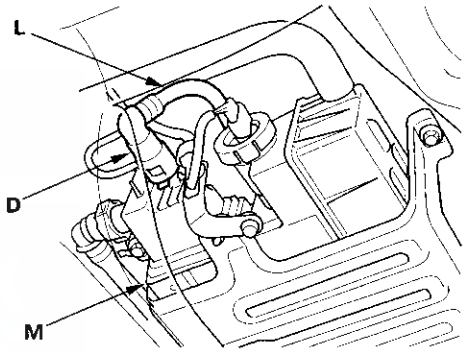
Fuel Line/Quick-Connect Fitting Precautions

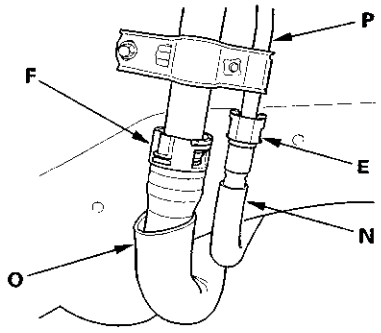
The fuel line/quick-connect fittings (A), (B), (C), (D), (E), and (F) connect the fuel joint hose (G) to the fuel feed hose (H), the fuel feed hose to the fuel line (I), the fuel line (J) to the fuel tank unit (K), the fuel vapor line (L) to the EVAP canister (M), and the fuel tank vapor recirculation tube (N) (PZEV model, and fuel fill neck tube (O) to the fuel fill pipe (P)). When removing or installing the fuel feed hose, the fuel tank unit, or the fuel tank, it is necessary to disconnect or connect the quick-connect fittings.
Pay attention to the following:

- The fuel feed hoses, fuel line, and quick-connect fittings are not heat-resistant; be careful not to damage them during welding or other heat-generating procedures.
- The fuel feed hoses, fuel line, and quick-connect fittings are not acid-proof; do not touch them with a shop towel that was used for wiping battery electrolyte. Replace them if they come in contact with electrolyte or something similar.
- When connecting or disconnecting the fuel feed hoses, fuel line, and quick-connect fittings, be careful not to bend or twist them excessively. Replace them if they are damaged.









PZEV model shown

(cont'd)

Fuel Line/Quick-Connect Fitting Precautions (cont'd)

A disconnected quick-connect fitting can be reconnected, but the retainer on the mating line cannot be reused once it has been removed from the line. Replace the retainer when:

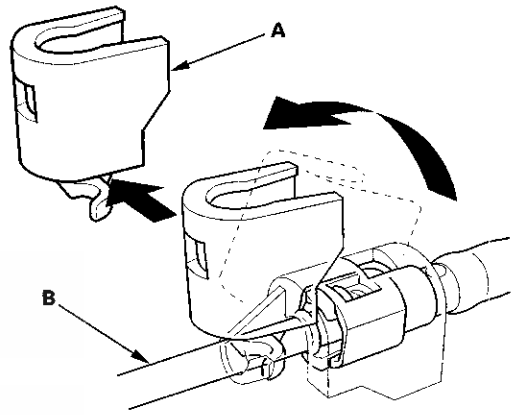
- replacing the fuel rail.
- replacing the fuel line.
- replacing the fuel pump.
- replacing the fuel filter.
- replacing the EVAP canister.
- replacing the fuel fill pipe.
- replacing the fuel tank.
- it has been removed from the line.
- it is damaged.
- Use the same manufacturer's retainer and the same size when replacing the retainer.

Location	Manufacturer	Retainer color	Line diameter
A	Tokai	Blue green	0.3 in. (8 mm)
B	Tokai	Blue green	0.3 in. (8 mm)
C	Tokai	Orange	0.4 in. (9.5 mm)
D	Tokai	Natural	0.5 in. (12 mm)
E	Tokai	Natural	0.5 in. (12 mm)
F (PZEV model)	Tokai	Green	1.1 in. (28.6 mm)

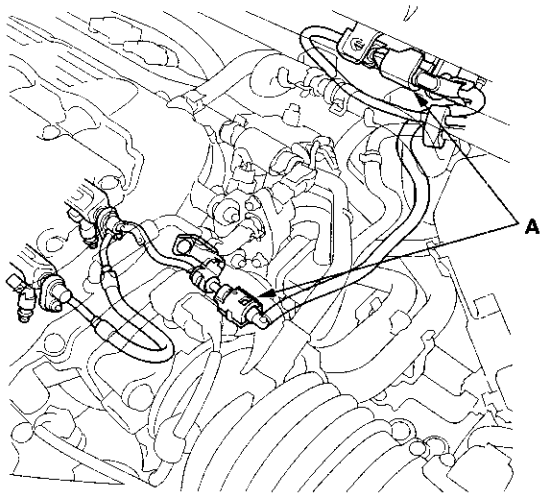
Fuel Line/Quick-Connect Fitting Removal

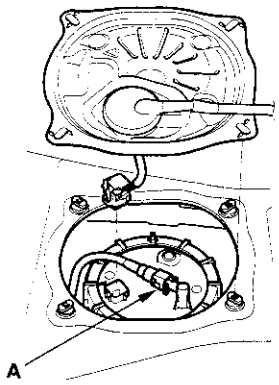
NOTE: Before you work on the fuel lines and fittings, read the Fuel Line/Quick-Connect Fitting Precautions (see page 11-407).

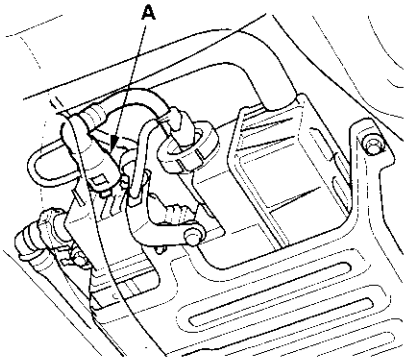
1. If equipped, remove the quick-connect fitting cover from the fuel line. Raise the cover (A) from the fuel line (B), and remove it as shown.

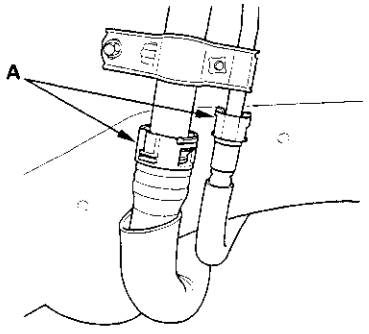


2. Relieve the fuel pressure (see page 11-400).
3. Check the fuel quick-connect fittings (A) for dirt, and clean them if needed.





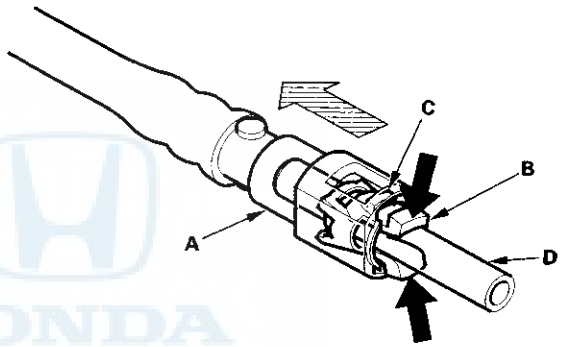




PZEV model shown

4. Place a rag or shop towel over the quick-connect fitting. Hold the connector (A) with one hand, and squeeze the retainer tabs (B) with the other hand to release them from the locking tabs (C). Pull the connector off.

   NOTE:
   - Be careful not to damage the line (D) or other parts. Do not use tools.
   - If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.
   - Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.



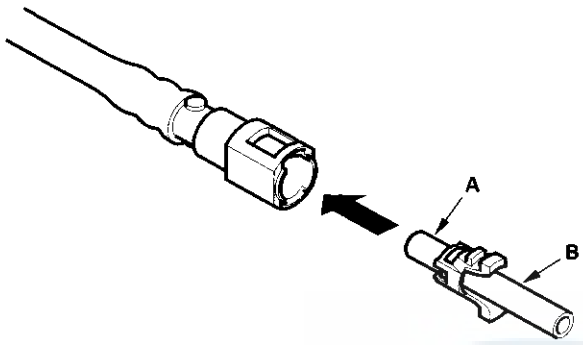
HONDA

(cont'd)

Fuel Line/Quick-Connect Fitting Removal (cont'd)

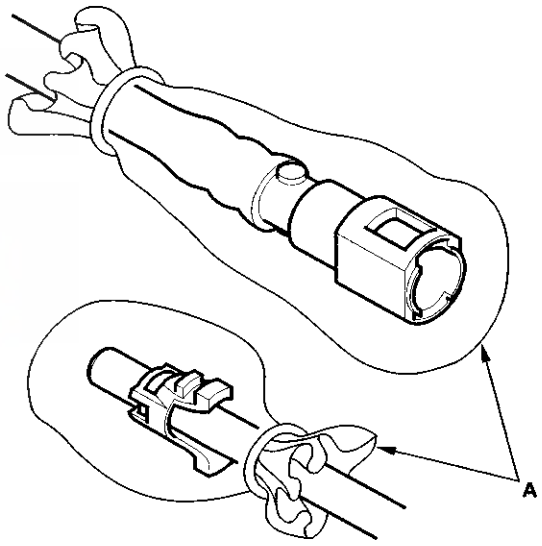
5. Check the contact area (A) of the line (B) for dirt or damage.

   - If it is dirty, clean the connector with a pressure washer, and dry it with the compressed air.
   - If it is rusty or damaged, replace the fuel filter or the fuel feed line.



6. To prevent damage and keep foreign matter out, cover the disconnected connector and line ends with plastic bags (A).

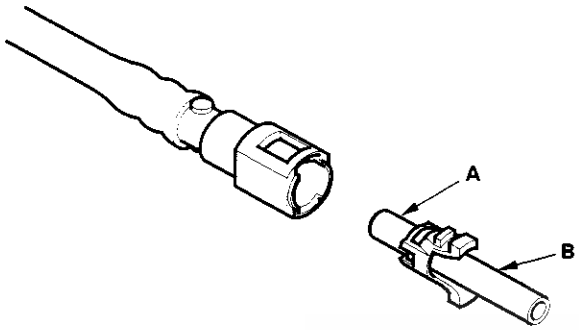
   NOTE: The retainer cannot be reused once it has been removed from the line.
   Replace the retainer when:
   - replacing the fuel rail.
   - replacing the fuel line.
   - replacing the fuel pump.
   - replacing the fuel filter.
   - replacing the EVAP canister.
   - replacing the fuel fill pipe.
   - replacing the fuel tank.
   - it has been removed from the line.
   - it is damaged.



Fuel Line/Quick-Connect Fitting Installation

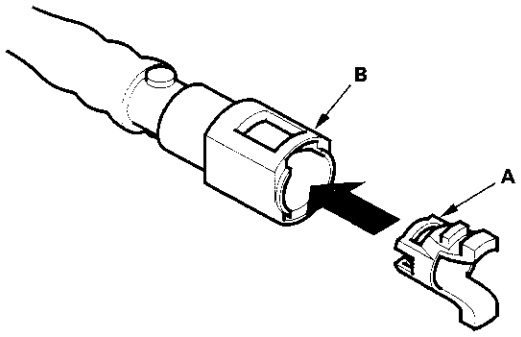
NOTE: Before you work on the fuel lines and fittings, read the "Fuel Line/Quick-Connect Fitting Precautions" (see page 11-407).

1. Check the contact area (A) of the line (B) for dirt or damage, and clean it if needed.

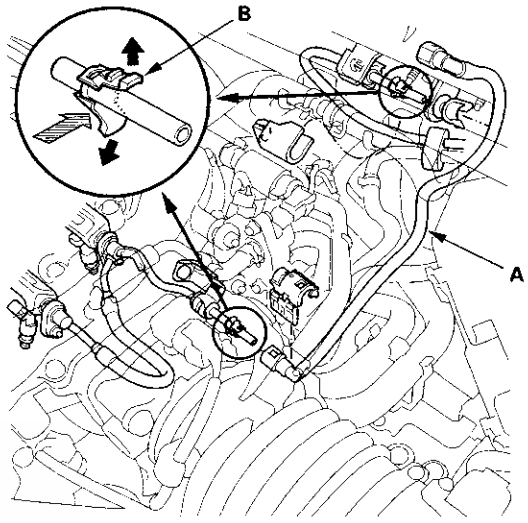


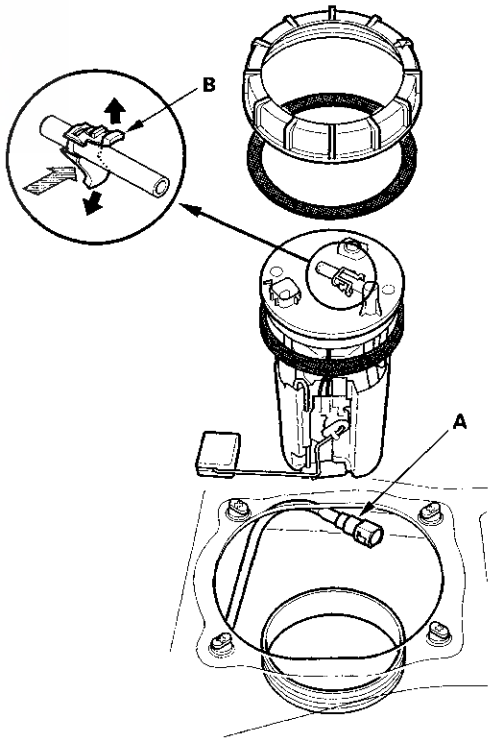
2. Insert a new retainer (A) into the connector (B) if the retainer is damaged, or after:

   - replacing the fuel rail.
   - replacing the fuel line.
   - replacing the fuel pump.
   - replacing the fuel filter.
   - replacing the EVAP canister.
   - replacing the fuel fill pipe.
   - replacing the fuel tank.
   - removing the retainer from the line.
   - Use the same manufacturer retainer and the same size retainer when the replacing the retainer (see page 11-407).



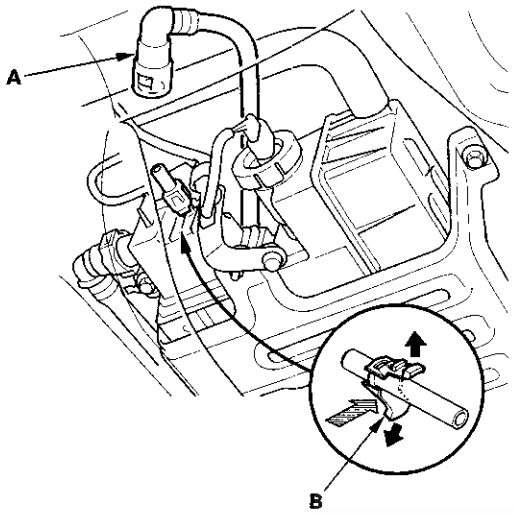
3. Before connecting a new fuel tube/quick-connect fitting assembly (A), remove the old retainer (B) from the mating line.

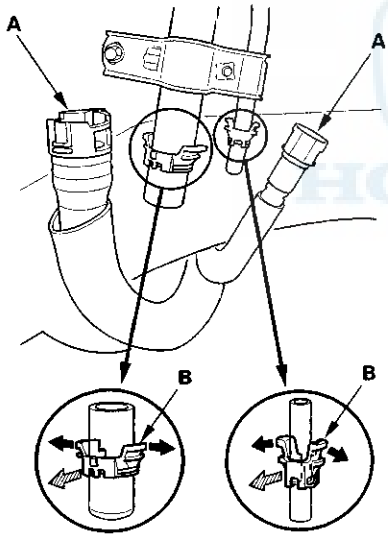




(cont'd)

Fuel Line/Quick-Connect Fitting Installation (cont'd)



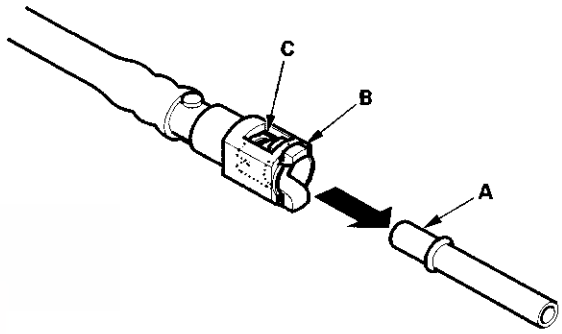


PZEV model shown

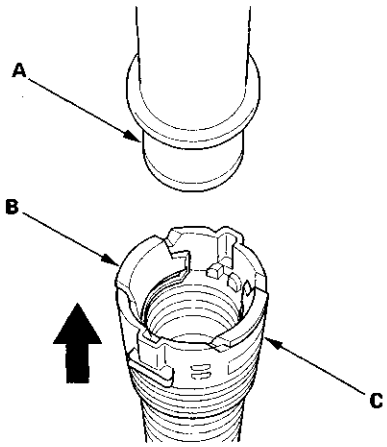
4. Align the quick-connect fittings with the line (A), and align the retainer locking tabs (B) with the connector grooves (C). Then press the quick-connect fittings onto the line until both retainer tabs lock with a clicking sound.

   NOTE: If it is hard to connect, put a small amount of new engine oil on the line end.

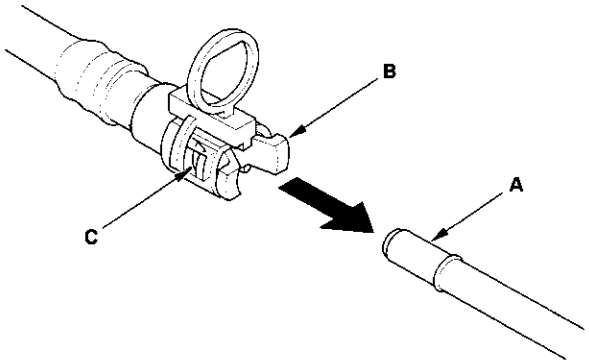
Connection with new retainer



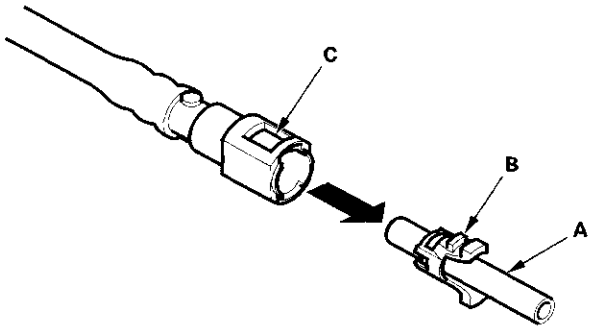
Connection with new retainer: Fuel fill neck tube (PZEV model)



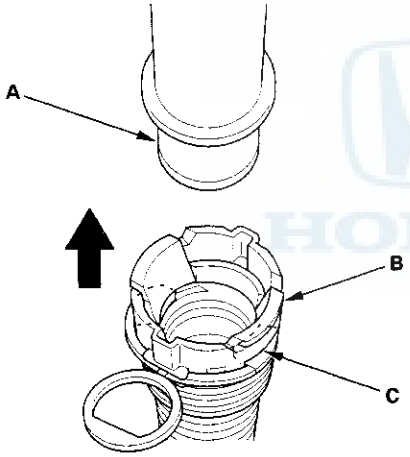
Connection to new fuel line



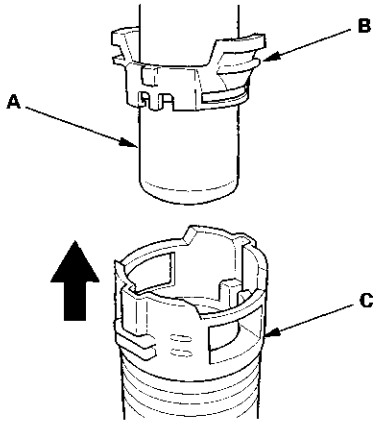
Reconnection to existing retainer



Connection to new fuel line: Fuel fill neck tube (PZEV model)



Reconnection to existing retainer: Fuel fill neck tube (PZEV model)

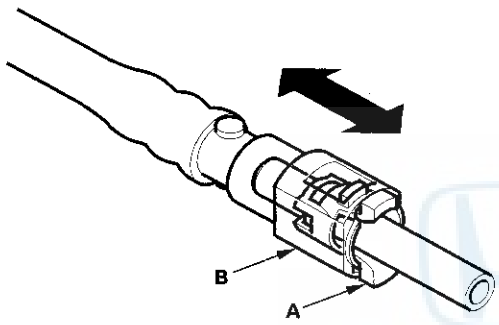


(cont'd)

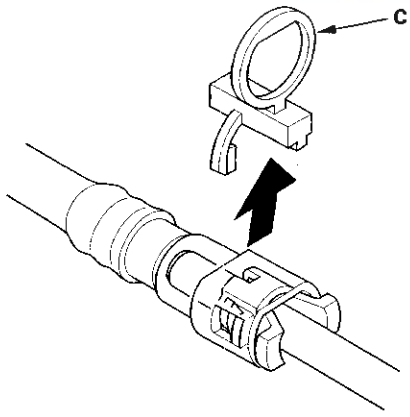
Fuel Line/Quick-Connect Fitting Installation (cont'd)

5. When you reconnect the connector with the old retainer, make sure the connection is secure and the tabs (A) are firmly locked into place; check visually and also by pulling the connector (B). When you replace the fuel line with a new one, make sure you remove the ring pull (C) upwards after you confirm the connection is secure.

   NOTE: Before you remove the ring pull, make sure the fuel line connection is secure. If the connection is not secure, the ring pull could break when you try to remove it.

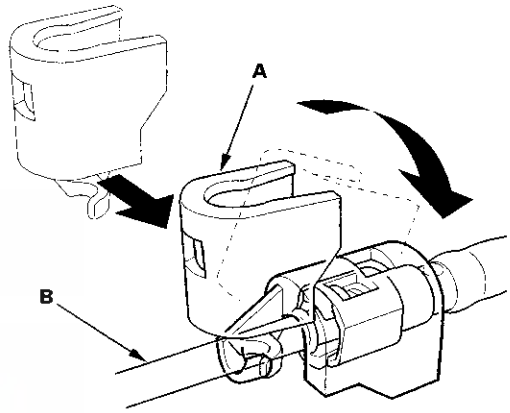


Connection to new fuel line



6. Reconnect the negative cable to the battery, and turn the ignition switch to ON (II) (but do not operate the starter motor). The fuel pump will run for about 2 seconds, and fuel pressure will rise. Repeat this two or three times, and check that there is no leakage in the fuel supply system.

7. If equipped, install the quick-connect fitting cover. Set the groove of the cover (A) on the fuel line (B) as shown, then install it. Make sure the cover is firmly locked in place.

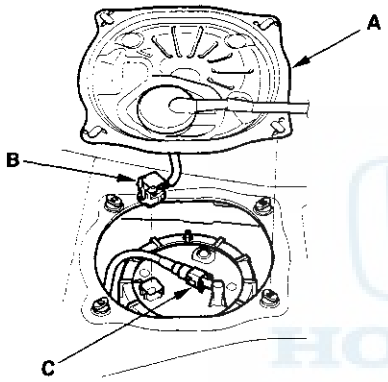


Fuel Tank Unit Removal and Installation

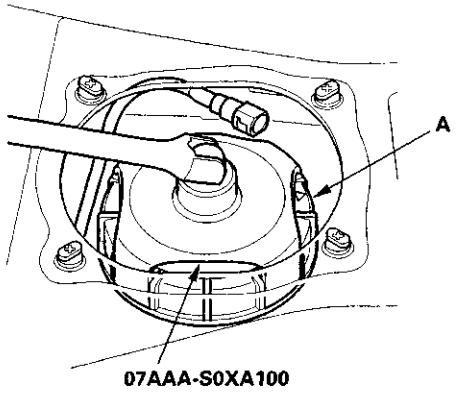
Special Tools Required
Fuel sender wrench 07AAA-S0XA100

Removal

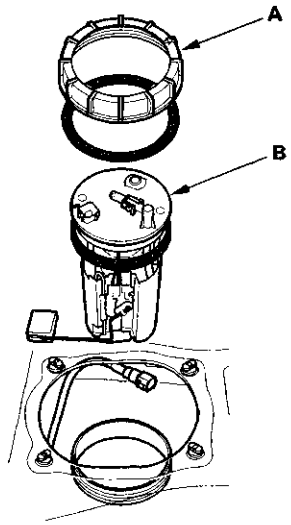
1. Relieve the fuel pressure (see page 11-400).
2. Remove the fuel fill cap.
3. Remove the rear seat cushion, refer to the 2008-2009 Accord Service Manual (see page 20-223).
4. Remove the access panel (A) from the floor.



5. Disconnect the fuel tank unit 4P connector (B).
6. Disconnect the quick-connect fitting (C) from the fuel tank unit.
7. Using the special tool, loosen the locknut (A).



8. Remove the locknut (A) and the fuel tank unit (B).



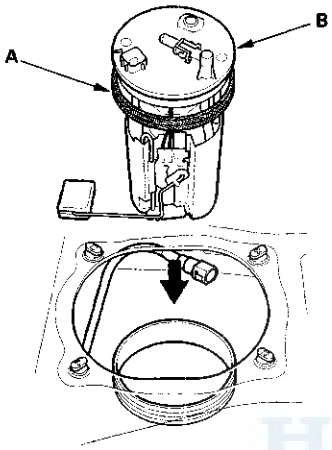
(cont'd)

Fuel Tank Unit Removal and Installation (cont'd)

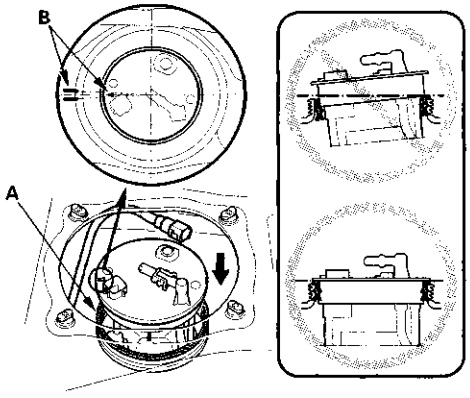
Installation

1. Temporarily attach a new base gasket (A) to the fuel tank unit (B), then insert the fuel tank unit partially into the fuel tank.

   NOTE:
   - Be careful not to damage the new base gasket.
   - Be careful not to bend the fuel gauge sending unit.
   - Do not coat the base gasket with oil.



2. Transfer the base gasket (A) from the fuel tank unit to the fuel tank.

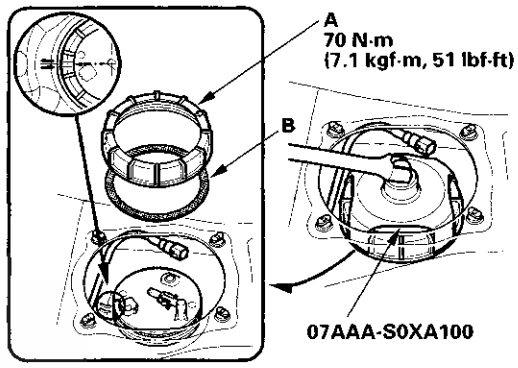


3. Align the marks (B) on the fuel tank and fuel tank unit, then insert the fuel tank unit into the fuel tank until the fuel tank unit rests on top of the base gasket.

   NOTE: To avoid a fuel leak, check the base gasket, visually or by hand, to make sure it is not pinched.

4. Using the special tool, tighten a new locknut (A) with a new locknut plate (B) to the specified torque.

   NOTE:
   - After tightening, make sure the marks are still aligned.
   - After installation, check the base gasket, visually or by hand, to make sure it is not pinched.



5. Connect the fuel tank unit 4P connector, then connect the quick-connect fitting.

6. Reconnect the negative cable to the battery, and turn the ignition switch to ON (II) (but do not operate the starter motor). The fuel pump will run for about 2 seconds, and fuel pressure rises. Repeat this two or three times, then check that there is no leakage in the fuel supply system.

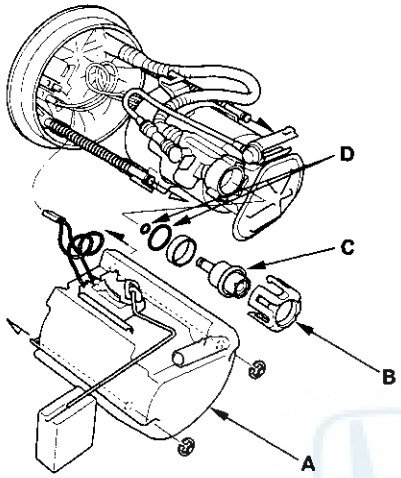
7. Install the access panel.

8. Install the rear seat cushion, refer to the 2008-2009 Accord Service Manual (see page 20-223).

9. Install the fuel fill cap.

Fuel Pressure Regulator Replacement

1. Remove the fuel tank unit (see page 11-415).
2. Remove the reservoir (A).



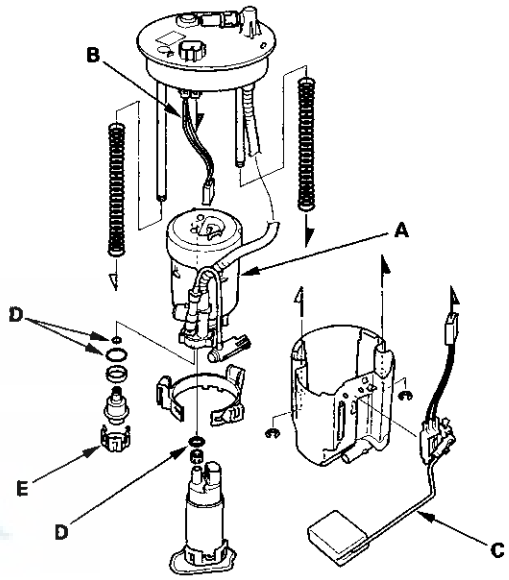
3. Remove the bracket (B).
4. Remove the fuel pressure regulator (C).
5. Install the parts in the reverse order of removal with new O-rings (D) and a new bracket. When installing the fuel tank unit, align the marks on the unit and the fuel tank (see page 11-416).

   NOTE:
   - Coat the O-rings with clean engine oil; do not use any other oils or fluids.
   - Do not pinch the O-rings during installation.
   - Use all the new parts supplied in the pressure regulator replacement kit.

Fuel Filter Replacement

The fuel filter should be replaced whenever the fuel pressure drops below the specified value (see page 11-403), after making sure that the fuel pump and the fuel pressure regulator are OK.

1. Remove the fuel tank unit (see page 11-415).
2. Remove the fuel filter set (A).



3. Check these items before installing the fuel tank unit:

   - When connecting the wire harness (B), make sure the connection is secure and the connectors are firmly locked into place.
   - When installing the fuel gauge sending unit (C), make sure the connection is secure and the connector is firmly locked into place. Be careful not to bend or twist it excessively.

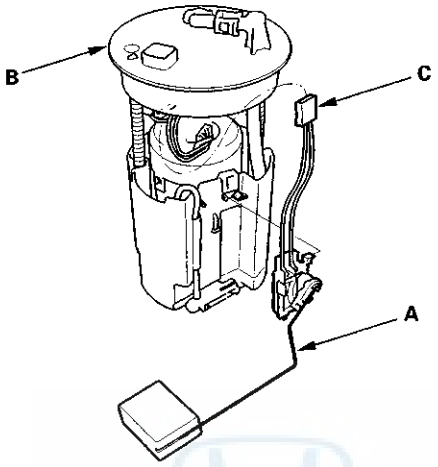
4. Install the parts in the reverse order of removal with new O-rings (D) and a new bracket (E). When installing the fuel tank unit, align the marks on the unit and the fuel tank (see page 11-416).

   NOTE:
   - Coat the O-rings with clean engine oil; do not use any other oils or fluids.
   - Do not pinch the O-rings during installation.
   - Use all the new parts supplied in the fuel filter replacement kit.

Fuel Pump/Fuel Gauge Sending Unit Replacement

1. Remove the fuel tank unit (see page 11-415).

2. Remove the fuel level sensor (fuel gauge sending unit) (A) from the fuel tank unit (B).



3. Check these items before installing the fuel tank unit:

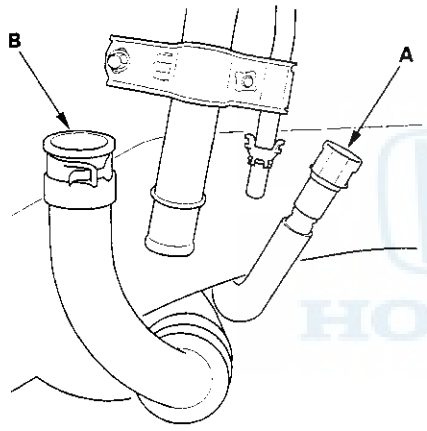
   - When connecting the wire harness, make sure the connection is secure and the connector (C) is firmly locked into place.
   - When installing the fuel gauge sending unit, make sure the connection is secure. Be careful not to bend or twist it excessively.

4. Install the parts in the reverse order of removal. When installing the fuel tank unit, align the marks on the unit and the fuel tank (see page 11-416).

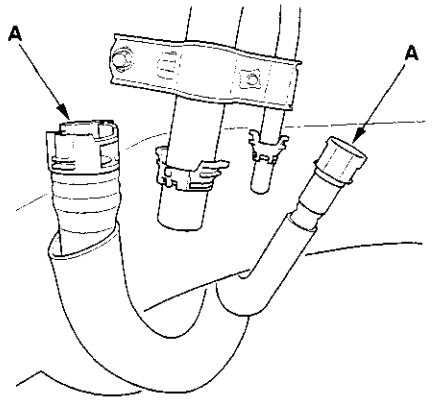
Fuel Tank Replacement

1. Drain the fuel tank (see page 11-403).
2. Reinstall the fuel tank unit without connecting the fuel tank unit 4P connector and the quick-connect fitting (see page 11-416).
3. Remove the fuel fill pipe cover (see page 11-421).
4. Disconnect the quick-connect fittings (A) (see page 11-408) (and on all models except PZEV, disconnect the fuel fill tube (B) from the fuel fill pipe. Slide back the clamps, then twist the hose as you pull to avoid damaging them).

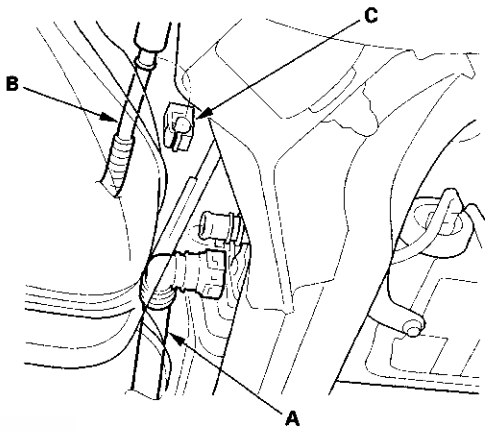
All models except PZEV



PZEV model



5. Raise the vehicle on a lift.
6. Disconnect the hose (A) from the EVAP canister.



7. Remove the hose (B) from the clamp (C).

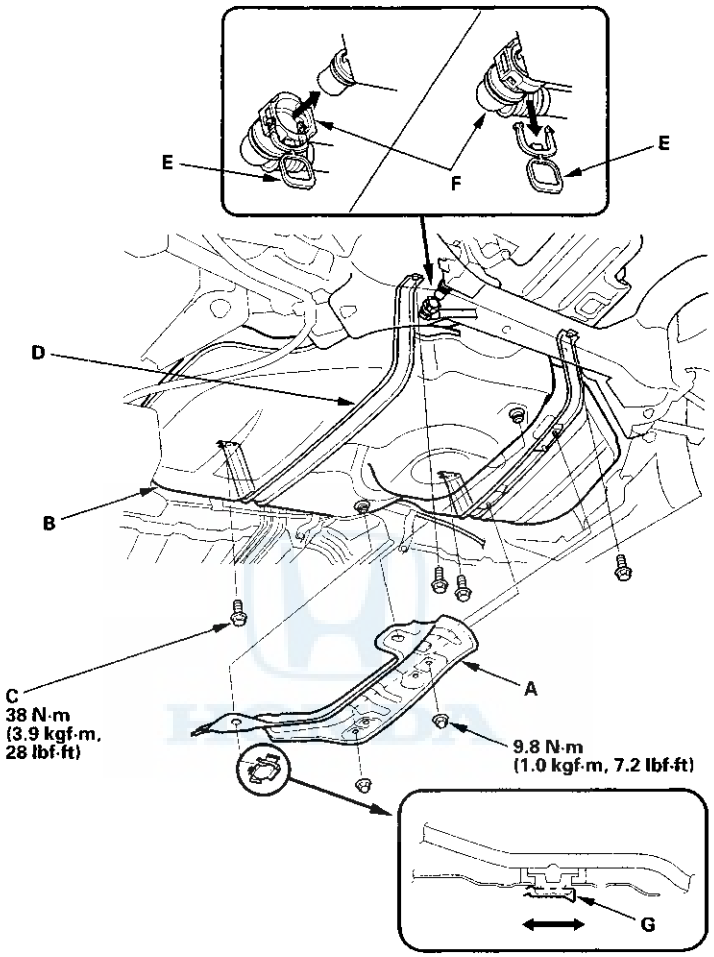
   NOTE: Be careful not to damage the hose.

8. Remove the exhaust pipe (see page 9-10).
9. Remove the right side middle floor undercover, refer to the 2008-2009 Accord Service Manual (see page 20-276).

(cont'd)

Fuel Tank Replacement (cont'd)

10. Remove the fuel tank protector (A).



11. Remove the right parking brake cable mounting bolts, refer to the 2008-2009 Accord Service Manual (see page 19-41).

12. Place a jack or other support under the fuel tank (B).

13. Remove the strap bolts (C) and the straps (D).

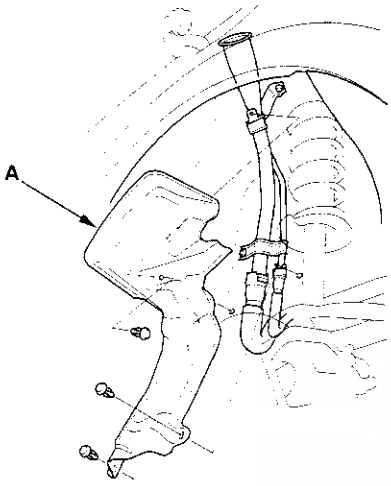
14. Remove the fuel tank.

15. Install the parts in the reverse order of removal.

NOTE:
- New fuel tanks have ring pull (E) at the fuel vapor hose connector (F). When you connect the hose and confirm that the connection is secure, remove the ring pull by pulling it down.
- Before connecting the fuel fill pipe and the quick-connect fitting, check for dirt, and clean it if needed, taking care not to damage the fuel fill pipe and other parts.
- When installing the fuel tank protector, make sure insert direction of the clip (G).

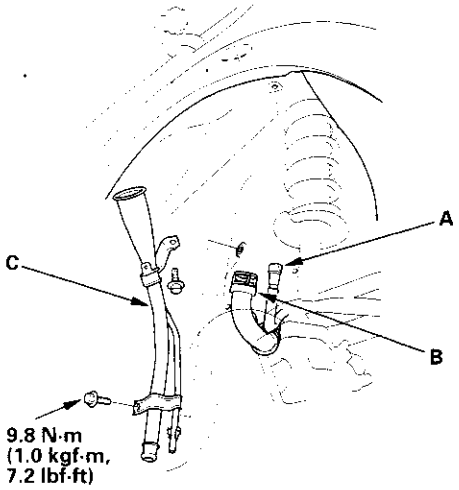
Fuel Fill Pipe Removal/Installation

1. Drain the fuel tank (see page 11-403).
2. Remove the fuel fill cap.
3. Remove the left rear wheel.
4. Remove the fuel fill pipe cover (A).

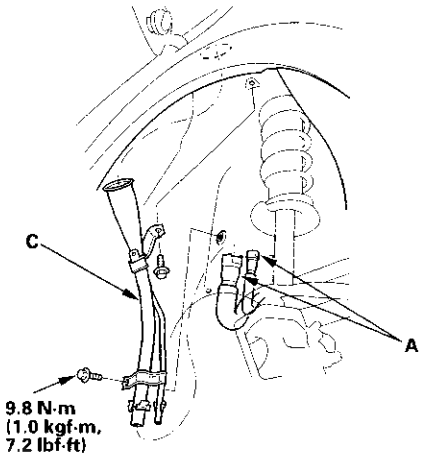


5. Disconnect the quick-connect fittings (A) (see page 11-408) (and on all models except PZEV, disconnect the fuel fill tube (B) from the fuel fill pipe. Slide back the clamp, then twist the hose as you pull to avoid damaging them).

All models except PZEV



PZEV model

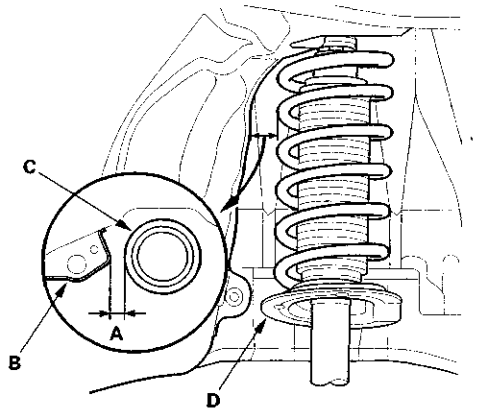


6. Remove the fuel fill pipe (C).
7. Install the parts in the reverse order of removal.

   NOTE: Before connecting the fuel fill pipe and quick-connect fitting, check for dirt, and clean it if needed, taking care not to damage the fuel fill pipe and other parts.

8. After installing the parts, measure clearance (A) between the fuel filler pipe cover (B) and the left rear damper spring outline (C) at the point that is above 5.9 in. (150 mm) to 8.2 in. (210 mm) from the left rear damper spring base (D). Make sure the clearance (A) is more than 0.81 in. (20.7 mm).

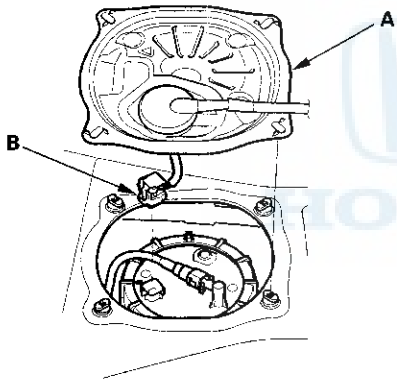
   NOTE: When measuring the clearance, raise the vehicle on the lift.



Fuel Gauge Sending Unit Test

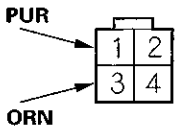
NOTE: For the fuel gauge system circuit diagram, refer to the Gauges Circuit Diagram (see page 22-72).

1. Check the No. 5 METER (7.5 A) fuse in the driver's under-dash fuse/relay box before testing.
2. Check for body electrical system DTCs.
   - If no problem is found, go to step 3.
   - If DTC B1175 or B1176 is indicated, go to the indicated DTC's troubleshooting.
3. Turn the ignition switch to LOCK (0).
4. Remove the rear seat cushion, refer to the 2008-2009 Accord Service Manual (see page 20-223).
5. Remove the access panel (A) from the floor.



6. Disconnect the fuel tank unit 4P connector (B).
7. Measure the voltage between fuel tank unit 4P connector terminals No. 1 and No. 3 with the ignition switch to ON (II). There should be battery voltage.
   - If the voltage is OK, go to step 8.
   - If the voltage is not as specified, check for:
     – a short in the PUR wire to ground.
     – an open in the PUR or ORN wire.

FUEL TANK UNIT 4P CONNECTOR

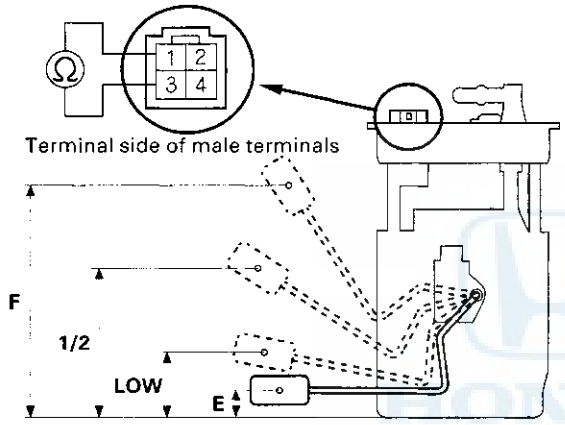


Wire side of female terminals

8. Turn the ignition switch to LOCK (0).
9. Remove the fuel tank unit from the fuel tank (see page 11-415).

10. Measure the resistance between fuel tank unit 4P connector terminals No. 1 and No. 3 with the float at E (EMPTY), LOW (LOW FUEL INDICATOR), 1/2 (HALF FULL), and F (FULL) positions.
If you do not get the following readings, replace the fuel gauge sending unit (see page 11-418).

Float Position	F 6.1 in. (155.2 mm)	1/2 3.8 in. (97.6 mm)	LOW 1.6 in. (40.8 mm)	E 0.6 in. (15.9 mm)
Resistance (Ω)	19 to 21	196.7 to 206.7	503.8 to 589.4	772 to 788



11. Reconnect the fuel tank unit 4P connector.

12. Remove the No. 15 BACK UP (10 A) fuse from the under-hood fuse/relay box for at least 10 seconds, then reinstall it.

13. Turn the ignition switch to ON (II).

14. Check that the pointer of the fuel gauge indicates F with the float at F.

    - If the pointer of the fuel gauge does not indicate F, replace the gauge assembly.
    - If the gauge is OK, the test is complete.

    NOTE:
    - The pointer of the fuel gauge returns to the bottom of the gauge dial when the ignition switch is in LOCK (0) and ACC (I), regardless of the fuel level.
    - Remove the No. 15 BACK UP (10 A) fuse from the under-hood fuse/relay box for at least 10 seconds after completing troubleshooting, otherwise it may take up to 20 minutes for the fuel gauge to indicate the correct fuel level.

Low Fuel Indicator Test

1. Do the gauge self-diagnostic test (see page 22-68).

    - If the low fuel indicator flashes, go to step 2.
    - If the low fuel indicator does not flash, replace the gauge control module, refer to the 2008-2009 Accord Service Manual (see page 22-324).

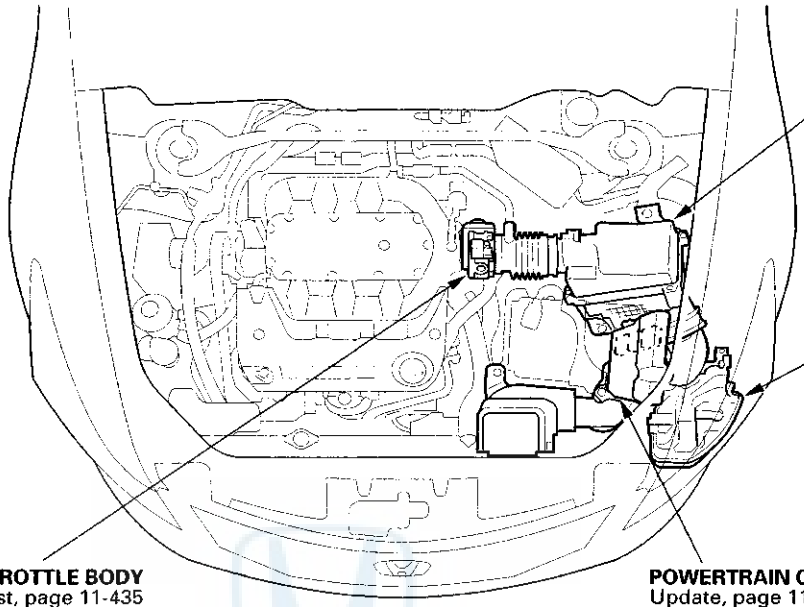
2. Check for body electrical system DTCs.

    - If any DTCs are indicated, do the indicated DTC's troubleshooting.
    - If no DTCs are indicated, go to step 3.

3. Do the fuel gauge sending unit test (see page 11-422).

Component Location Index

J35Z2 engine



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INTAKE AIR RESONATOR
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THROTTLE BODY
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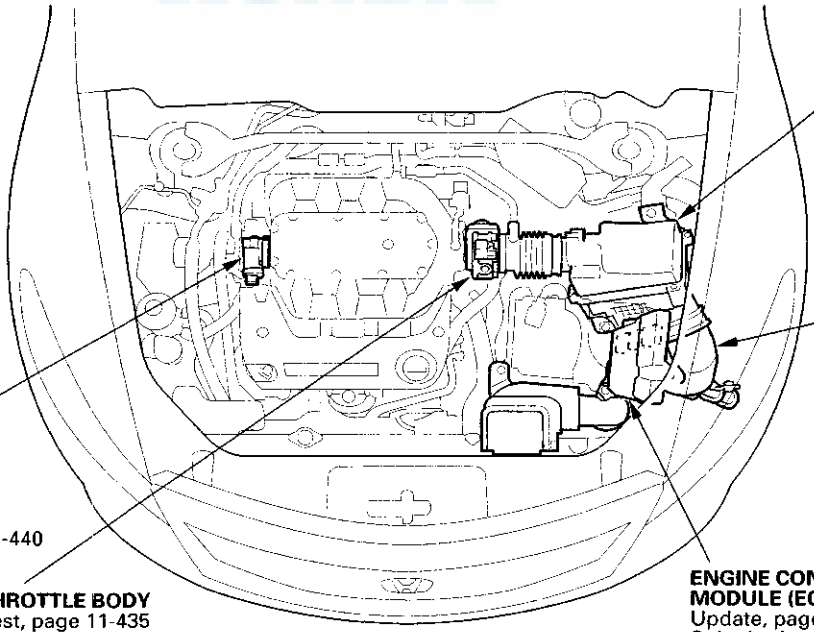
J35Z3 engine



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DTC Troubleshooting

DTC P1077: IMT Valve Stuck in High RPM Position

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

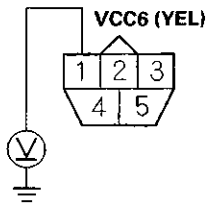
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Do the IMT TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the IMT actuator and the ECM. ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect the IMT actuator 5P connector.
6. Turn the ignition switch to ON (II).
7. Measure the voltage between IMT actuator 5P connector terminal No. 1 and body ground.

IMT ACTUATOR 5P CONNECTOR



Wire side of female terminals

Is there about 5 V?

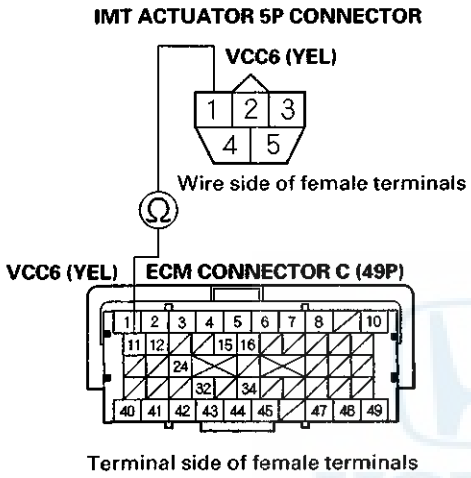
YES—Go to step 12.

NO—Go to step 8.

(cont'd)

DTC Troubleshooting (cont'd)

8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect ECM connector C (49P).
11. Check for continuity between IMT actuator 5P connector terminal No. 1 and ECM connector terminal C11.

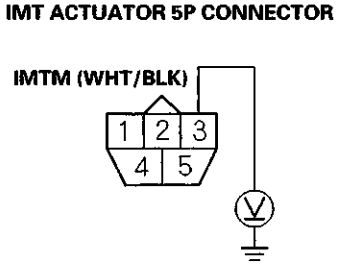


Is there continuity?

YES—Go to step 36.

NO—Repair open in the wire between the ECM (C11) and the IMT actuator, then go to step 30.

12. Measure the voltage between IMT actuator 5P connector terminal No. 3 and body ground.



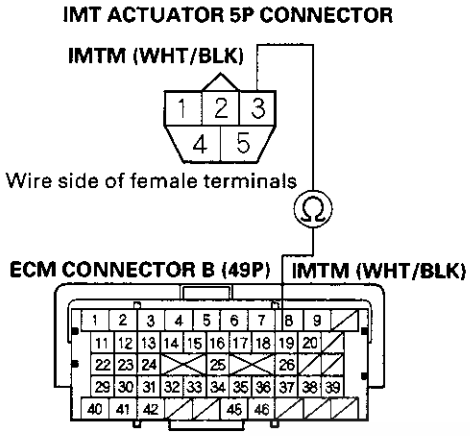
Is there about 5 V?

YES—Go to step 17.

NO—Go to step 13.

13. Turn the ignition switch to LOCK (0).
14. Jump the SCS line with the HDS.
15. Disconnect ECM connector B (49P).

16. Check for continuity between IMT actuator 5P connector terminal No. 3 and ECM connector terminal B19.



Is there continuity?

YES—Go to step 36.

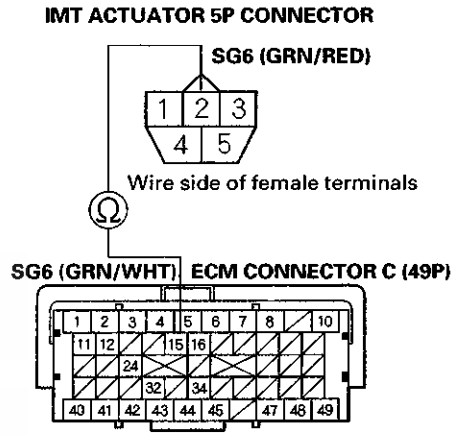
NO—Repair open in the wire between the ECM (B19) and the IMT actuator, then go to step 30.

17. Turn the ignition switch to LOCK (0).

18. Jump the SCS line with the HDS.

19. Disconnect ECM connector C (49P).

20. Check for continuity between IMT actuator 5P connector terminal No. 2 and ECM connector terminal C15.



Is there continuity?

YES—Go to step 21.

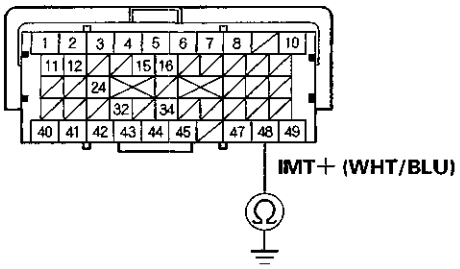
NO—Repair open in the wire between the ECM (C15) and the IMT actuator, then go to step 30.

(cont'd)

DTC Troubleshooting (cont'd)

21. Check for continuity between ECM connector terminal C48 and body ground.

ECM CONNECTOR C (49P)



Terminal side of female terminals

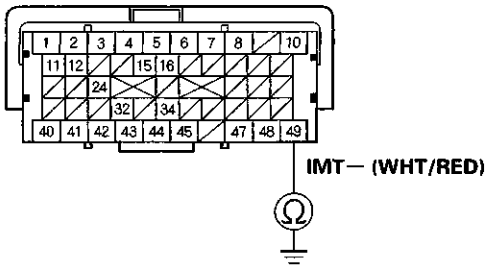
Is there continuity?

YES—Repair short in the wire between the ECM (C48) and the IMT actuator, then go to step 30.

NO—Go to step 22.

22. Check for continuity between ECM connector terminal C49 and body ground.

ECM CONNECTOR C (49P)



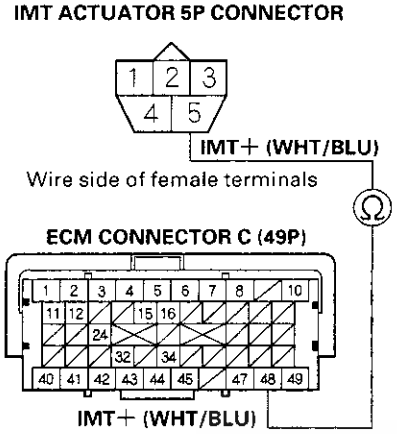
Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM (C49) and the IMT actuator, then go to step 30.

NO—Go to step 23.

23. Check for continuity between IMT actuator 5P connector terminal No. 5 and ECM connector terminal C48.

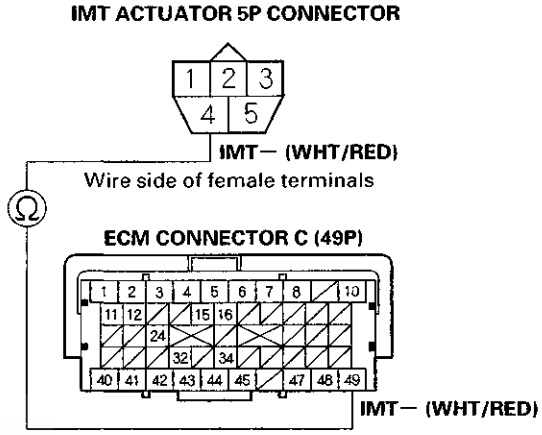


Is there continuity?

YES—Go to step 24.

NO—Repair open in the wire between the ECM (C48) and the IMT actuator, then go to step 30.

24. Check for continuity between IMT actuator 5P connector terminal No. 4 and ECM connector terminal C49.



Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between the ECM (C49) and the IMT actuator, then go to step 30.

25. Remove the IMT actuator (see page 11-440).

26. Move the IMT valve by hand.

Does it move smoothly?

YES—Go to step 27.

NO—Remove the engine cover (see step 2 on page 9-4), and repair the stuck valve. If necessary, replace the intake manifold (see page 9-4), then go to step 30.

(cont'd)

DTC Troubleshooting (cont'd)

27. Substitute a known-good IMT actuator (see page 11-440).

28. Turn the ignition switch to ON (II).

29. Do the IMT TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Replace the original IMT actuator (see page 11-440), then go to step 30.

    NO—Go to step 36.

30. Reconnect all connectors.

31. Turn the ignition switch to ON (II).

32. Reset the ECM with the HDS.

33. Do the ECM idle learn procedure (see page 11-385).

34. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1077 indicated?

    YES—Check for poor connections or loose terminals at the IMT actuator and the ECM, then go to step 1.

    NO—Go to step 35.

35. Monitor the OBD STATUS for DTC P1077 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 34, go to the indicated DTC's troubleshooting.

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the IMT actuator and the ECM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

36. Reconnect all connectors.

37. Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7).

38. Start the engine, and let it idle without load (in neutral) until the radiator fan comes on.

39. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1077 indicated?

    YES—Check for poor connections or loose terminals at the IMT actuator and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then go to step 38. If the ECM was substituted, go to step 1.

    NO—Go to step 40.

40. Monitor the OBD STATUS for DTC P1077 in the DTC's MENU with the HDS.

    Does the screen indicates PASSED?

    YES—If the ECM was updated, troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 39, go to the indicated DTC's troubleshooting.

    NO—If the screen indicated FAILED, check for poor connections or loose terminals at the IMT actuator and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then go to step 38. If the ECM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P1078: IMT Valve Stuck in Low RPM Position

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Do the IMT TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

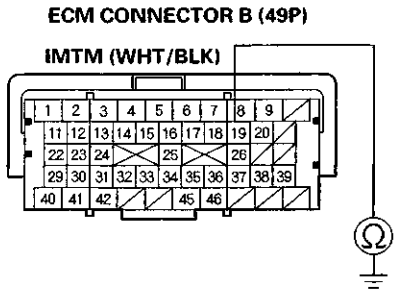
   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the IMT actuator and the ECM. ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect the IMT actuator 5P connector.
6. Turn the ignition switch to ON (II).
7. Check the IMT VALVE SW in the DATA LIST with the HDS.

   Is CLOSE indicated?

   YES—Go to step 12.

   NO—Go to step 8.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect ECM connector B (49P).
11. Check for continuity between ECM connector terminal B19 and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM (B19) and the IMT actuator, then go to step 24.

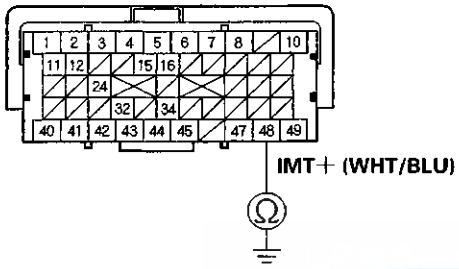
NO—Go to step 32.

(cont'd)

DTC Troubleshooting (cont'd)

12. Turn the ignition switch to LOCK (0).
13. Jump the SCS line with the HDS.
14. Disconnect ECM connector C (49P).
15. Check for continuity between ECM connector terminal C48 and body ground.

ECM CONNECTOR C (49P)



Terminal side of female terminals

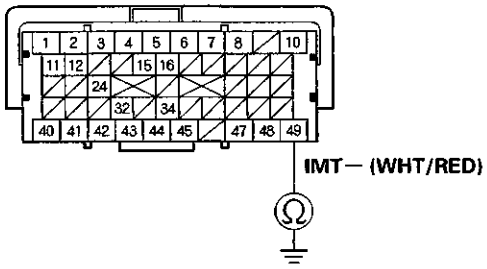
Is there continuity?

YES—Repair short in the wire between the ECM (C48) and the IMT actuator, then go to step 24.

NO—Go to step 16.

16. Check for continuity between ECM connector terminal C49 and body ground.

ECM CONNECTOR C (49P)



Terminal side of female terminals

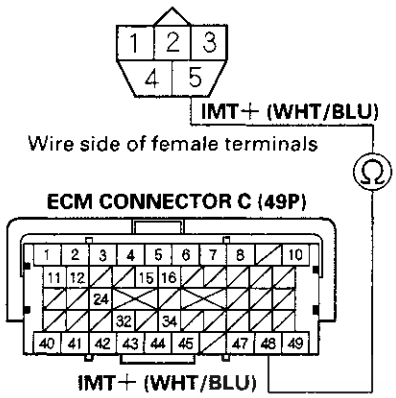
Is there continuity?

YES—Repair short in the wire between the ECM (C49) and the IMT actuator, then go to step 24.

NO—Go to step 17.

17. Check for continuity between IMT actuator 5P connector terminal No. 5 and ECM connector terminal C48.

IMT ACTUATOR 5P CONNECTOR



Terminal side of female terminals

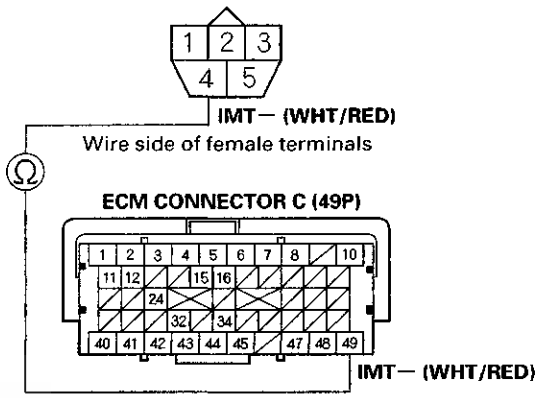
Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the ECM (C48) and the IMT actuator, then go to step 24.

18. Check for continuity between IMT actuator 5P connector terminal No. 4 and ECM connector terminal C49.

IMT ACTUATOR 5P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 19.

NO—Repair open in the wire between the ECM (C49) and the IMT actuator, then go to step 24.

19. Remove the IMT actuator (see page 11-440).

20. Move the IMT valve by hand.

Does it move smoothly?

YES—Go to step 21.

NO—Remove the engine cover (see step 2 on page 9-4), and repair the stuck valve. If necessary, replace the intake manifold (see page 9-4), then go to step 24.

(cont'd)

DTC Troubleshooting (cont'd)

21. Substitute a known-good IMT actuator (see page 11-440).

22. Turn the ignition switch to ON (II).

23. Do the IMT TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Replace the original IMT actuator (see page 11-440), then go to step 24.

    NO—Go to step 32.

24. Reconnect all connectors.

25. Turn the ignition switch to ON (II).

26. Reset the ECM with the HDS.

27. Do the ECM idle learn procedure (see page 11-385).

28. Start the engine, and let it idle without load (in neutral) until the radiator fan comes on.

29. Hold the engine speed at 4,000 rpm for 3 seconds or more, then let it idle.

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1078 indicated?

    YES—Check for poor connections or loose terminals at the IMT actuator and the ECM, then go to step 1.

    NO—Go to step 31.

31. Monitor the OBD STATUS for DTC P1078 in the DTCs MENU with the HDS.

    Does the screen indicates PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting.

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the IMT actuator and the ECM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 28.

32. Reconnect all connectors.

33. Update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7).

34. Start the engine, and let it idle without load (in neutral) until the radiator fan comes on.

35. Hold the engine speed at 4,000 rpm for 3 seconds or more, then let it idle.

36. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1078 indicated?

    YES—Check for poor connections or loose terminals at the IMT actuator and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then go to step 34. If the ECM was substituted, go to step 1.

    NO—Go to step 37.

37. Monitor the OBD STATUS for DTC P1078 in the DTC's MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM was updated, troubleshooting is complete. If the ECM was substituted, replace the original ECM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 36, go to the indicated DTC's troubleshooting.

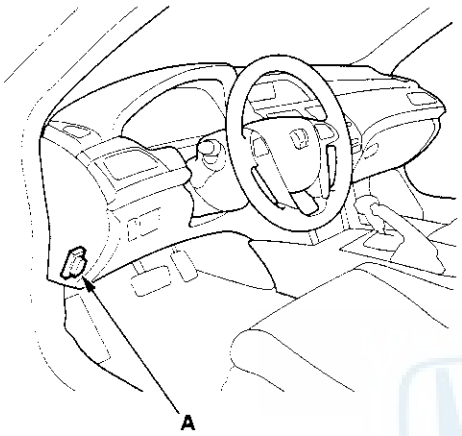
    NO—If the screen indicated FAILED, check for poor connections or loose terminals at the IMT actuator and the ECM. If the ECM was updated, substitute a known-good ECM (see page 11-7), then go to step 34. If the ECM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 34.

Throttle Body Test

Carbon Accumulation Check

NOTE: If the malfunction indicator lamp (MIL) has been reported on, check for diagnostic trouble codes (DTCs).

1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.

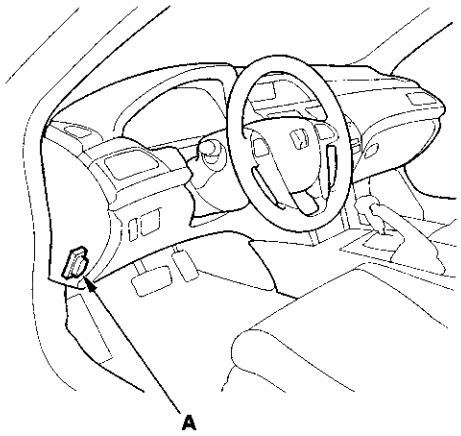


2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the ECM/PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).
4. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
5. Check the REL TP SENSOR in the DATA LIST with the HDS. The reading should be below 2.46 deg. If it is not, clean the throttle body (see page 11-436).

Throttle Position Learning Check

NOTE: If the malfunction indicator lamp (MIL) has been reported on, check for diagnostic trouble codes (DTCs).

1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the ECM/PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).
4. Select the INSPECTION MENU with the HDS.
5. Do the TP LEARNING CHECK in the ETCS TEST. If needed, clean the throttle body (see page 11-436).

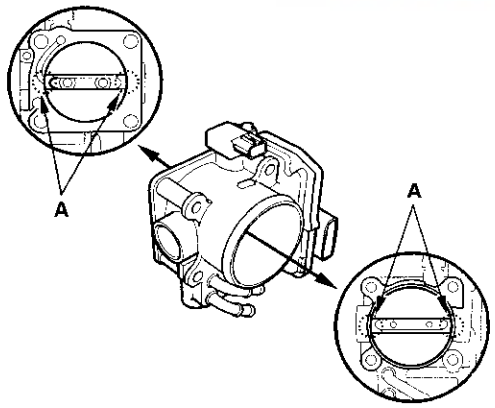
Throttle Body Cleaning

⚠CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

1. Check for damage to the air cleaner element. If the air cleaner element is damaged, replace it (see page 11-437).
2. Remove the throttle body (see page 11-441).
3. Clean off the carbon from the throttle valve and inside the throttle body with a paper towel soaked in throttle plate and induction cleaner.

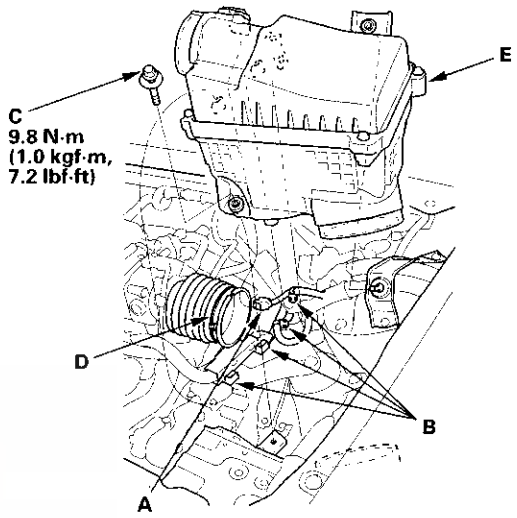
   NOTE:
   - Remove the throttle body to clean it.
   - Be careful not to pinch your fingers.
   - To avoid removing the molybdenum coating, do not clean the bearing area of the throttle shaft (A).
   - Do not spray throttle plate and induction cleaner directly on the throttle body.
   - Use Honda genuine throttle plate and induction cleaner.



4. Install the throttle body (see page 11-441).
5. Reset the ECM/PCM with the HDS (see page 11-4).
6. Turn the ignition switch to ON (II), and wait 2 seconds.
7. Do the ECM/PCM idle learn procedure (see page 11-385).

Air Cleaner Removal/Installation

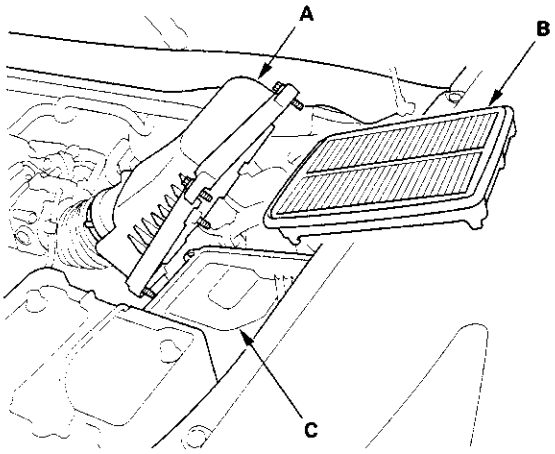
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Disconnect the MAF sensor/IAT sensor 5P connector (A).



3. Remove the harness clamps (B) and the bolt (C).
4. Loosen the band (D), then remove the air cleaner housing (E).
5. Install the parts in the reverse order of removal.
6. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Air Cleaner Element Inspection/Replacement

1. Open the air cleaner housing cover (A).



2. Remove the air cleaner element (B) from the air cleaner housing (C).

3. Check the air cleaner element for damage or clogging. If it is damaged or clogged, replace it.

   NOTE: Do not use compressed air to clean the air cleaner element.

4. Clean and remove any debris from inside the air cleaner housing.

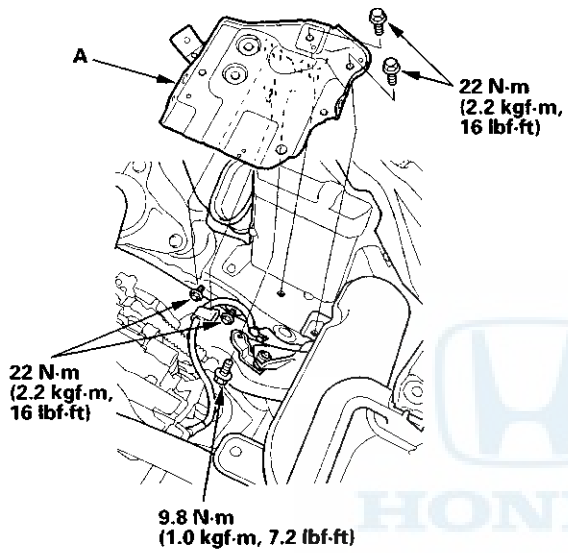
5. Install the parts in the reverse order of removal.

   - If you did not replace the air cleaner element, this procedure is complete.
   - If the maintenance minder required air cleaner element replacement, reset the maintenance minder (see page 3-7).
   - If you replace the air cleaner element, reset the ECM/PCM with the HDS, and do the ECM/PCM idle learn procedure (see page 11-385).

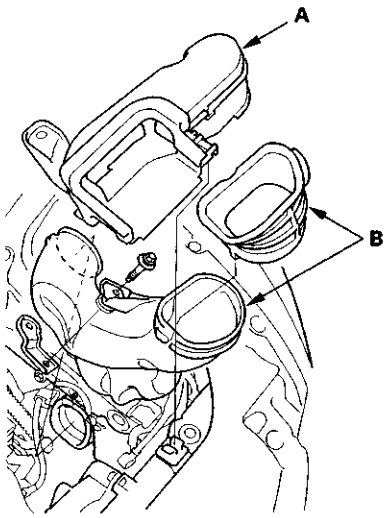
Intake Air Resonator Removal/Installation

J35Z2 engine

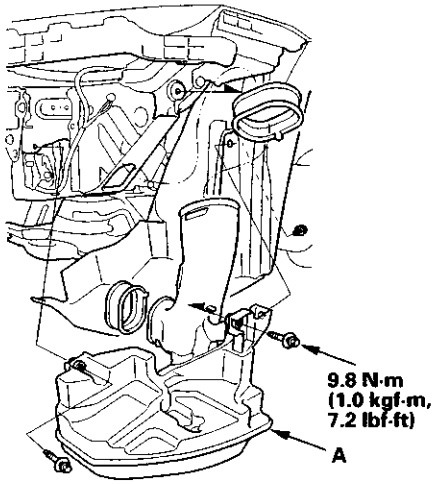
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the air cleaner (see page 11-436).
3. Remove the battery base (A).



4. Remove the splash separator (A) and intake air ducts (B).



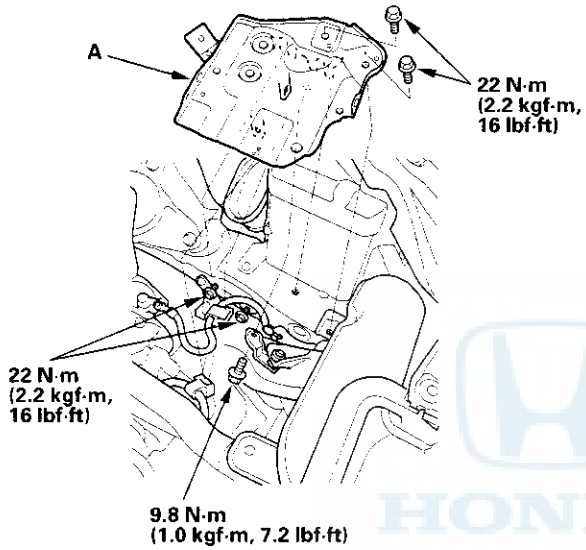
5. Remove the front bumper (see page 20-22).
6. Remove the intake air resonator (A).



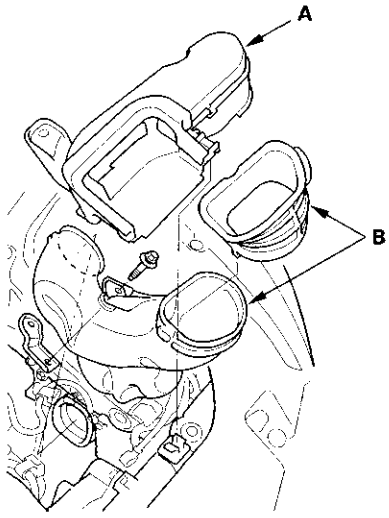
7. Install the parts in the reverse order of removal.
8. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

J35Z3 engine

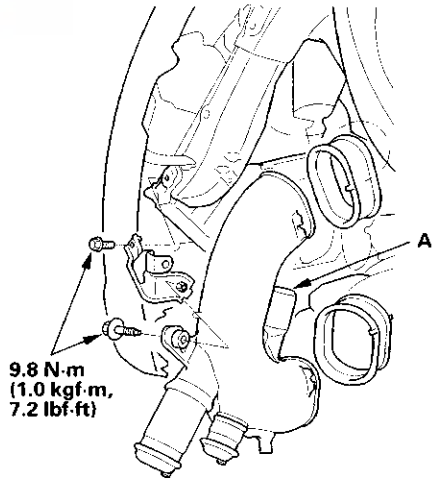
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the air cleaner (see page 11-436).
3. Remove the battery base (A).



4. Remove the splash separator (A) and intake air ducts (B).



5. Remove the left front inner fender, refer to the 2008-2009 Accord Service Manual (see page 20-273).
6. Remove the intake air resonator (A).

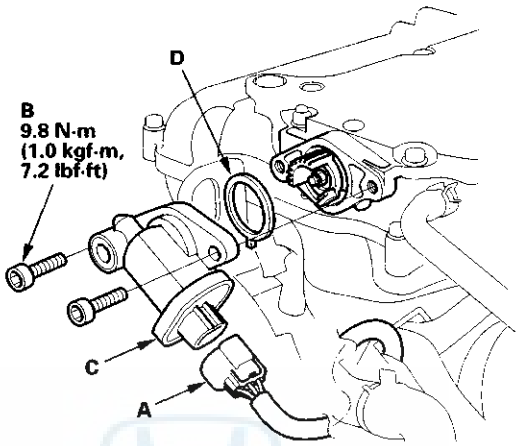


7. Install the parts in the reverse order of removal.
8. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

IMT Actuator Replacement

J35Z3 engine

1. Remove the engine cover (see step 2 on page 9-4).
2. Disconnect the IMT actuator 5P connector (A).



3. Remove the bolts (B) and the IMT actuator (C).
4. Install the parts in the reverse order of removal with a new O-ring (D).

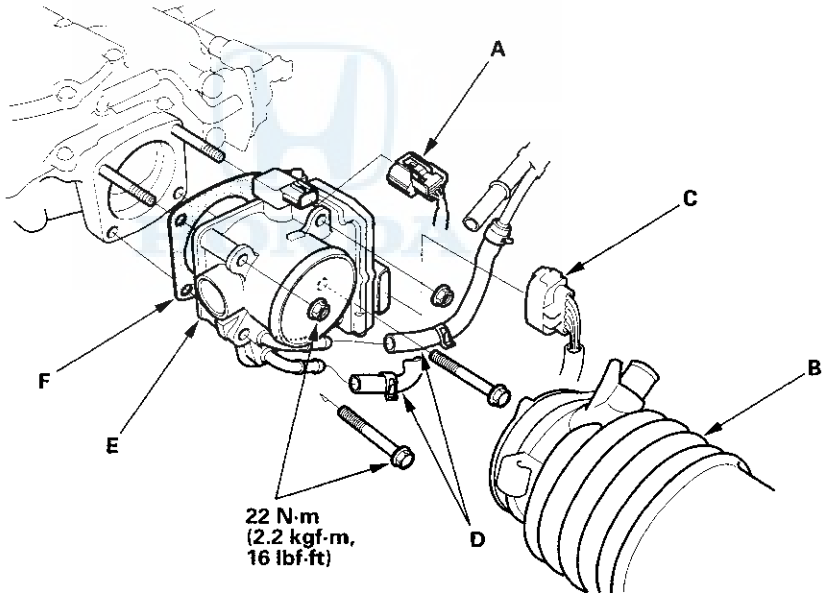
Throttle Body Removal/Installation

⚠CAUTION

Do not insert your fingers into the installed throttle body when you turn the ignition switch to ON (II) or while the ignition switch is ON (II). If you do, you will seriously injure your fingers if the throttle valve is activated.

NOTE: If you are replacing the throttle body, begin at step 1. If you are removing the throttle body temporarily, begin at step 4.

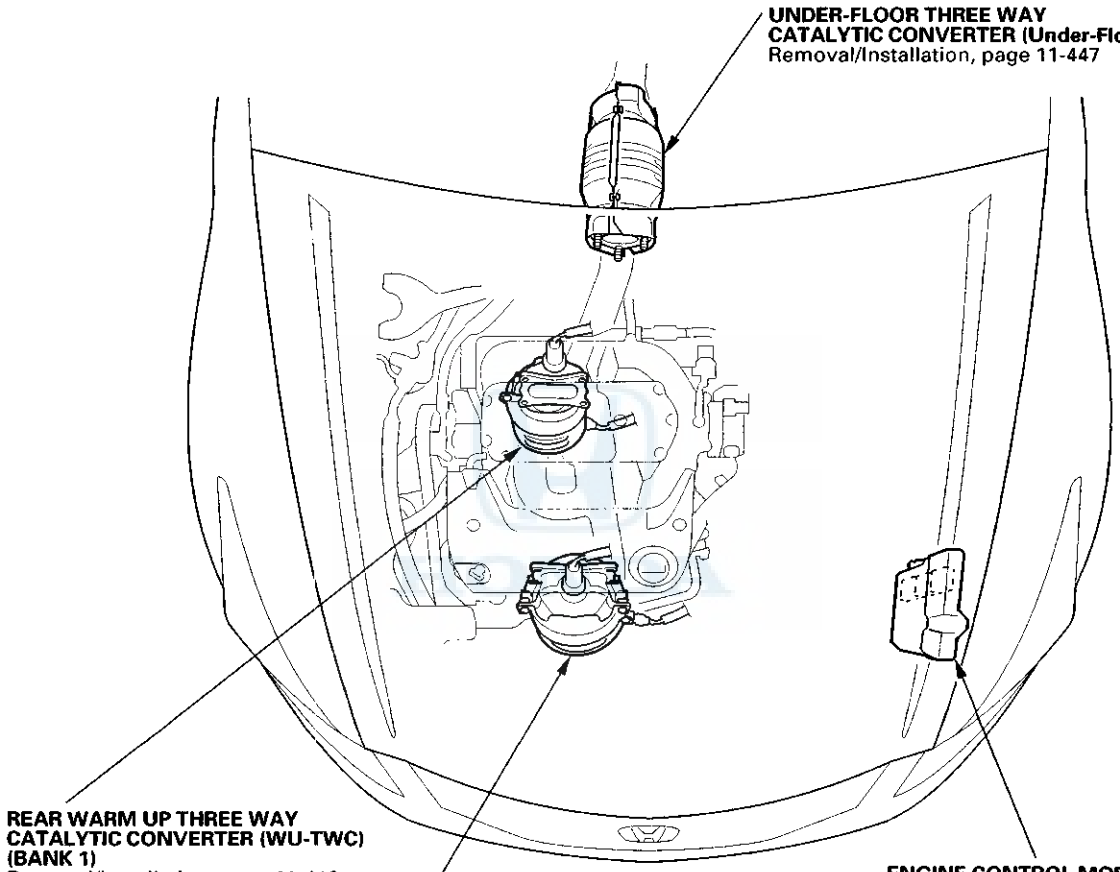
1. Connect the HDS while the engine is stopped.
2. Select the INSPECTION MENU with the HDS.
3. Do the TP LEARNING CHECK in the ETCS TEST.
4. Turn the ignition switch to LOCK (0).
5. Disconnect the MAP sensor connector (A).



6. Remove the intake air duct (B).
7. Disconnect the throttle body connector (C).
8. Disconnect and plug the water bypass hoses (D).
9. Remove the throttle body (E).
10. Install the parts in the reverse order of removal with a new gasket (F), then do this:
    - Refill the radiator with engine coolant (see page 10-6).
    - Do the ECM/PCM idle learn procedure (see page 11-385).

Catalytic Converter System

Component Location Index



DTC Troubleshooting

DTC P0420: Rear Bank Catalyst System Efficiency Below Threshold (Bank 1)

DTC P0430: Front Bank Catalyst System Efficiency Below Threshold (Bank 2)

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If some of the DTCs listed below are stored at the same time as DTC P0420 and/or P0430*, troubleshoot those DTCs first, then recheck for DTC P0420 and/or P0430*.
  P0137, P0138, P0157, P0158: Secondary HO2S (Sensor 2)
  P0141, P0161: Secondary HO2S (Sensor 2) heater
- Poor quality fuel can cause these DTCs.
- Information marked with an asterisk (*) applies to the front bank (Bank 2).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:
   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 4th
   - Vehicle speed between 45—75 mph (72—120 km/h) for 5 minutes or more with cruise control set
   - Vehicle speed between 55—75 mph (88—120 km/h) for 10 seconds, then decelerate (with throttle fully closed). Repeat this 3 times or more
   - Maintain the vehicle speed at 55 mph (88 km/h) for 5 minutes or more with cruise control set
5. Monitor the OBD STATUS for DTC P0420 and/or P0430* in the DTCs MENU with the HDS.

   Does the screen indicate EXECUTING?

   YES—Go to step 6.

   NO—If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 4 and recheck. If the screen indicates PASSED, intermittent failure, the system is OK at this time. If the screen indicates FAILED, go to step 8 and recheck.
6. Continue test driving until a result comes on.
7. Monitor the OBD STATUS for DTC P0420 and/or P0430* in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 8.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 4 and recheck.
8. Turn the ignition switch to LOCK (0).
9. Replace the WU-TWC:
   - For DTC P0420, replace the rear WU-TWC (Bank 1) (see page 11-446).
   - For DTC P0430, replace the front WU-TWC (Bank 2) (see page 11-447).
10. Turn the ignition switch to ON (II).
11. Reset the ECM/PCM with the HDS.
12. Do the ECM/PCM idle learn procedure (see page 11-385).

(cont'd)

DTC Troubleshooting (cont'd)

13. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

14. Test-drive for about 10 minutes, continually changing the vehicle speed.

15. Check the CATA MONITOR CONDITION B1 (B2)* in the DATA LIST with the HDS.

    Is the condition OK?

    YES—Go to step 16.

    NO—Go to step 13 and recheck.

16. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Vehicle speed between 55—75 mph (88—120 km/h) for 10 seconds, then decelerate (with throttle fully closed). Repeat this 3 times or more
    - Maintain the vehicle speed at 55 mph (88 km/h) for 5 minutes or more with cruise control set

17. Continue test driving until a result comes on.

18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0420 and/or P0430 indicated?*

    YES—Check the fuel quality, then go to step 1.

    NO—Go to step 19.

19. Monitor the OBD STATUS for DTC P0420 and/or P0430* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

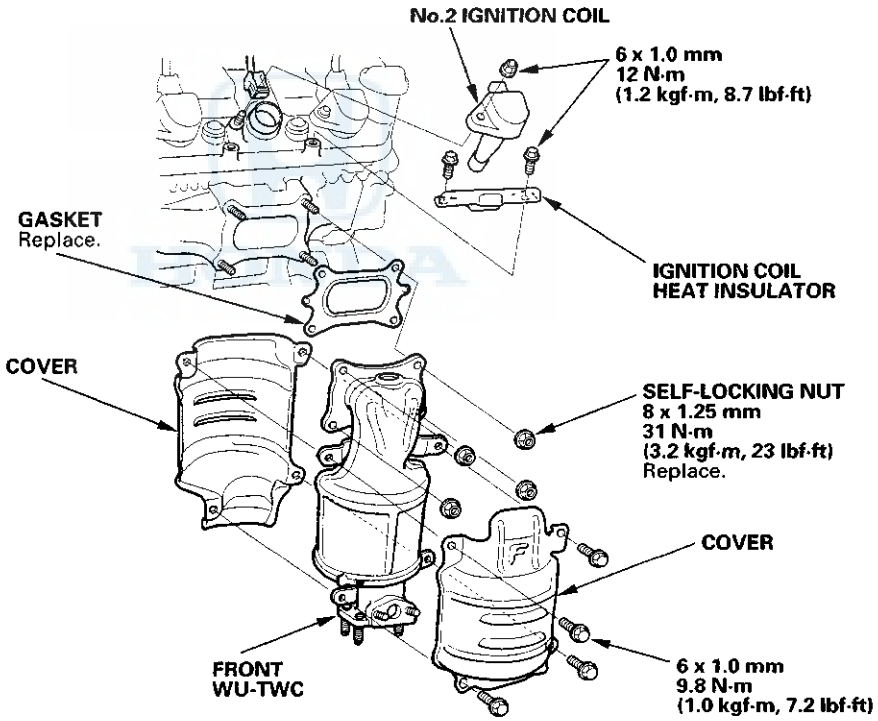
    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check the fuel quality, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 16.

Warm Up TWC Removal/Installation

FRONT

1. Remove the engine cover.
2. Remove the No. 2 the ignition coil and the ignition coil heat insulator.
3. Remove the front A/F sensor (Sensor 1) (see page 11-275) and the front secondary HO2S (Sensor 2) (see page 11-276).
4. Remove the exhaust pipe A mounting nuts (front WU-TWC side) (see page 9-10).
5. Remove the EGR pipe (see page 11-462).
6. Remove the A/C condenser fan assembly (see page 10-12) and the radiator upper bracket/cushion (see page 10-12).
7. Carefully remove the front WU-TWC.



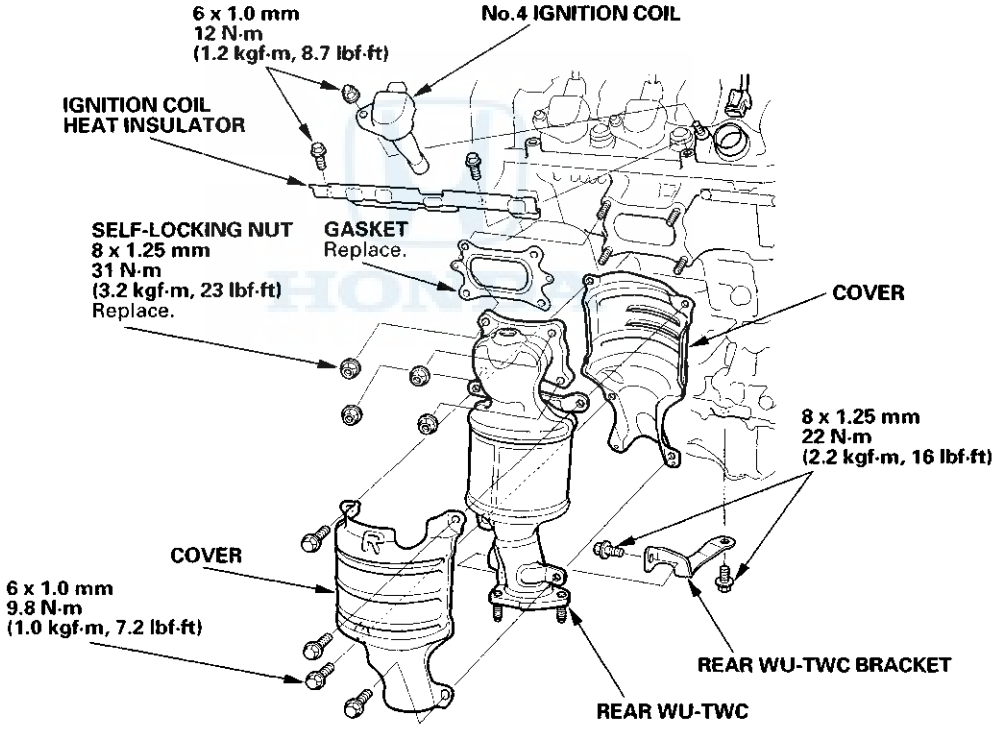
8. Carefully install the front WU-TWC with a new gasket and new self-locking nuts. Tighten the nuts in a crisscross pattern in two or three steps.
9. Install the parts in the reverse order of removal.

(cont'd)

Warm Up TWC Removal/Installation (cont'd)

REAR

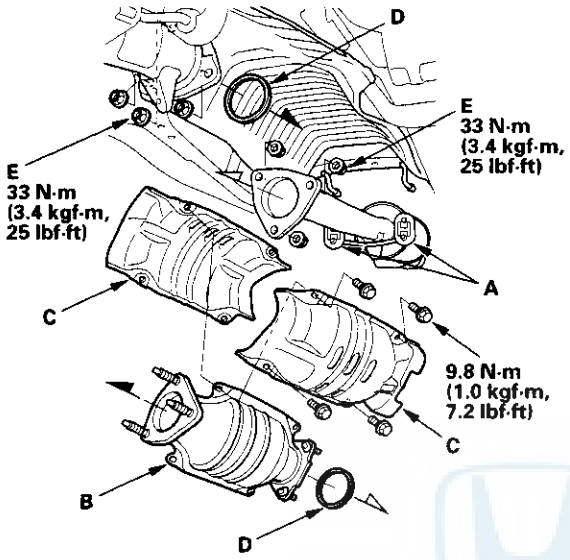
1. Remove the strut brace.
2. Remove the P/S feed hose clamp (see page 17-19).
3. Remove the cowl cover, refer to the 2008-2009 Accord Service Manual (see page 20-261).
4. Remove the No. 4 ignition coil and the ignition coil heat insulator.
5. Remove the rear A/F sensor (Sensor 1) (see page 11-275) and the rear secondary HO2S (Sensor 2) (see page 11-276).
6. Remove the exhaust pipe A mounting nuts (rear WU-TWC side) (see page 9-10).
7. Carefully remove the rear WU-TWC.



8. Carefully install the rear WU-TWC with a new gasket and new self-locking nuts. Tighten the nuts in a crisscross pattern in two or three steps.
9. Install the parts in the reverse order of removal.

Under-floor TWC Removal/Installation

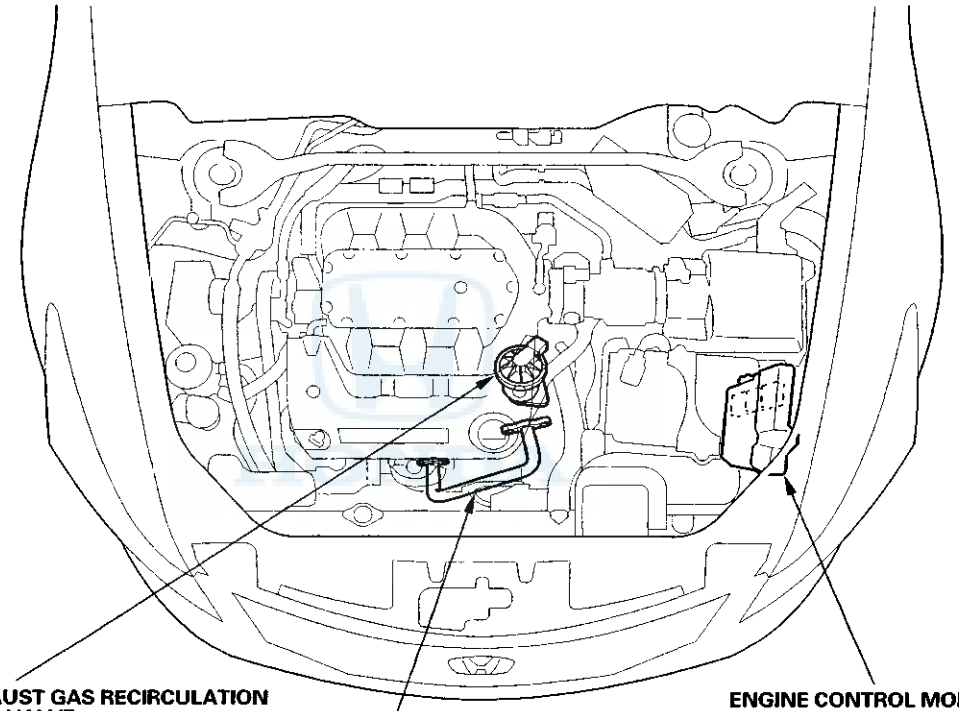
1. Raise the vehicle on a lift
2. Remove the exhaust pipe hangers (A).



3. Remove the under-floor TWC (B).
4. Remove the converter cover (C).
5. Install the parts in the reverse order of removal with new gaskets (D) and new self-locking nuts (E).

EGR System

Component Location Index



EXHAUST GAS RECIRCULATION (EGR) VALVE
Replacement, page 11-461

EXHAUST GAS RECIRCULATION (EGR) PIPE
Removal and Installation, page 11-462

ENGINE CONTROL MODULE (ECM)/ POWERTRAIN CONTROL MODULE (PCM)
Update, page 11-281
Substitution, page 11-7
Replacement, page 11-282

DTC Troubleshooting

DTC P0400: EGR System Leak Detected

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Check for a loose or damaged EGR pipe.

   Is the EGR pipe OK?

   YES—Go to step 2.

   NO—Reconnect or replace the EGR pipe, then go to step 7.

2. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

3. Test-drive under these conditions:

   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 4th
   - Vehicle speed at 25 mph (40 km/h) for 5 minutes or more
   - Maintain the vehicle speed at 32 mph (50 km/h) for 5 minutes or more with cruise control set

4. Monitor the OBD STATUS for DTC P0400 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 5.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for exhaust gas leakage between EGR pipe and EGR valve. If the screen indicates NOT COMPLETED, go to step 3 and recheck.

5. Turn the ignition switch to LOCK (0).

6. Replace the EGR valve (see page 11-461).

7. Turn the ignition switch to ON (II).

8. Reset the ECM/PCM with the HDS.

9. Do the ECM/PCM idle learn procedure (see page 11-385).

10. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Vehicle speed at 25 mph (40 km/h) for 5 minutes or more
    - Maintain the vehicle speed at 32 mph (50 km/h) for 5 minutes or more with cruise control set

11. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0400 indicated?

    YES—Check for leakage between EGR pipe and EGR valve exhaust gas, then go to step 1.

    NO—Go to step 12.

12. Monitor the OBD STATUS for DTC P0400 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 11, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for exhaust gas leakage between EGR pipe and EGR valve, then go to step 1. If the screen indicates NOT COMPLETED, go to step 10.

DTC Troubleshooting (cont'd)

DTC P0401: EGR Insufficient Flow

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Do the EGR TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Go to step 5.

   NO—Go to step 7.
5. Test-drive under these conditions:

   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 4th
   - Drive at a steady speed between 55—75 mph (88—120 km/h) for at least 10 seconds
   - During the drive, decelerate (with the throttle fully closed) for 5 seconds
6. Monitor the OBD STATUS for DTC P0401 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Clean the intake manifold EGR port and EGR pipe (see page 11-462) with throttle plate and induction cleaner. Also, clean the passage inside the EGR valve with throttle plate and induction cleaner, then go to step 9.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 5 and recheck.
7. Turn the ignition switch to LOCK (0).
8. Replace the EGR valve (see page 11-461).
9. Turn the ignition switch to ON (II).
10. Reset the ECM/PCM with the HDS.
11. Do the ECM/PCM idle learn procedure (see page 11-385).
12. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Drive at a steady speed between 55—75 mph (88—120 km/h) for at least 10 seconds
    - During the drive, decelerate (with the throttle fully closed) for 5 seconds
13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0401 indicated?

    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the connections are OK, go to step 15.

    NO—Go to step 14.
14. Monitor the OBD STATUS for DTC P0401 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the EGR valve and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 12.

15. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

16. Test-drive under these conditions:

    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Drive at a steady speed between 55—75 mph (88—120 km/h) for at least 10 seconds
    - During the drive, decelerate (with the throttle fully closed) for 5 seconds

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0401 indicated?

    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 16. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 18.

18. Monitor the OBD STATUS for DTC P0401 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 17, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 16. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION or NOT COMPLETED, go to step 16.

DTC P0404: EGR Circuit Range/Performance Problem

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

4. Do the EGR TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Intermittent failure, the system is OK at this time. Clean any carbon build-up on the EGR valve with throttle plate and induction cleaner.■

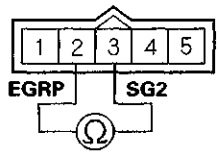
    NO—Go to step 5.

5. Turn the ignition switch to LOCK (0).

6. Disconnect the EGR valve 5P connector.

7. At the EGR valve side, measure the resistance between EGR valve 5P connector terminals No. 2 and No. 3.

EGR VALVE 5P CONNECTOR



Terminal side of male terminals

Is there 100 kΩ or more?

YES—Go to step 25.

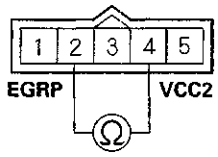
NO—Go to step 8.

(cont'd)

DTC Troubleshooting (cont'd)

8. At the EGR valve side, measure the resistance between EGR valve 5P connector terminals No. 2 and No. 4.

EGR VALVE 5P CONNECTOR



Terminal side of male terminals

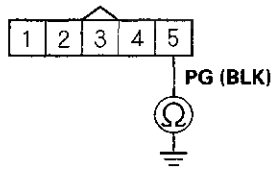
Is there 100 kΩ or more?

YES—Go to step 25.

NO—Go to step 9.

9. Check for continuity between EGR valve 5P connector terminal No. 5 and body ground.

EGR VALVE 5P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 10.

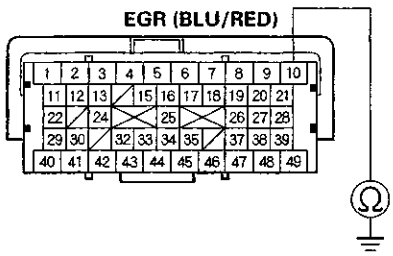
NO—Repair open in the wire between the EGR valve and G101, then go to step 26.

10. Jump the SCS line with the HDS.

11. Disconnect ECM/PCM connector C (49P).

12. Check for continuity between ECM/PCM connector terminal C10 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

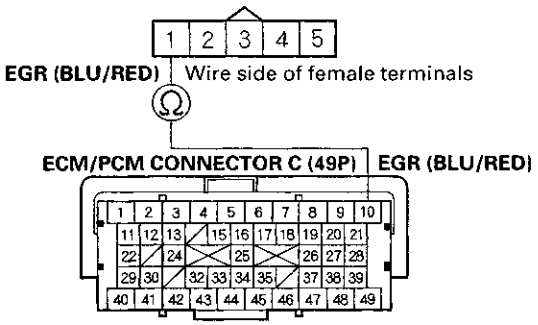
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C10) and the EGR valve, then go to step 26.

NO—Go to step 13.

13. Check for continuity between ECM/PCM connector terminal C10 and EGR valve 5P connector terminal No. 1.

EGR VALVE 5P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 14.

NO—Repair open in the wire between the ECM/PCM (C10) and the EGR valve, then go to step 26.

14. Remove the EGR valve (see page 11-461).

15. Clean any carbon build-up on the EGR valve with throttle plate and induction cleaner.

16. Install the EGR valve (see page 11-461).

17. Reconnect the EGR valve 5P connector.

18. Reconnect ECM/PCM connector C (49P).

19. Turn the ignition switch to ON (II).

20. Reset the ECM/PCM with the HDS.

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

23. Do the EGR TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Go to step 32.

    NO—Go to step 24.

24. Turn the ignition switch to LOCK (0).

25. Replace the EGR valve (see page 11-461).

26. Reconnect all connectors.

27. Turn the ignition switch to ON (II).

28. Reset the ECM/PCM with the HDS.

29. Do the ECM/PCM idle learn procedure (see page 11-385).

30. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

31. Do the EGR TEST in the INSPECTION MENU with the HDS.

32. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0404 indicated?

    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM, then go to step 1. If the connections and terminals are OK, go to step 33.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

33. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

34. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

35. Do the EGR TEST in the INSPECTION MENU with the HDS.

36. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0404 indicated?

    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC Troubleshooting (cont'd)

DTC P0406: EGR Valve Position Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

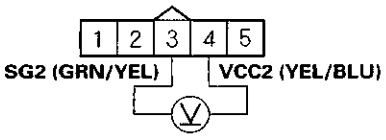
1. Turn the ignition switch to ON (II).
2. Check the EGR VLS in the DATA LIST with the HDS.

   Is 4.88 V or more indicated?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. ■
3. Turn the ignition switch to LOCK (0).
4. Disconnect the EGR valve 5P connector.
5. Turn the ignition switch to ON (II).
6. Measure the voltage between EGR valve 5P connector terminals No. 3 and No. 4.

EGR VALVE 5P CONNECTOR



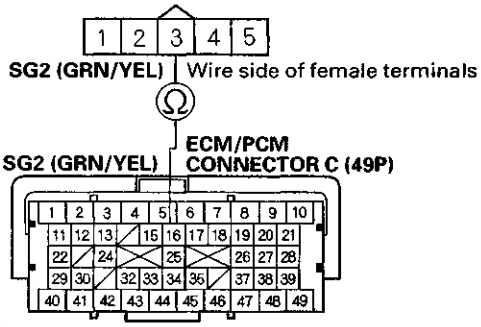
Wire side of female terminals

   Is there about 5 V?

   YES—Go to step 11.

   NO—Go to step 7.
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect ECM/PCM connector C (49P).
10. Check for continuity between ECM/PCM connector terminal C16 and EGR valve 5P connector terminal No. 3.

EGR VALVE 5P CONNECTOR



Terminal side of female terminals

   Is there continuity?

   YES—Go to step 18.

   NO—Repair open in the wire between the EGR valve and the ECM/PCM (C16), then go to step 13.
11. Turn the ignition switch to LOCK (0).
12. Replace the EGR valve (see page 11-461).
13. Reconnect all connectors.
14. Turn the ignition switch to ON (II).
15. Reset the ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see page 11-385).

17. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0406 indicated?

    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

18. Reconnect all connectors.

19. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0406 indicated?

    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

DTC P2413: EGR System Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

4. Do the EGR TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. ■

    NO—Go to step 5.

5. Turn the ignition switch to LOCK (0).

6. Turn the ignition switch to ON (II).

7. Check the EGR VLS in the DATA LIST with the HDS.

    Is about 0 V indicated?

    YES—Go to step 8.

    NO—Go to step 21.

8. Turn the ignition switch to LOCK (0).

9. Disconnect the EGR valve 5P connector.

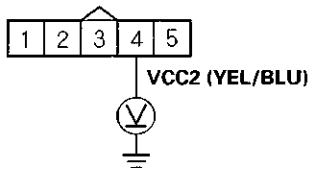
10. Turn the ignition switch to ON (II).

(cont'd)

DTC Troubleshooting (cont'd)

11. Measure the voltage between EGR valve 5P connector terminal No. 4 and body ground.

EGR VALVE 5P CONNECTOR



Wire side of female terminals

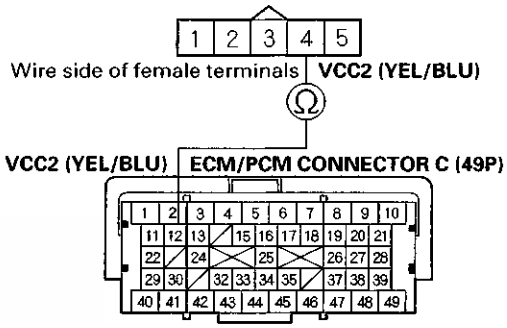
Is there about 5 V?

YES—Go to step 16.

NO—Go to step 12.

12. Turn the ignition switch to LOCK (0).
13. Jump the SCS line with the HDS.
14. Disconnect ECM/PCM connector C (49P).
15. Check for continuity between ECM/PCM connector terminal C12 and EGR valve 5P connector terminal No. 4.

EGR VALVE 5P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 50.

NO—Repair open in the wire between the EGR valve and the ECM/PCM (C12), then go to step 42.

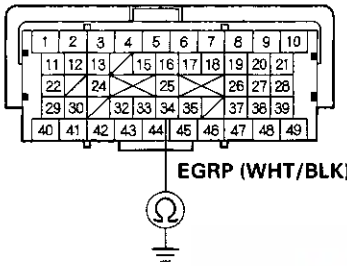
16. Turn the ignition switch to LOCK (0).

17. Jump the SCS line with the HDS.

18. Disconnect ECM/PCM connector C (49P).

19. Check for continuity between ECM/PCM connector terminal C34 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

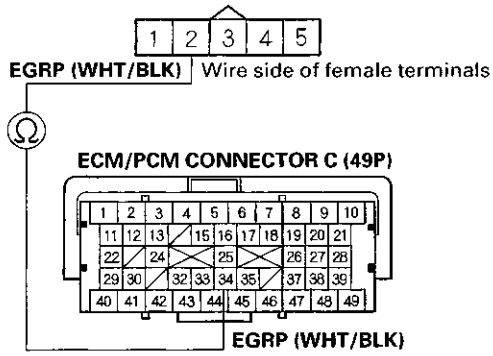
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C34) and the EGR valve, then go to step 42.

NO—Go to step 20.

20. Check for continuity between ECM/PCM connector terminal C34 and EGR valve 5P connector terminal No. 2.

EGR VALVE 5P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES—Go to step 21.

NO—Repair open in the wire between the ECM/PCM (C34) and the EGR valve, then go to step 42.

21. Turn the ignition switch to LOCK (0).

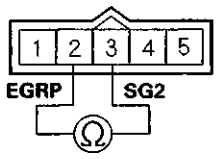
22. Disconnect the EGR valve 5P connector.

(cont'd)

DTC Troubleshooting (cont'd)

23. At the EGR valve side, measure the resistance between EGR valve 5P connector terminals No. 2 and No. 3.

EGR VALVE 5P CONNECTOR



Terminal side of male terminals

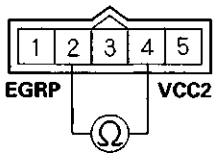
Is there 100 kΩ or more?

YES—Go to step 41.

NO—Go to step 24.

24. At the EGR valve side, measure the resistance between EGR valve 5P connector terminals No. 2 and No. 4.

EGR VALVE 5P CONNECTOR



Terminal side of male terminals

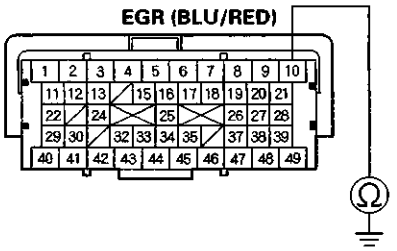
Is there 100 kΩ or more?

YES—Go to step 41.

NO—Go to step 25.

25. Check for continuity between ECM/PCM connector terminal C10 and body ground.

ECM/PCM CONNECTOR C (49P)



Terminal side of female terminals

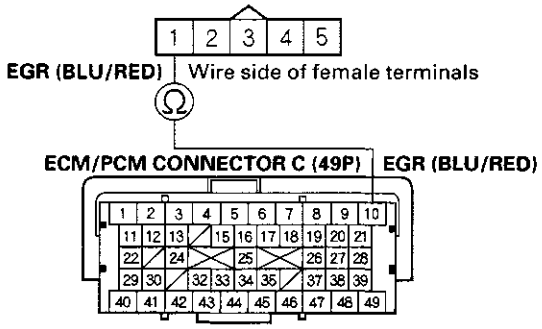
Is there continuity?

YES—Repair short in the wire between the ECM/PCM (C10) and the EGR valve, then go to step 42.

NO—Go to step 26.

26. Check for continuity between ECM/PCM connector terminal C10 and EGR valve 5P connector terminal No. 1.

EGR VALVE 5P CONNECTOR



Terminal side of female terminals

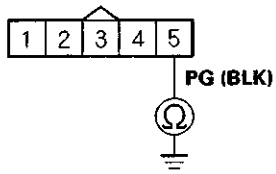
Is there continuity?

YES—Go to step 27.

NO—Repair open in the wire between the ECM/PCM (C10) and the EGR valve, then go to step 42.

27. Check for continuity between EGR valve 5P connector terminal No. 5 and body ground.

EGR VALVE 5P CONNECTOR



Wire side of female terminals

Is there continuity?

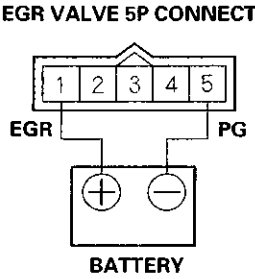
YES—Go to step 28.

NO—Repair open in the wire between the EGR valve and G101, then go to step 42.

(cont'd)

DTC Troubleshooting (cont'd)

28. Reconnect ECM/PCM connector C (49P).
29. At the EGR valve side, connect the battery positive terminal to EGR valve 5P connector terminal No. 1 with a jumper wire.



Terminal side of male terminals

30. Start the engine, and let it idle, then connect the battery negative terminal to EGR valve 5P connector terminal No. 5 with a jumper wire.

    Does the engine stall?

    YES—Go to step 48.

    NO—Go to step 31.

31. Turn the ignition switch to LOCK (0).
32. Remove the EGR valve (see page 11-461).
33. Clean any carbon build-up inside the EGR valve with throttle plate and induction cleaner.
34. Install the EGR valve (see page 11-461).
35. Reconnect all connectors.
36. Turn the ignition switch to ON (II).
37. Reset the ECM/PCM with the HDS.
38. Do the ECM/PCM idle learn procedure (see page 11-385).
39. Do the EGR TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Go to step 47.

    NO—Go to step 40.

40. Turn the ignition switch to LOCK (0).
41. Replace the EGR valve (see page 11-461).
42. Reconnect all connectors.
43. Turn the ignition switch to ON (II).
44. Reset the ECM/PCM with the HDS.
45. Do the ECM/PCM idle learn procedure (see page 11-385).
46. Do the EGR TEST in the INSPECTION MENU with the HDS.

47. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2413 indicated?

    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM, then go to step 1.

    NO—Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

48. Turn the ignition switch to LOCK (0).

49. Reconnect all connectors.

50. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

51. Do the EGR TEST in the INSPECTION MENU with the HDS.

52. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P2413 indicated?

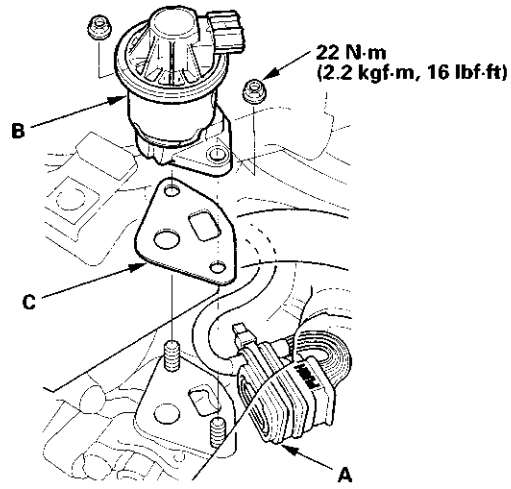
    YES—Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 51. If the ECM/PCM was substituted, go to step 1.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting. ■

EGR Valve Replacement

1. Remove the engine cover (see step 2 on page 9-4).

2. Disconnect the EGR valve 5P connector (A).



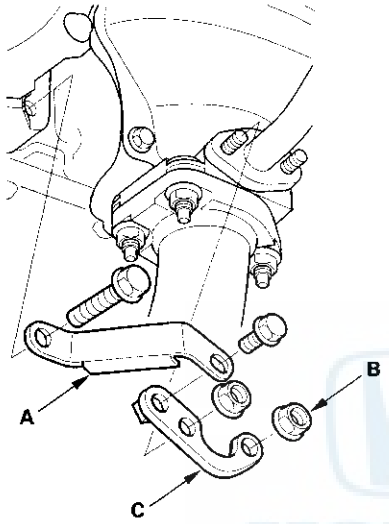
3. Remove the EGR valve (B).

4. Install the parts in the reverse order of removal with a new gasket (C).

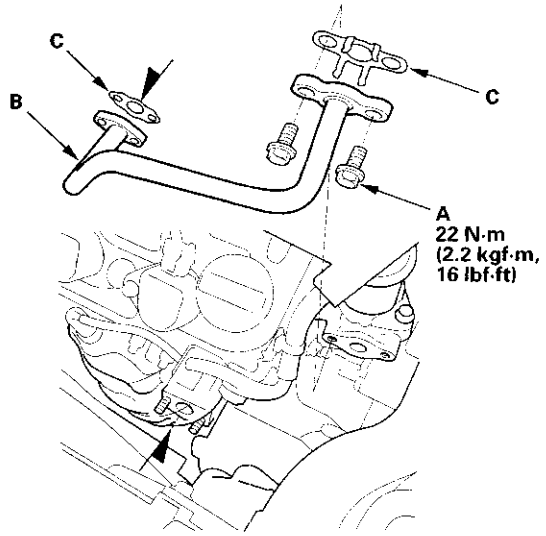
EGR Pipe Removal and Installation

Removal

1. Raise the vehicle on a lift.
2. Remove the splash shield (see step 27 on page 5-5).
3. Remove the front WU-TWC stay (A).



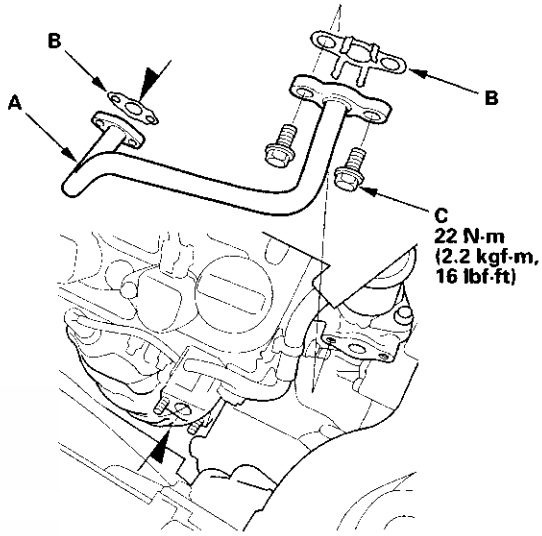
4. Remove the EGR pipe mounting nuts (B) and front WU-TWC stay joint (C).
5. Lower the vehicle.
6. Remove the EGR pipe mounting bolts (A).



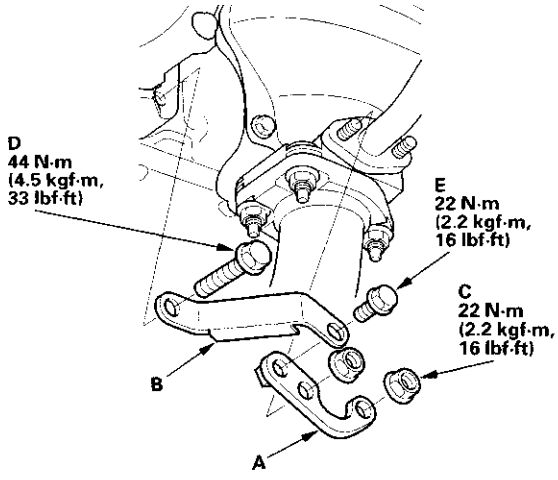
7. Remove the EGR pipe (B) and gaskets (C).

Installation

1. Set the EGR pipe (A) with new gaskets (B), and tighten the EGR pipe mounting bolts (C).



2. Raise the vehicle on a lift.
3. Temporarily install the front WU-TWC stay joint (A) and the front WU-TWC stay (B). Tighten the EGR pipe mounting nuts (C) and the bolts by hand.



4. Tighten the EGR pipe mounting nuts.
5. Tighten the A/C compressor bracket mounting bolt (D), then tighten the bolt (E).
6. Install the splash shield (see step 48 on page 5-22).

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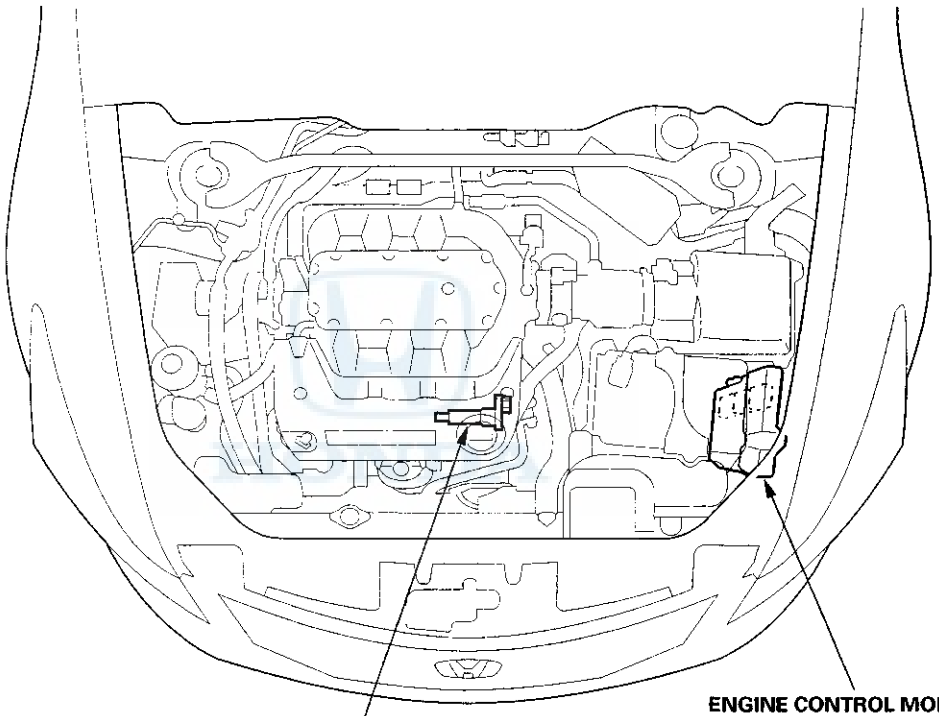


PCV VALVE
Inspection, page 11-465
Replacement, page 11-465

ENGINE CONTROL MODULE (ECM)/ POWERTRAIN CONTROL MODULE (PCM)
Update, page 11-281
Substitution, page 11-7
Replacement, page 11-282

DTC Troubleshooting

DTC P2279: Intake Air System Leak

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P0443 is stored at the same time as DTC P2279, troubleshoot DTC P0443 first, then recheck for DTC P2279.

1. Check for vacuum leaks at these parts:

   - PCV valve
   - PCV hose
   - Purge (PCS) line
   - Throttle body
   - Intake manifold
   - Brake booster hose

   Are the parts OK?

   YES—Go to step 2.

   NO—Repair or replace any damaged parts, then go to step 4.

2. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle 1 minute.

3. Monitor the OBD STATUS for DTC P2279 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Check the camshaft timing; J35Z2 engine (see page 6-10), J35Z3 engine (see page 6-75), then go to step 4.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. If the screen indicates NOT COMPLETED, go to step 2 and recheck.

4. Reset the ECM/PCM with the HDS.

5. Do the ECM/PCM idle learn procedure (see page 11-385).

6. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle 1 minute.

7. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P2279 indicated?

   YES—Check for vacuum leaks at the PCV valve, the PCV hose, the purge (PCS) line, the throttle body, the intake manifold, and the brake booster hose, then go to step 1.

   NO—Go to step 8.

8. Monitor the OBD STATUS for DTC P2279 in the DTCs MENU with the HDS.

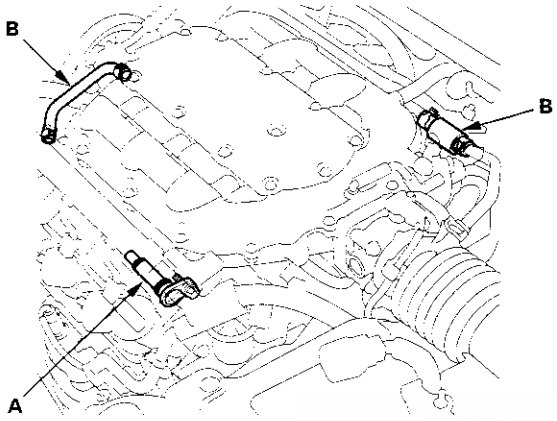
   Does the screen indicate PASSED?

   YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 7, go to the indicated DTC's troubleshooting.■

   NO—If the screen indicates FAILED, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

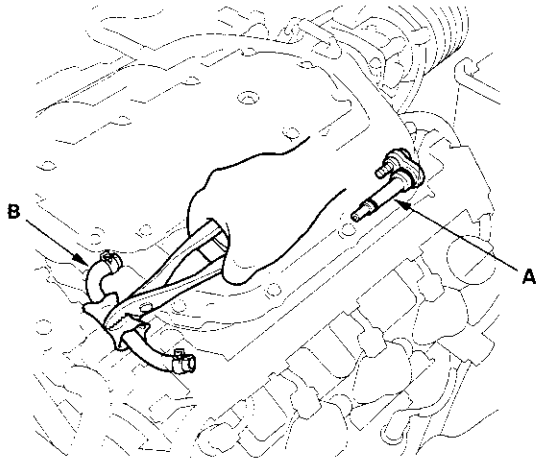
PCV Valve Inspection

1. Remove the engine cover (see step 2 on page 9-4).
2. Check the PCV valve (A), hoses (B), and connections for leaks or restrictions.



3. At idle, listen to the PCV valve (A) with a stethoscope as you lightly pinch the PCV hose (B) with your fingers or pliers several times. Each time the hose is pinched, the valve should click.

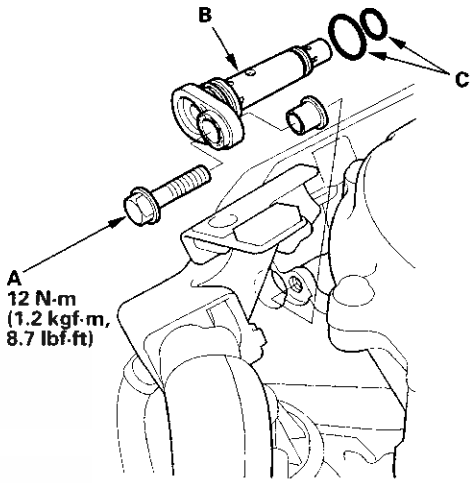
   If there is no clicking sound, check the PCV valve grommet for cracks or damage. If the grommet is OK, replace the PCV valve and recheck.



PCV Valve Replacement

1. Remove the engine cover (see step 2 on page 9-4).
2. Remove the bolt (A).

   NOTE: Take care not to spill oil on the hot exhaust manifold.

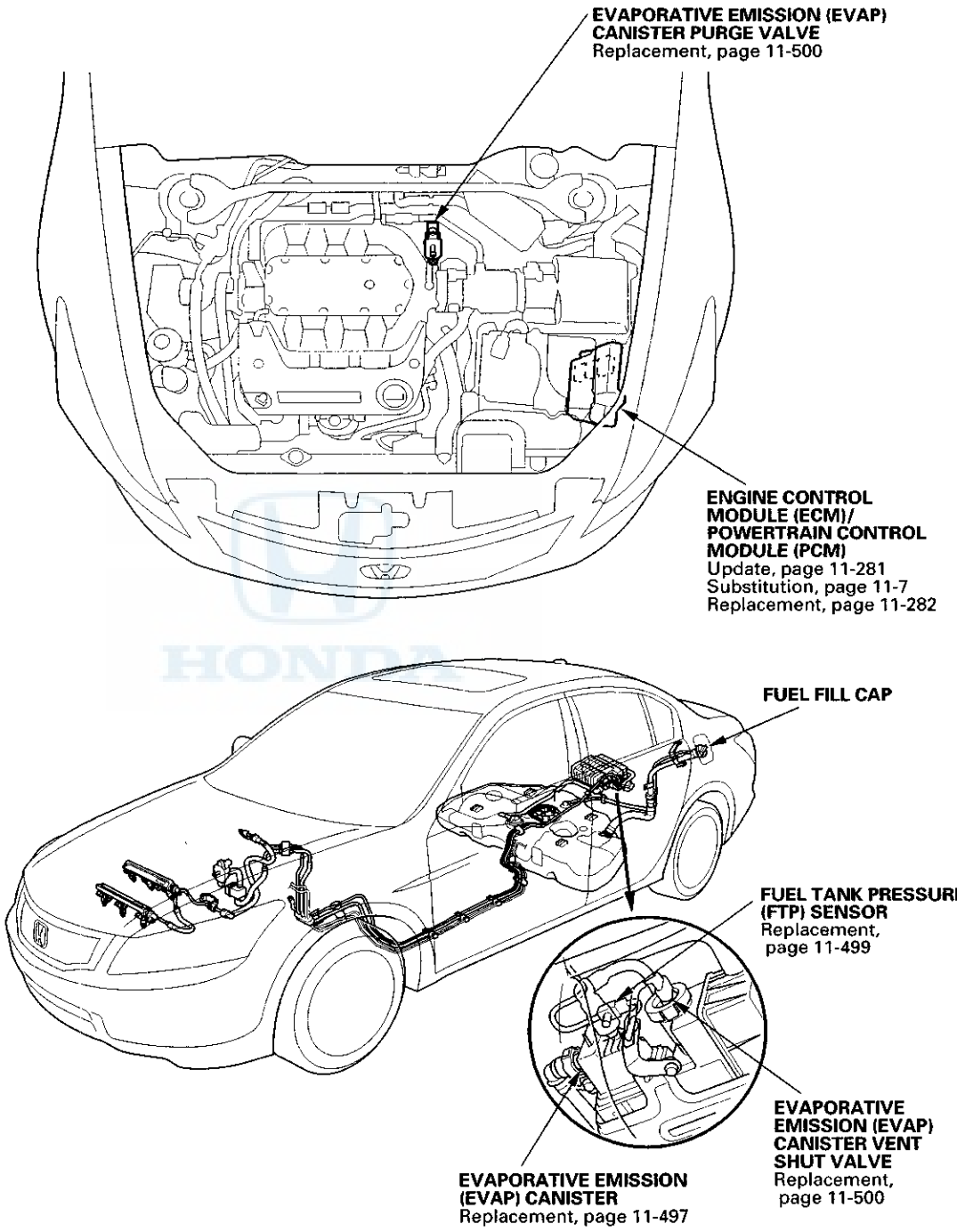


3. Remove the PCV valve (B).
4. Install the parts in the reverse order of removal.

   NOTE:
   - When installing a new PCV valve, make sure the O-rings (C) are in place.
   - When installing a used PCV valve, use new O-rings.

EVAP System

Component Location Index



DTC Troubleshooting

DTC P0443: EVAP Canister Purge Valve Circuit Malfunction

Special Tools Required
Vacuum pump/gauge, 0—30 in.Hg, Snap-on YA4000A or equivalent, commercially available

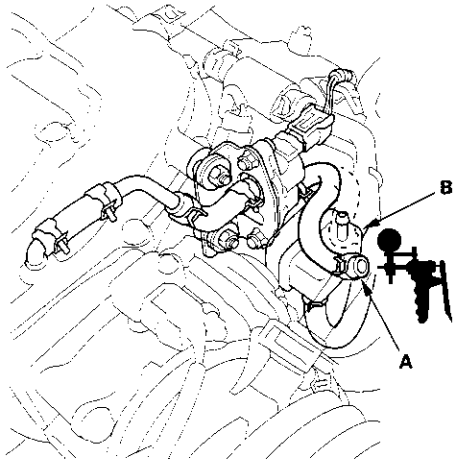
NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0443 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EVAP canister purge valve and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0), and allow the engine to cool below 140 °F (60 °C).
6. Disconnect the vacuum hose (A) from the purge joint (B) in the engine compartment, and connect a vacuum pump/gauge, 0—30 in.Hg, to the hose.



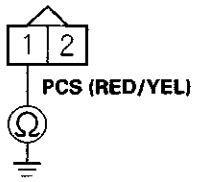
7. Start the engine, and let it idle.

   Is there vacuum?

   YES—Go to step 8.

   NO—Go to step 14.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the EVAP canister purge valve 2P connector.
10. Check for continuity between EVAP canister purge valve 2P connector terminal No. 1 and body ground.

EVAP CANISTER PURGE VALVE 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 11.

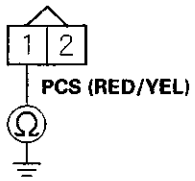
NO—Go to step 23.

(cont'd)

DTC Troubleshooting (cont'd)

11. Jump the SCS line with the HDS.
12. Disconnect ECM/PCM connector C (49P).
13. Check for continuity between EVAP canister purge valve 2P connector terminal No. 1 and body ground.

EVAP CANISTER PURGE VALVE 2P CONNECTOR



Wire side of female terminals

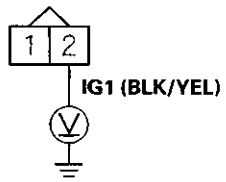
Is there continuity?

YES—Repair short in the wire between the EVAP canister purge valve and the ECM/PCM (C40), then go to step 24.

NO—Go to step 30.

14. Turn the ignition switch to LOCK (0).
15. Disconnect the EVAP canister purge valve 2P connector.
16. Turn the ignition switch to ON (II).
17. Measure voltage between EVAP canister purge valve 2P connector terminal No. 2 and body ground.

EVAP CANISTER PURGE VALVE 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

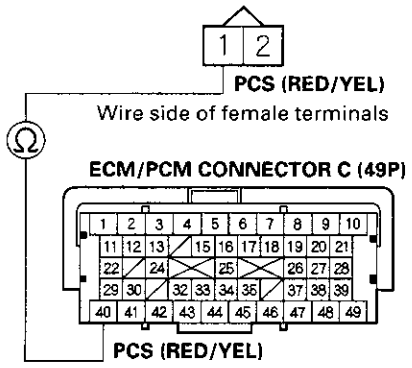
YES—Go to step 18.

NO—Repair open in the wire between the EVAP canister purge valve and the No. 7 ACG (15 A) fuse in the driver's under-dash fuse/relay box, then go to step 24.

18. Turn the ignition switch to LOCK (0).
19. Jump the SCS line with the HDS.
20. Disconnect ECM/PCM connector C (49P).

21. Check for continuity between ECM/PCM connector terminal C40 and EVAP canister purge valve 2P connector terminal No. 1.

EVAP CANISTER PURGE VALVE 2P CONNECTOR



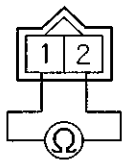
Is there continuity?

YES—Go to step 22.

NO—Repair open in the wire between the EVAP canister purge valve and the ECM/PCM (C40), then go to step 24.

22. At the valve side, measure the resistance between EVAP canister purge valve 2P connector terminals No. 1 and No. 2.

EVAP CANISTER PURGE VALVE 2P CONNECTOR



Is there about 23—26 Ω at room temperature?

YES—Go to step 30.

NO—Go to step 23.

23. Replace the EVAP canister purge valve (see page 11-500).

24. Reconnect all connectors.

25. Turn the ignition switch to ON (II).

26. Reset the ECM/PCM with the HDS.

(cont'd)

DTC Troubleshooting (cont'd)

27. Do the ECM/PCM idle learn procedure (see page 11-385).

28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0443 indicated?

    YES—Check for poor connections or loose terminals at the EVAP canister purge valve and the ECM/PCM, then go to step 1.

    NO—Go to step 29.

29. Monitor the OBD STATUS for DTC P0443 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the EVAP canister purge valve and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, OUT OF CONDITION, or NOT COMPLETED, keep idling until a result comes on.

30. Reconnect all connectors.

31. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

32. Start the engine, and let it idle.

33. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0443 indicated?

    YES—Check for poor connections or loose terminals at the EVAP canister purge valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 32. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 34.

34. Monitor the OBD STATUS for DTC P0443 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 33, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the EVAP canister purge valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 32. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, OUT OF CONDITION, or NOT COMPLETED, keep idling until a result comes on.

DTC P0451: FTP Sensor Circuit Range/ Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P2422 is stored at the same time as DTC P0451, troubleshoot DTC P2422 first, then recheck for DTC P0451.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle for 1 minute.
4. Monitor the OBD STATUS for DTC P0451 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 5.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM. If the screen indicates NOT COMPLETED, keep idling until a result comes on.
5. Turn the ignition switch to LOCK (0).
6. Replace the FTP sensor (see page 11-499).
7. Turn the ignition switch to ON (II).
8. Reset the ECM/PCM with the HDS.
9. Do the ECM/PCM idle learn procedure (see page 11-385).
10. Start the engine, and let it idle for 1 minute.
11. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0451 indicated?

    YES—Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM, then go to step 1.

    NO—Go to step 12.
12. Monitor the OBD STATUS for DTC P0451 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 11, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P0452: FTP Sensor Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0).
4. Remove the fuel fill cap.
5. Turn the ignition switch to ON (II).
6. Check the FTP SENSOR in the DATA LIST with the HDS.

   Is about −7.3 kPa (−2.16 in.Hg, −55 mmHg), or 0.3 V or less indicated?

   YES—Go to step 10.

   NO—Go to step 7.
7. Install the fuel fill cap.
8. Start the engine.
9. Monitor the OBD STATUS for DTC P0452 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 10.

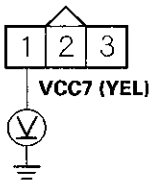
   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM. If the screen indicates NOT COMPLETED, keep idling until a result comes on.
10. Turn the ignition switch to LOCK (0).
11. Disconnect the FTP sensor 3P connector.
12. Turn the ignition switch to ON (II).
13. Check the FTP SENSOR in the DATA LIST with the HDS.

    Is about −7.3 kPa (−2.16 in.Hg, −55 mmHg), or 0.3 V or less indicated?

    YES—Go to step 20.

    NO—Go to step 14.
14. Measure the voltage between FTP sensor 3P connector terminal No. 1 and body ground.

FTP SENSOR 3P CONNECTOR



Wire side of female terminals

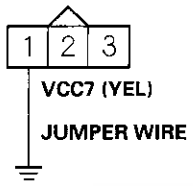
Is there about 5 V?

YES—Go to step 24.

NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).
16. Jump the SCS line with the HDS.
17. Disconnect ECM/PCM connector A (49P).
18. Connect FTP sensor 3P connector terminal No. 1 to body ground with a jumper wire.

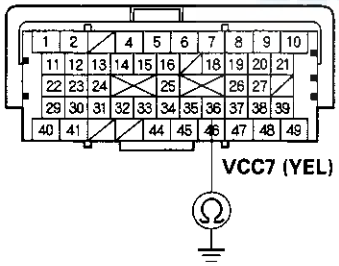
FTP SENSOR 3P CONNECTOR



Wire side of female terminals

19. Check for continuity between ECM/PCM connector terminal A36 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

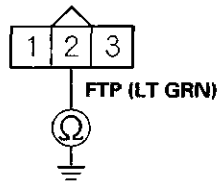
Is there continuity?

YES—Go to step 32.

NO—Repair open in the wire between the ECM/PCM (A36) and the FTP sensor, then go to step 26.

20. Turn the ignition switch to LOCK (0).
21. Jump the SCS line with the HDS.
22. Disconnect ECM/PCM connector A (49P).
23. Check for continuity between FTP sensor 3P connector terminal No. 2 and body ground.

FTP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the ECM/PCM (A39) and the FTP sensor, then go to step 26.

NO—Go to step 32.

24. Turn the ignition switch to LOCK (0).
25. Replace the FTP sensor (see page 11-499).
26. Reconnect all connectors.
27. Turn the ignition switch to ON (II).
28. Reset the ECM/PCM with the HDS.
29. Do the ECM/PCM idle learn procedure (see page 11-385).

(cont'd)

DTC Troubleshooting (cont'd)

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0452 indicated?

    YES—Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM, then go to step 1.

    NO—Go to step 31.

31. Monitor the OBD STATUS for DTC P0452 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

32. Reconnect all connectors.

33. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

34. Start the engine, and let it idle.

35. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0452 indicated?

    YES—Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 36.

36. Monitor the OBD STATUS for DTC P0452 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 35, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 34. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P0453: FTP Sensor Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0).
4. Remove the fuel fill cap.
5. Turn the ignition switch to ON (II).
6. Check the FTP SENSOR in the DATA LIST with the HDS.

   Is about 7.3 kPa (2.16 in.Hg, 55 mmHg), or 4.7 V or more indicated?

   YES—Go to step 10.

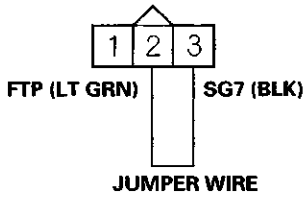
   NO—Go to step 7.
7. Install the fuel fill cap.
8. Start the engine.
9. Monitor the OBD STATUS for DTC P0453 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES—Go to step 10.

   NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM. If the screen indicates NOT COMPLETED, keep idling until a result comes on.
10. Turn the ignition switch to LOCK (0).
11. Disconnect the FTP sensor 3P connector.
12. Connect FTP sensor 3P connector terminals No. 2 and No. 3 with a jumper wire.

FTP SENSOR 3P CONNECTOR



Wire side of female terminals

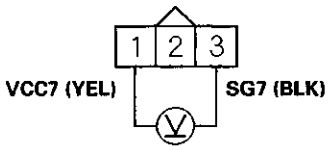
13. Turn the ignition switch to ON (II).
14. Check the FTP SENSOR in the DATA LIST with the HDS.

    Is about 7.3 kPa (2.16 in.Hg, 55 mmHg), or 4.7 V or more indicated?

    YES—Go to step 15.

    NO—Go to step 26.
15. Measure the voltage between FTP sensor 3P connector terminals No. 1 and No. 3.

FTP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 21.

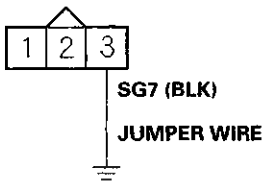
NO—Go to step 16.

(cont'd)

DTC Troubleshooting (cont'd)

16. Turn the ignition switch to LOCK (0).
17. Jump the SCS line with the HDS.
18. Disconnect ECM/PCM connector A (49P).
19. Connect FTP sensor 3P connector terminal No. 3 to body ground with a jumper wire.

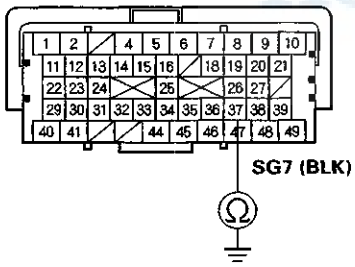
FTP SENSOR 3P CONNECTOR



Wire side of female terminals

20. Check for continuity between ECM/PCM connector terminal A37 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

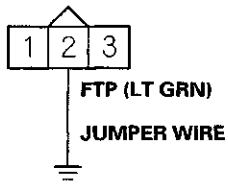
Is there continuity?

YES—Go to step 34.

NO—Repair open in the wire between the ECM/PCM (A37) and the FTP sensor, then go to step 28.

21. Turn the ignition switch to LOCK (0).
22. Jump the SCS line with the HDS.
23. Disconnect ECM/PCM connector A (49P).
24. Connect FTP sensor 3P connector terminal No. 2 to body ground with a jumper wire.

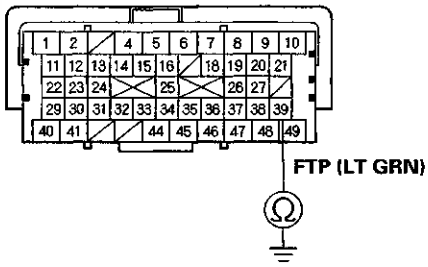
FTP SENSOR 3P CONNECTOR



Wire side of female terminals

25. Check for continuity between ECM/PCM connector terminal A39 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 34.

NO—Repair open in the wire between the ECM/PCM (A39) and the FTP sensor, then go to step 28.

26. Turn the ignition switch to LOCK (0).

27. Replace the FTP sensor (see page 11-499).

28. Reconnect all connectors.

29. Turn the ignition switch to ON (II).

30. Reset the ECM/PCM with the HDS.

31. Do the ECM/PCM idle learn procedure (see page 11-385).

32. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0453 indicated?

    YES—Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM, then go to step 1.

    NO—Go to step 33.

33. Monitor the OBD STATUS for DTC P0453 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 32, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

34. Reconnect all connectors.

35. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

36. Start the engine, and let it idle.

37. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0453 indicated?

    YES—Check for poor connections or loose terminals at the FTP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 36. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 38.

38. Monitor the OBD STATUS for DTC P0453 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 37, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 36. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC Troubleshooting (cont'd)

DTC P0455: EVAP System Large Leak Detected

DTC P0456: EVAP System Very Small Leak Detected

NOTICE

The fuel system is designed to allow specified maximum vacuum and pressure conditions. Do not deviate from the vacuum and pressure tests as indicated in these procedures. Excessive pressure/vacuum would damage the EVAP components or cause eventual fuel tank failure.

Special Tools Required

Vacuum pump/gauge, 0—30 in.Hg, Snap-on YA4000A or equivalent, commercially available

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Fresh fuel has a higher volatility that will create greater pressure/vacuum. The optimum condition for testing is less than a full tank of fresh fuel. If possible, to assist in leak detection, add 1 gallon of fresh fuel to the tank (as long as it will not fill the tank), just before starting these procedures.

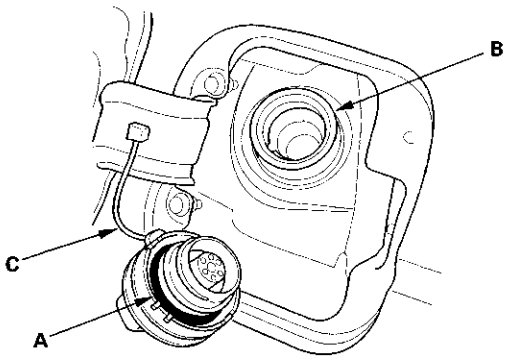
1. Check the fuel fill cap (the cap must say TIGHTEN TO CLICK). It should turn 1/4 turn after it's tight, then it clicks.

   Is the correct fuel fill cap installed and properly tightened?

   YES—Go to step 2.

   NO—Replace or tighten the cap, then go to step 28.

2. Check the fuel fill cap seal (A) and the fuel fill pipe mating surface (B). Verify that the fuel fill cap tether cord (C) is not caught under the cap.



   Is the fuel fill cap seal missing or damaged, is the fuel fill pipe damaged, or is the tether cord caught under the cap?

   YES—Replace the fuel fill cap or the fuel fill pipe, then go to step 28.

   NO—Go to step 3.

3. Turn the ignition switch to ON (II).

4. Clear the DTC with the HDS.

5. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, or the EVAP canister vent shut valve, and the ECM/PCM. ■

   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

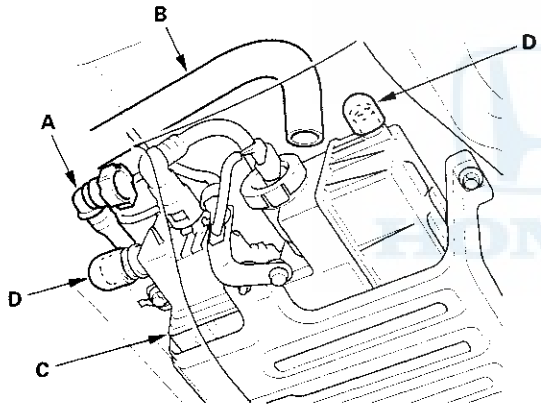
7. Check for a poor connection or damage at the fuel tank vapor recirculation tube.

   Is the tube OK?

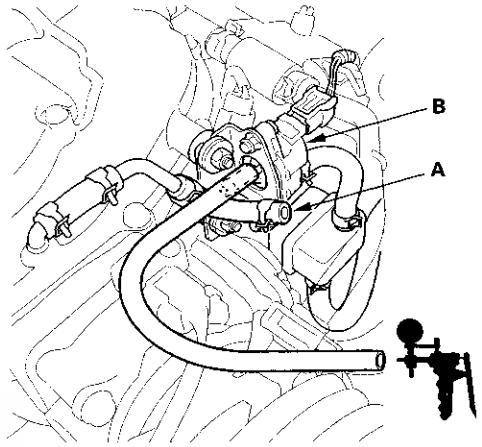
   YES—Go to step 8.

   NO—
   - Replace the fuel tank vapor recirculation tube, then go to step 28.
   - If necessary, replace the fuel tank (see page 11-419), then go to step 28.

8. Disconnect the fuel tank vapor recirculation tube (A) and fresh air hose (B) from the EVAP canister (C), and plug the EVAP canister port (D).



9. Disconnect the vacuum hose (engine side) (A) from the EVAP canister purge valve (B) in the engine compartment, and connect a vacuum pump/gauge, 0—30 in.Hg, to the purge valve as shown.



10. Turn the ignition switch to ON (II).

11. Select EVAP PCS ON in the INSPECTION MENU with the HDS.

12. Apply vacuum to the hose until the FTP reads 1.90 V (—0.59 in.Hg, —15.1 mmHg).

    NOTE: Be careful not to damage the vacuum. If you do, the FTP sensor can be damaged.

13. Select EVAP PCS OFF in the INSPECTION MENU with the HDS.

14. Monitor the FTP SENSOR in the DATA LIST for 1 minute with the HDS.

    Does the voltage increase more than 0.2 V (0.1 in.Hg, 0.5 mmHg)?

    YES—Go to step 15.

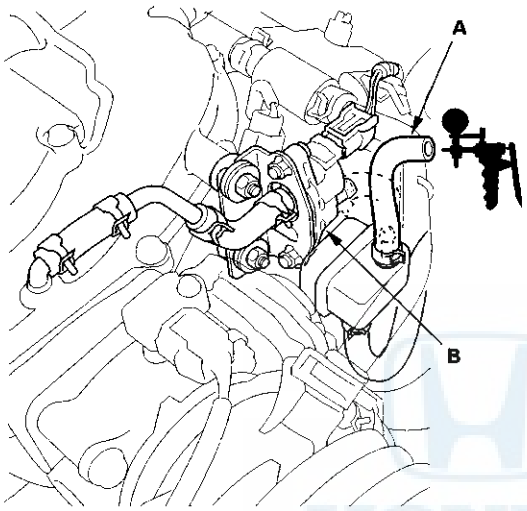
    NO—Go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

15. Reconnect the vacuum hose (engine side) to the EVAP canister purge valve.

16. Disconnect the vacuum hose (EVAP canister side) (A) from the EVAP canister purge valve (B) in the engine compartment, then connect the vacuum pump/gauge to the purge valve as shown.



17. Apply vacuum to the hose until the FTP reads 1.90 V (−0.59 in.Hg, −15.1 mmHg).

    NOTE: Be careful not to damage the vacuum. If you do, the FTP sensor can be damaged.

18. Monitor the FTP SENSOR in the DATA LIST for 1 minute with the HDS.

    Does the voltage increase more than 0.2 V (0.1 in.Hg, 0.5 mmHg)?

    YES—Go to step 19.

    NO—Replace the EVAP canister purge valve (see page 11-500), then go to step 28.

19. Check for a loose or damaged EVAP canister purge line between the EVAP canister and the EVAP canister purge valve, or a leaking EVAP canister.

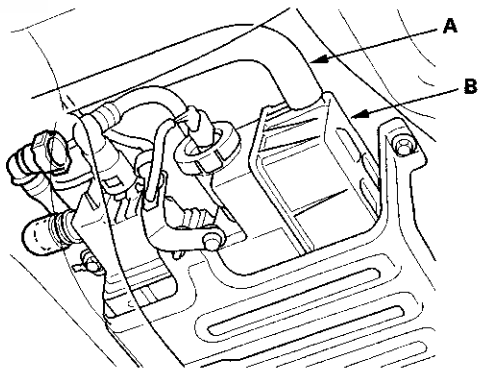
    Are the lines and the EVAP canister OK?

    YES—Replace these parts, then go to step 28:

    - FTP sensor O-ring
    - EVAP canister vent shut valve case and O-ring
    - EVAP canister

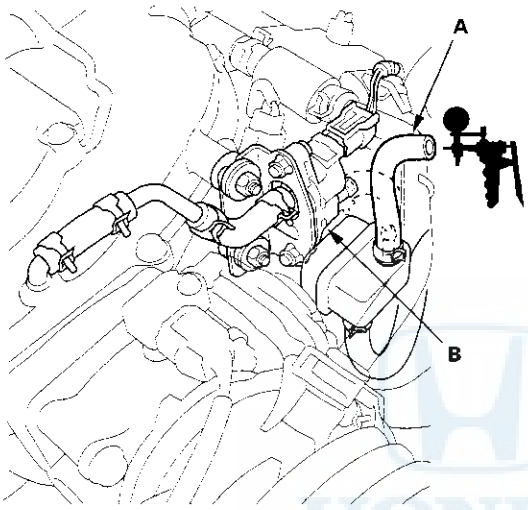
    NO—Reconnect or repair the EVAP canister purge line, then go to step 28.

20. Reconnect the fresh air hose (A) to the EVAP canister (B).



21. Reconnect the vacuum hose (engine side) to the EVAP canister purge valve.

22. Disconnect the vacuum hose (EVAP canister side) (A) from the EVAP canister purge valve (B) in the engine compartment, then connect the vacuum pump/gauge to the purge valve as shown.



23. Select EVAP CVS ON in the INSPECTION MENU with the HDS.

24. Apply vacuum to the EVAP system until the FTP reads 1.90 V (−0.59 in.Hg, −15.1 mmHg).

    NOTE: Be careful not to exceed the vacuum. If you do, the FTP sensor can be damaged.

25. Monitor the FTP SENSOR in the DATA LIST for 1 minute with the HDS.

    Does the voltage increase more than 0.2 V (0.1 in.Hg, 2.5 mmHg)?

    YES—Go to step 26.

    NO—Replace the EVAP canister vent shut valve (see page 11-500), then go to step 28.

26. Select EVAP CVS OFF in the INSPECTION MENU with the HDS.

27. Check these parts for looseness or damage:

    - Fuel fill pipe
    - Fuel vapor return pipe

    Are the parts OK?

    YES—Check the fuel tank unit base gasket (see page 11-415), and check the fuel tank, then go to step 28.

    NO—Repair or replace the damaged parts, then go to step 28.

28. Reconnect all hoses and connectors.

29. Turn the ignition switch to ON (II).

30. Reset the ECM/PCM with the HDS.

31. Do the ECM/PCM idle learn procedure (see page 11-385).

32. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Troubleshooting is complete.■

    NO—Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, the EVAP canister vent shut valve, and the ECM/PCM, then go to step 1.

DTC Troubleshooting (cont'd)

DTC P0457: EVAP System Leak Detected/Fuel Fill Cap Loose or Missing

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

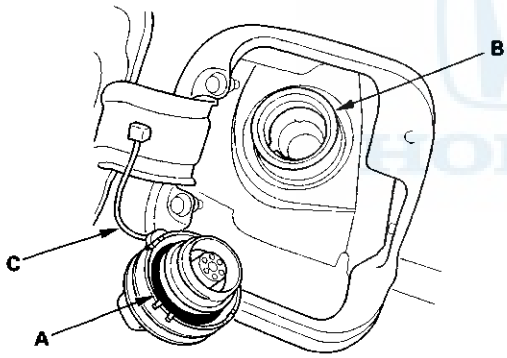
1. Check the fuel fill cap (the cap must say TIGHTEN TO CLICK). It should turn 1/4 turn after it's tight, then it clicks.

   Is the correct fuel fill cap installed and properly tightened?

   YES—Go to step 2.

   NO—Replace or tighten the cap, then go to step 19.

2. Check the fuel fill cap seal (A) and the fuel fill pipe mating surface (B). Verify that the fuel fill cap tether cord (C) is not caught under the cap.



   Is the fuel fill cap seal missing or damaged, is the fuel fill pipe damaged, or is the tether cord caught under the cap?

   YES—Replace the fuel fill cap or the fuel fill pipe, then go to step 19.

   NO—Go to step 3.

3. Turn the ignition switch to ON (II).

4. Clear the DTC with the HDS.

5. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP canister vent shut valve, and the ECM/PCM. ■

   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

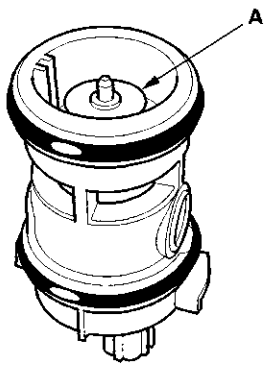
7. Remove the EVAP canister vent shut valve from the EVAP canister (see page 11-500).

8. Connect the 2P connector to the EVAP canister vent shut valve.

9. Turn the ignition switch to ON (II).

10. Select EVAP CVS ON in the INSPECTION MENU with the HDS.

11. Check the EVAP canister vent shut valve (A) operation.



   Does the valve operate?

   YES—Check the routing of the EVAP canister vent tube, then go to step 18.

   NO—Go to step 12.

12. Turn the ignition switch to LOCK (0).

13. Replace the EVAP canister vent shut valve (see page 11-500).

14. Turn the ignition switch to ON (II).

15. Reset the ECM/PCM with the HDS.

16. Do the ECM/PCM idle learn procedure (see page 11-385).

17. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Troubleshooting is complete. ■

    NO—Check for poor connections or loose terminals at the FTP sensor, the EVAP canister vent shut valve, and the ECM/PCM, then go to step 1.

18. Reinstall the EVAP canister vent shut valve.

19. Turn the ignition switch to ON (II).

20. Reset the ECM/PCM with the HDS.

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Troubleshooting is complete. ■

    NO—Check for poor connections or loose terminals at the FTP sensor, the EVAP canister vent shut valve, and the ECM/PCM, then go to step 1.

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DTC Troubleshooting (cont'd)

DTC P0496: EVAP System High Purge Flow Detected

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, the EVAP canister vent shut valve, and the ECM/PCM. ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Replace the EVAP canister purge valve (see page 11-500).
6. Turn the ignition switch to ON (II).
7. Reset the ECM/PCM with the HDS.
8. Do the ECM/PCM idle learn procedure (see page 11-385).
9. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Troubleshooting is complete. ■

   NO—Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, the EVAP canister vent shut valve, and the ECM/PCM, then go to step 1.

DTC P0497: EVAP System Low Purge Flow Detected

Special Tools Required
- Vacuum pump/gauge, 0—30 in.Hg, Snap-on YA4000A or equivalent, commercially available
- Vacuum/pressure gauge, 0—4 in.Hg 07JAZ-001000B

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Select EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EVAP canister purge valve, the FTP sensor, and the ECM/PCM. ■

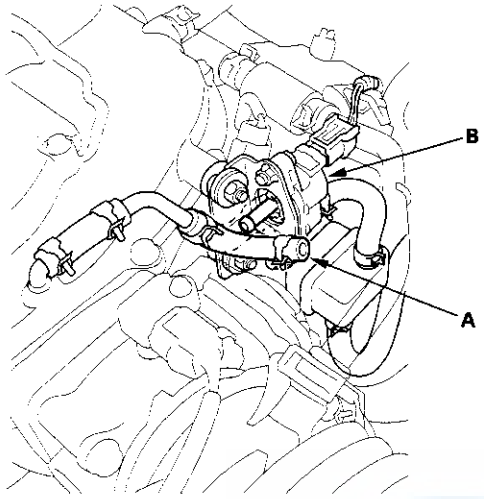
   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Check for poor connections, a blockage, or damage at the EVAP canister purge line between the throttle body and the EVAP canister.

   Is the line OK?

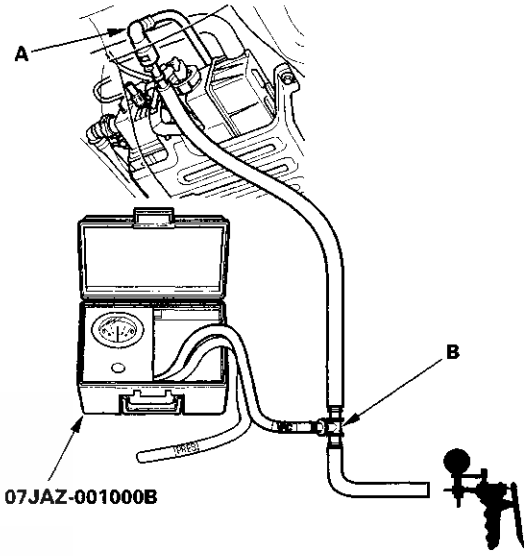
   YES—Go to step 6.

   NO—Reconnect or repair the EVAP canister purge line, then go to step 24.

6. Disconnect the vacuum hose (A) from the EVAP canister purge valve (B).



7. Disconnect the vacuum hose (A) from the purge line (at the EVAP canister side), then connect a T-fitting (B) from the vacuum gauge and connect vacuum pump/gauge, 0—30 in.Hg, to the hose as shown.



8. Turn the ignition switch to ON (II).
9. Apply about 2 kPa (0.6 in. Hg, 15 mmHg) of vacuum to the hose.
10. Select EVAP PCS ON in the INSPECTION MENU with the HDS.

    Does the vacuum release immediately?

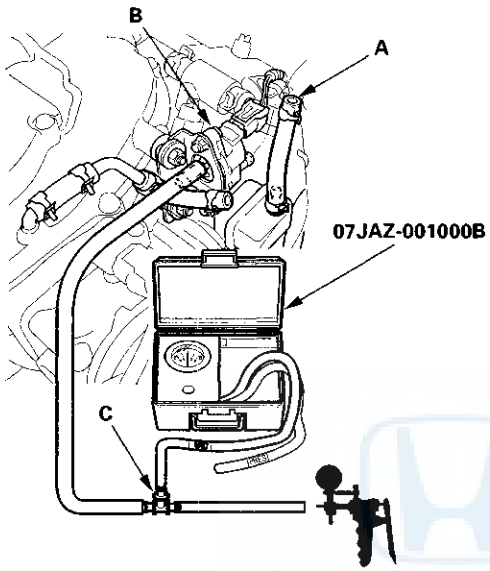
    YES—Go to step 15.

    NO—Go to step 11.
11. Select EVAP PCS OFF in the INSPECTION MENU with the HDS.

(cont'd)

DTC Troubleshooting (cont'd)

12. Disconnect the vacuum hose (A) from the EVAP canister purge valve (B). Connect the T-fitting (C) from the vacuum gauge and connect the vacuum pump/gauge, 0—30 in.Hg, to the EVAP canister purge valve as shown.



13. Apply about 2 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the purge valve.

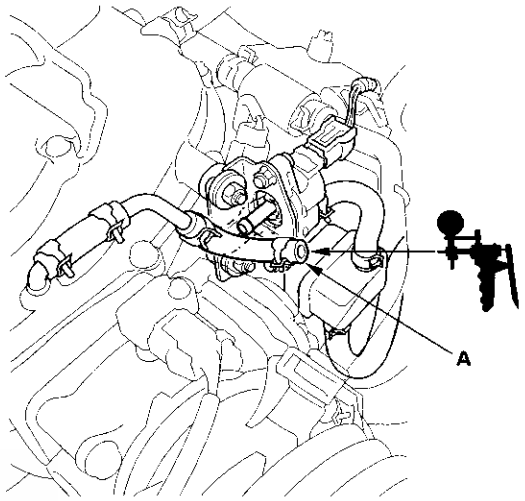
14. Select EVAP PCS ON in the INSPECTION MENU with the HDS.

    Does the vacuum release immediately?

    YES—Check for a blockage in the vacuum hose between the EVAP canister purge valve and the EVAP canister, then go to step 24.

    NO—Replace the EVAP canister purge valve (see page 11-500), then go to step 24.

15. Connect the vacuum pump/gauge, 0—30 in.Hg, to the vacuum hose (A) as shown.



16. Start the engine, and let it idle.

    Is there vacuum?

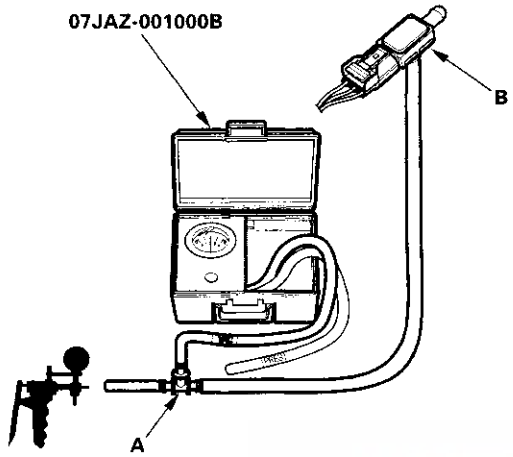
    YES—Go to step 17.

    NO—Check for a blockage in vacuum hose between the EVAP canister purge valve and the intake manifold then go to step 24.

17. Turn the ignition switch to LOCK (0).

18. Remove the FTP sensor with its connector connected (see page 11-499).

19. Connect a T-fitting (A) from the vacuum pump/gauge, 0—30 in.Hg, then connect the vacuum pump to the FTP sensor (B) as shown.



20. Turn the ignition switch to ON (II).

21. Check and record the FTP SENSOR reading in the DATA LIST with the HDS.

22. Slowly apply about 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the hose.

23. Check the FTP SENSOR in the DATA LIST with the HDS.

    Does the value change?

    YES—Check for debris or blockage at the EVAP canister port, then go to step 24.

    NO—Replace the FTP sensor (see page 11-499), then go to step 24.

24. Turn the ignition switch to ON (II).

25. Reset the ECM/PCM with the HDS.

26. Do the ECM/PCM idle learn procedure (see page 11-385).

27. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES—Troubleshooting is complete. ■

    NO—Check for poor connections or loose terminals at the EVAP canister purge valve, the FTP sensor, and ECM/PCM, then go to step 1.

DTC Troubleshooting (cont'd)

DTC P0498: EVAP Canister Vent Shut Valve Circuit Low Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0498 indicated?

   YES—Go to step 6.

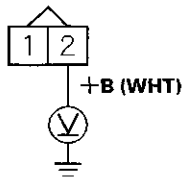
   NO—Go to step 4.
4. Select EVAP CVS ON in the INSPECTION MENU with the HDS.
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0498 indicated?

   YES—Go to step 6.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM. ■
6. Turn the ignition switch to LOCK (0).
7. Disconnect the EVAP canister vent shut valve 2P connector.
8. Turn the ignition switch to ON (II).
9. Measure the voltage between EVAP canister vent shut valve 2P connector terminal No. 2 and body ground.

EVAP CANISTER VENT SHUT VALVE 2P CONNECTOR



Wire side of female terminals

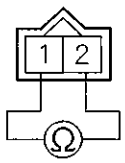
Is there battery voltage?

YES—Go to step 10.

NO—Repair open in the wire between the EVAP canister vent shut valve and the PGM-FI subrelay, then go to step 18.

10. Turn the ignition switch to LOCK (0).
11. At the valve side, measure the resistance between EVAP canister vent shut valve 2P connector terminals No. 1 and No. 2.

EVAP CANISTER VENT SHUT VALVE 2P CONNECTOR



Terminal side of male terminals

Is there about 25—30 Ω at room temperature?

YES—Go to step 12.

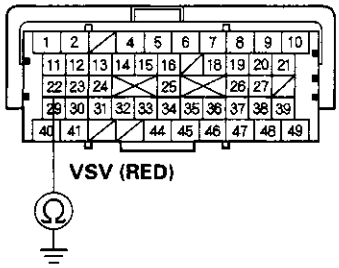
NO—Go to step 17.

12. Jump the SCS line with the HDS.

13. Disconnect ECM/PCM connector A (49P).

14. Check for continuity between ECM/PCM connector terminal A22 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

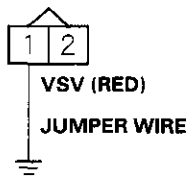
Is there continuity?

YES—Repair short in the wire between the EVAP canister vent shut valve and the ECM/PCM (A22), then go to step 18.

NO—Go to step 15.

15. Connect EVAP canister vent shut valve 2P connector terminal No. 1 to body ground with a jumper wire.

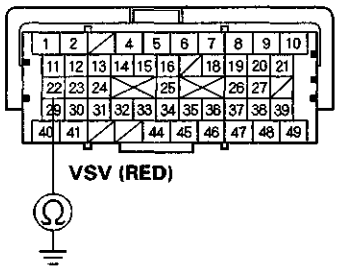
EVAP CANISTER VENT SHUT VALVE 2P CONNECTOR



Wire side of female terminals

16. Check for continuity between ECM/PCM connector terminal A22 and body ground.

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between the EVAP canister vent shut valve and the ECM/PCM (A22), then go to step 18.

17. Replace the EVAP canister vent shut valve (see page 11-500).

18. Reconnect all connectors.

(cont'd)

DTC Troubleshooting (cont'd)

19. Turn the ignition switch to ON (II).

20. Reset the ECM/PCM with the HDS.

21. Do the ECM/PCM idle learn procedure (see page 11-385).

22. Select EVAP CVS ON in the INSPECTION MENU with the HDS.

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0498 indicated?

    YES—Check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM, then go to step 1.

    NO—Go to step 24.

24. Monitor the OBD STATUS for DTC P0498 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 22.

25. Reconnect all connectors.

26. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

27. Select EVAP CVS ON in the INSPECTION MENU with the HDS.

28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0498 indicated?

    YES—Check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 27. If the ECM/PCM was substituted, go to step 1.

    NO—Go to step 29.

29. Monitor the OBD STATUS for DTC P0498 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting. ■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 27. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 27.

DTC P0499: EVAP Canister Vent Shut Valve Circuit High Voltage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Select EVAP CVS ON in the INSPECTION MENU with the HDS.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0499 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM.■
5. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).
6. Select EVAP CVS ON in the INSPECTION MENU with the HDS.
7. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0499 indicated?

   YES—Check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 6. If the ECM/PCM was substituted, go to step 1.

   NO—Go to step 8.
8. Monitor the OBD STATUS for DTC P0499 in the DTCs MENU with the HDS.

   Does the screen indicate PASSED?

   YES—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 7, go to the indicated DTC's troubleshooting.■

   NO—If the screen indicates FAILED, check for poor connections or loose terminals at the EVAP canister vent shut valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 6. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 6.

DTC Troubleshooting (cont'd)

DTC P1454: FTP Sensor Circuit Range/ Performance Problem

DTC P2422: EVAP Canister Vent Shut Valve Stuck Closed Malfunction

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0).
4. Remove the fuel fill cap, and wait 1 minute.
5. Turn the ignition switch to ON (II).
6. Check the FTP SENSOR in the DATA LIST with the HDS.

   Is it between −0.67 and 0.67 kPa (−0.2 and 0.2 in.Hg, −5 and 5 mmHg), or 2.4 and 2.6 V?

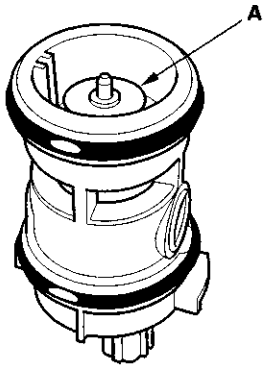
   YES—Go to step 7.

   NO—Go to step 18.
7. Install the fuel fill cap.
8. Clear the DTC with the HDS.
9. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
10. Monitor the OBD STATUS for DTC P1454 in the DTCs MENU with the HDS.

    Does the screen indicate FAILED?

    YES—Go to step 11.

    NO—If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP canister vent shut valve, and the ECM/PCM. Also check for a blockage in the vent hoses and the drain joint. If the screen indicates NOT COMPLETED, keep idling until a result comes on.
11. Clear the DTC with the HDS.
12. Turn the ignition switch to LOCK (0).
13. Remove the EVAP canister vent shut valve from the EVAP canister (see page 11-500).
14. Connect the 2P connector to the EVAP canister vent shut valve.
15. Turn the ignition switch to ON (II).
16. Select EVAP CVS ON in the INSPECTION MENU with the HDS.
17. Check the EVAP canister vent shut valve (A) operation.

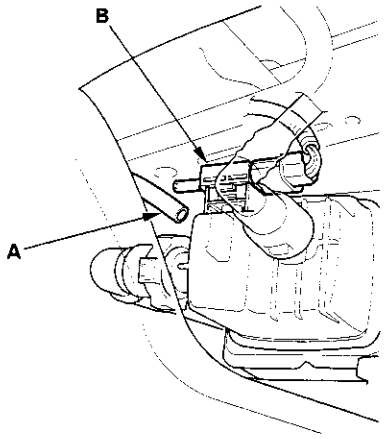


Does the valve operate?

YES—Check for a blockage in the EVAP canister, vent hoses, and drain joint, then install the EVAP canister vent shut valve, and go to step 24.

NO—Replace the EVAP canister vent shut valve (see page 11-500), then go to step 24.

18. Disconnect the air tube (A) from the FTP sensor (B).



19. Check the FTP SENSOR in the DATA LIST with the HDS.

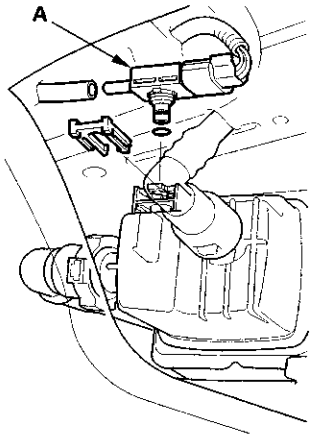
    Is it between −0.67 and 0.67 kPa (−0.2 and 0.2 in.Hg, −5 and 5 mmHg), or 2.4 and 2.6 V?

    YES—Check for a blockage in the FTP sensor air tube or vent, then go to step 24.

    NO—Go to step 20.

20. Turn the ignition switch to LOCK (0).

21. Remove the FTP sensor (A) from the EVAP canister with its connector connected (see page 11-499).



22. Turn the ignition switch to ON (II).

23. Check the FTP SENSOR in the DATA LIST with the HDS.

    Is it between −0.67 kPa and 0.67 kPa (−0.2 and 0.2 in.Hg, −5 and 5 mmHg), or 2.4 and 2.6 V?

    YES—Check for debris or clogging at the EVAP canister and the FTP sensor port, then go to step 24.

    NO—Replace the FTP sensor (see page 11-499), then go to step 24.

(cont'd)

DTC Troubleshooting (cont'd)

24. Turn the ignition switch to ON (II).

25. Reset the ECM/PCM with the HDS.

26. Do the ECM/PCM idle learn procedure (see page 11-385).

27. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.

28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1454 and/or P2422 indicated?

    YES—Check for poor connections or loose terminals at the FTP sensor, the EVAP canister vent shut valve, and the ECM/PCM, then go to step 1.

    NO—Go to step 29.

29. Monitor the OBD STATUS for DTC P1454 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting.■

    NO—If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor, the EVAP canister vent shut valve, and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P145C: EVAP System Purge Flow Malfunction

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- If DTC P145C is indicated alone, do the troubleshooting for DTC P0496 and P0497 using freeze data for P145C.
- If DTC P0497 and P145C stored at the same time, check for a poor connection, a blockage, or damage at the EVAP canister purge line between the EVAP canister purge valve and the EVAP canister, or a stuck closed EVAP canister purge valve.
- If any of DTCs listed below are indicated at the same time as DTC P145C, troubleshoot those DTCs first, then recheck for P145C.

  P0496, P0497: EVAP system purge flow

Fuel Cap Warning Message System Troubleshooting

Special Tools Required
- Vacuum pump/gauge, 0—30 in.Hg, Snap-on YA4000A or equivalent, commercially available
- Vacuum/pressure gauge, 0—4 in.Hg 07JAZ-001000B

Do this procedure if the fuel cap warning message comes on frequently, or if the message does not go off after the fuel fill cap is tightened and the vehicle is driven several days.

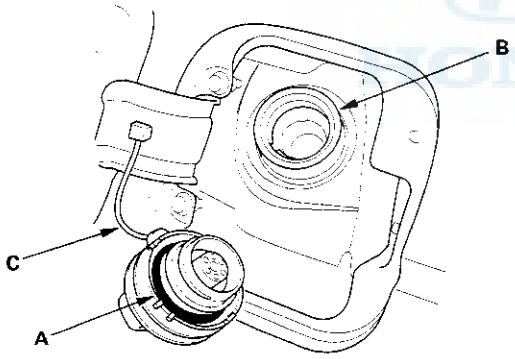
1. Check the fuel fill cap (the cap must say TIGHTEN TO CLICK). It should turn 1/4 after it's tight, then it clicks.

   Is the correct fuel fill cap installed and properly tightened?

   YES—Go to step 2.

   NO—Replace or tighten the cap, then go to step 13.

2. Check the fuel fill cap seal (A) and the fuel fill pipe mating surface (B). Verify that the fuel fill cap tether cord (C) is not caught under the cap.



   Is the fuel fill cap seal missing or damaged, is the fuel fill pipe damaged, or is the tether cord caught under the cap?

   YES—Replace the fuel fill cap or the fuel fill pipe, then go to step 13.

   NO—Go to step 3.

3. Reinstall and tighten the fuel fill cap.

4. Clear the DTC with the HDS.

5. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 1 minute.

6. Test drive at 45 mph (72 km/h) for 1 minute or more.

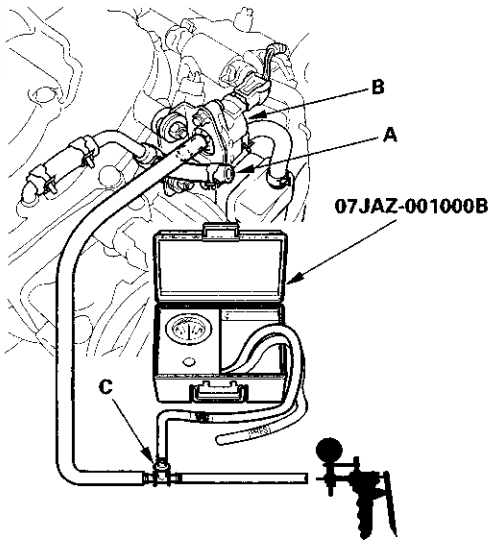
   Does the fuel fill cap warning message come on?

   YES—Go to step 7.

   NO—Intermittent failure, the system is OK at this time.

7. Turn the ignition switch to LOCK (0).

8. Disconnect the vacuum hose (A) from the EVAP canister purge valve (B) in the engine compartment, then connect a T-fitting (C) from the vacuum gauge and connect the vacuum pump/gauge 0—30 in.Hg, to the EVAP canister purge valve as shown.



(cont'd)

Fuel Cap Warning Message System Troubleshooting (cont'd)

9. Turn the ignition switch to ON (II).
10. Apply about 2 kPa (0.6 in.Hg,15 mmHg) of vaccum to the hose.
11. Select the EVAP PCS ON in the INSPECTION MENU with the HDS.

    Does the vacuum release immediately?

    YES—Check for a blockage in the vacuum hose between the EVAP canister purge valve and the EVAP canister, then go to step 12.

    NO—Replace the EVAP canister purge valve (see page 11-500), then go to step 12.
12. Install the parts in the reverse order of removal.
13. Turn the ignition switch to ON (II).
14. Reset the ECM/PCM with the HDS.
15. Do the ECM/PCM idle learn procedure (see page 11-385).
16. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle for 1 minute.
17. Test-drive at 45 mph (72 km/h) for 1 minute or more.

    Does the fuel cap warning message come on?

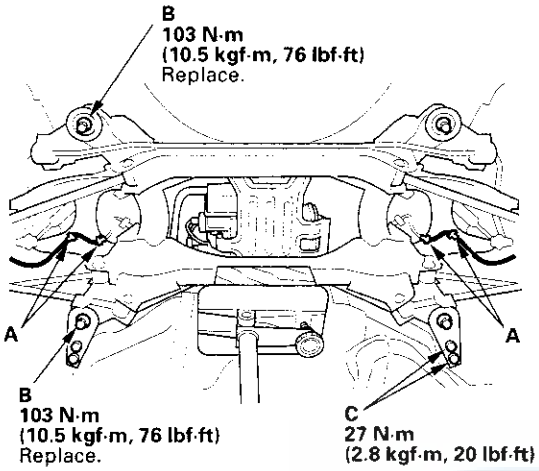
    YES—Go to step 1 and recheck.

    NO—Troubleshooting is complete.■

EVAP Canister Replacement

1. Raise the vehicle on a lift.

2. Remove the wheel sensor harness clamps (A)



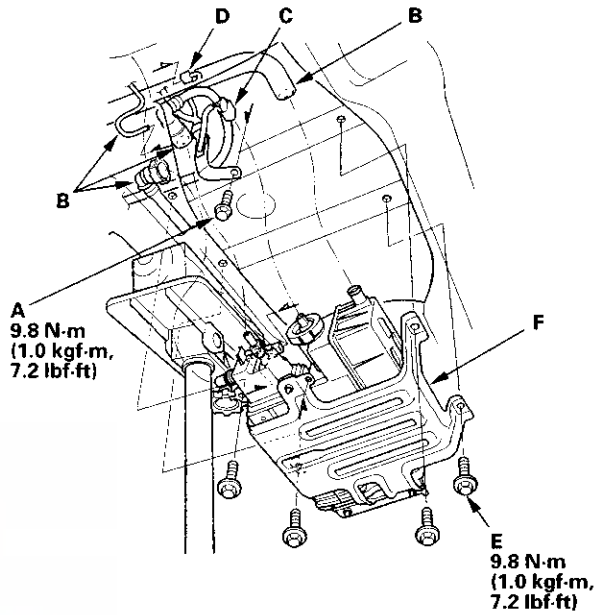
3. Support the rear subframe with a transmission jack and a wooden block as shown.

4. Remove the rear subframe mounting bolts (B) and (C).

5. Lower the transmission jack and rear subframe about 50 mm.

   NOTE: Be careful not to damage the connecting parts.

6. Remove the bolt (A), and disconnect the hoses (B), the EVAP canister vent shut valve 2P connector (C), and the FTP sensor 3P connector (D).

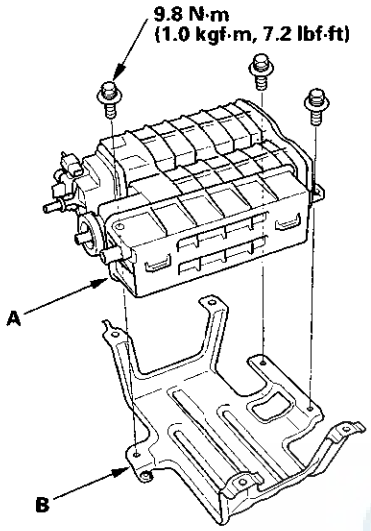


7. Remove the bolts (E), then remove the EVAP canister assembly (F).

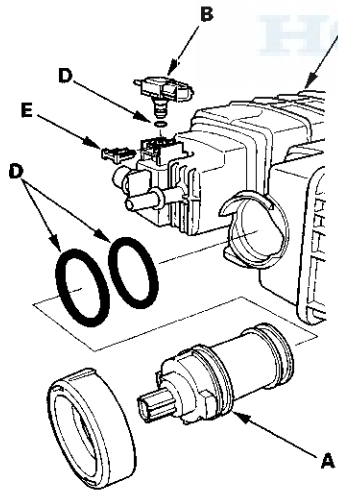
(cont'd)

EVAP Canister Replacement (cont'd)

8. Remove the EVAP canister (A) from the EVAP canister bracket (B).



9. Remove the EVAP canister vent shut valve (A) and FTP sensor (B) from the canister (C).

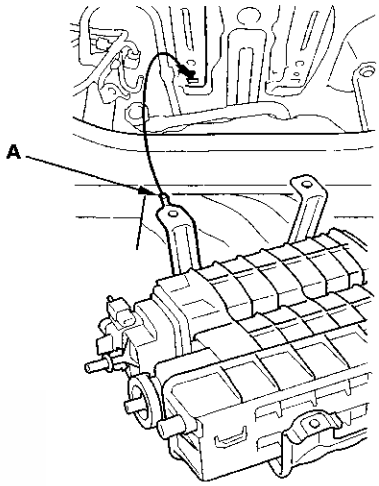


10. Reassemble the EVAP canister with new O-rings (D) and a new retainer (E), then install the EVAP canister bracket.

    NOTE: Do not coat the O-rings with oil.

11. Install the EVAP canister assembly to the body.

    NOTE: Attach the bracket arm (A) to the body as shown.

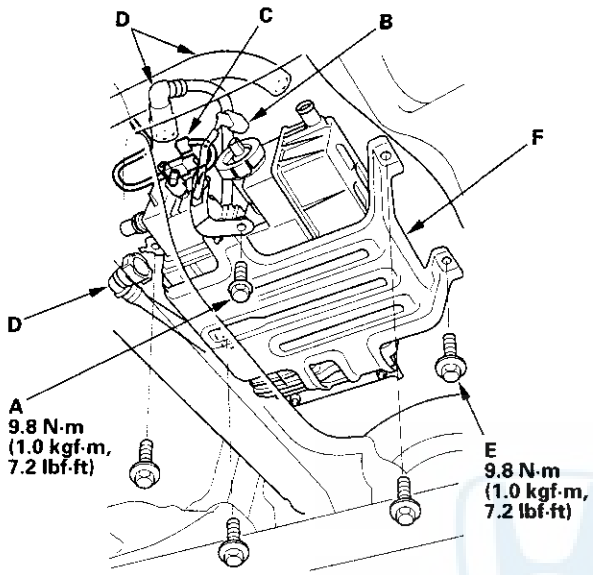


12. Install the parts in the reverse order of removal. Use new bolts when you install the rear subframe.

13. Check the wheel alignment (see page 18-4).

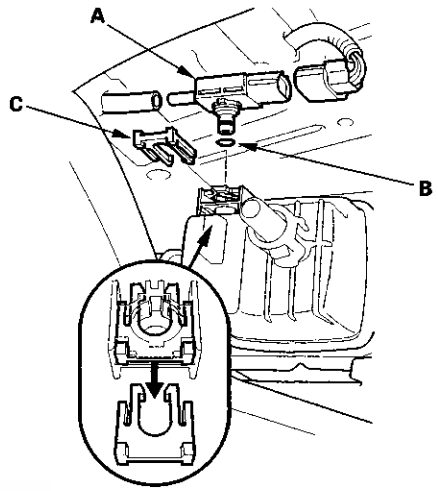
FTP Sensor Replacement

1. Remove the bolt (A), and disconnect the EVAP canister vent shut valve 2P connector (B), the FTP sensor 3P connector (C), and the hoses (D).



2. Remove the bolts (E), and move the EVAP canister assembly (F) to the rear.

3. Remove the FTP sensor (A).

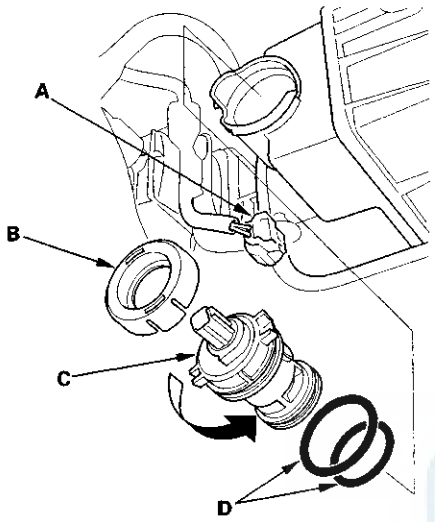


4. Install the parts in the reverse order of removal with a new O-ring (B) and a new retainer (C).

HONDA

EVAP Canister Vent Shut Valve Replacement

1. Disconnect the EVAP canister vent shut valve 2P connector (A).

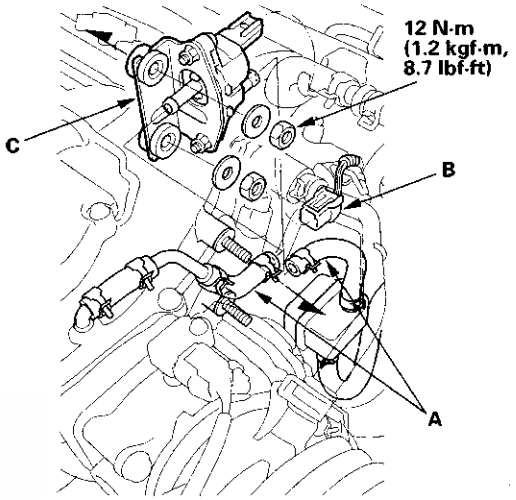


2. Remove the cap (B).
3. Remove the EVAP canister vent shut valve (C).
4. Install the parts in the reverse order of removal with new O-rings (D) and a new cap.

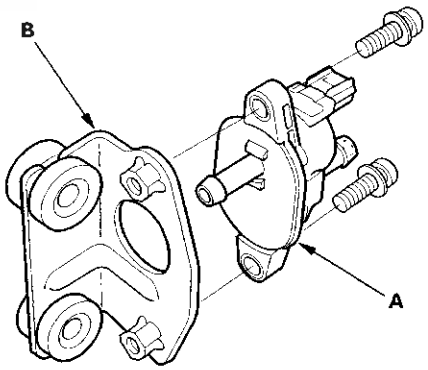
   NOTE: Do not coat the O-rings with oil.

EVAP Canister Purge Valve Replacement

1. Disconnect the hoses (A) and the EVAP canister purge valve 2P connector (B).



2. Remove the EVAP canister purge valve assembly (C).
3. Remove the EVAP canister purge valve (A) from the bracket (B).



4. Install the parts in the reverse order of removal.

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Transaxle

Clutch **12-1**

Manual Transmission **13-1**

Automatic Transmission **14-1**

Driveline/Axle **16-1**

HONDA

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Clutch

Clutch

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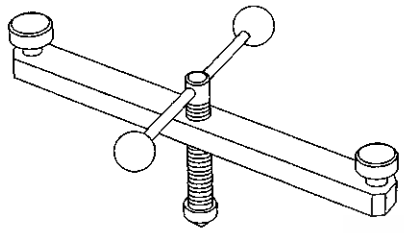
Component Location Index 12-3
System Description 12-4
Clutch Hydraulic System Bleeding 12-9
Clutch Pedal, Clutch Pedal Position Switch, and Clutch Interlock Switch Adjustment 12-10
Clutch Pedal Assembly Replacement 12-12
Clutch Master Cylinder Replacement 12-13
Slave Cylinder Replacement 12-15
Clutch Hose Replacement 12-17
Clutch Replacement 12-19

Outline of Model Changes

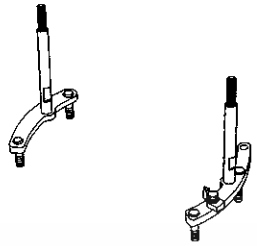
- J35Z3 engine model has been added; related information is included.
- The self-adjust clutch (SAC) with the dualmass flywheel has been added.

Special Tools

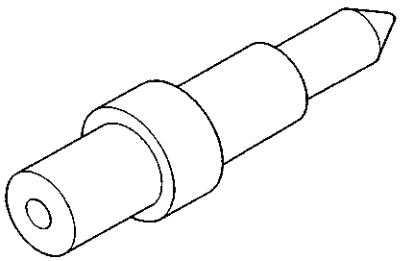
Ref. No.	Tool Number	Description	Qty
①-1	07AAE-P8EA000 or 07AAE-P8EA110	Pressure Plate Compressor	1
①-2	07AAE-P8EA220	3.5 Engine Clutch Compressor Adapters	2
②	07AAF-P8EA000	Clutch Alignment Shaft	1
③	07AAK-P8EA000	Stop Collar	1
④	07LAB-PV00100	Ring Gear Holder	1
⑤	07746-0010200	Bearing Driver Attachment, 37 x 40 mm	1
⑥	07749-0010000	Driver Handle, 15 x 135L	1



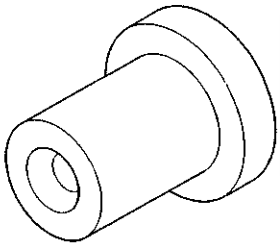
①-1



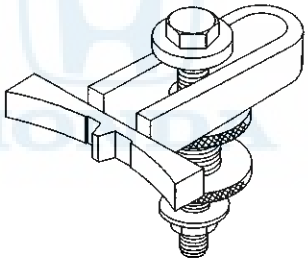
①-2



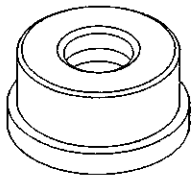
②



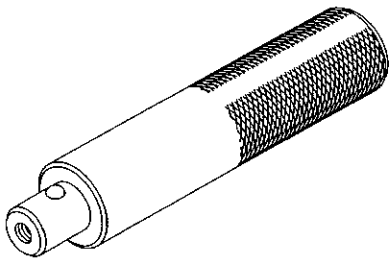
③



④

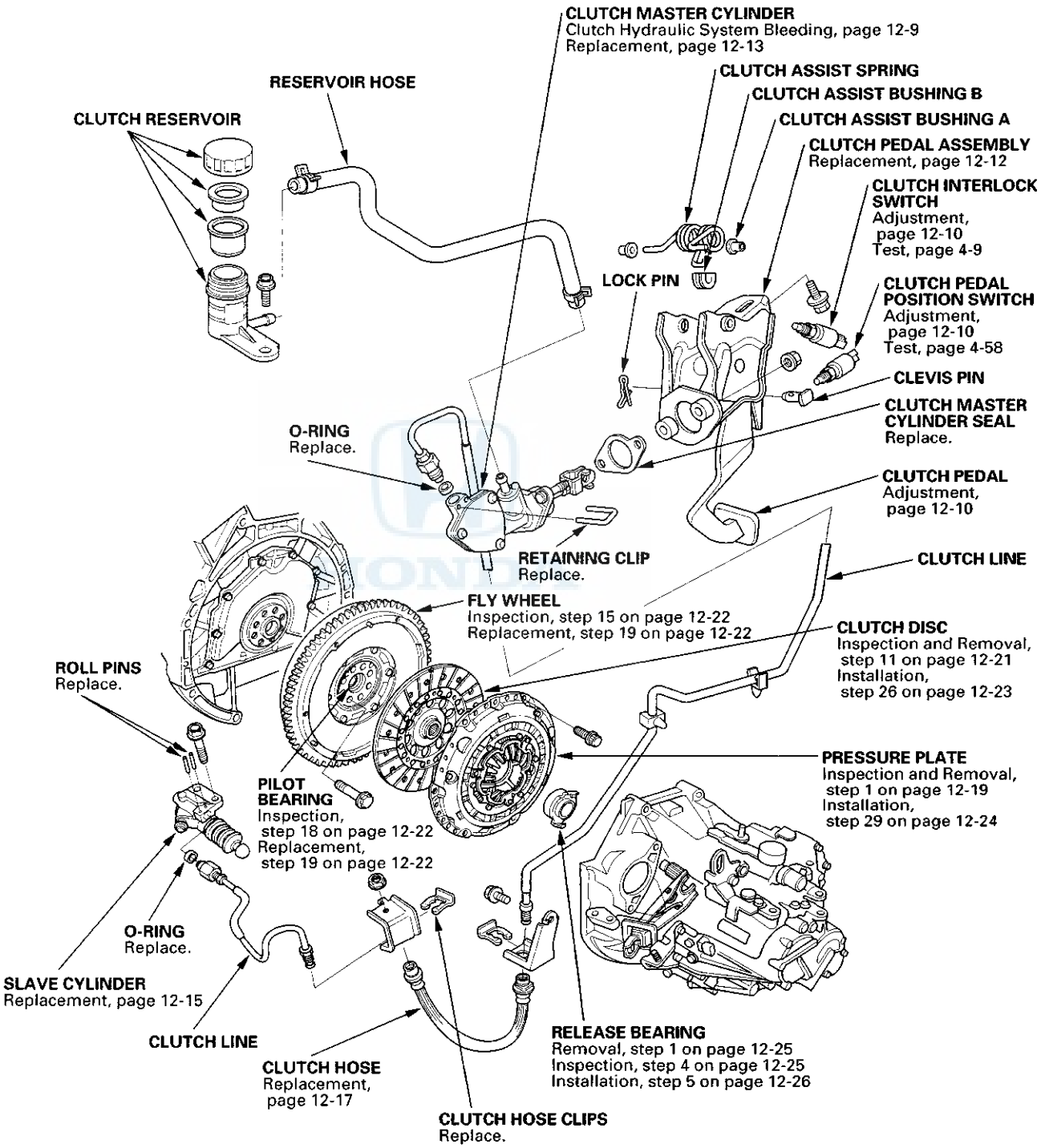


⑤



⑥

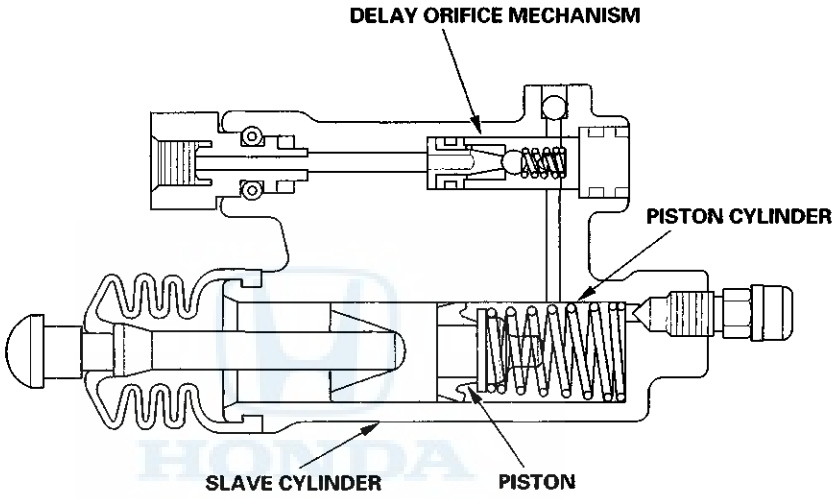
Component Location Index



System Description

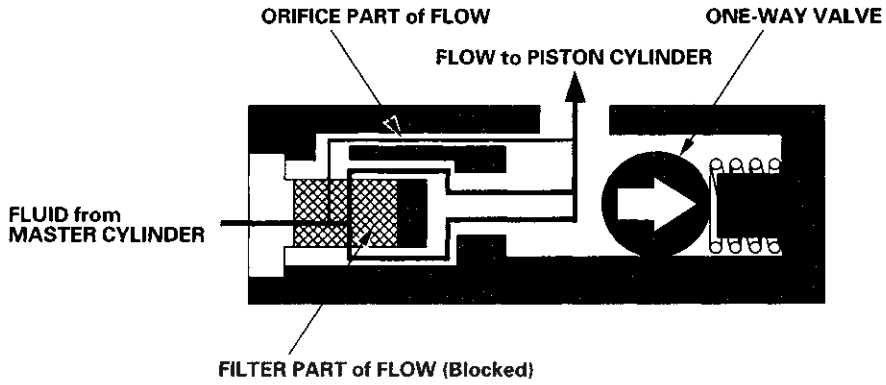
Delay Orifice Mechanism

Function
The delay orifice mechanism improves clutch operation by delaying the slave cylinder release speed when the clutch pedal is suddenly released. The delay orifice mechanism is built into the slave cylinder.

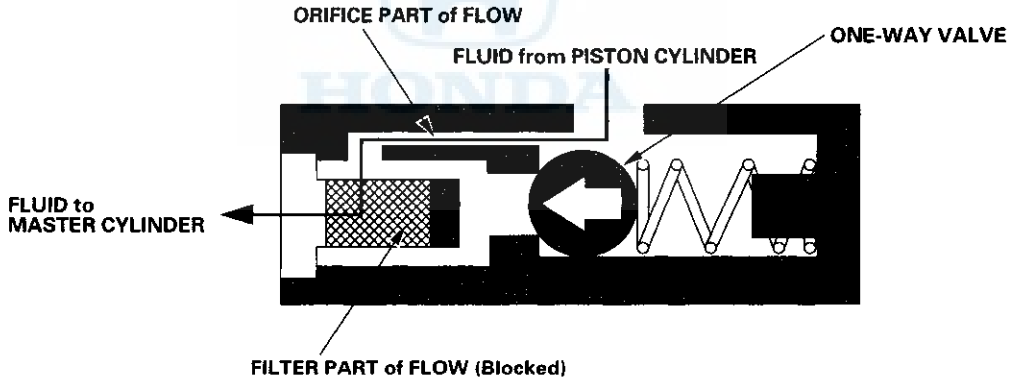


Fluid flow operation

When the clutch pedal is pressed, the fluid pressure from the master cylinder moves the one-way valve in the direction shown in the illustration. The fluid flows through two passages: the orifice part and the filter part. It then flows out to the piston cylinder to release the pressure plate and clutch disc joint.



When the clutch pedal is released, the fluid pressure from the piston cylinder moves the one-way valve in the direction shown in the illustration. The one-way valve blocks the filter-part passage and delays the clutch release speed by returning the fluid to the master cylinder through only the orifice-part passage.



(cont'd)

System Description (cont'd)

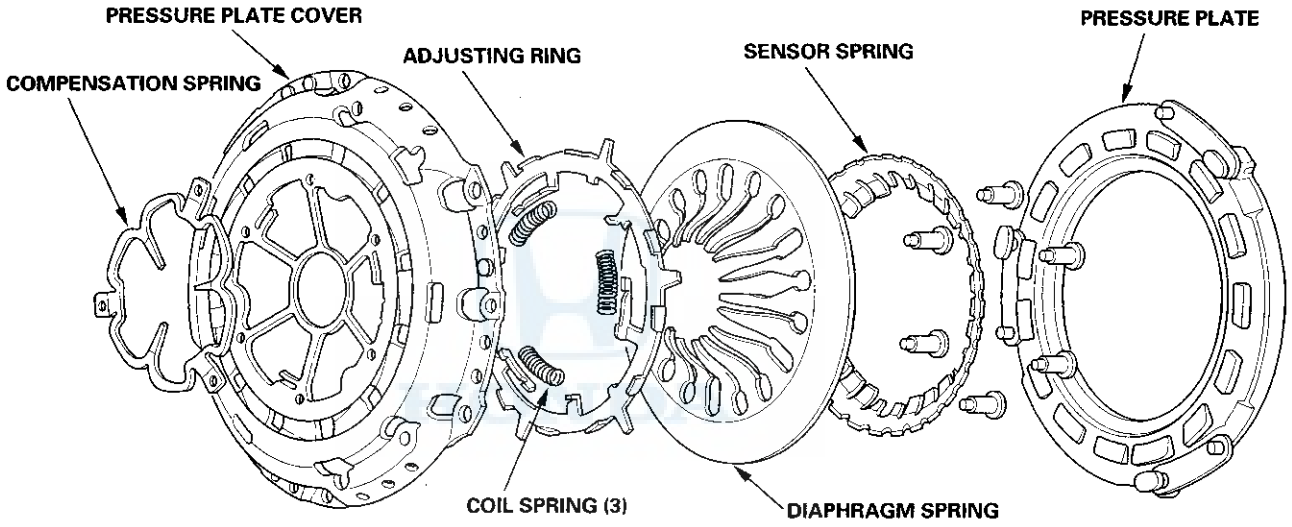
Self-Adjusting Clutch (SAC)

Function

On conventional clutches, the clutch pedal load increases as the clutch disc wears. The self-adjusting clutch is designed so the clutch pedal load will not increase even when the clutch disc wears. This is done by automatically adjusting the fulcrum of the diaphragm spring as the clutch disc wears. The clutch pedal load stays consistent even when the clutch disc is worn.

Construction

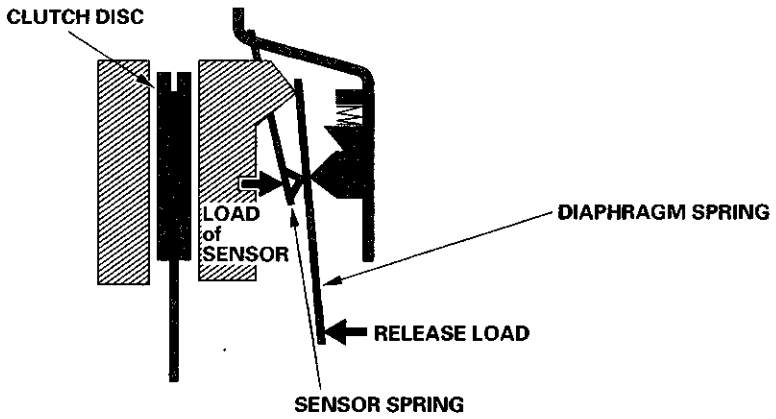
The self-adjusting clutch consists of a pressure plate, a sensor spring, a diaphragm spring, an adjusting ring, three coil springs, a pressure plate cover, and a compensation spring. They are riveted together and must not be disassembled. If there is problem with any part of the pressure plate or clutch disc, they must be replaced together as a set.



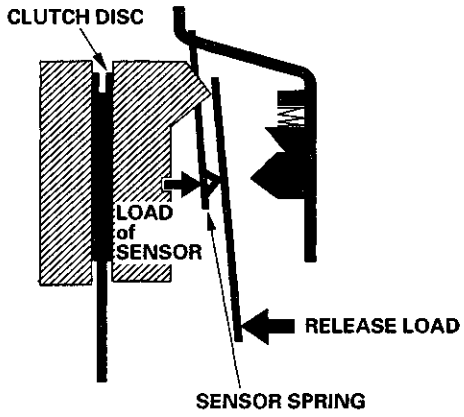
Operation

Minor clutch disc wear:

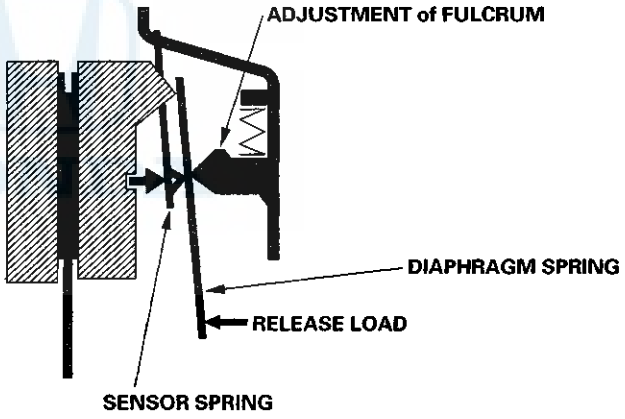
As the clutch begins to wear, the release load increases slightly. However, this does not affect the operation of the clutch because the release load does not exceed that of the sensor.



Major clutch disc wear:
The sensor spring starts to deflect as the clutch disc is worn further and the release load exceeds that of the sensor.



The fulcrum then moves following the amount of sensor spring deflection. As this takes place, the fulcrum of the diaphragm spring is adjusted, keeping the release load consistent.



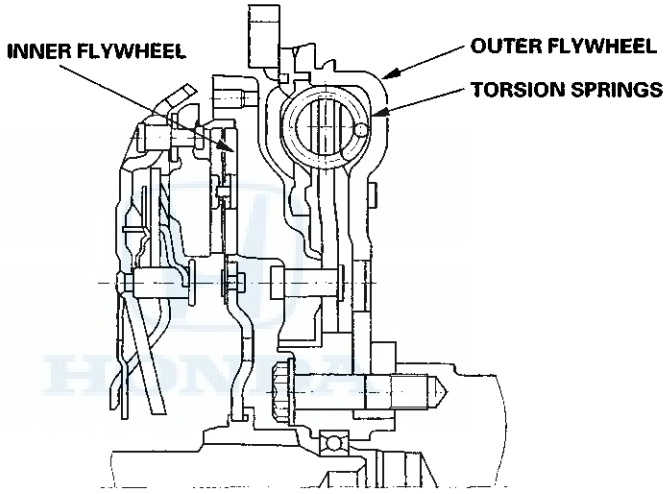
(cont'd)

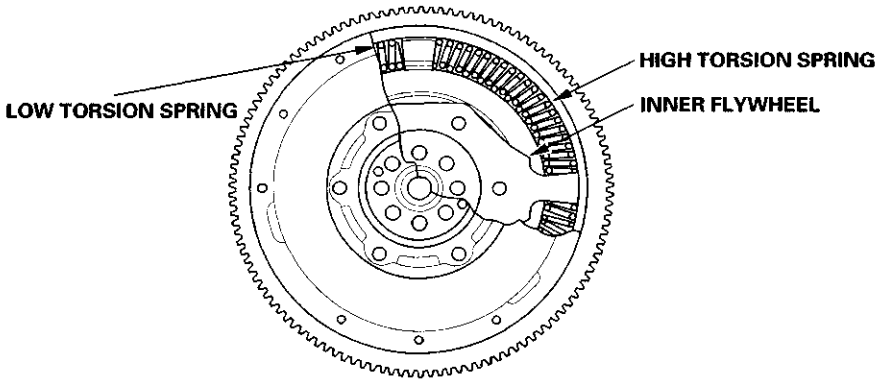
System Description (cont'd)

Dual Mass Flywheel

Function
The dual mass flywheel is designed to reduce the noise and vibration produced by the engine, clutch, and transmission during acceleration and cruising.

Construction
The flywheel assembly is actually two flywheels in one, which raises the inertial mass on both the engine and transmission. The inner and outer flywheels are connected by high and low torsion springs. This combination effectively dampers changes in engine speed before they are transmitted to the transmission.
Since there are high and low torsion springs between the flywheels, none are used in the clutch disc, which reduces the inertial mass on the mainshaft. This reduction of the rotating inertial mass reduces the load on the synchro rings, allowing the transmission to shift smoothly.



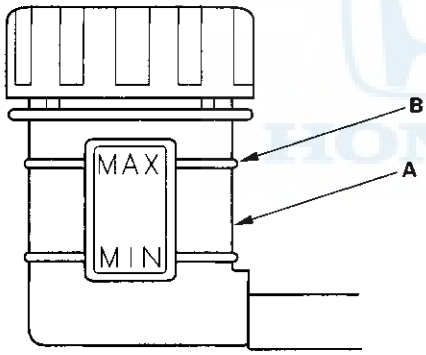


Clutch Hydraulic System Bleeding

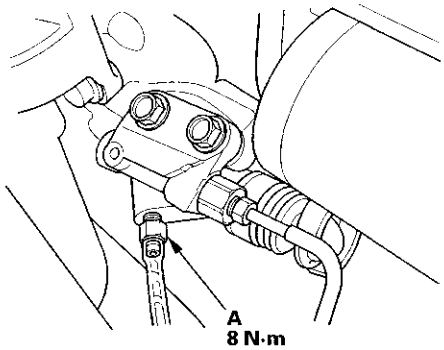
NOTE:
- Do not reuse the drained fluid. Always use Honda DOT 3 Brake Fluid from an unopened container. Using a non-Honda brake fluid can cause corrosion and shorten the life of the system.
- Make sure no dirt or other foreign matter is allowed to contaminate the brake fluid.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic. If brake fluid does contact the paint or plastic, wash it off immediately with water.
- If may be necessary to limit the movement of the release fork with a block of wood to remove all the air from the system.
- Use fender covers to avoid damaging painted surfaces.

1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

2. Make sure the brake fluid level in the clutch reservoir (A) is at the MAX (upper) level line (B).



3. Attach one end of a clear tube to the bleeder screw (A), and put the other end into a container. Loosen the bleeder screw to allow air to escape from the system.



4. Make sure there is an adequate supply of fluid in the reservoir, then slowly push the clutch pedal all the way down. Before releasing the pedal, have an assistant temporarily tighten the bleeder screw. Loosen the bleeder screw, and push the clutch pedal down again. Repeat this step until no more bubbles appear at the clear tube.

   NOTE: Make sure the fluid level on the reservoir does not go below MIN.

5. Tighten the bleeder screw securely.

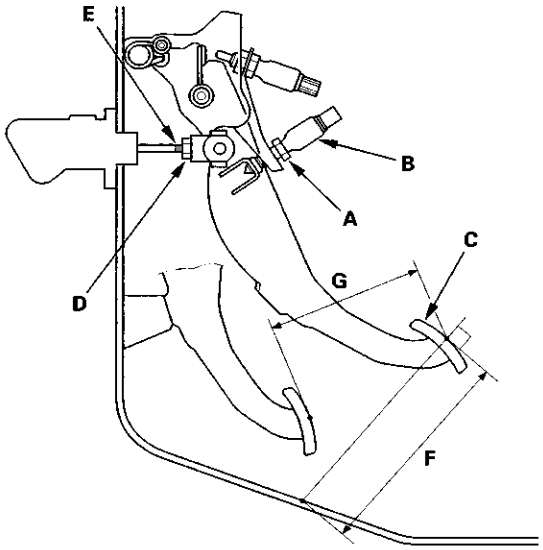
6. Refill the brake fluid in the reservoir to the MAX (upper) level line.

7. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Clutch Pedal, Clutch Pedal Position Switch, and Clutch Interlock Switch Adjustment

NOTE:
- For a cruise control problem, check the clutch pedal position switch (see page 4-58).
- For a clutch interlock operation problem, check the clutch interlock switch (see page 4-9).
- Remove the driver's floor mat before adjusting the clutch pedal.
- If there is no clearance between the master cylinder piston and push rod, the release bearing will be held against the diaphragm spring, which can result in clutch slippage or other clutch problems.

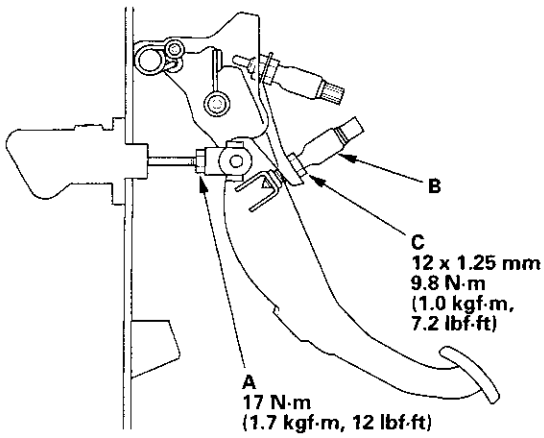
1. Disconnect the clutch pedal position switch connector and the clutch interlock switch connector.
2. Loosen the clutch pedal position switch locknut (A), and back off the clutch pedal position switch (B) until it no longer touches the clutch pedal (C).



3. Loosen the clutch pushrod locknut (D), and turn the pushrod (E) in or out to get the specified height (F), and the stroke (G) at the clutch pedal. If adjusting the pushrod causes the clutch pedal to contact the clutch pedal position switch, back off the switch further.

F Clutch Pedal Height: 179 mm (7.05 in.)
G Clutch Pedal Stroke: 135—145 mm (5.31—5.71 in.)

4. Tighten the clutch pushrod locknut (A).

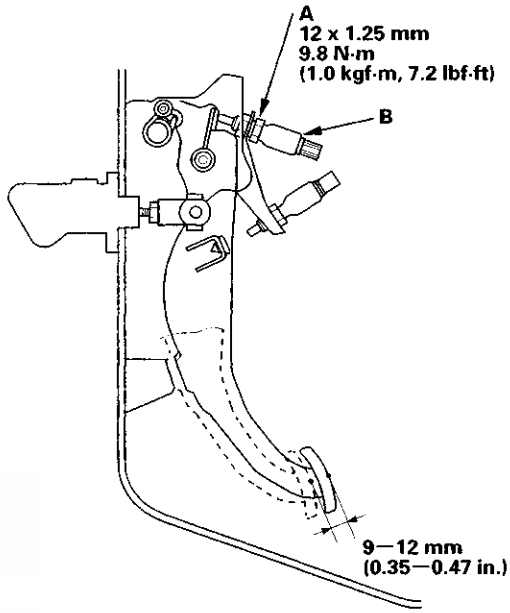


5. With the clutch pedal released, turn in the clutch pedal position switch (B) until it contacts the clutch pedal.

6. Turn in the clutch pedal position switch an additional 3/4 to 1 turn. Make sure the clutch pedal height didn't change.

7. While holding the clutch pedal position switch, tighten the locknut (C).

8. Loosen the clutch interlock switch locknut (A).



9. Fully press the clutch pedal to the floor, then release the clutch pedal 9—12 mm (0.35—0.47 in.) and hold it there.

10. Adjust the position of the clutch interlock switch (B) so the engine starts with the clutch pedal in this position.

11. While holding the clutch interlock switch, tighten the locknut.

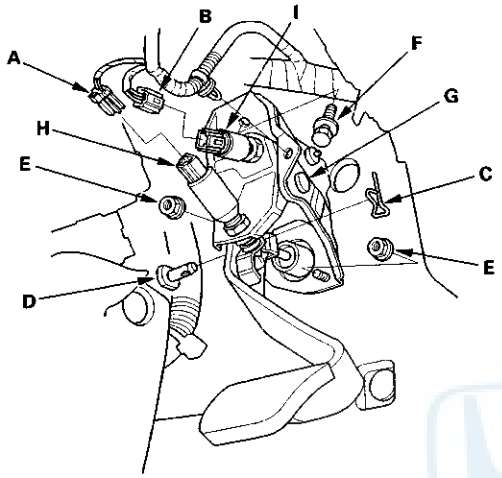
12. Check the clutch operation.

13. Connect the clutch pedal position switch connector and the clutch interlock switch connector, then check the cruise control and clutch interlock operation.

Clutch Pedal Assembly Replacement

1. Remove the driver's dashboard undercover (see page 20-5).

2. Disconnect the clutch pedal position switch connector (A) and the clutch interlock switch connector (B).



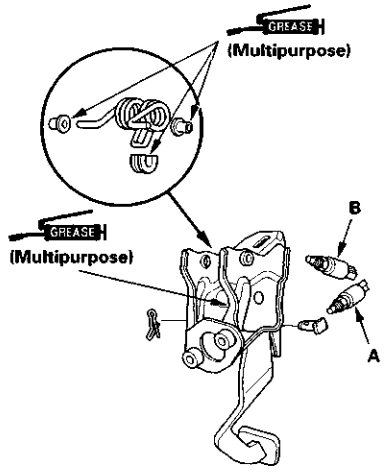
3. Pry out the lock pin (C), and pull the clevis pin (D) out of the clevis.

4. Remove the master cylinder mounting nuts (E) and clutch pedal mounting bolt (F).

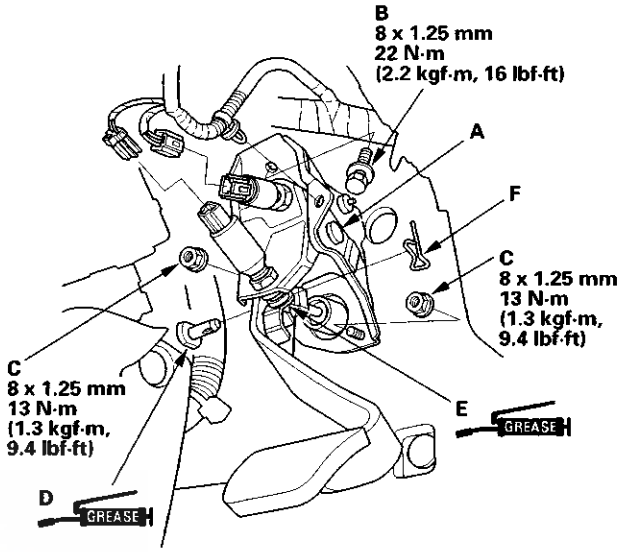
5. Remove the clutch pedal assembly (G).

6. Remove the clutch pedal position switch (H) and the clutch interlock switch (I).

7. Loosely install the clutch pedal position switch (A) and the clutch interlock switch (B).



8. Install the clutch pedal assembly (A).



9. Install the clutch pedal mounting bolt (B) and the master cylinder mounting nuts (C).

10. Apply multipurpose grease to the clevis pin (D) and the mating surfaces (E) of the clevis and the pedal. Slide the clevis pin into the clevis, then install a lock pin (F).

11. Adjust the clutch pedal, the clutch pedal position switch, and the clutch interlock switch (see page 12-10).

    NOTE: Connect the switch connectors after adjusting them.

12. Check the clutch operation.

13. Reinstall the driver's dashboard undercover (see page 20-5).

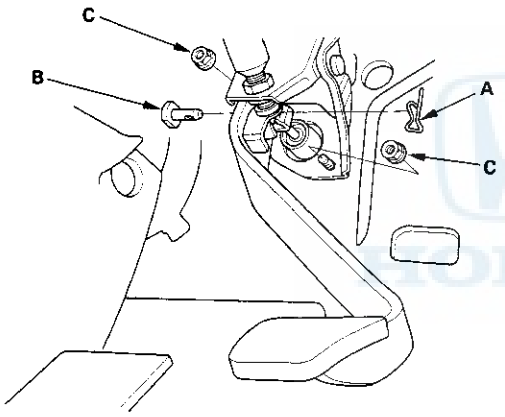
Clutch Master Cylinder Replacement

NOTE:
- Use fender covers to avoid damaging painted surfaces.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic. If brake fluid does contact the paint or plastic, wash it off immediately with water.

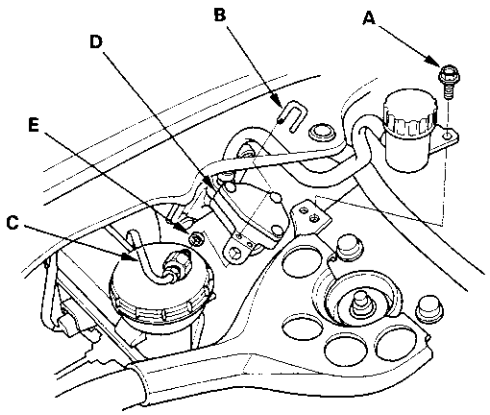
1. Remove and discard the brake fluid from the clutch master cylinder reservoir with a syringe or other suitable device.

2. Remove the driver's dashboard undercover (see page 20-5).

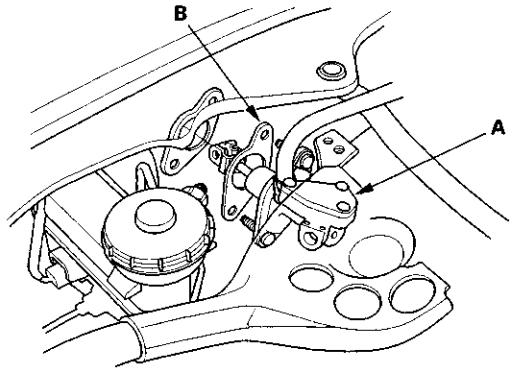
3. Pry out the lock pin (A), and pull the clevis pin (B) out of the clevis. Remove the master cylinder mounting nuts (C).



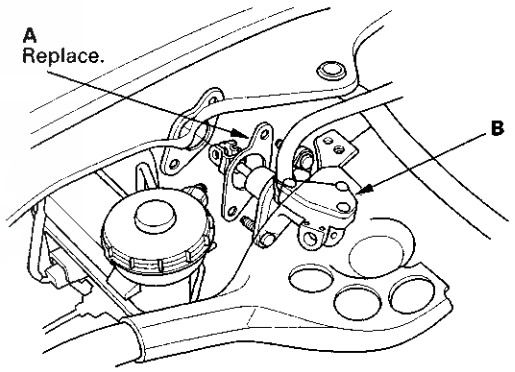
4. Remove the reservoir mounting bolt (A) and the retaining clip (B) then disconnect the clutch line (C) from the clutch master cylinder (D), and remove the O-ring (E). Plug or wrap the end of the clutch line with a clean shop towel to prevent brake fluid from coming out.



5. Remove the master cylinder (A) and the master cylinder seal (B).



6. Install a new master cylinder seal (A), then install the master cylinder (B).

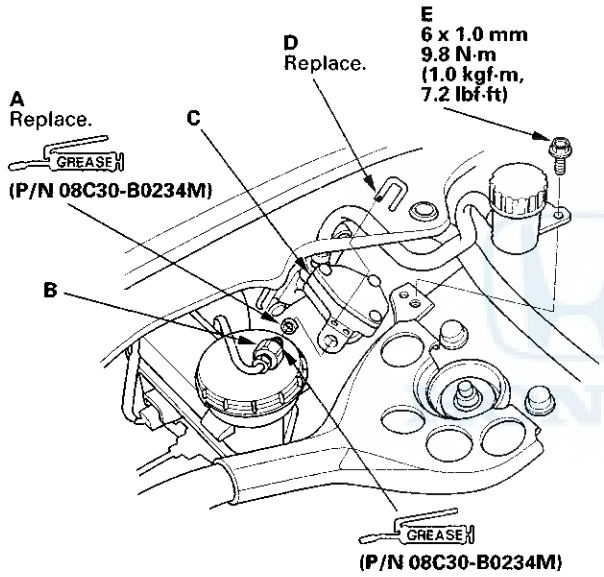


(cont'd)

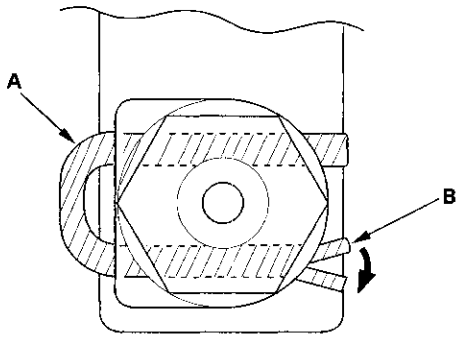
Clutch Master Cylinder Replacement (cont'd)

7. Install a new O-ring (A) on the clutch line (B), then install the clutch line in the clutch master cylinder (C), with a new retaining clip (D). Install the mater cylinder reservoir mounting bolt (E).

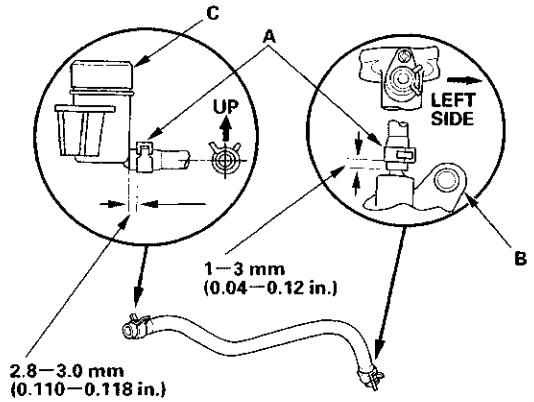
   NOTE:
   - Apply the silicone grease (P/N 08C30-B0234M) on the O-ring and the end of the clutch line.
   - Make sure not to get any silicone grease on the terminal part of the connectors and switches, especially if you have silicone grease on your hands or gloves.



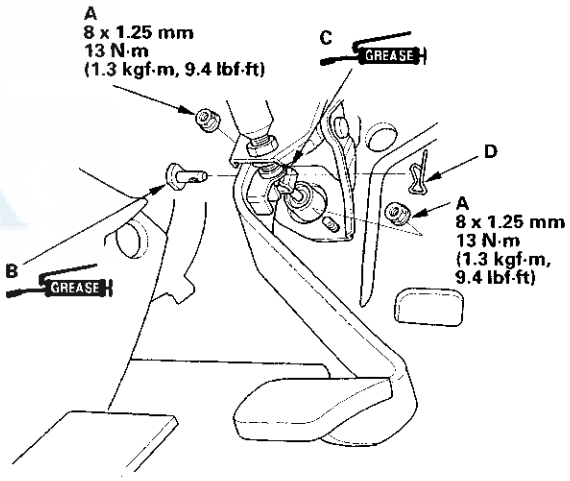
8. To prevent the retaining clip (A) from coming off, pry apart the tip of the clip (B) with a screwdriver.



9. Make sure the hose clamps (A) are positioned on the master cylinder (B) and reservoir (C) as shown.



10. Install the master cylinder mounting nuts (A).



11. Apply multipurpose grease to the clevis pin (B) and the mating surfaces (C) of the clevis and the pedal. Slide the clevis pin into the clevis, then install a lock pin (D).

12. Bleed the clutch hydraulic system (see page 12-9).

13. Adjust the clutch pedal, the clutch pedal position switch, and the clutch interlock switch (see page 12-10).

14. Check the clutch operation and check for leaks.

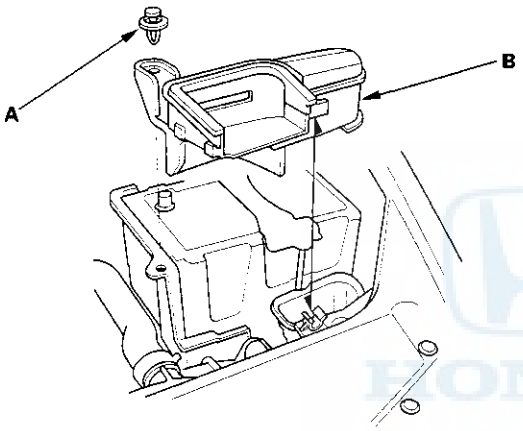
15. Install the driver's dashboard undercover (see page 20-5).

16. Test-drive the vehicle.

Slave Cylinder Replacement

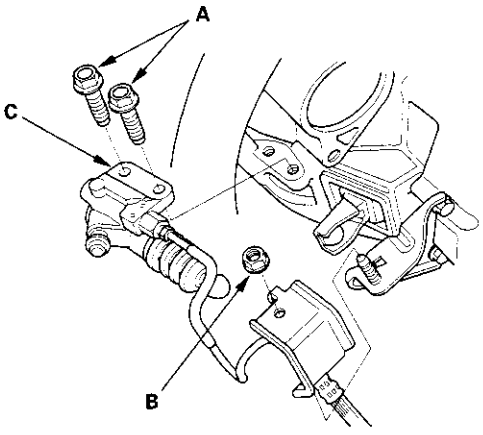
NOTE:
- Use fender covers to avoid damaging painted surfaces.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic. If brake fluid does contact the paint or plastic, wash it off immediately with water.
- Make sure not to get any silicone grease on the terminal part of the connectors and switches, especially if you have silicone grease on your hands or gloves.

1. Remove the clip (A), then remove the splash separator (B).

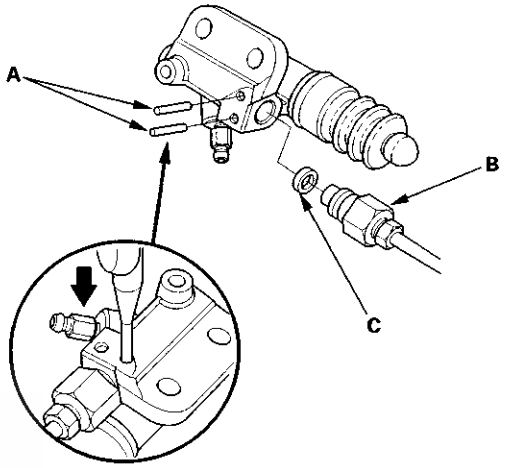


2. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

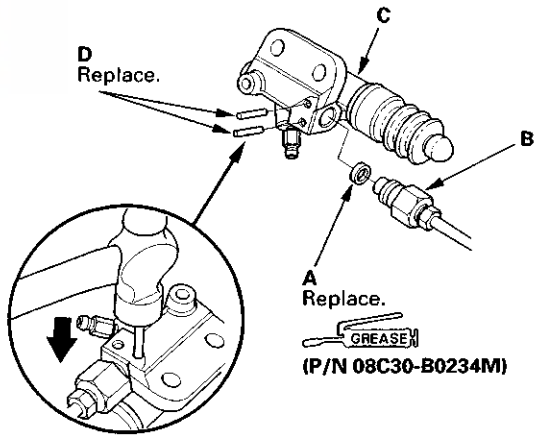
3. Remove the mounting bolts (A), the bracket mounting nut (B), and the slave cylinder (C).



4. Remove the roll pins (A). Disconnect the clutch line (B), and remove the O-ring (C). Plug or wrap the end of the clutch line with a clean shop towel to prevent brake fluid from coming out.



5. Install a new O-ring (A) on the clutch line (B), install the clutch line in the slave cylinder (C), and install the new roll pins (D).



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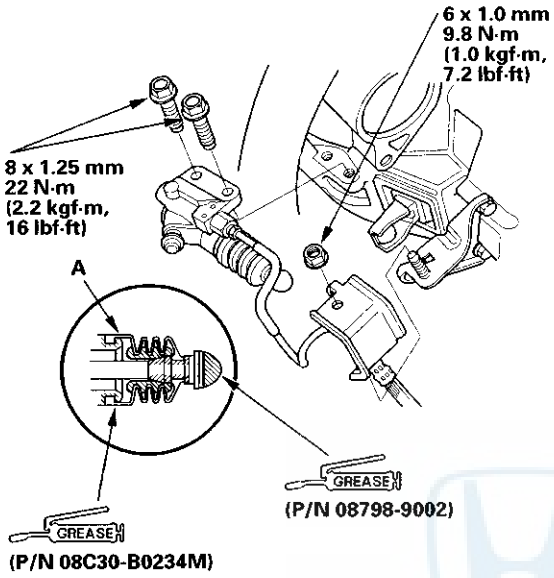
Slave Cylinder Replacement (cont'd)

6. Pull back the boot (A), and apply silicone grease (P/N 08C30-B0234M) to the boot and slave cylinder. Reinstall the boot.



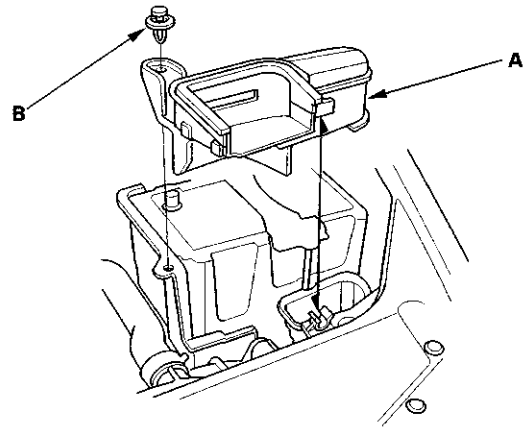
7. Apply a light coat of super high temp urea grease (P/N 08798-9002) to the end of the slave pushrod. Tighten the slave cylinder mounting bolts and the bracket mounting nut.

8. Bleed the clutch hydraulic system (see page 12-9).

9. Check the clutch operation, and check for leaks.

10. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

11. Install the splash separator (A) with a clip (B).

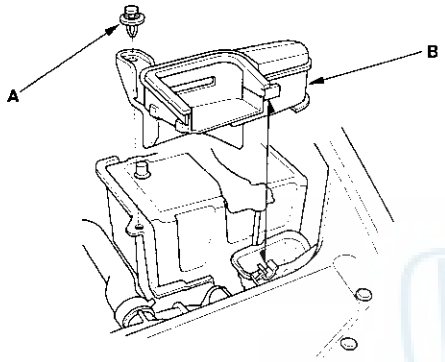


12. Test-drive the vehicle.

Clutch Hose Replacement

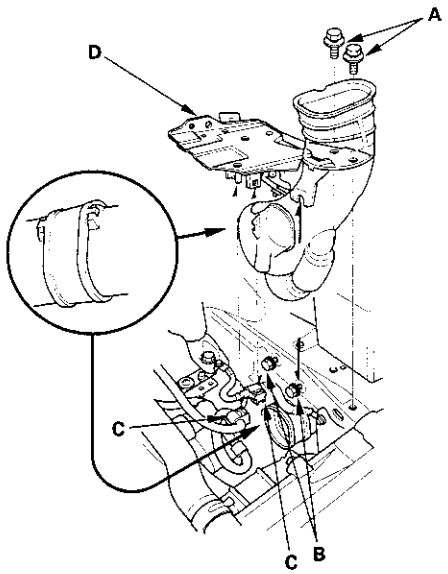
NOTE:
- Replace the clutch hose it is twisted, cracked, or if it leaks.
- Use fender covers to avoid damaging painted surfaces.
- Do not spill brake fluid on the vehicle; it may damage the paint or plastic; if brake fluid does contact the paint or plastic, wash it off immediately water.

1. Remove the clip (A), then remove the splash separator (B).

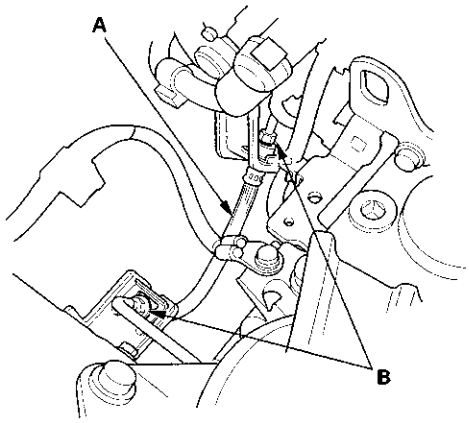


2. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

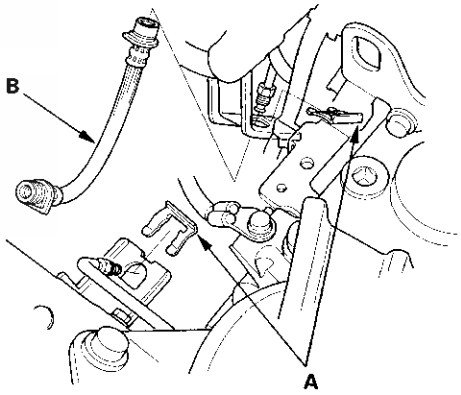
3. Remove the battery base bolts (A), loosen the two bolts (B), remove the cable clamps (C), then remove the battery base (D).



4. Disconnect the clutch hose (A) from the clutch lines (B).



5. Remove and discard the clutch hose clips (A) from the clutch hose (B).

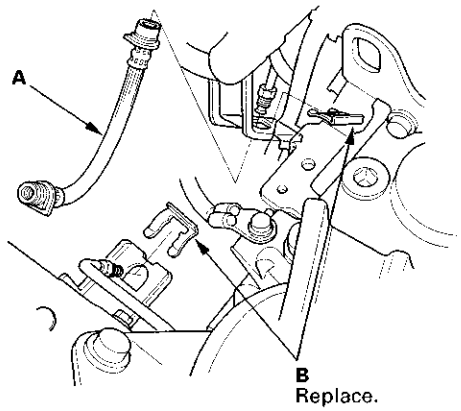


6. Remove the clutch hose from the clutch hose brackets.

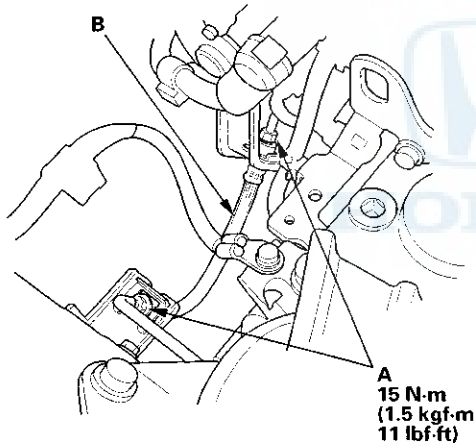
(cont'd)

Clutch Hose Replacement (cont'd)

7. Install the clutch hose (A) into the clutch hose brackets with the new clutch hose clips (B).



8. Connect the clutch lines (A) to the clutch hose (B).

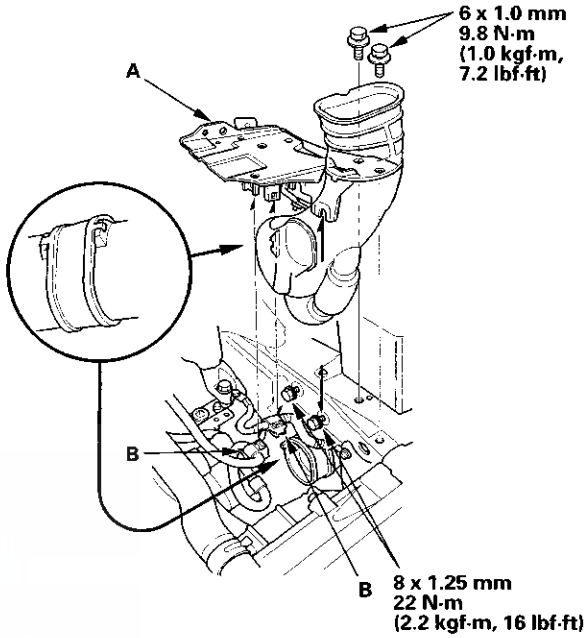


9. Bleed the clutch hydraulic system (see page 12-9).

10. Do the following checks:

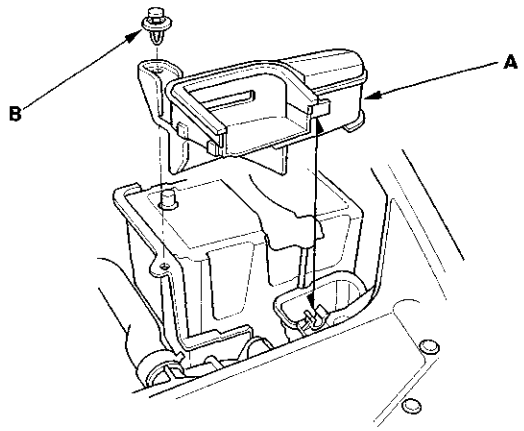
    - Check the clutch hose and line joint for leaks, and tighten if necessary.
    - Check the clutch hose for interference and twisting.

11. Install the battery base (A), and the cable clamps (B).



12. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

13. Install the splash separator (A) with a clip (B).



Clutch Replacement

Special Tools Required
- Pressure plate compressor 07AAE-P8EA000 or 07AAE-P8EA110
- 3.5 Engine clutch compressor adapters 07AAE-P8EA220
- Clutch alignment shaft 07AAF-P8EA000
- Stop collar 07AAK-P8EA000
- Ring gear holder 07LAB-PV00100
- Bearing driver attachment, 37 x 40 mm 07746-0010200
- Driver handle, 15 x 135L 07749-0010000

Engine Side

NOTICE

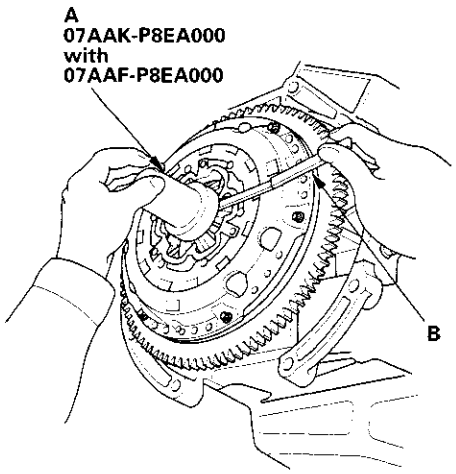
You must use the pressure plate compressor, the 3.5 engine clutch compressor adapters, the clutch alignment shaft, and the stop collar required to remove and install the clutch pressure plate or you will damage it.

Pressure Plate Inspection and Removal

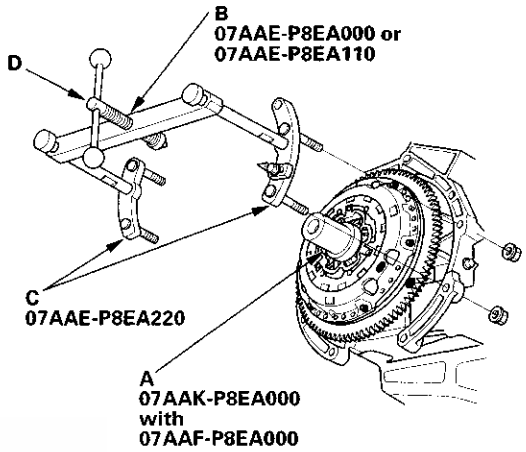
1. Remove the transmission (see page 13-18).

2. Check the evenness of the height of the diaphragm spring fingers using the clutch alignment shaft, the stop collar (A), and a feeler gauge (B). If the height difference is more than the service limit, replace the pressure plate and clutch disc as a set.

   Standard (New): 0.6 mm (0.02 in.) max.
   Service Limit: 0.8 mm (0.03 in.)



3. Install the clutch alignment shaft, the stop collar (A), the pressure plate compressor (B), and the 3.5 engine clutch compressor adapters (C).

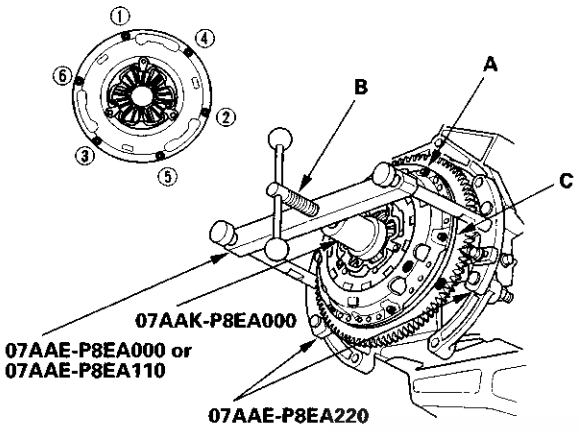


4. Turn the center screw (D) clockwise by hand to apply pressure on the diaphragm spring. Continue turning the center screw until it stops.

(cont'd)

Clutch Replacement (cont'd)

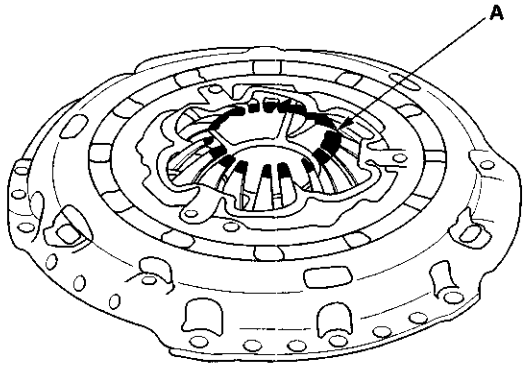
5. Loosen the pressure plate mounting bolts (A) in the pattern shown in several steps, then remove the bolts.



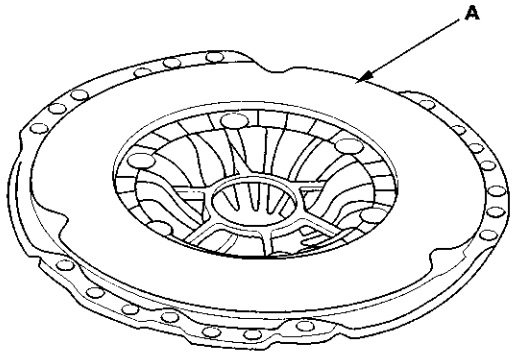
6. Turn the center screw (B) on the pressure plate compressor counterclockwise by hand to release the pressure, then install two pressure plate mounting bolts by finger-tight to hold the pressure plate (C).

7. Remove the pressure plate compressor, the stop collar, and the clutch compressor adapters, then remove the finger-tightened bolts and the pressure plate.

8. Inspect the fingers of the diaphragm spring (A) for wear at the release bearing contact area.

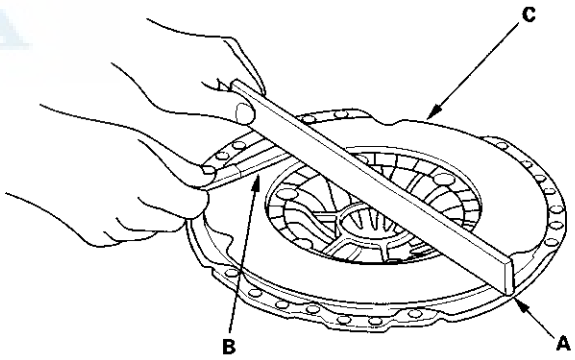


9. Inspect the pressure plate surface (A) for wear, cracks, and burning.



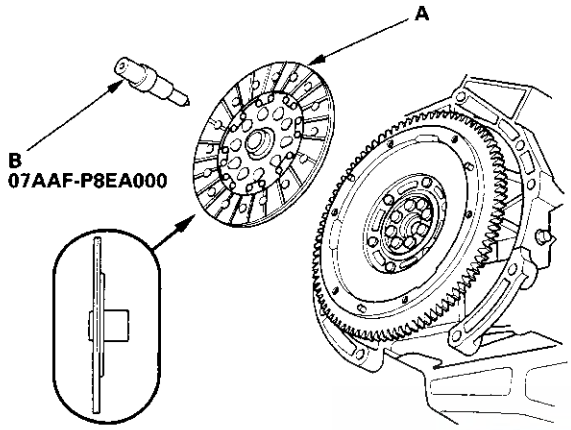
10. Inspect for warpage using a straight edge (A) and a feeler gauge (B). Measure across the pressure plate (C). If the any measured point is more than the service limit, replace the pressure plate and clutch disc as a set.

Standard (New): 0.03 mm (0.001 in.) max.
Service Limit: 0.15 mm (0.006 in.)



Clutch Disc Inspection and Removal

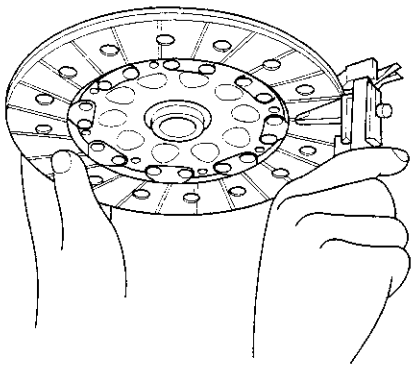
11. Remove the clutch disc (A) and the clutch alignment shaft (B).



12. Inspect the lining of the clutch disc for signs of slippage or oil. If the clutch disc looks burnt or is oil soaked, replace the clutch disc and the pressure plate as a set. If the clutch disc is oil soaked, find and repair the source of the oil leak.

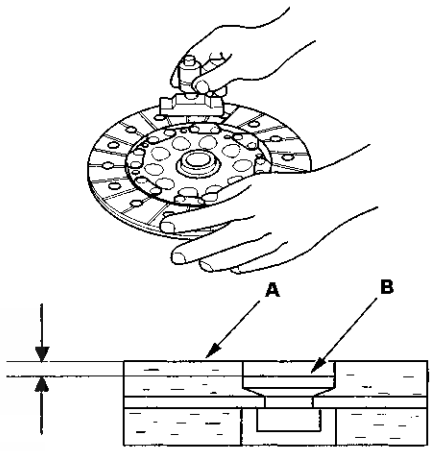
13. Measure clutch disc thickness. If the measurement is less than the service limit, replace the clutch disc and pressure plate as a set.

Standard (New): 8.68—9.53 mm (0.342—0.375 in.)
Service Limit: 7.2 mm (0.283 in.)



14. Measure the depths of the rivets from the clutch disc lining surface (A) to the rivets (B) on both sides. If the measurement is less than the service limit, replace the clutch disc and pressure plate as a set.

Standard (New): 1.0 mm (0.039 in.) min.
Service Limit: 0.2 mm (0.008 in.)



(cont'd)

Clutch Replacement (cont'd)

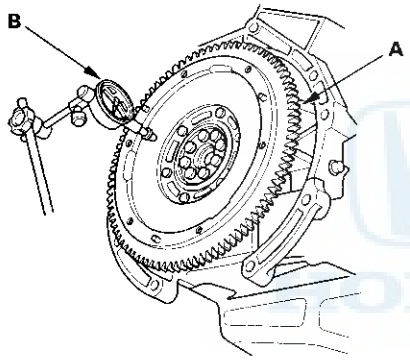
Flywheel Inspection

15. Inspect the ring gear teeth for wear and damage.

16. Inspect the clutch disc mating surface on the flywheel for wear, cracks, and burning.

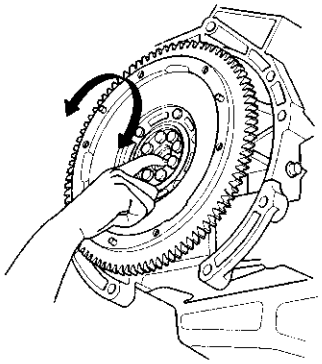
17. Measure the flywheel (A) runout using a dial indicator (B). Through at least two full turns with pushing against the flywheel each time you turn it to take up the crankshaft thrust washer clearance. If the measurement is not within the standard, replace the flywheel, and recheck the runout; go to step 19.

    Standard (New): 0.05—0.45 mm (0.002—0.018 in.)



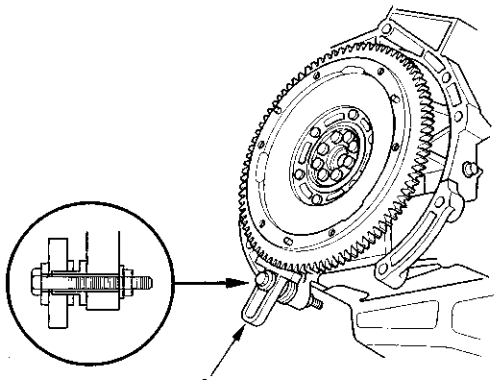
Pilot Bearing Inspection

18. Turn the inner race of the pilot bearing with your finger. The pilot bearing should turn smoothly and quietly. Check that the pilot bearing outer race fits tightly in the flywheel. If the race does not turn smoothly, quietly, or fit tight in the flywheel, replace the pilot bearing; then go to step 19.



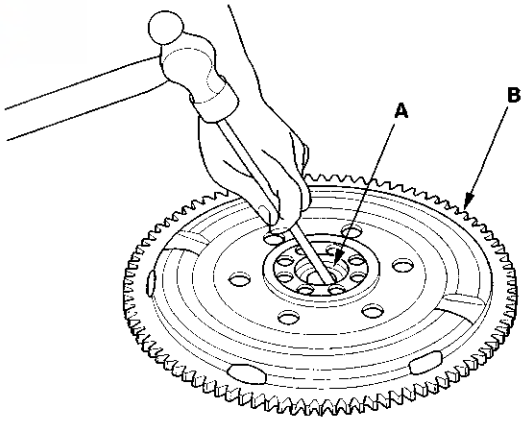
Flywheel and Pilot Bearing Replacement

19. Install the ring gear holder (A).

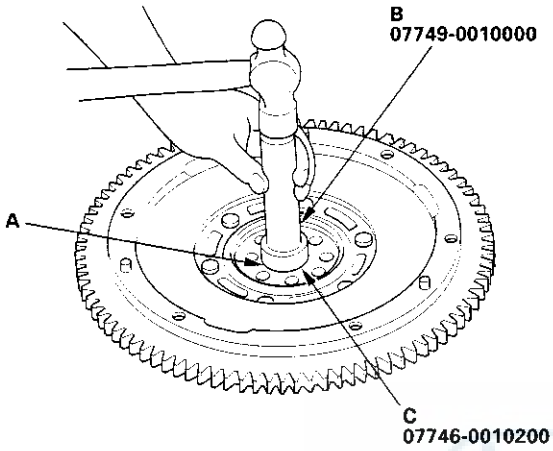


20. Loosen the flywheel mounting bolts in a crisscross pattern in several steps. Remove the bolts, then remove the flywheel and the ring gear holder. Never use air or electric impact tools to prevent irreversibly damage in the flywheel.

21. Remove the pilot bearing (A) from the flywheel (B).

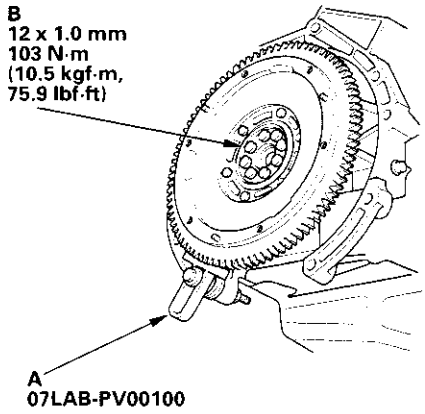


22. Install the new pilot bearing (A) into the flywheel using the 15 x 135L driver handle (B) and the 37 x 40 mm bearing driver attachment (C). Apply a light coat of oil to the bearing outer surface.



23. Install the flywheel on the crankshaft, and install the mounting bolts finger-tight.

24. Install the ring gear holder (A), then torque the flywheel mounting bolts (B) in a crisscross pattern in several steps. Do not use impact tools to tighten the flywheel bolts. Using impact tools may permanently damage the flywheel.



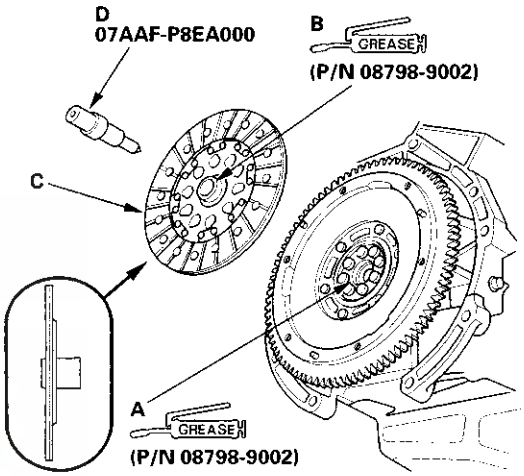
25. Remove the ring gear holder.

Clutch Disc and Pressure Plate Installation

NOTE: The clutch disc and pressure plate are a matched set and must be replaced together.

26. Temporarily install the clutch disc onto the splines of the transmission mainshaft. Make sure the clutch disc slides freely on the mainshaft.

27. Apply a light coat of super high temp urea grease (P/N 08798-9002) to the pilot bearing (A).

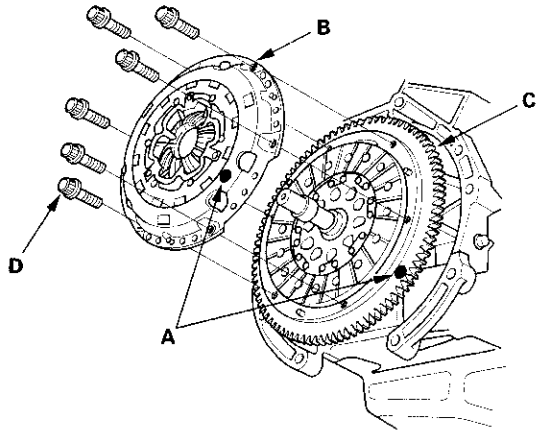


28. Apply super high temp urea grease (P/N 08798-9002) to the splines (B) of the clutch disc (C), then install the clutch disc using the clutch alignment shaft (D).

(cont'd)

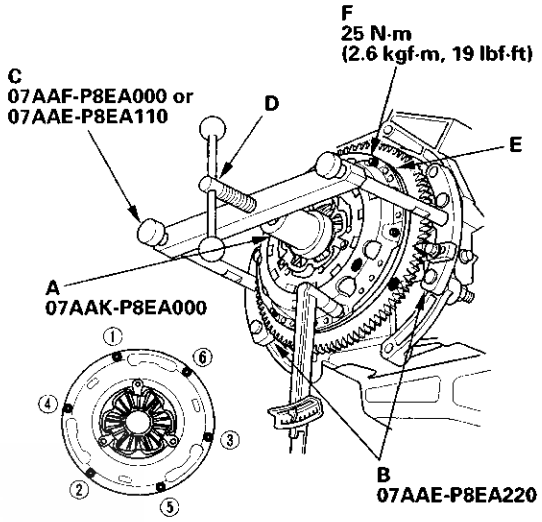
Clutch Replacement (cont'd)

29. Align the point marks (A) across the pressure plate (B) and the flywheel (C).



30. Install the pressure plate and the mounting bolts (D), finger-tight.

31. Install the stop collar (A), the clutch compressor adapters (B), and the pressure plate compressor (C).

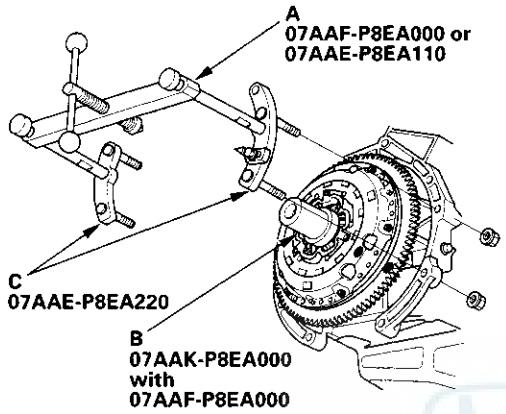


32. Turn the center screw (D) clockwise by hand to apply pressure on the diaphragm spring. Continue turning the center screw until it stops.

33. Be careful not to damage the pressure plate (E). Tighten (180 degrees apart) the pressure plate mounting bolts (F) in the pattern as shown in several steps.

Specified Torque: 25 N·m (2.6 kgf·m, 19 lbf·ft)

34. Turn the center screw on the pressure plate compressor counterclockwise by hand to release the pressure, then remove the pressure plate compressor (A), the stop collar (B), the clutch alignment shaft, and the clutch compressor adapters (C).



35. Make sure the diaphragm spring fingers are all the same height.

36. Do the release bearing inspection, and replace it if necessary.

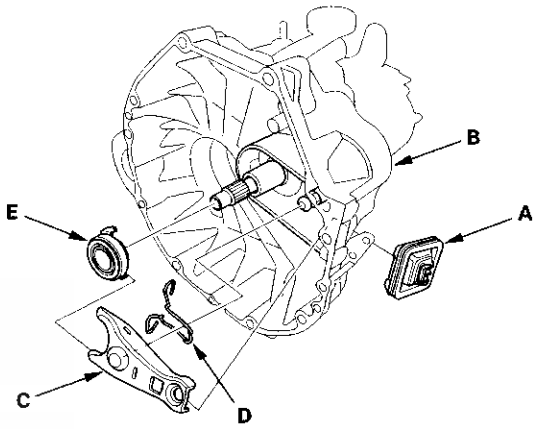
37. Install the transmission (see page 13-29).

Transmission Side

Release Bearing Removal

1. Remove the transmission (see page 13-18).

2. Remove the release fork boot (A) from the clutch housing (B).

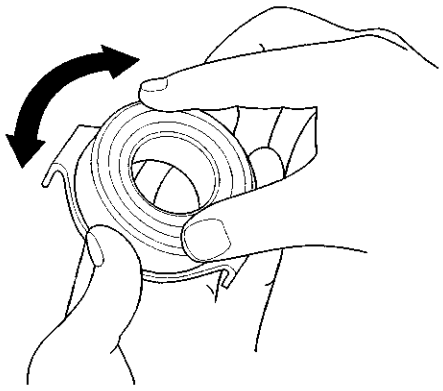


3. Remove the release fork (C) from the clutch housing by squeezing the release fork set spring (D). Remove the release bearing (E).

Release Bearing Inspection

4. Check the play of the release bearing by spinning it by hand. If there is excessive play or noise, replace the release bearing.

   NOTE: The release bearing is packed with grease. Do not wash it in solvent.



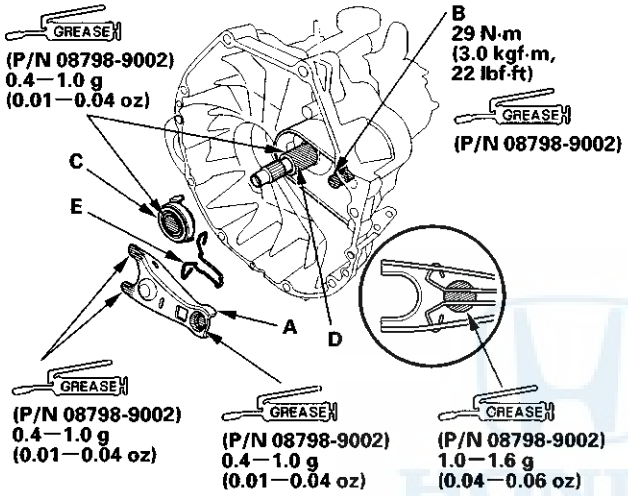
(cont'd)

Clutch Replacement (cont'd)

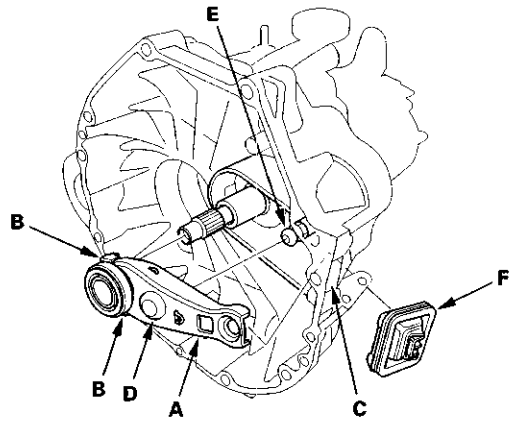
Release Bearing Installation

5. Apply super high temp urea grease (P/N 08798-9002) to the release fork (A), the release fork bolt (B), the release bearing (C), and the release bearing guide (D) in the shaded areas, then set the release fork set spring (E).

   NOTE: Replace the release fork bolt if necessary.



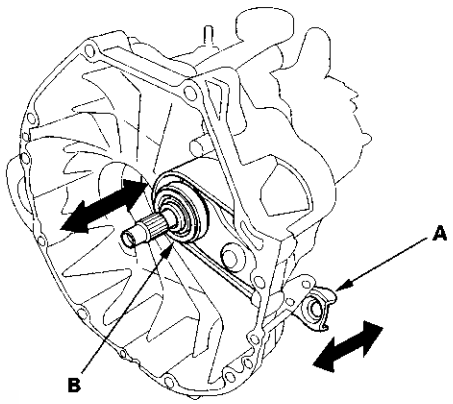
6. With the release fork (A) slide between the release bearing pawls (B), install the release bearing on the mainshaft while inserting the release fork through the hole (C) in the clutch housing.



7. Align the detent (D) of the release fork with the release fork bolt (E), then press the detent of the release fork over the release fork bolt squarely.

8. Install the release fork boot (F). Make sure the boot seals around the release fork and clutch housing.

9. Move the release fork (A) right and left to make sure that it fits properly against the release bearing (B) and that the release bearing slides smoothly. Wipe off any excess grease.



10. Install the transmission (see page 13-29).

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

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NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

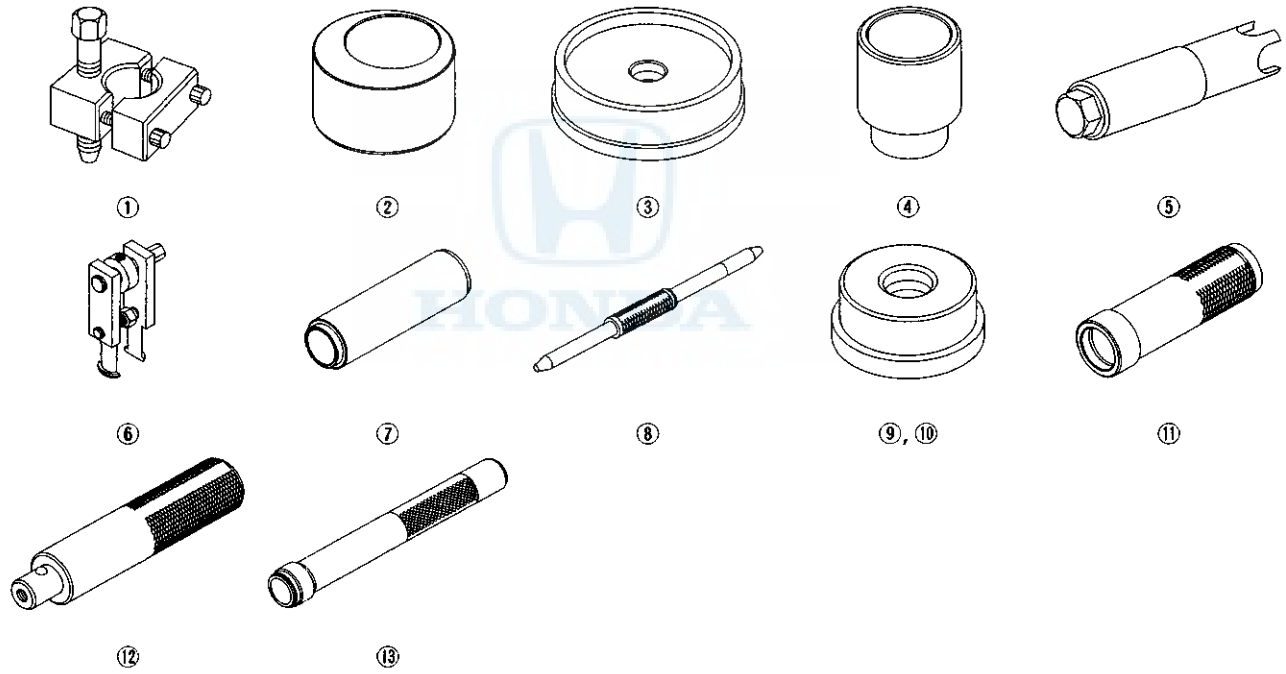
Outline of Model Changes

- The J35Z3 engine model has been added; related information is included.
- The reverse lockout system, the transmission, and the M/T differential type have been changed.

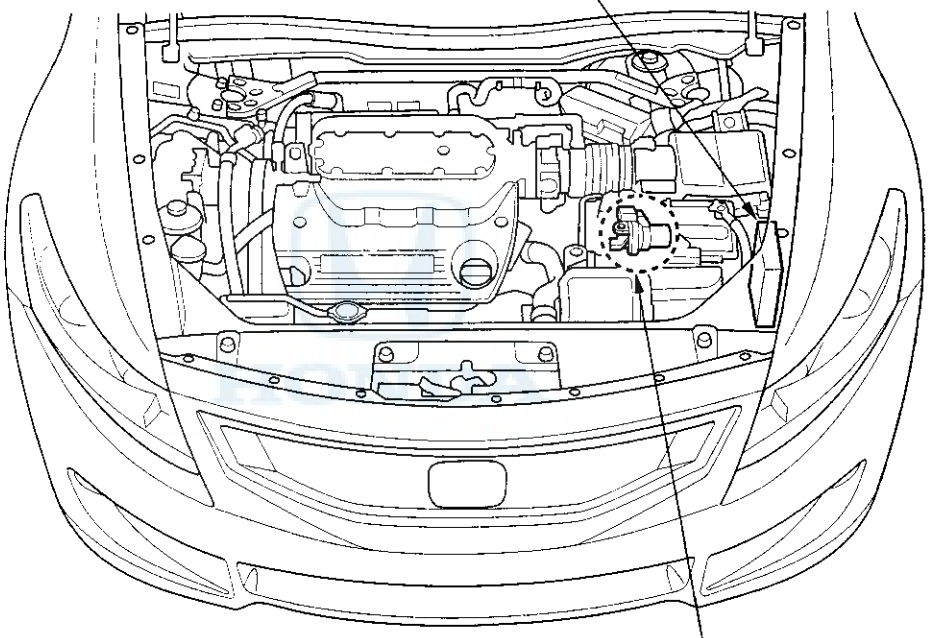
Special Tools

Ref. No.	Tool Number	Description	Qty
*①	07GAJ-PG20110	Catch Adapter	1
*②	07GAJ-PG20130	Base Adapter	1
③	07NAD-PX40100	Bearing Driver Attachment, 78 x 80 mm	1
④	07PAF-0030100	Installer, 22 x 37/46 x 52 mm	1
⑤	07XAJ-S0KA100	Preload Inspection Tool	1
**⑥	07YAC-0010100	Adjustable Bearing Puller, 45—75 mm	1
⑦	070AD-PYZA100	Driver, 58 x 62 mm	1
⑧	070AG-SJAA10S	Subframe Alignment Pin	1
⑨	07746-0010300	Bearing Driver Attachment, 42 x 47 mm	1
⑩	07746-0010600	Bearing Driver Attachment, 72 x 75 mm	1
⑪	07746-0030100	Inner Driver Handle, 40 mm	1
⑫	07749-0010000	Driver Handle, 15 x 135L	1
⑬	07946-MB00000	Inner Driver, 30 x 36 mm	1

*: Part of Mainshaft Inspection Tool Set, 07GAJ-PG20102.
**: Must be used with commercially available 3/8"-16 UNF Slide Hammer.



Component Location Index

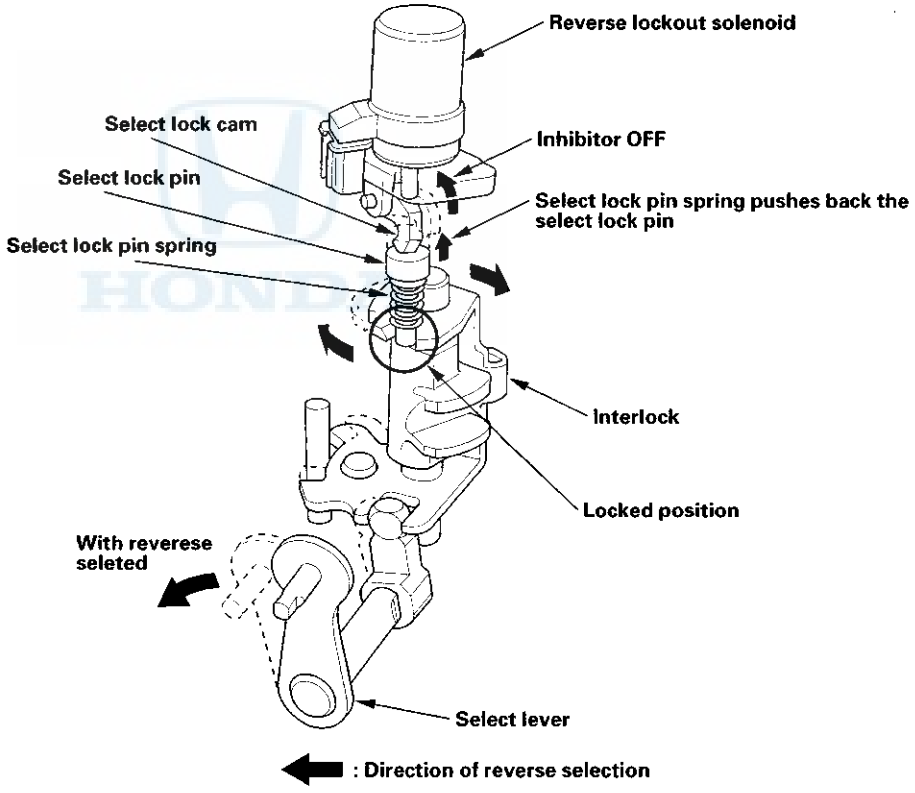


Reverse Lockout System

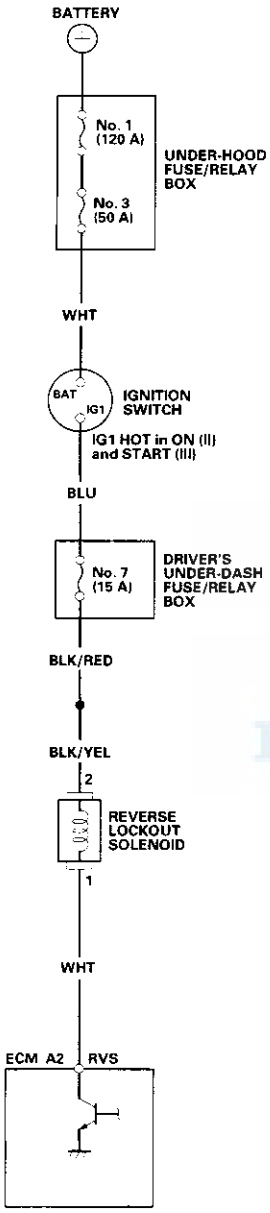
System Description

At vehicle speeds of 12 mph (20 km/h) or more, the ECM, which monitors the signals from the output shaft (countershaft) speed sensor, activates the reverse lockout solenoid, which pushes the select lock cam and select lock pin into the locked position. As a result, the interlock cannot rotate to the reverse select position, making it impossible to engage reverse gear. As the vehicle speed drops to of 9 mph (15 km/h) or less, the ECM turns off the reverse lockout solenoid. The return spring pulls back the select lock pin, enabling the interlock to move freely so reverse gear can be selected.

Vehicle speed	Inhibitor	Reverse selection
Above 12 mph (20 km/h)	ON	Not allowed
Below 9 mph (15 km/h)	OFF	OK
Ignition switch LOCK (0)	OFF	OK



Circuit Diagram



Symptom Troubleshooting

Driver can select reverse gear when vehicle speed is 12 mph (20 km/h) or more

NOTE:
- When checking if the transmission will shift to reverse while the wheels are being driven forward, raise the vehicle on a lift, make sure it is securely supported, and allow the front wheels to rotate freely.
- Do not release the clutch pedal if you can select reverse gear while the wheels are driven forward.
- When the vehicle is on a lift, and you make the wheels rotate, turn off the VSA system by the VSA OFF switch.
- Refer to How to Troubleshoot Circuits at the ECM Connectors in the Fuel and Emission Systems section before troubleshooting this circuit (see page 11-6).

1. Turn the ignition switch to LOCK (0).
2. Check the No. 7 (15 A) fuse in the driver's under-dash fuse/relay box.

   Is the fuse OK?

   YES—Reinstall the fuse, then go to step 3.

   NO—Install a new No. 7 (15 A) fuse, and recheck. If the fuse continues to blow, check for short to body ground in the wire between the No. 7 (15 A) fuse in the driver's under-dash fuse/relay box and the reverse lockout solenoid. ■
3. Test-drive the vehicle.

(cont'd)

Symptom Troubleshooting (cont'd)

4. Check for fuel and emissions system's DTC with the HDS.

   Are there any DTCs stored in the ECM?

   YES—Go to the indicated ECM DTC's troubleshooting (see page 11-3).■

   NO—Go to step 5.

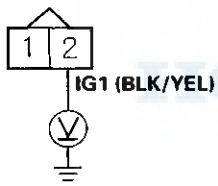
5. Turn the ignition switch to LOCK (0).

6. Disconnect the reverse lockout solenoid 2P connector.

7. Turn the ignition switch to ON (II).

8. Measure the voltage between reverse lockout solenoid 2P connector terminal No. 2 and body ground.

REVERSE LOCKOUT SOLENOID 2P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 9.

NO—Repair open in the wire between the reverse lockout solenoid and the No. 7 (15 A) fuse in the driver's under-dash fuse/relay box.■

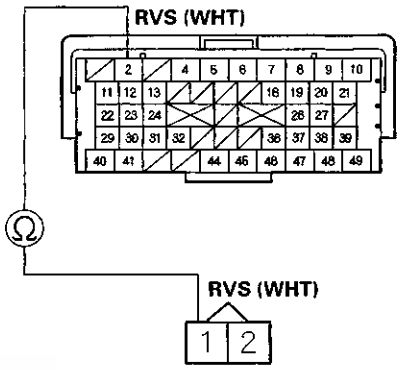
9. Turn the ignition switch to LOCK (0).

10. Jump the SCS line with the HDS.

11. Disconnect ECM connector A (49P).

12. Check for continuity between reverse lockout solenoid 2P connector terminal No. 1 and ECM connector A (49P) terminal No. 2.

ECM CONNECTOR A (49P)
Terminal side of female terminals



REVERSE LOCKOUT SOLENOID 2P CONNECTOR
Wire side of female terminals

Is the continuity?

YES—Go to step 13.

NO—Repair open in the wire between the reverse lockout solenoid and the ECM.■

13. Do the reverse lockout solenoid test (see page 13-8).

    Is the reverse lockout solenoid OK?

    YES—Check for loose terminals or poor connections at the ECM. If necessary, update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7), then recheck. If the trouble goes away with a known-good ECM, replace the original ECM (see page 11-282).■

    NO—Repair or replace the reverse lockout solenoid (see page 13-8).■

Driver cannot select reverse gear when vehicle speed is 9 mph (15 km/h) or less

NOTE:
- When checking if the transmission will shift to reverse while the wheels are being driven forward, raise the vehicle on a lift, make sure it is securely supported, and allow the front wheels to rotate freely.
- Do not release the clutch pedal if you can select reverse gear while the wheels are driven forward.
- When the vehicle is on a lift, and you make the wheels rotate, turn off the VSA system by the VSA OFF switch.

1. Turn the ignition switch to LOCK (0).
2. Try to shift the transmission into reverse.

   Can you shift the transmission into the reverse?

   YES—Go to step 4.

   NO—Go to step 3.
3. Do the reverse lockout solenoid test (see page 13-8).

   Is the reverse lockout solenoid OK?

   YES—Check the reverse idler gear shaft assembly (see page 13-72), or inspect the internal transmission.■

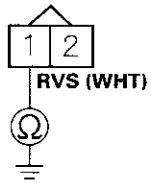
   NO—Repair or replace the reverse lockout solenoid (see page 13-8).■
4. Start the engine.

   Can you shift the transmission into the reverse?

   YES—Intermittent failure, the system is OK at this time.■

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Jump the SCS line with the HDS.
7. Disconnect ECM connector A (49P).
8. Disconnect the reverse lockout solenoid 2P connector.
9. Check for continuity between body ground and reverse lockout solenoid 2P connector terminal No. 1.

REVERSE LOCKOUT SOLENOID 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between the reverse lockout solenoid and the ECM.■

NO—Check for loose terminals or poor connections at the ECM. If necessary, update the ECM if it does not have the latest software (see page 11-281), or substitute a known-good ECM (see page 11-7), then recheck. If the trouble goes away with a known-good ECM, replace the original ECM (see page 11-282).■

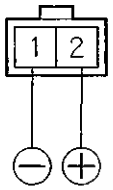
Reverse Lockout System

Reverse Lockout Solenoid Test

1. Remove the reverse lockout solenoid (see page 13-8).

2. Connect jumper wires from the battery positive terminal to the reverse lockout solenoid 2P connector terminal No. 2, and from the battery negative terminal to the reverse lockout solenoid 2P connector terminal No. 1.

REVERSE LOCKOUT SOLENOID 2P CONNECTOR



Terminal side of male terminals

3. Make sure the reverse lockout solenoid works. If the reverse lockout solenoid does not work, replace it.

   NOTE: The inhibitor should be pushed out when applying battery voltage to the solenoid, and the inhibitor should be released when there is no battery voltage at the solenoid.

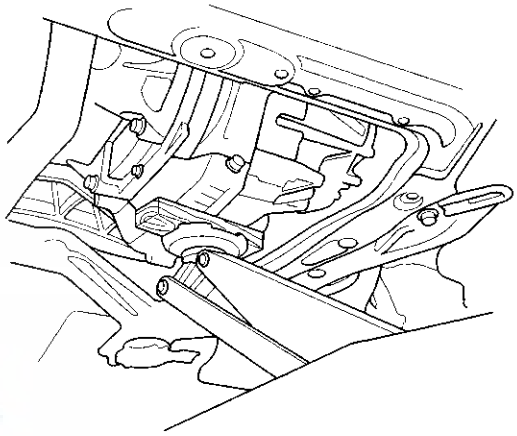
Reverse Lockout Solenoid Disassembly/Reassembly

NOTE: Use fender covers to avoid damaging painted surfaces.

1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

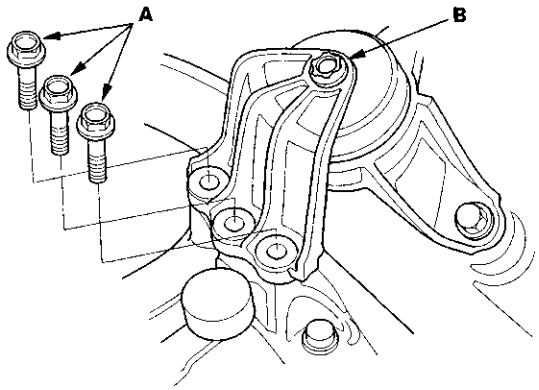
2. Remove the air cleaner assembly (see page 11-436).

3. Support the under engine/transmission with a floor jack.

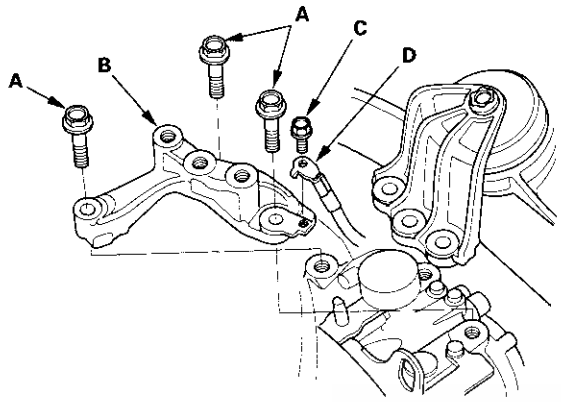


4. Remove the upper transmission mount bracket bolts (A).

   NOTE: Do not remove the TORX bolt (B) from the upper transmission mount. If the TORX bolt is removed, the upper transmission mount must be replaced as an assembly.

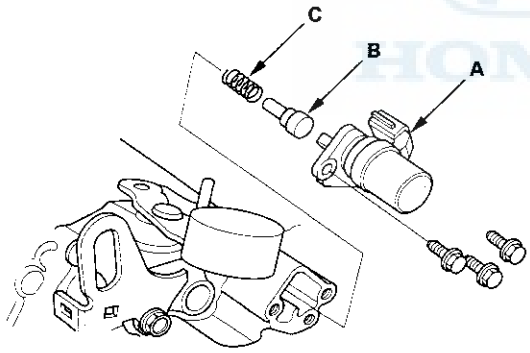


5. Remove the three upper transmission mount bracket bolts (A), the upper transmission mount bracket (B), the ground cable mount bolt (C), and the ground cable (D).

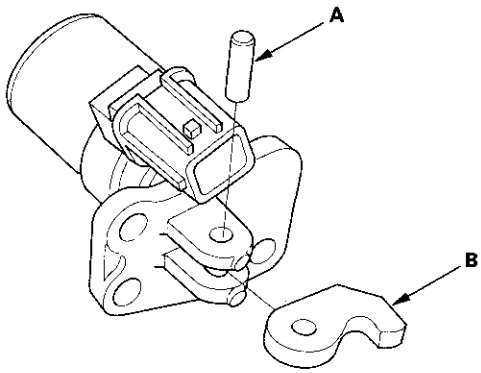


6. Disconnect the reverse lockout solenoid connector.

7. Remove the reverse lockout solenoid (A), the select lock pin (B), and the select lock pin spring (C).



8. Remove the pin (A), and select lock cam (B).

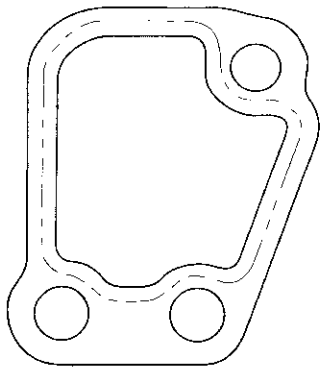


9. Install the components of the reverse lockout solenoid in the reverse order of removal.

10. Clean any the dirt and oil from the reverse lockout solenoid sealing surface.

11. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009 evenly to the transmission housing mating surface of the reverse lockout solenoid. Install the component within 5 minutes of applying the liquid gasket.

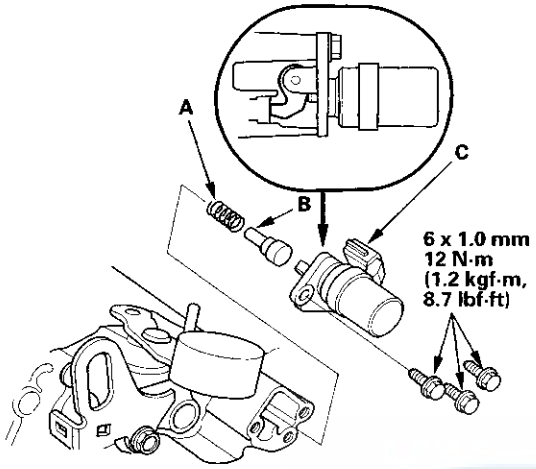
NOTE:
- If apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
- If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply new liquid gasket.



(cont'd)

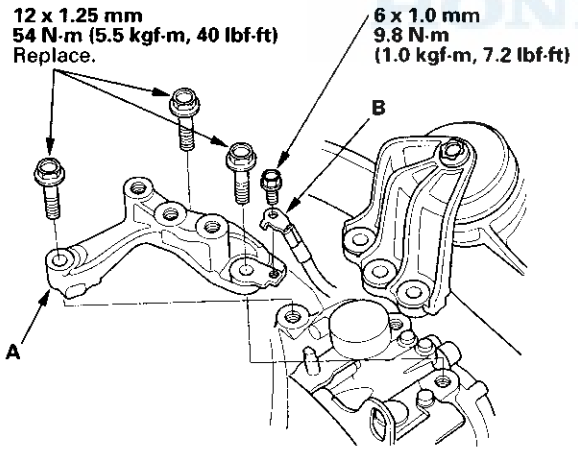
Reverse Lockout Solenoid Disassembly/Reassembly (cont'd)

12. Install the select lock pin spring (A), the select lock pin (B), and the reverse lockout solenoid (C) with the bolts.

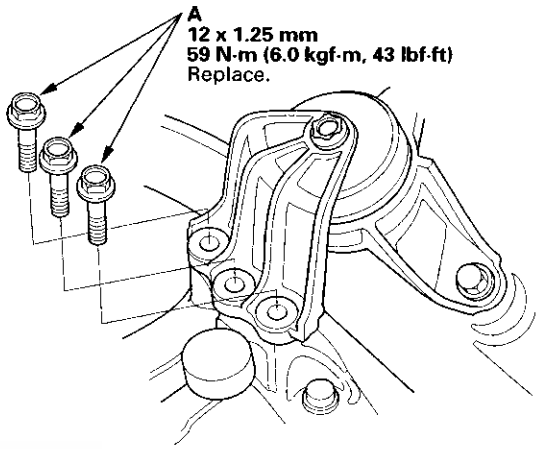


13. Connect the reverse lockout solenoid connector.

14. Install the upper transmission mount bracket (A) with new bolts, and connect the ground cable (B) by installing its mounting bolt.



15. Install the new upper transmission mount bracket bolts (A).

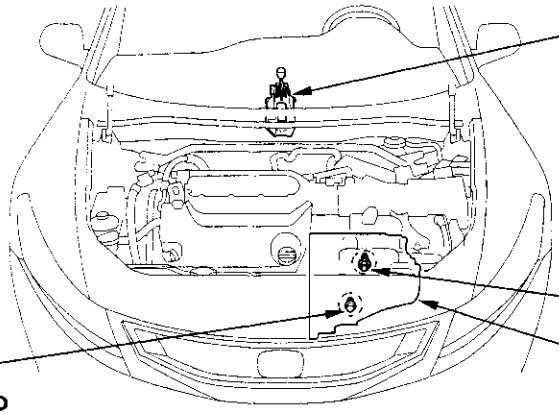


16. Remove the floor jack that suppress the engine/transmission.

17. Install the air cleaner assembly (see page 11-436).

18. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Component Location Index



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SHIFT LEVER HOUSING
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BACK-UP LIGHT SWITCH
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TRANSMISSION FLUID
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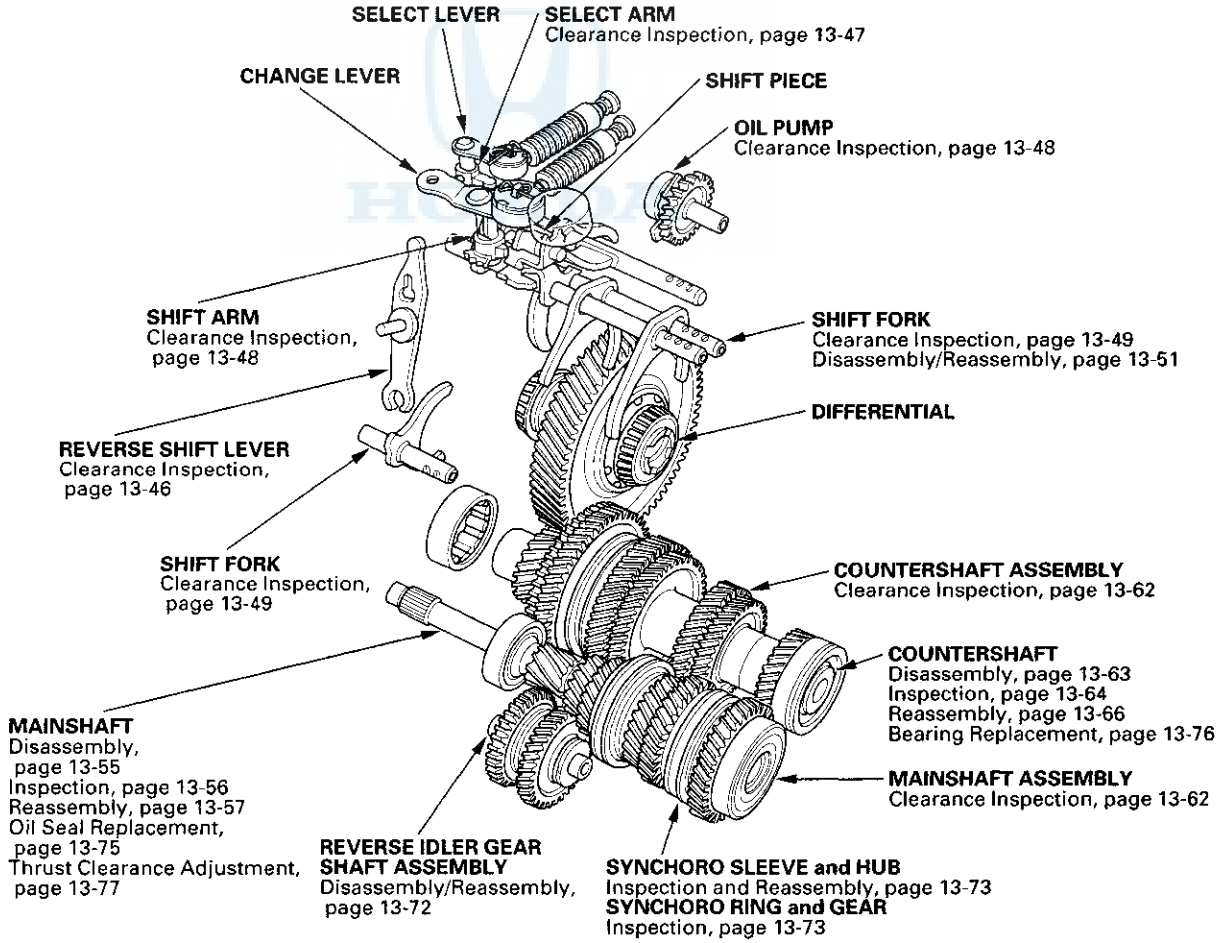

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CHANGE LEVER

SHIFT PIECE

OIL PUMP
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SHIFT ARM
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SYNCHORO RING and GEAR
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Symptom Troubleshooting Index

Symptom	Diagnostic procedure
Hard to shift into 1st gear	1. Check and/or replace the MTF (see page 13-14). 2. Check the clutch (see page 12-19). 3. Check the change lever and the select lever (see page 13-40). 4. Check the 1st synchro ring and the 1st gear (see page 13-73). 5. Check the 1st/2nd synchro sleeve and hub (see page 13-73).
Hard to shift into 2nd gear	1. Check and/or replace the MTF (see page 13-14). 2. Check the change lever and the select lever (see page 13-40). 3. Check the 2nd synchro ring and the 2nd gear (see page 13-73). 4. Check the 1st/2nd synchro sleeve and hub (see page 13-73).
Hard to shift into 3rd gear	1. Check and/or replace the MTF (see page 13-14). 2. Check the change lever and the select lever (see page 13-40). 3. Check the 3rd synchro ring and the 3rd gear (see page 13-73). 4. Check the 3rd/4th synchro sleeve and hub (see page 13-73).
Hard to shift into 4th gear	1. Check and/or replace the MTF (see page 13-14). 2. Check the change lever and the select lever (see page 13-40). 3. Check the 4th synchro ring and the 4th gear (see page 13-73). 4. Check the 3rd/4th synchro sleeve and hub (see page 13-73).
Hard to shift into 5th gear	1. Check and/or replace the MTF (see page 13-14). 2. Check the change lever and the select lever (see page 13-40). 3. Check the 5th synchro ring and the 5th gear (see page 13-73). 4. Check the 5th/6th synchro sleeve and hub (see page 13-73).
Hard to shift into 6th gear	1. Check and/or replace the MTF (see page 13-14). 2. Check the change lever and the select lever (see page 13-40). 3. Check the 6th synchro ring and the 6th gear (see page 13-73). 4. Check the 5th/6th synchro sleeve and hub (see page 13-73).
Hard to shift into reverse	1. Check and/or replace the MTF (see page 13-14). 2. Check the clutch (see page 12-19). 3. Check the change lever and the select lever (see page 13-40). 4. Check the reverse shift lever (see page 13-46). 5. Check the reverse shift fork and reverse idler gear (see page 13-49). 6. Check reverse gears.

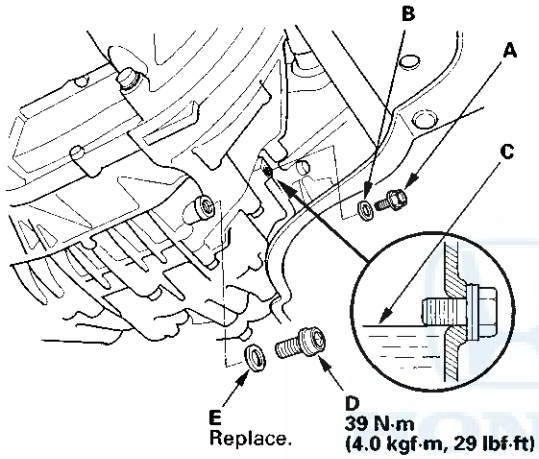
Symptom	Diagnostic procedure
HDS does not communicate with the ECM or the vehicle	Troubleshoot the DLC circuit (see page 11-259).
Driver can select reverse gear when vehicle speed is 12 mph (20 km/h) or more	Do the symptom troubleshooting (see page 13-5).
Driver cannot select reverse gear when vehicle speed is 9 mph (15 km/h) or less	Do the symptom troubleshooting (see page 13-7).
Noise from the transmission	1. Check and/or replace the MTF (see page 13-14). 2. Check the MTF level (unfilled or in surplus the transmission with the MTF). 3. Check the transmission gears. 4. Check the transmission bearings. 5. Check the differential carrier, the final driven gear, and the carrier bearings.
Shift lever does not operate smoothly	1. Check and/or replace the MTF (see page 13-14). 2. Check the shift cables and their joints (see page 13-87). 3. Check the shift lever housing with the shift lever shaft.
Transmission jumps out of gear	1. Check and/or replace the MTF (see page 13-14). 2. Check the detent ball springs. 3. Check the teeth of the synchro rings and the gears (see page 13-73). 4. Check for bent, deform, or damage of the shift forks.

HONDA

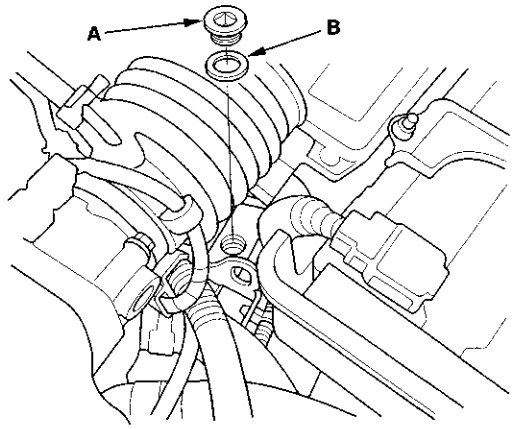
Transmission Fluid Inspection and Replacement

NOTE: Use fender covers to avoid damaging painted surfaces.

1. Raise the vehicle on a lift, and make sure securely supported.
2. Remove the front splash shield (see page 20-29).
3. Remove the check bolt (A) and the sealing washer (B). Check the condition of the MTF and make sure it is at the proper level (C).

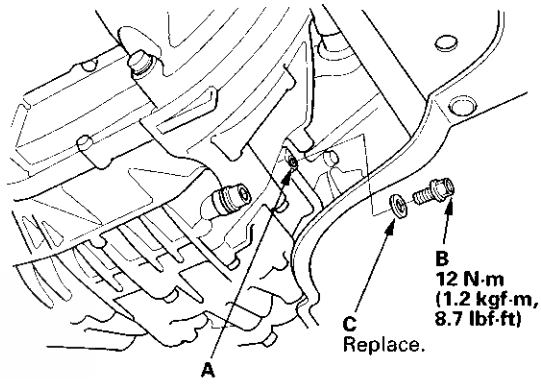


4. If the fluid is dirty, remove the drain plug (D) and the sealing washer (E), and drain the MTF.
5. Install the drain plug with a new sealing washer.
6. Lower the vehicle on the lift, then remove the filler plug (A) and the sealing washer (B).

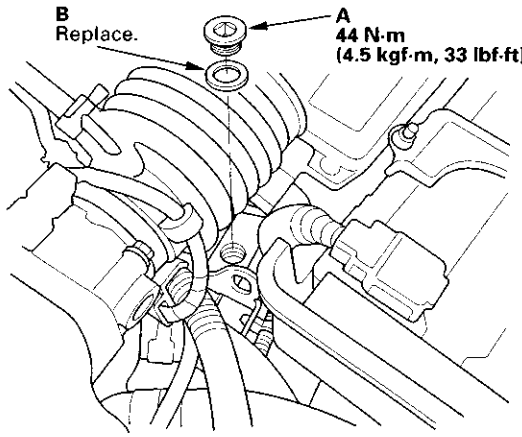


7. Refill the fluid from the filler plug hole on the transmission, until the MTF overflows from the check bolt hole (A). Always use Honda Manual Transmission Fluid (MTF).

Fluid Capacity:
2.1 L (2.2 US qt) at fluid change
2.5 L (2.6 US qt) at overhaul



8. Raise the vehicle on a lift. After the fluid stops overflowing, install the check bolt (B) with a new sealing washer (C).
9. Install the front splash shield (see page 20-29).
10. Lower the vehicle on the lift.
11. Install the filler plug (A) with a new sealing washer (B).



12. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on page 11-3).

13. Turn the ignition switch to ON (II).

14. Make sure the HDS communicates with the vehicle and the engine control module (ECM). If it doesn't communicate, troubleshoot the DLC circuit (see page 11-259).

15. Select BODY ELECTRICAL with the HDS.

16. Select ADJUSTMENT in the GAUGES MENU with the HDS.

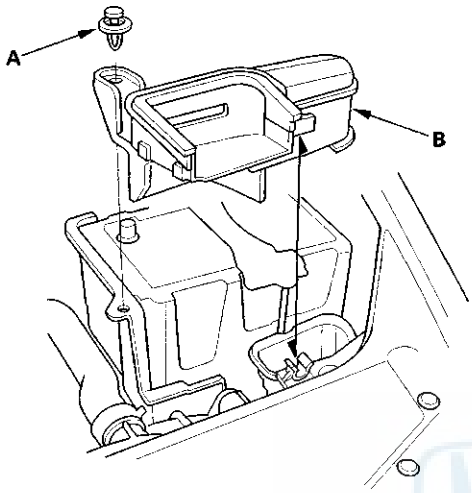
17. Select RESET in the MAINTENANCE MINDER with the HDS.

18. Select RESETTING THE MTF LIFE with the HDS (see page 3-6).

Back-up Light Switch Test

NOTE: Use fender covers to avoid damaging painted surfaces.

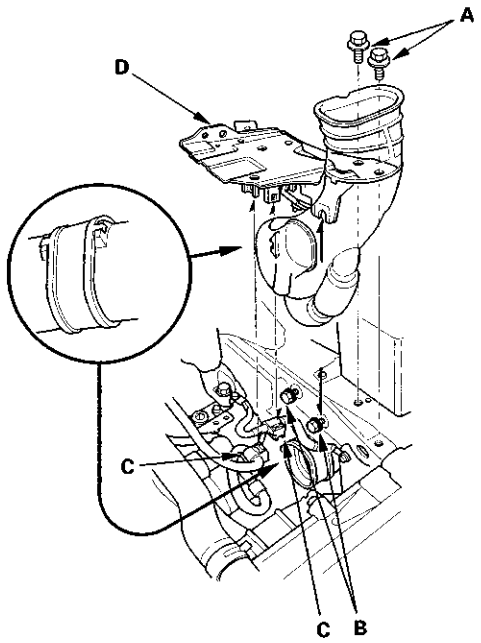
1. Remove the clip (A), then remove the air duct (B)



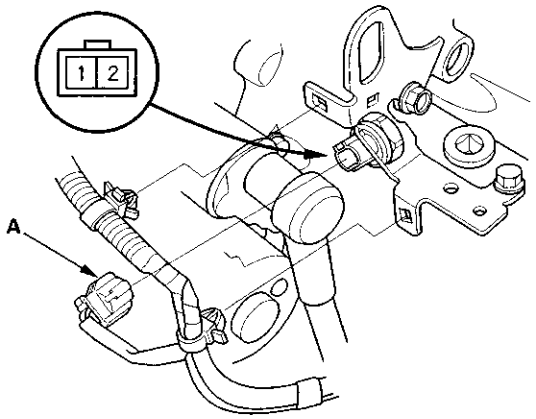
2. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

3. Remove the air cleaner assembly (see page 11-436).

4. Remove the battery base bolts (A), loosen the two bolts (B), remove the cable clamps (C), then remove the battery base (D).

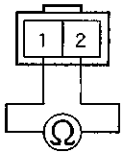


5. Disconnect the back-up light switch 2P connector (A).



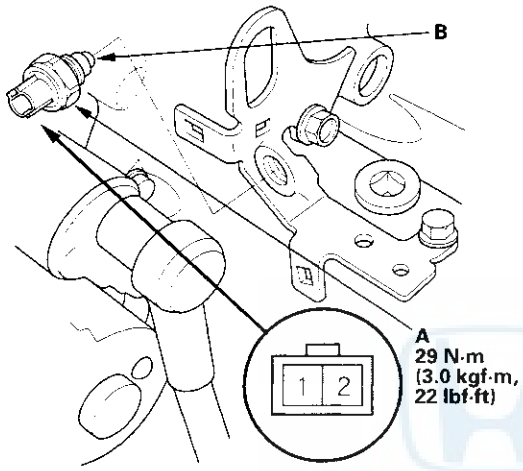
6. Check for continuity between the back-up light switch 2P connector terminals No. 1 and No. 2. There should be continuity only when the shift lever is in reverse.

BACK-UP LIGHT SWITCH 2P CONNECTOR

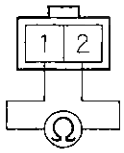


Terminal side of male terminals

7. Remove the back-up light switch (A). Check for continuity between back-up light switch 2P connector terminals No. 1 and No. 2. There should be continuity when the switch end (B) is pressed, and no continuity when the switch end is released. If the result is faulty, replace the back-up light switch. If the switch is OK, check the reverse shift piece in the transmission.



BACK-UP LIGHT SWITCH 2P CONNECTOR

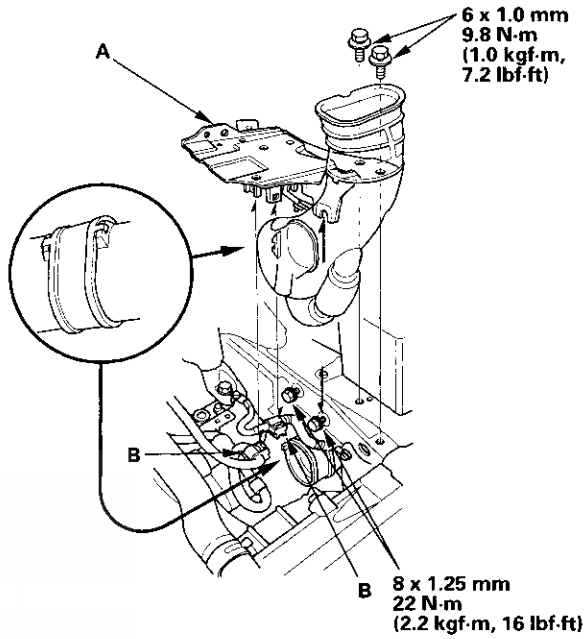


Terminal side of male terminals

8. Apply liquid gasket (P/N 08717-0004, 08718-0001, 08718-0012, 08718-0003, or P/N 08718-0009) to the threads of the back-up light switch, and install it on the transmission housing.

9. Connect the back-up light switch 2P connector.

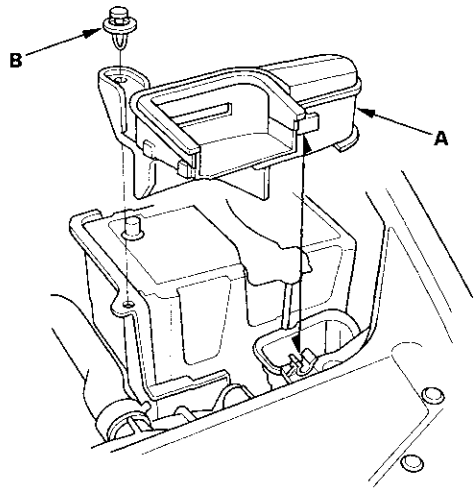
10. Install the battery base (A) and the cable clamps (B).



11. Install the air cleaner assembly (see page 11-436).

12. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

13. Install the air duct (A) and the clip (B).



Transmission Removal

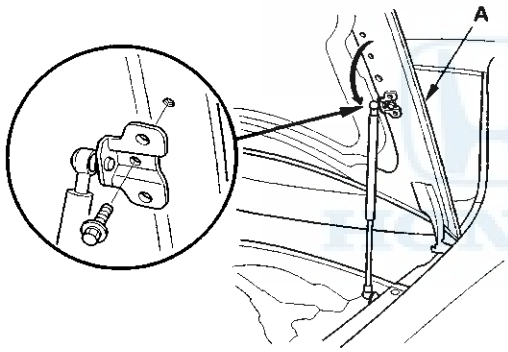
Special Tools Required
- Engine support hanger, A and Reds AAR-T1256 *
- 2008 V6 attachment arm SIL02C000033 *
- Front subframe adapter VSB02C000016 *
- Engine hanger balance bar VSB02C000019 *

* : These special tools are available through the Honda Tool and Equipment Program 1-888-424-6857

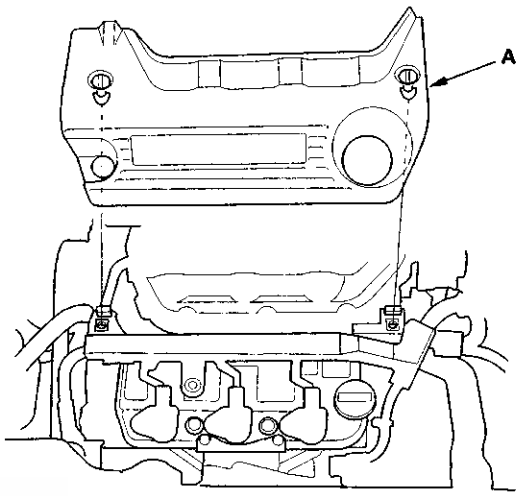
NOTE: Use fender covers to avoid damaging painted surfaces.

1. Remove the hood support struts from both sides of the engine hood. Secure the hood (A) in a vertical position, then reinstall the support strut as shown.

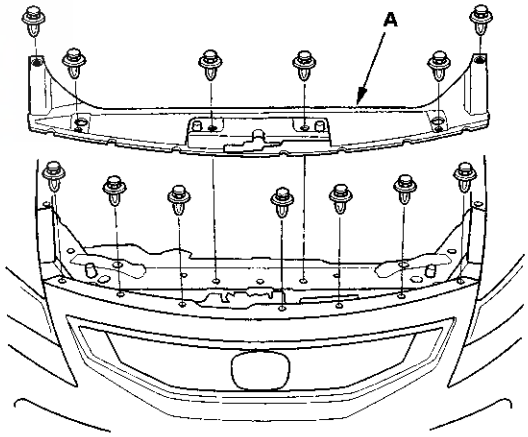
   NOTE: Do not attempt to close the hood with the support strut in the vertical position; it will damage the support strut and the hood.



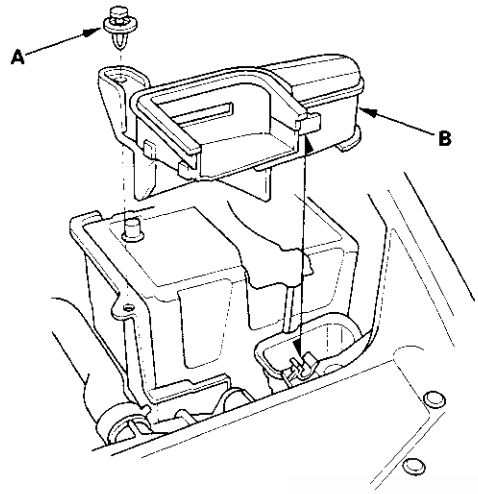
2. Remove the engine cover (A).



3. Remove the front grille cover (A), refer to the 2008-2009 Accord Service Manual (see page 20-257).



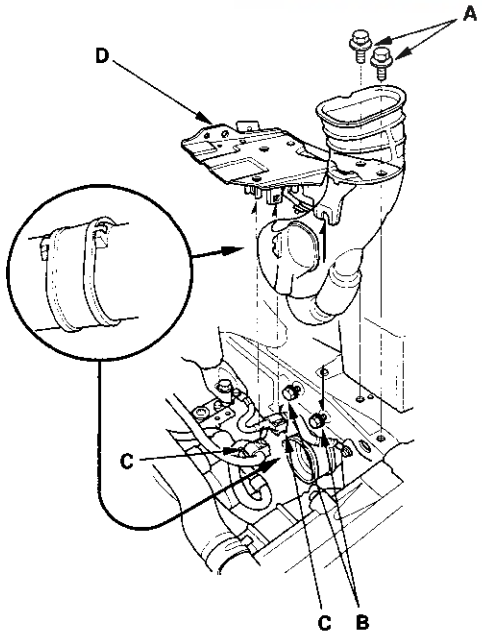
4. Remove the clip (A), then remove the air duct (B).



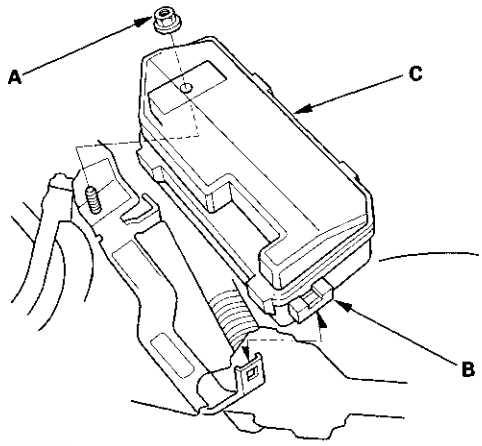
5. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

6. Remove the air cleaner assembly (see page 11-436).

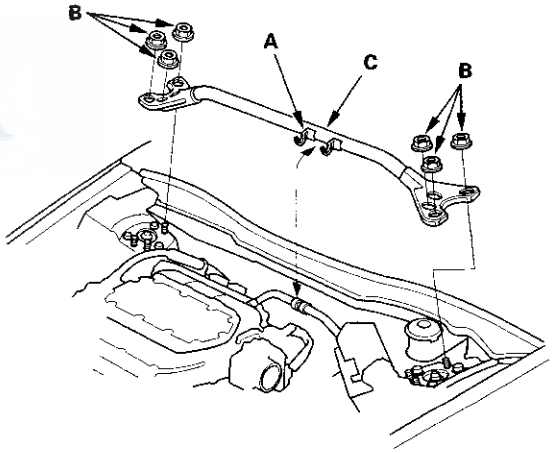
7. Remove the battery base bolts (A), loosen the two bolts (B), remove the cable clamps (C), then remove the battery base (D).



8. Remove the nut (A) and the clamp (B), then move the under-hood fuse/relay box (C) out of the way.



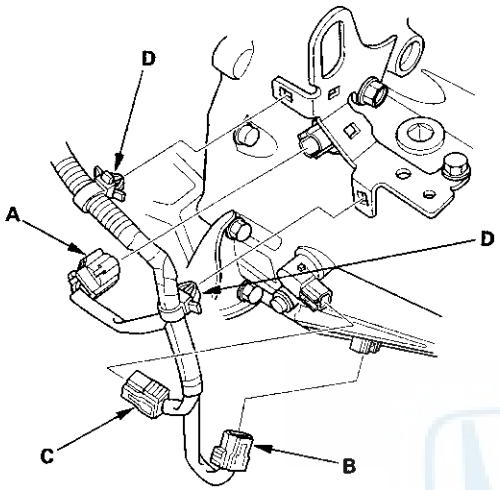
9. Remove the harness from the clamp (A) and the nuts (B), then remove the strut brace (C).



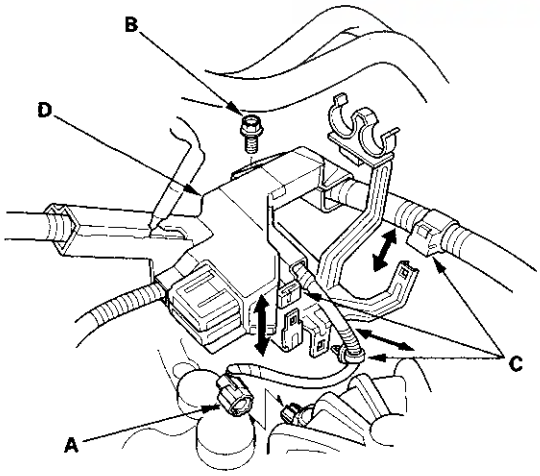
(cont'd)

Transmission Removal (cont'd)

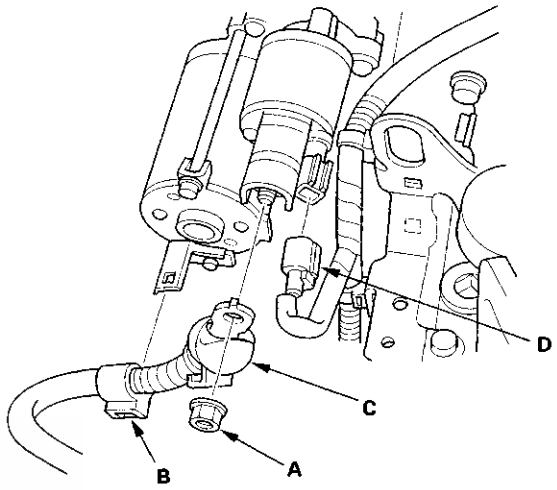
10. Disconnect the back-up light switch connector (A), the input shaft (mainshaft) speed sensor connector (B) and the output shaft (countershaft) speed sensor connector (C), then remove the harness clips (D).



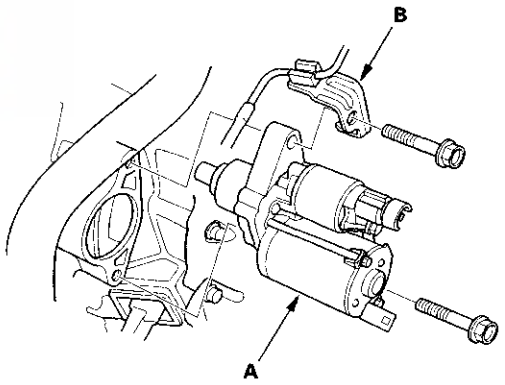
11. Disconnect the reverse lockout solenoid connector (A), remove the harness mounting bolt (B) and the harness clamps (C), then remove the harness (D).



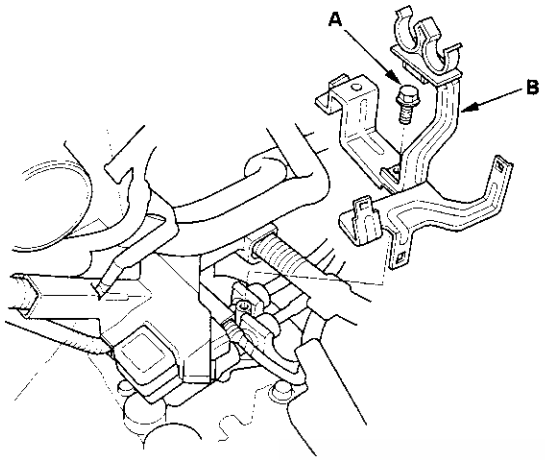
12. Remove the starter cable nut (A) and the harness clamp (B), disconnect the starter cable (C), and disconnect the connector (D).



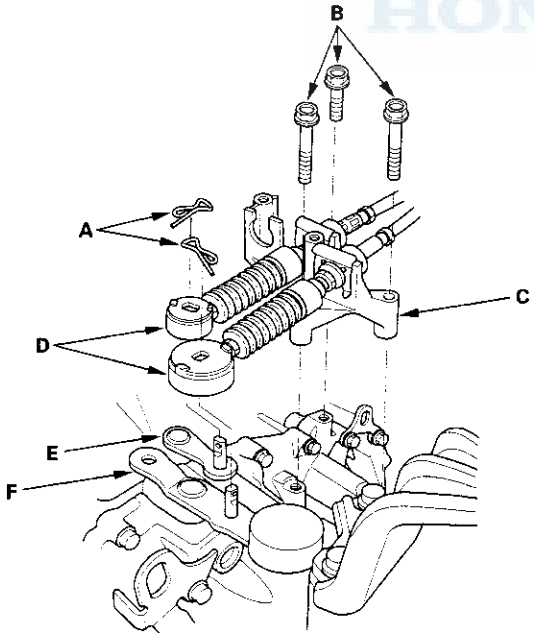
13. Remove the starter (A) and the vacuum hose bracket (B).



14. Remove the harness bracket mounting bolt (A) and the harness bracket (B).

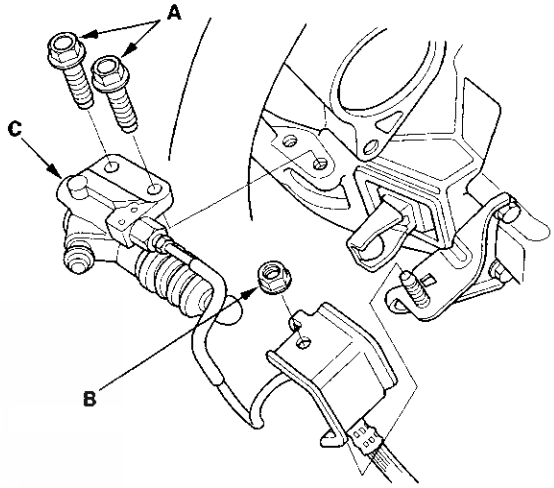


15. Remove the lock pins (A), the shift cable bracket bolts (B), and the shift cable bracket (C), then disconnect the shift cables (D) from the select lever (E) and the change lever (F). Carefully remove both cables and the bracket together to avoid bending the cables.

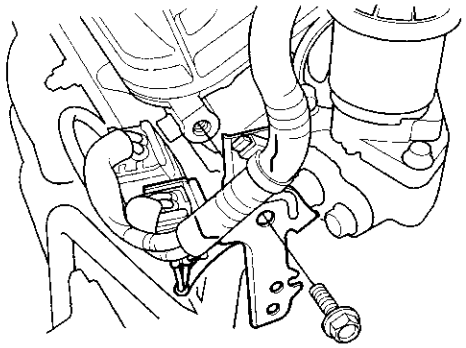


16. Remove the slave cylinder mounting bolts (A) and the bracket mounting nut (B), then carefully move the slave cylinder (C) out of the way to avoid bending the clutch line.

    NOTE: Do not press the clutch pedal after the slave cylinder has been removed.



17. Remove the connector bracket from the front cylinder head; use the bracket bolt hole to attach the engine hanger balance bar front arm.



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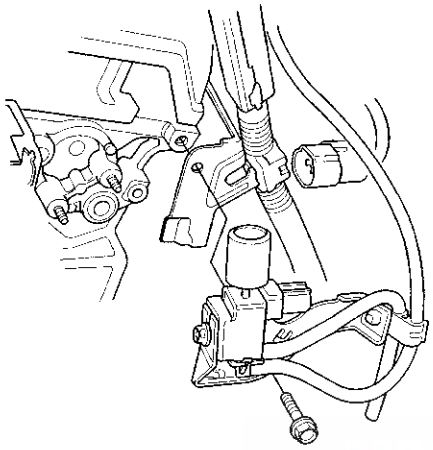
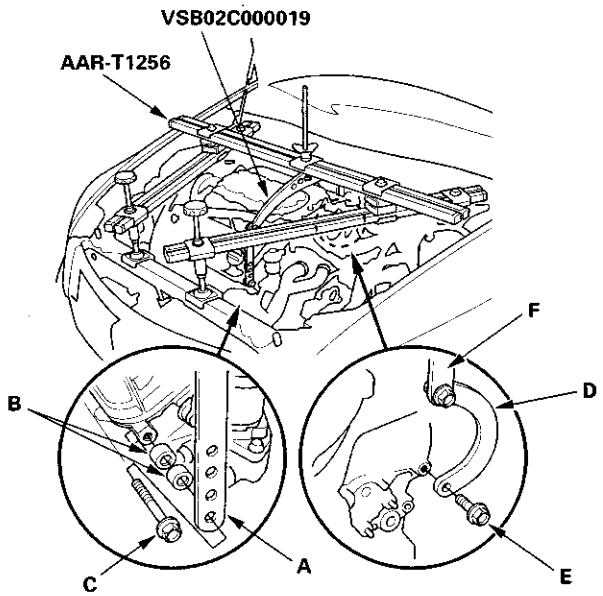
Transmission Removal (cont'd)

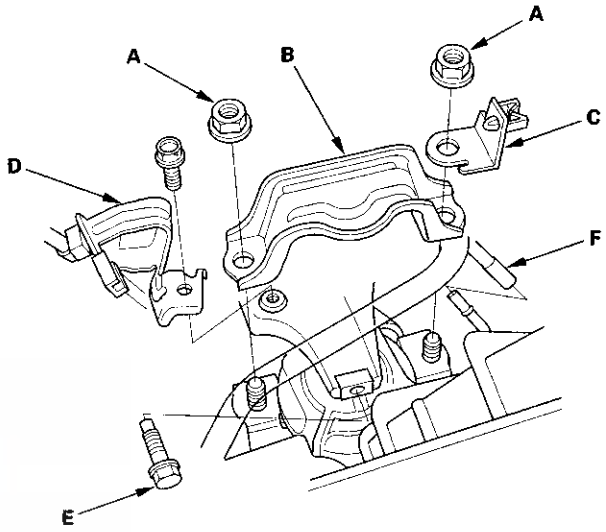
18. Remove the harness clamp bracket from the rear cylinder head; use the bracket bolt hole to attach the 2008 V6 attachment arm.



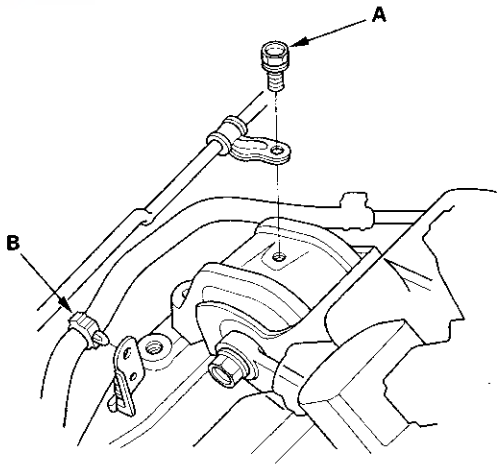
19. Lift and support the engine with engine support hanger (AAR-T1256) and the engine hanger balance bar (VSB02C000019). Attach the front arm (A) to the front cylinder head with several spacers (B) and the bolt (10 x 1.25 mm) (C). Attach the 2008 V6 attachment arm (SIL02C000033) (D) to the rear cylinder head and the bolt (8 x 1.25mm) (E), then attach the rear arm (F) to the 2008-2009 V6 attachment arm.



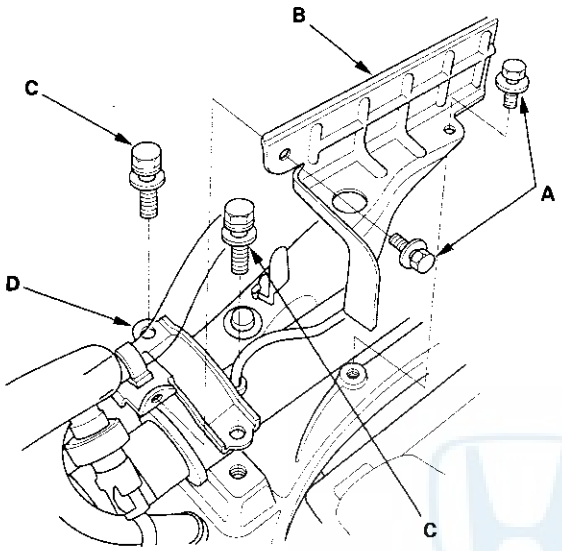
20. Remove the front engine mount stop nuts (A), the front engine mount stop (B), the vacuum hose bracket (C), and the harness bracket (D), then remove the front engine mount bolt (E), and disconnect the vacuum hose (F).



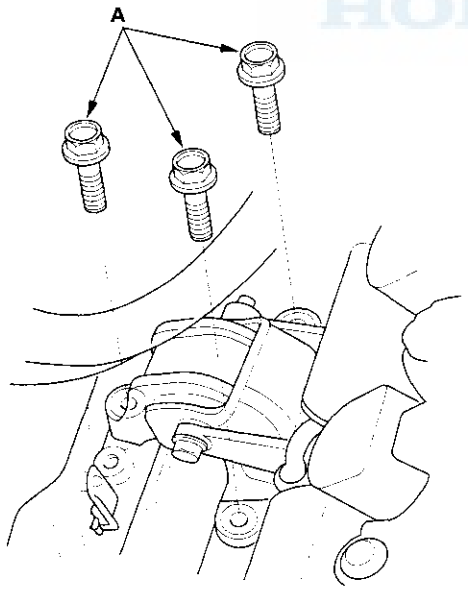
21. Remove the power steering line holder mounting bolt (A), and the power steering hose clamp (B).



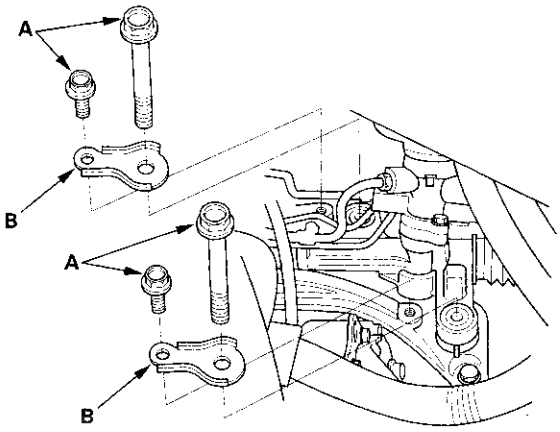
22. Remove the two heat shield bolts (A), the heat shield (B) and the power steering gearbox mounting bracket bolts (C), then remove the power steering gearbox mounting bracket (D).



23. Remove the rear engine mount bolts (A).

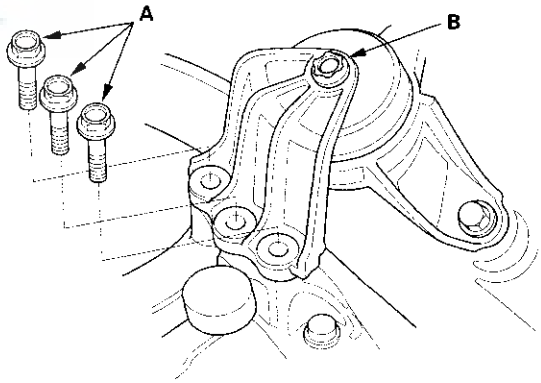


24. Remove the power steering gearbox stiffener bolts (A) and the power steering stiffener plates (B).



25. Remove the upper transmission mount bracket bolts (A).

    NOTE: Do not remove the TORX bolt (B) from the upper transmission mount. If the TORX bolt is removed, the upper transmission mount must be replaced as an assembly.



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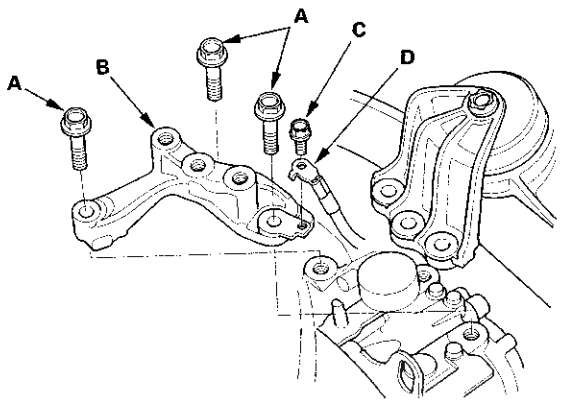
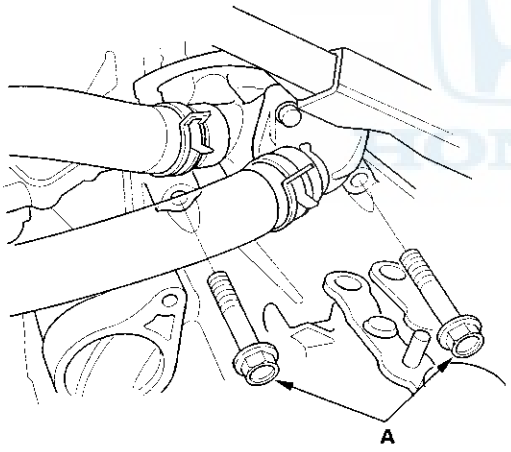
Transmission Removal (cont'd)

26. Remove the three upper transmission mount bracket bolts (A), the upper transmission mount bracket (B), the ground cable mounting bolt (C), and the ground cable (D).



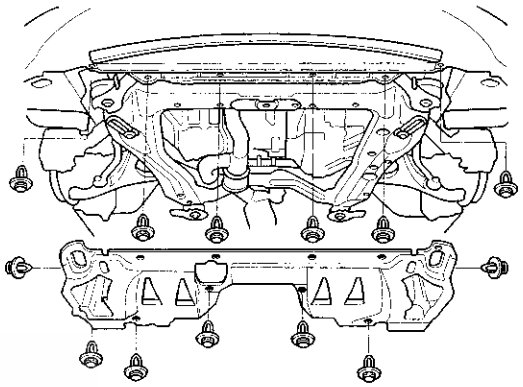
27. Remove the upper transmission mount bolts (A).



28. Raise the vehicle on a lift, and make sure it is securely supported.

29. Remove the front wheels.

30. Remove the front splash shield (see page 20-29).

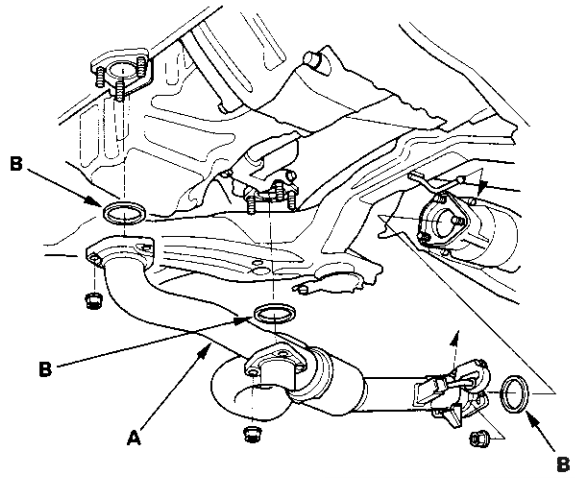


31. Drain the MTF. Reinstall the drain plug using a new sealing washer (see page 13-14).

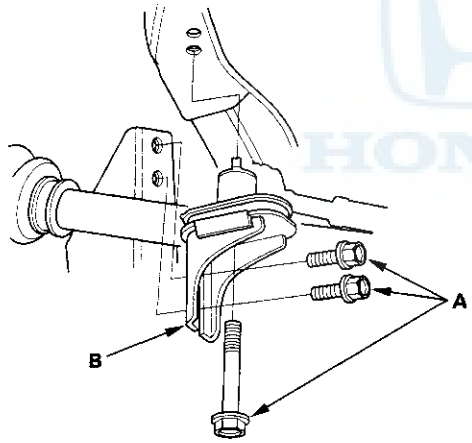
32. Remove the damper fork, refer to the 2008-2009 Accord Service Manual (see step 4 on page 18-31).

33. Separate the knuckle ball joint from the lower arm, refer to the 2008-2009 Accord Service Manual (see page 18-21).

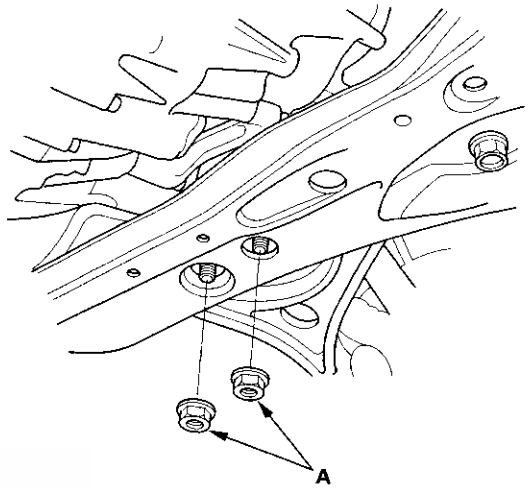
34. Remove exhaust pipe A and the gaskets (B).



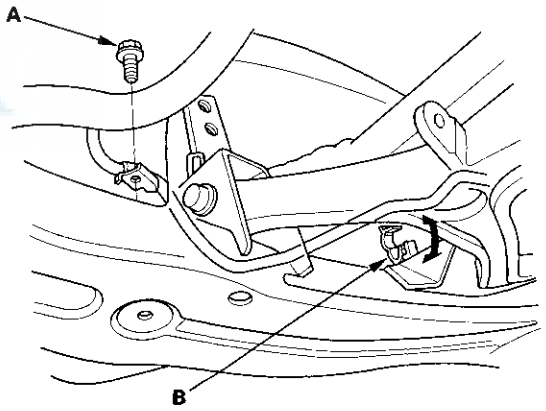
35. Remove the subframe mid mount bolts (A) and the subframe mid mount (B) from both sides.



36. Remove the lower transmission mount mounting nuts (A).



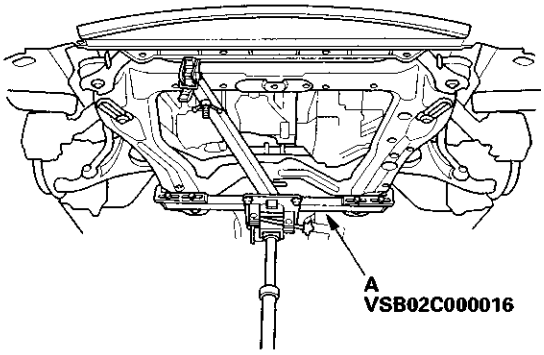
37. Remove the power steering line holder bolt (A) and the power steering line from the clamp (B).



(cont'd)

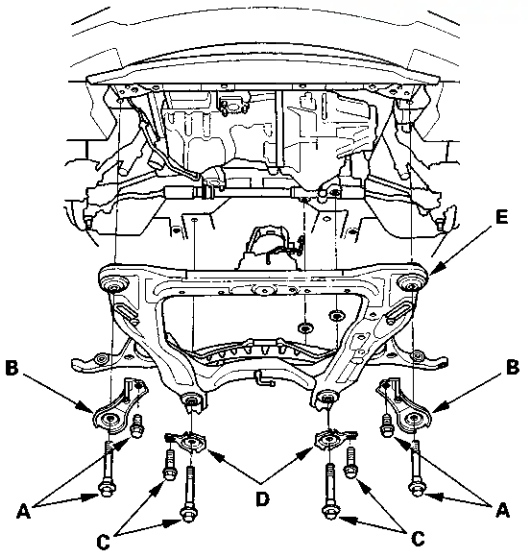
Transmission Removal (cont'd)

38. Attach the front subframe adapter (A) to the front suspension subframe and hang the belt of the subframe adapter over the front of the subframe, then secure the belt with its stop.

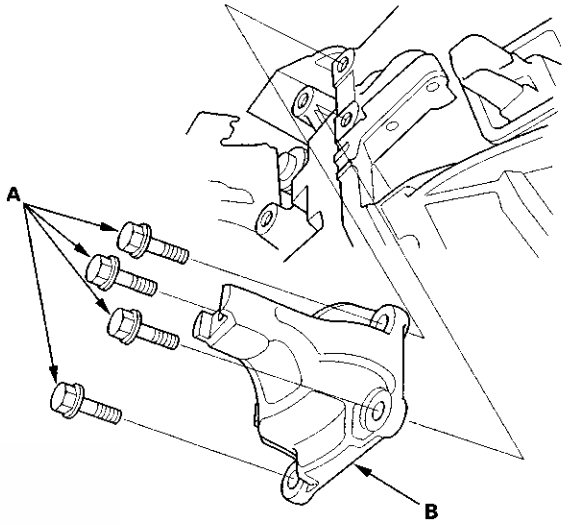


39. Raise the jack and line up the slots in the front subframe adapter arms with the bolt holes on the jack base, then securely attach them with four bolts.

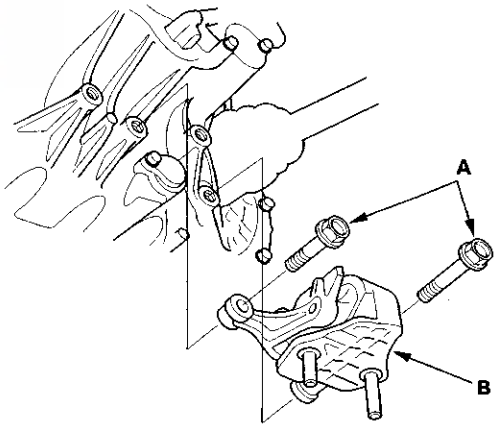
40. Remove the four front stiffeners bolts (A), the front stiffeners (B), the four rear stiffeners bolts (C), the rear stiffeners (D), then remove the front suspension subframe (E).



41. Remove the front engine mount bracket bolts (A) and the front engine mount bracket (B).

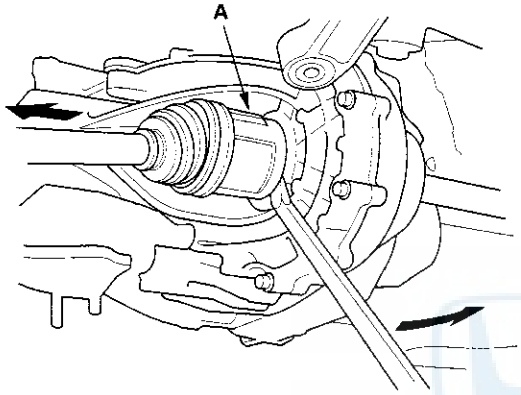


42. Remove the lower transmission mount bolts (A) and lower transmission mount (B).



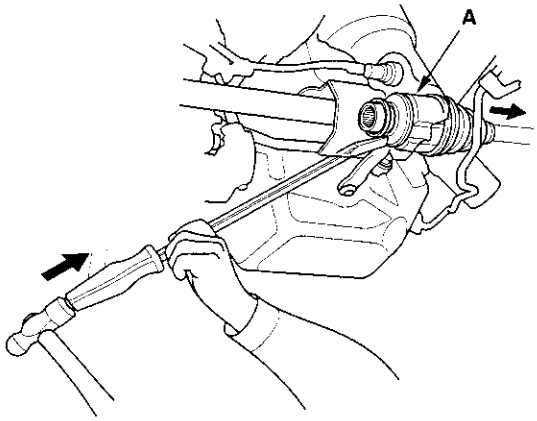
43. Pry the left driveshaft inboard joint (A) from the differential using a prybar.

    NOTE:
    - Do not pull on the driveshaft, or the inboard joint may come apart. Pull the inboard joint straight out to avoid damaging the oil seal.
    - Be careful not to damage the oil seal with the prybar.



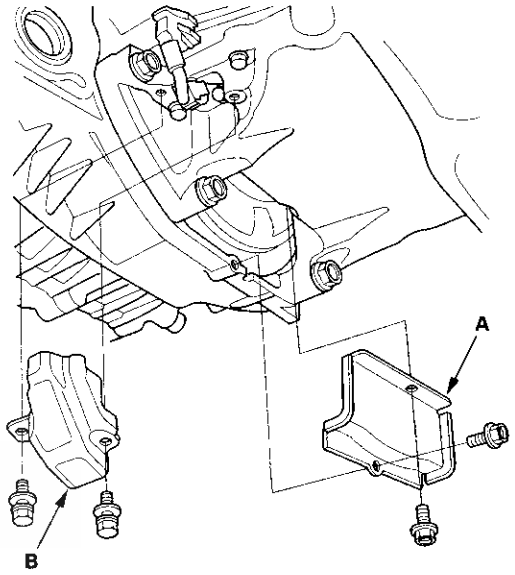
44. Drive the inboard joint (A) of the right driveshaft off of the intermediate shaft using a drift and a hammer.

    NOTE: Do not pull on the driveshaft, or the inboard joint may come apart.



45. Remove the intermediate shaft (see step 4 on page 16-15).

46. Remove the clutch cover (A) and the harness cover (B).



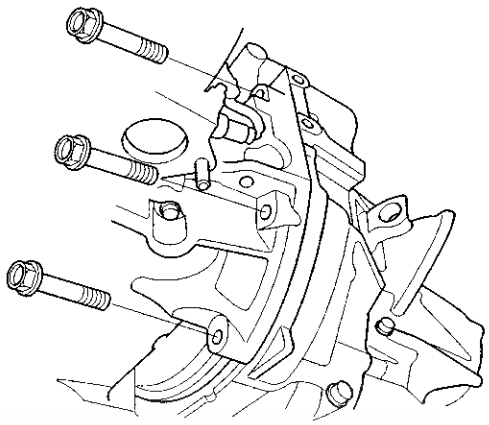
47. Support the transmission with a transmission jack.

(cont'd)

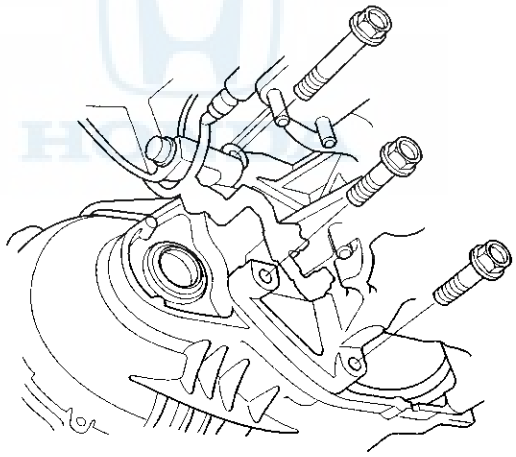
Transmission Removal (cont'd)

48. Remove the lower transmission mounting bolts.

Front side



Rear side



49. Pull the transmission away from the engine until the transmission mainshaft clears the clutch pressure plate.

50. Slowly lower the transmission about 150 mm (6 in.). Check once again that all hoses and electrical wiring are disconnected and free from the transmission, then lower it completely.

Transmission Installation

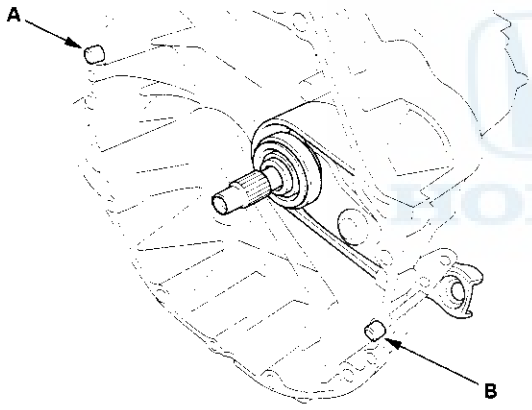
Special Tools Required
- Subframe alignment pin 070AG-SJAA10S
- Engine support hanger, A and Reds AAR-T1256 *
- 2008 V6 attachment arm SIL02C000033 *
- Front subframe adapter VSB02C000016 *
- Engine hanger balance bar VSB02C000019 *

* : These special tools are available through the Honda Tool and Equipment Program 1-888-424-6857

NOTE: Use fender covers to avoid damaging painted surfaces.

1. Inspect the release bearing (see page 12-25), and reinstall the release bearing and the release fork with the appropriate grease (see page 12-25).

2. Make sure the 14 x 20 mm dowel pin (A) and the 10 x 20 mm dowel pin (B) are installed in the clutch housing.

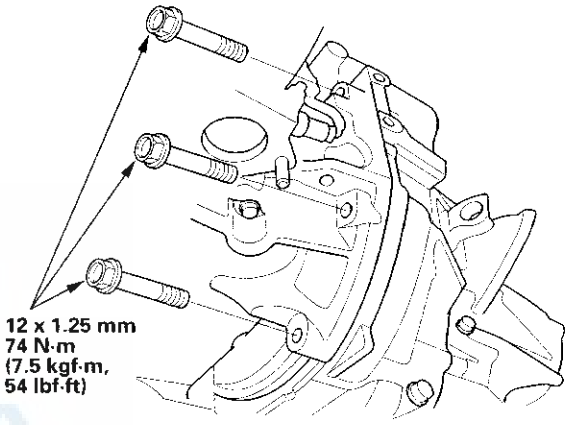


3. Place the transmission on the transmission jack, and raise it to engine level.

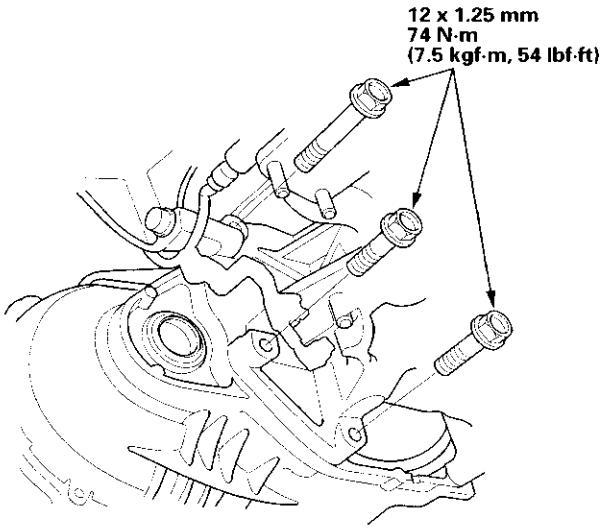
4. Align the transmission mainshaft and the clutch pressure plate, then move the transmission inward until there is no gap between the transmission housing and the engine block.

5. Install the lower transmission mounting bolts.

Front side



Rear side



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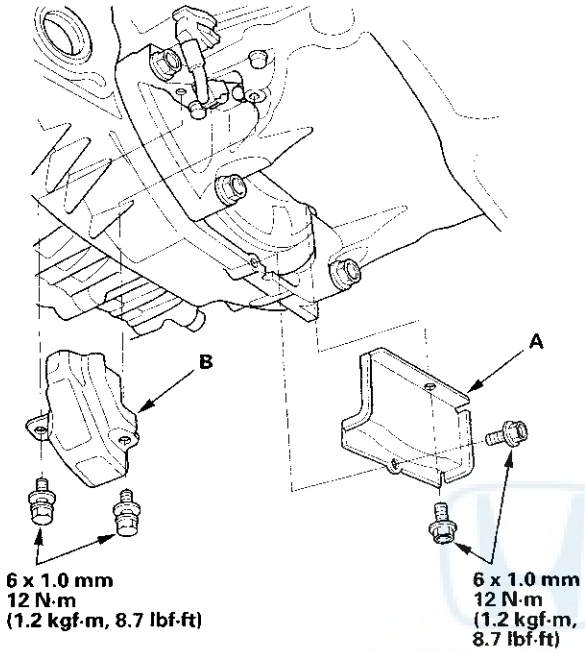
Transmission Installation (cont'd)

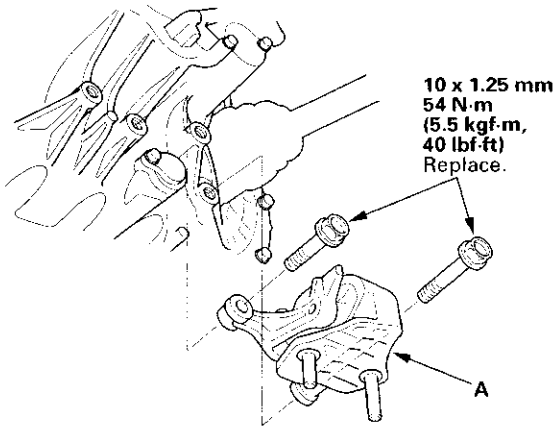
6. Install the clutch cover (A) and the harness cover (B).



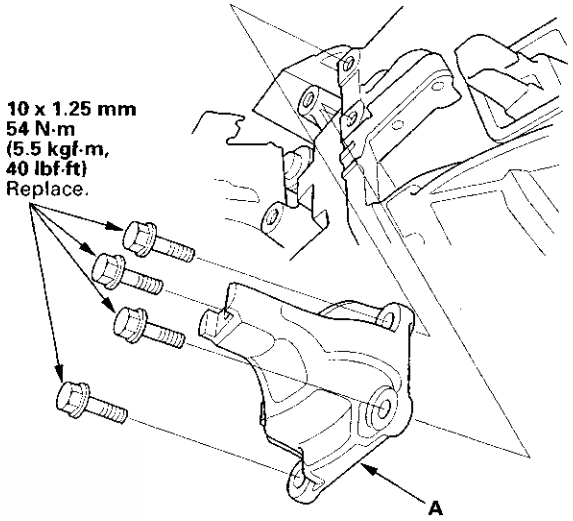
7. Install the intermediate shaft (see step 3 on page 16-25).

8. Install both driveshafts, refer to the 2008-2009 Accord Service Manual (see page 16-20).

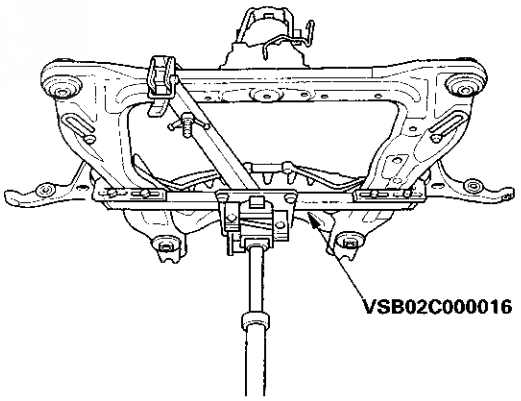
9. Install the lower transmission mount (A) with new bolts.



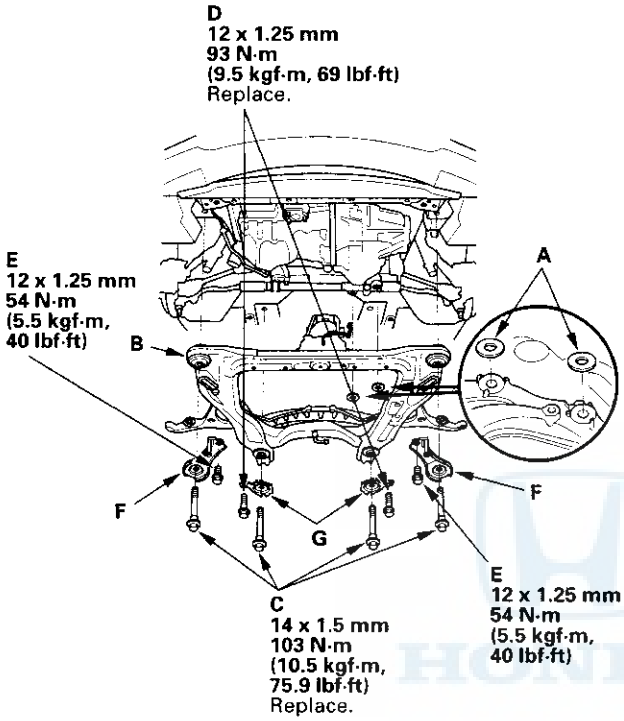
10. Install the front engine mount bracket (A), with new bolts.



11. Support the front suspension subframe with the front subframe adapter and a jack.

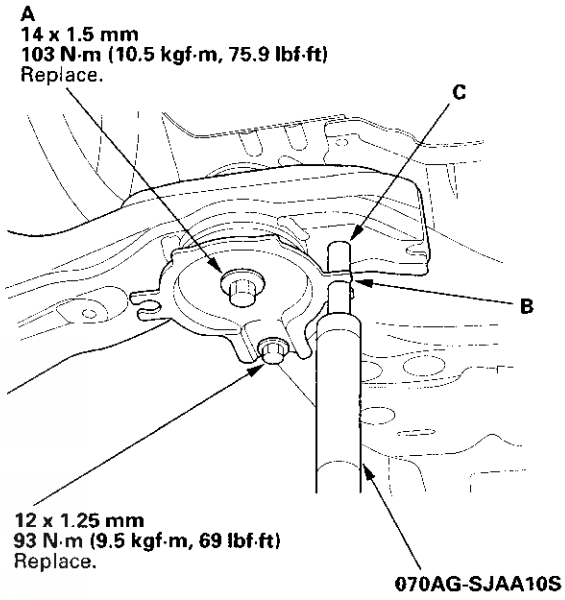


12. Position the steering gearbox washers (A) on the front suspension subframe (B), and lift the subframe up to the body.



13. Loosely install the new subframe mounting bolts (C), the new rear stiffener mounting bolts (D), the front stiffener mounting bolts (E), the front stiffeners (F) and the rear stiffeners (G).

14. Partially tighten the right rear subframe mounting bolt (A); insert the subframe alignment pin through the positioning slot (B) on the rear stiffener, through the positioning hole (C) on the subframe, and into the positioning hole on the body, then tighten the subframe mounting bolt.



15. Partially tighten the left rear subframe mounting bolt in the same manner as in step 12.

16. Partially tighten the right and left front subframe mounting bolts.

17. Tighten the right rear mounting bolt to the specified torque with the subframe alignment pin in the positioning hole.

18. Tighten the left rear mounting bolt to the specified torque with the subframe alignment pin in the positioning hole.

19. Tighten the right and left front mounting bolt to the specified torque.

20. Check that the positioning holes and slots are aligned using the subframe alignment pin.

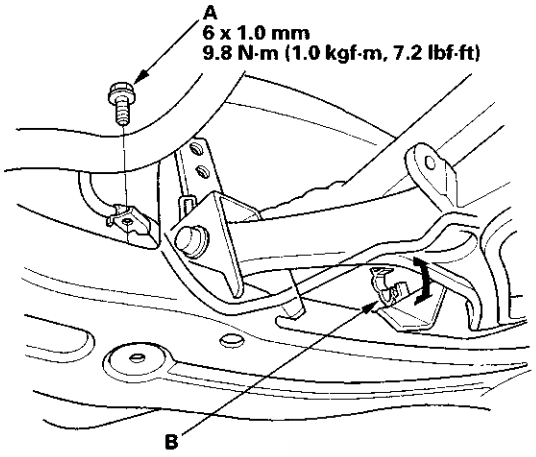
21. Tighten the rear and front stiffener mounting bolts to the specified torque.

22. Remove the jack and front subframe adapter.

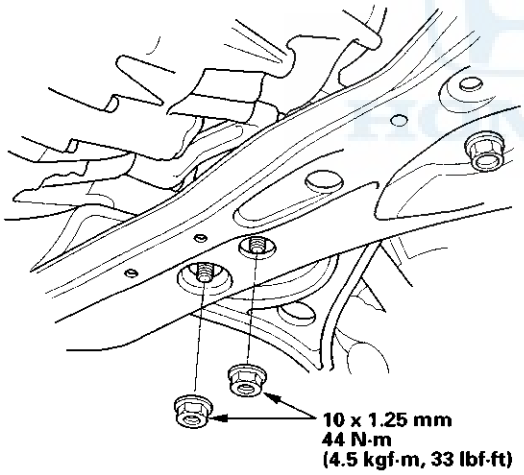
(cont'd)

Transmission Installation (cont'd)

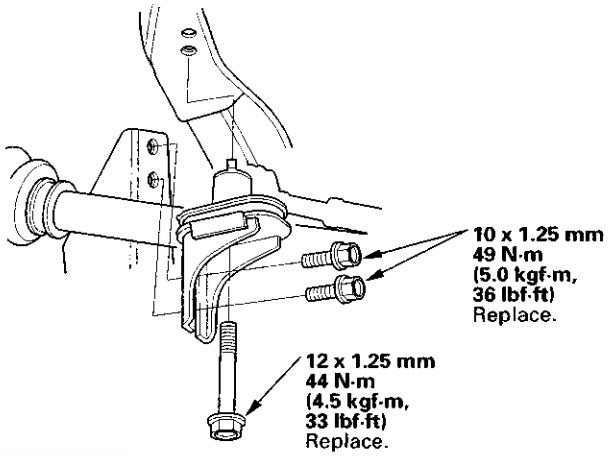
23. Install the power steering line holder bolt (A) and the power steering line to the clamp (B).



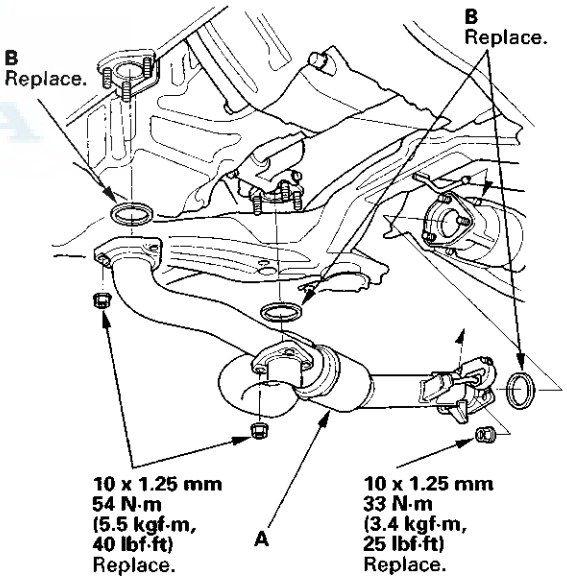
24. Install the lower transmission mount mounting nuts.



25. Install the subframe mid mount on both sides with new bolts.



26. Install exhaust pipe A with the new gaskets (B) and the new nuts.



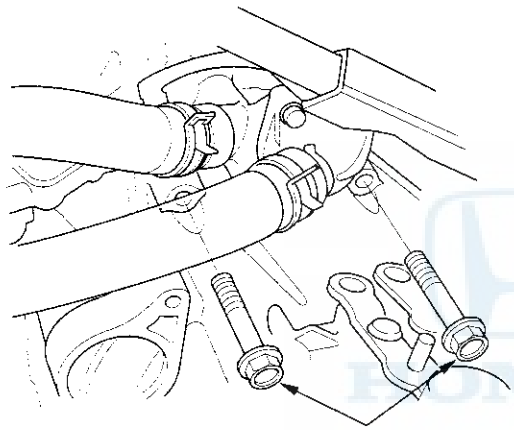
27. Connect the knuckle ball joint onto the lower arm, refer to the 2008-2009 Accord Service Manual (see page 18-21).

28. Install the damper fork, refer to the 2008-2009 Accord Service Manual (see step 4 on page 18-33).

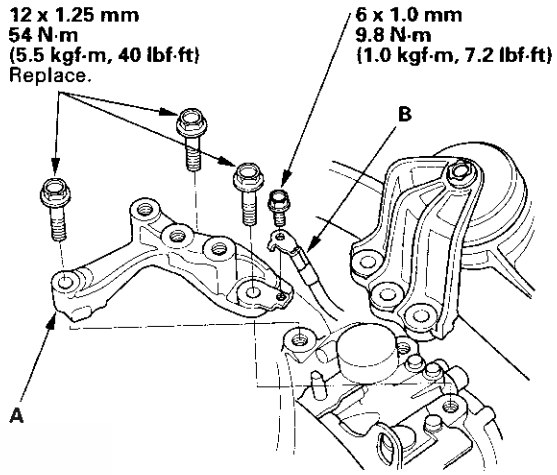
29. Install the front wheels, and set them in the straight-ahead position.

30. Lower the vehicle on the lift.

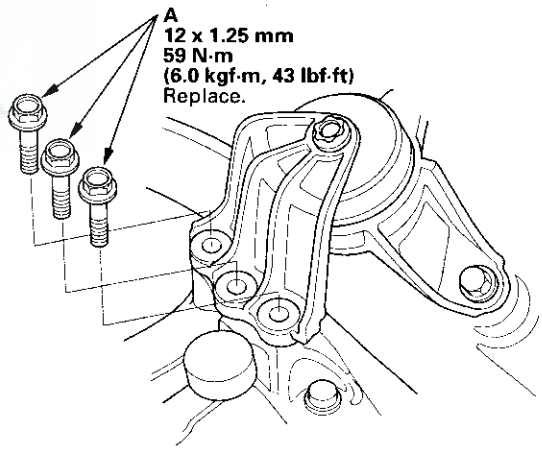
31. Install the upper transmission mount bolts (A).



32. Install the upper transmission mount bracket (A) with new bolts, and connect the ground cable (B) by installing mounting bolt.



33. Install the new upper transmission mount bracket bolts (A).

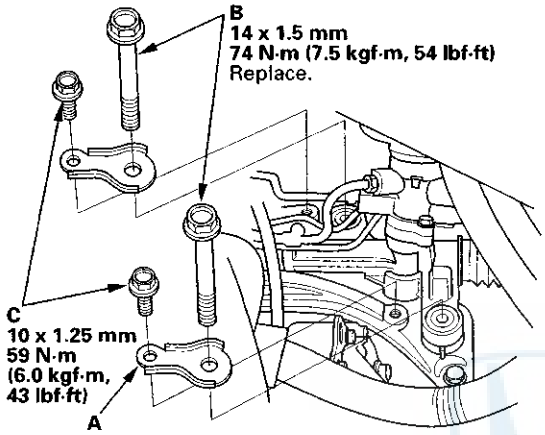


(cont'd)

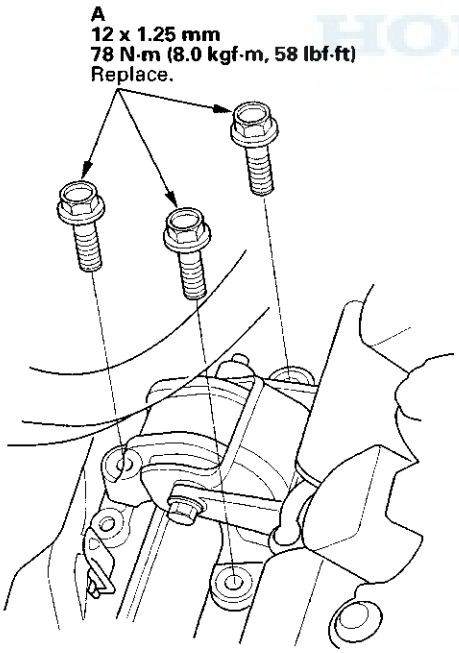
Transmission Installation (cont'd)

34. Install the power steering stiffener plates (A), and loosely tighten the new power steering gear box mounting bolts (B) and the stiffener plate bolts (C).

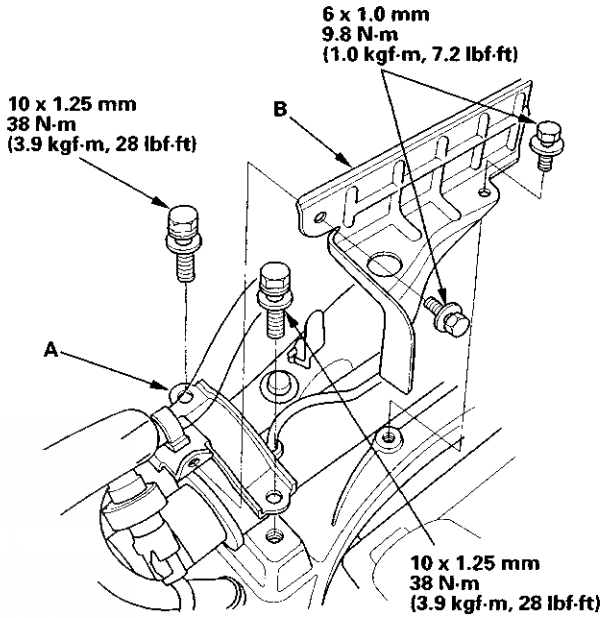
    NOTE: Make sure the lower washers placed in step 12 are correctly positioned before installing the bolts.



35. Install the new rear engine mount bolts (A).

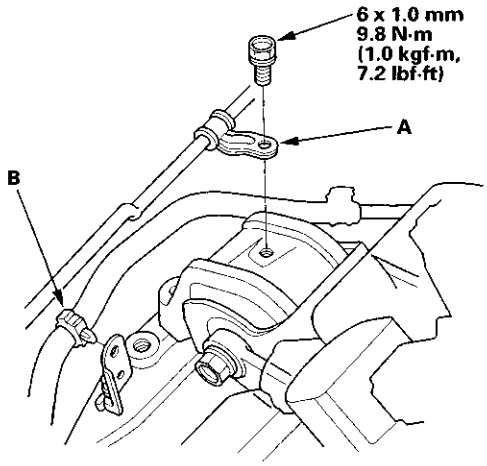


36. Install the power steering gearbox mounting bracket (A) to the specified torque, then install the heat shield (B).

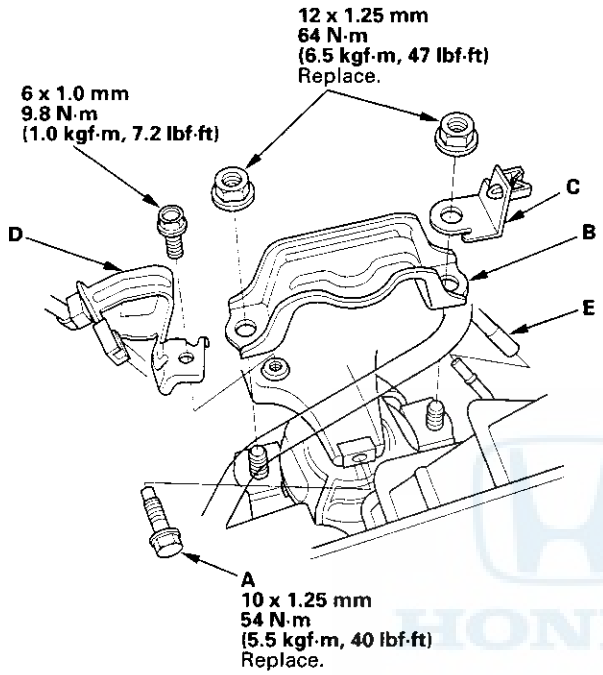


37. Tighten the driver's side of the power steering gear box mounting bolts and the stiffener plate bolts to the specified torque alternately in two steps.

38. Install the power steering line holder (A), and the power steering hose clamp (B).

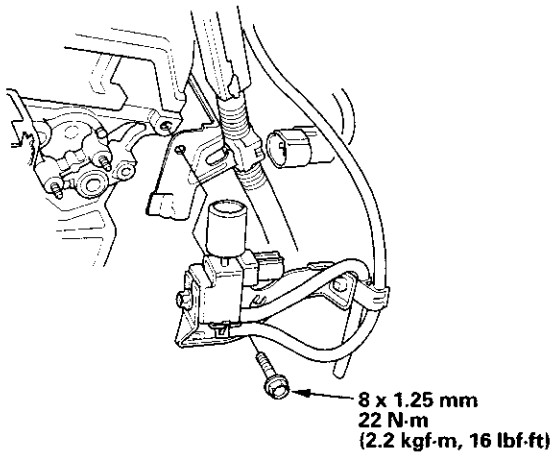


39. Install the new front engine mount bolt (A), the front engine mount stop (B), the vacuum hose bracket (C) with new nuts, and the harness bracket (D), then connect the vacuum hose (E).

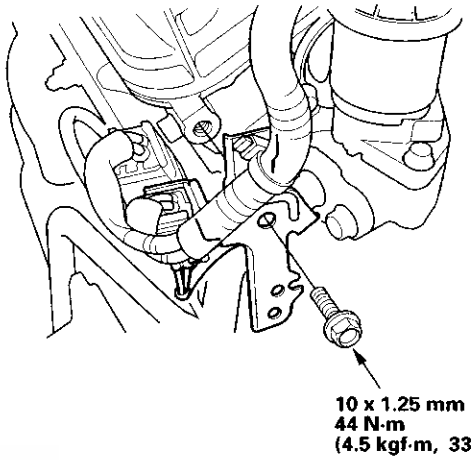


40. Remove the engine support hanger, the engine hanger balance bar, and the 2008 V6 attachment arm from the engine.

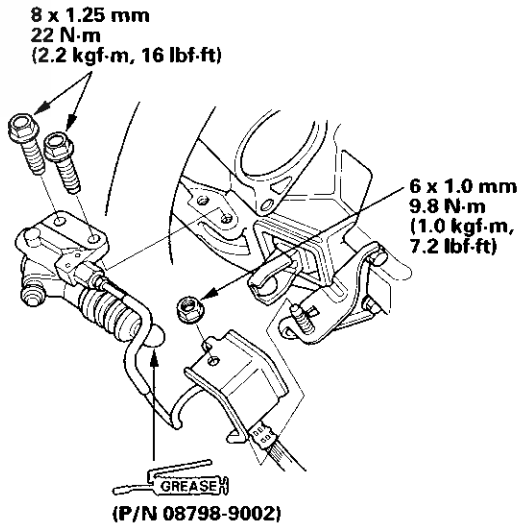
41. Install the harness clamp bracket to the rear cylinder head.



42. Install the connector bracket to the front cylinder head.



43. Apply a light coat of super high temp urea grease (P/N 08798-9002) to the end of the slave cylinder pushrod. Install the slave cylinder and the bracket mounting nut. Be careful not to bend the clutch line.

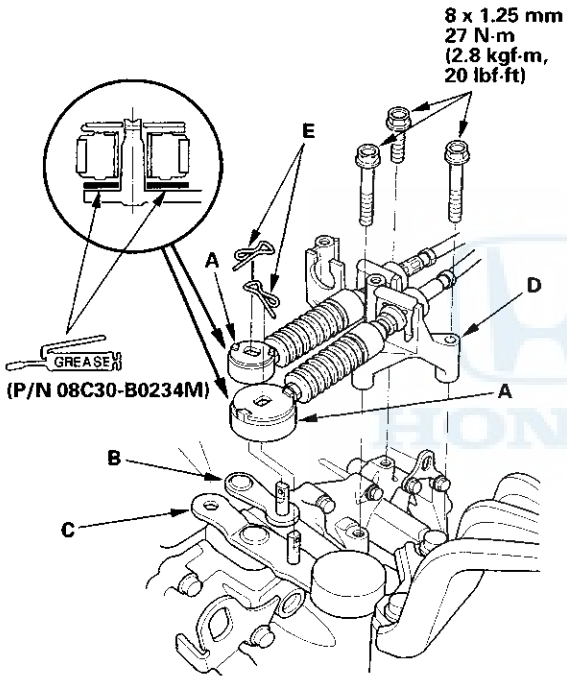


(cont'd)

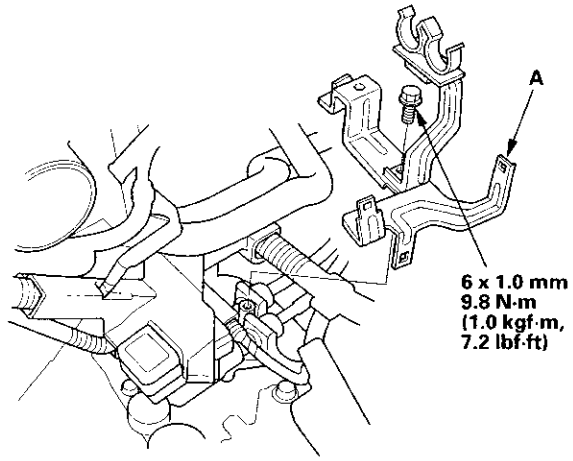
Transmission Installation (cont'd)

44. Apply a light coat of silicone grease (P/N 08C30-B0234M) to the cable ends (A) and connect the cable end to the select lever (B) and the change lever (C), then install the shift cable bracket (D) and the lock pins (E). Do not bend or damage the shift cables.

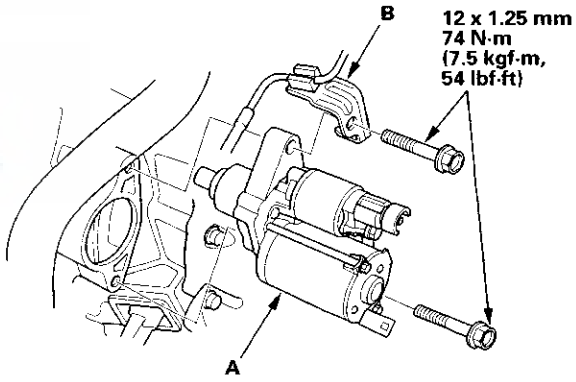
    NOTE: Make sure not to get any silicone grease on the terminal part of the connectors and switches, especially if you have silicone grease on your hands or gloves.



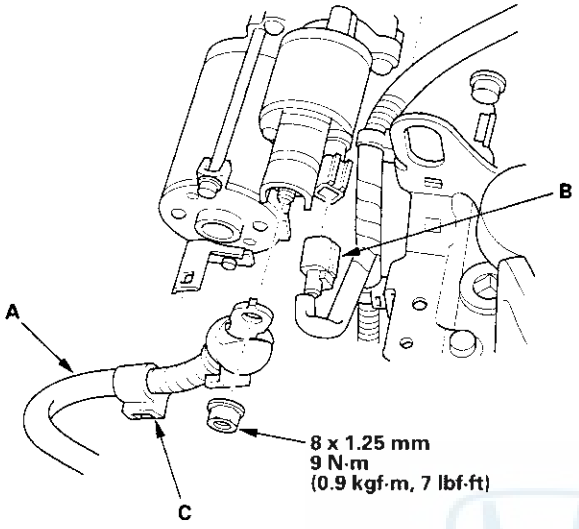
45. Install the harness bracket (A).



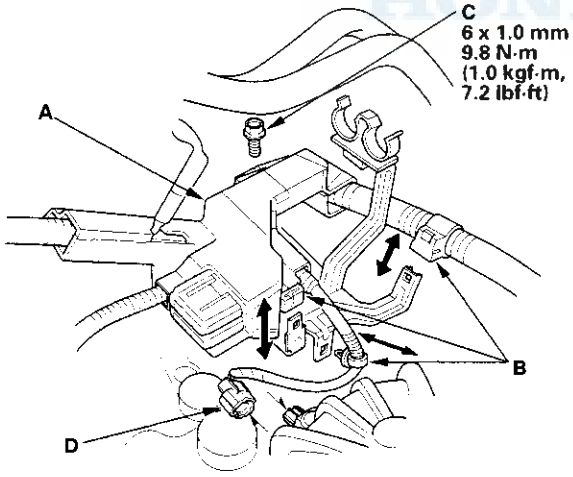
46. Install the starter (A) and the vacuum hose bracket (B).



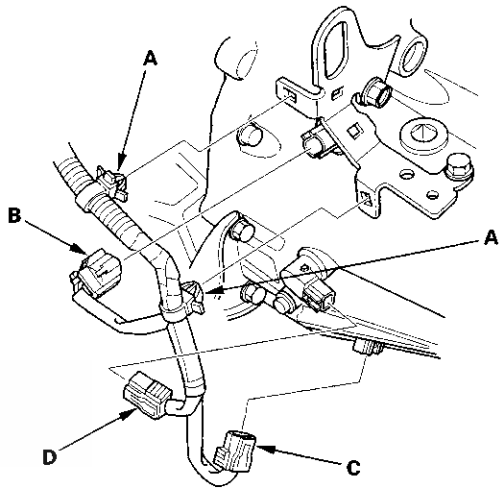
47. Connect the starter cable (A), the connector (B), and install the harness clamp (C).



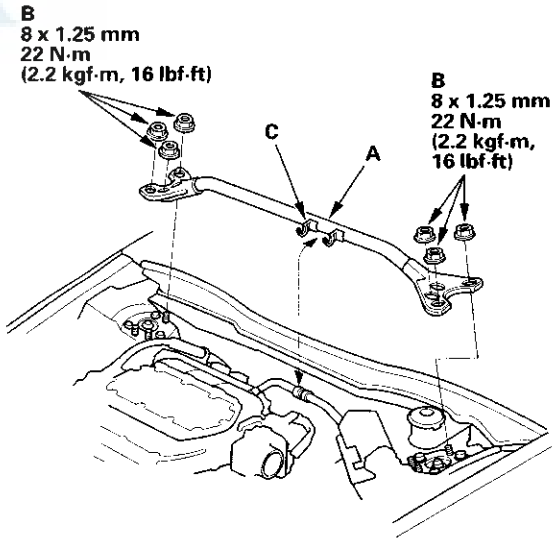
48. Install the harness (A), the harness clamps (B), and the harness mounting bolt (C) then connect the reverse lockout solenoid connector (D).



49. Install the harness clips (A), then connect the back-up light switch connector (B), the input shaft (mainshaft) speed sensor connector (C), and the output shaft (countershaft) speed sensor connector (D).



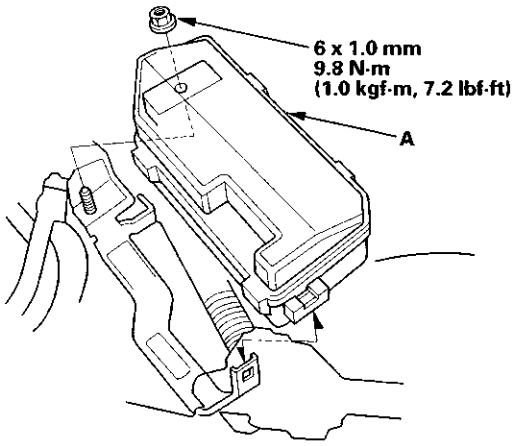
50. Install the strut brace (A) with the nuts (B), then install the harness to the clamp (C).



(cont'd)

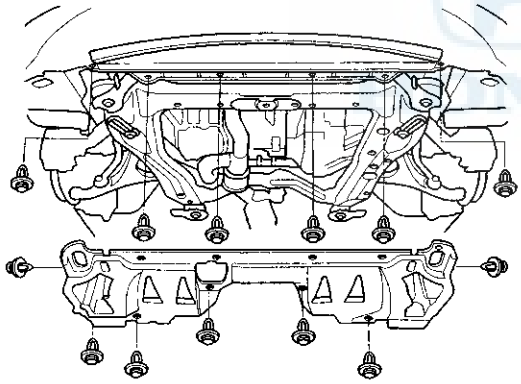
Transmission Installation (cont'd)

51. Install the under-hood fuse/relay box (A).

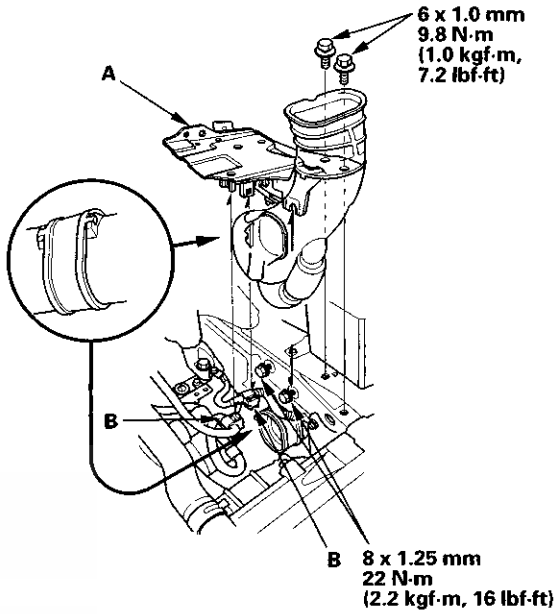


52. Refill the transmission fluid to the proper level (see page 13-14).

53. Install the splash shield (see page 20-29).



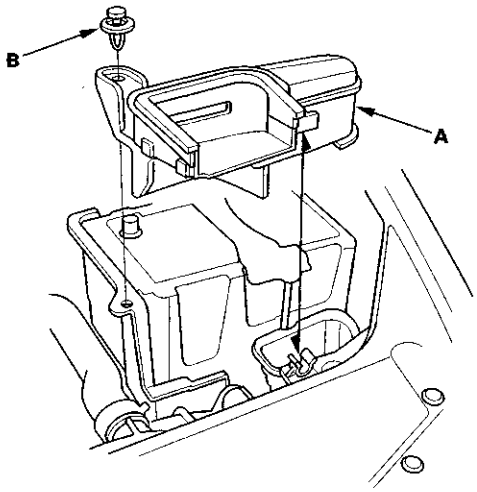
54. Install the battery base (A) and the cable clamps (B).



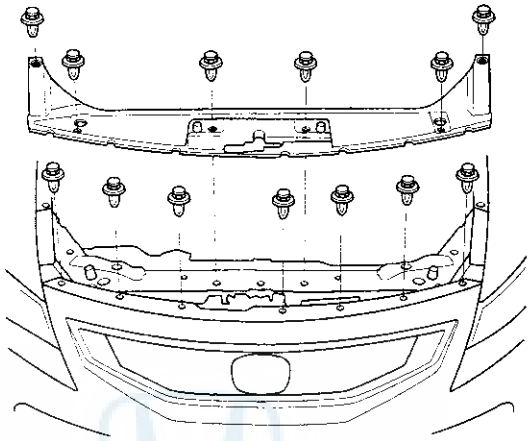
55. Install the air cleaner assembly (see page 11-436).

56. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

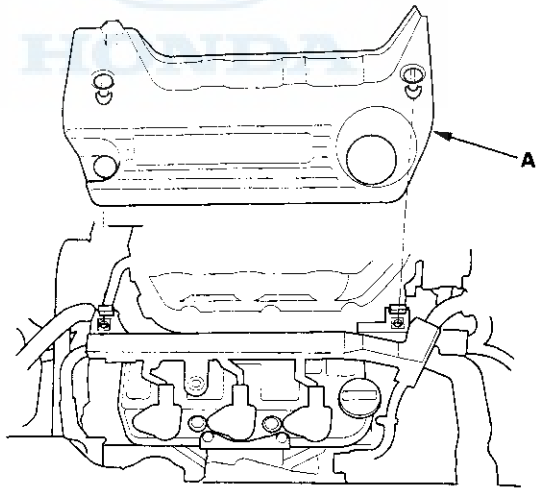
57. Install the air duct (A) and the clip (B).



58. Install the front grille cover, refer to the 2008-2009 Accord Service Manual (see page 20-257).



59. Install the engine cover (A).



60. Reinstall the hood support struts to the proper locations on both sides of the hood.

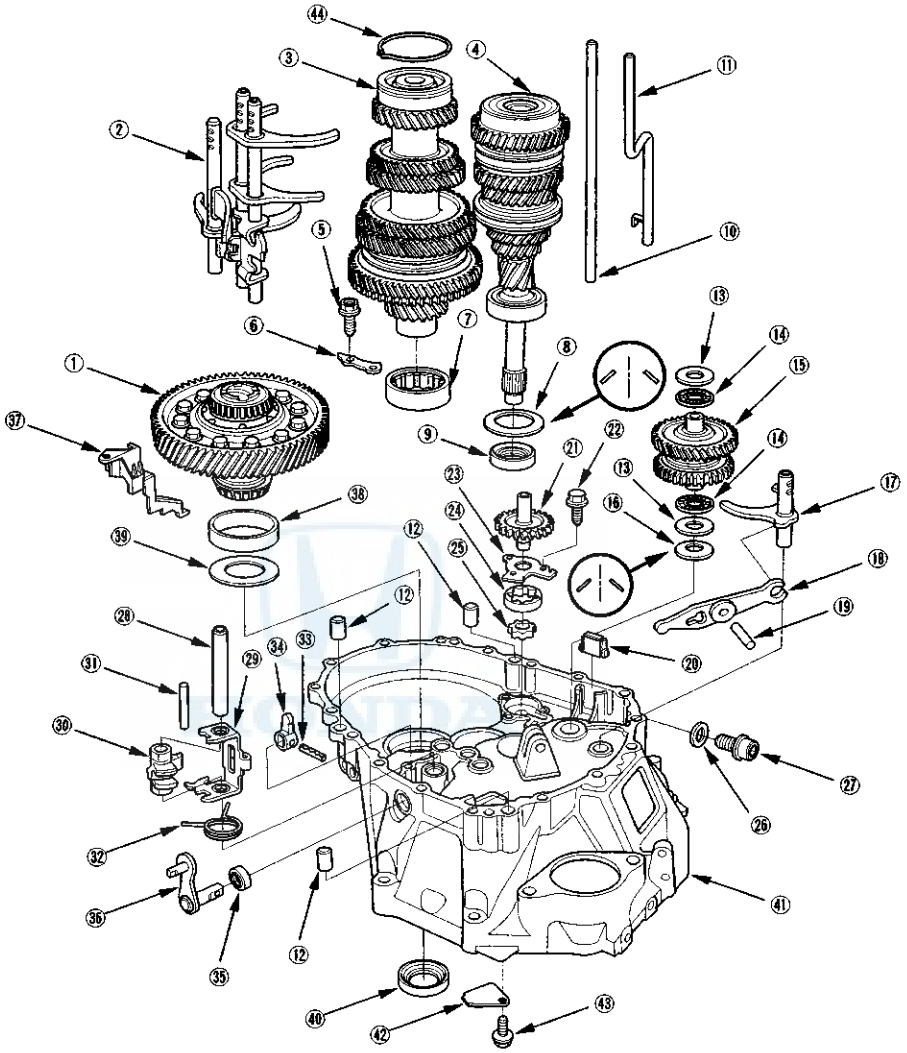
61. Check the wheel alignment (see page 18-4).

62. Check the shift lever and clutch operation.

63. Test-drive the vehicle.

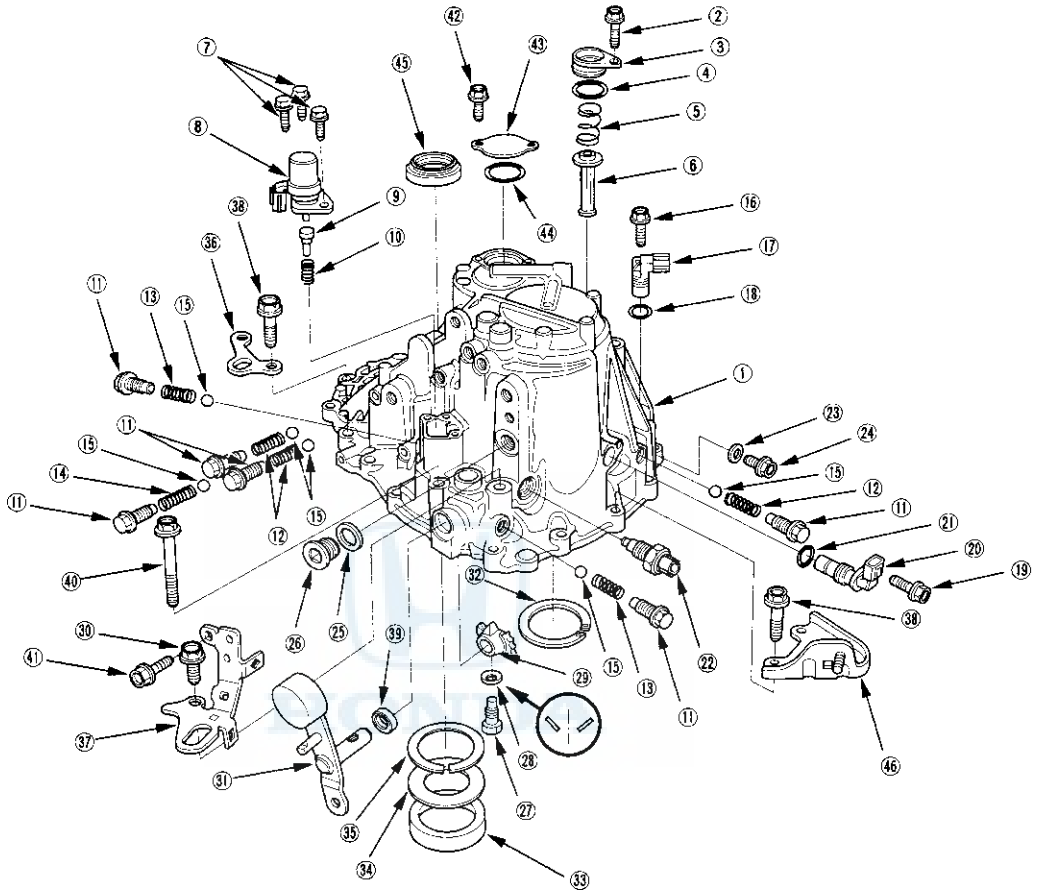
Transmission Disassembly

Exploded View - Clutch Housing



① DIFFERENTIAL ASSEMBLY
② SHIFT FORK ASSEMBLY
③ COUNTERSHAFT ASSEMBLY
④ MAINSHAFT ASSEMBLY
⑤ 6 mm FLANGE BOLT
13 N·m (1.3 kgf·m, 9.4 lbf·ft)
⑥ BEARING SET PLATE
⑦ NEEDLE BEARING
⑧ 64 mm SPRING WASHER
⑨ 28 x 43 x 7 mm OIL SEAL
Replace.
⑩ OIL GUIDE PIPE A
⑪ OIL GUIDE PIPE B
⑫ 14 x 20 mm DOWEL PIN
⑬ 20 mm THRUST WASHER
⑭ 20 mm THRUST NEEDLE BEARING
⑮ REVERSE IDLER GEAR SHAFT ASSEMBLY
⑯ 33 mm SPRING WASHER
⑰ REVERSE SHIFT FORK
⑱ REVERSE SHIFT LEVER
⑲ 8 x 50 mm PIN
⑳ MAGNET
㉑ OIL PUMP SHAFT
㉒ 6 mm FLANGE BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
㉓ OIL PUMP PLATE
㉔ OIL PUMP OUTER ROTOR
㉕ OIL PUMP INNER ROTOR
㉖ 14 mm SEALING WASHER
Replace.
㉗ DRAIN PLUG
39 N·m (4.0 kgf·m, 29 lbf·ft)
㉘ SHIFT PIECE SHAFT
㉙ INTERLOCK
㉚ SHIFT PIECE
㉛ 8 x 50 mm PIN
㉜ SELECT RETURN SPRING
㉝ 5 x 22 mm, 3 x 22 mm SPRING PIN
Replace.
㉞ SELECT ARM
㉟ 14 x 20 x 4 mm DUST SEAL
Replace.
㊱ SELECT LEVER
㊲ OIL GUTTER PLATE
㊳ 45 x 80 x 21 mm BEARING OUTER RACE
㊴ 46 x 80 x 1 mm SPACER
㊵ 35 x 54 x 8 mm OIL SEAL
Replace.
㊶ CLUTCH HOUSING
㊷ BREATHER PLATE
㊸ 6 mm FLANGE BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
㊹ 75 mm SNAP RING

Exploded View - Transmission Housing



① TRANSMISSION HOUSING
② 6 mm FLANGE BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
③ STRAINER COVER
④ O-RING
Replace.
⑤ STRAINER SET SPRING
⑥ OIL PUMP STRAINER
⑦ 6 mm FLANGE BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
⑧ REVERSE LOCKOUT SOLENOID
⑨ SELECT LOCK PIN
⑩ SELECT LOCK PIN SPRING
⑪ DETENT BOLT
22 N·m (2.2 kgf·m, 16 lbf·ft)
⑫ 27.4 mm SPRING (3)
⑬ 22.0 mm SPRING (2)
⑭ 26.1 mm SPRING (1)
⑮ STEEL BALL
⑯ 6 mm FLANGE BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
⑰ INPUT SHAFT
(MAINSHAFT) SPEED SENSOR
⑱ O-RING
Replace.
⑲ 6 mm FLANGE BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
⑳ OUTPUT SHAFT
(COUNTERSHAFT) SPEED SENSOR
㉑ O-RING
Replace.
㉒ BACK-UP LIGHT SWITCH
29 N·m (3.0 kgf·m, 22 lbf·ft)
㉓ 6 mm SEALING WASHER
Replace.
㉔ OIL CHECK BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
㉕ 20 mm SEALING WASHER
Replace.
㉖ FILLER PLUG
44 N·m (4.5 kgf·m, 33 lbf·ft)
㉗ 8 mm SPECIAL BOLT
29 N·m (3.0 kgf·m, 22 lbf·ft)
㉘ 8 mm SPRING WASHER
㉙ SHIFT ARM
㉚ 10 x 20 mm FLANGE BOLT
44 N·m (4.5 kgf·m, 33 lbf·ft)
㉛ CHANGE LEVER
㉜ 82 mm SHIM
㉝ 45 x 81 x 18 mm BEARING OUTER RACE
㉞ 46 x 81 x 1 mm SPACER
㉟ 81 mm SHIM
㊱ TRANSMISSION HANGER B
㊲ TRANSMISSION HANGER A
㊳ 10 x 42 mm FLANGE BOLT
44 N·m (4.5 kgf·m, 33 lbf·ft)
㊴ 16 x 23 x 5 mm DUST SEAL
Replace.
㊵ 10 x 90 mm FLANGE BOLT
44 N·m (4.5 kgf·m, 33 lbf·ft)
㊶ 8 mm FLANGE BOLT
27 N·m (2.8 kgf·m, 20 lbf·ft)
㊷ 6 mm FLANGE BOLT
12 N·m (1.2 kgf·m, 8.7 lbf·ft)
㊸ TRANSMISSION CASE CAP
㊹ O-RING
Replace.
㊺ 40 x 56 x 9 mm OIL SEAL
Replace.
㊻ CLUTCH LINE BRACKET

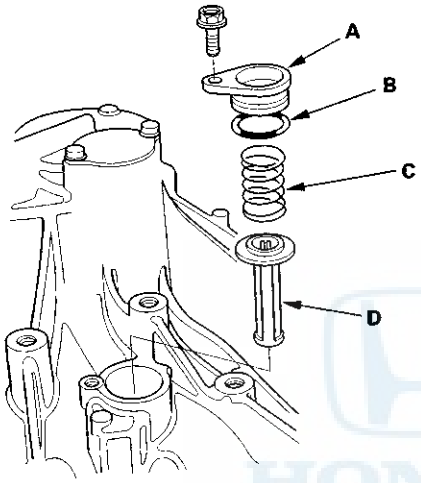
(cont'd)

Transmission Disassembly (cont'd)

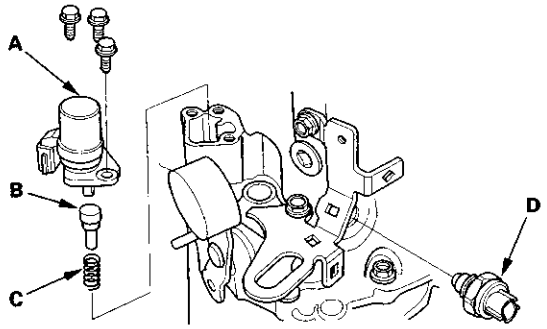
NOTE: Place the clutch housing on two pieces of wood thick enough to keep the mainshaft from hitting the workbench.

1. Remove the release bearing and the release fork (see page 12-25).

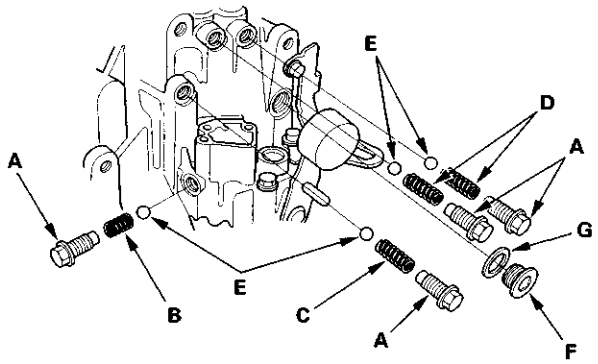
2. Remove the strainer cover (A), the O-ring (B), the strainer set spring (C), and the oil pump strainer (D).



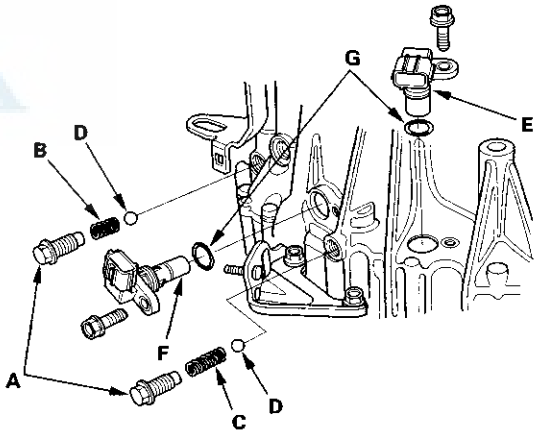
3. Remove the reverse lockout solenoid (A), the select lock pin (B), the select lock pin spring (C), and the back-up light switch (D).



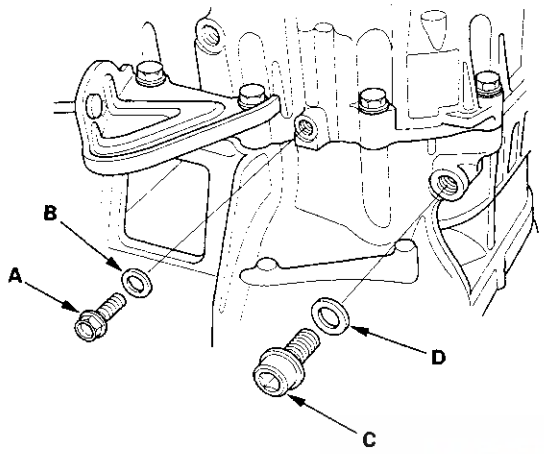
4. Remove the detent bolts (A), the 22.0 mm spring (B), the 26.1 mm spring (C), the 27.4 mm springs (D), the steel balls (E), the filler plug (F), and the 20 mm sealing washer (G).



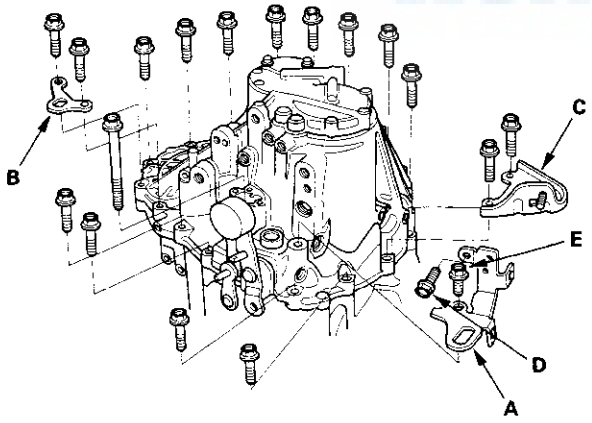
5. Remove the detent bolts (A), the 22.0 mm spring (B), the 27.4 mm spring (C), the steel balls (D), the input shaft (mainshaft) speed sensor (E), the output shaft (countershaft) speed sensor (F), and the O-rings (G).



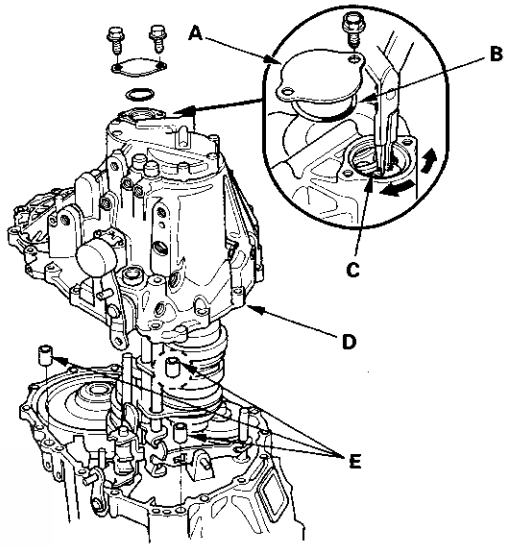
6. Remove the oil check bolt (A), the 6 mm sealing washer (B), the drain plug (C), and the 14 mm sealing washer (D).



7. Remove transmission hanger A, transmission hanger B, the clutch line bracket (C) and the 8 x 16 mm flange bolt (D), and the 10 x 20 mm flange bolt (E). Loosen the 10 x 42 mm flange bolts in a crisscross pattern in several steps, then remove them.



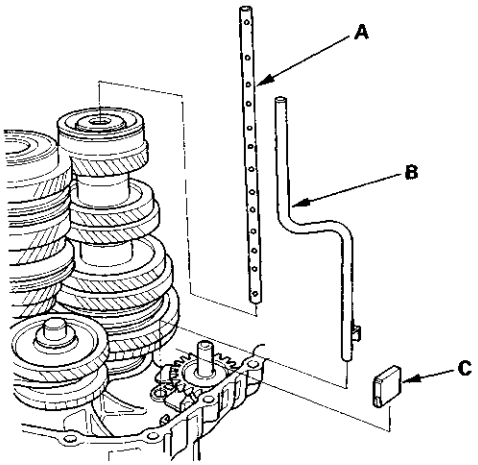
8. Remove the transmission case cap (A) and the O-ring (B).



9. Expand the 75 mm snap ring (C) on the countershaft ball bearing, and remove it from the groove with snap ring pliers.

10. Remove the transmission housing (D) and the three 14 x 20 mm dowel pins (E).

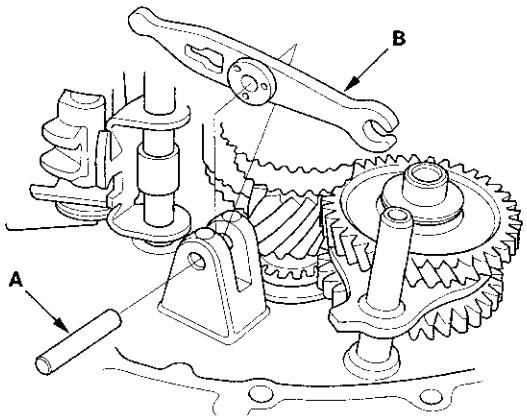
11. Remove oil guide pipe A, oil guide pipe B, and the magnet (C).



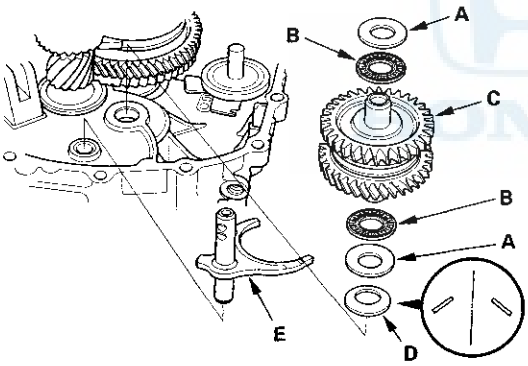
(cont'd)

Transmission Disassembly (cont'd)

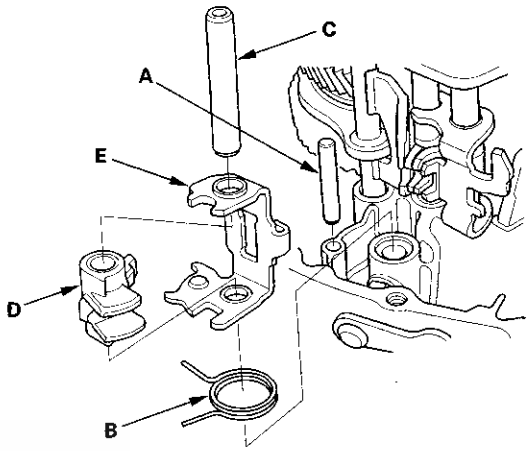
12. Remove the 8 x 50 mm pin (A) and the reverse shift lever (B).



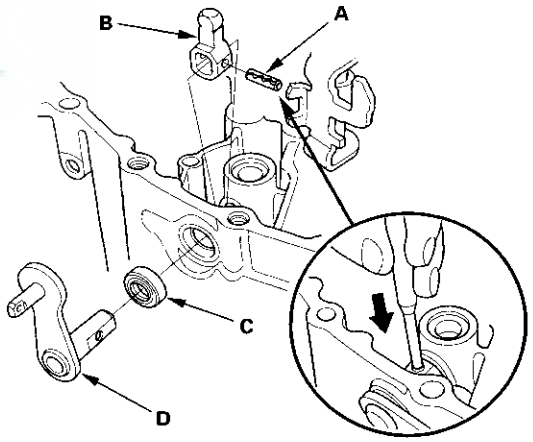
13. Remove the 20 mm thrust washers (A), the 20 mm thrust needle bearings (B), the reverse idler gear shaft assembly (C), the 33 mm spring washer (D), and the reverse shift fork (E) as an assembly.



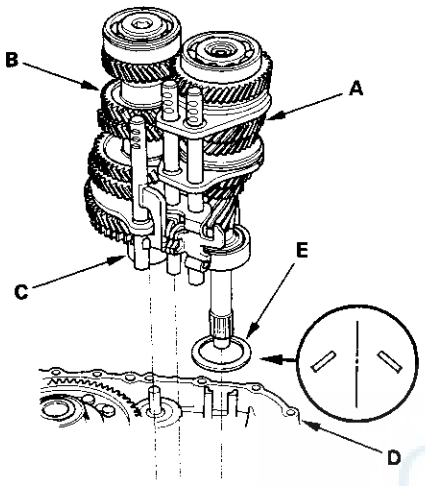
14. Remove the 8 x 50 mm pin (A), the select return spring (B), the shift piece shaft (C), the shift piece (D) and the interlock (E).



15. Remove the 5 x 22 mm, 3 x 22 mm spring pins (A), the select arm (B), the 14 x 20 x 4 mm dust seal (C), and the select lever (D).

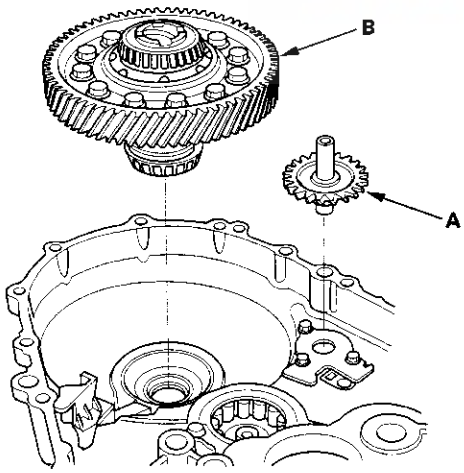


16. Apply tape to the mainshaft splines to protect the seal, then remove the mainshaft assembly (A) and the countershaft assembly (B) with the shift fork assembly (C) from the clutch housing (D).

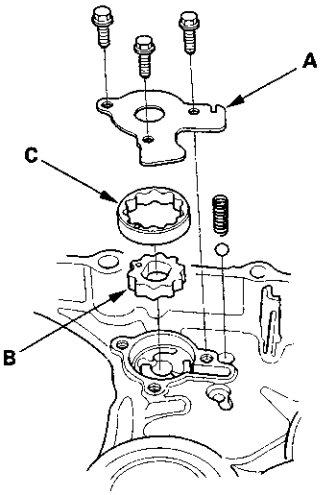


17. Remove the 64 mm spring washer (E).

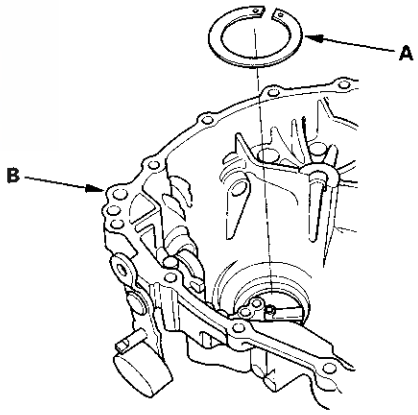
18. Remove the oil pump shaft (A) and the differential assembly (B).



19. Remove the oil pump plate (A), the oil pump inner rotor (B), and the oil pump outer rotor (C).



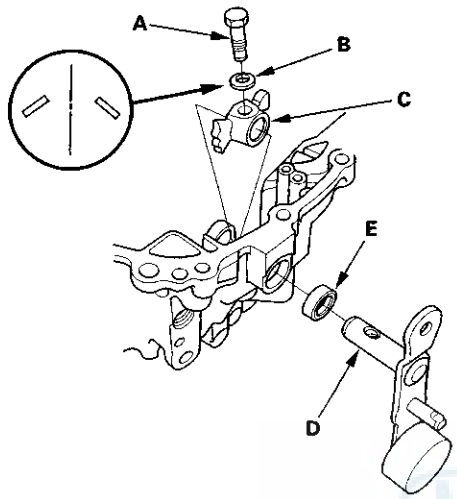
20. Remove the 82 mm shim (A) from the transmission housing (B).



(cont'd)

Transmission Disassembly (cont'd)

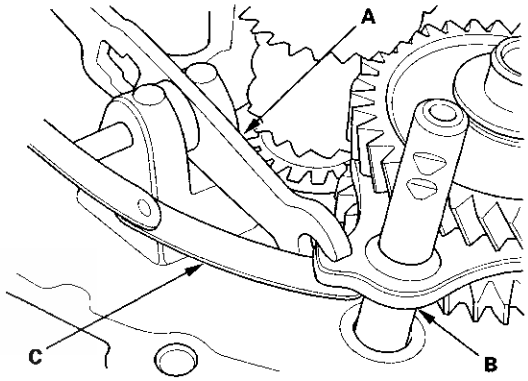
21. Remove the 8 mm special bolt (A), 8 mm spring washer (B), shift arm (C), change lever (D), and 16 x 23 x 5 mm dust seal (E).



Reverse Shift Lever Clearance Inspection

1. Measure the clearance between the reverse shift lever (A) and reverse shift fork (B) with a feeler gauge (C). If the clearance exceeds the service limit, go to step 2.

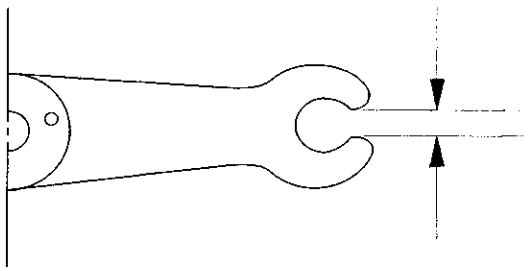
Standard: 0.05—0.50 mm (0.002—0.020 in.)
Service Limit: 0.6 mm (0.024 in.)



2. Measure width of the reverse shift lever.

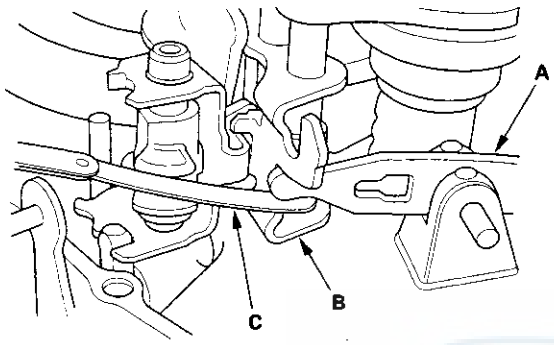
- If the width is not within the standard, replace the reverse shift lever.
- If the width is within the standard, replace the reverse shift fork.

Standard: 6.40—6.65 mm (0.252—0.262 in.)



3. Measure the clearance between the reverse shift lever (A) and the reverse shift piece (B) with a feeler gauge (C). If the clearance exceeds the service limit, go to step 4.

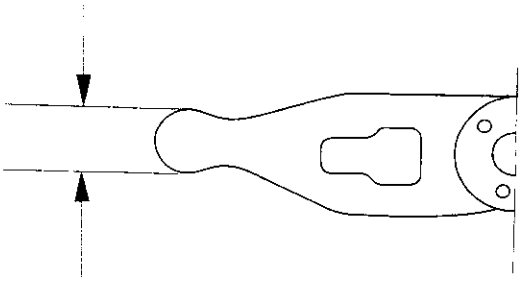
Standard: 0—0.4 mm (0—0.016 in.)
Service Limit: 0.5 mm (0.020 in.)



4. Measure the width of the reverse shift lever.

- If the width is not within the standard, replace the reverse shift lever.
- If the width is within the standard, replace the reverse shift piece.

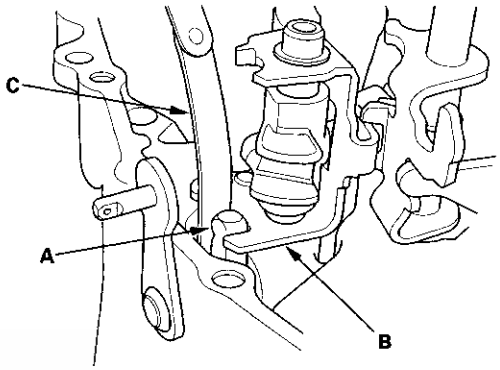
Standard: 13.0—13.2 mm (0.51—0.52 in.)



Select Arm Clearance Inspection

1. Measure the clearance between the select arm (A) and interlock (B) with a feeler gauge (C). If the clearance exceeds the service limit, go to step 2.

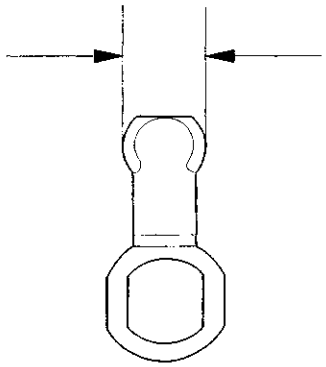
Standard: 0.05—0.25 mm (0.002—0.010 in.)
Service Limit: 0.5 mm (0.020 in.)



2. Measure the width of the select arm.

- If the width is not within the standard, replace the select arm.
- If the width is within the standard, replace the interlock.

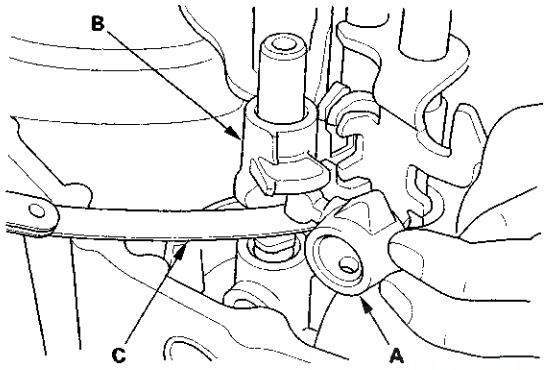
Standard: 12.9—13.0 mm (0.508—0.512 in.)



Shift Arm Clearance Inspection

1. Measure the clearance between the shift arm (A) and the shift piece (B) with a feeler gauge (C). If the clearance exceeds the service limit, go to step 2.

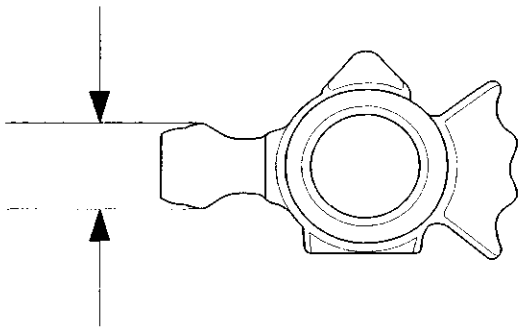
   Standard: 0.26—0.57 mm (0.01—0.02 in.)
   Service Limit: 0.75 mm (0.030 in.)



2. Measure the width of the shift arm.

   - If the width is not within the standard, replace the shift arm.
   - If the width is within the standard, replace the shift piece.

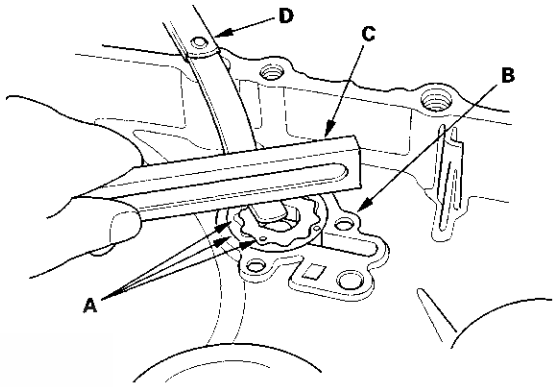
   Standard: 13.6—13.8 mm (0.535—0.543 in.)



Oil Pump Clearance Inspection

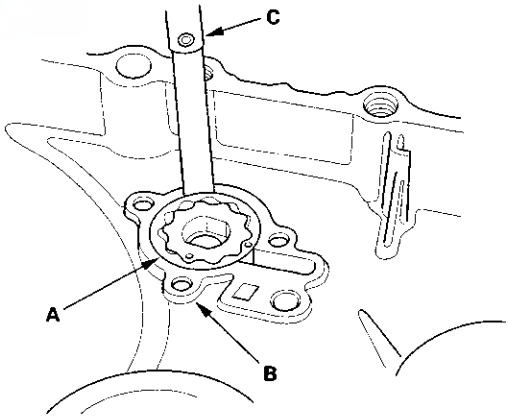
1. Measure the thrust clearance between the oil pump rotors (A) and clutch housing (B) with a straight edge (C) and a feeler gauge (D).

   Standard (new): 0.03—0.13 mm (0.001—0.005 in.)
   Service Limit: 0.15 mm (0.006 in.)



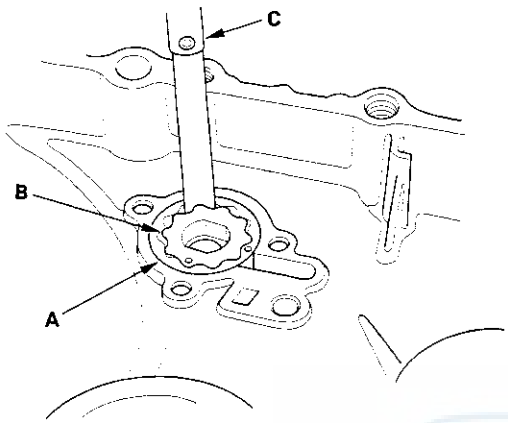
2. Measure the side clearance between the outer rotor (A) and clutch housing (B) with a feeler gauge (C).

   Standard (new): 0.1—0.2 mm (0.004—0.008 in.)
   Service Limit: 0.22 mm (0.009 in.)



3. Measure the side clearance between the outer rotor (A) and inner rotor (B) with a feeler gauge (C).

Standard (new): 0.14 mm (0.006 in.) max.
Service Limit: 0.2 mm (0.008 in.)



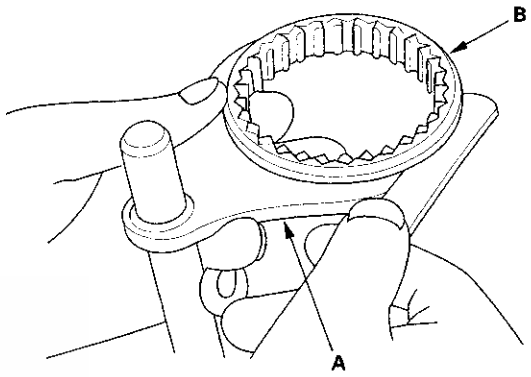
4. If any clearance is not within the standard, replace the oil pump outer and inner rotors as a set.

Shift Fork Clearance Inspection

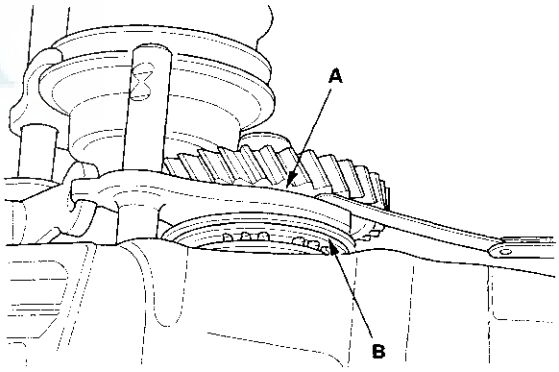
1. Measure the clearance between each shift fork (A) and its matching synchro sleeve (B). If the clearance exceeds the service limit, go to step 2.

Standard: 0.35—0.65 mm (0.014—0.026 in.)
Service Limit: 1.0 mm (0.039 in.)

1st/2nd, 3rd/4th, 5th/6th



Reverse



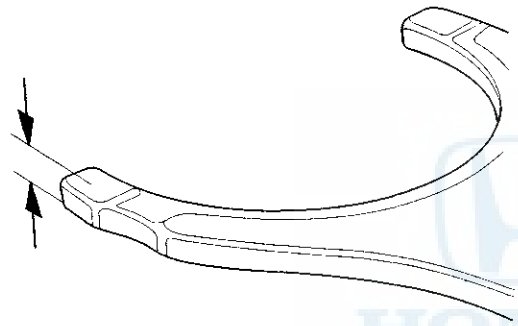
(cont'd)

Shift Fork Clearance Inspection (cont'd)

2. Measure the thickness of the shift fork fingers.

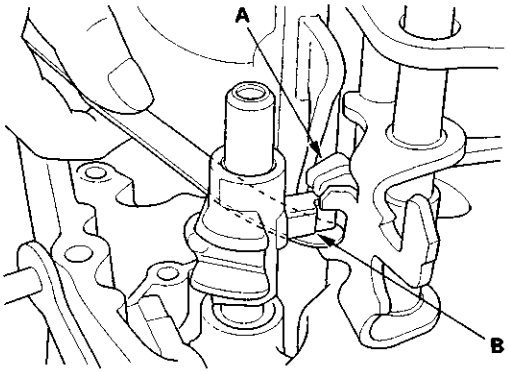
   - If the thickness is not within the standard, replace the shift fork.
   - If the thickness is within the standard, replace the synchro sleeve and synchro hub as a set.
   - If one arm of the shift fork shows more wear than others, the fork may be bent and needs to be replaced.

   Standard:
   1st/2nd, 3rd/4th, 5th/6th:
   7.4—7.6 mm (0.29—0.30 in.)
   Reverse: 6.2—6.4 mm (0.24—0.25 in.)



3. Measure the clearance between each shift fork (A) and shift piece (B). If the clearance exceeds the service limit, go to step 4.

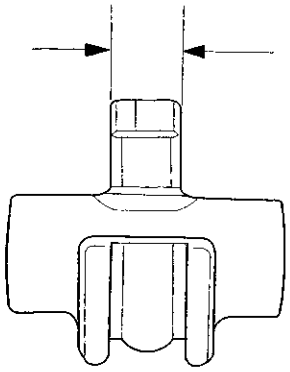
   Standard: 0.2—0.6 mm (0.008—0.024 in.)
   Service Limit: 0.7 mm (0.028 in.)



4. Measure the width of the shift piece.

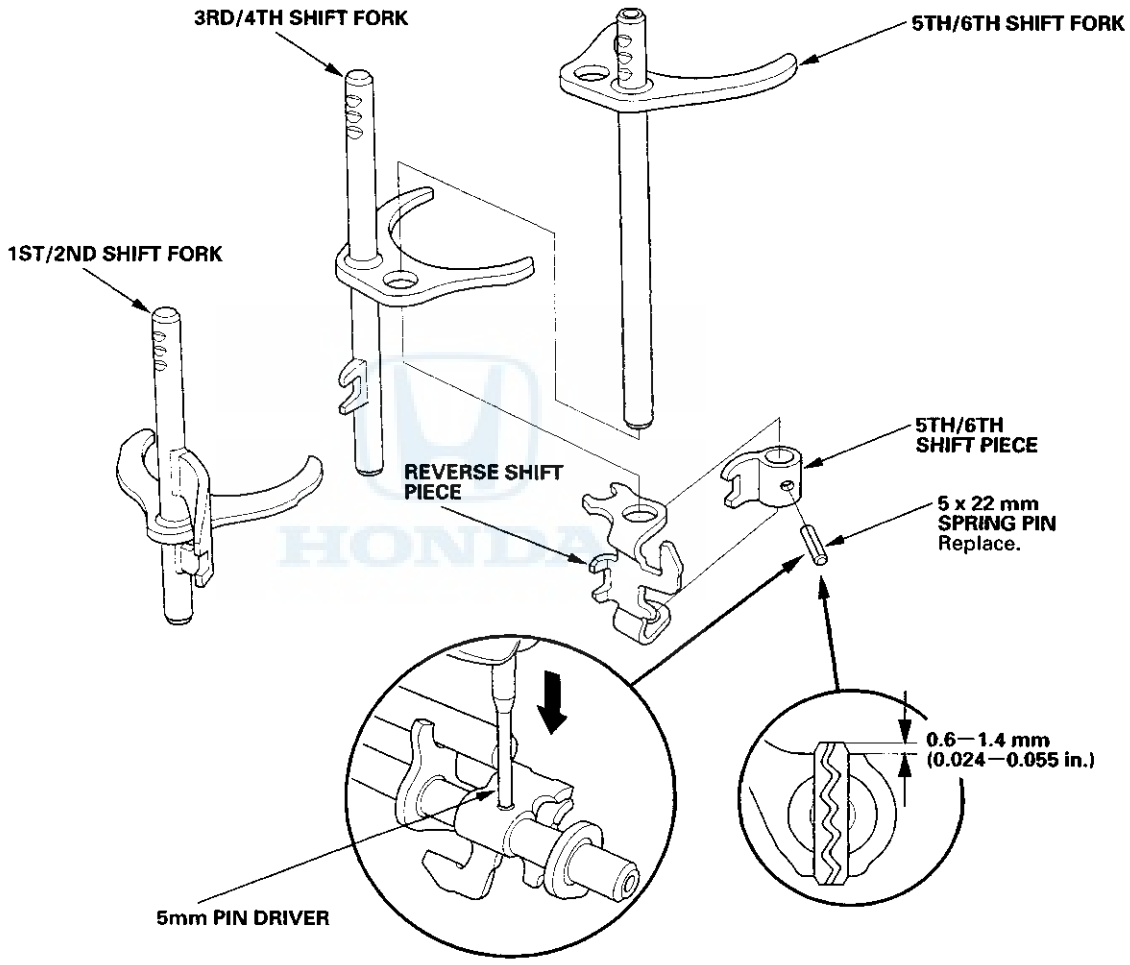
   - If the width is not within the standard, replace the shift piece.
   - If the width is within the standard, replace the shift fork.

   Standard: 12.8—13.0 mm (0.504—0.512 in.)



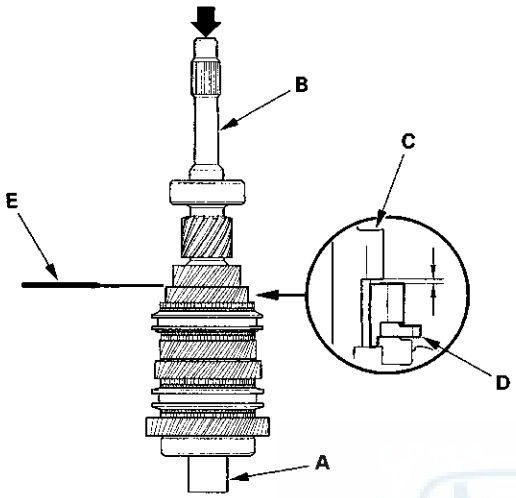
Shift Fork Disassembly/Reassembly

NOTE: Prior to reassembling, clean all parts in solvent, dry them, and apply MTF to all contact surfaces.



Mainshaft Assembly Clearance Inspection

1. Support the bearing inner race with an appropriate sized socket (A), and push down on the mainshaft (B).



2. Measure the clearance between 2nd gear (C) and 3rd gear (D) with a feeler gauge (E).

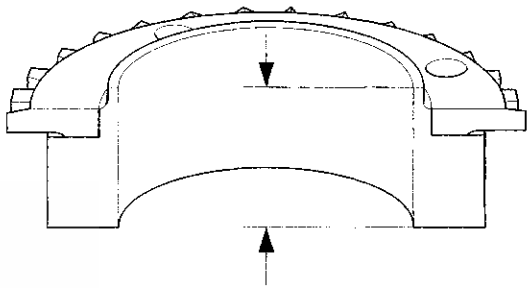
   - If the clearance exceeds the service limit, go to step 3.
   - If the clearance is within the service limit, go to step 4.

   Standard: 0.06—0.19 mm (0.002—0.007 in.)
   Service Limit: 0.3 mm (0.01 in.)

3. Measure the thickness of 3rd gear.

   - If the thickness is less than the service limit, replace 3rd gear.
   - If the thickness is within the service limit, replace the 3rd/4th synchro hub and 3rd/4th synchro sleeve as a set.

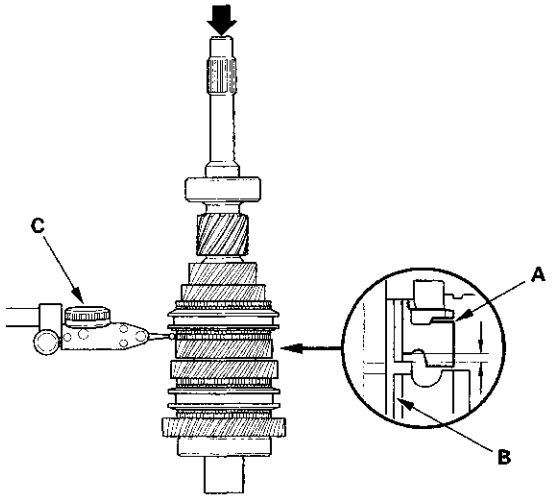
   Standard: 23.89—23.97 mm (0.941—0.944 in.)
   Service Limit: 23.8 mm (0.94 in.)



4. Measure the clearance between 4th gear (A) and the distance collar (B) with a dial indicator (C).

   - If the clearance exceeds the service limit, go to step 5.
   - If the clearance is within the service limit, go to step 7.

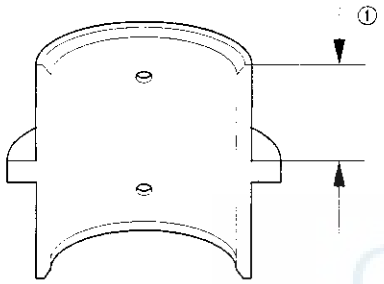
   Standard: 0.06—0.19 mm (0.002—0.007 in.)
   Service Limit: 0.3 mm (0.01 in.)



5. Measure the length ① of the 4th/5th gear distance collar as shown.

   - If the length ① is not within the standard, replace the 4th/5th gear distance collar.
   - If the length ① is within the standard, go to step 6.

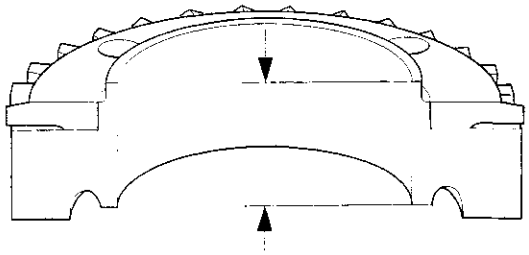
   Standard: 22.53—22.58 mm (0.887—0.889 in.)



6. Measure the thickness of 4th gear.

   - If the thickness is less than the service limit, replace 4th gear.
   - If the thickness is within the service limit, replace the 3rd/4th synchro hub and 3rd/4th synchro sleeve as a set.

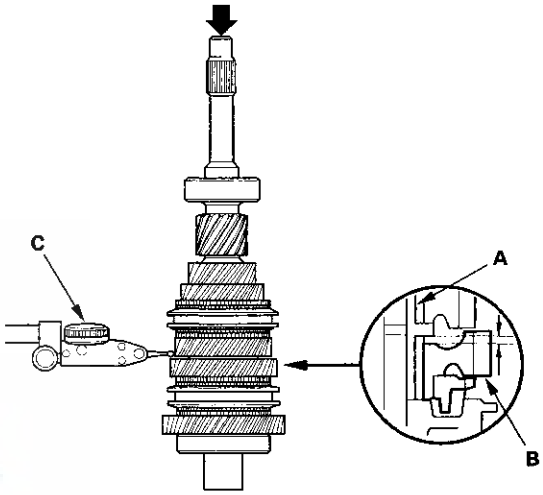
   Standard: 22.39—22.47 mm (0.881—0.885 in.)
   Service Limit: 22.3 mm (0.88 in.)



7. Measure the clearance between the distance collar (A) and 5th gear (B) with a dial indicator (C).

   - If the clearance exceeds the service limit, go to step 8.
   - If the clearance is within the service limit, go to step 10.

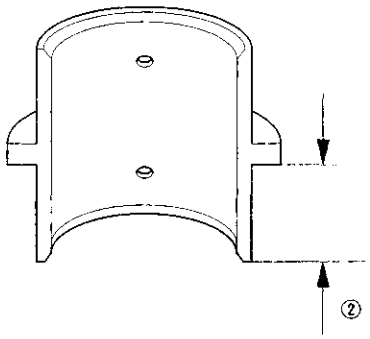
   Standard: 0.06—0.19 mm (0.002—0.007 in.)
   Service Limit: 0.3 mm (0.01 in.)



8. Measure the length ② of the 4th/5th gear distance collar as shown.

   - If the length ② is not within the standard, replace the 4th/5th gear distance collar.
   - If the length ② is within the standard, go to step 9.

   Standard: 22.53—22.58 mm (0.887—0.889 in.)



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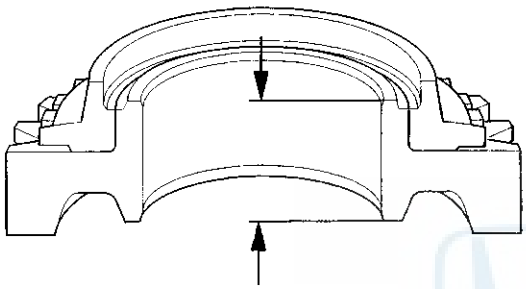
Mainshaft Assembly Clearance Inspection (cont'd)

9. Measure the thickness of 5th gear.

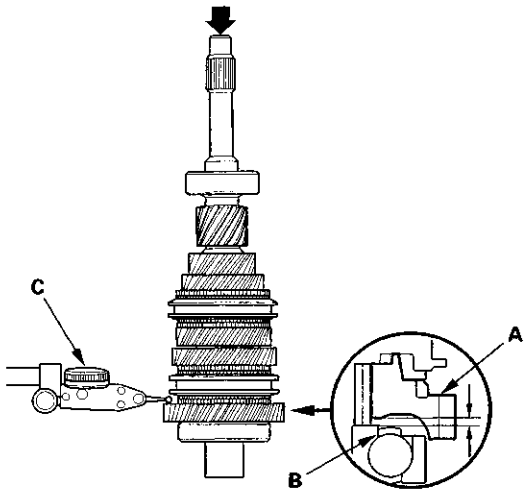
   - If the thickness is less than the service limit, replace 5th gear.
   - If the thickness is within the service limit, replace the 5th/6th synchro hub and 5th/6th synchro sleeve as a set.

   Standard: 22.39—22.47 mm (0.881—0.885 in.)
   Service Limit: 22.3 mm (0.88 in.)



10. Measure the clearance between 6th gear (A) and the angular ball bearing inner race (B) with a dial indicator (C). If the clearance exceeds the service limit, go to step 11.

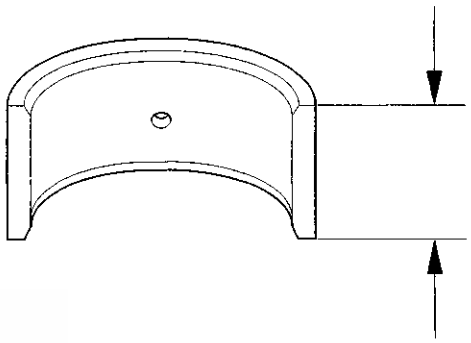
    Standard: 0.13—0.26 mm (0.005—0.010 in.)
    Service Limit: 0.35 mm (0.01 in.)



11. Measure the length of the 6th gear distance collar.

    - If the length is not within the standard, replace the 6th gear distance collar.
    - If the length is within the standard, go to step 12.

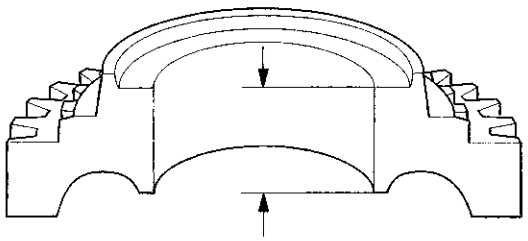
    Standard: 24.03—24.08 mm (0.946—0.948 in.)



12. Measure the thickness of 6th gear.

    - If the thickness is less than the service limit, replace 6th gear.
    - If the thickness is within the service limit, replace the 5th/6th synchro hub and 5th/6th synchro sleeve as a set.

    Standard: 23.82—23.90 mm (0.938—0.941 in.)
    Service Limit: 23.75 mm (0.94 in.)

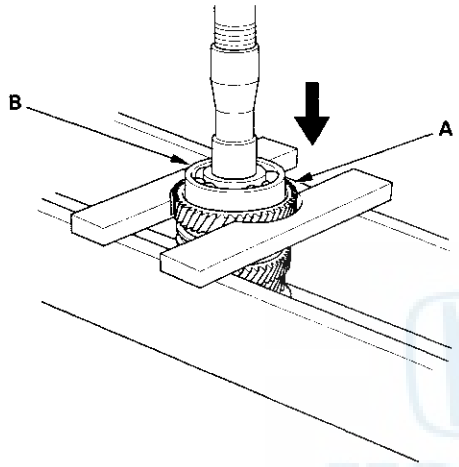


Mainshaft Disassembly

NOTE: Refer to the Exploded View in the Mainshaft Reassembly, as needed, to remove components except those pressed on the mainshaft (see page 13-57).

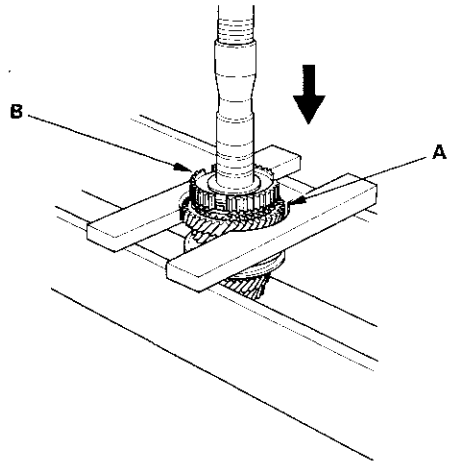
1. Support 6th gear (A) on the steel blocks, and press the mainshaft out of the ball bearing (B).

   NOTE: Do not use a jaw-type puller; it can damage the gear teeth.



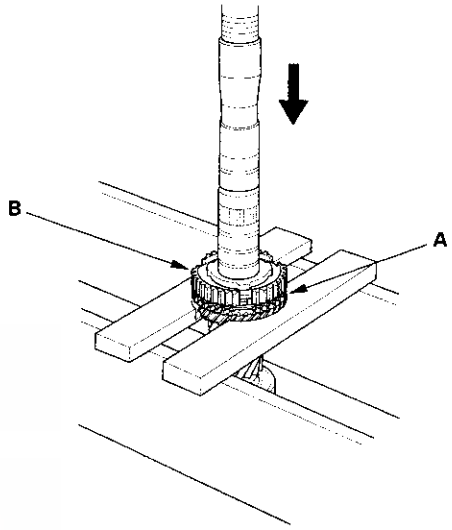
2. Support 5th gear (A) on the steel blocks, and press the mainshaft out of the 5th/6th synchro hub (B) and 5th gear.

   NOTE: Do not use a jaw-type puller; it can damage the gear teeth.

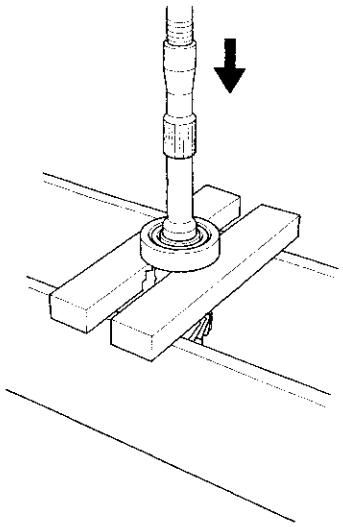


3. Support 3rd gear (A) on the steel blocks, and press the mainshaft out of the 3rd/4th synchro hub (B) and 3rd gear.

   NOTE: Do not use a jaw-type puller; it can damage the gear teeth.



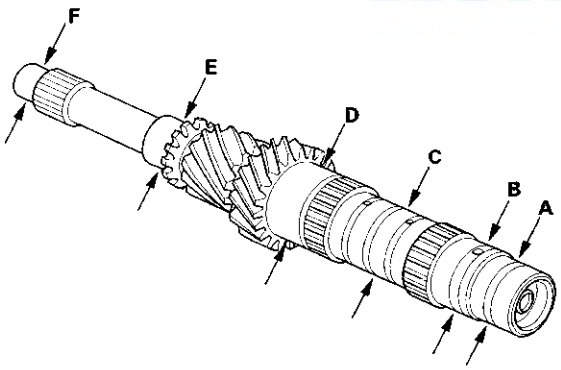
4. Support the angular ball bearing on the steel blocks, and press out the mainshaft.



Mainshaft Inspection

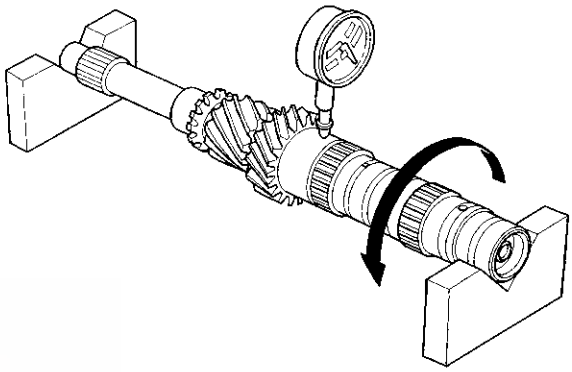
1. Inspect the oil passage, gear, and bearing contact areas for wear and damage, then measure the mainshaft at points A, B, C, D, E, and F. If any part of the mainshaft is less than the service limit, replace it.

Standard:
A Ball Bearing Contact Area (Transmission Housing Side):
30.987—31.000 mm (1.2200—1.2205 in.)
B 6th Gear Distance Collar Contact Area:
32.987—33.000 mm (1.2987—1.2992 in.)
C 4th/5th Gear Distance Collar Contact Area:
35.987—36.000 mm (1.4168—1.4173 in.)
D Needle Bearing Contact Area:
41.984—42.000 mm (1.6529—1.6535 in.)
E Ball Bearing Contact Area (Clutch Housing Side):
28.002—28.015 mm (1.1024—1.1030 in.)
F Pilot Bearing Contact Area:
19.967—19.980 mm (0.7861—0.7866 in.)
Service Limit:
A: 30.93 mm (1.218 in.)
B: 32.93 mm (1.296 in.)
C: 35.93 mm (1.415 in.)
D: 41.93 mm (1.651 in.)
E: 27.95 mm (1.100 in.)
F: 19.91 mm (0.784 in.)



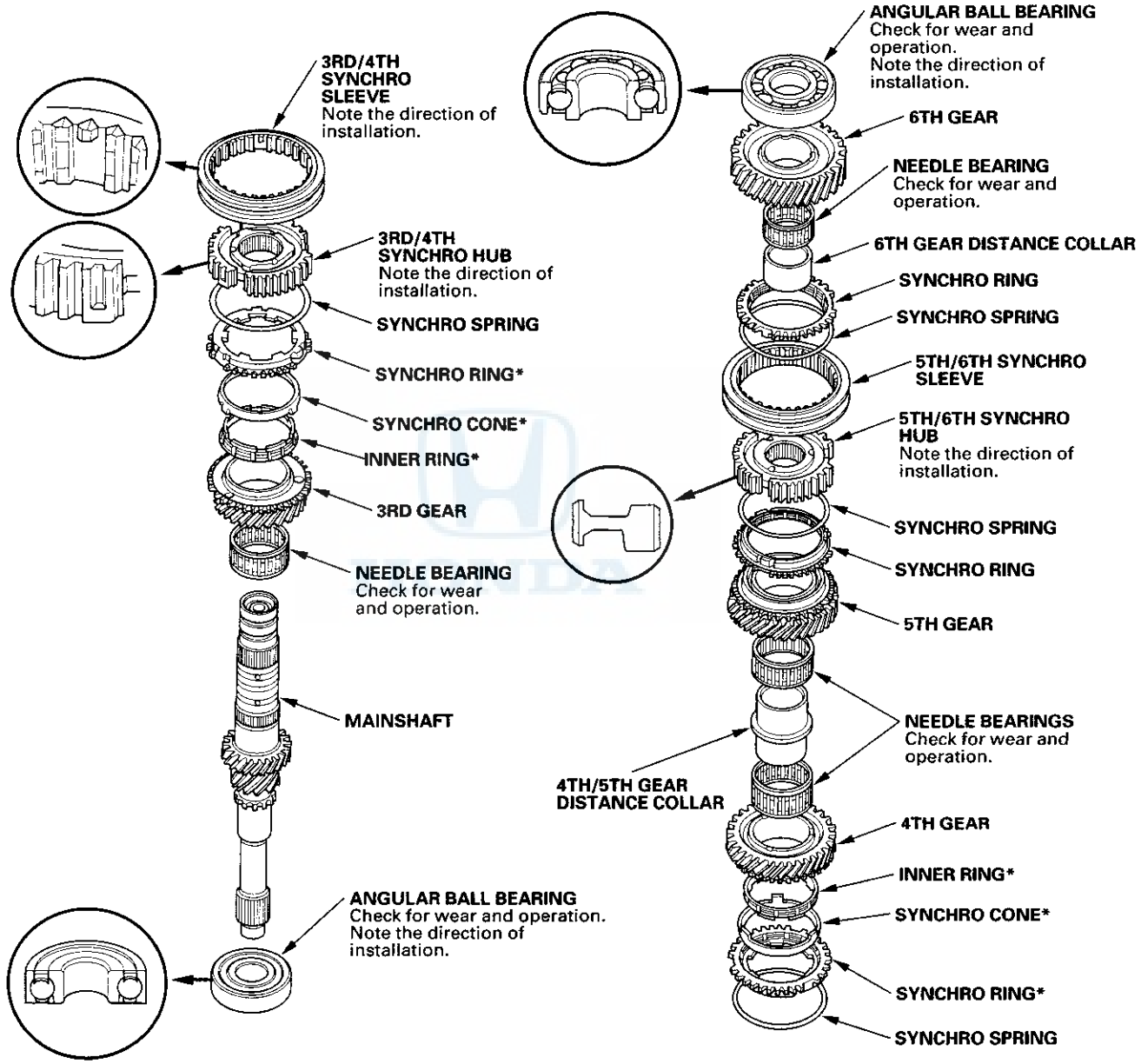
2. Inspect the runout by supporting both ends of the mainshaft. Then rotate the mainshaft two complete turns while measuring with a dial gauge. If the runout exceeds the service limit, replace the mainshaft.

Standard: 0.02 mm (0.001 in.) max.
Service Limit: 0.05 mm (0.002 in.)



Mainshaft Reassembly

Exploded View



*: The components of the double cone synchro assembly.

(cont'd)

Mainshaft Reassembly (cont'd)

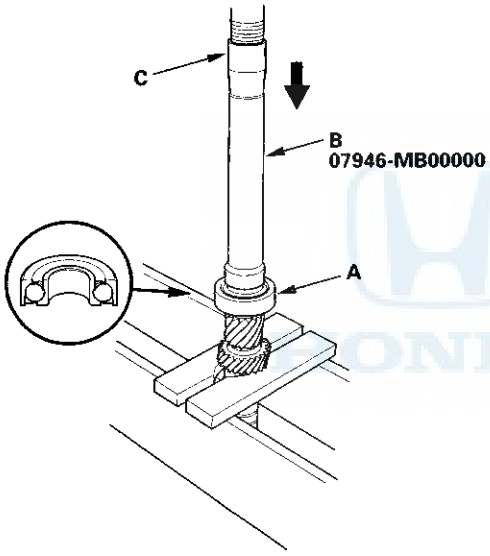
Special Tools Required
- Inner driver handle, 40 mm 07746-0030100
- Inner driver, 30 x 36 mm 07946-MB00000

NOTE: Refer to the Exploded View, as needed, during this procedure.

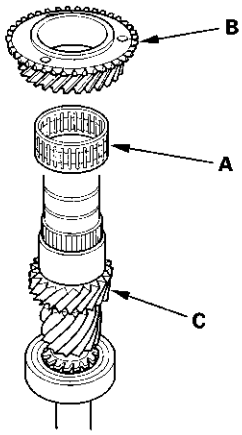
1. Clean all parts in solvent, dry them, and apply MTF to all contact surfaces.

2. Press in the new angular ball bearing (A) using the 30 x 36 mm inner driver (B) and a press (C).

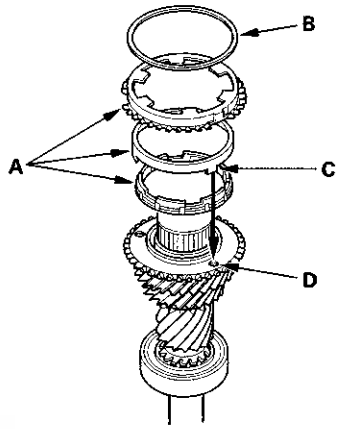
   NOTE: Check the ball bearing install direction.



3. Install the needle bearing (A) and 3rd gear (B) onto the mainshaft (C).

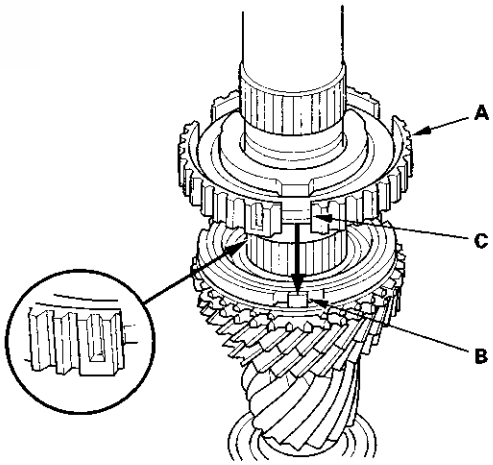


4. Install the double cone synchro assembly (A) with the synchro spring (B) by aligning the synchro cone fingers (C) with the holes (D) in 3rd gear.

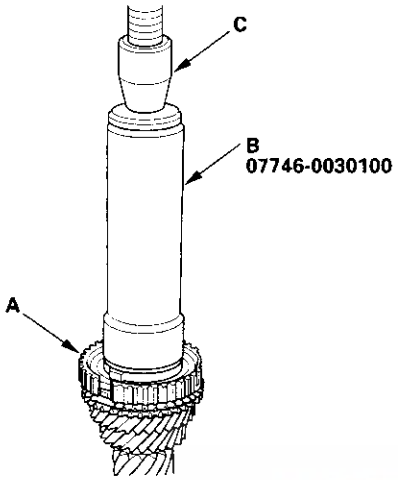


5. Install the 3rd/4th synchro hub (A) by aligning the synchro ring fingers (B) with the grooves (C) in the 3rd/4th synchro hub.

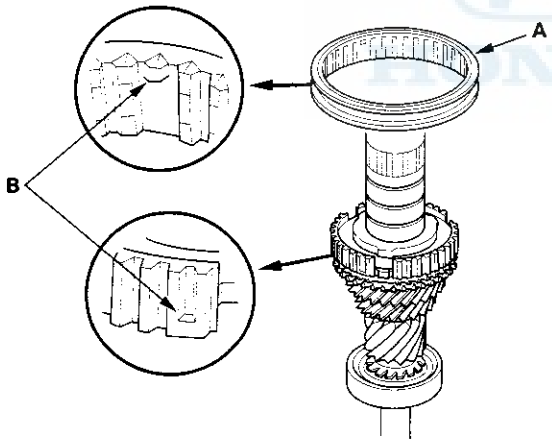
   NOTE: Make sure to install the 3rd/4th synchro hub in the direction shown.



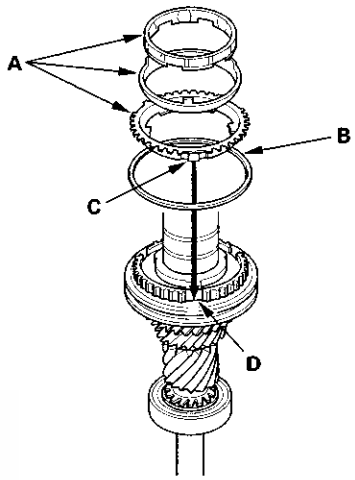
6. Press on the 3rd/4th synchro hub (A) using the 40 mm inner driver handle (B) and a press (C).



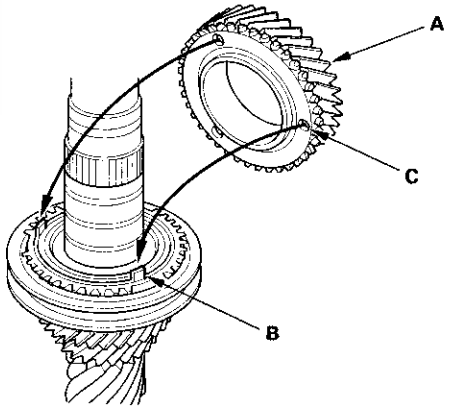
7. Install the 3rd/4th synchro sleeve (A) by aligning the stops (B) of the 3rd/4th synchro sleeve and the 3rd/4th synchro hub. After installing, check the operation of the 3rd/4th synchro hub set.



8. Install the double cone synchro assembly (A) with the synchro spring (B) by aligning the synchro ring fingers (C) with the grooves (D) in 3rd/4th synchro hub.



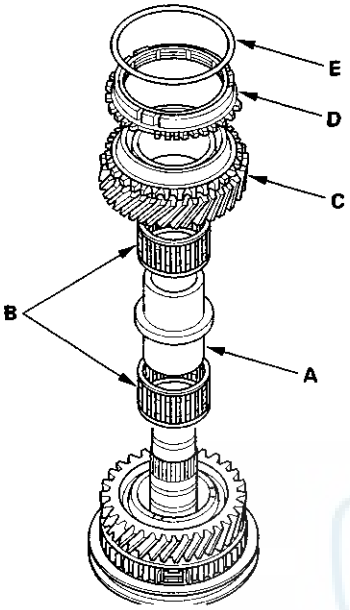
9. Install 4th gear (A) by aligning the synchro cone fingers (B) with the holes (C) in 4th gear.



(cont'd)

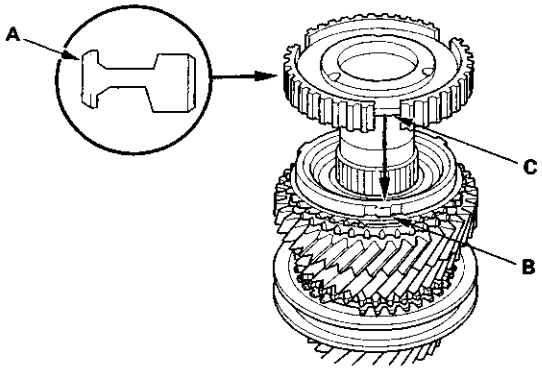
Mainshaft Reassembly (cont'd)

10. Install the 4th/5th gear distance collar (A) with needle bearings (B) and 5th gear (C).

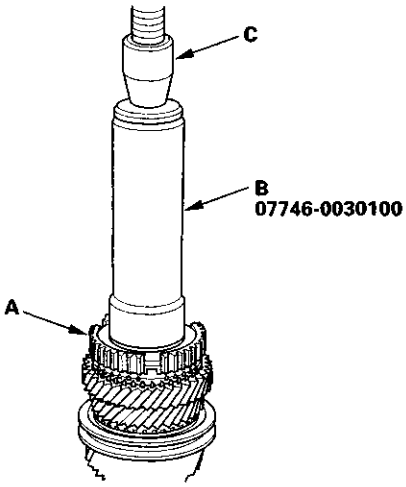


11. Install the synchro ring (D) with the synchro spring (E) onto the 5th gear.

12. Install the 5th/6th synchro hub (A) by aligning the synchro ring fingers (B) with the grooves (C) in the 5th/6th synchro hub .

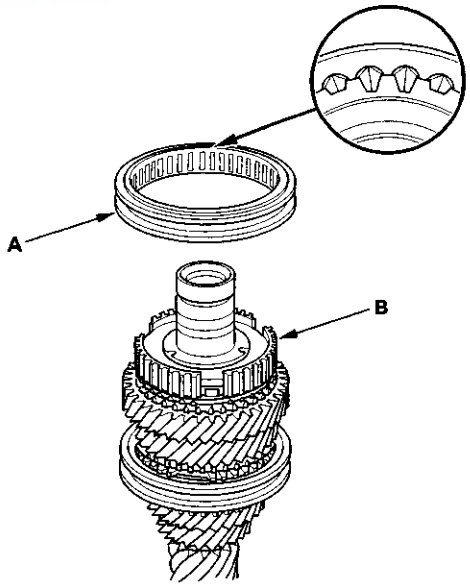


13. Press on the 5th/6th synchro hub (A) using the 40 mm inner driver handle (B) and a press (C).

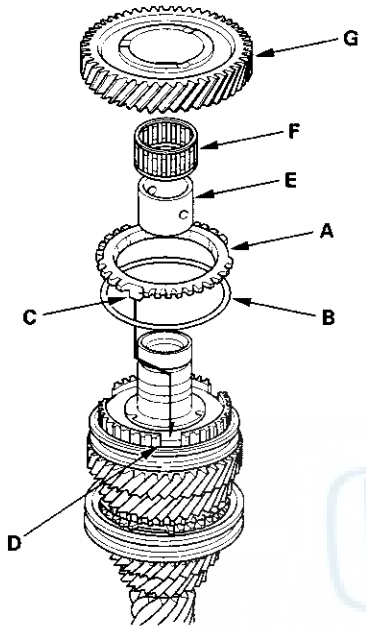


14. Install the 5th/6th synchro sleeve (A) by aligning the slots of the 5th/6th synchro sleeve and the 5th/6th synchro hub (B). After installing, check the operation of the 5th/6th synchro hub set.

NOTE: Make sure to align the slots in the 5th/6th synchro sleeve as shown.



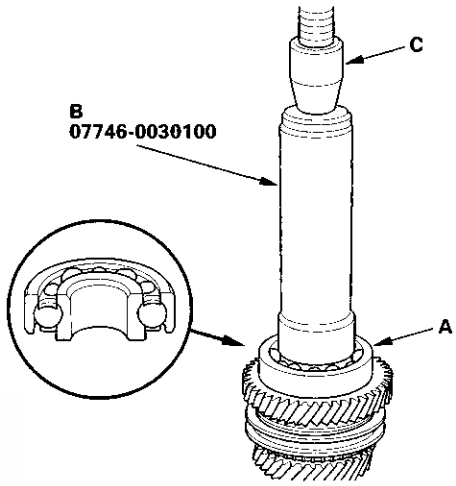
15. Install the synchro ring (A) with the synchro spring (B) by aligning the synchro ring fingers (C) with the grooves (D) in 5th/6th synchro hub.



16. Install the 6th gear distance collar (E) with the needle bearing (F) and 6th gear (G).

17. Press on the new angular ball bearing (A) using the 40 mm inner driver handle (B) and a press (C).

NOTE: Check the ball bearing install direction.



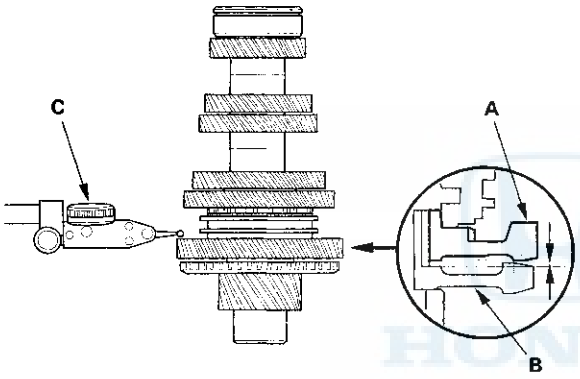
Countershaft Assembly Clearance Inspection

NOTE: Before inspection, make sure the special bolt is tightened to the specified torque (see page 13-66).

1. Measure the clearance between 1st gear (A) and the countershaft reverse gear (B) with a dial indicator (C).

   - If the clearance exceeds the service limit, go to step 2.
   - If the clearance within the service limit, go to step 4.

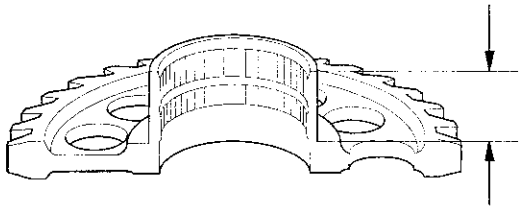
   Standard: 0.04—0.17 mm (0.002—0.007 in.)
   Service Limit: 0.28 mm (0.011 in.)



2. Measure the length of the countershaft reverse gear as shown.

   - If the length is not within the standard, replace the countershaft reverse gear.
   - If the length is within the standard, go to step 3.

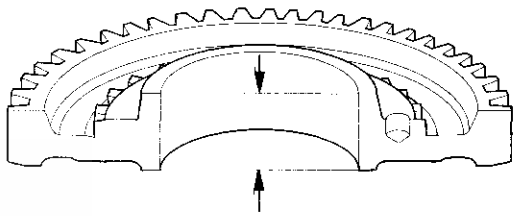
   Standard: 23.03—23.08 mm (0.907—0.909 in.)



3. Measure the thickness of 1st gear.

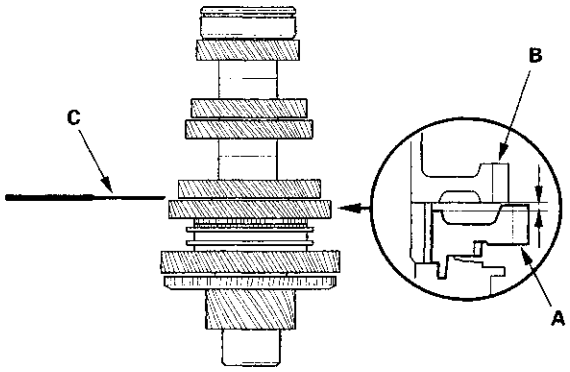
   - If the thickness is less than the service limit, replace 1st gear.
   - If the thickness within the service limit, replace the 1st/2nd synchro hub and 1st/2nd synchro sleeve as a set.

   Standard: 22.91—22.99 mm (0.902—0.905 in.)
   Service Limit: 22.86 mm (0.900 in.)



4. Measure the clearance between 2nd gear (A) and 3rd gear (B) with a feeler gauge (C). If the clearance exceeds the service limit, go to step 5.

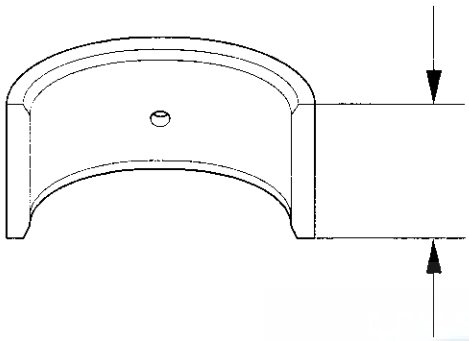
   Standard: 0.04—0.17 mm (0.002—0.007 in.)
   Service Limit: 0.28 mm (0.011 in.)



5. Measure the length of the 2nd gear distance collar.

   - If the length is not within the standard, replace the 2nd gear distance collar.
   - If the length is within the standard, go to step 6.

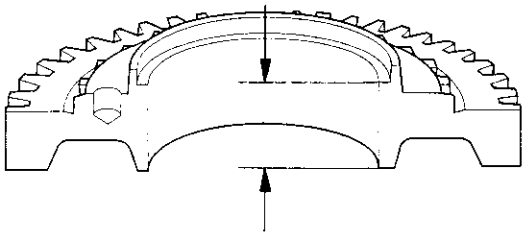
   Standard: 23.03—23.08 mm (0.907—0.909 in.)



6. Measure the thickness of 2nd gear as shown.

   - If the thickness is less than the service limit, replace 2nd gear.
   - If the thickness is within the service limit, replace the 1st/2nd synchro hub and 1st/2nd synchro sleeve as a set.

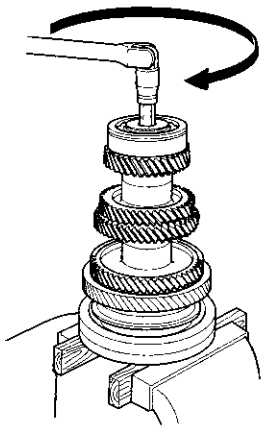
   Standard: 22.91—22.99 mm (0.902—0.905 in.)
   Service Limit: 22.86 mm (0.900 in.)



Countershaft Disassembly

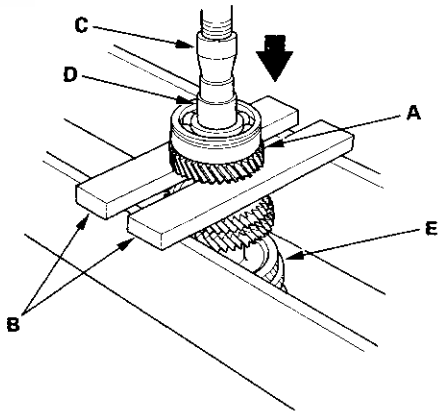
NOTE: Refer to the Exploded View in the Countershaft Reassembly, as needed, to remove components except those pressed on the countershaft (see page 13-66).

1. Securely clamp the countershaft assembly in a bench vise with wood blocks.



2. Remove the special bolt (left-hand threads).

3. Support 6th gear (A) on steel blocks (B), then use a press (C) and an attachment (D) to press the countershaft (E) out of the ball bearing and 6th gear.

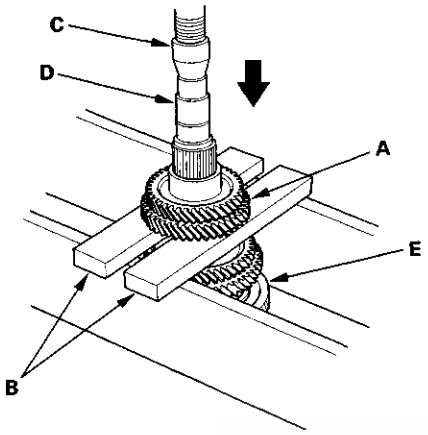


4. Remove the 35 mm shim.

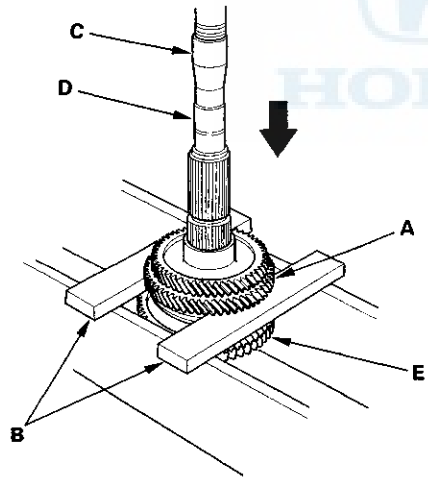
(cont'd)

Countershaft Disassembly (cont'd)

5. Support 4th gear (A) on steel blocks (B), then use a press (C) and an attachment (D) to press the countershaft (E) out of 5th gear and 4th gear.



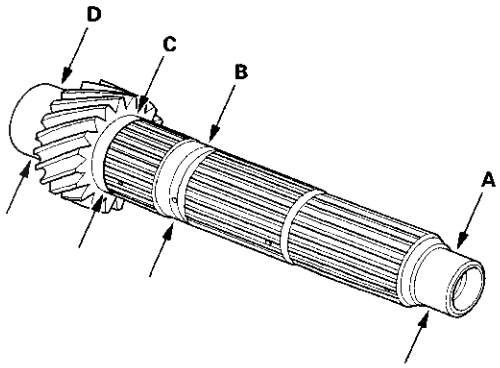
6. Support 2nd gear (A) on steel blocks (B), then use a press (C) and an attachment (D) to press the countershaft (E) out of 3rd gear and 2nd gear.



Countershaft Inspection

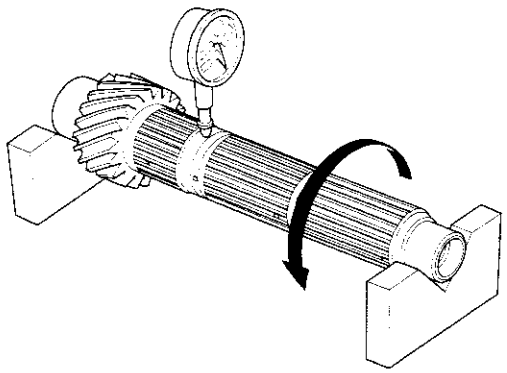
1. Inspect the oil passage, gear, and bearing contact areas for wear and damage, then measure countershaft at points A, B, C, and D. If any part of the countershaft is less than the service limit, replace it.

Standard:
A Ball Bearing Contact Area (Transmission Housing Side):
30.002—30.015 mm (1.1812—1.1817 in.)
B 2nd Gear Distance Collar Contact Area:
42.975—42.991 mm (1.6919—1.6926 in.)
C Countershaft Reverse Gear Contact Area:
45.934—45.950 mm (1.8084—1.8091 in.)
D Needle Bearing Contact Area (Clutch Housing Side):
43.974—43.990 mm (1.7313—1.7319 in.)
Service Limit:
A: 29.95 mm (1.179 in.)
B: 42.92 mm (1.690 in.)
C: 45.88 mm (1.806 in.)
D: 43.92 mm (1.729 in.)



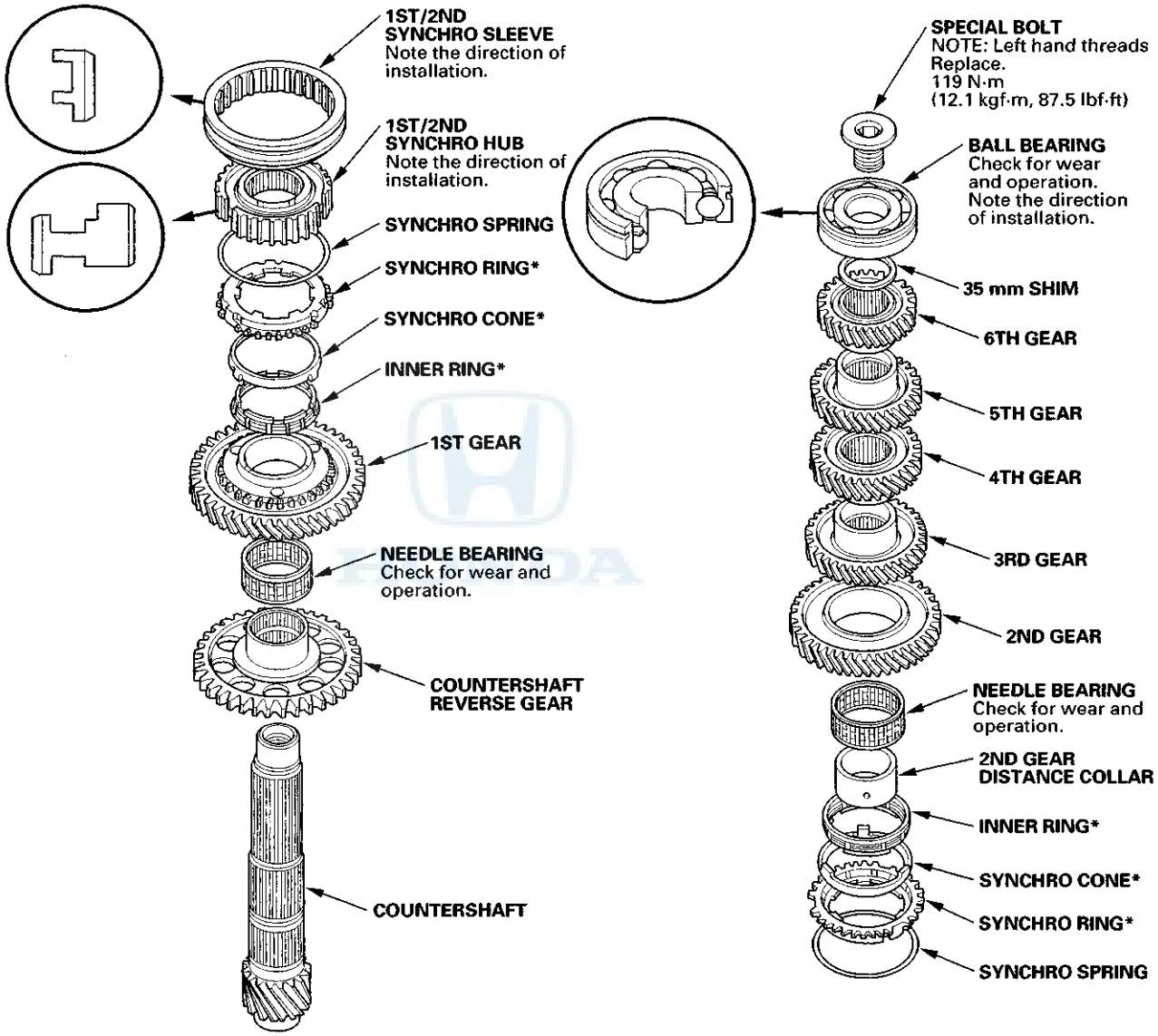
2. Inspect the runout by supporting both ends of the countershaft. Then rotate the countershaft two complete turns while measuring with a dial gauge. If the runout exceeds the service limit, replace the countershaft.

Standard: **0.02 mm (0.001 in.) max.**
Service Limit: **0.05 mm (0.002 in.)**



Countershaft Reassembly

Exploded View



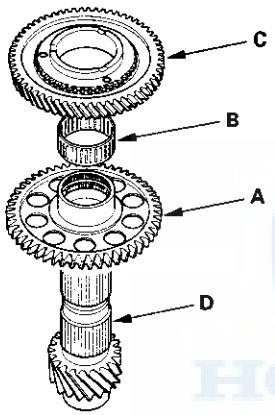
*: The components of the triple cone synchro assembly.

Special Tools Required
- Driver, 58 x 62 mm 070AD-PYZA100
- Inner driver handle, 40 mm 07746-0030100

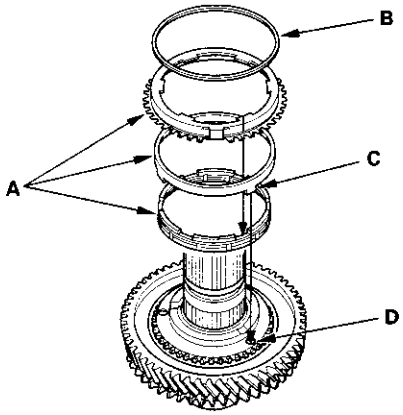
NOTE: Refer to the Exploded View, as needed, during this procedure.

1. Clean all parts in solvent, dry them, and apply MTF to all contact surfaces.

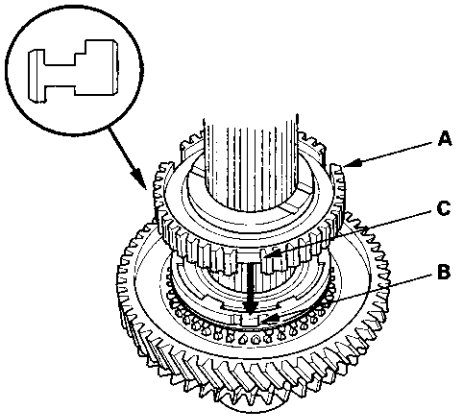
2. Install the countershaft reverse gear (A) with the needle bearing (B), and 1st gear (C) onto the countershaft (D).



3. Install the triple cone synchro assembly (A) with the synchro spring (B) by aligning the synchro cone fingers (C) with the holes (D) in 1st gear.

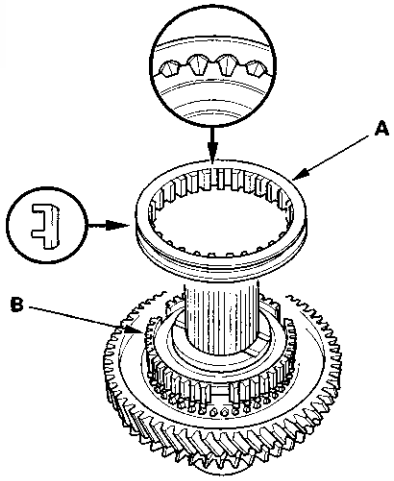


4. Install the 1st/2nd synchro hub (A) by aligning the synchro ring fingers (B) with the grooves (C) in the 1st/2nd synchro hub.



5. Install the 1st/2nd synchro sleeve (A) by aligning the slots of the 1st/2nd synchro sleeve and the 1st/2nd synchro hub (B). After installing, check the operation of the 1st/2nd synchro hub set.

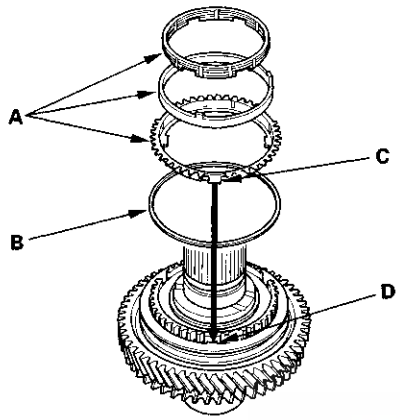
   NOTE: Make sure to align the slots in the 1st/2nd synchro hub as shown.



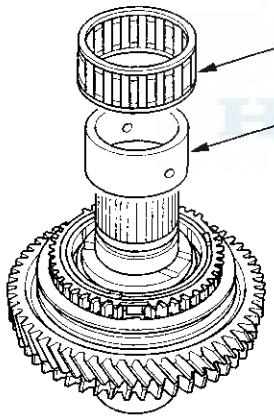
(cont'd)

Countershaft Reassembly (cont'd)

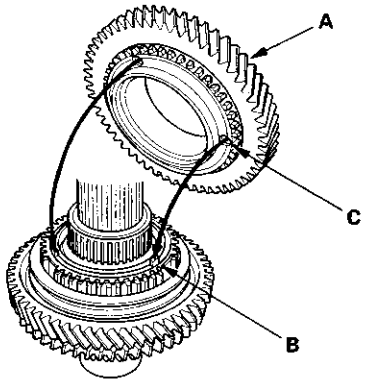
6. Install the triple cone synchro assembly (A) with the synchro spring (B) by aligning the synchro ring fingers (C) with the grooves (D) in the 1st/2nd synchro hub.



7. Install the 2nd gear distance collar (A) with the needle bearing (B).

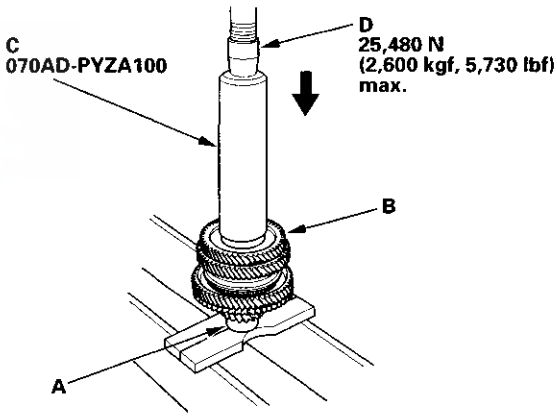


8. Install 2nd gear (A) by aligning the synchro cone fingers (B) with the holes in 2nd gear (C).



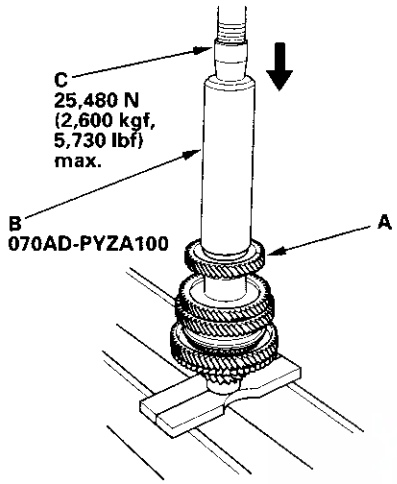
9. Support the countershaft (A) on steel blocks, then press on 3rd gear (B) using the 58 x 62 mm driver (C) and a press (D).

NOTE: Do not exceed the maximum pressure.



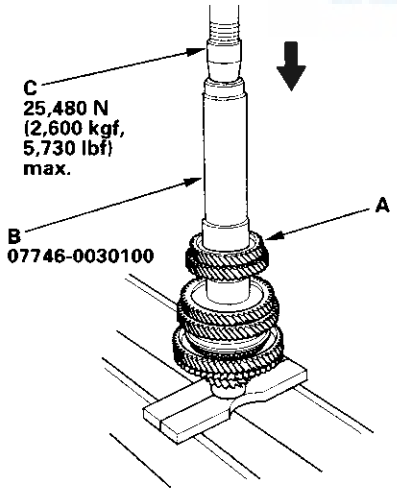
10. Press on 4th gear (A) using the 58 x 62 mm driver (B) and a press (C).

    NOTE: Do not exceed the maximum pressure.



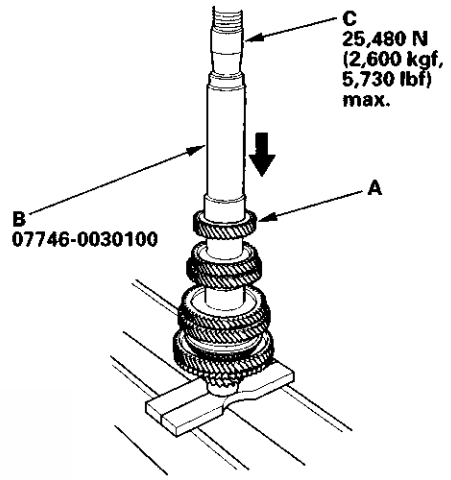
11. Press on 5th gear (A) using the 40 mm inner driver handle (B) and a press (C).

    NOTE: Do not exceed the maximum pressure.



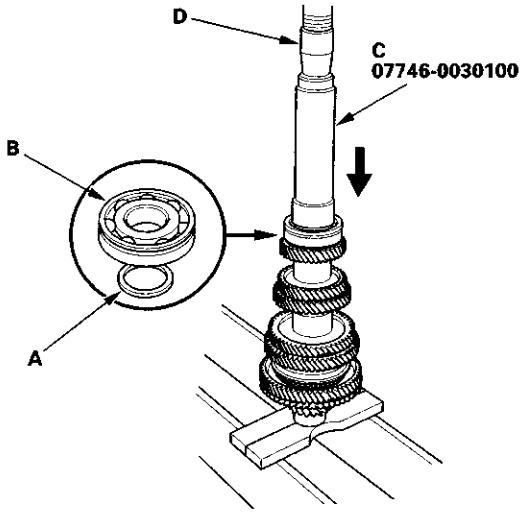
12. Press on 6th gear (A) using the 40 mm inner driver handle (B) and a press (C).

    NOTE: Do not exceed the maximum pressure.



13. Install the 35 mm shim (A) and temporarily press on the used ball bearing (B) using the 40 mm inner driver handle (C) and a press (D).

    - Use any size of 35 mm shim, and note size you used. Measurements taken in the following steps will determine the correct shim to use for final assembly.
    - Make sure the ball bearing is installed in the correct direction.

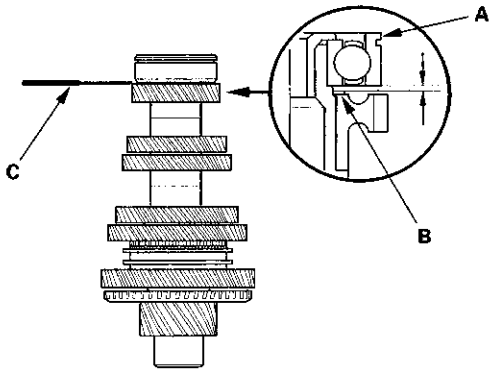


(cont'd)

Countershaft Reassembly (cont'd)

14. Measure the clearance between the bearing (A) and the 35 mm shim (B) with a feeler gauge (C).

Standard: 0.04—0.10 mm (0.0016—0.0039 in.)



15. If the measured clearance in step 14 is not within the standard, select another suitable 35 mm shim from the table, then go to next step to replace the 35 mm shim and the ball bearing with a new one. If the measured clearance in step 14 is within the standard, go to the next step to replace the only the ball bearing with a new one.

35 mm Shim

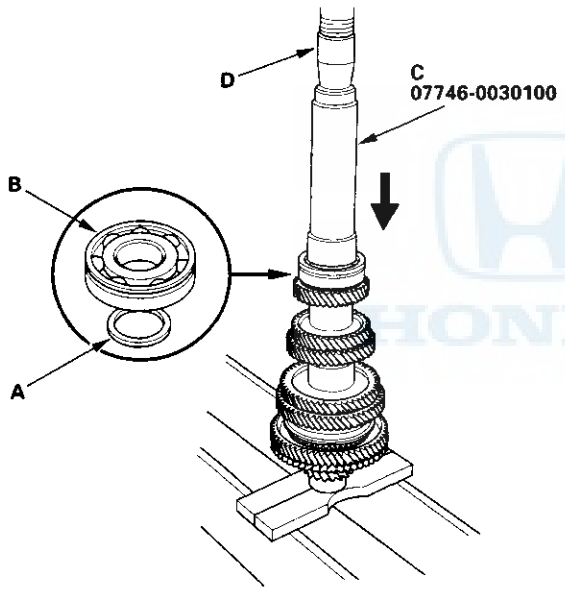
Type	Part Number	Thickness
A	23981-PPP-000	0.87 mm (0.034 in.)
AA	23981-PPP-900	0.91 mm (0.036 in.)
B	23982-PPP-000	0.95 mm (0.037 in.)
AB	23982-PPP-900	0.99 mm (0.039 in.)
C	23983-PPP-000	1.03 mm (0.041 in.)
AC	23983-PPP-900	1.07 mm (0.042 in.)
D	23984-PPP-000	1.11 mm (0.044 in.)
AD	23984-PPP-900	1.15 mm (0.045 in.)
E	23985-PPP-000	1.19 mm (0.047 in.)
AE	23985-PPP-900	1.23 mm (0.048 in.)
F	23986-PPP-000	1.27 mm (0.050 in.)
AF	23986-PPP-900	1.31 mm (0.052 in.)
G	23987-PPP-000	1.35 mm (0.053 in.)
AG	23987-PPP-900	1.39 mm (0.055 in.)
H	23988-PPP-000	1.43 mm (0.056 in.)
AH	23988-PPP-900	1.47 mm (0.058 in.)
J	23989-PPP-000	1.51 mm (0.059 in.)
AJ	23989-PPP-900	1.55 mm (0.061 in.)
K	23990-PPP-000	1.59 mm (0.063 in.)
AK	23990-PPP-900	1.63 mm (0.064 in.)
L	23991-PPP-000	1.67 mm (0.066 in.)
AL	23991-PPP-900	1.71 mm (0.067 in.)
M	23992-PPP-000	1.75 mm (0.069 in.)
AM	23992-PPP-900	1.79 mm (0.070 in.)
N	23993-PPP-000	1.83 mm (0.072 in.)
AN	23993-PPP-900	1.87 mm (0.074 in.)
P	23994-PPP-000	1.91 mm (0.075 in.)
AP	23994-PPP-900	1.95 mm (0.077 in.)
Q	23995-PPP-000	1.99 mm (0.078 in.)

16. Remove 6th gear with the ball bearing and the 35 mm shim using a press (see step 3 on page 13-63).

17. Repeat step 12 to install 6th gear.

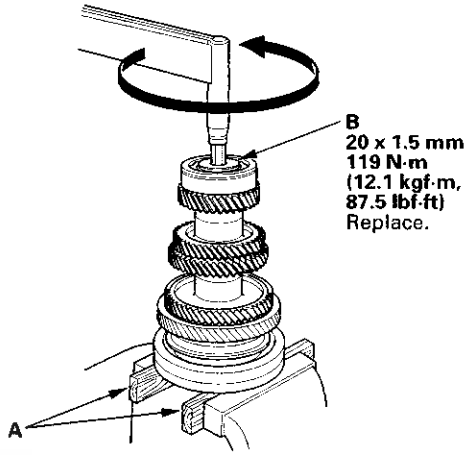
18. Install the correct 35 mm shim (A) and new ball bearing (B) using the 40 mm inner driver handle (C), and a press (D).

    NOTE:
    - If necessary, replace the 35 mm shim with the correct one selected in step 15.
    - Make sure the ball bearing is installed in the correct direction.



19. Check the clearance between the bearing and the 35 mm shim with a feeler gauge.

20. Securely clamp the countershaft assembly in a bench vise with wood blocks (A).

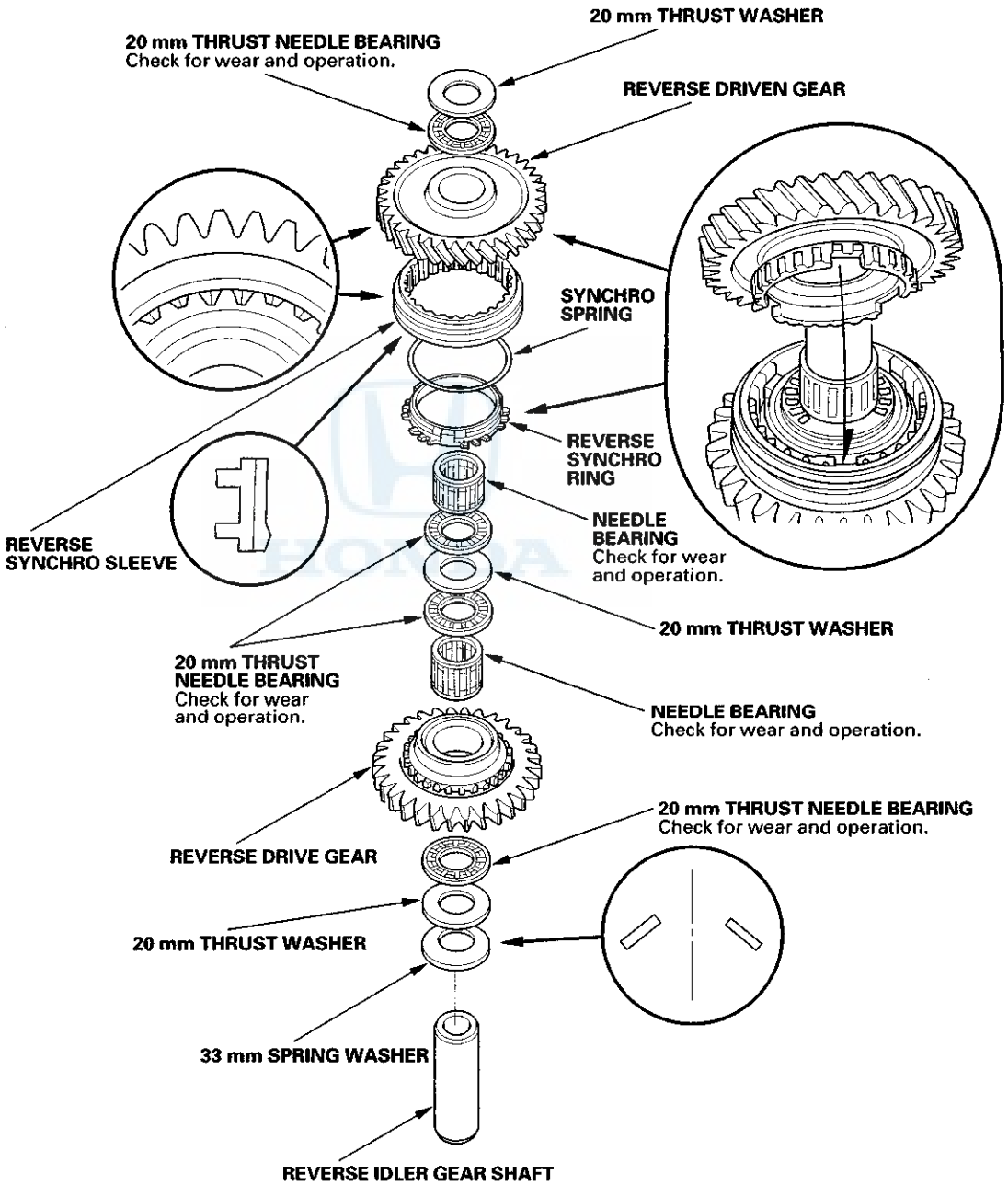


21. Tighten the new special bolt (B) (left-hand threads).

    NOTE: Apply new MTF to the bolt threads and flange.

Reverse Idler Gear Shaft Assembly Disassembly/Reassembly

NOTE: Prior to reassembling, clean all the parts in solvent, dry them, and apply MTF to all contact surfaces.

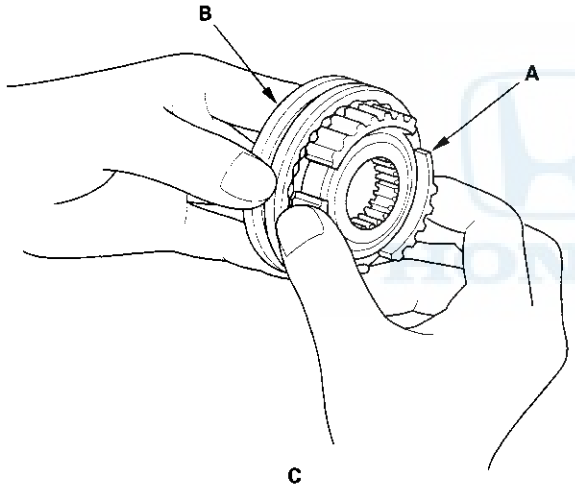


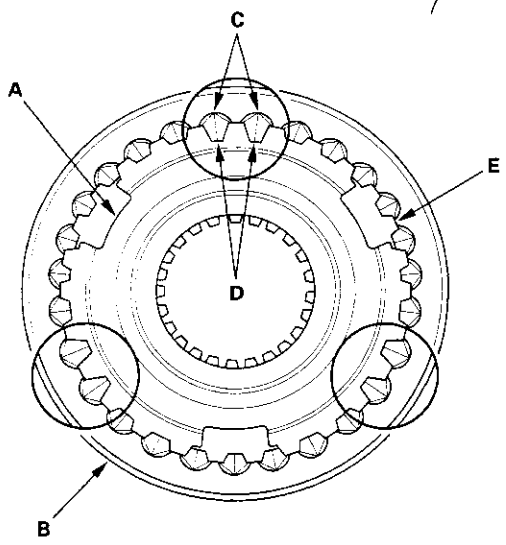
Synchro Sleeve and Hub Inspection and Reassembly

1. Inspect the gear teeth on all synchro hubs and synchro sleeves for wear (rounded off corners).

2. Install each synchro hub (A) in its mating synchro sleeve (B), and check for free movement. Make sure to match the three sets of longer teeth (C) (120 degrees apart) on the synchro sleeve with the three sets of deeper grooves (D) in the synchro hub.

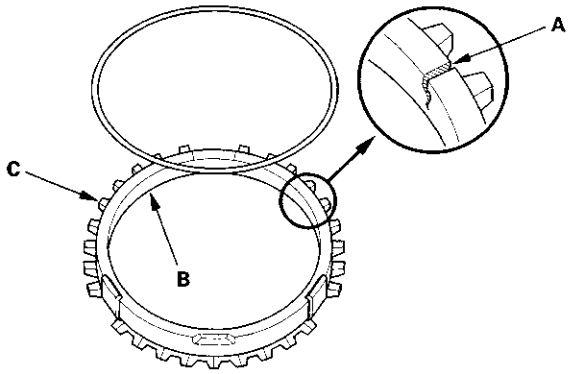
   NOTE:
   - Do not install the synchro sleeve with its longer teeth in the 1st/2nd and 5th/6th synchro hub slots (E) because it will damage the spring ring.
   - If replacement is required, always replace the synchro sleeve and synchro hub as a set.





Synchro Ring and Gear Inspection

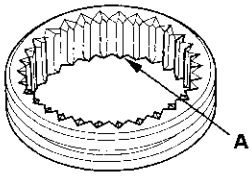
1. Inspect the synchro rings for scoring, cracks, and damage (A).



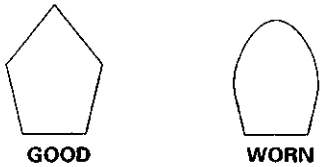
Example of synchro ring teeth

2. Inspect the inside of each synchro ring (B) for wear. Inspect the teeth (C) on each synchro ring for wear (rounded off).

3. Inspect the teeth (A) on each synchro sleeve and matching teeth on each gear for wear (rounded off).



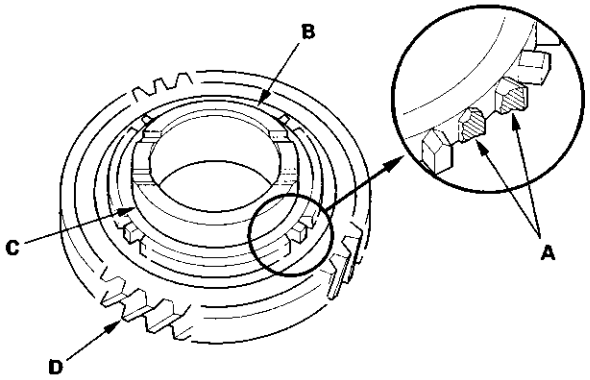
Example of synchro sleeve teeth and gear teeth



(cont'd)

Synchro Ring and Gear Inspection (cont'd)

4. Inspect the synchro teeth on gear, for scoring, cracks, and damage (A).



5. Inspect the thrust surface (B) on each gear hub for wear.

6. Inspect the cone surface (C) on each gear hub for wear and roughness.

7. Inspect the teeth on all gears (D) for uneven wear, scoring, and cracks.

8. Coat the cone surface of each gear with MTF, and place its synchro ring on it. Rotate the synchro ring, making sure that it does not slip.

9. Measure the clearance between each gear (A) and its synchro ring (B) all around the gear. Hold the synchro ring against the gear evenly while measuring the clearance. If the clearance is less than the service limit, replace the synchro ring and gear.

Synchro Ring-to-Gear Clearance

Standard (5th gear):	**0.70—1.49 mm (0.028—0.059 in.)**
Standard (6th gear):	**0.73—1.44 mm (0.029—0.057 in.)**
Service Limit:	**0.4 mm (0.016 in.)**

Double Cone Synchro and Triple Cone Synchro-to-Gear Clearance

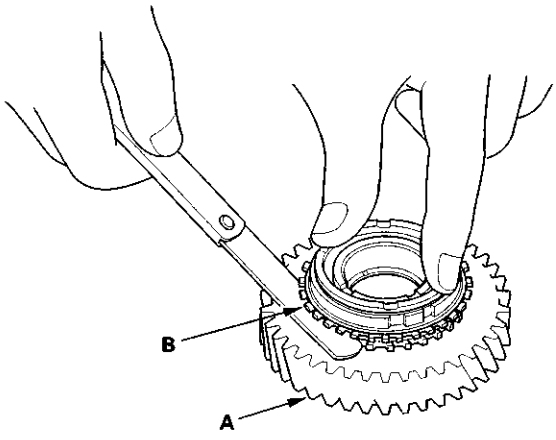
Standard: (1st Gear)
①: Outer Synchro Ring (B)-to-Synchro Cone (C) 0.70—1.19 mm (0.028—0.047 in.)
②: Synchro Cone (C)-to-Gear (A) 0.45—1.14 mm (0.018—0.045 in.)
③: Outer Synchro Ring (B)-to-Gear (A) 1.12—1.68 mm (0.044—0.066 in.)

Standard: (2nd Gear)
①: Outer Synchro Ring (B)-to-Synchro Cone (C) 0.70—1.19 mm (0.028—0.047 in.)
②: Synchro Cone (C)-to-Gear (A) 0.60—1.88 mm (0.024—0.074 in.)
③: Outer Synchro Ring (B)-to-Gear (A) 1.12—1.68 mm (0.044—0.066 in.)

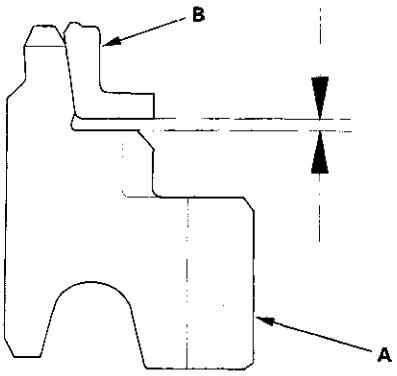
Standard: (3rd Gear)
①: Outer Synchro Ring (B)-to-Synchro Cone (C) 0.68—1.19 mm (0.027—0.047 in.)
②: Synchro Cone (C)-to-Gear (A) 0.48—1.04 mm (0.019—0.041 in.)
③: Outer Synchro Ring (B)-to-Gear (A) 0.95—1.68 mm (0.037—0.066 in.)

Standard: (4th Gear)
①: Outer Synchro Ring (B)-to-Synchro Cone (C) 0.70—1.19 mm (0.028—0.047 in.)
②: Synchro Cone (C)-to-Gear (A) 0.50—1.04 mm (0.020—0.041 in.)
③: Outer Synchro Ring (B)-to-Gear (A) 0.95—1.68 mm (0.037—0.066 in.)

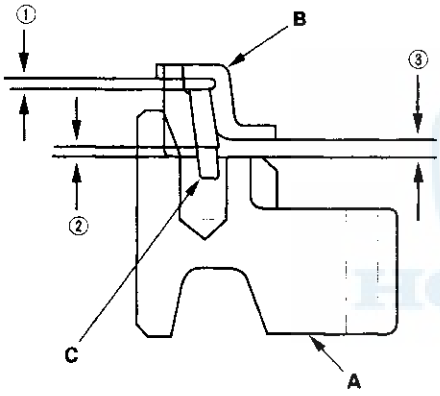
Service Limit:
①: 0.3 mm (0.012 in.)
②: 0.3 mm (0.012 in.)
③: 0.6 mm (0.024 in.)



Synchro Ring-to-Gear Clearance



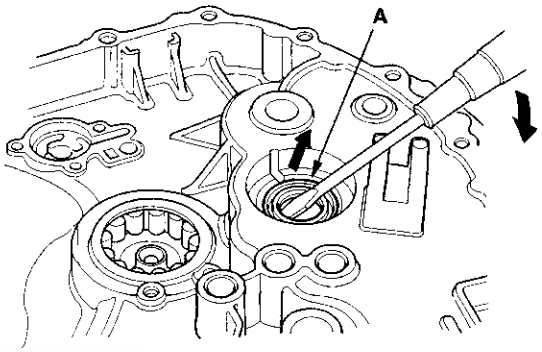
Double Cone Synchro and Triple Cone Synchro-to-Gear Clearance



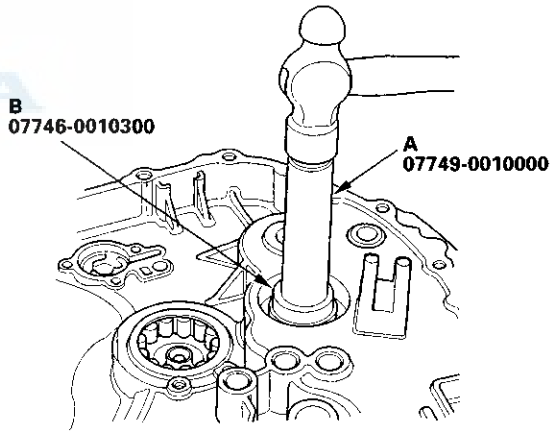
Mainshaft Oil Seal Replacement

Special Tools Required
- Bearing driver attachment, 42 x 47 mm 07746-0010300
- Driver handle, 15 x 135L 07749-0010000

1. Remove the oil seal (A) from the clutch housing. Be careful when removing the seal so the clutch housing is not damaged.



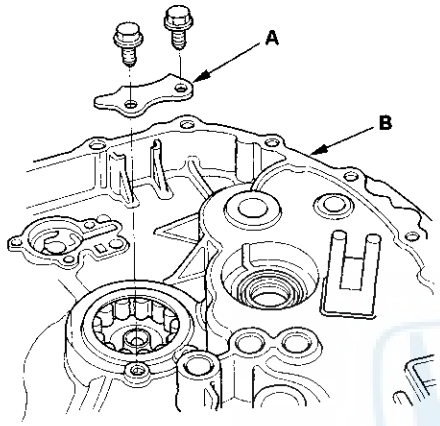
2. Drive in the new oil seal from the transmission side using the 15 x 135L driver handle (A) and the 42 x 47 mm bearing driver attachment (B).



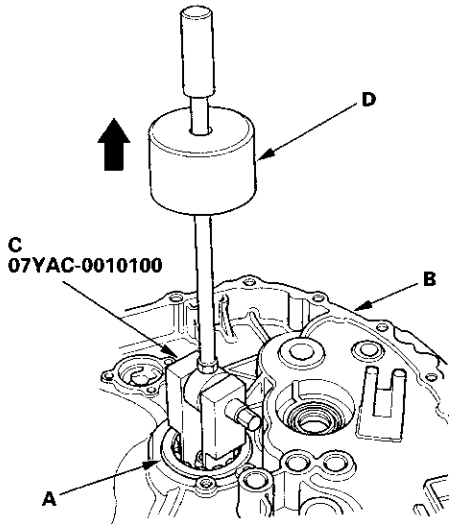
Countershaft Bearing Replacement

Special Tools Required
- Adjustable bearing puller, 45—75 mm 07YAC-0010100
- Bearing driver attachment, 72 x 75 mm 07746-0010600
- Driver handle, 15 x 135L 07749-0010000
- Slide hammer, 3/8"-16 UNF commercially available

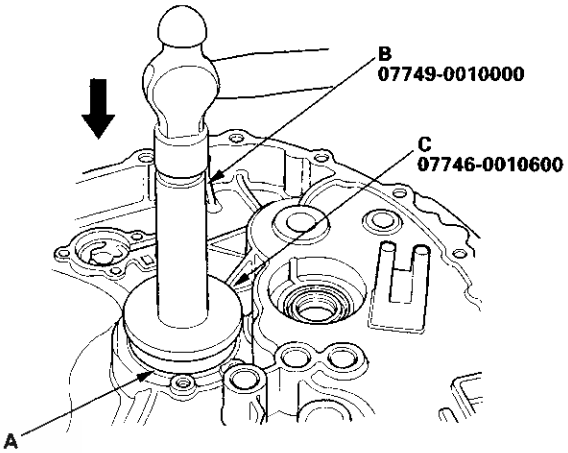
1. Remove the bearing set plate (A) from the clutch housing (B).



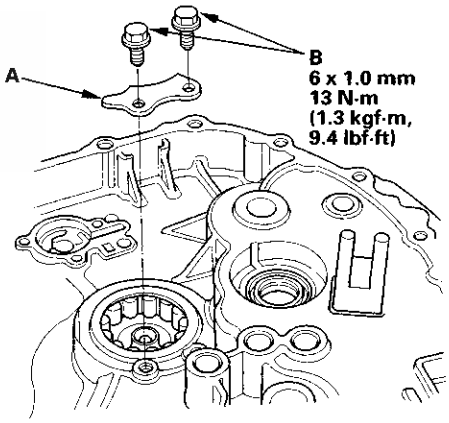
2. Remove the needle bearing (A) from the clutch housing (B) using the 45—75 mm adjustable bearing puller (C) and a commercially available 3/8"-16 UNF slide hammer (D).



3. Install the new needle bearing (A) using the 15 x 135L driver handle (B) and the 72 x 75 mm bearing driver attachment (C).



4. Install the bearing set plate (A) with bolts (B).

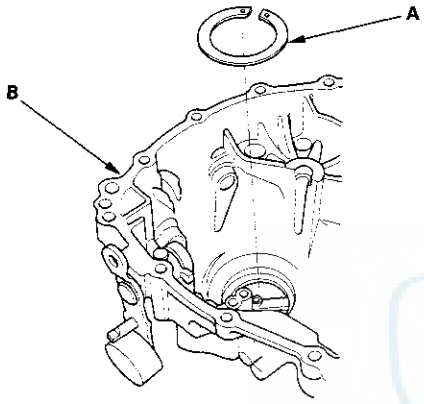


Mainshaft Thrust Clearance Adjustment

Special Tools Required
- Catch adapter 07GAJ-PG20110
- Base adapter 07GAJ-PG20130

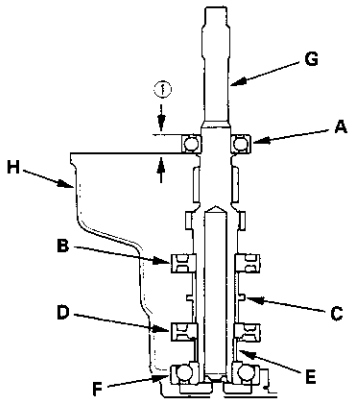
NOTE:
- Take measurements at normal room temperature.
- Clean all the parts thoroughly before installation.

1. Remove the 82 mm shim (A) from the transmission housing (B).



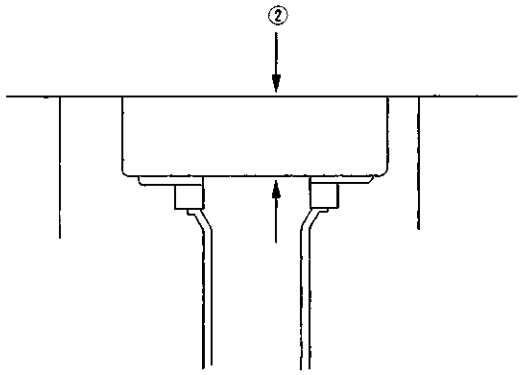
2. Install the ball bearing (A), 3rd/4th synchro hub (B), 4th/5th gear distance collar (C), 5th/6th synchro hub (D), distance collar (E), and angular ball bearing (F) on the mainshaft (G), then install the assembled mainshaft in the transmission housing (H).

   NOTE: The angular ball bearing is directional. If installed the wrong way, the measurements will not be accurate.



3. Measure the distance ① between the end of the transmission housing and ball bearing with a straight edge and depth gauge. Measure at three locations, and average the readings.

4. Measure the distance ② (the depth of the clutch housing) with a straight edge and depth gauge. Measure at three locations, and average the readings.



Shim Selection Formula

5. Select the proper 82 mm shim from the chart. Follow the example below, and use the measurements you made in steps 3 and 4.

   (Basic Formula)
   ② − ① − (0.85 + 0.14) = shim thickness (maximum)
   ② − ① − (0.85 + 0.21) = shim thickness (minimum)

   - Subtract distance ② (step 4) from distance ① (step 3).
   - 0.85 mm (0.033 in.): Spring washer, a dimension in the installation.
   - 0.14 mm (0.006 in.): Minimum thrust clearance.
   - 0.21 mm (0.008 in.): Maximum thrust clearance.

   (For example)
   21.04 − 17.97 − (0.85 + 0.14) = 2.08 mm (0.082 in.)
   21.04 − 17.97 − (0.85 + 0.21) = 2.01 mm (0.079 in.)

   Take the middle value 2.04 mm (0.080 in.) of the minimum value and the maximum value, and select the 0.93 mm (0.037 in.) and 1.11 mm (0.044 in.) shims.

   NOTE: It is acceptable to select two 82 mm shims and put them together to get the required thickness. Make sure the washers are clean and dry to achieve an accurate measurement.

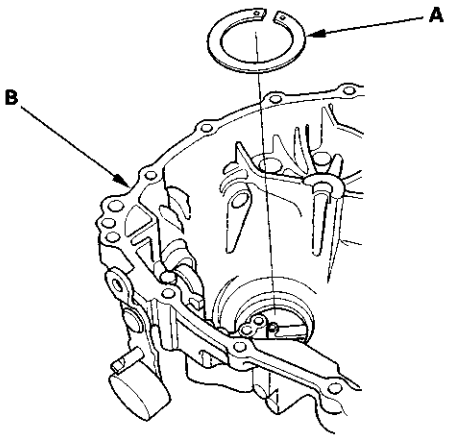
(cont'd)

Mainshaft Thrust Clearance Adjustment (cont'd)

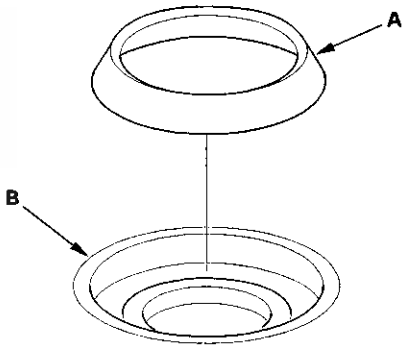
82 mm Shim

Type	Part Number	Thickness
A	23931-PR8-F00	0.60 mm (0.024 in.)
B	23932-PR8-F00	0.63 mm (0.025 in.)
C	23933-PR8-F00	0.66 mm (0.026 in.)
D	23934-PR8-F00	0.69 mm (0.027 in.)
E	23935-PR8-F00	0.72 mm (0.028 in.)
F	23936-PR8-F00	0.75 mm (0.030 in.)
G	23937-PR8-F00	0.78 mm (0.031 in.)
H	23938-PR8-F00	0.81 mm (0.032 in.)
I	23939-PR8-F00	0.84 mm (0.033 in.)
J	23940-PR8-F00	0.87 mm (0.034 in.)
K	23941-PR8-F00	0.90 mm (0.035 in.)
L	23942-PR8-F00	0.93 mm (0.037 in.)
M	23943-PR8-F00	0.96 mm (0.038 in.)
N	23944-PR8-F00	0.99 mm (0.039 in.)
O	23945-PR8-F00	1.02 mm (0.040 in.)
P	23946-PR8-F00	1.05 mm (0.041 in.)
Q	23947-PR8-F00	1.08 mm (0.043 in.)
R	23948-PR8-F00	1.11 mm (0.044 in.)
S	23949-PR8-F00	1.14 mm (0.045 in.)
T	23950-PR8-F00	1.17 mm (0.046 in.)
U	23951-PR8-F00	1.20 mm (0.047 in.)
W	23952-RAT-000	1.23 mm (0.048 in.)
X	23953-RAT-000	1.26 mm (0.050 in.)
Y	23954-RAT-000	1.29 mm (0.051 in.)
Z	23955-RAT-000	1.32 mm (0.052 in.)
AA	23956-RAT-000	1.35 mm (0.053 in.)
AB	23957-RAT-000	1.38 mm (0.054 in.)
AC	23958-RAT-000	1.41 mm (0.056 in.)
AD	23959-RAT-000	1.44 mm (0.057 in.)

6. Install the selected 82 mm shim (A) in the transmission housing (B).



7. Thoroughly clean the 64 mm spring washer (A) before installing it on the clutch housing (B). Note the installation direction of the spring washer.



8. Install the assembled mainshaft in the clutch housing.

9. Place the transmission housing over the mainshaft and onto the clutch housing.

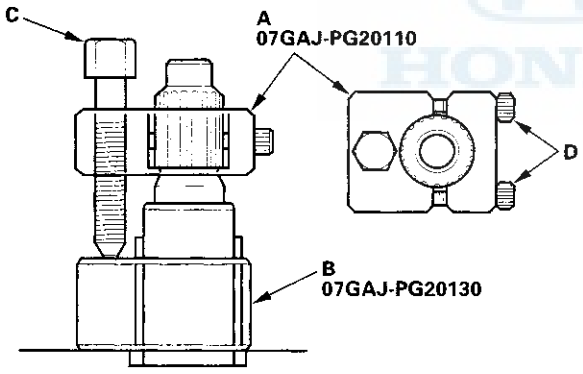
10. Tighten the clutch and transmission housings with several 10 mm bolts.

    NOTE: It is not necessary to use sealing agent between the housings for this procedure.

11. Lightly tap on the mainshaft with a plastic hammer.

12. Attach the catch adapter (A) and base adapter (B) to the mainshaft as follows:

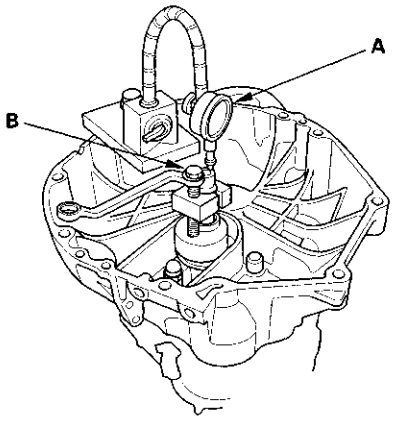
    - Back out the catch adapter bolt (C), and loosen the two hex bolts (D).
    - Fit the holder over the mainshaft so its lip is toward the transmission.
    - Align the catch adapter lip around the groove at the inside of the mainshaft splines, then tighten the hex bolts.



13. Fully seat the mainshaft by tapping on its end with a plastic hammer.

14. Thread in the catch adapter bolt until it just contacts the wide surface of the base adapter.

15. Zero a dial gauge (A) on the end of the mainshaft.



16. Turn the catch adapter bolt (B) clockwise; stop turning when the dial gauge has reached its maximum movement. The reading on the dial gauge is the amount of mainshaft thrust clearance.

    NOTE: Do not turn the catch adapter bolt more than 60 degrees after the needle of the dial gauge stops moving. Applying more pressure with the catch adapter bolt could damage the transmission.

17. If the reading is within the standard, the clearance is correct. If the reading is not within the standard, recheck the shim thickness.

    Standard: 0.14—0.21 mm (0.006—0.008 in.)

Transmission Reassembly

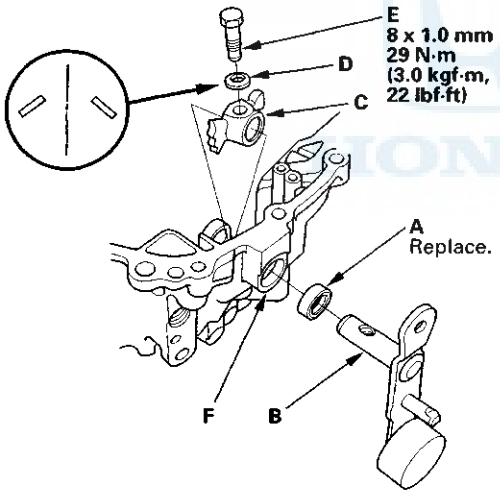
NOTE: Prior to reassembling, clean all parts in solvent, dry them, and apply MTF to all contact surfaces.

1. If any of the items listed were replaced, do the carrier bearing preload adjustment before reassembling the transmission (see page 13-92).

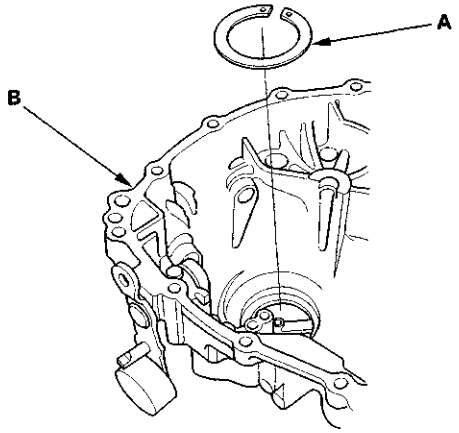
   - Transmission housing
   - Clutch housing
   - Differential carrier
   - Spacer
   - Carrier bearing and outer race

2. Press the new 16 x 23 x 5 mm dust seal (A) into the transmission housing surface, then install the change lever (B), the shift arm (C), the 8 mm spring washer (D), and the 8 mm special bolt (E).

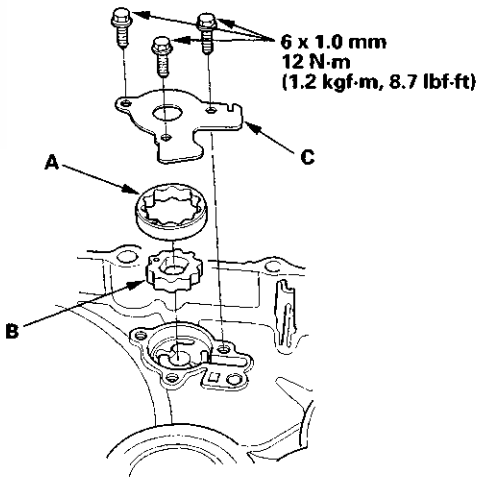
   NOTE: Press the dust seal end until it is 0±0.2 mm (0±0.008 in.) below the surface of the transmission housing edge (F).



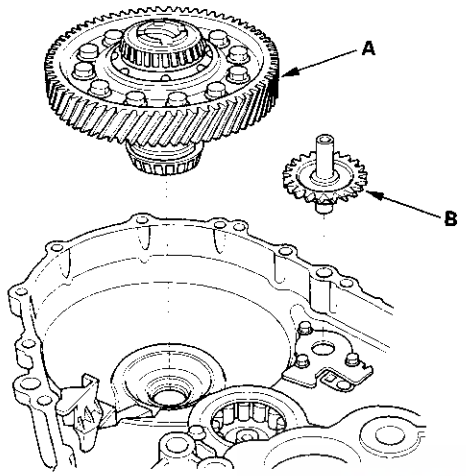
3. Select the proper size 82 mm shim (A) according to the measurements made during the Mainshaft Thrust Clearance Adjustment (see page 13-77). Install it into the transmission housing (B).



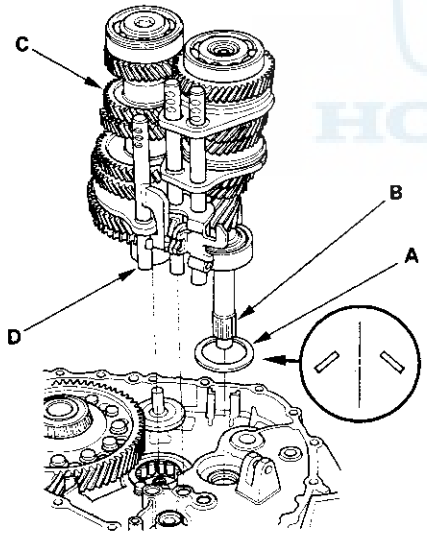
4. Install the oil pump outer rotor (A), the oil pump inner rotor (B), and the oil pump plate (C).



5. Install the differential assembly (A) and the oil pump shaft (B).



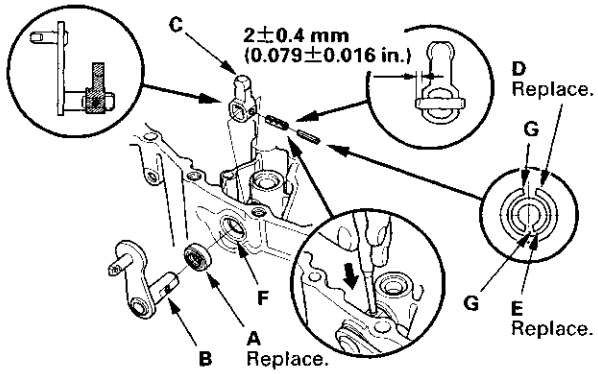
6. Install the 64 mm spring washer (A). Note the installation direction of the 64 mm spring washer.



7. Apply tape to the mainshaft splines (B) to protect the seal. Install the mainshaft and countershaft (C) into the shift fork assembly (D) as an assembly.

8. Press the new 14 x 20 x 4 mm dust seal (A) into the clutch housing surface, then install the select lever (B), the select arm (C), new 5 x 22 mm spring pin (D), and new 3 x 22 mm spring pin (E).

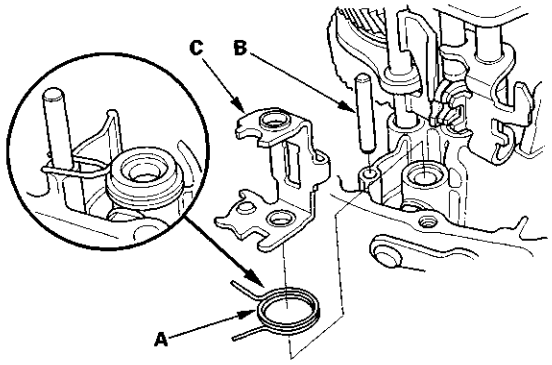
NOTE:
- Press the dust seal end until it is 0±0.2 mm (0±0.008 in.) below the surface of the clutch housing edge (F).
- Make the seams (G) of the 5 x 22 mm and 3 x 22 mm spring pin are opposite side.



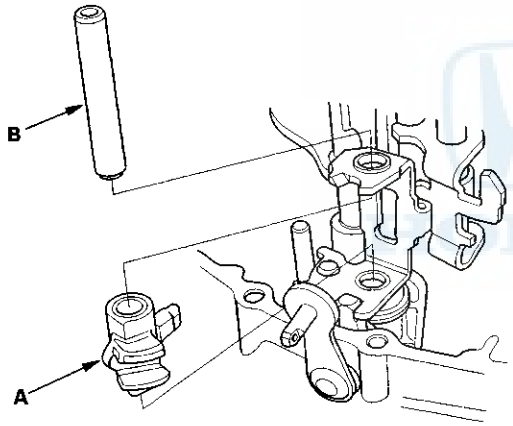
(cont'd)

Transmission Reassembly (cont'd)

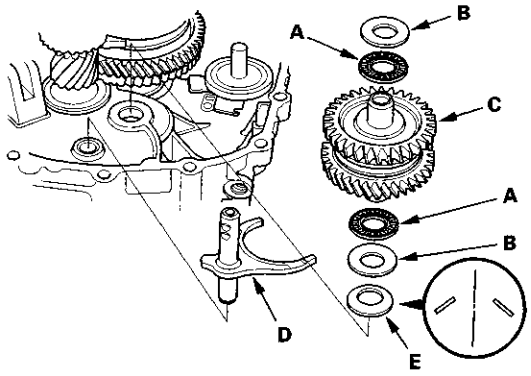
9. Set the select return spring (A), the 8 x 50 mm pin (B), and the interlock (C) as shown.



10. Install the shift piece (A) and the shift piece shaft (B).

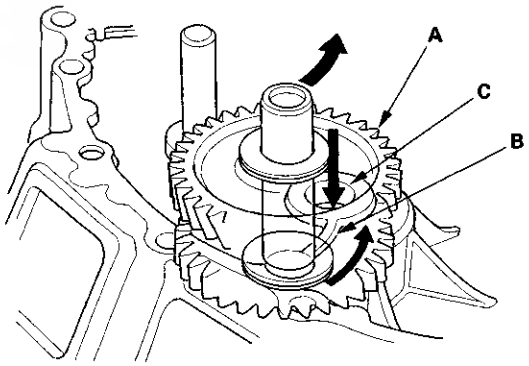


11. Assemble the 20 mm thrust needle bearings (A), the 20 mm thrust washers (B), the reverse idler gear shaft assembly (C), and the reverse shift fork (D) (see page 13-72).

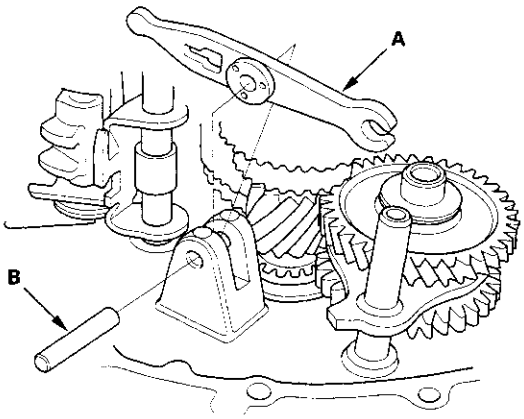


12. Install the 33 mm spring washer (E) to the reverse idler gear assembly. Note the installation direction of the spring washer.

13. Slide the reverse idler gear shaft assembly (A) on the rib (B) of the clutch housing, then install it into the hole (C) of the clutch housing.

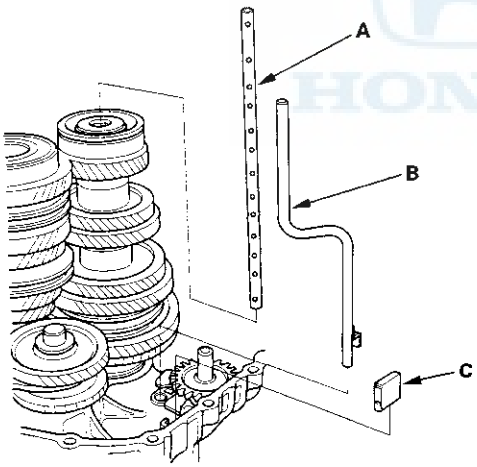


14. Install the reverse shift lever (A), and the 8 x 50 mm pin (B).



15. Install oil guide pipe A, oil guide pipe B, and the magnet (C).

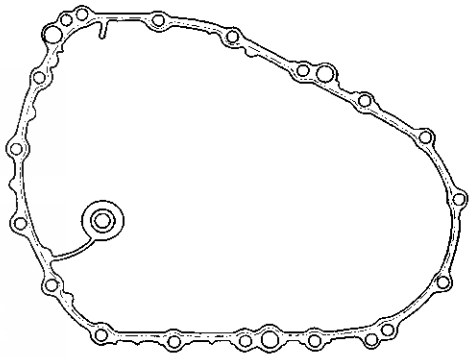
NOTE: Clean the magnet anytime the transmission is disassembled.



16. Clean any dirt and oil from the transmission housing sealing surface.

17. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009 evenly to the clutch housing mating surface of the transmission housing. Install the component within 5 minutes of applying the liquid gasket.

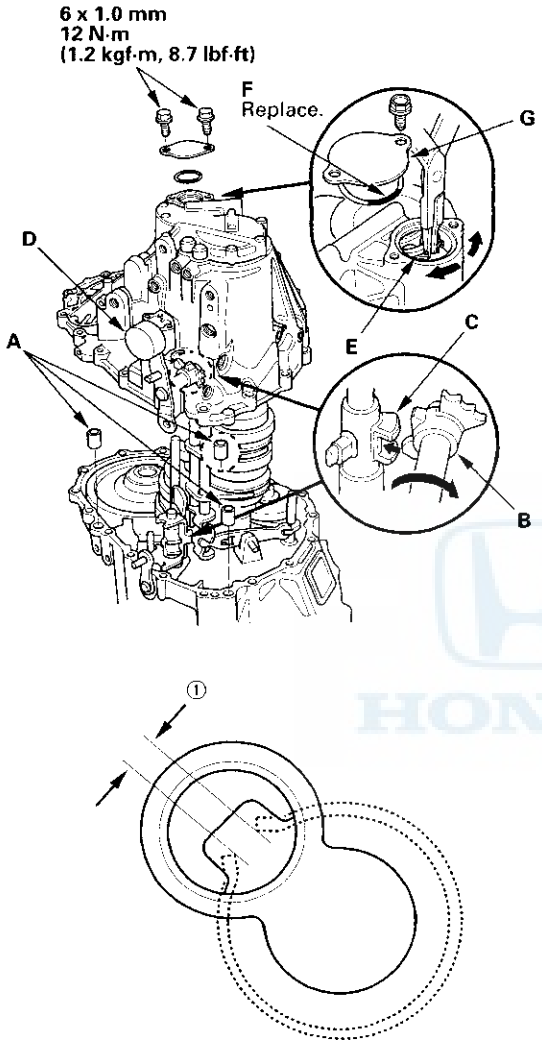
NOTE:
- If apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
- If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply new liquid gasket.



(cont'd)

Transmission Reassembly (cont'd)

18. Install the three 14 x 20 mm dowel pins (A).



19. Lower the transmission housing, then place the shift arm (B) in the groove of the shift piece (C) by turning the change lever (D).

20. While expanding the 75 mm snap ring (E) on the countershaft ball bearing using snap ring pliers, push the transmission housing down to start the countershaft ball bearing through the snap ring. Release the pliers, and push down the housing unit it bottoms and the snap ring snaps in place in the counter shaft ball bearing snap ring groove.

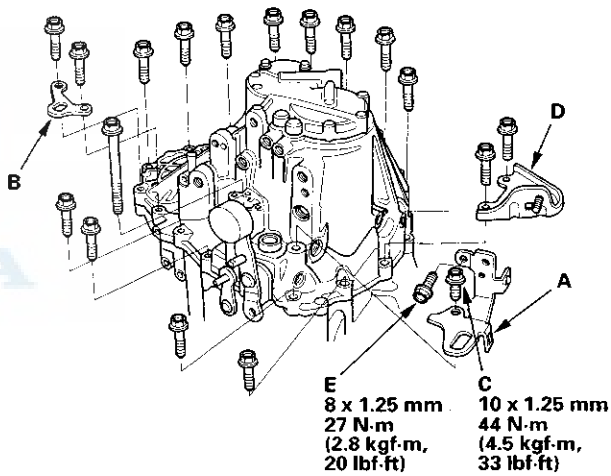
21. Make sure the 75 mm snap ring is securely seated in the groove of the countershaft bearing.

    Dimension ① as installed: 1.67—9.42 mm (0.066—0.371 in.)

22. Install the new O-ring (F) and transmission case cap (G).

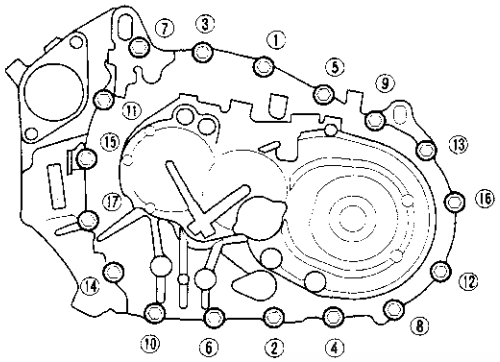
    NOTE: Check the operation of the change lever and select lever.

23. Install the 10 x 42 mm flange bolts and the 10 x 20 mm flange bolts (C) finger-tight with transmission hanger A, transmission hanger B, clutch line bracket (D), and the 8 x 16 mm flange bolt (E).

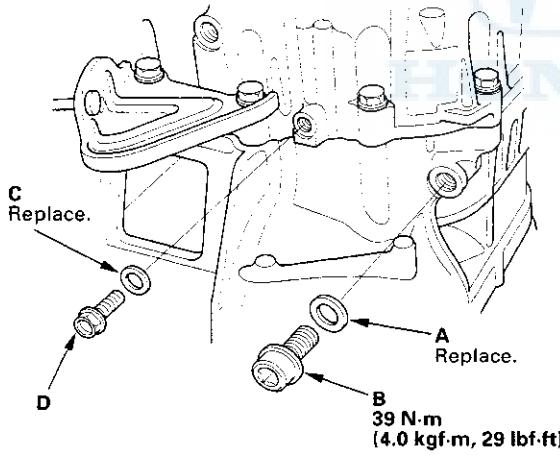


24. Tighten the 10 mm flange bolts in a crisscross pattern in several steps.

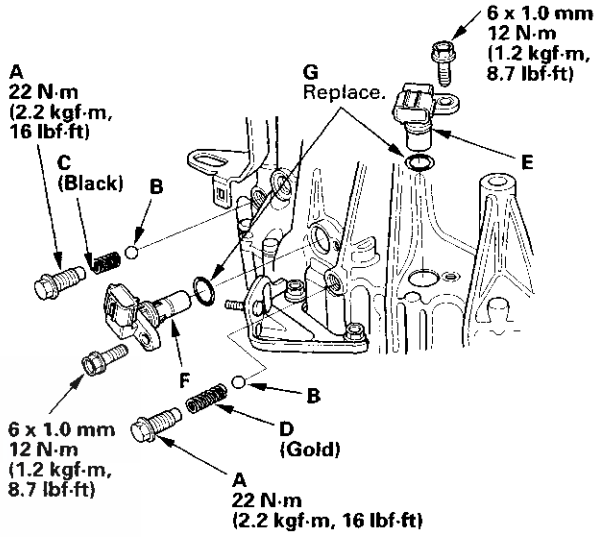
Specified Torque: 10 x 1.25 mm
44 N·m (4.5 kgf·m, 33 lbf·ft)



25. Install the new 14 mm sealing washer (A), the drain plug (B), and the new 6 mm washer (C), and install the oil check bolt (D) by finger-tight.

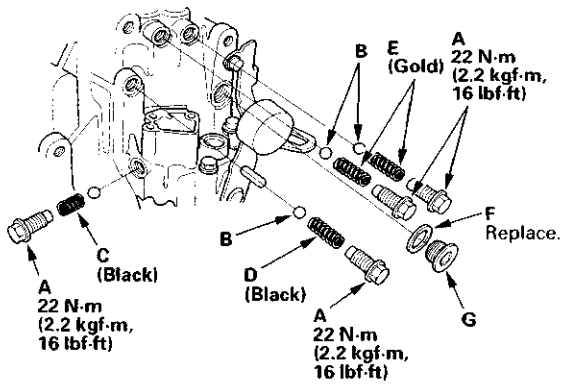


26. Apply liquid gasket (P/N 08717-0004, 08718-0001, 08718-0012, 08718-0003, or 08718-0009) to the thread of the detent bolts (A), then install the steel balls (B), the 22.0 mm spring (C), the 27.4 mm spring (D), and the detent bolts.



27. Install the input shaft (mainshaft) speed sensor (E), the output shaft (countershaft) speed sensor (F), and the new O-rings (G).

28. Apply liquid gasket (P/N 08717-0004, 08718-0001, 08718-0012, 08718-0003, or 08718-0009) to the thread of the detent bolts (A), then install the steel balls (B), the 22.0 mm spring (C), the 26.1 mm spring (D), the 27.4 mm spring (E), and the detent bolts.



29. Install the new 20 mm sealing washer (F) and the filler plug (G) by finger-tight.

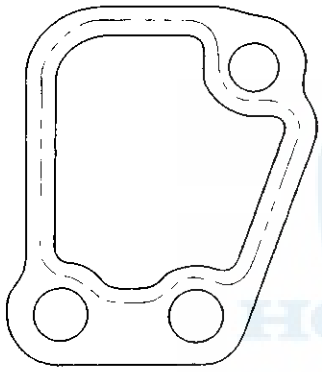
(cont'd)

Transmission Reassembly (cont'd)

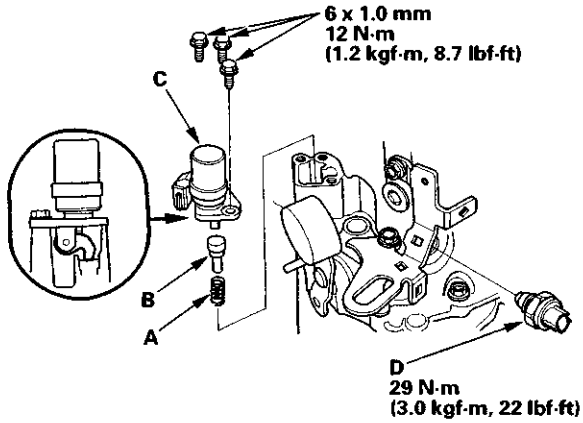
30. Clean any dirt or oil from the reverse lockout solenoid sealing surface.

31. Apply liquid gasket, P/N 08717-0004, 08718-0001, 08718-0003, or 08718-0009 evenly to the transmission housing mating surface of the reverse lockout solenoid. Install the component within 5 minutes of applying the liquid gasket.

    NOTE:
    - If apply liquid gasket P/N 08718-0012, the component must be installed within 4 minutes.
    - If too much time has passed after applying the liquid gasket, remove the old liquid gasket and residue, then reapply new liquid gasket.



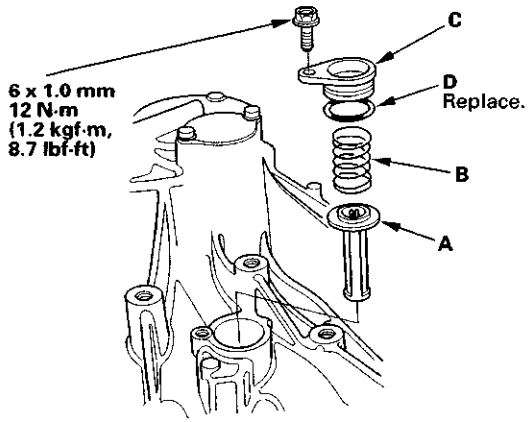
32. Install the select lock pin spring (A), the select lock pin (B), and the reverse lockout solenoid (C).



33. Apply liquid gasket, (P/N 08717-0004, 08718-0001, 08718-0012, 08718-0003, or 08718-0009) to the threads of the back-up light switch (D), and install it in the transmission housing.

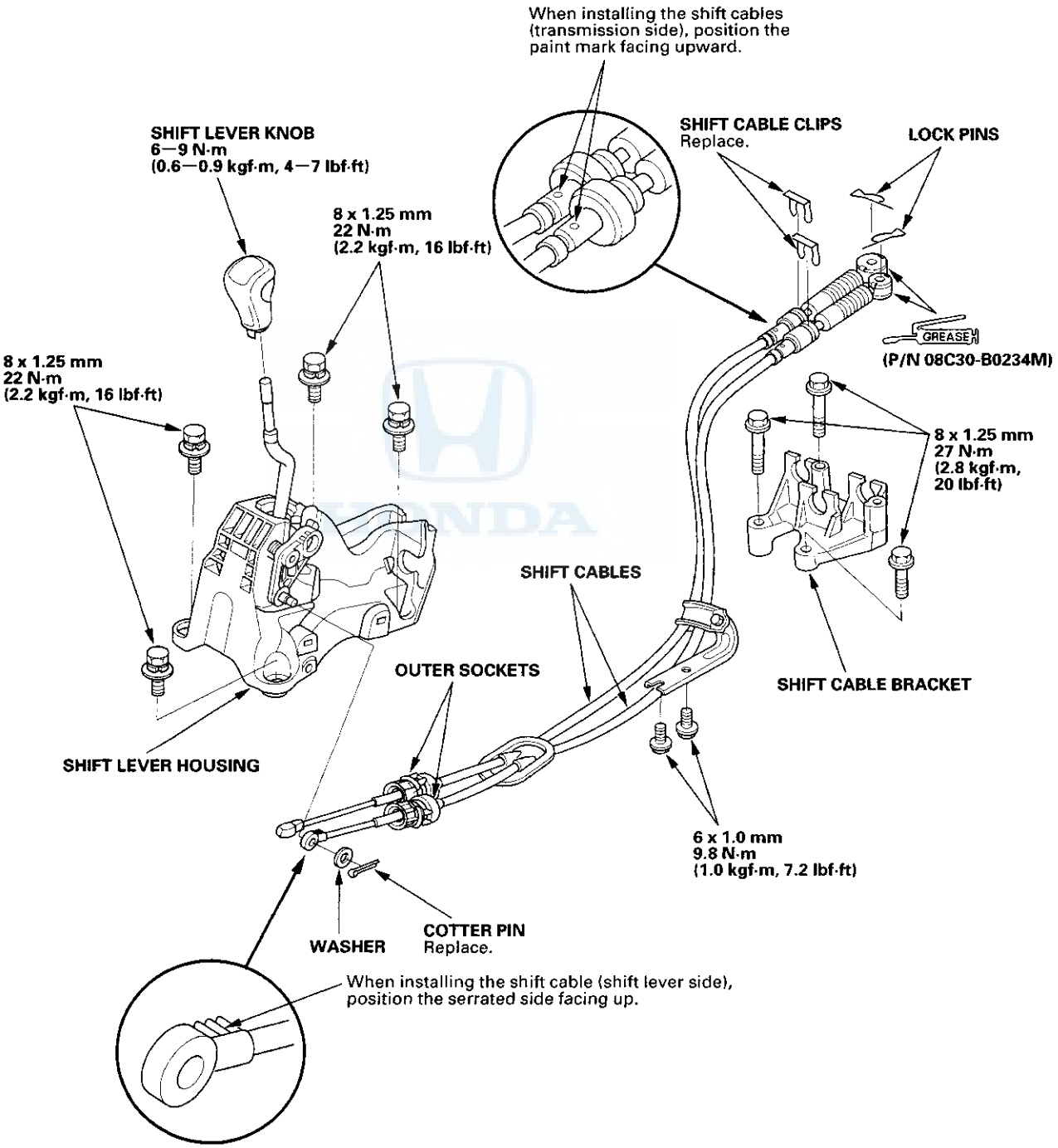
34. Install the oil pump strainer (A), the strainer set spring (B), and the strainer cover (C) with the new O-ring (D).

    NOTE: Clean the strainer anytime the transmission is disassembled.

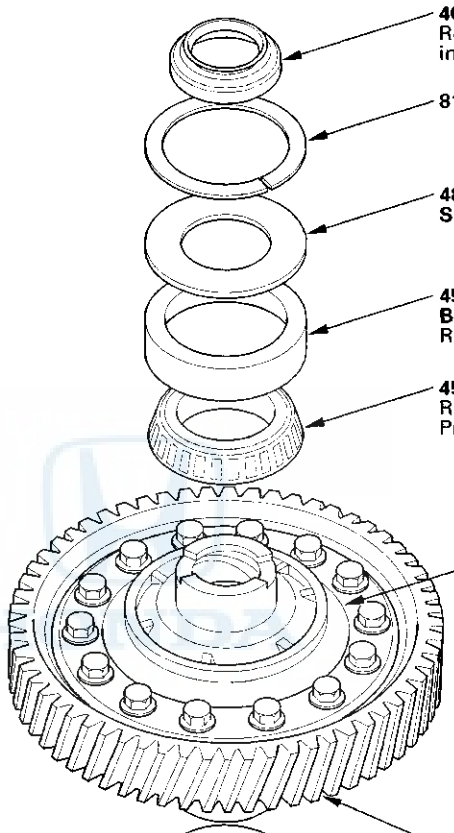


Gearshift Mechanism Replacement

NOTE: Make sure not to get any silicone grease on the terminal part of the connectors and switches, especially if you have silicone grease on your hands or gloves.



Component Location Index



40 x 56 x 9 mm OIL SEAL
Replacement, page 13-70
in the 2008-2009 Accord Sevice Manual

81 mm SHIM

48 x 81 x 1 mm SPACER

45 x 81 x 18 mm BEARING OUTER RACE
Replacement, page 13-90

45 x 81 x 18 mm CARRIER BEARING
Replacement, page 13-89
Preload Adjustment, page 13-92

DIFFERENTIAL CARRIER
Backlash inspection, page 13-89

FINAL DRIVEN GEAR
Do not separate from the differential carrier.

45 x 80 x 21 mm CARIER BEARING
Replacement, page 13-89
Preload Adjustment, page 13-92

45 x 80 x 21 mm BEARING OUTER RACE
Replacement, page 13-90

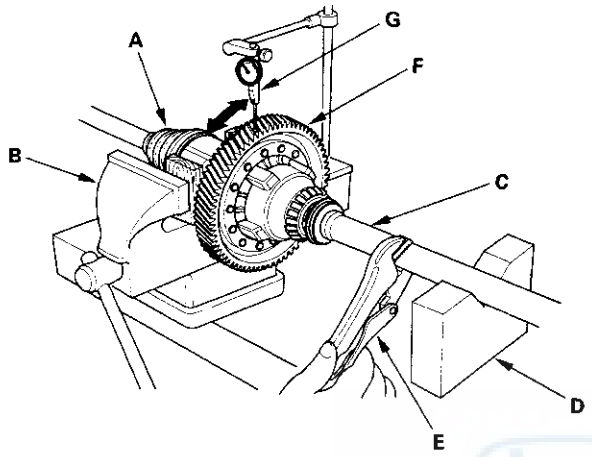
46 x 80 x 21 mm SPACER

35 x 54 x 8 mm OIL SEAL
Replacement, page 13-70
in the 2008-2009 Accord Service Manual

Backlash Inspection

1. Install the driveshaft and intermediate shaft into the differential assembly.

2. Carefully clamp the driveshaft (A) in a vise (B).



3. Place the intermediate shaft (C) on a V-block (D), then fix the intermediate shaft using vise grips or equivalent (E).

4. Measure the backlash of the final driven gear (F) with a dial indicator (G). If the backlash is not within the standard, check the differential carrier and replace if necessary.

   NOTE: If it needs to replace the differential carrier, the final driven gear as a set. Do not remove the final driven gear from the differential carrier.

   Standard (New): 0.6—1.1 mm (0.024—0.043 in.)

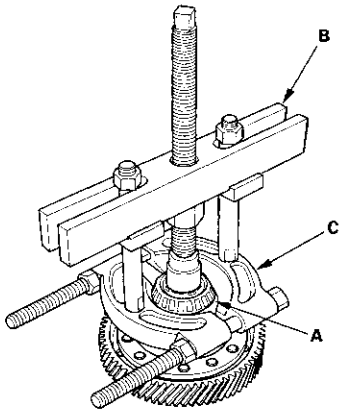
Carrier Bearing Replacement

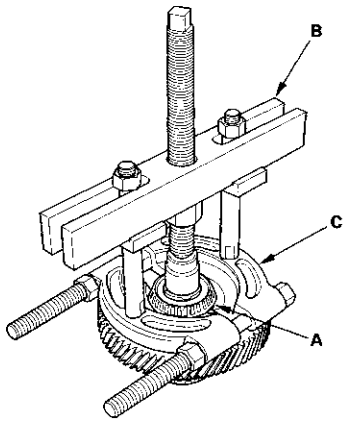
Special Tool Required
Installer, 22 x 37/46 x 52 mm 07PAF-0030100

NOTE:
- The bearing outer race and tapered roller bearing should be replaced as a set.
- Whenever the tapered roller bearing is replaced, do the carrier bearing preload adjustment (see page 13-92) while reassembling the transmission.

1. Check the carrier bearings for wear and rough rotation on the transmission or the clutch housing with the bearing outer race. If they rotate smoothly and their rollers show no signs of wear, the bearings are OK.

2. Remove the carrier bearings (A) with a commercially available bearing puller (B) and bearing separator (C).

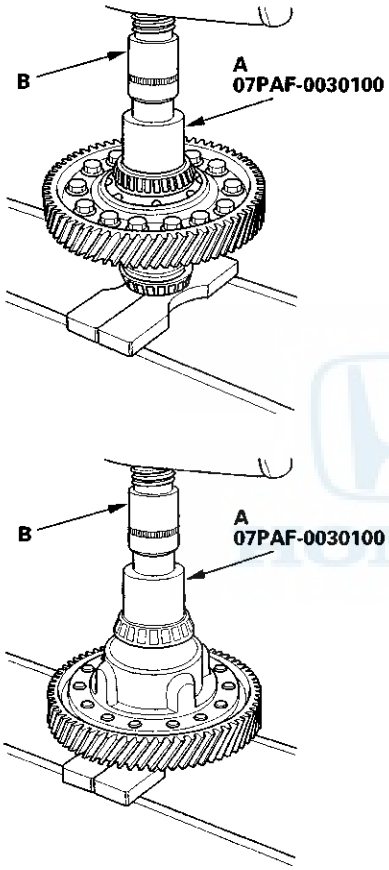




(cont'd)

Carrier Bearing Replacement (cont'd)

3. Install the new bearings with the 22 x 37/46 x 52 mm installer (A) and a press (B). Press on each bearing until it bottoms out. There should be no clearance between the bearings and the differential carrier.



Bearing Outer Race Replacement

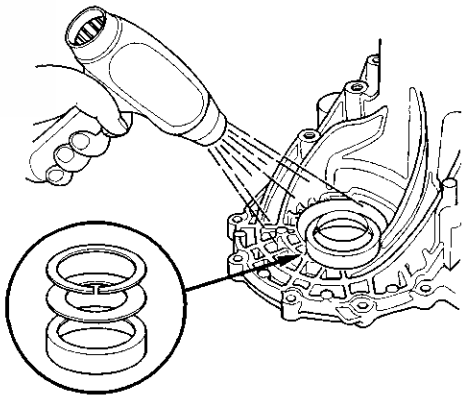
Special Tools Required
- Bearing driver attachment, 78 x 80 mm 07NAD-PX40100
- Driver handle, 15 x 135L 07749-0010000

NOTE:
- The bearing outer race and tapered roller bearing should be replaced as a set (see page 13-88).
- Whenever the tapered roller bearing and the bearing outer race are replaced, do the carrier bearing preload adjustment (see page 13-92) while reassembling the transmission.

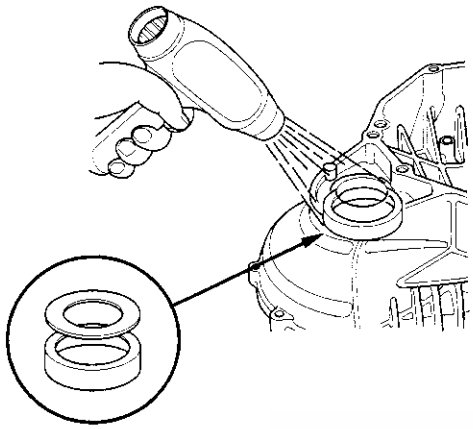
1. Remove the oil seals from the transmission housing and the clutch housing, refer to the 2008-2009 Accord Service Manual (see page 13-70).

2. Remove the bearing outer race, the spacer, and the 81 mm thrust shim from the transmission housing by heating the housing to about 100 ℃ (212 ℉) with a heat gun.

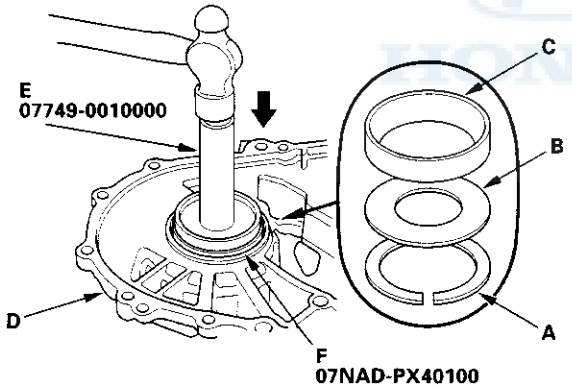
   NOTE: Do not reuse the 81 mm thrust shim if the outer race was driven out.



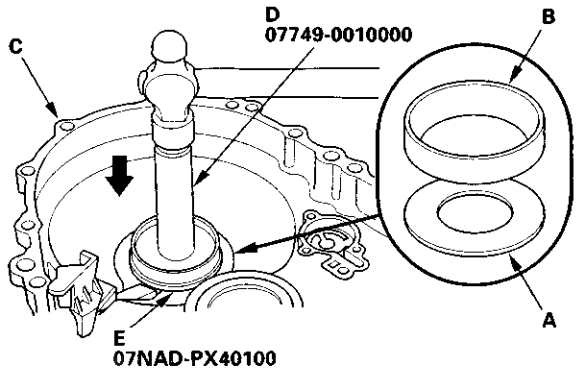
3. Remove the bearing outer race and the spacer from the clutch housing by heating the housing to about 100 °C (212 °F) with a heat gun.



4. Install the 81 mm thrust shim (A), the spacer (B), and the bearing outer race (C) into the transmission housing (D) using the 15 x 135L driver handle (E) and the 78 x 80 mm bearing driver attachment (F).



5. Install the spacer (A) and the bearing outer race (B) into the clutch housing (C) using the 15 x 135L driver handle (D) and the 78 x 80 mm bearing driver attachment (E).



6. Install the oil seals into the transmission housing and clutch housing, refer to the 2008-2009 Accord Service Manual (see page 13-70).

Carrier Bearing Preload Adjustment

Special Tools Required
Preload inspection tool 07XAJ-S0KA100

If any of the items listed below were replaced, the carrier bearing preload must be adjusted.

- Transmission housing
- Clutch housing
- Differential carrier
- Spacer
- Carrier bearing and outer race

1. Disassemble the transmission (see page 13-40).

2. Install the 81 mm thrust shim, the spacer, and the bearing outer race into the transmission housing, and install the spacer and the bearing outer race into the clutch housing, if they are removed (see page 13-90).

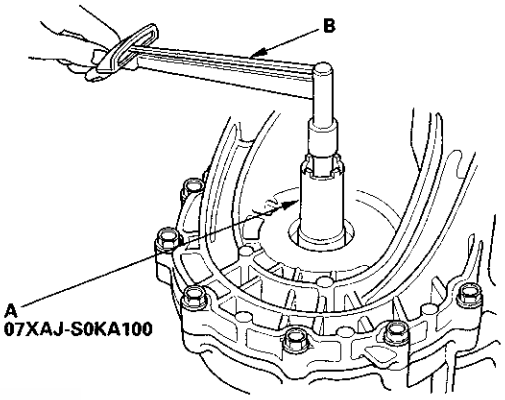
   NOTE:
   - The tapered roller bearing and the bearing outer race compose the carrier bearing are always should be a set. Do not combine the other one.
   - Note the thickness size of the used 81 mm thrust shim.

3. Install the differential carrier with the tapered roller bearing, and assemble the transmission housing and the clutch housing using the bolts by specified tightening torque (see step 24 on page 13-85).

   NOTE: It is not necessary to use sealing agent between the housings for this adjustment.

4. Rotate the differential assembly in both directions to seat the carrier bearings.

5. At normal room temperature, measure starting torque of the differential assembly by rotating it in both directions with the preload inspection tool (A) and a torque wrench (B).



6. If the carrier bearing preload is not within the standard, select an 81 mm shim that will provide the correct preload:

   - Compare the bearing preload you got on the first try with the specified preload of 3.43—4.51 N·m (35—46 kgf·cm, 30—40 lbf·in.).
   - If the preload you measure was less than specified, subtract it from the specified preload.
   - If the preload you measure was more than specified, subtract the specified preload from the preload you measure.

   Standard: 3.43—4.51 N·m (35—46 kgf·cm, 30—40 lbf·in.)

   For example, with a 2.50 mm (0.098 in.) shim:

   ① specified 4.51 N·m (46 kgf·cm, 40 lbf·in.)
   — you got less 2.55 N·m (26 kgf·cm, 23 lbf·in.)
   1.96 N·m (20 kgf·cm, 17 lbf·in.) less

   ② you got more 5.29 N·m (54 kgf·cm, 47 lbf·in.)
   — specified 4.51 N·m (46 kgf·cm, 40 lbf·in.)
   0.78 N·m (8 kgf·cm, 7 lbf·in.) more

   NOTE: Each shim size up or down from standard makes about 0.3—0.4 N·m (3—4 kgf·cm, 2.6—3.5 lbf·in.) difference in preload.

   In example ①, your preload was 1.96 N·m (20 kgf·cm, 17 lbf·in.) less than standard, so you need a shim five sizes thicker than standard (try the 2.65 mm (0.104 in.) 81 mm shim, and recheck).

In example ②, your preload was 0.78 N·m (8 kgf·cm, 7 lbf·in.) more than standard, so you need a shim two sizes thinner (try the 2.44 mm (0.096 in.) 81 mm shim, and recheck).

81 mm Thrust Shim

Type	Part Number	Thickness
A	41438-PYZ-000	2.05 mm (0.081 in.)
B	41439-PYZ-000	2.08 mm (0.082 in.)
C	41440-PYZ-000	2.11 mm (0.083 in.)
D	41441-PYZ-000	2.14 mm (0.084 in.)
E	41442-PYZ-000	2.17 mm (0.085 in.)
F	41443-PYZ-000	2.20 mm (0.087 in.)
G	41444-PYZ-000	2.23 mm (0.088 in.)
H	41445-PYZ-000	2.26 mm (0.089 in.)
J	41446-PYZ-000	2.29 mm (0.090 in.)
K	41447-PYZ-000	2.32 mm (0.091 in.)
L	41448-PYZ-000	2.35 mm (0.093 in.)
M	41449-PYZ-000	2.38 mm (0.094 in.)
N	41450-PYZ-000	2.41 mm (0.095 in.)
P	41451-PYZ-000	2.44 mm (0.096 in.)
Q	41452-PYZ-000	2.47 mm (0.097 in.)
R	41453-PYZ-000	2.50 mm (0.098 in.)
S	41454-PYZ-000	2.53 mm (0.100 in.)
T	41455-PYZ-000	2.56 mm (0.101 in.)
U	41456-PYZ-000	2.59 mm (0.102 in.)
V	41457-PYZ-000	2.62 mm (0.103 in.)
W	41458-PYZ-000	2.65 mm (0.104 in.)
X	41459-PYZ-000	2.68 mm (0.106 in.)
Y	41460-PYZ-000	2.71 mm (0.107 in.)
Z	41461-PYZ-000	2.74 mm (0.108 in.)
AA	41462-PYZ-000	2.77 mm (0.109 in.)
AB	41463-PYZ-000	2.80 mm (0.110 in.)
AC	41464-PYZ-000	2.83 mm (0.111 in.)
AD	41465-PYZ-000	2.86 mm (0.113 in.)
AE	41466-PYZ-000	2.89 mm (0.114 in.)
AF	41467-PYZ-000	2.92 mm (0.115 in.)
AG	41468-PYZ-000	2.95 mm (0.116 in.)
AH	41469-PYZ-000	2.98 mm (0.117 in.)
AJ	41470-PYZ-000	3.01 mm (0.119 in.)
AK	41471-PYZ-000	3.04 mm (0.120 in.)
AL	41472-PYZ-000	3.07 mm (0.121 in.)
AM	41473-PYZ-000	3.10 mm (0.122 in.)
AN	41474-PYZ-000	3.13 mm (0.123 in.)
AP	41475-PYZ-000	3.16 mm (0.124 in.)

7. Once the carrier bearing preload is correct, disassemble the transmission housing, and install new oil seals in the differential (see step 1 on page 13-89).

8. Reassemble the transmission (see page 13-80).

HONDA

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If automatic transmission maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

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Automatic Transmission

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NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

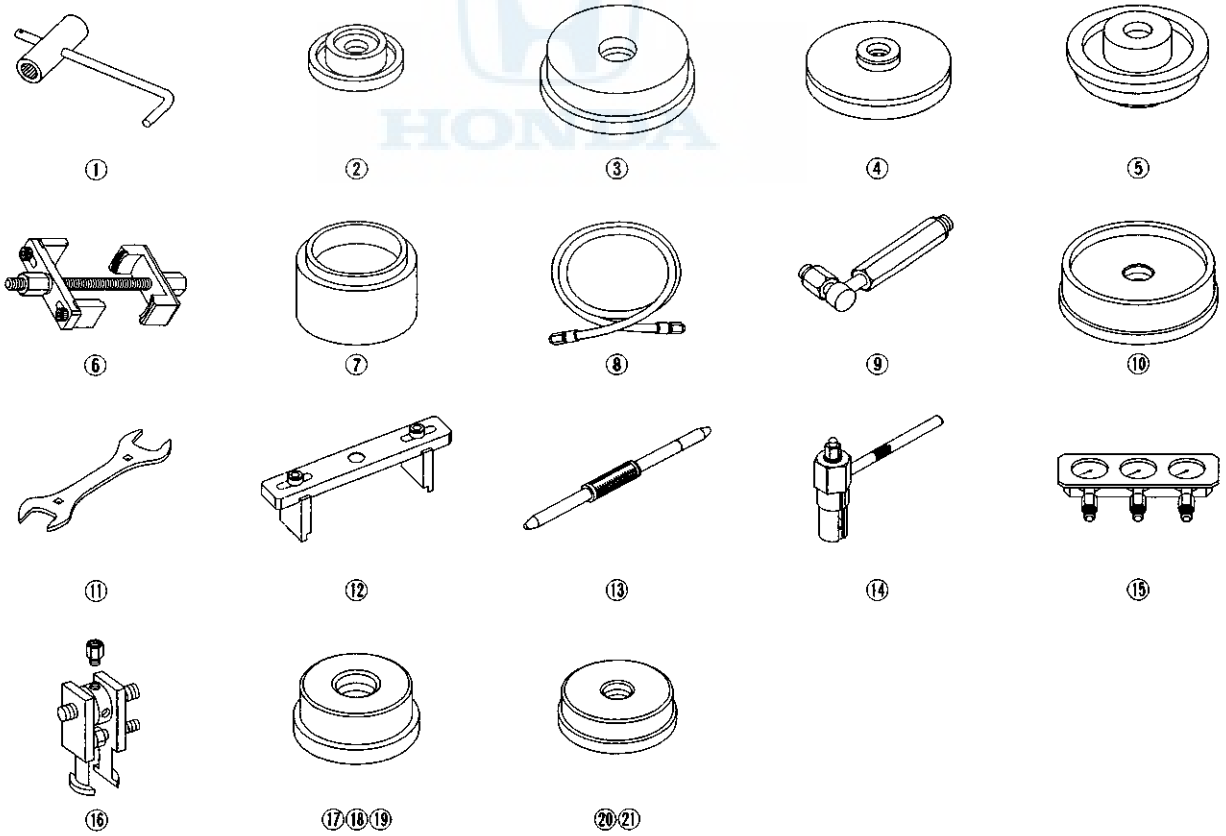
Outline of Model Change

The B97A transmission has been added.

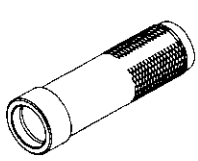
Special Tools

Ref. No.	Tool Number	Description	Qty
①	07GAB-PF50101	Mainshaft Holder	1
②	07GAD-PG40100	Oil Seal Driver Attachment	1
③	07GAD-SD40101	Attachment, 78 x 90 mm	1
④	07HAD-SG00100	Attachment, 83 mm	1
⑤	07JAD-PN00100	Oil Seal Driver Attachment	1
⑥	07LAE-PX40000	Clutch Spring Compressor Set	1
⑦	07MAD-PR90100	Attachment, 45 x 55 mm	1
⑧	07MAJ-PY4011A	A/T Pressure Hose, 2,210 mm	3
⑨	07MAJ-PY40120	A/T Pressure Hose Adapter	3
⑩	07NAD-PX40100	Attachment, 78 x 80 mm	1
⑪	07XAA-002010A	Wrench, 40 x 42 mm	1
⑫	07ZAE-PRP0100	Clutch Compressor Attachment	1
⑬	070AG-SJAA10S	Subframe Alignment Pin	1
⑭	070AJ-0020101	Preload Inspection Tool	1
⑮	07406-0020400 or 07406-0020401	A/T Oil Clutch Pressure Gauge Set	1
⑯	07736-A01000B or 07736-A01000A	Adjustable Bearing Puller, 25—40 mm	1
⑰	07746-0010200	Attachment, 37 x 40 mm	1
⑱	07746-0010400	Attachment, 52 x 55 mm	1
⑲	07746-0010500	Attachment, 62 x 68 mm	1
⑳	07746-0010600	Attachment, 72 x 75 mm	1

Must be used with commercially available 3/8"-16 slide hammer.



Ref. No.	Tool Number	Description	Qty
㉑	07746-001A800	Attachment, 22 x 24 mm	1
㉒	07746-0030100	Driver Handle, 40 mm I.D.	1
㉓	07746-0030300	Attachment, 30 mm I.D.	1
㉔	07749-0010000	Driver	1
㉕	07936-166010A	Bearing Remover Shaft Set, 12 mm	1
㉖	07936-3710100	Bearing Remover Shaft Handle	1
㉗	07936-371020A	Sliding Hammer Weight	1
㉘	07936-3710600	Bearing Remover Shaft Set, 20 mm	1
㉙	07936-8890300	Bearing Remover Shaft Set, 30 mm	1
㉚	07936-GE0A000	Bearing Remover, 10 mm	1
㉛	07947-6340500	Driver Attachment	1



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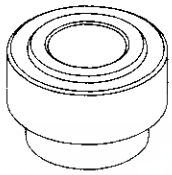

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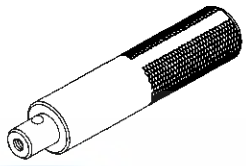

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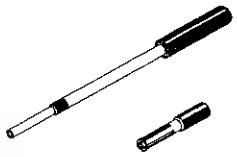

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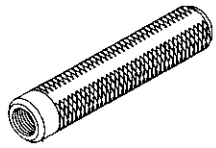

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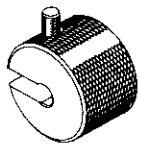

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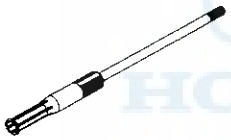

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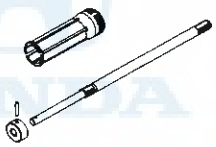

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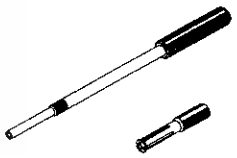

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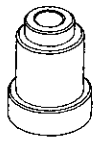

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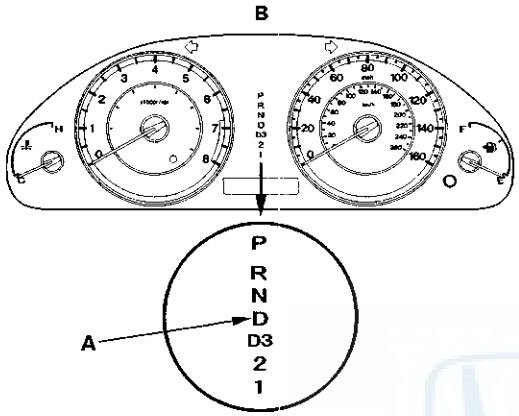
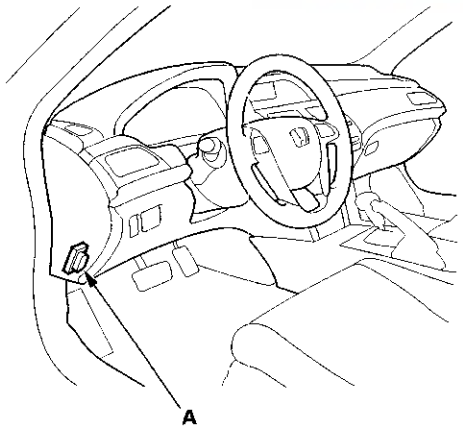
General Troubleshooting Information

How to Check for DTCs with the Honda Diagnostic System (HDS)

When the powertrain control module (PCM) senses an abnormality in the input or output system, the D indicator (A) in the gauge control module (B) will usually blink.



When the Honda Diagnostic System (HDS) is connected to the data link connector (DLC) (A) located under the driver's side of the dashboard, it will indicate the diagnostic trouble code (DTC) when the ignition switch is turned to ON (II) and the appropriate menu is selected.



If the D indicator or the malfunction indicator lamp (MIL) has been reported on, or if a driveability problem is suspected, follow this procedure:

1. Connect the HDS to the DLC. (See the HDS user's manual for specific instructions.)
2. Turn the ignition switch to ON (II). Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).
3. Select A/T system, and observe the DTC in the DTCs MENU on the HDS screen.
4. Record the freeze data and the on-board snapshots for all fuel and emissions DTCs and A/T DTCs.
5. If there is a fuel and emissions DTC, first check the fuel and emissions system as indicated by the DTC.
6. Clear the DTC and the data.
7. Drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, and then recheck for a DTC. If the A/T DTC returns, go to the indicated DTC's troubleshooting. If the DTC does not return, there was an intermittent problem within the circuit. Make sure all pins and terminals in the circuit are tight.

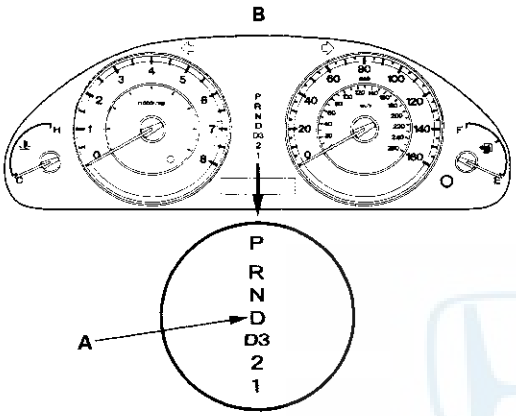
Symptom Troubleshooting Versus DTC Troubleshooting

Some symptoms will not trigger DTCs or cause the D indicator to blink. If the MIL was reported ON or the D indicator has been blinking, check for DTCs. If the vehicle has an abnormal symptom, and there are no DTCs stored, do the symptom troubleshooting. Check the list of probable cause(s) for the symptom, in the sequence listed, until you find the problem.

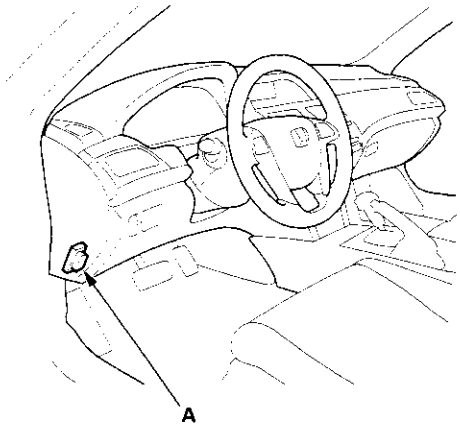
How to Check for DTCs with the SCS Mode (retrieving the flash codes)

NOTE: The preferred method is to use the HDS to retrieve the DTCs.

When the PCM senses an abnormality in the input or output system, the D indicator (A) in the gauge control module (B) will usually blink.



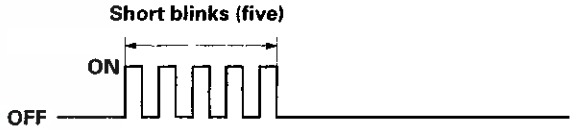
When the D indicator has been reported on, connect the HDS to the DLC (A) located under the driver's side of the dashboard. Turn the ignition switch to ON (II), select SCS mode, then the D indicator will indicate (flash) the DTC.



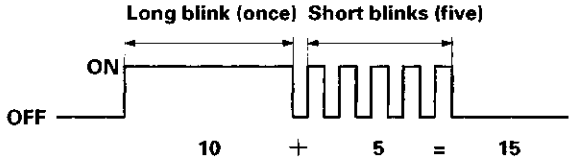
If the D indicator and the MIL come on at the same time, or if a driveability problem is suspected, follow this procedure:

1. Connect the HDS to the DLC. (See the HDS user's manual for specific instructions.)
2. Turn the ignition switch to ON (II). Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).
3. Select SCS mode, then observe the D indicator in the gauge control module. Codes 1 through 9 are indicated by individual short blinks. Code 10 and above are indicated by a series of long and short blinks. One long blink equals 10 short blinks. Add the long and short blinks together to determine the code.

Example: DTC P0705 (5)



Example: DTC P0717 (15)



4. Record all fuel and emissions DTCs and A/T DTCs.
5. If there is a fuel and emissions DTC, first check the fuel and emissions system as indicated by the DTC.
6. Clear the DTC and the data.
7. Drive the vehicle for several minutes under the same conditions as those indicated by the freeze data, and then recheck for DTCs. If the A/T DTC returns, go to the indicated DTC's troubleshooting. If the DTC does not return, there was an intermittent problem within the circuit. Make sure all pins and terminals in the circuit are tight.

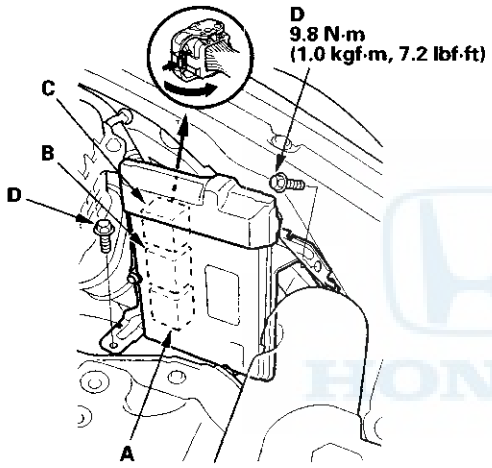
(cont'd)

General Troubleshooting Information (cont'd)

How to Troubleshoot Circuits at the PCM Connectors

NOTE: The PCM overwrites data and monitors the EVAP system for about 40 minutes after the ignition switch is turned to LOCK (0). Jumping the SCS line after turning the ignition switch to LOCK (0) cancels this function. Disconnecting the PCM during this function, without jumping the SCS line first, can damage the PCM.

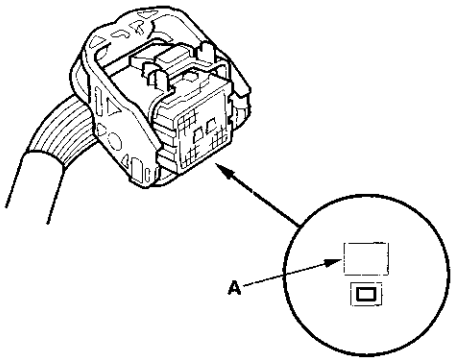
1. Jump the SCS line with the HDS.
2. Remove the bolts (D).



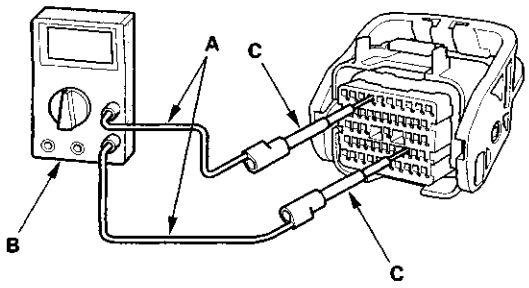
3. Disconnect PCM connectors A, B, and C.

   NOTE: PCM connectors A, B, and C have symbols (A=□, B=△, C=○) embossed on them for identification.

4. When diagnosis/troubleshooting is done at the PCM connector, use the terminal test port (A) above the terminal you need to check.



5. Connect one side of the patch cord (A) terminals to a commercially available digital multimeter (B), and connect the other side of the patch cords terminals to a commercially available banana jack (Pomona Electronics Tool No. 3563 or equivalent) (C).



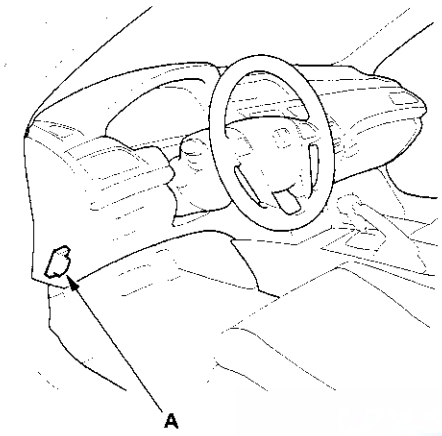
6. Gently insert the pin probe (male) into the terminal test port from the terminal side. Do not force the tips into the terminals.

NOTICE

- For accurate results, always use the pin probe (male).
- To prevent damage to the connector terminals, do not insert test equipment probes, paper clips, or other substitutes as they can damage the terminals. Damaged terminals cause a poor connection and an incorrect measurement.
- Do not puncture the insulation on a wire. Punctures can cause poor or intermittent electrical connections.

Clear A/T DTCs Procedure

1. Connect the HDS to the DLC (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).
4. Clear the DTC(s) on the HDS screen.

OBD Status

The OBD status shows the current system status of each DTC and all of the parameters. This function is used to see if the technician's repair was successfully completed. The results of diagnostic tests for the DTC are displayed as:

- PASSED: The on-board diagnosis has successfully completed.
- FAILED: The on-board diagnosis has finished but failed.
- NOT COMPLETED: The on-board diagnosis was running but is out of the enable conditions of the DTC.

How to End a Troubleshooting Session (required after any troubleshooting)

NOTE: Reset the PCM with the HDS while the engine is stopped.

1. Turn the ignition switch to LOCK (0).
2. Turn the ignition switch to ON (II), and wait for 30 seconds.
3. Turn the ignition switch to LOCK (0), and disconnect the HDS from the DLC.
4. Do the PCM idle learn procedure (see page 11-385).
5. Start the engine with the shift lever in P or N, and warm it up to normal operating temperature (the radiator fan comes on).
6. To verify that the problem is repaired, test-drive the vehicle for several minutes at speeds over 31 mph (50 km/h) or under the same conditions as those indicated by the freeze data.

(cont'd)

General Troubleshooting Information (cont'd)

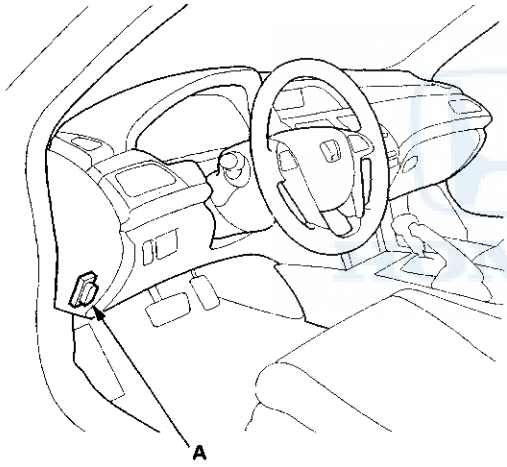
Substituting the PCM

Special Tools Required
- Honda diagnostic system (HDS) tablet tester
- Honda interface module (HIM) and an iN workstation with HDS and CM update software
- HDS pocket tester
- GNA600 and an iN workstation with HDS and CM update software

Use any one of these update tools.

NOTE: Use this procedure when you have to substitute a known-good PCM during the troubleshooting procedure.

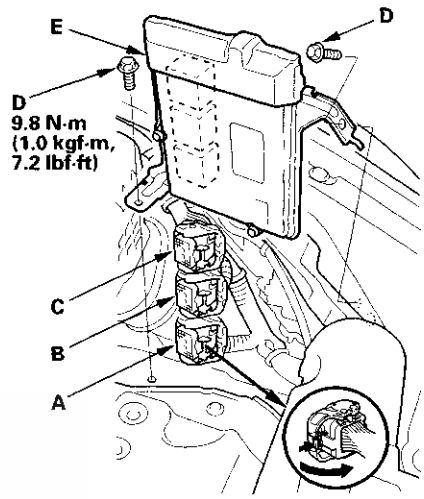
1. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259). If you are returning from DLC circuit troubleshooting, skip steps 4 and 5, and then clean the throttle body after substituting the PCM (see page 11-436).
4. Select the INSPECTION MENU with the HDS.
5. Select the ETCS TEST, then select the TP POSITION CHECK, and follow the screen prompts.

   NOTE: If the TP POSITION CHECK indicates FAILED, continue this procedure.

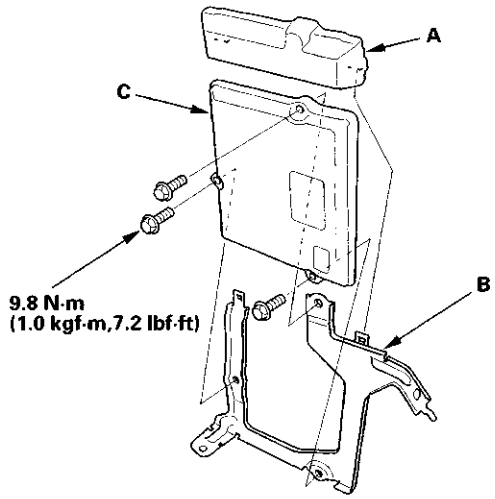
6. Turn the ignition switch to LOCK (0).
7. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
8. Remove the bolts (D).



9. Disconnect PCM connectors A, B, and C, then remove the PCM assembly (E).

   NOTE: PCM connectors A, B, and C have symbols (A=□, B=△, C=○) embossed on them for identification.

10. Remove the cover (A) and the bracket (B) from the PCM (C).



11. Install a known-good PCM in the reverse order of removal.

12. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

    NOTE: While doing the battery installation procedure, do not start the engine.

13. Turn the ignition switch to ON (II).

    NOTE: DTC P0630 "VIN Not Programmed or Mismatch" may be stored because the VIN has not been programmed into the PCM; ignore it, and continue this procedure.

14. Manually input the VIN to the PCM with the HDS.

15. Select the IMMOBI SYSTEM with the HDS.

16. Enter the immobilizer code using the PCM replacement procedure in the HDS; this allows you to start the engine.

17. Update the PCM if it does not have the latest software (see page 11-281).

18. Reset the PCM with the HDS.

19. If the TP POSITION CHECK failed in step 5, clean the throttle body (see page 11-436).

20. Do the PCM idle learn procedure (see page 11-385).

21. Do the CKP pattern learn procedure (see page 11-5).

Failure Reproduction Technique

Make sure to follow these points while the vehicle is raised on a lift for the test-drive.

- Disable the VSA by pressing the VSA OFF switch.
- VSA DTC's may come on when test-driving on a lift. If the VSA DTC(s) come on, clear the DTC(s) with the HDS.

DTC Troubleshooting Index

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the General Troubleshooting Information (see page 14-4).

DTC *(1)	Two Drive Cycle Detection	D Indicator	MIL	Detection Item	Page
P0705 (5) *(2)	—	Blinks	ON	Short in Transmission Range Switch Circuit (Multiple Shift-position Input)	(see page 14-89)
P0706 (6) *(2)	○	OFF	ON	Open in Transmission Range Switch Circuit	(see page 14-91)
P0711 (28) *(2)	—	Blinks	OFF	Problem in ATF Temperature Sensor Circuit	(see page 14-93)
P0712 (28) *(2)	—	Blinks	OFF	Short in ATF Temperature Sensor Circuit	(see page 14-95)
P0713 (28) *(2)	—	Blinks	OFF	Open in ATF Temperature Sensor Circuit	(see page 14-97)
P0716 (15) *(2)	—	Blinks	ON	Problem in Input Shaft (Mainshaft) Speed Sensor Circuit	(see page 14-100)
P0717 (15) *(2)	—	Blinks	ON	Problem in Input Shaft (Mainshaft) Speed Sensor Circuit (No Signal Input)	(see page 14-100)
P0718 (15) *(2)	○	Blinks	ON	Input Shaft (Mainshaft) Speed Sensor Intermittent Failure	(see page 14-105)
P0721 (9) *(2)	—	Blinks	ON	Problem in Output Shaft (Countershaft) Speed Sensor Circuit	(see page 14-109)
P0722 (9) *(2)	—	Blinks	ON	Problem in Output Shaft (Countershaft) Speed Sensor Circuit (No Signal Input)	(see page 14-109)
P0723 (9) *(2)	○	Blinks	ON	Output Shaft (Countershaft) Speed Sensor Intermittent Failure	(see page 14-114)
P0731 (64)	○	Blinks	OFF	Problem in 1st Clutch and 1st Clutch Hydraulic Circuit	(see page 14-118)
P0732 (64)	○	Blinks	OFF	Problem in 2nd Clutch and 2nd Clutch Hydraulic Circuit	(see page 14-119)
P0733 (64)	○	Blinks	OFF	Problem in 3rd Clutch and 3rd Clutch Hydraulic Circuit	(see page 14-121)
P0734 (64)	○	Blinks	OFF	Problem in 4th Clutch and 4th Clutch Hydraulic Circuit	(see page 14-122)
P0735 (64)	○	Blinks	OFF	Problem in 5th Clutch and 5th Clutch Hydraulic Circuit	(see page 14-124)
P0741 (40)	○	Blinks	OFF	Torque Converter Clutch Hydraulic Circuit Stuck OFF	(see page 14-125)
P0746 (76)	○	Blinks	ON	A/T Clutch Pressure Control Solenoid Valve A Stuck OFF	(see page 14-127)
P0747 (76)	○	Blinks	ON	A/T Clutch Pressure Control Solenoid Valve A Stuck ON	(see page 14-127)
P0751 (70)	○	Blinks	ON	Shift Solenoid Valve A Stuck OFF	(see page 14-128)
P0752 (70)	○	Blinks	ON	Shift Solenoid Valve A Stuck ON	(see page 14-128)
P0756 (71)	○	Blinks	ON	Shift Solenoid Valve B Stuck OFF	(see page 14-130)
P0757 (71)	○	Blinks	ON	Shift Solenoid Valve B Stuck ON	(see page 14-130)

DTC *(1)	Two Drive Cycle Detection	D Indicator	MIL	Detection Item	Page
P0761 (72)	○	Blinks	ON	Shift Solenoid Valve C Stuck OFF	(see page 14-131)
P0762 (72)	○	Blinks	ON	Shift Solenoid Valve C Stuck ON	(see page 14-131)
P0766 (73)	○	Blinks	ON	Shift Solenoid Valve D Stuck OFF	(see page 14-133)
P0767 (73)	○	Blinks	ON	Shift Solenoid Valve D Stuck ON	(see page 14-133)
P0776 (77)	○	Blinks	ON	A/T Clutch Pressure Control Solenoid Valve B Stuck OFF	(see page 14-134)
P0777 (77)	○	Blinks	ON	A/T Clutch Pressure Control Solenoid Valve B Stuck ON	(see page 14-134)
P0796 (78)	○	Blinks	ON	A/T Clutch Pressure Control Solenoid Valve C Stuck OFF	(see page 14-136)
P0797 (78)	○	Blinks	ON	A/T Clutch Pressure Control Solenoid Valve C Stuck ON	(see page 14-137)
P0812 (65) *(2)	○	Blinks	ON	Open in Transmission Range Switch ATPR Switch Circuit	(see page 14-139)
P0842 (25) *(2)	——	Blinks	ON	Short in 2nd Clutch Transmission Fluid Pressure Switch Circuit, or 2nd Clutch Transmission Fluid Pressure Switch Stuck ON	(see page 14-141)
P0843 (25)	——	Blinks	ON	Open in 2nd Clutch Transmission Fluid Pressure Switch Circuit, or 2nd Clutch Transmission Fluid Pressure Switch Stuck OFF	(see page 14-143)
P0847 (26) *(2)	——	Blinks	ON	Short in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck ON	(see page 14-146)
P0848 (26)	——	Blinks	ON	Open in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck OFF	(see page 14-148)
P0872 (27) *(2)	○	Blinks	OFF	Short in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck ON	(see page 14-151)
P0873 (27)	○	Blinks	OFF	Open in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck OFF	(see page 14-153)

NOTE:

* (1): The DTC in parentheses is the flash code the D indicator indicates when the data link connector (DLC) is connected to the HDS, and in the SCS mode.
* (2): This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

(cont'd)

DTC Troubleshooting Index (cont'd)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the General Troubleshooting Information (see page 14-4).

DTC *(1)	Two Drive Cycle Detection	D Indicator	MIL	Detection Item	Page
P0962 (16) *(2)	———	Blinks	ON	Problem in A/T Clutch Pressure Control Solenoid Valve A Circuit	(see page 14-156)
P0963 (16) *(2)	———	Blinks	ON	Problem in A/T Clutch Pressure Control Solenoid Valve A	(see page 14-160)
P0966 (23) *(2)	———	Blinks	ON	Problem in A/T Clutch Pressure Control Solenoid Valve B Circuit	(see page 14-162)
P0967 (23) *(2)	———	Blinks	ON	Problem in A/T Clutch Pressure Control Solenoid Valve B	(see page 14-166)
P0970 (29) *(2)	———	Blinks	ON	Problem in A/T Clutch Pressure Control Solenoid Valve C Circuit	(see page 14-168)
P0971 (29) *(2)	———	Blinks	ON	Problem in A/T Clutch Pressure Control Solenoid Valve C	(see page 14-172)
P0973 (7) *(2)	———	Blinks	ON	Short in Shift Solenoid Valve A Circuit	(see page 14-174)
P0974 (7) *(2)	———	Blinks	ON	Open in Shift Solenoid Valve A Circuit	(see page 14-177)
P0976 (8) *(2)	———	Blinks	ON	Short in Shift Solenoid Valve B Circuit	(see page 14-180)
P0977 (8) *(2)	———	Blinks	ON	Open in Shift Solenoid Valve B Circuit	(see page 14-183)
P0979 (22) *(2)	———	Blinks	ON	Short in Shift Solenoid Valve C Circuit	(see page 14-186)
P0980 (22) *(2)	———	Blinks	ON	Open in Shift Solenoid Valve C Circuit	(see page 14-189)
P0982 (60) *(2)	———	Blinks	ON	Short in Shift Solenoid Valve D Circuit	(see page 14-192)
P0983 (60) *(2)	———	Blinks	ON	Open in Shift Solenoid Valve D Circuit	(see page 14-195)
P1717 (62)	○	Blinks	ON	Open in Transmission Range Switch ATPRVS Switch Circuit	(see page 14-198)
P1743 (45)	○	Blinks	OFF	Problem in Shift Control System; Shift Valve E Stuck OFF	(see page 14-201)
P1744 (45)	○	Blinks	OFF	Problem in Shift Control System; Shift Valve E Stuck ON	(see page 14-201)
P1745 (45)	○	Blinks	OFF	Problem in Shift Control System; Servo Control Valve Stuck OFF or Servo Valve Stuck OFF	(see page 14-202)
P1780 (49)	○	Blinks	ON	Problem in Shift Control System	(see page 14-203)

NOTE:

* (1): The DTC in parentheses is the flash code the D indicator indicates when the data link connector (DLC) is connected to the HDS, and in the SCS mode.
* (2): This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

Symptom Troubleshooting Index

Symptom	Probable cause(s)	Notes
When you turn the ignition switch to ON (II), the D indicator comes on and stays on in all shift lever positions, or it never comes on at all	• F-CAN communication line error • Gauge control module defective • PCM defective	• Check the F-CAN communication line for a DTC (see page 11-248). • Check the A/T gear position indicator drive circuit in the gauge control module by using the gauge control module self-diagnostic function (see page 22-68).
A/T gear position indicator does not come on while the shift lever is in that position	• F-CAN communication line error • Gauge control module defective • PCM defective • Transmission range switch defective	• Check the F-CAN communication line for a DTC (see page 11-248). • Check the A/T gear position indicator drive circuit in the gauge control module by using the gauge control module self-diagnostic function (see page 22-68). • Inspect the transmission range switch (see page 14-265).
Shift lever cannot be moved from P while pressing on the brake pedal	• Accelerator pedal position sensor circuit • Accelerator pedal position sensor defective • Brake pedal position switch circuit • Brake pedal position switch defective • Shift lock solenoid defective • Shift lock solenoid control circuit • Shift lock solenoid mechanism • Throttle body defective • Transmission range switch ATPP switch stuck OFF • Transmission range switch ATPP switch line opened	• Inspect the APP sensor signal (see page 11-327). • Troubleshoot the shift lock system circuit (see page 14-271). • Test the shift lock solenoid, refer to the 2008-2009 Accord Service Manual (see page 14-296). • Inspect the transmission range switch (see page 14-265).
Ignition switch cannot be moved from ACCESSORY (I) to LOCK (0) (key is pushed in, the shift lever in P)	• Interlock control system circuit • Key interlock solenoid stuck ON • Park pin switch stuck ON • Transmission range switch ATPP line opened	• Troubleshoot the key interlock system circuit, refer to the 2008-2009 Accord Service Manual (see page 14-294). • Inspect the transmission range switch (see page 14-265).
HDS does not communicate with the PCM or the vehicle	DLC circuit	Troubleshoot the DLC circuit (see page 11-259).

(cont'd)

Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Engine runs, but vehicle does not move in any gear	1. Low ATF level 2. Shift cable broken or out of adjustment 3. Connection between shift cable and transmission or shift lever is worn 4. ATF pump worn or binding 5. Regulator valve stuck or spring worn 6. ATF strainer clogged 7. Foreign material in separator plate orifice 8. Mainshaft worn or damaged 9. Countershaft worn or damaged 10. Final gears worn or damaged 11. Park mechanism defective 12. Selector control shaft worn or damaged 13. Drive plate defective 14. Torque converter defective 15. Transmission-to-engine assembly error 16. Axle disengaged	• Check the ATF level, and check the ATF cooler line for leaks and loose connections. If necessary, clean the ATF cooler lines. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check the stall speed. • Check the line pressure. • Improper alignment of the ATF pump and the torque converter housing may cause the ATF pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Check the regulator valve in the regulator valve body for free movement, and check the valve springs for wear and damage. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, thoroughly clean the transmission, and clean the cooler and lines. • Replace the torque converter. • Be careful not to damage the torque converter housing when replacing the main ball bearing. You may also damage the ATF pump when you torque down the main valve body. This will cause the ATF pump seizure, use the proper tools. • Install the main seal flush with the torque converter housing. If you push it into the torque converter housing until it bottoms out, it will block the fluid return passage and result in damage. • Inspect the countershaft and the secondary shaft for wear and damage. • Inspect the park mechanism at the park lever link, park gear, and 2nd gears. • Check the drive plate for wear and damage, replace the drive plate if it is worn or damaged. • Check for a misinstalled transmission.

Symptom	Probable cause(s)	Notes
Vehicle moves in R, but not in D, D3, 2, or 1	1. 1st accumulator defective 2. Idler gears worn or damaged 3. 1st clutch defective 4. 5th clutch defective	• Check the 1st and 5th clutch pressure. • Inspect the mainshaft, the countershaft, the secondary shaft, the intermediary shaft, and the idler gears for wear and damage. • Inspect the 1st clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 1st accumulator piston, the O-ring, and the spring in the accumulator body for wear and damage.
Vehicle moves in 2 and R, but not in D, D3, or 1	1. 1st gear one-way clutch defective 2. 1st gears worn or damaged 3. 1st clutch defective	• Check the 1st clutch pressure. • Inspect the mainshaft, the countershaft, 1st gears, and the one-way clutch for wear and damage. • Inspect the 1st clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Vehicle moves in D, D3, 2, and R, but not in 1	1st-hold clutch defective	• Check the 1st-hold clutch pressure. • Inspect the 1st-hold clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between clutch plate B and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate.
Vehicle moves in D, D3, 1, and R, but not in 2	1. 2nd accumulator defective 2. 2nd clutch defective	• Check the 2nd clutch pressure. • Inspect the 2nd clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 2nd accumulator piston, the O-ring, and the spring in the accumulator body for wear and damage.

Symptom	Probable cause(s)	Notes
Vehicle moves in D, D3, 2, and 1, but not in R (or moves forward in R)	1. Shift fork shaft stuck 2. 5th accumulator defective 3. 5th clutch defective 4. Reverse gears worn or damaged 5. Reverse idler gear shaft/holder worn or damaged 6. Reverse selector or reverse selector hub worn or damaged	• Check for a missing shift fork bolt on the shift fork shaft. • Check the shift fork shaft detent for wear and damage. • Check for a stuck servo valve in the regulator valve body, and check the O-ring for wear and damage. • Check the stall speed in R. • Check the 5th clutch pressure. • Inspect the 5th clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 5th accumulator piston, the O-ring, and the spring in the accumulator body for wear and damage. • Inspect the reverse idler gear shaft/holder for wear and damage. • Inspect the reverse selector gear teeth chamfers, and inspect the engagement teeth chamfers of the countershaft 5th gear and the reverse gear. Replace the reverse gears and the reverse selector if they are worn or damaged. If the transmission makes clicking, grinding, or whirring noises, also replace the mainshaft 5th gear, the reverse idler gear, and the countershaft 5th gear.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Poor acceleration; flares when starting off in D, D3, and R	1. Low ATF level 2. Shift cable broken or out of adjustment 3. ATF pump worn or binding 4. Regulator valve stuck or spring worn 5. Stator shaft worn or damaged 6. ATF strainer clogged 7. Torque converter one-way clutch defective 8. Torque converter check valve defective 9. Shift valve E defective	• Check the ATF level, and check the ATF cooler line for leaks and loose connections. If necessary, clean the ATF cooler lines. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check the stall speed. • Check the line pressure. • Improper alignment of ATF pump and the torque converter housing may cause the ATF pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Check the regulator valve in the regulator valve body for free movement, and check the valve springs for wear and damage. • Check the stator shaft splines for wear and damage. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Check the torque converter check valve in the main valve body for free movement, and check the valve spring for wear and damage. • Check shift valve E in the main valve body for free movement, and check the valve spring for wear and damage. • Replace the torque converter.
Poor acceleration; flares when starting off in D, D3, and R; stall speed high in D, D3, 2, and 1	1. 1st accumulator defective 2. 1st clutch defective	• Check the 1st clutch pressure. • Inspect the 1st clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 1st accumulator piston, the O-ring, and the spring in the accumulator body for wear and damage.

Symptom	Probable cause(s)	Notes
Poor acceleration; flares when starting off in D, D3, and R; stall speed high in 1	1st-hold clutch defective	• Check the 1st-hold clutch pressure. • Inspect the 1st-hold clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between clutch plate B and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate.
Poor acceleration; flares when starting off in D, D3, and R; stall speed high in 2	1. 2nd accumulator defective 2. 2nd clutch defective	• Check the 2nd clutch pressure. • Inspect the 2nd clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 2nd accumulator piston, the O-ring, and the spring in the accumulator body for wear and damage.
Poor acceleration; flares when starting off in D, D3, and R; stall speed high in R	1. Shift cable broken or out of adjustment 2. 5th accumulator defective 3. 5th clutch defective	• Check for a loose shift cable at the shift lever and the selector control lever. • Check the stall speed in R. • Check the 5th clutch pressure. • Inspect the 5th clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 5th accumulator piston, the O-ring, and the spring in the accumulator body for wear and damage.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Poor acceleration; flares when starting off in D, D3, and R; stall speed low	1. Engine output low 2. Torque converter clutch piston defective	• Check the stall speed. • Replace the torque converter. • Check the engine control system.
Engine idle vibration	1. Low ATF level 2. Engine output low 3. Torque converter clutch piston defective	• Check the ATF level, and check the ATF cooler line for leaks and loose connections. If necessary, clean the ATF cooler lines. • Check the stall speed. • Check the engine control system. • Check the line pressure. • Improper alignment of the ATF pump and the torque converter housing may cause the ATF pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak.
Vehicle moves in N	1. Excessive ATF 2. ATF temperature sensor defective 3. Foreign material in separator plate orifice 4. Relief valve defective 5. Reverse control valve defective 6. Lubrication control valve defective 7. 1st-hold clutch defective 8. 1st clutch defective 9. 2nd clutch defective 10. 3rd clutch defective 11. 4th clutch defective 12. 5th clutch defective 13. Clearance between clutch end-plate and top disc incorrect 14. Needle bearing seized, worn, or damaged 15. Thrust washer seized, worn or damaged	• Check the ATF level, and drain the ATF if it is over-filled. • Check the sensor O-ring for wear and damage. • Check all clutch pressures. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the relief valve and lubrication control valve in the main valve body for free movement, and check the valve springs for wear and damage. • Check the reverse control valve in the secondary valve body for free movement, and check the valve spring for wear and damage. • Check the stall speed. • Inspect all clutches for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the needle bearings and the thrust washers on all shafts for seizure, wear, and damage.

Symptom	Probable cause(s)	Notes
Late shift after shifting from N to D or D3, or excessive shock when shifting	1. Shift solenoid valve A defective 2. Shift solenoid valve B defective 3. Shift solenoid valve C defective 4. A/T clutch pressure control solenoid valve C defective 5. Shift cable broken or out of adjustment 6. Connection between shift cable and transmission or shift lever is worn 7. ATF temperature sensor defective 8. CPC valve C stuck 9. ATF strainer clogged 10. Foreign material in separator plate orifice 11. Shift valve A defective 12. Shift valve D defective 13. Servo control valve defective 14. 1st accumulator defective 15. 2nd accumulator defective 16. 1st check ball stuck 17. 1st clutch defective 18. Clearance between clutch end-plate and top disc incorrect	• Check for a stored DTC, and check for loose connections. • Inspect the shift solenoid valve function with the HDS. • Check for a seized shift solenoid valve, and inspect the O-rings. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check for a loose shift cable at the shift lever and the transmission control lever. • Inspect the sensor O-ring for wear and damage. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the stall speed. • Check the line pressure. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Check CPC valve C in the secondary valve body for free movement, and check the valve spring for wear and damage. • Check shift valve A in the main valve body for free movement, and check the valve spring for wear and damage. • Check shift valve D in the secondary valve body for free movement, and check the valve spring for wear and damage. • Check the 1st clutch pressure. • Inspect the 1st clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 1st and 2nd accumulator pistons, the O-rings, and the springs in the accumulator body for wear and damage. • Check for a stuck 1st check ball in the secondary valve body.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Late shift after shifting from N to R, or excessive shock when shifting	1. A/T clutch pressure control solenoid valve C defective 2. Shift cable broken or out of adjustment 3. Connection between shift cable and transmission or shift lever is worn 4. ATF temperature sensor defective 5. Reverse CPC valve defective 6. ATF strainer clogged 7. Foreign material in separator plate orifice 8. 5th clutch defective	• Check for a stored DTC, and check for loose connections. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check the stall speed. • Check the line pressure. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Inspect the sensor O-ring for wear and damage. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the stall speed in R. • Check the 5th clutch pressure. • Inspect the 5th clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate.
Transmission does not shift	1. Input shaft (mainshaft) speed sensor defective 2. Output shaft (countershaft) speed sensor defective	• Check for a stored DTC, and check for loose connections. • Check the speed sensor installation. • Inspect the sensor O-ring for wear and damage.
Excessive shock or flares on all upshifts and downshifts	1. Input shaft (mainshaft) speed sensor defective 2. Output shaft (countershaft) speed sensor defective 3. ATF temperature sensor defective 4. Foreign material in separator plate orifice	• Check for a stored DTC, and check for loose connections. • Check the speed sensor installation. • Inspect the sensor O-ring for wear and damage. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice.

Symptom	Probable cause(s)	Notes
Excessive shock or flares on 1-2 upshift or 2-1 downshift	1. Shift solenoid valve A defective 2. Shift solenoid valve B defective 3. Shift solenoid valve C defective 4. A/T clutch pressure control solenoid valve A defective 5. A/T clutch pressure control solenoid valve B defective 6. A/T clutch pressure control solenoid valve C defective 7. 2nd clutch transmission fluid pressure switch defective 8. CPC valve A defective 9. CPC valve B defective 10. CPC valve C defective 11. Shift valve C defective 12. Shift valve D defective 13. Foreign material in separator plate orifice 14. 2nd accumulator defective 15. 2nd clutch defective	• Check for a stored DTC, and check for loose connections. • Inspect the shift solenoid valve function with the HDS. • Check for a seized shift solenoid valve, and inspect the O-rings. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check for a clogged orifice in the transmission fluid pressure switch connector. If the orifice is clogged, remove it and clean the connector. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check CPC valve A in the main valve body for free movement, and check the valve spring for wear and damage. • Check CPC valves B and C in the secondary valve body for free movement, and check the valve springs for wear and damage. • Check shift valves C and D in the secondary valve body for free movement, and check the valve springs for wear and damage. • Check the 2nd clutch pressure. • Inspect the 2nd clutch for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 2nd accumulator piston, the O-ring, and the spring in the accumulator body for wear and damage.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Excessive shock or flares on 2-3 upshift or 3-2 downshift	1. Shift solenoid valve D defective 2. A/T clutch pressure control solenoid valve A defective 3. A/T clutch pressure control solenoid valve B defective 4. A/T clutch pressure control solenoid valve C defective 5. 3rd clutch transmission fluid pressure switch defective 6. Shift fork shaft stuck 7. Servo control valve defective 8. CPC valve A defective 9. CPC valve B defective 10. Lock-up shift valve defective 11. Foreign material in separator plate orifice 12. 2nd accumulator defective 13. 3rd accumulator defective 14. 2nd check ball stuck 15. 2nd clutch defective 16. 3rd clutch defective 17. Clearance between clutch end-plate and top disc incorrect	• Check for a stored DTC, and check for loose connections. • Inspect the shift solenoid valve function with the HDS. • Check for a seized shift solenoid valve, and inspect the O-rings. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check for a clogged orifice in the transmission fluid pressure switch connector. If the orifice is clogged, remove it and clean the connector. • Check for a missing shift fork bolt on the shift fork shaft. • Check the shift fork shaft detent for wear and damage. • Check for a stuck servo valve in the regulator valve body, and check the O-ring for wear and damage. • Check the servo control valve, CPC valve A, and the lock-up shift valve in the main valve body for free movement, and check the valve springs for wear and damage. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check CPC valve B in the secondary valve body for free movement, and check the valve spring for wear and damage. • Check the 2nd and 3rd clutch pressures. • Inspect the 2nd and 3rd clutches for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 2nd and 3rd accumulator pistons, the O-rings, and the springs in the accumulator body for wear and damage. • Check for a stuck 2nd check ball in the secondary valve body.

Symptom	Probable cause(s)	Notes
Excessive shock or flares on 3-4 upshift or 4-3 downshift	1. A/T clutch pressure control solenoid valve A defective 2. A/T clutch pressure control solenoid valve B defective 3. A/T clutch pressure control solenoid valve C defective 4. 4th clutch transmission fluid pressure switch defective 5. Shift fork shaft stuck 6. Servo control valve defective 7. Foreign material in separator plate orifice 8. 3rd accumulator defective 9. 4th accumulator defective 10. 3rd clutch defective 11. 4th clutch defective 12. Clearance between clutch end-plate and top disc incorrect	• Check for a stored DTC, and check for loose connections. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check for a missing shift fork bolt on the shift fork shaft. • Check the shift fork shaft detent for wear and damage. • Check for a stuck servo valve in the regulator valve body, and check the O-ring for wear and damage. • Check the servo control valve in the main valve body for free movement, and check the valve spring for wear and damage. • Check for a clogged orifice in the transmission fluid pressure switch connector. If the orifice is clogged, remove it and clean the connector. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the 3rd and 4th clutch pressures. • Inspect the 3rd and 4th clutches for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 3rd and 4th accumulator pistons, the O-rings, and the springs in the accumulator body for wear and damage.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Excessive shock or flares on 4-5 upshift or 5-4 downshift	1. A/T clutch pressure control solenoid valve A defective 2. A/T clutch pressure control solenoid valve B defective 3. A/T clutch pressure control solenoid valve C defective 4. Foreign material in separator plate orifice 5. 4th accumulator defective 6. 5th accumulator defective 7. 4th clutch defective 8. 5th clutch defective 9. Clearance between clutch end-plate and top disc incorrect	• Check for a stored DTC, and check for loose connections. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the stall speed in R. • Check the 4th and 5th clutch pressures. • Inspect the 4th and 5th clutches for wear and damage. • Inspect the clutch piston, the clutch piston check valve, and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and the plates for wear and damage, and inspect the clutch wave-plate height. If the discs and the plates are worn or damaged, replace them as a set. If the clutch wave-plate height is out of the tolerance, replace the clutch wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Check the 4th and 5th accumulator pistons, the O-rings, and the springs in the accumulator body for wear and damage.

Symptom	Probable cause(s)	Notes
Noise from transmission in all shift lever positions	1. ATF pump worn or binding 2. ATF strainer clogged 3. Mainshaft, countershaft, secondary shift, and intermediary shaft bearings worn or damaged 4. Idler gears worn or damaged 5. Thrust washer seized, worn, or damaged	• Check the line pressure. • Improper alignment of the ATF pump and torque converter housing may cause the ATF pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, thoroughly clean the transmission, and clean the cooler and lines. • Replace the torque converter. • Be careful not to damage the torque converter housing when replacing the main ball bearing. You may also damage the ATF pump when you torque down the main valve body. This will cause the ATF pump seizure, use the proper tools. • Install the main seal flush with the torque converter housing. If you push it into the torque converter housing until it bottoms out, it will block the fluid return passage and result in damage. • Inspect the countershaft and the secondary shaft for wear and damage. • Inspect the park mechanism at the park lever link, park gear, and 2nd gears. • Inspect the mainshaft, the countershaft, the secondary shaft, the intermediary shaft, and idler gears for wear and damage. • Check the thrust washers on all shafts for seizure, wear, and damage.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Vehicle does not accelerate above 31 mph (50 km/h)	Torque converter one-way clutch defective	• Check the stall speed. • Replace the torque converter.
Vibration in all shift lever positions	1. Drive plate defective or transmission misassembled 2. Torque converter defective 3. ATF pump worn or binding 4. Engine control problem	• Check for a misassembled transmission, and check the drive plate for wear and damage. Replace the drive plate if it is worn or damaged. • Check the engine control system. • Check the stall speed. • Check the line pressure. • Improper alignment of ATF pump and the torque converter housing may cause the ATF pump seizure. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, thoroughly clean the transmission, and clean the cooler and lines. • Replace the torque converter. • Be careful not to damage the torque converter housing when replacing the main ball bearing. You may also damage the ATF pump when you torque down the main valve body. This will cause the ATF pump seizure, use the proper tools.
Shift lever does not operate smoothly	1. Transmission range switch defective or out of adjustment 2. Shift cable broken, binding, or out of adjustment 3. Connection between shift cable and transmission or shift lever is worn 4. Manual valve defective 5. Selector control shaft worn or damaged	• Check for a stored DTC, and check for loose connections. • Inspect the transmission range switch. If the transmission range switch fails the inspection, replace the switch. If the inspection is OK, check for proper transmission range switch installation, and adjust the shift cable. • Check for a loose shift cable at the shift lever and the selector control lever. • Check the manual valve in the main valve body for wear and damage, and check the manual lever guide pin for wear and damage.
Transmission does not shift into P	1. Shift cable broken, binding, or out of adjustment 2. Connection between shift cable and transmission or shift lever is worn 3. Park mechanism defective 4. Secondary shaft 2nd gear worn or damage	• Check for a loose shift cable at the shift lever and the selector control lever. • Inspect the countershaft and the secondary shaft for wear and damage. • Inspect the park mechanism at the park lever link, park gear, and 2nd gears.

Symptom	Probable cause(s)	Notes
Torque converter clutch does not disengage	1. Shift solenoid valve D defective 2. A/T clutch pressure control solenoid valve C defective 3. Torque converter clutch piston defective 4. Lock-up shift valve defective 5. Lock-up control valve defective 6. Lock-up timing valve defective	• Check for a stored DTC, and check for loose connections. • Inspect the shift solenoid valve function with the HDS. • Check for a seized shift solenoid valve, and inspect the O-rings. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Replace the torque converter. • Check the lock-up shift valve and the lock-up timing valve in the main valve body for free movement, and check the valve springs for wear and damage. • Check the lock-up control valve in the regulator valve body for free movement, and check the valve spring for wear and damage.
Torque converter clutch does not operate smoothly	1. Shift solenoid valve D defective 2. A/T clutch pressure control solenoid valve C defective 3. Torque converter clutch piston defective 4. Torque converter check valve defective 5. Lock-up shift valve defective 6. Lock-up control valve defective 7. Lock-up timing valve defective	• Check for a stored DTC, and check for loose connections. • Inspect the shift solenoid valve function with the HDS. • Check for a seized shift solenoid valve, and inspect the O-rings. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check the line pressure. • Replace the torque converter. • Check the torque converter check valve, the lock-up shift valve, and the lock-up timing valve in the main valve body for free movement, and check the valve springs for wear and damage. • Check the lock-up control valve in the regulator valve body for free movement, and check the valve spring for wear and damage.

(cont'd)

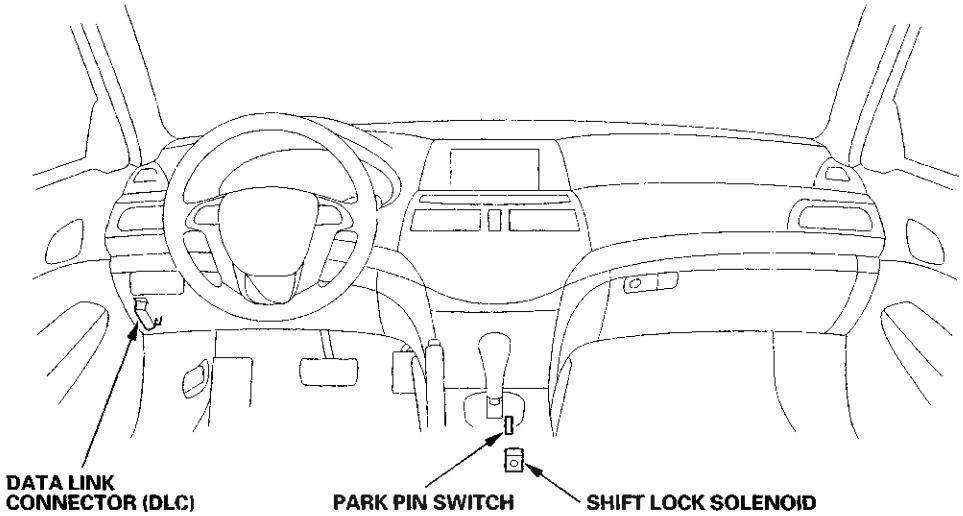
Symptom Troubleshooting Index (cont'd)

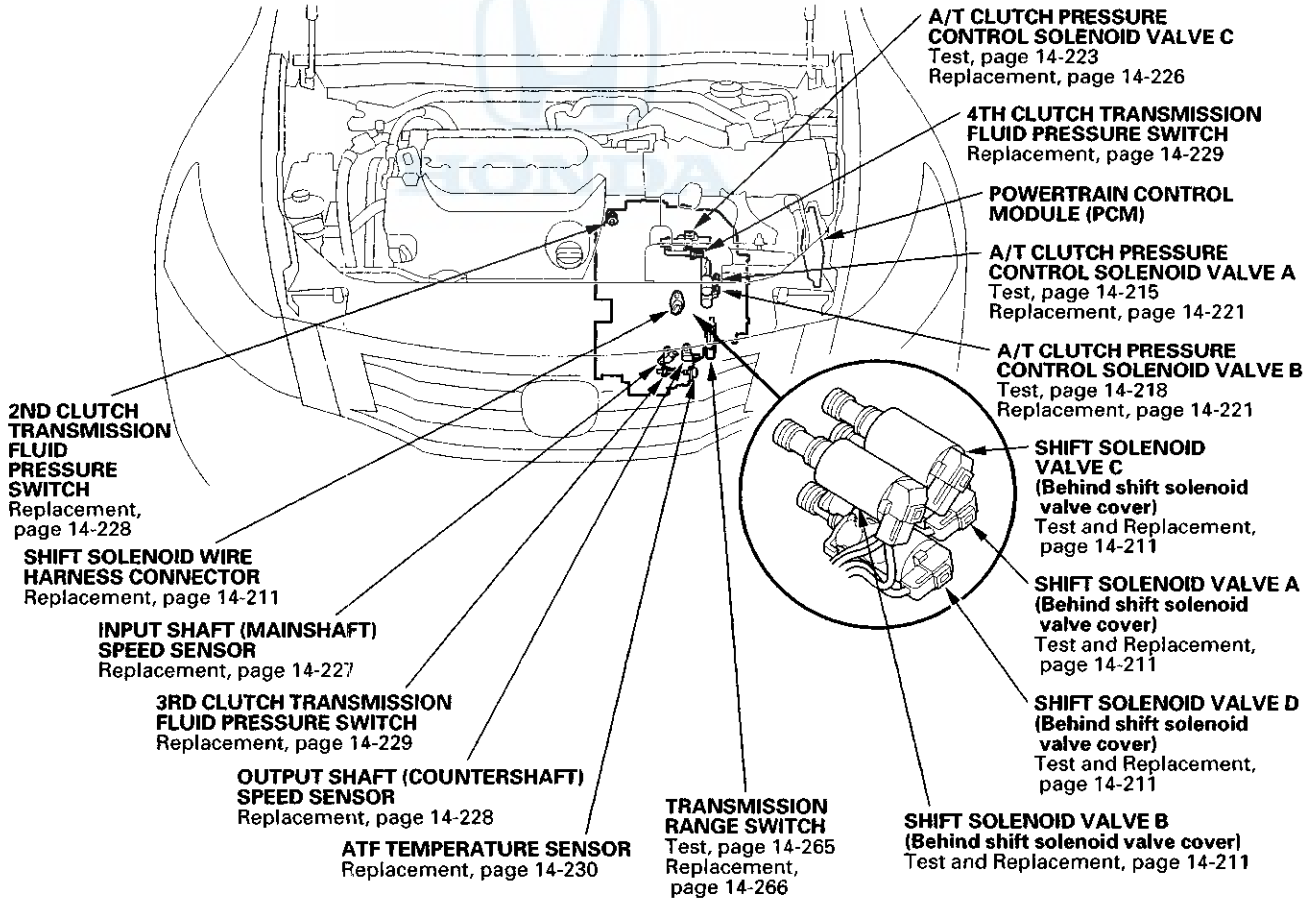
Symptom	Probable cause(s)	Notes
Torque converter clutch does not engage	1. Shift solenoid valve D defective 2. A/T clutch pressure control solenoid valve C defective 3. Input shaft (mainshaft) speed sensor defective 4. Output shaft (countershaft) speed sensor defective 5. Shift cable broken or out of adjustment 6. Connection between shift cable and transmission or shift lever is worn 7. Foreign material in separator plate orifice 8. Torque converter clutch piston defective 9. Torque converter check valve defective 10. Lock-up shift valve defective 11. Lock-up control valve defective 12. Lock-up timing valve defective	• Check for a stored DTC, and check for loose connections. • Inspect the shift solenoid valve function with the HDS. • Check for a seized shift solenoid valve, and inspect the O-rings. • Inspect the A/T clutch pressure control solenoid valve with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, the ATF feed pipes, and the O-rings for wear and damage. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the speed sensor installation. • Inspect the sensor O-ring for wear and damage. • Check the line pressure. • Replace the torque converter. • Check the torque converter check valve and the lock-up shift valve in the main valve body for free movement, and check the valve springs for wear and damage. • Check the lock-up control valve in the regulator valve body for free movement, and check the valve spring for wear and damage.

Symptom	Probable cause(s)	Notes
A/T gear position indicator does not indicate shift lever positions	1. Transmission range switch defective or out of adjustment 2. Shift cable broken or out of adjustment 3. Connection between shift cable and transmission or shift lever is worn	• Check for a stored DTC, and check for loose connections. • Inspect the transmission range switch. If the transmission range switch fails the inspection, replace the switch. If the inspection is OK, check for proper transmission range switch installation, and adjust the shift cable. • Check for a loose shift cable at the shift lever and the selector control lever.
Speedometer and odometer do not work	Output shaft (countershaft) speed sensor defective	• Check for a stored DTC, and check for loose connections. • Check the speed sensor installation. • Inspect the sensor O-ring for wear and damage.
Engine does not rev to high rpm, and the transmission upshifts at low rpm (engine at normal operating temperature)	VCM system malfunction	• Check the engine control system. • Check the VCM system for proper operation. • Check the engine rocker arms.

HONDA

Component Location Index





System Description

General Operation

The automatic transmission is a combination of a three-element torque converter and a four-shaft electronically controlled unit which provides five forward speeds and one in reverse. The entire unit is positioned in line with the engine.

Torque Converter, Shafts, Gears, and Clutches

The torque converter consists of a pump, turbine, and stator assembly in a single unit. The converter housing (pump) is connected to the engine crankshaft and turns as the engine turns. Around the outside of the torque converter is a ring gear which meshes with the starter drive gear when the engine is being started. The entire torque converter assembly serves as a flywheel, transmitting power to the transmission mainshaft. The transmission has four parallel shafts: the mainshaft, the countershaft, the secondary shaft, and the intermediary shaft. The mainshaft is in line with the engine crankshaft. The mainshaft includes the 4th and 5th clutches, and gears for 3rd, 4th, 5th, and reverse (reverse gear is integral with the 5th gear). The countershaft includes gears for the final drive, 2nd, idler, 1st, 4th, 5th, and reverse (the final drive gear is integral with the countershaft). The secondary shaft includes the 1st, 1st-hold, and 2nd clutches, and gears for park, 2nd, idler, and 1st. The intermediary shaft includes the 3rd clutch, and gears for 3rd and 4th. The countershaft 5th gear and the countershaft reverse gear can be locked to the countershaft at its left end, providing 5th gear or reverse, depending with which way the selector is moved. The gears on the mainshaft, the secondary shaft, and the intermediary shaft are in constant mesh with those on the countershaft. When certain conditions of gears in the transmission are engaged by the clutches, power is transmitted through the mainshaft, and/or to the secondary shaft, the intermediary shaft, then to the countershaft to provide drive.

Electronic Control

The electronic control system consists of the powertrain control module (PCM), sensors, and solenoid valves. Shifting and lock-up are electronically controlled for comfortable driving under all conditions. The PCM is located in the engine compartment.

Hydraulic Control

The valve bodies include the main valve body, the regulator valve body, the secondary valve body, and the accumulator body. They are bolted to the torque converter housing. The main valve body contains the manual valve, the modulator valve, the torque converter check valve, shift valves A, B, and E, CPC valve A, the relief valve, the servo control valve, the lock-up shift valve, the lock-up timing valve, the lubrication control valve, the lubrication check valve, and the ATF pump gears. The secondary valve body contains shift valves C and D, CPC valves B and C, the reverse CPC valve, and the reverse control valve. The regulator valve body contains the regulator valve, the cooler check valve, the lock-up control valve, and the 3rd accumulator. The accumulator body contains the 1st, 1st-hold, 2nd, 4th, and 5th accumulators, shift solenoid valves A, B, C, and D. Fluid from the regulator valve passes through the manual valve to the various control valves. All the clutches receive fluid from the internal hydraulic circuit.

Shift Control Mechanism

To shift gears, the PCM controls shift solenoid valves A, B, C and D, and automatic transmission (A/T) clutch pressure control solenoid valves A, B, and C, while receiving input signals from various sensors and switches located throughout the vehicle. The shift solenoid valves shift the positions of the shift valves to switch the port to send hydraulic pressure to the clutches. A/T clutch pressure control solenoid valves A, B, and C control CPC valves A and B, and the reverse CPC valve to shift smoothly between lower and higher gears. This pressurizes a line to one of the clutches, engaging the clutch and its corresponding gear.

Lock-up Mechanism

The lock-up mechanism operates in D (2nd, 3rd, 4th, and 5th gears) and D3 (2nd and 3rd gears). The pressurized fluid is drained from the back of the torque converter through a fluid passage, causing the torque converter clutch piston to be held against the torque converter cover. As this takes place, the mainshaft rotates at the same speed as the engine crankshaft. Together with the hydraulic control, the PCM optimizes the timing and volume of the lock-up mechanism. When shift solenoid valve D is turned on by the PCM, shift solenoid valve D pressure switches the lock-up shift valve on and off. A/T clutch pressure control solenoid valve C, the lock-up control valve, and the lock-up timing valve control the degree of lock-up. Shift solenoid valve D is located on the accumulator body in the transmission, and A/T clutch pressure control solenoid valve C is mounted on the transmission housing.

(cont'd)

System Description (cont'd)

General Operation (cont'd)

Gear Selection
The shift lever has seven positions; P: PARK, R: REVERSE, N: NEUTRAL, D: DRIVE 1st through 5th gear range, D3: DRIVE 1st through 3rd gear range, 2: SECOND, and 1: FIRST.

Position	Description
P: PARK	Front wheels locked; the park pawl engaged with the park gear on the secondary shaft. All clutches are released.
R: REVERSE	Reverse; the reverse selector engaged with the countershaft reverse gear and the 5th clutch engaged.
N: NEUTRAL	All clutches are released.
D: DRIVE (1st through 5th)	General driving; starts off in 1st, shifts automatically to 2nd, 3rd, 4th, then 5th, depending on the vehicle speed and the accelerator pedal position. Downshifts through 4th, 3rd, 2nd, and 1st on deceleration to stop. The lock-up mechanism operates in 2nd, 3rd, 4th, and 5th gears.
D3: DRIVE (1st through 3rd)	Used for rapid acceleration at highway speeds and general driving, up-hill and down-hill driving; starts off in 1st, shifts automatically to 2nd, then 3rd, depending on the vehicle speed and the accelerator pedal position. Downshifts through 2nd and 1st on deceleration to stop. The lock-up mechanism operates in 2nd and 3rd gears.
2: SECOND	Used for engine braking or better traction starting off on loose or slippery surfaces; stays in 2nd gear, does not shift up and down.
1: FIRST	Used for engine braking; stays in 1st gear, does not shift up.

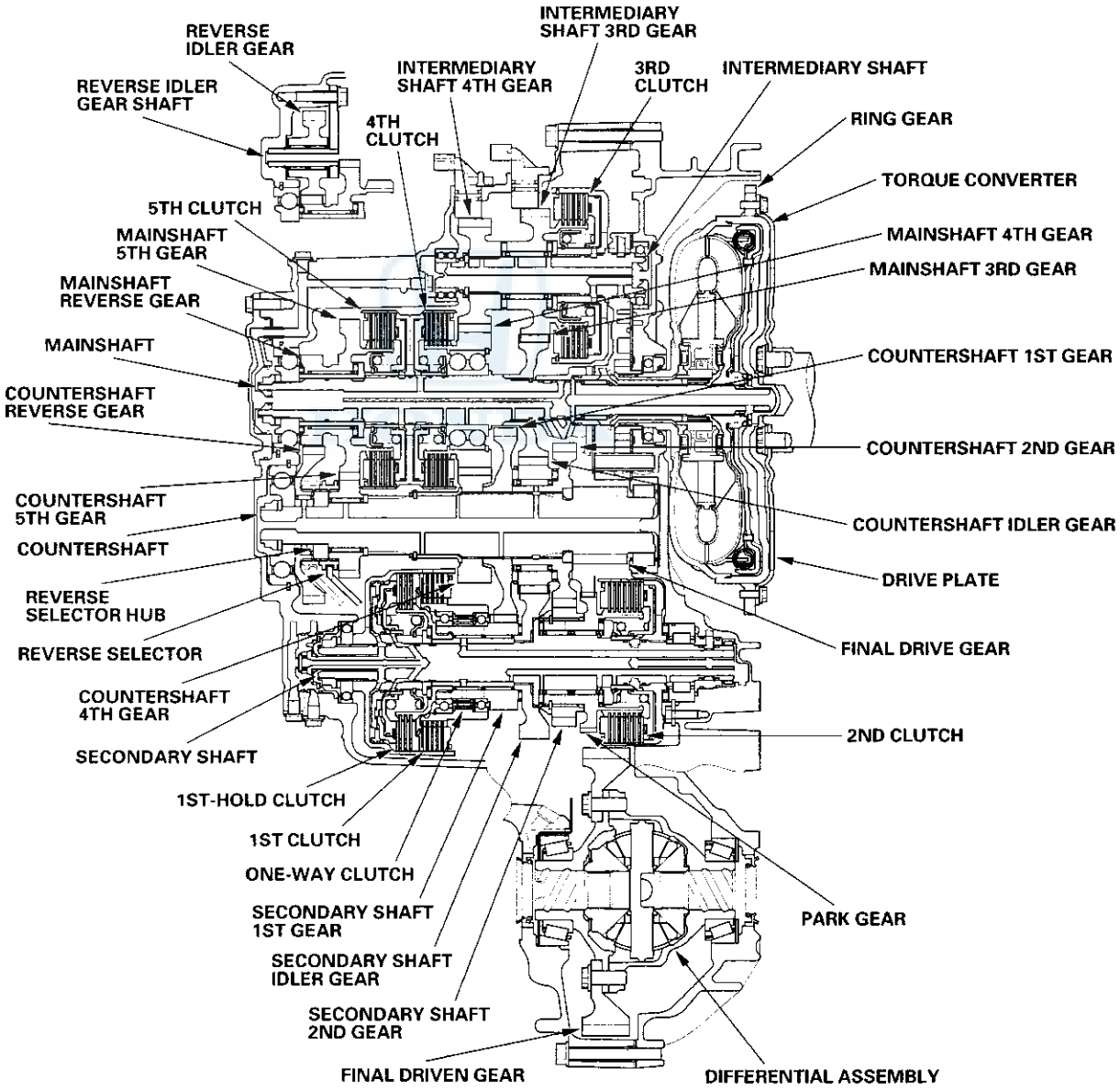
Starting is possible only in P and N because of a slide-type neutral-safety switch.

Automatic Transmission (A/T) Gear Position Indicator
The A/T gear position indicator in the gauge control module shows which shift lever position has been selected without having look down at the console.

Clutches and Gears

The five-speed automatic transmission uses hydraulically-actuated clutches to engage or disengage the transmission gears. When hydraulic pressure is introduced into the clutch drum, the clutch piston moves. This presses the friction discs and the steel plates together, locking them so they do not slip. Power is then transmitted through the engaged clutch pack to its hub-mounted gear. Likewise, when the hydraulic pressure is bled from the clutch pack, the piston releases the friction discs and the steel plates, and they are free to slide past each other. This allows the gear to spin independently on its shaft, transmitting no power.

Transmission Cutaway View



(cont'd)

System Description (cont'd)

Clutches and Gears (cont'd)

1st Clutch
The 1st clutch engages/disengages 1st gear, and is located at the left end of the secondary shaft. The 1st clutch is supplied hydraulic pressure by its ATF feed pipe within the secondary shaft.

1st-hold Clutch
The 1st-hold clutch engages/disengages 1st-hold in 1st gear in 1. The 1st-hold clutch is located in the 1st clutch drum, and is supplied hydraulic pressure by its ATF feed pipe within the secondary shaft.

2nd Clutch
The 2nd clutch engages/disengages 2nd gear, and is located at the right end of the secondary shaft. The 2nd clutch is supplied hydraulic pressure through the secondary shaft by a circuit connected to the internal hydraulic circuit.

3rd Clutch
The 3rd clutch engages/disengages 3rd gear, and is located at the end of the intermediary shaft. The 3rd clutch is supplied hydraulic pressure through the intermediary shaft by a circuit connected to the internal hydraulic circuit.

4th Clutch
The 4th clutch engages/disengages 4th gear, and is located at the middle of the mainshaft. The 4th clutch is joined back-to-back to the 5th clutch. The 4th clutch is supplied hydraulic pressure through the mainshaft by a circuit connected to the internal hydraulic circuit.

5th Clutch
The 5th clutch engages/disengages 5th gear, as well as reverse gear, and is located at the middle of the mainshaft. The 5th clutch is joined back-to-back to the 4th clutch. The 5th clutch is supplied hydraulic pressure through the mainshaft by a circuit connected to the internal hydraulic circuit.

One-way Clutch
The one-way clutch is positioned between the 1st clutch hub and the secondary shaft 1st gear. The secondary shaft 1st gear is splined to the 1st-hold clutch hub, with the 1st-hold clutch hub splined to the secondary shaft. The secondary shaft 1st gear provides the outer race surface, and the 1st clutch hub provides the inner race surface. The one-way clutch locks when power is transmitted from the secondary shaft 1st gear to the countershaft 1st gear. The 1st clutch and gears remain engaged in the 1st, 2nd, 3rd, 4th, and 5th gear ranges in D, and in the 1st, 2nd, and 3rd gear ranges in D3.
However, the one-way clutch disengages when the 2nd, 3rd, 4th, or 5th clutches and gears are applied in D or D3. This is because the increased rotational speed of the gears on the secondary shaft causes the one-way clutch to free-wheel with the 1st clutch still engaged.

Gear Operation

Gears on the mainshaft:

- 4th gear is engaged/disengaged with the mainshaft by the 4th clutch.
- 5th gear is engaged/disengages with the mainshaft by the 5th clutch.
- Reverse gear is engaged/disengaged with the mainshaft by the 5th clutch.
- 3rd gear is splined with the mainshaft and rotates with the mainshaft.

Gears on the countershaft:

- Final drive gear is integral with the countershaft.
- 1st gear, 2nd gear, and 4th gear are splined with the countershaft, and rotate with the countershaft.
- 5th gear and reverse gear rotate freely from the countershaft. The reverse selector engages 5th gear and reverse gear with the reverse selector hub. The reverse selector hub is splined to the countershaft so 5th gear and reverse gear engage with the countershaft.
- Idler gear is located over 2nd gear, and rotates freely from the countershaft.

Gears on the secondary shaft:

- 1st gear is engaged with the secondary shaft by the 1st clutch and the one-way clutch when accelerating, and 1st gear is disengaged from the 1st clutch at the one-way clutch when decelerating. 1st gear is engaged with the secondary shaft by the 1st-hold clutch when decelerating for engine braking.
- 2nd gear is engaged/disengaged with the secondary shaft by the 2nd clutch.
- Idler gear is splined with the secondary shaft, and rotates with the secondary shaft.
- Park gear is integral with 2nd gear.

Gears on the intermediary shaft:

- 3rd gear is engaged/disengaged with the intermediary shaft by the 3rd clutch.
- 4th gear is splined with the intermediary shaft.

HONDA

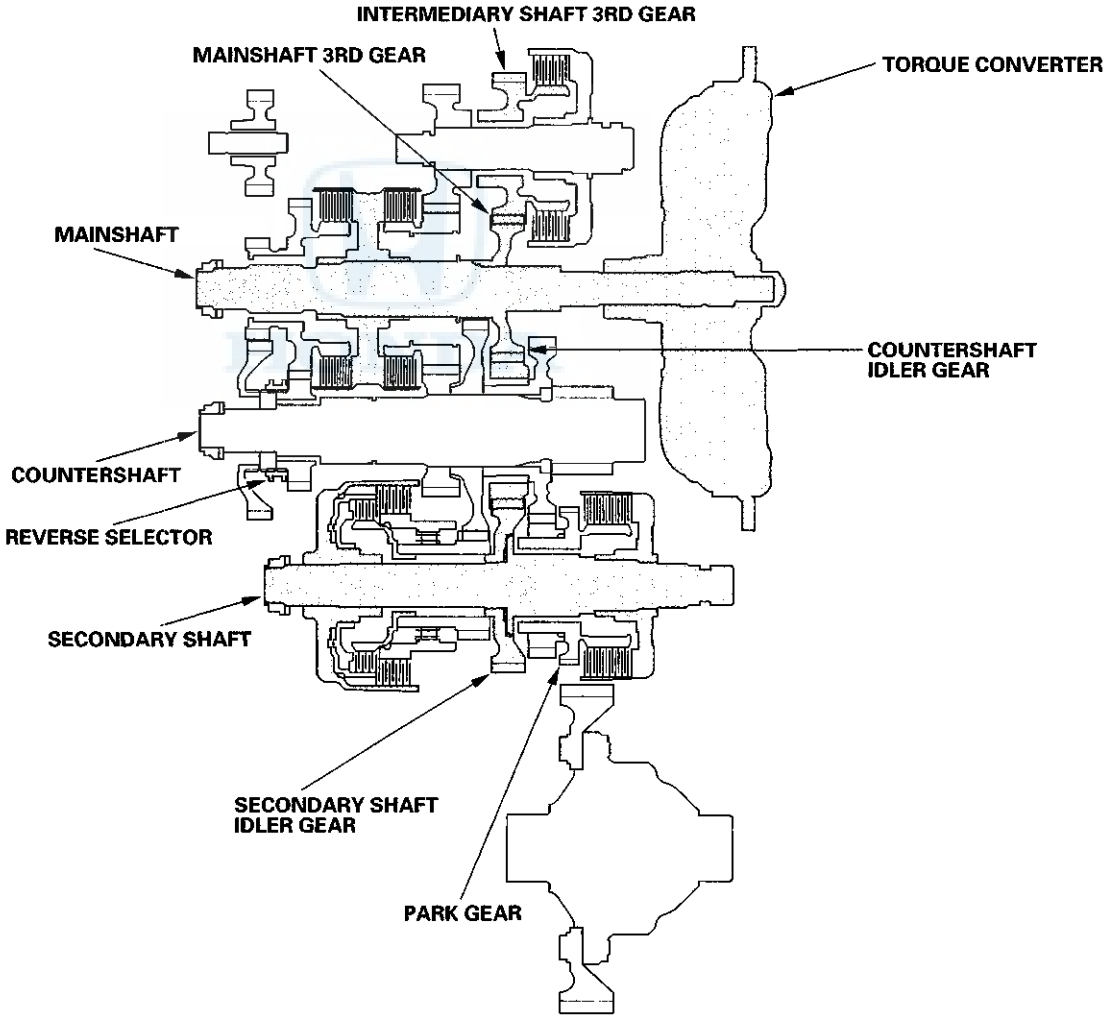
System Description (cont'd)

Power Flow

P Position
Hydraulic pressure is not applied to the clutches. Power is not transmitted to the countershaft. The countershaft is locked by the park pawl interlocking the park gear.

N Position
Engine power transmitted from the mainshaft, drives the mainshaft 3rd gear and the intermediary shaft 3rd gear, but hydraulic pressure is not applied to the clutches. Power is not transmitted to the countershaft. In this position, the position of the reverse selector differs according to whether the shift lever shifted from D or R:

- When shifted from D, the reverse selector engages with the countershaft 5th gear and the reverse selector hub, and 5th gear engages with the countershaft.
- When shifted from R, the reverse selector engages with the countershaft reverse gear and the reverse selector hub, and the reverse gear engages with the countershaft.

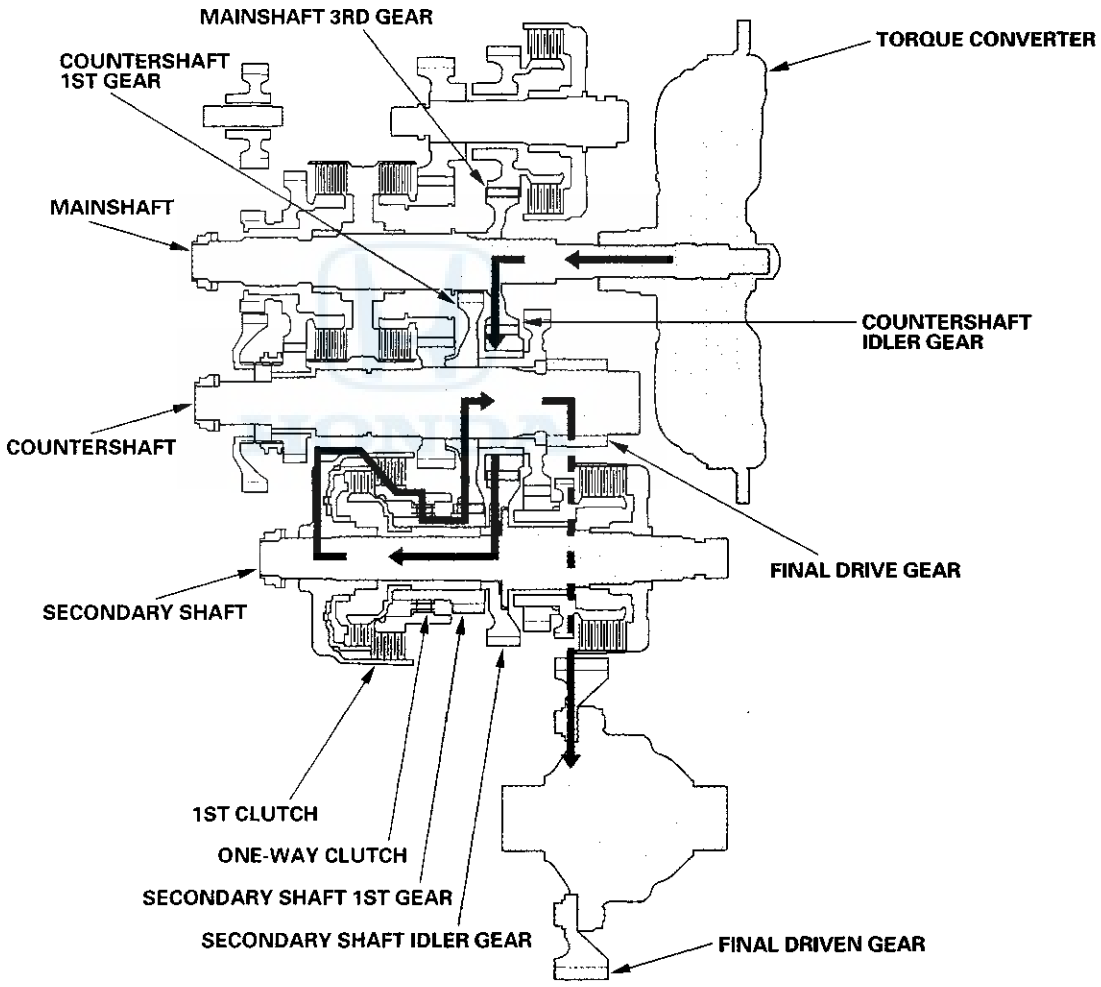


D and D3 Position

In D, the optimum gear is automatically selected from 1st, 2nd, 3rd, 4th, and 5th gears; and 1st, 2nd, and, 3rd gears in D3 according to conditions such as the balance between the accelerator pedal opening (engine loading) and the vehicle speed.

In 1st gear

- Hydraulic pressure is applied to the 1st clutch, then the 1st clutch engages the secondary shaft 1st gear with the secondary shaft by the one-way clutch.
- The mainshaft 3rd gear drives the secondary shaft via the countershaft idler gear and the secondary shaft idler gear.
- The secondary shaft 1st gear drives the countershaft 1st gear and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.



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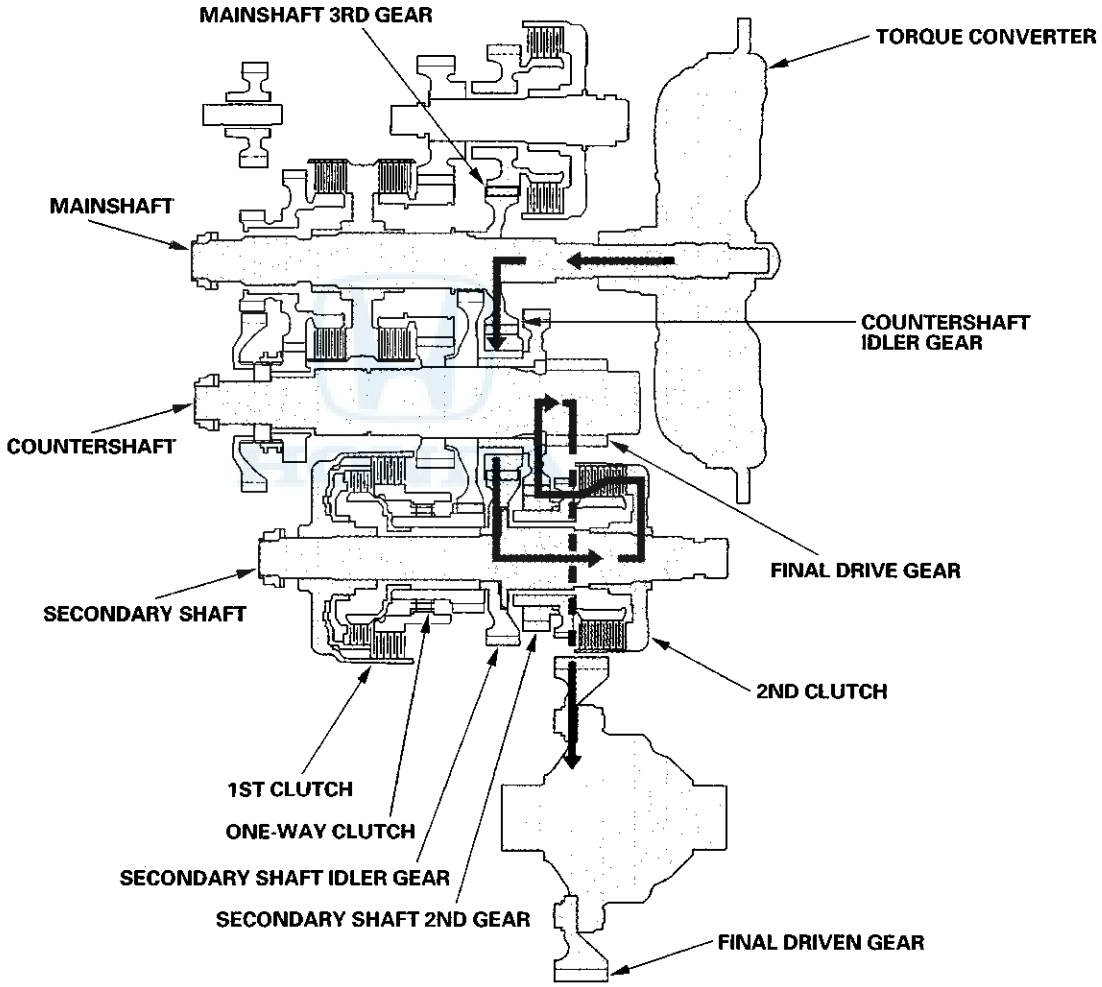
System Description (cont'd)

Power Flow (cont'd)

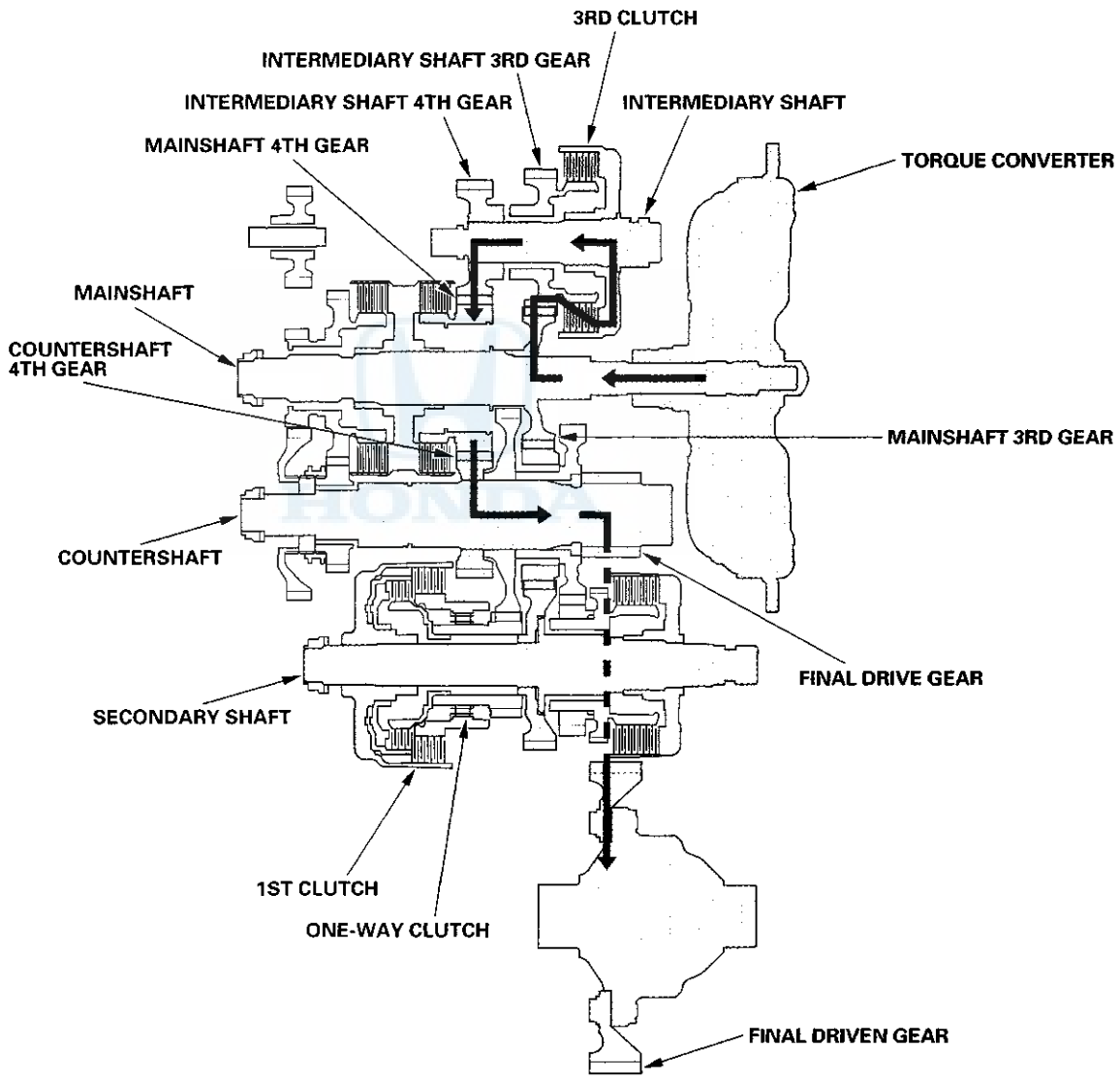
In 2nd gear

- Hydraulic pressure is applied to the 2nd clutch, then the 2nd clutch engages the secondary shaft 2nd gear with the secondary shaft.
- The mainshaft 3rd gear drives the secondary shaft via the countershaft idler gear and the secondary shaft idler gear.
- The secondary shaft 2nd gear drives the countershaft 2nd gear and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.
- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 2nd gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.



In 3rd gear

- Hydraulic pressure is applied to the 3rd clutch, then the 3rd clutch engages the intermediary shaft 3rd gear with the intermediary shaft.
- The mainshaft 3rd gear drives the intermediary shaft 4th gear via the intermediary shaft 3rd gear and the 3rd clutch.
- The intermediary shaft 4th gear drives the countershaft 4th gear and the countershaft via the mainshaft 4th gear.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.
- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 3rd gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.



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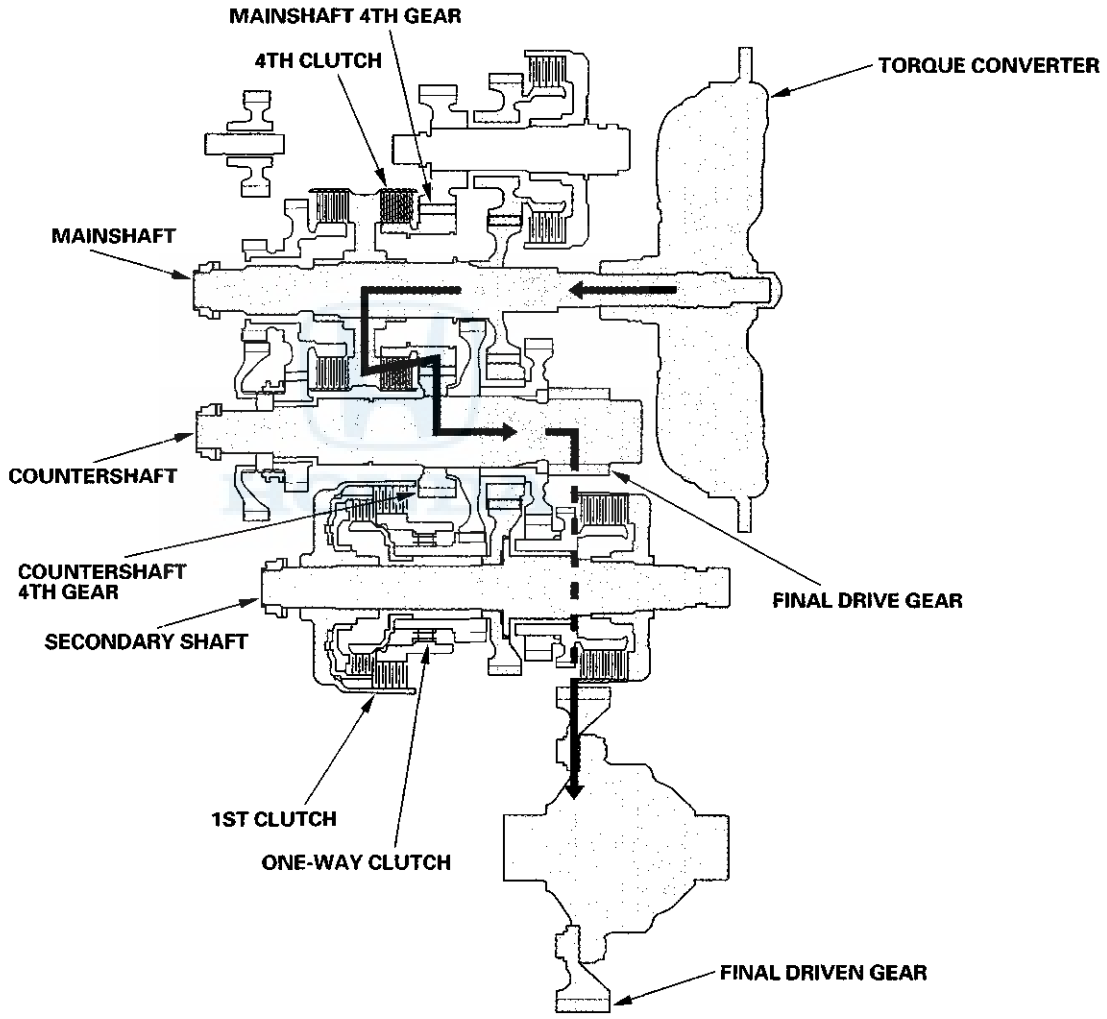
System Description (cont'd)

Power Flow (cont'd)

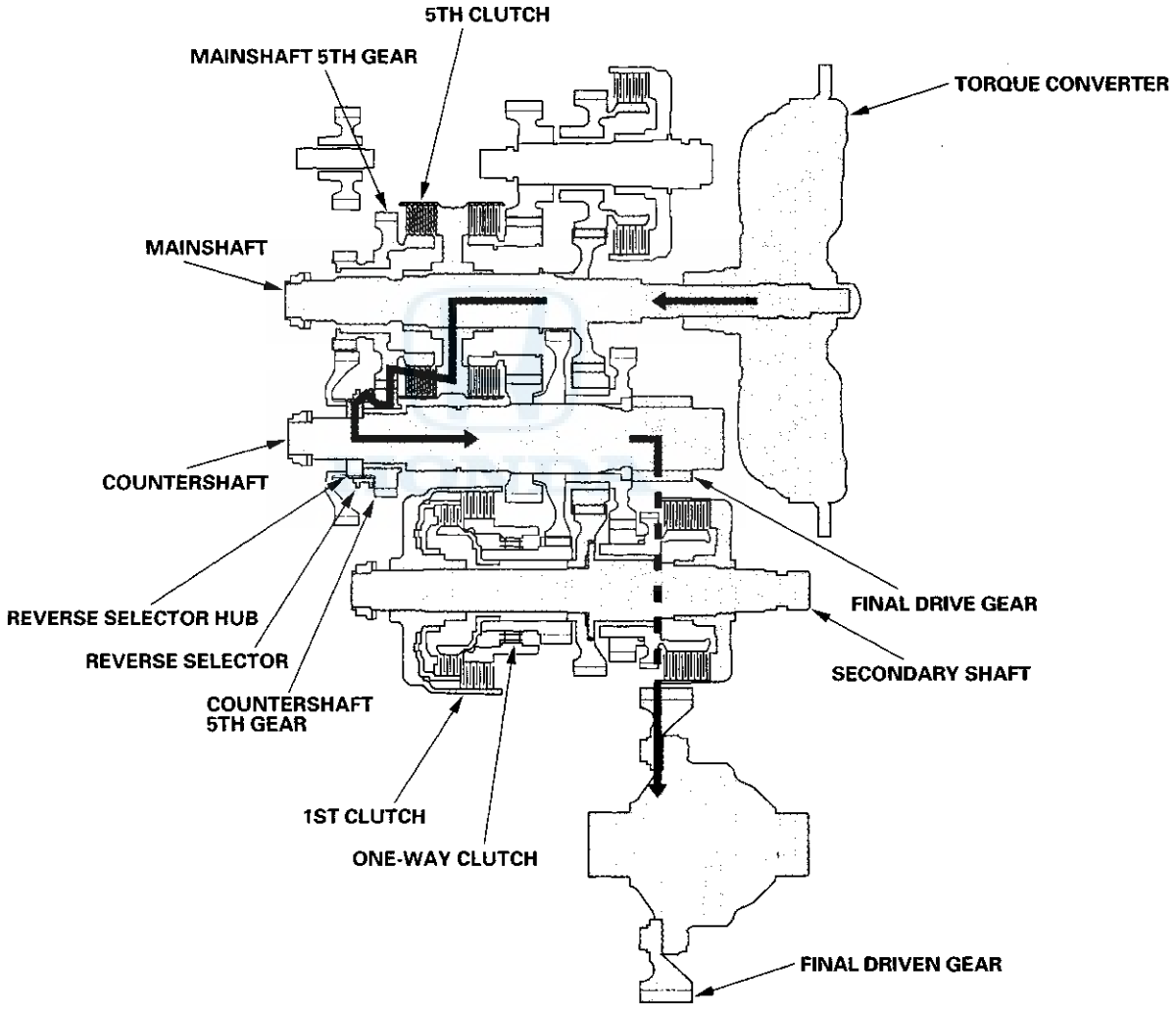
In 4th gear

- Hydraulic pressure is applied to the 4th clutch, then the 4th clutch engages the mainshaft 4th gear with the mainshaft.
- The mainshaft 4th gear drives the countershaft 4th gear and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.
- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 4th gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.



In 5th gear

- Hydraulic pressure is applied to the servo valve to engage the reverse selector with the countershaft 5th gear while the shift lever is in D.
- Hydraulic pressure is applied to the 5th clutch, then the 5th clutch engages the mainshaft 5th gear with the mainshaft.
- The mainshaft 5th gear drives the countershaft 5th gear, which drives the reverse selector hub and the countershaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.
- Hydraulic pressure is also applied to the 1st clutch, but since the rotation speed of 5th gear exceeds that of 1st gear, power from 1st gear is cut off at the one-way clutch.



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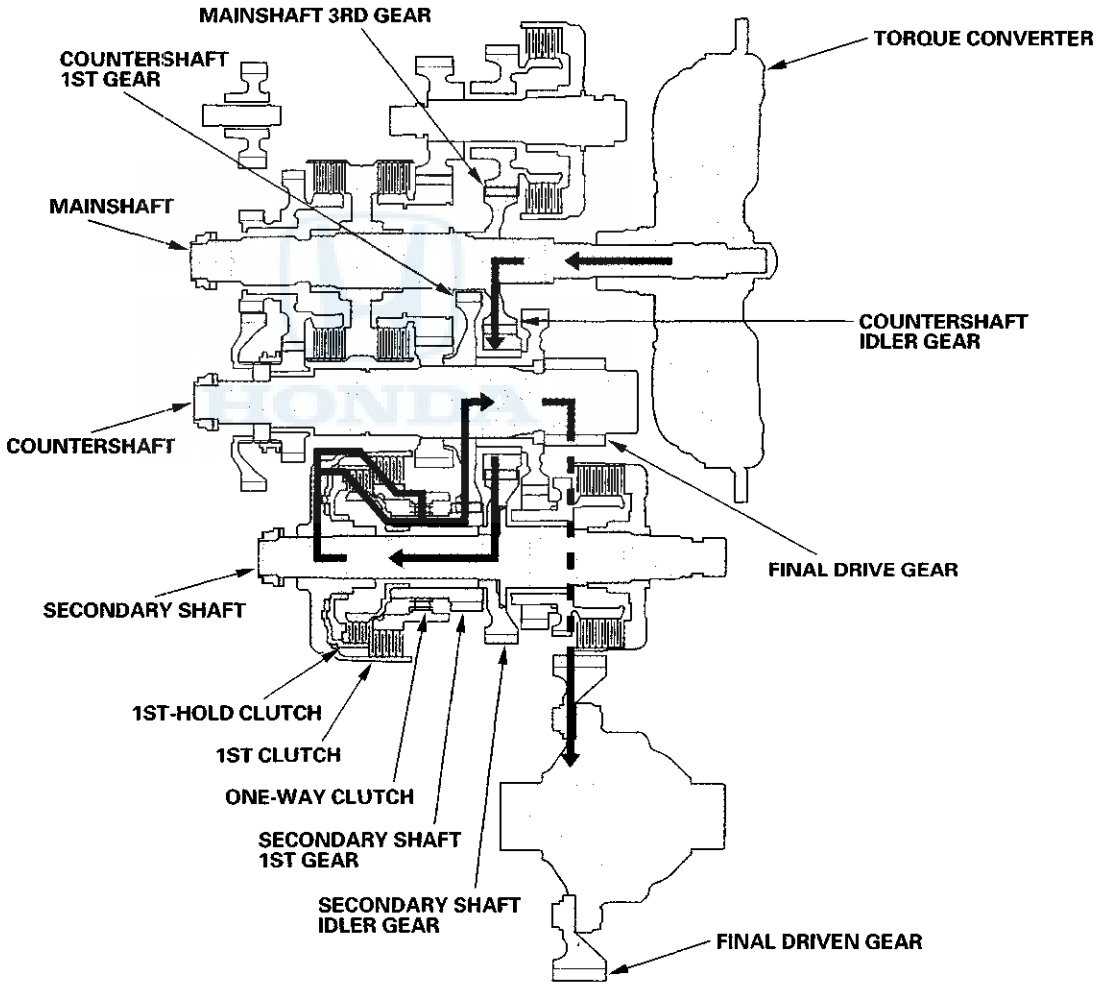
System Description (cont'd)

Power Flow (cont'd)

Acceleration in 1 Position

In 1, hydraulic pressure is applied to the 1st clutch and the 1st-hold clutch. The power flow when accelerating is as follows:

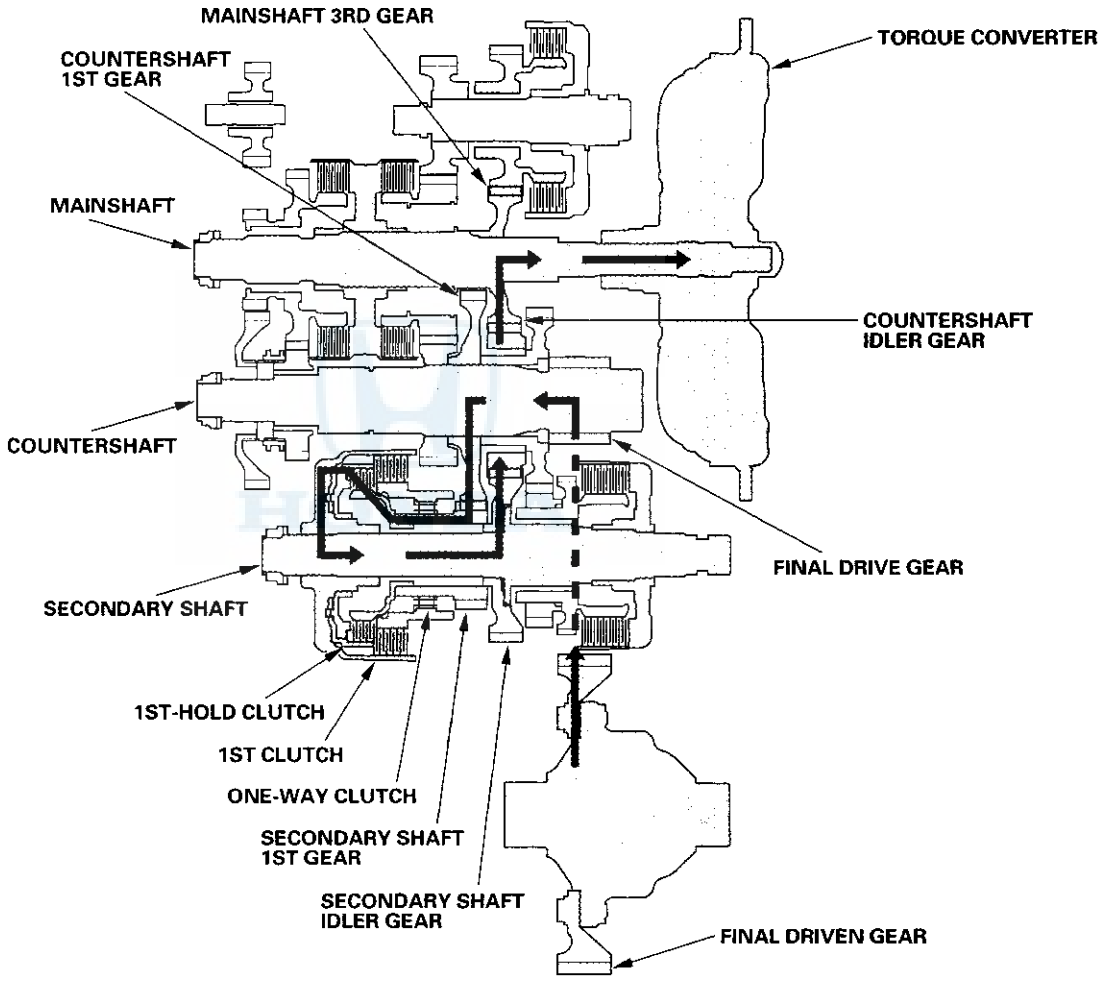
- Hydraulic pressure is applied to the 1st clutch, then the 1st clutch engages the secondary shaft 1st gear with the secondary shaft by the one-way clutch.
- The mainshaft 3rd gear drives the secondary shaft via the countershaft idler gear and secondary shaft idler gear.
- The secondary shaft 1st gear drives the countershaft 1st gear and the countershaft.
- Hydraulic pressure is also applied to the 1st-hold clutch, and the 1st-hold clutch engages the secondary shaft 1st gear with the secondary shaft.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.



Deceleration in 1 Position

The power flow in 1 when decelerating is as follows:

- Hydraulic pressure is applied to the 1st clutch and the 1st-hold clutch.
- Rolling resistance from the road surface goes through the front wheels to the final driven gear, then to the countershaft idler gear via the 1st-hold clutch, the secondary shaft 1st gear, and the secondary shaft idler gear.
- The one-way clutch cannot transmit power because the application of torque is reversed.
- The force transmitted to the secondary shaft idler gear turns the mainshaft 3rd gear via the countershaft idler gear. As a result, engine braking can be obtained with 1st gear.



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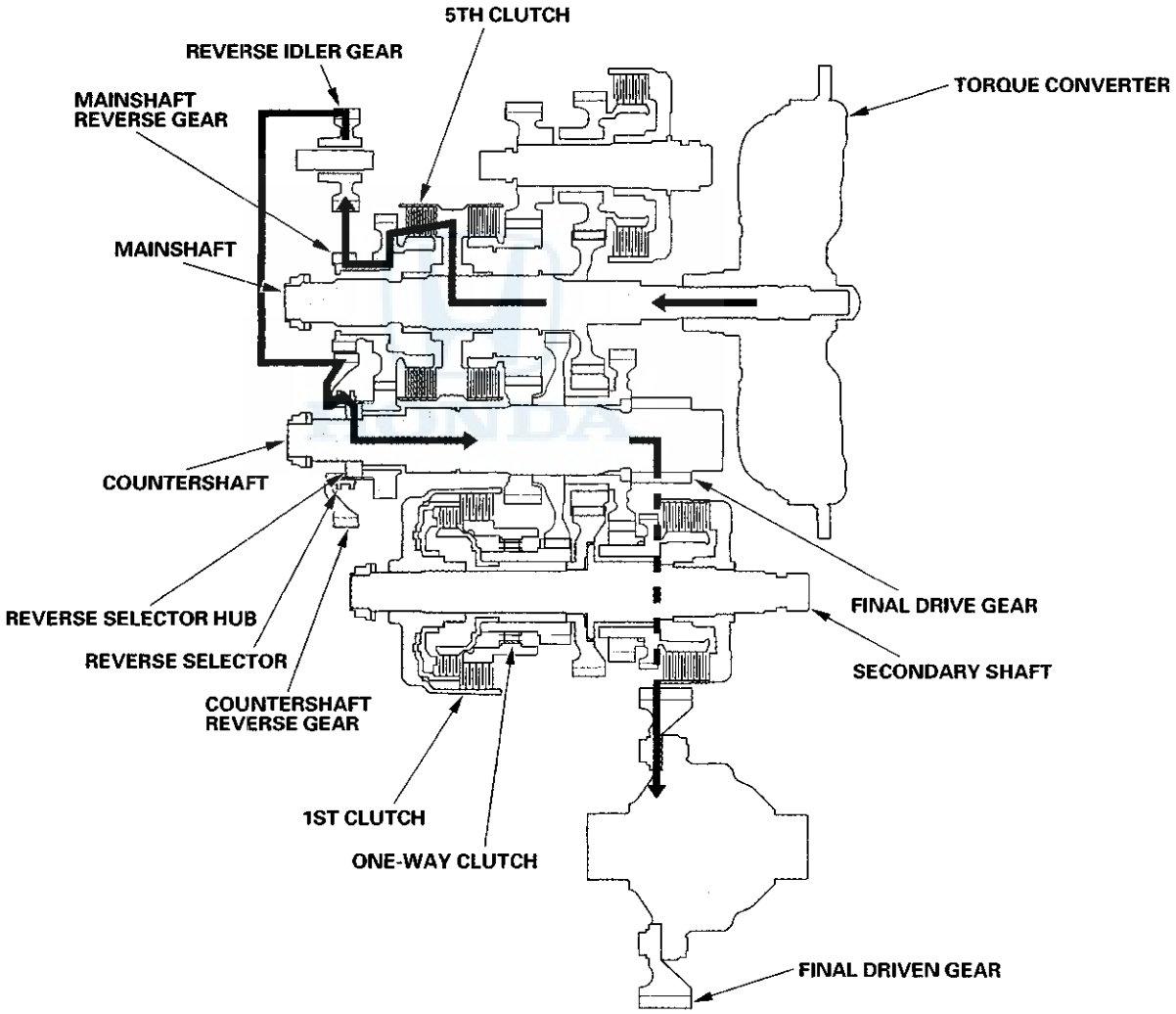
System Description (cont'd)

Power Flow (cont'd)

R Position

- Hydraulic pressure is applied to the servo valve to engage the reverse selector with the countershaft reverse gear while the shift lever is in R.
- Hydraulic pressure is applied to the 5th clutch, then the 5th clutch engages the mainshaft reverse gear with the mainshaft.
- The mainshaft reverse gear drives the countershaft reverse gear via the reverse idler gear.
- The countershaft reverse gear drives the countershaft via the reverse selector which drives the reverse selector hub.
- The rotation direction of the countershaft is changed by the reverse idler gear.
- Power is transmitted to the final drive gear, which in turn drives the final driven gear.



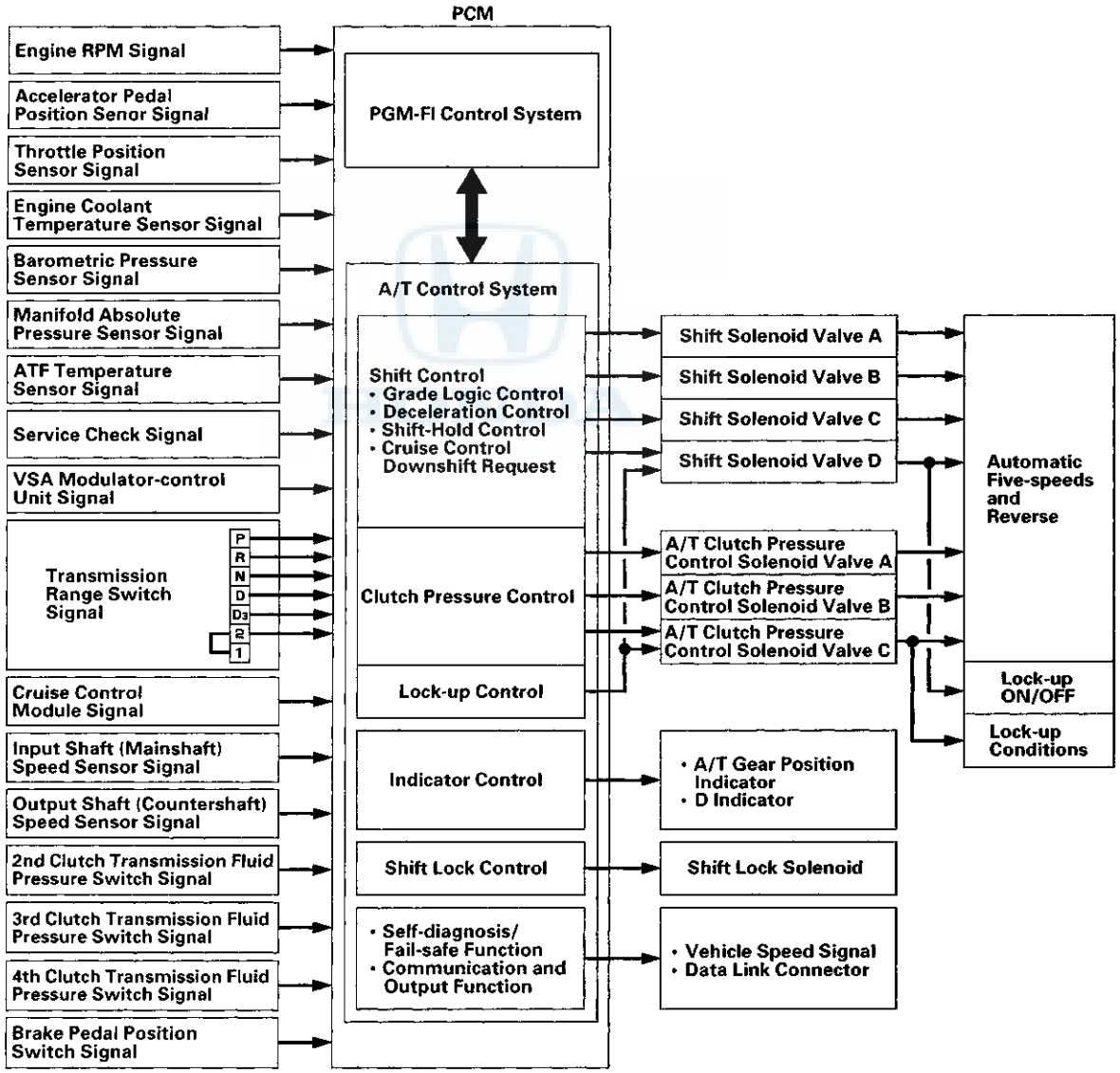
Electronic Control System

Electronic Control

The electronic control system consists of the powertrain control module (PCM), sensors, and the solenoid valves. Shifting and lock-up are electronically controlled for comfortable driving under all conditions.

Functional Diagram

The PCM receives input signals from the sensors, switches, and other control units, processes data, and the outputs signals for the engine control system and the A/T control system. The A/T control system includes shift control, grade logic control, clutch pressure control, and lock-up control. The PCM switches the shift solenoid valves and the A/T clutch pressure control solenoid valves ON and OFF to control gear selection and the torque converter clutch lock-up.



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System Description (cont'd)

Electronic Control System (cont'd)

Shift Control
The PCM instantly determines which gear should be selected by various signals sent from sensors and switches, and it actuates shift solenoid valves A, B, C, and D to control gear selection.

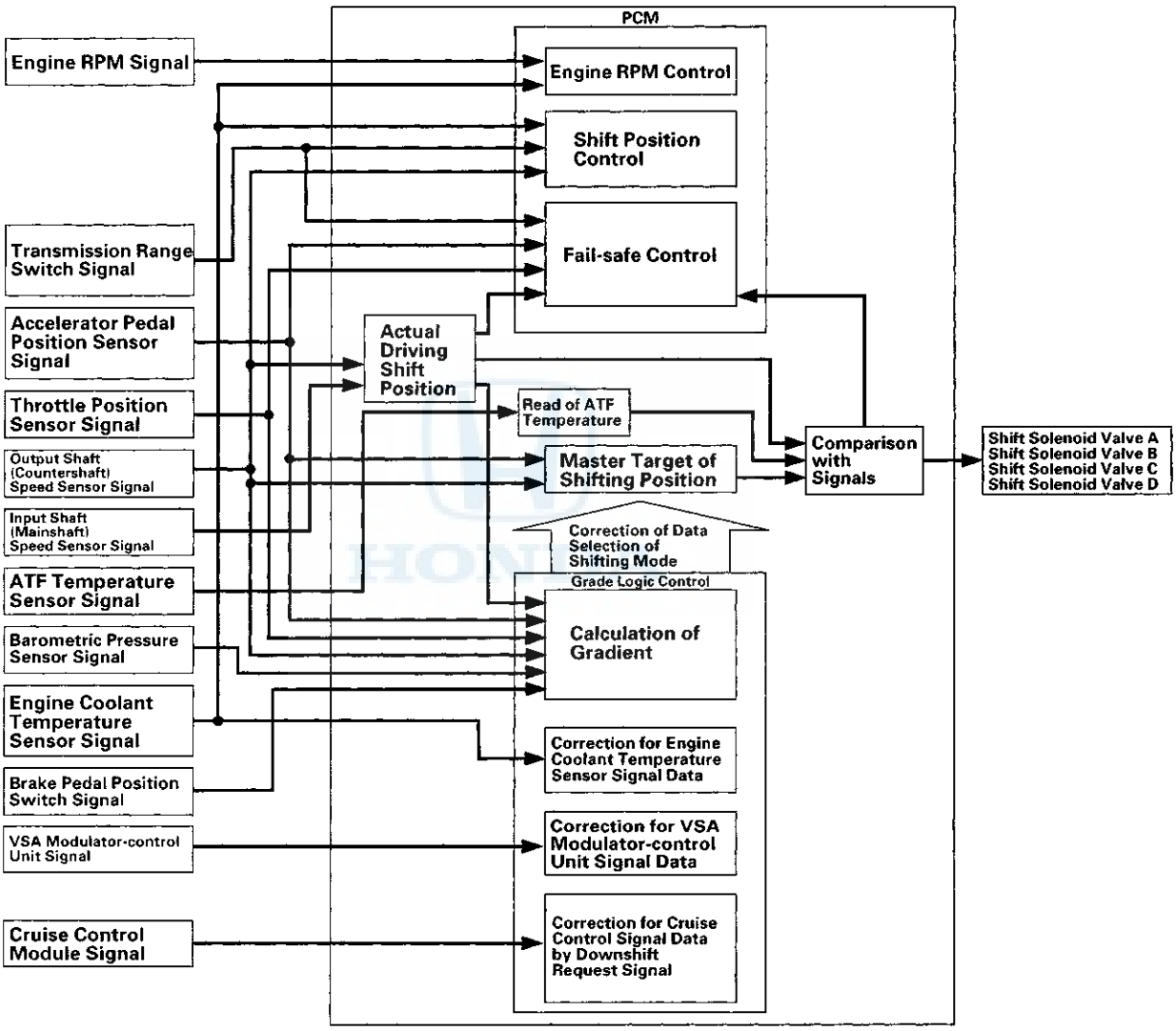
There are two types of shift solenoid valves:
- Shift solenoid valves A and D use the ON-OPEN/OFF-CLOSE type; the shift solenoid valve opens the port of shift solenoid valve pressure while the shift solenoid valve is turned ON by the PCM, and closes the port when shift solenoid valve is OFF.
- Shift solenoid valves B and C use the ON-CLOSE/OFF-OPEN type; the shift solenoid valve closes the port of shift solenoid valve pressure while the shift solenoid valve is turned ON by the PCM, and opens the port when shift solenoid valve is OFF.

The combination of driving signals to shift solenoid valves A, B, C, and D are shown in the table.

Position	Gear Position	Shift Solenoid Valve			
		A	B	C	D
D and D3	Shifting from N	OFF	ON	OFF	OFF
	Stays in 1st	OFF	ON	ON	OFF
	Shifting gears between 1st and 2nd	ON	ON	ON	OFF or ON
	Stays in 2nd	ON	ON	OFF	OFF or ON
	Shifting gears between 2nd and 3rd	ON	ON	ON	OFF or ON
	Stays in 3rd	ON	OFF	ON	OFF or ON
D	Shifting gears between 3rd and 4th	ON	OFF	OFF	OFF or ON
	Stays in 4th	OFF	OFF	OFF	OFF or ON
	Shifting gears between 4th and 5th	OFF	OFF	ON	OFF or ON
	Stays in 5th	OFF	ON	ON	OFF or ON
2	2nd	ON	ON	OFF	OFF or ON
1	1st	OFF	ON	ON	OFF
N	Neutral	OFF	ON	OFF	OFF
R	Shifting from P and N	OFF	ON	OFF	ON
	Stays in reverse	ON	ON	OFF	ON
	Reverse inhibit control	OFF	ON	OFF	OFF
P	Park	OFF	ON	OFF	ON

Shift Control - Grade Logic Control

The grade logic control system has been adopted to control shifting in D and D3. The PCM compares actual driving conditions with programmed driving conditions, based on the input from the accelerator pedal position sensor, the engine coolant temperature sensor, the barometric pressure sensor, the brake pedal position switch signal, and the shift lever position signal, to control shifting while the vehicle is ascending or descending a slope.



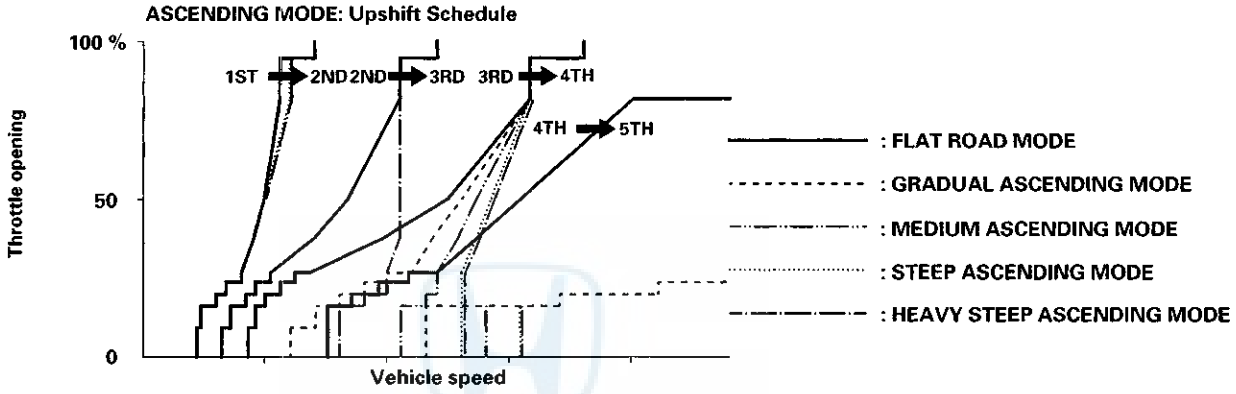
(cont'd)

System Description (cont'd)

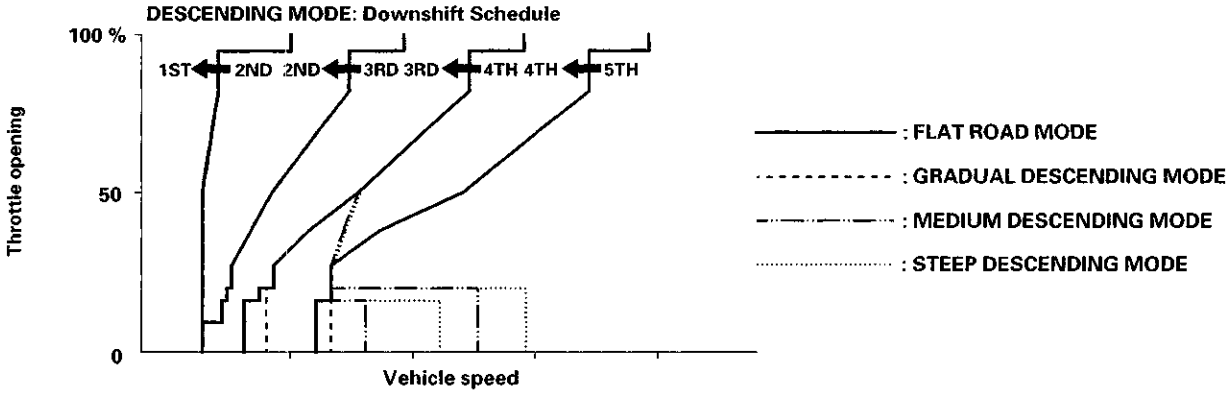
Electronic Control System (cont'd)

Grade Logic Control: Ascending Control
When the PCM determines that the vehicle is climbing a hill in D and D3, the system extends the engagement area of 2nd gear, 3rd gear, and 4th gear to prevent the transmission from frequently shifting between 2nd and 3rd gears, between 3rd and 4th gears, and between 4th and 5th gears, so the vehicle can run smoothly and have more power when needed.

NOTE: Shift commands stored in the PCM between 2nd and 3rd gears, between 3rd and 4th gears, and between 4th and 5th gears, enable the PCM to automatically select the most suitable gear according to the magnitude of a gradient.

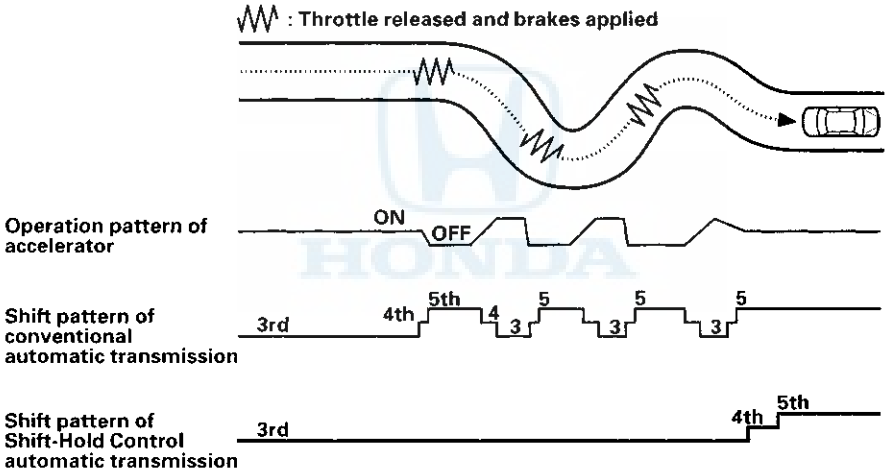


Grade Logic Control: Descending Control
When the PCM determines that the vehicle is going down a hill in D and D3, the upshift speed from 4th to 5th gear, 3rd to 4th gear, and from 2nd to 3rd (when the throttle is closed) becomes higher than the set speed for flat road driving to extend the 4th gear, 3rd gear, and 2nd gear driving areas. This, in combination with engine braking from the deceleration lock-up, achieves smooth driving when the vehicle is descending. There are three descending modes with different 4th gear driving areas, 3rd gear driving areas and, 2nd gear driving areas according to the magnitude of a gradient stored in the PCM. When the vehicle is in 5th or 4th gear and you are decelerating while applying the brakes on a steep hill, the transmission downshifts to a lower gear. When you accelerate, the transmission then returns to a higher gear.



Deceleration Control
When the vehicle goes around a corner and needs to decelerate first and then accelerate, the PCM goes into the deceleration control mode to reduce the number of times the transmission shifts. When the vehicle is decelerating from speeds above 25 mph (40 km/h), the PCM shifts the transmission from 4th to 3rd earlier than normal to cope with upcoming acceleration.

Shift-Hold Control
When negotiating winding roads, the throttle is suddenly released and the brakes are applied, as is the case when decelerating at the entrance of a corner, Shift-Hold Control keeps the transmission in its current (lower) gear as it negotiates the corner and accelerates out.
When the vehicle is driven aggressively on a winding road, the PCM extends the engagement time of 3rd gear and 4th gear to prevent the transmission from frequently shifting between 3rd, 4th, and 5th gears. This allows the driver to have more control for both acceleration and deceleration.
The PCM monitors the average change in vehicle speed and throttle over time. When these values exceed those for normal driving conditions, the upshift from 3rd to 4th gear and 4th to 5th gear is delayed. This gives more control over power, and engine braking when the driver is driving aggressively around winding roads. The transmission resumes the normal upshift pattern after the PCM determines that normal driving has resumed.



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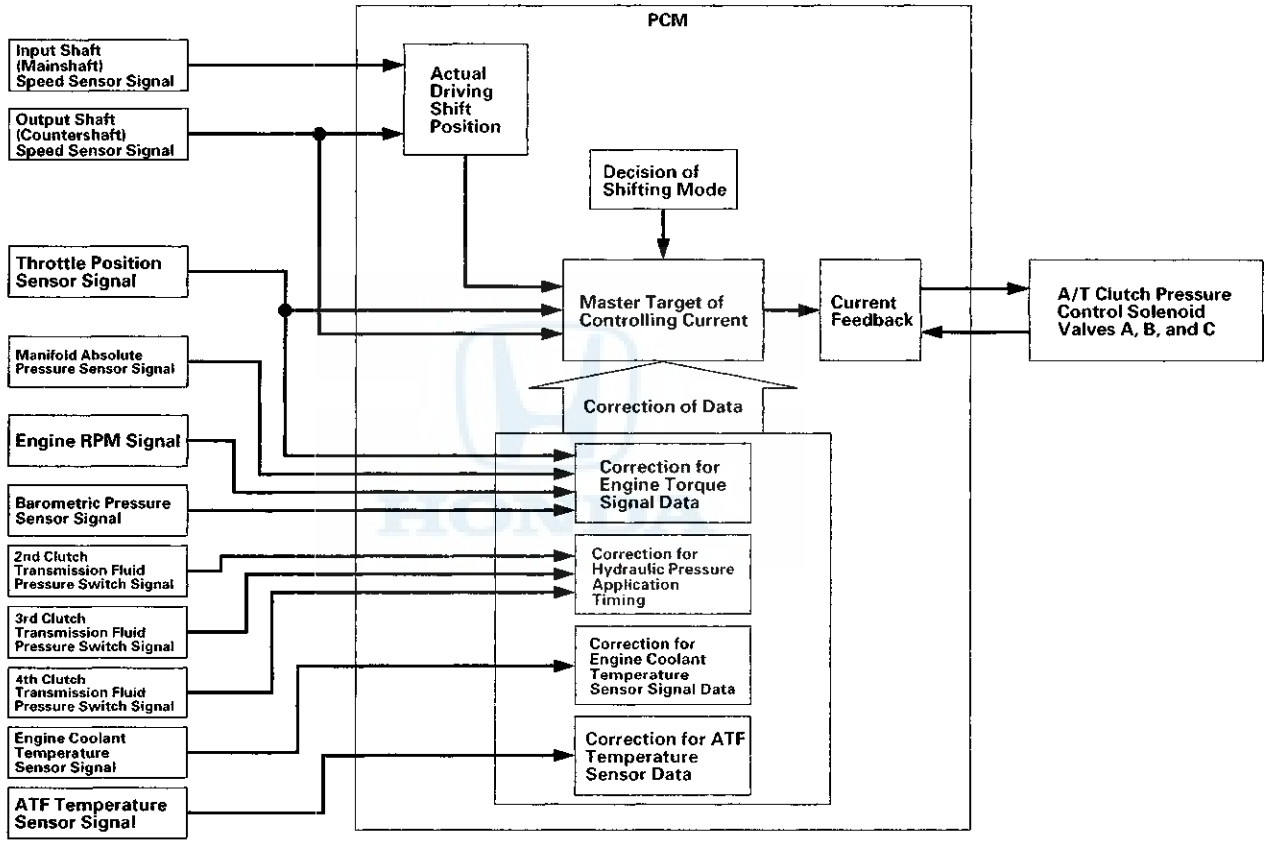
System Description (cont'd)

Electronic Control System (cont'd)

Clutch Pressure Control

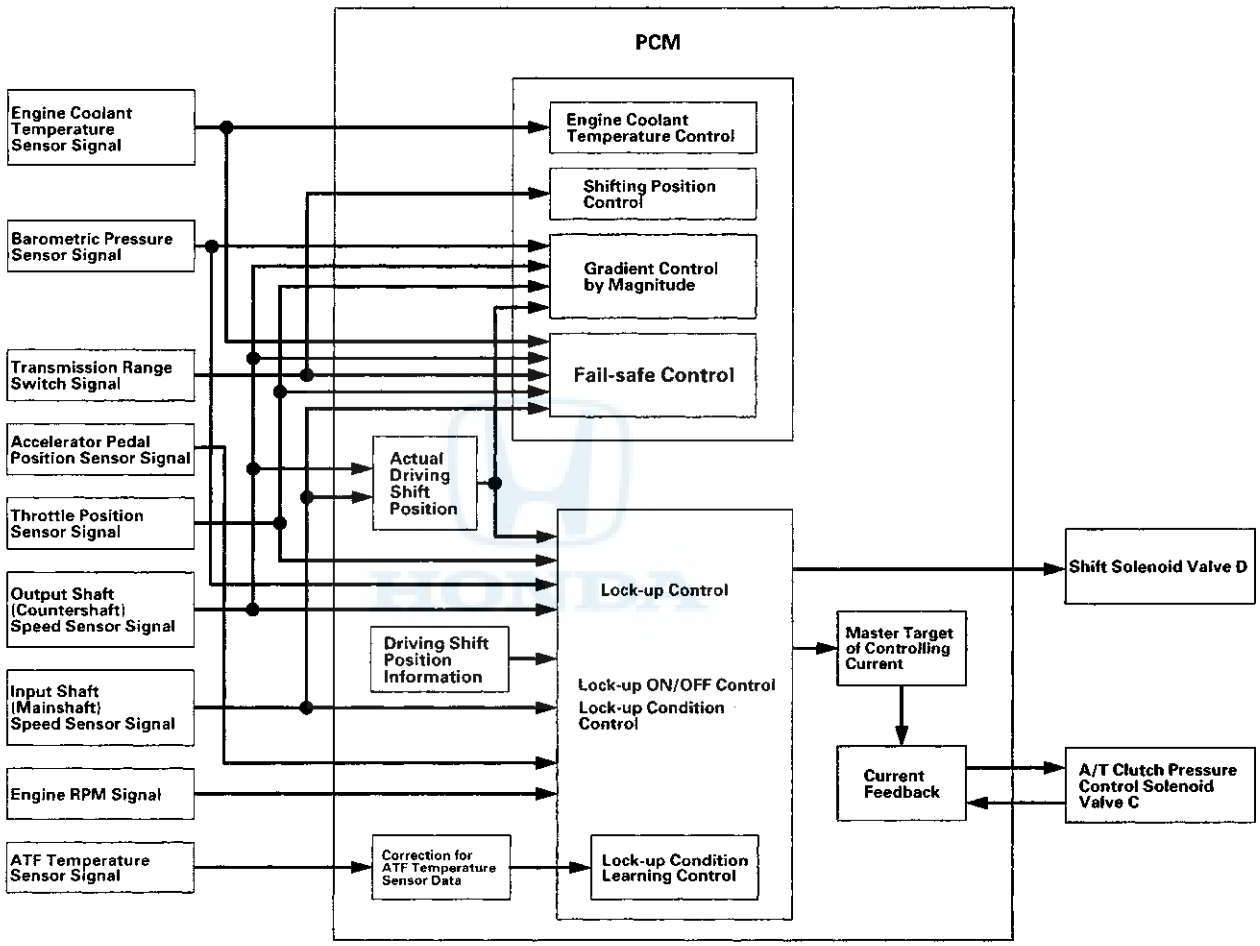
The PCM actuates A/T clutch pressure control solenoid valves A, B, and C to control the clutch pressure. When shifting between gears, the clutch pressure regulated by A/T clutch pressure control solenoid valves A, B, and C engages and disengages the clutch smoothly.

The PCM receives input signals from the various sensors and switches, processes data, and outputs current to A/T clutch pressure control solenoid valves A, B, and C.



Lock-up Control

Shift solenoid valve D controls the hydraulic pressure to switch the lock-up shift valve ON and OFF. When the PCM actuates shift solenoid valve D and A/T clutch pressure control solenoid valve C ON, and lock-up starts. A/T clutch pressure control solenoid valve C applies and regulates hydraulic pressure to the lock-up control valve to control the amount of lock-up. The lock-up mechanism operates in D (2nd, 3rd, 4th, and 5th gears), and D3 (2nd and 3rd gears).



(cont'd)

System Description (cont'd)

Electronic Control System (cont'd)

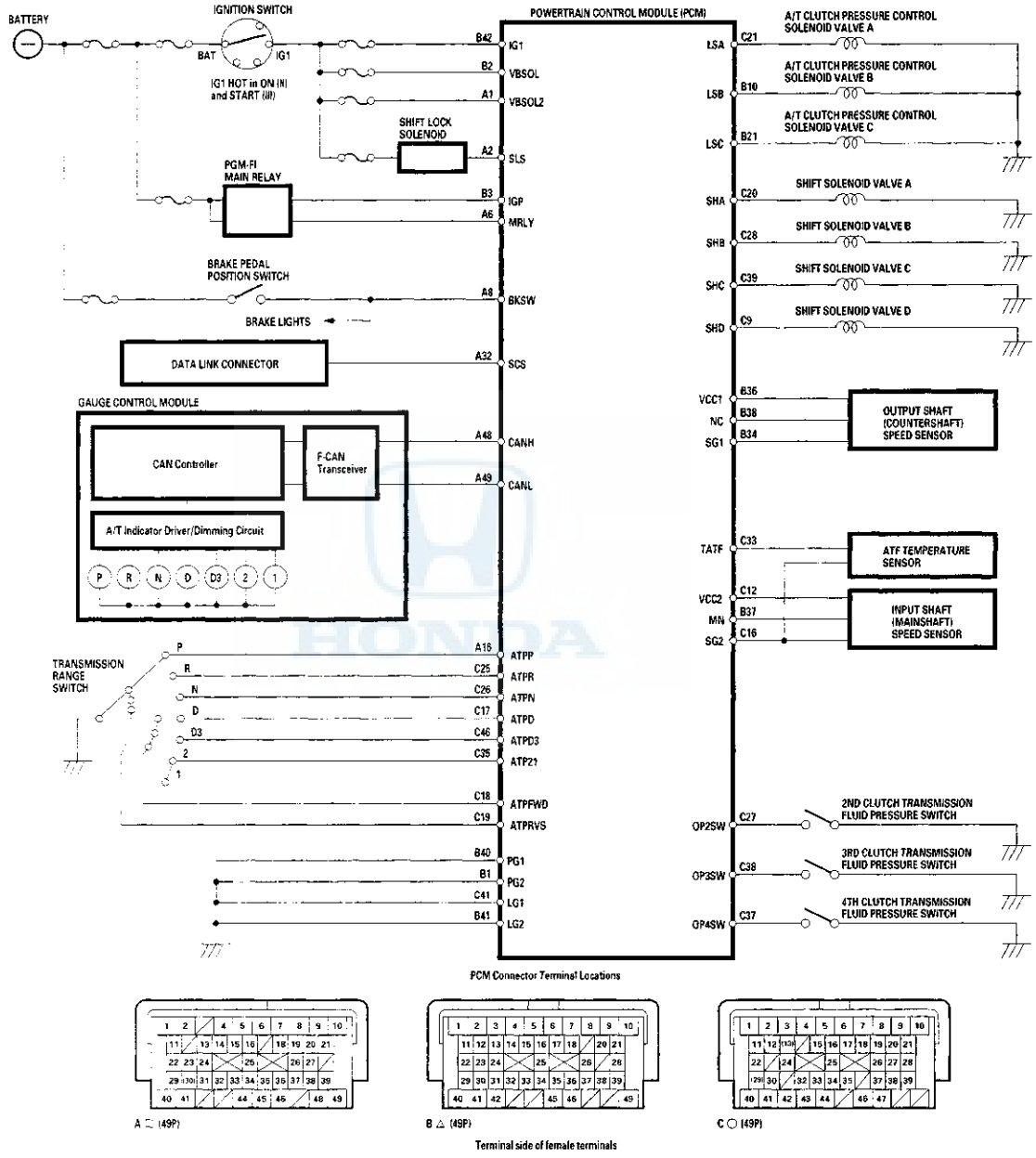
Self-diagnosis
If the PCM detects the failure of a signal from a sensor, a switch, a solenoid valve, or from another control unit, it stores a Temporary DTC or a DTC. Depending on the failure, a DTC is stored in either the first or the second drive cycle. When a DTC is stored, the PCM blinks the D indicator and/or turns on the malfunction indicator lamp (MIL) by a signal sent to the gauge control module via F-CAN.

- **One Drive Cycle Detection Method:**
  When an abnormality occurs in the signal from a sensor, a switch, a solenoid valve, or from another control unit, the PCM stores a DTC for the failure and blinks the D indicator and/or turns on the MIL immediately.

- **Two Drive Cycle Detection Method:**
  When an abnormality occurs in the signal from a sensor, a switch, a solenoid valve, or from another control unit in the first drive cycle, the PCM stores a Temporary DTC. The D indicator and the MIL do not turns on at this time. If the failure continues in the second drive cycle, the PCM stores a DTC and blinks the D indicator and/or turns on the MIL.

Fail-safe Function
When an abnormality occurs in the signal from a sensor, a switch, a solenoid valve, or from another control unit, the PCM ignores that signal and substitutes a pre-programmed value for them that allow the automatic transmission to continue driving. This causes a DTC to be stored and the D indicator to blink and/or the MIL to come on.

PCM A/T Control System Electrical Connections



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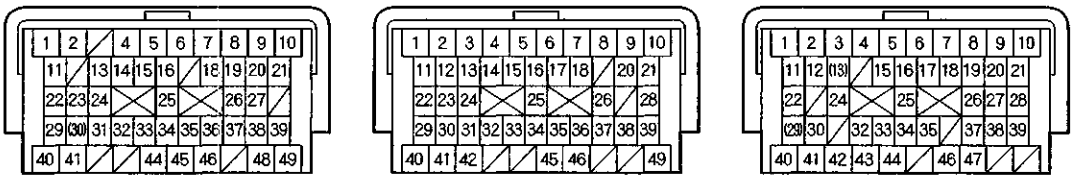
System Description (cont'd)

Electronic Control System (cont'd)

PCM A/T Control System Inputs and Outputs

PCM Connector Terminal Locations



A □ (49P) B △ (49P) C ○ (49P)

Terminal side of female terminals

NOTE: Standard battery voltage is about 12 V.

PCM CONNECTOR A □ (49P)

Terminal Number	Wire Color	Terminal Name	Description	Signal
A1	RED	VBSOL2 (POWER SOURCE FOR SOLENOID VALVES)	Power source for solenoid valves	With ignition switch ON (II): battery voltage
A2	PNK	SLS (SHIFT LOCK SOLENOID)	Drives shift lock solenoid	With ignition switch ON (II), in P, brake pedal pressed, and accelerator released: about 0 V
A8	LT GRN	BKSW (BRAKE PEDAL POSITION SWITCH)	Detects brake pedal position switch signal	With brake pedal released: about 0 V With brake pedal pressed: battery voltage
A16	GRN	ATPP (TRANSMISSION RANGE SWITCH P POSITION)	Detects transmission range switch P position signal	In P: about 0 V In any position other than P: battery voltage
A32	ORN	SCS (SERVICE CHECK SIGNAL)	Detects service check signal	With service check signal shorted with the HDS: about 0 V With service check signal opened: about 5.0 V
A48	WHT	CANH (CAN COMMUNICATION SIGNAL HIGH)	Sends communication signal	With ignition switch ON (II): pulses
A49	RED	CANL (CAN COMMUNICATION SIGNAL LOW)	Sends communication signal	With ignition switch ON (II): pulses

PCM CONNECTOR B △ (49P)

Terminal Number	Wire Color	Terminal Name	Description	Signal
B1	BLK	PG2 (POWER GROUND)	Ground circuit for PCM circuit	Less than 1.0 V at all times
B2	BLK/YEL	VBSOL (POWER SOURCE FOR SOLENOID VALVES)	Power source for solenoid valves	With ignition switch ON (II): battery voltage
B3	YEL/BLK	IGP (POWER SOURCE FOR PCM)	Power source for PCM circuit	With ignition switch ON (II): battery voltage
B10	BRN/WHT	LSB (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B)	Drives A/T clutch pressure control solenoid valve B	With ignition switch ON (II): current controlled

PCM CONNECTOR B △ (49P)

Terminal Number	Wire Color	Terminal Name	Description	Signal
B21	GRN/RED	LSC (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C)	Drives A/T clutch pressure control solenoid valve C	With ignition switch ON (II): current controlled
B34	GRN/WHT	SG1 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
B36	YEL/RED	VCC1 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
B37	RED	NM (INPUT SHAFT (MAINSHAFT) SPEED SENSOR)	Detects input shaft (mainshaft) speed sensor signal	With ignition switch ON (II): about 0 V or about 5.0 V With engine idling in N: about 2.5 V
B38	BLU	NC (OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR)	Detects output shaft (countershaft) speed sensor signal	With ignition switch ON (II): about 0 V or about 5.0 V With driving: pulses
B40	BLK	PG1 (POWER GROUND)	Ground circuit for PCM circuit	Less than 1.0 V at all times
B41	BRN/YEL	LG2 (LOGIC GROUND)	Ground circuit for PCM	Less than 1.0 V at all times
B42	BLK/YEL	IG1 (IGNITION SIGNAL)	Detects ignition signal	With ignition switch ON (II): battery voltage

PCM CONNECTOR C ○ (49P)

Terminal Number	Wire Color	Terminal Name	Description	Signal
C9	GRN/RED	SHD (SHIFT SOLENOID VALVE D)	Drives shift solenoid valve D	With engine running in N, D, and D3 during no lock-up condition: about 0 V With engine running in P and R, and D and D3 during lock-up condition: battery voltage
C12	YEL/BLU	VCC2 (SENSOR VOLTAGE)	Provides sensor reference voltage	With ignition switch ON (II): about 5.0 V
C16	GRN/YEL	SG2 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
C17	YEL/GRN	ATPD (TRANSMISSION RANGE SWITCH D POSITION)	Detects transmission range switch D position signal input	In D: about 0 V In any position other than D: battery voltage
C18	BLU/YEL	ATPFWD (TRANSMISSION RANGE SWITCH FWD)	Detects transmission range switch D, D3, and 2-1 position signal input	In D, D3, 2, and 1: about 0 V In any position other than D, D3, 2, and 1: battery voltage
C19	RED/WHT	ATPRVS (TRANSMISSION RANGE SWITCH RVS)	Detects transmission range switch P, R, and N position signal	In P, R, and N: about 0 V In any position other than P, R, and N: battery voltage
C20	BLU/YEL	SHA (SHIFT SOLENOID VALVE A)	Drives shift solenoid valve A	With engine running in R, and 2nd and 3rd in D and D3 (in 2nd and 3rd gears): battery voltage With engine running P and N, D (in 1st, 4th, and 5th gears), and D (in 1st gear): about 0 V
C21	RED	LSA (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A)	Drives A/T clutch pressure control solenoid valve A	With ignition switch ON (II): current controlled

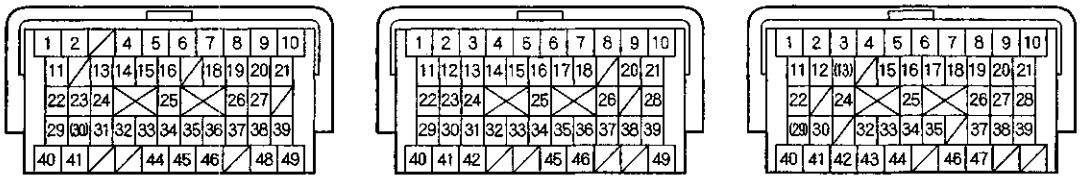
(cont'd)

System Description (cont'd)

Electronic Control System (cont'd)

PCM A/T Control System Inputs and Outputs

PCM Connector Terminal Locations



A □ (49P) **B △ (49P)** **C ○ (49P)**

Terminal side of female terminals

PCM CONNECTOR C ○ (49P)

Terminal Number	Wire Color	Terminal Name	Description	Signal
C25	WHT	ATPR (TRANSMISSION RANGE SWITCH R POSITION)	Detects transmission range switch R position signal	In R: about 0 V In any position other than R: battery voltage
C26	RED/BLK	ATPN (TRANSMISSION RANGE SWITCH N POSITION)	Detects transmission range switch N position signal	In N: about 0 V In any position other than N: battery voltage
C27	BLU/BLK	OP2SW (2ND CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 2nd clutch transmission fluid pressure switch signal	With ignition switch ON (II): • Without 2nd clutch pressure: battery voltage • With 2nd clutch pressure: about 0 V
C28	GRN/WHT	SHB (SHIFT SOLENOID VALVE B)	Drives shift solenoid valve B	With engine running in P, R, N, 2, and 1, D (in 1st, 2 nd, and 5th gears), and D3 (in 1st and 2nd gears): battery voltage With engine running in D (in 3rd and 4th gears), and D3 (in 3rd gear): about 0 V
C33	BLU/YEL	TATF (ATF TEMPERATURE SENSOR)	Detects ATF temperature sensor signal	With ignition switch ON (II): about 0.2—4.0 V (depending on ATF temperature)
C35	BLU	ATP21 (TRANSMISSION RANGE SWITCH 2-1 POSITION)	Detects transmission range switch 2-1 position signal input	In 2 and 1: about 0 V In any position other than 2 and 1: battery voltage
C37	BLU/YEL	OP4SW (4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 4th clutch transmission fluid pressure switch signal	With ignition switch ON (II): • Without 4th clutch pressure: battery voltage • With 4th clutch pressure: about 0 V

PCM CONNECTOR C ○ (49P)

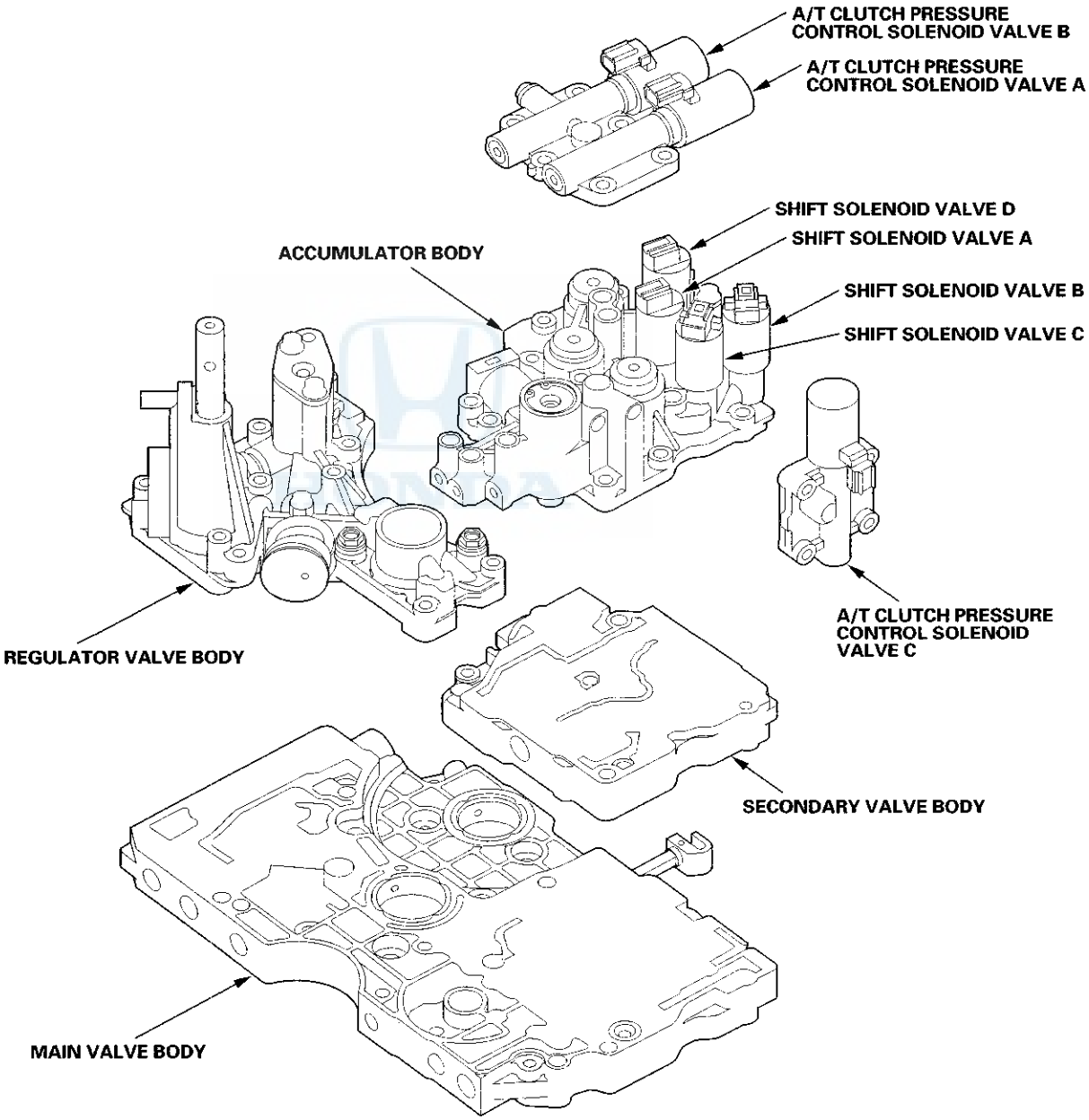
Terminal Number	Wire Color	Terminal Name	Description	Signal
C38	BLU/WHT	OP3SW (3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 3rd clutch transmission fluid pressure switch signal	With ignition switch ON (II): • Without 3rd clutch pressure: battery voltage • With 3rd clutch pressure: about 0 V
C39	GRN	SHC (SHIFT SOLENOID VALVE C)	Drives shift solenoid valve C	With engine running in 1, D (in 1st, 3rd, and 5th gears), and D3 (in 1st and 3rd gears): battery voltage With engine running in P, R, N, 2, D (in 2nd and 4th gears), and D3 (in 2nd gear): about 0 V
C41	BRN/YEL	LG1 (LOGIC GROUND)	Ground circuit for PCM	Less than 1.0 V at all times
C46	RED	ATPD3 (TRANSMISSION RANGE SWITCH D3 POSITION)	Detects transmission range switch D3 position signal input	In D3: about 0 V In any position other than D3: battery voltage

HONDA

System Description (cont'd)

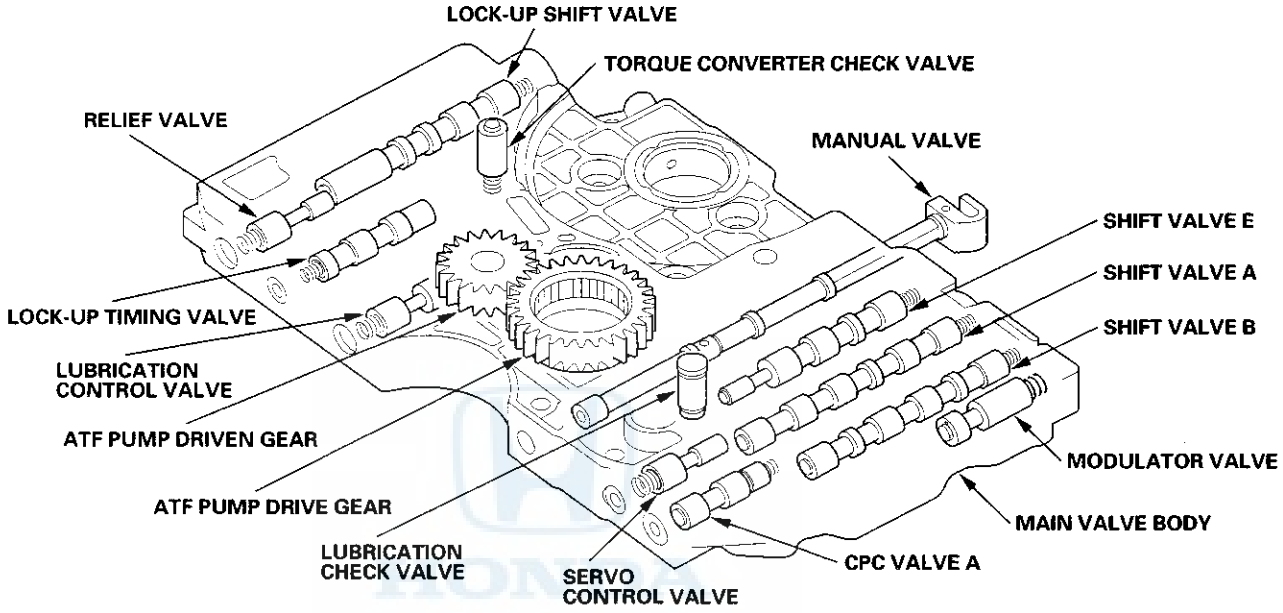
Hydraulic Controls

The valve body includes the main valve body, the regulator valve body, the secondary valve body, and the accumulator body. The ATF pump is driven by splines on the end of the torque converter which is attached to the engine. Fluid flows through the regulator valve to maintain specified pressure through the main valve body to the manual valve, directing pressure to each of the clutches. Shift solenoid valves A, B, C, and D are mounted on the accumulator body. A/T clutch pressure control solenoid valves A, B, and C are mounted on the transmission housing.



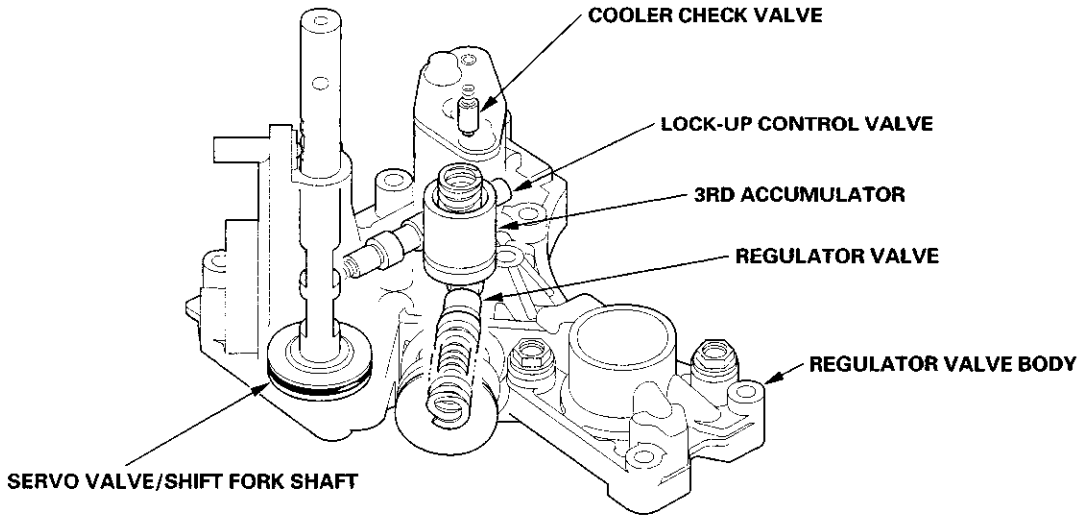
Main Valve Body

The main valve body contains the manual valve, the modulator valve, the torque converter check valve, shift valve A, shift valve B, shift valve E, CPC valve A, the servo control valve, the relief valve, the lock-up shift valve, the lock-up timing valve, the lubrication control valve, the lubrication check valve, the ATF pump drive gear, and the ATF pump driven gear. The primary function of the main valve body is to switch fluid pressure on and off to control hydraulic pressure going to the hydraulic control system.



Regulator Valve Body

The regulator valve body is located on the main valve body. The regulator valve body contains the regulator valve, the cooler check valve, the lock-up control valve, the servo valve/shift fork shaft, and the 3rd accumulator.



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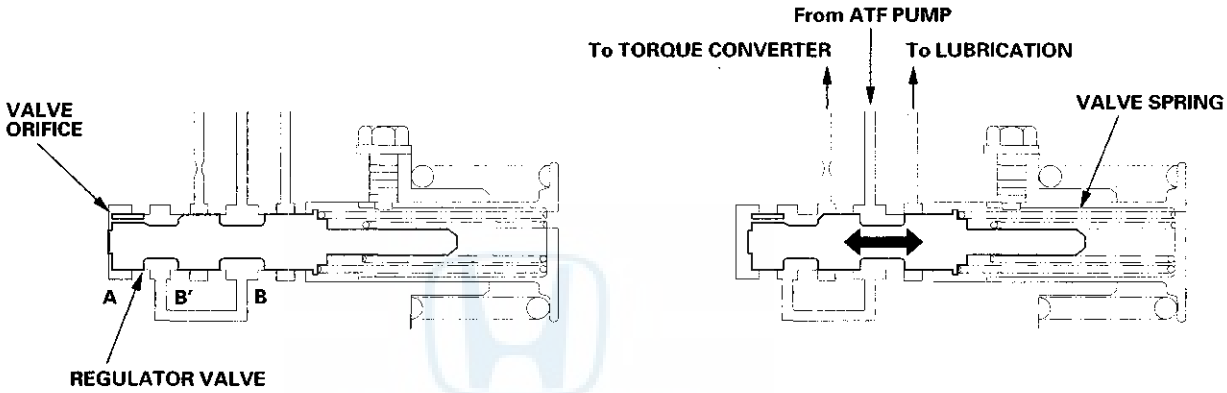
System Description (cont'd)

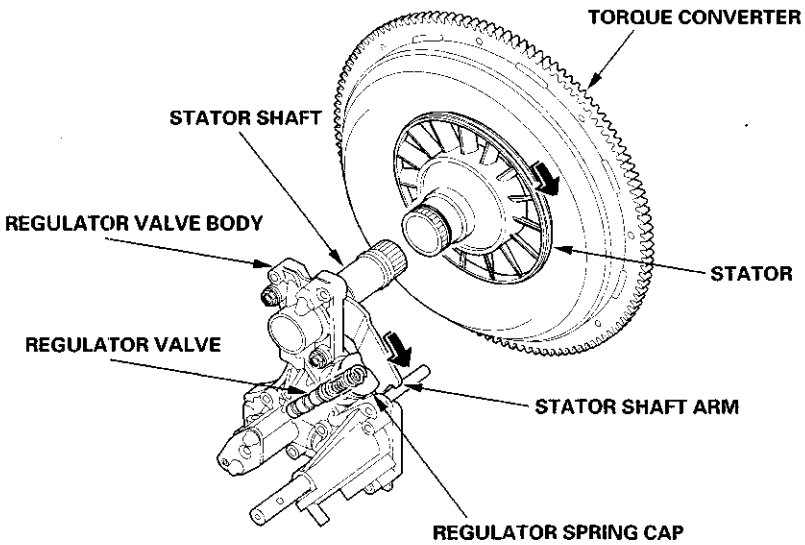
Hydraulic Controls (cont'd)

Regulator Valve

The regulator valve maintains constant hydraulic pressure from the ATF pump to the hydraulic control system, while also providing fluid to the lubrication system and the torque converter. Fluid from the ATF pump flows through B and B'. Fluid entering from B flows through the valve orifice to the A cavity. This pressure of the A cavity pushes the regulator valve to the spring side, and this movement of the regulator valve uncovers the fluid port to the torque converter and the relief valve. The fluid flows out to the torque converter and the relief valve, and the regulator valve returns under spring force. According to the level of the hydraulic pressure through B, the position of the regulator valve changes, and the amount of fluid from B' through the torque converter changes. This operation is continued, maintaining the line pressure.

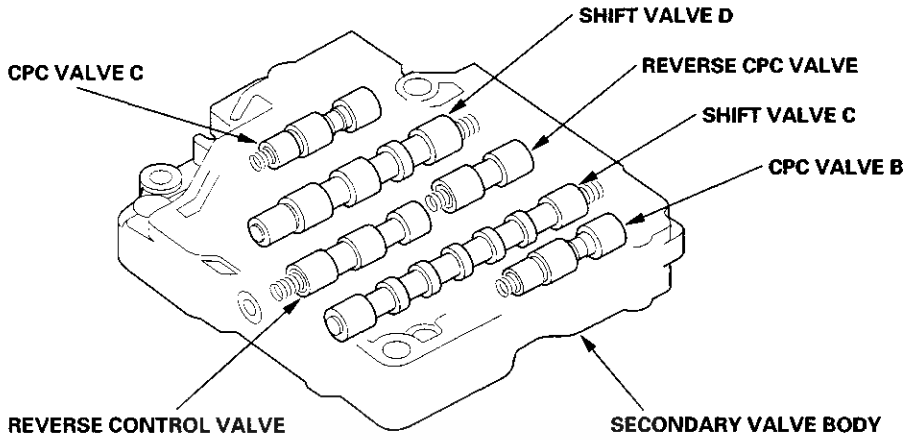


Increases in hydraulic pressure according to torque are regulated by the regulator valve using stator torque reaction. The stator shaft is splined to the stator in the torque converter, and the stator shaft arm end contacts the regulator spring cap. When the vehicle is accelerating or climbing (torque converter range), stator torque reaction acts on the stator shaft, and the stator shaft arm pushes the regulator spring cap in the direction of the arrow in proportion to the reaction. The stator reaction spring compresses, and the regulator valve moves to increase the line pressure which is regulated by the regulator valve. The line pressure reaches its maximum when the stator torque reaction reaches its maximum.



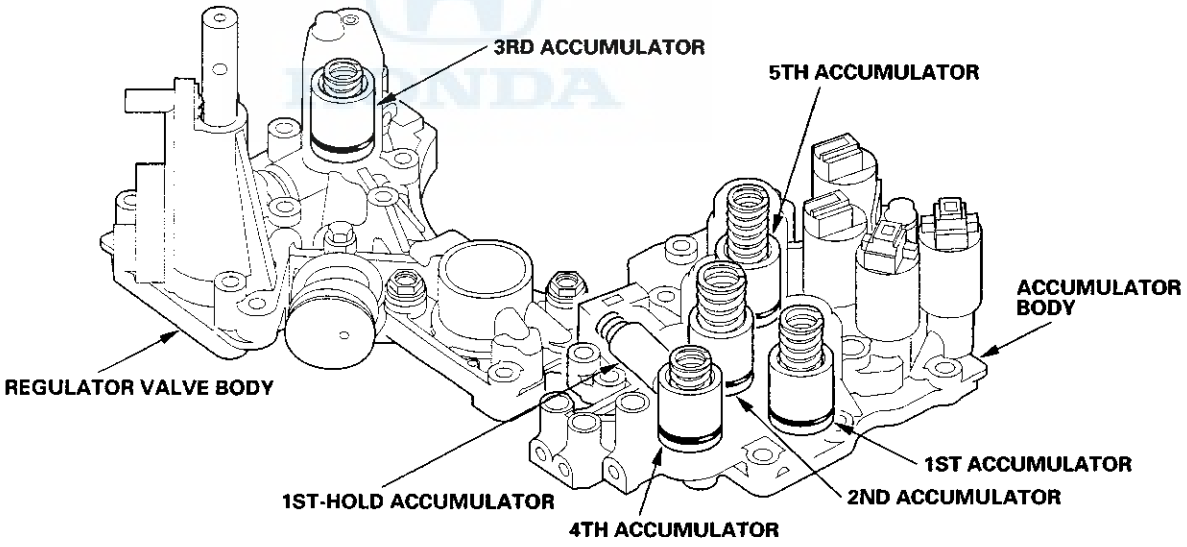
Secondary Valve Body

The secondary valve body is on the main valve body. The secondary valve body contain shift valve C, shift valve D, CPC valve B, CPC valve C, the reverse control valve, and the reverse CPC valve.



Accumulator Body

The accumulator body is on the secondary valve body, and contains the 1st, 1st-hold, 2nd, 4th, and 5th accumulators. The 3rd accumulator is in the regulator valve body.



System Description (cont'd)

Hydraulic Flow

Distribution of Hydraulic Pressure

As the engine turns, the ATF pump starts to operate. Automatic transmission fluid (ATF) is drawn through the ATF strainer (filter) and discharged into the hydraulic circuit. Then, ATF flowing from the ATF pump becomes line pressure that is regulated by the regulator valve. Torque converter pressure from the regulator valve enters the torque converter through the lock-up shift valve and lock-up control valve, and it is discharged from the torque converter. The torque converter check valve prevents torque converter pressure from rising.

The PCM switches shift solenoid valves A, B, C, and D ON and OFF, and the shift solenoid valves control shift solenoid pressure to the shift valves. Applying shift solenoid pressure to the shift valves moves the position of the shift valve, and switches the port of hydraulic pressure. The PCM also actuates A/T clutch pressure control solenoid valves A, B, and C. The A/T clutch pressure control solenoid valves regulate hydraulic pressure, and applies the pressure to CPC valves A, B and C, and the reverse CPC valve.

When shifting between gears, the clutches are engaged by pressure from the CPC pressure mode. The PCM actuates one of the shift solenoid valves to move the position of the shift valve. This movement switches the port of CPC pressure and line pressure. Line pressure is then applied to the clutch, and CPC pressure is released. The clutch is engaged with line pressure after shifting is completed.

Hydraulic Pressure at the Port for use in the hydraulic circuit

Port	Hydraulic Pressure	Port	Hydraulic Pressure
1	Line	SC	Shift solenoid valve C
2	Line	SC'	Shift solenoid valve C
3	Line	SD	Shift solenoid valve D
3'	Line	10	1st clutch
3''	Reverse CPC or Line	15	1st-hold clutch
3A	Line	20	2nd clutch
3B	Reverse CPC	30	3rd clutch
4	Line	40	4th clutch
4'	Line	50	5th clutch
4''	Line	51	5th clutch
4A	CPC A	56	A/T clutch pressure control solenoid valve A
4B	CPC B	57	A/T clutch pressure control solenoid valve B
4C	CPC C	5R	A/T clutch pressure control solenoid valve B
5A	CPC A	58	A/T clutch pressure control solenoid valve C
5B	CPC A or Line	90	Torque converter
5C	CPC B or Line	90'	Torque converter
5D	CPC B	91	Torque converter
5E	CPC C	91'	Torque converter
5F	CPC C	92	Torque converter
5G	CPC C	93	ATF cooler
5H	CPC B or Line	94	Torque converter
5J	CPC B or Line	95	Lubrication
5K	CPC A or Line	95'	Lubrication
5L	CPC A or Line	96	Torque converter
5M	Line	99	Suction
5N	CPC C	X	Drain
6	Modulator	HX	High position drain
SA	Shift solenoid valve A	AX	Air drain
SB	Shift solenoid valve B	———	———

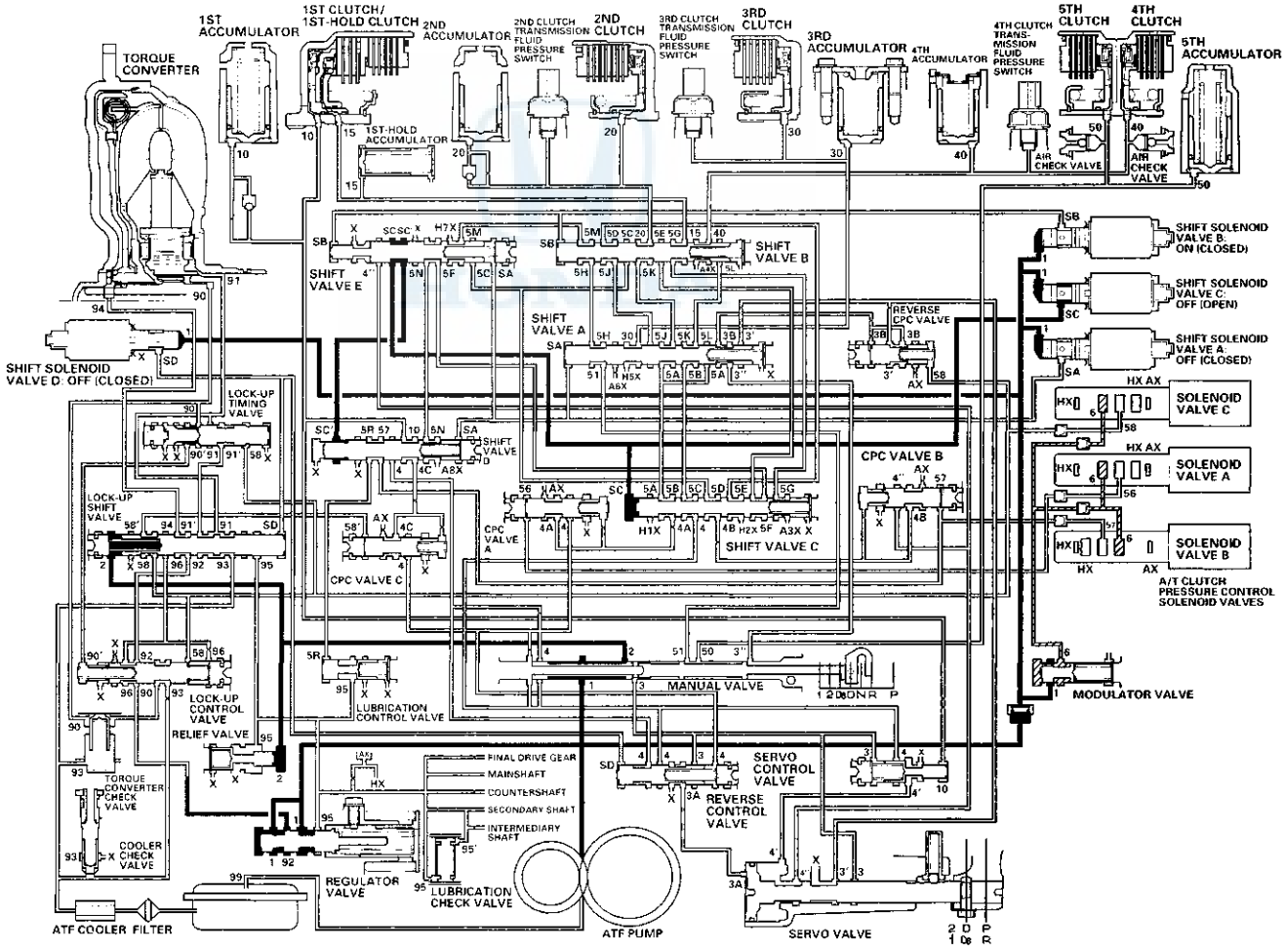
N Position

Line pressure (1) regulated by the regulator valve flows to the shift solenoid valves. The PCM switches the shift solenoid valves ON and OFF. The conditions of the shift solenoid valves and the positions of the shift valves are as follows:

- Shift solenoid valve A is OFF, and closes the shift solenoid valve A pressure port (SA); shift valve A remains on the left side.
- Shift solenoid valve B is turned ON, and closes the shift solenoid valve B pressure port (SB); shift valve B and shift valve E remain on the left side.
- Shift solenoid valve C is OFF, and opens the shift solenoid valve C pressure port (SC); shift valve C and shift valve D move to the right side.
- Shift solenoid valve D is OFF, and closes the shift solenoid valve D pressure port (SD).

Line pressure (1) also flows to the modulator valve and becomes modulator pressure (6). Modulator pressure (6) flows to the A/T clutch pressure control solenoid valves. The manual valve covers the port leading pressure to the clutches, and hydraulic pressure is not applied to the clutches.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



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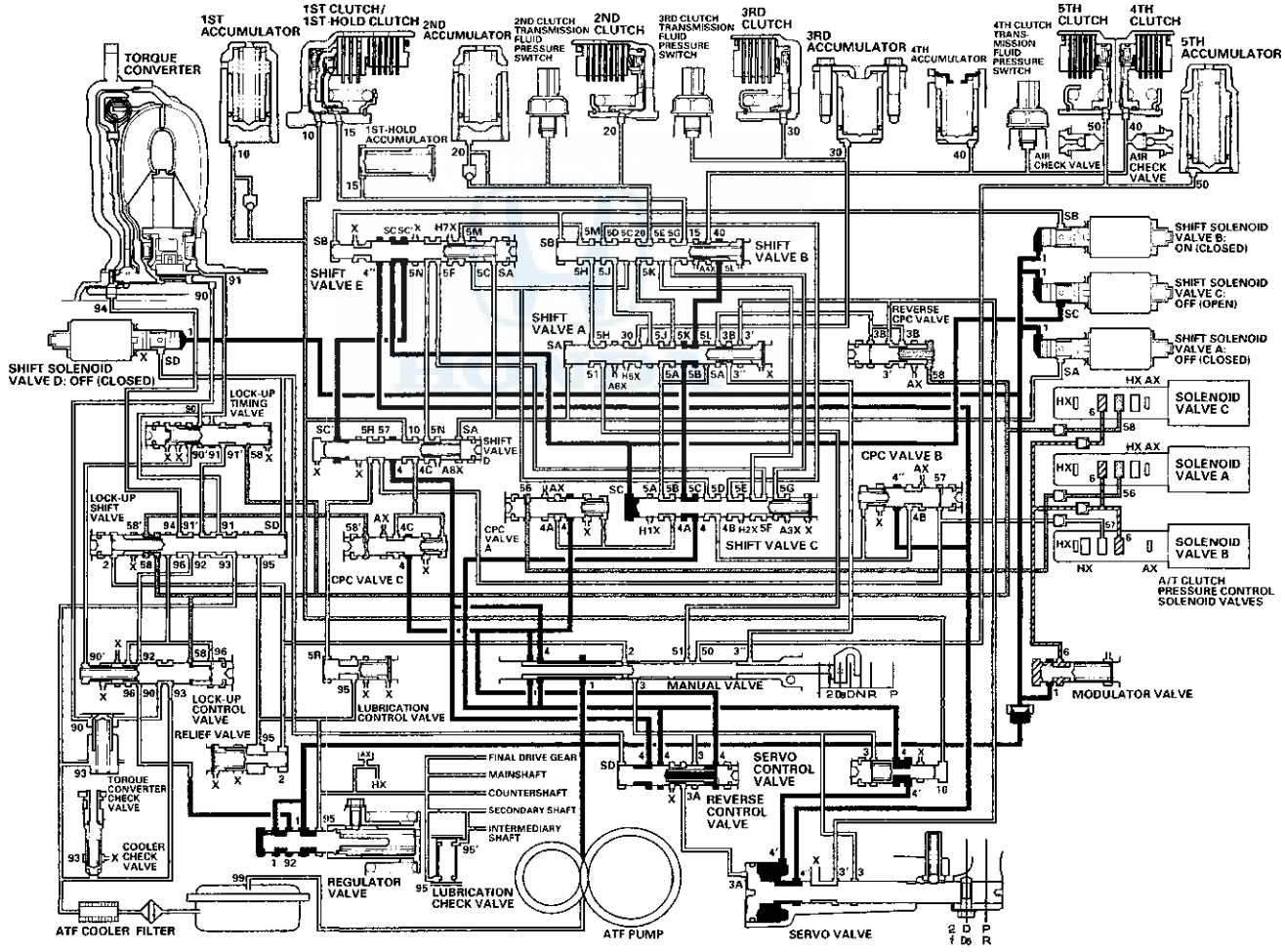
System Description (cont'd)

Hydraulic Flow (cont'd)

D Position: Shifting to D from N

When shifting to D from N, the condition of the shift solenoid valves remains the same as in N. The manual valve is moved to the D position, and uncovers the line pressure port (4) leading to CPC valves A and C. The PCM actuates A/T clutch pressure control solenoid valves A and C, A/T clutch pressure control solenoid valve A pressure (56) flows to the CPC valve A, and A/T clutch pressure control solenoid valve C pressure (58) flows to the CPC valve C. CPC valves A and C regulate line pressure (4), line pressure (4) becomes CPC C pressure (4C) at CPC valve C, and becomes CPC A pressure at CPC valve A. CPC C pressure (4C) becomes 1st clutch pressure (10) at shift valve D, and 1st clutch pressure flows to the 1st clutch. CPC A pressure (4A) becomes 2nd clutch pressure (20) at shift valve B via shift valves A and C. The 1st clutch and 2nd clutch engage gently by CPC pressure.

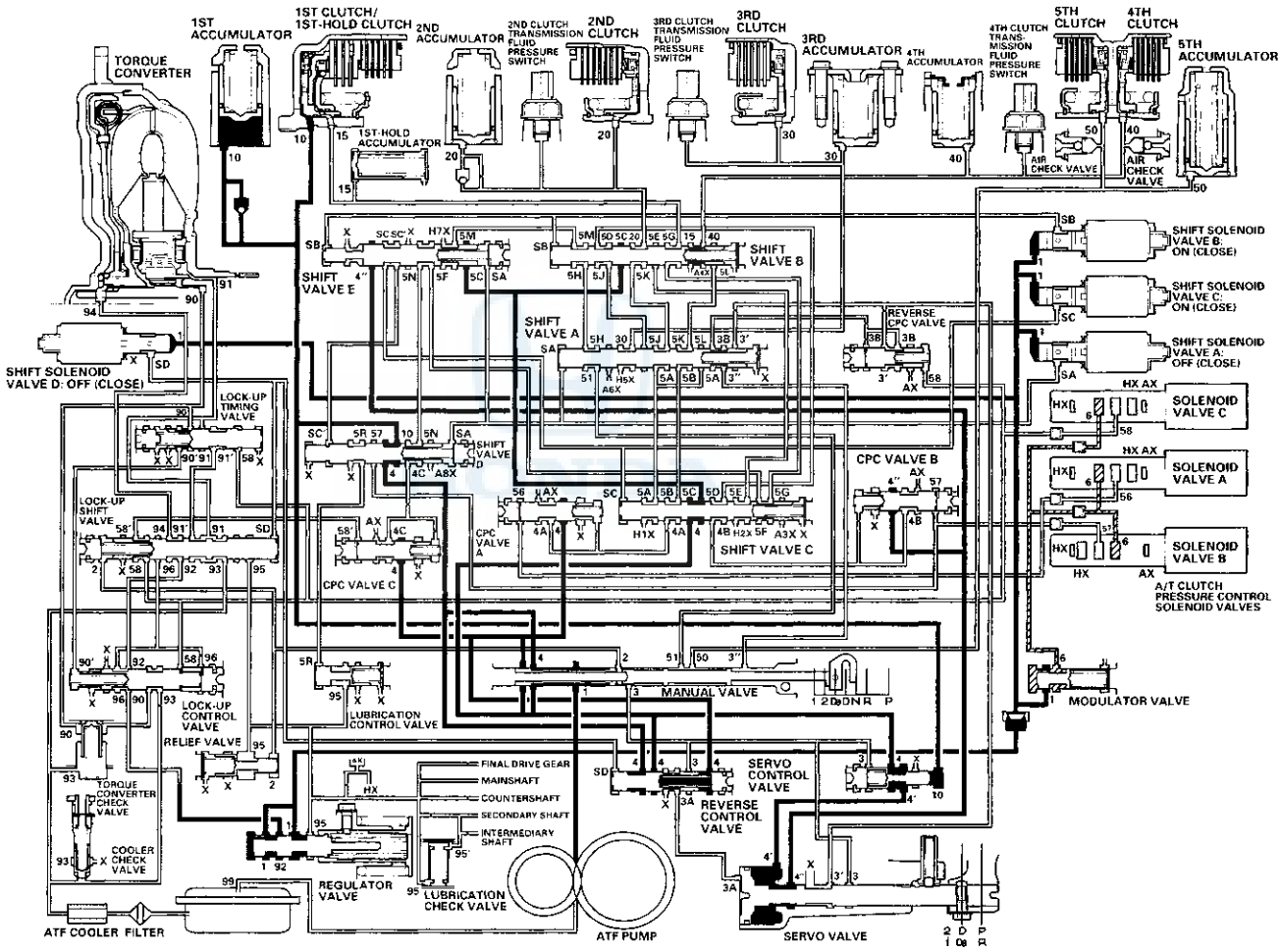
NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



D Position: Driving in 1st gear

The PCM turns shift solenoid valve C ON, and shift solenoid valve C covers the shift solenoid valve C pressure port (SC) to shift valve C and shift valve D via shift valve E. Shift solenoid valve A remains OFF, and shift solenoid valve B remains ON. Shift valves C and D are moved to the left side, shift valve D switches the line pressure port (4) and CPC C pressure (4C) leading to the 1st clutch, and shift valve C switches the port of CPC A pressure (5A) releasing 2nd clutch pressure. Line pressure (4) becomes 1st clutch pressure (10) at shift valve D, and flows to the 1st clutch. The 1st clutch is engaged securely by the line pressure.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

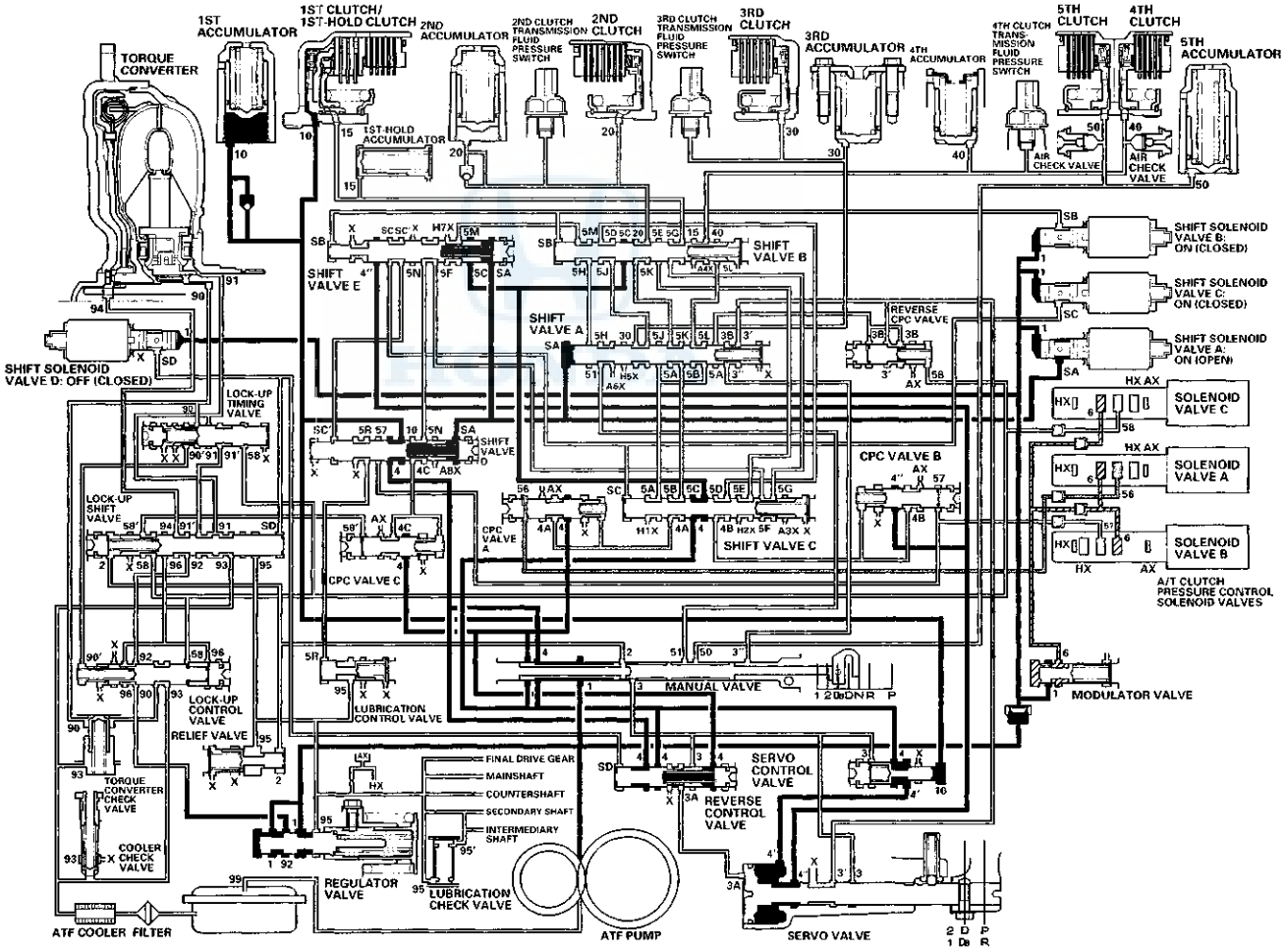
System Description (cont'd)

Hydraulic Flow (cont'd)

D Position: Shifting between 1st gear and 2nd gear

As the speed of the vehicle reaches the programmed value, the PCM turns shift solenoid valve A ON, and shift solenoid valve A uncovers the shift solenoid valve A pressure port (SA) to shift valve A. Shift solenoid valves B and C remain ON. Shift valve A is moved to the right side to uncover the CPC A pressure port (4A) leading to the 2nd clutch. The PCM actuates A/T clutch pressure control solenoid valve A, and A/T clutch pressure control solenoid valve A pressure (56) is applied to CPC valve A. CPC valve A regulates line pressure (4), and line pressure (4) becomes CPC A pressure (4A). CPC A pressure (4A) flows to shift valve B via shift valves C and A, and becomes 2nd clutch pressure (20) at shift valve B. The 2nd clutch is engaged by CPC pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

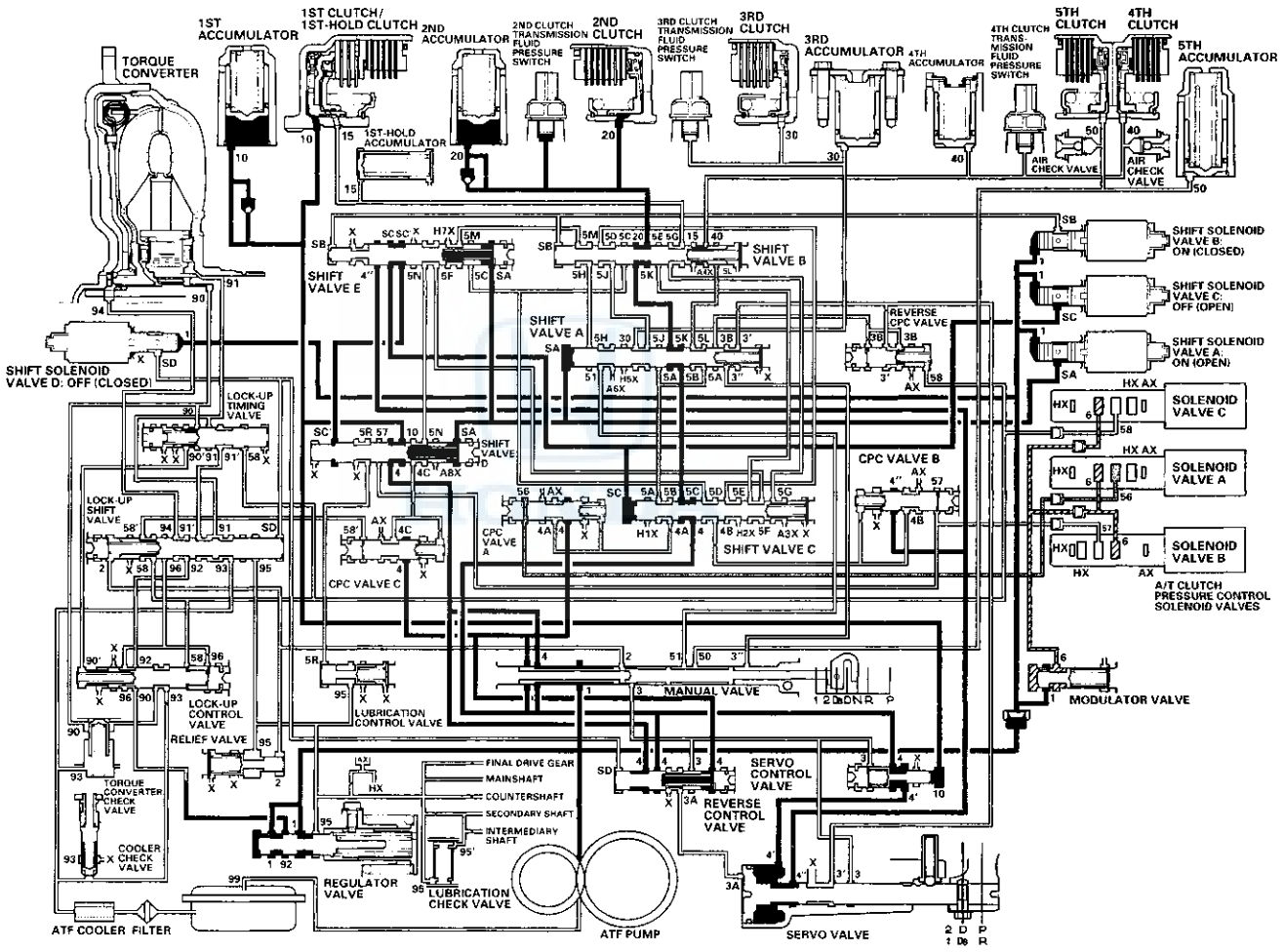
NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



D Position: Driving in 2nd gear

The PCM turns shift solenoid valve C OFF, and shift solenoid valve C uncovers the shift solenoid valve C pressure port (SC) to shift valve C. Shift solenoid valves A and B remain ON. Shift valve C is moved to the right side to switch the line pressure port (4) and CPC A pressure (4A) leading to the 2nd clutch. CPC A pressure (5B) (5K) changes to line pressure (5B) (5K) and 2nd clutch pressure (20) is changed to line pressure mode, and the 2nd clutch is engaged by the line pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

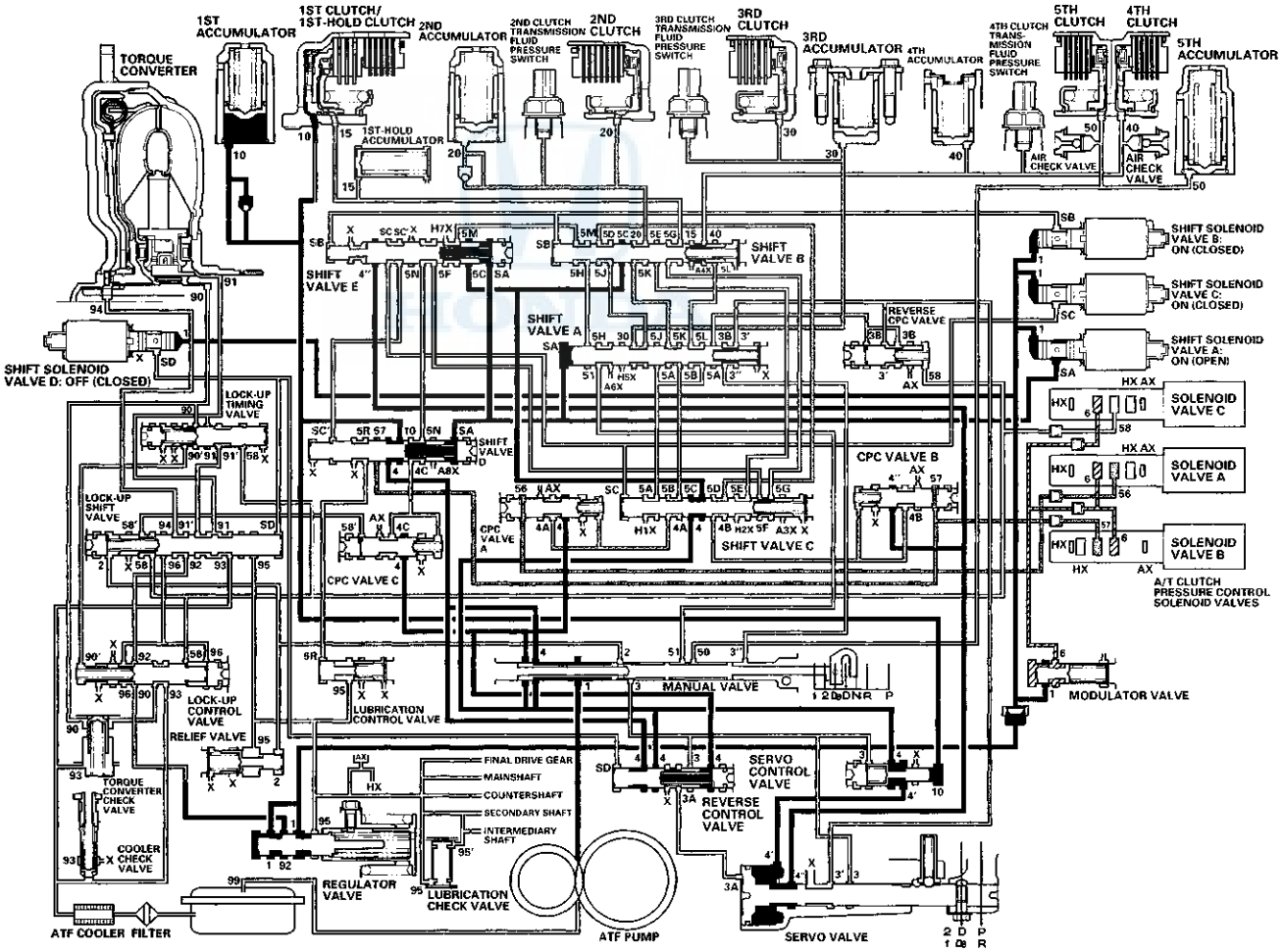
System Description (cont'd)

Hydraulic Flow (cont'd)

D Position: Shifting between 2nd gear and 3rd gear

As the speed of the vehicle reaches the programmed value, the PCM turns shift solenoid valve C ON, and shift solenoid valve C covers the shift solenoid valve C pressure port (SC) to shift valve C. Shift solenoid valves A and B remain ON. Shift valve C is moved to the left side to switch the line pressure port (4) and CPC A pressure (4A) leading to the 2nd clutch. Shift valve C also uncovers the CPC B pressure port (4B) leading to the 3rd clutch. The PCM actuates A/T clutch pressure control solenoid valves A and B. A/T clutch pressure control solenoid valve A pressure (56) is applied to CPC valve A, and A/T clutch pressure control solenoid valve B pressure (57) is applied to CPC valve B. CPC valve B regulates line pressure (4''), and line pressure (4'') becomes CPC B pressure (4B). CPC B pressure flows to shift valve A via shift valves C and B, and becomes 3rd clutch pressure (30) at shift valve A. The 2nd clutch pressure (20) is changed to CPC pressure mode, and the 3rd clutch is engaged by the CPC pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

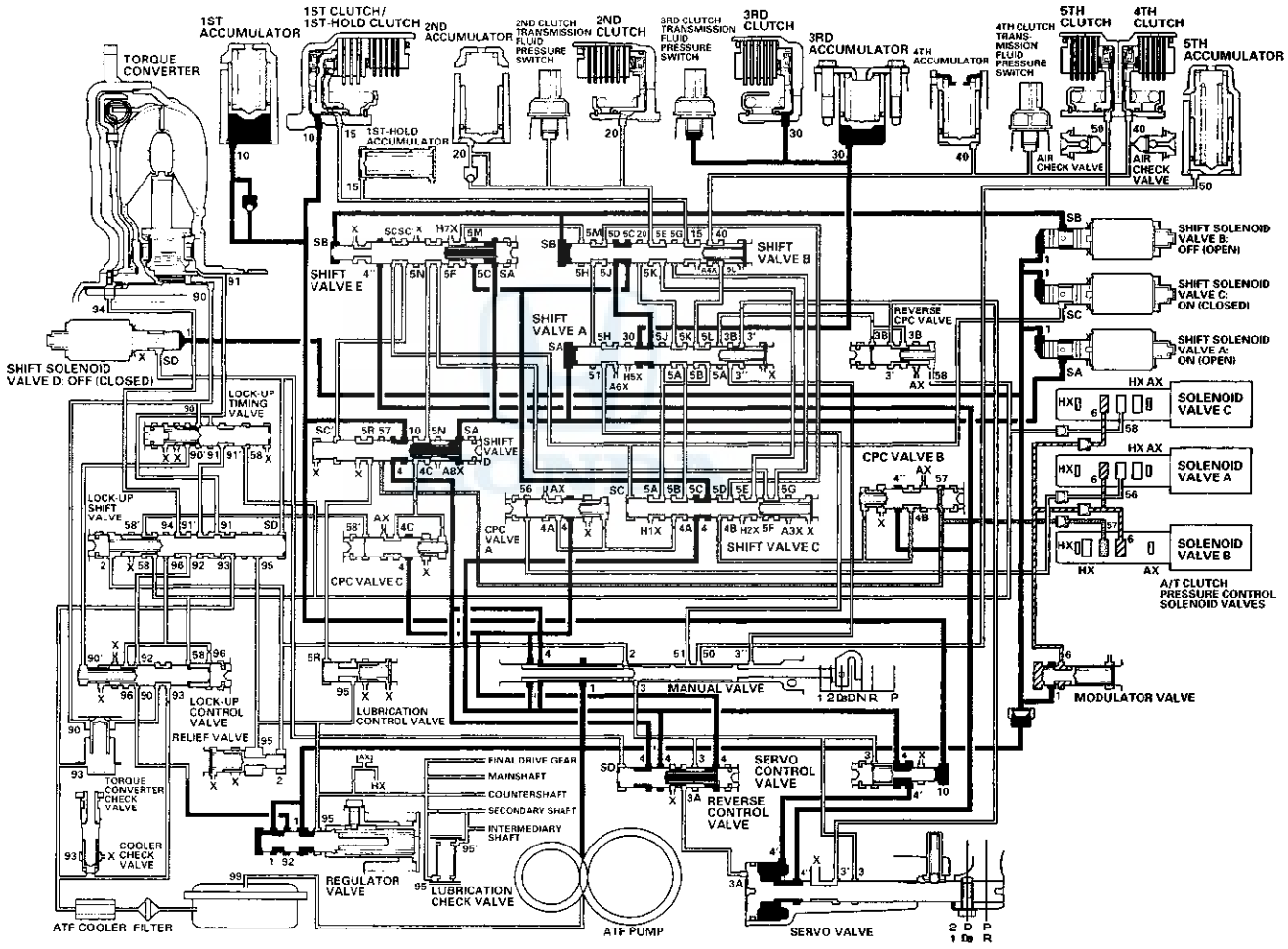
NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



D Position: Driving in 3rd gear

The PCM turns shift solenoid valve B OFF, and shift solenoid valve B uncovers the shift solenoid valve B pressure port (SB) to shift valve B. Shift solenoid valves A and C remain ON. Shift valve B is moved to the right side to switch the line pressure port (5C), CPC B pressure (5J) leading to the 3rd clutch, and 2nd clutch pressure (20) releasing 2nd clutch pressure. CPC B pressure (5J) changes to line pressure (5J) and 3rd clutch pressure (30) is changed to the line pressure mode, and the 3rd clutch is engaged by the line pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

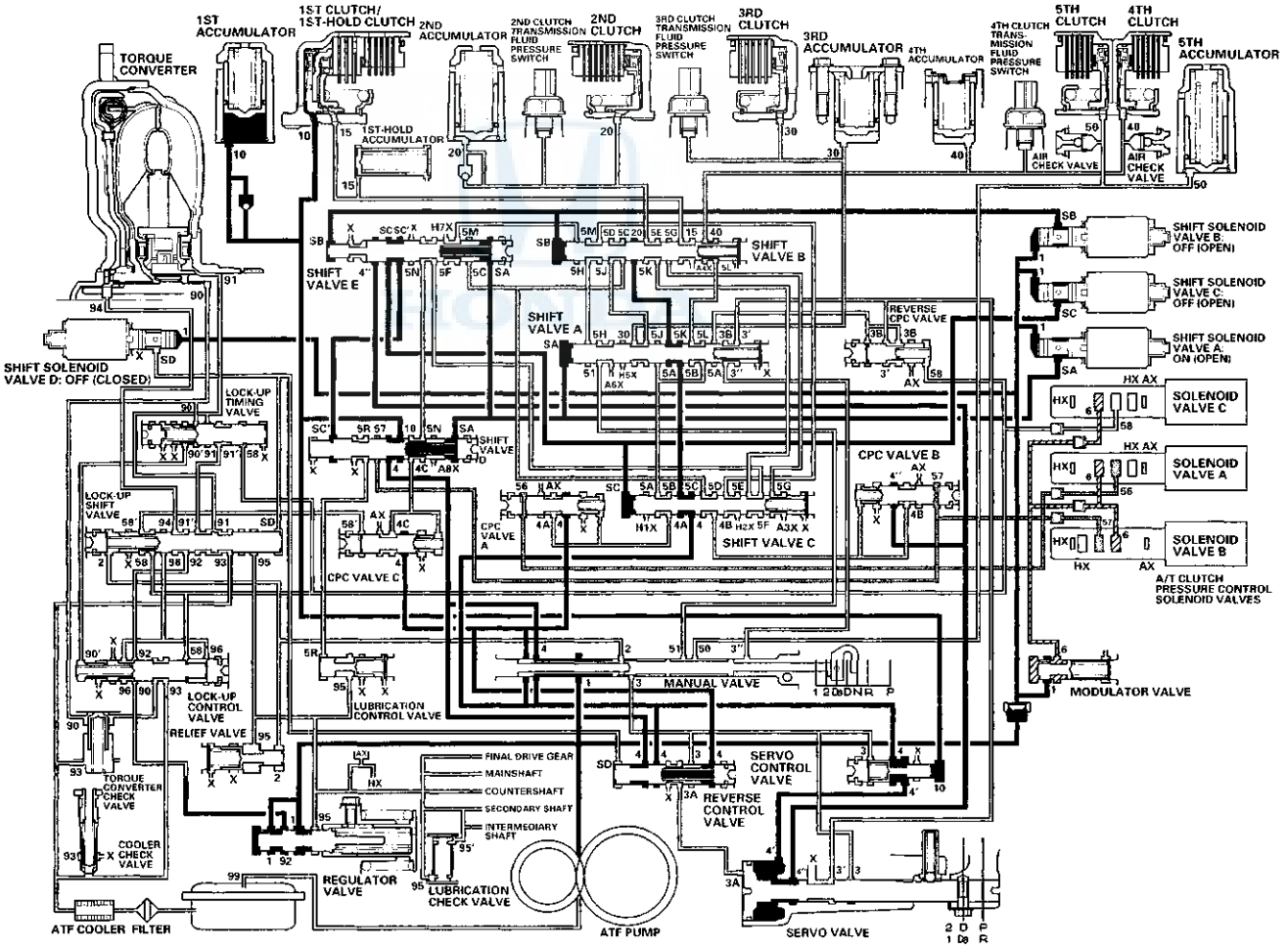
System Description (cont'd)

Hydraulic Flow (cont'd)

D Position: Shifting between 3rd gear and 4th gear

As the speed of the vehicle reaches the programmed value, the PCM turns shift solenoid valve C OFF, and shift solenoid valve C uncovers the shift solenoid valve C pressure port (SC) to shift valve C. Shift solenoid valve A remains ON, and shift solenoid valve B remains OFF. Shift valve C is moved to the right side to switch the line pressure port (4) and CPC B pressure port (4B) leading to the 3rd clutch. Shift valve C also uncovers the CPC A pressure port (4A) leading to the 4th clutch. The PCM actuates A/T clutch pressure control solenoid valves A and B. A/T clutch pressure control solenoid valve A pressure (56) is applied to CPC valve A, and A/T clutch pressure control solenoid valve B pressure (57) is applied to CPC valve B. CPC valve A regulates line pressure (4), and line pressure (4) becomes CPC A pressure (4A). CPC A pressure (4A) flows to shift valve B via shift valves C and A, and becomes 4th clutch pressure (40) at shift valve B. 3rd clutch pressure (30) is changed to CPC pressure, and the 4th clutch is engaged by the CPC pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

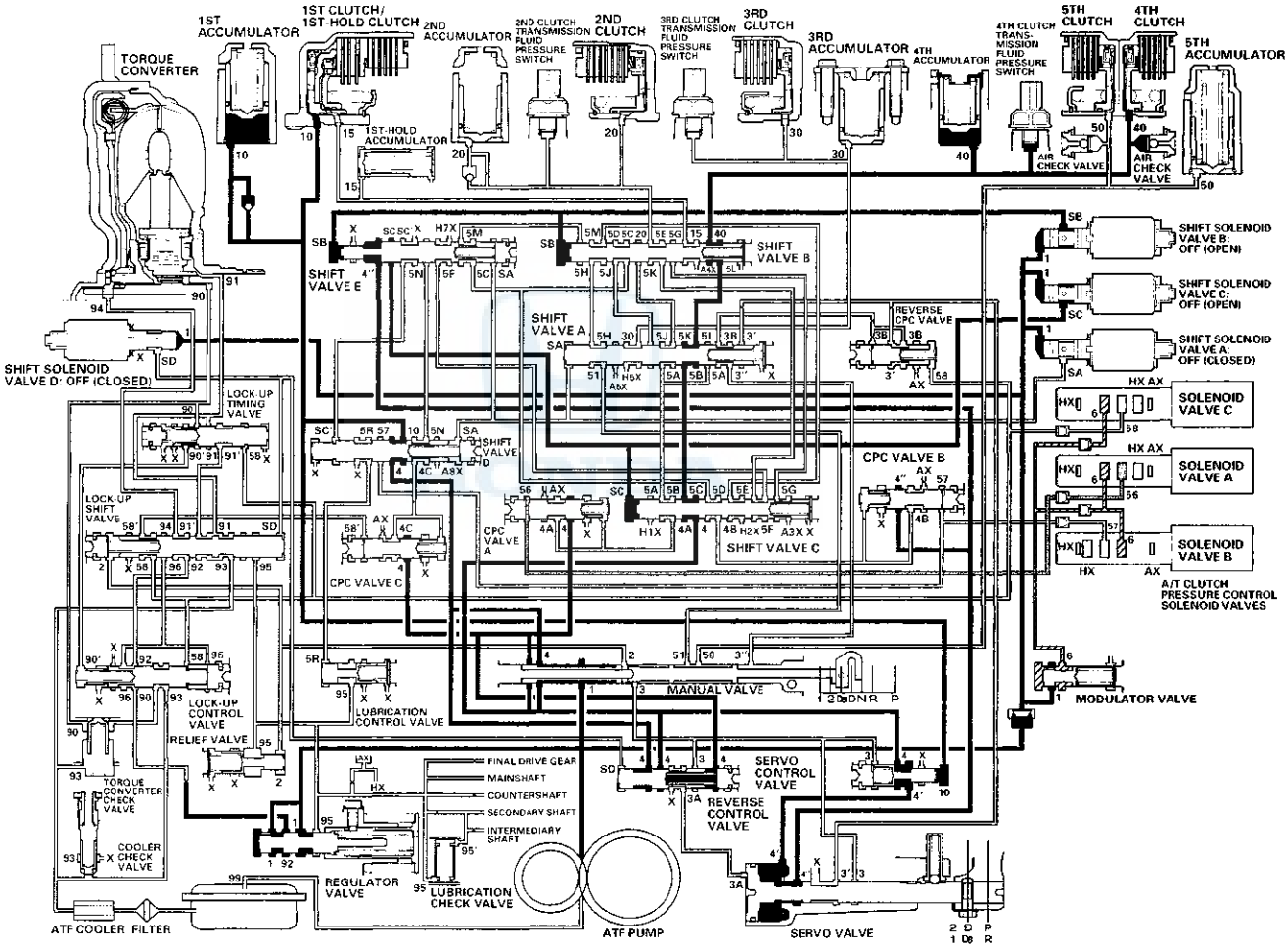
NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



D Position: Driving in 4th gear

The PCM turns shift solenoid valve A OFF, and shift solenoid valve A covers the shift solenoid valve A pressure port (SA) to shift valve A. Shift solenoid valves B and C remain OFF. Shift valve A is moved to the left side to switch the pressure port (5B), the CPC A pressure port (5A) (5L) leading to the 4th clutch, and 3rd clutch pressure (30) releasing 3rd clutch pressure. CPC A pressure (5L) changes to line pressure (5L) and 4th clutch pressure (40) is changed to line pressure, and the 4th clutch is engaged by line pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

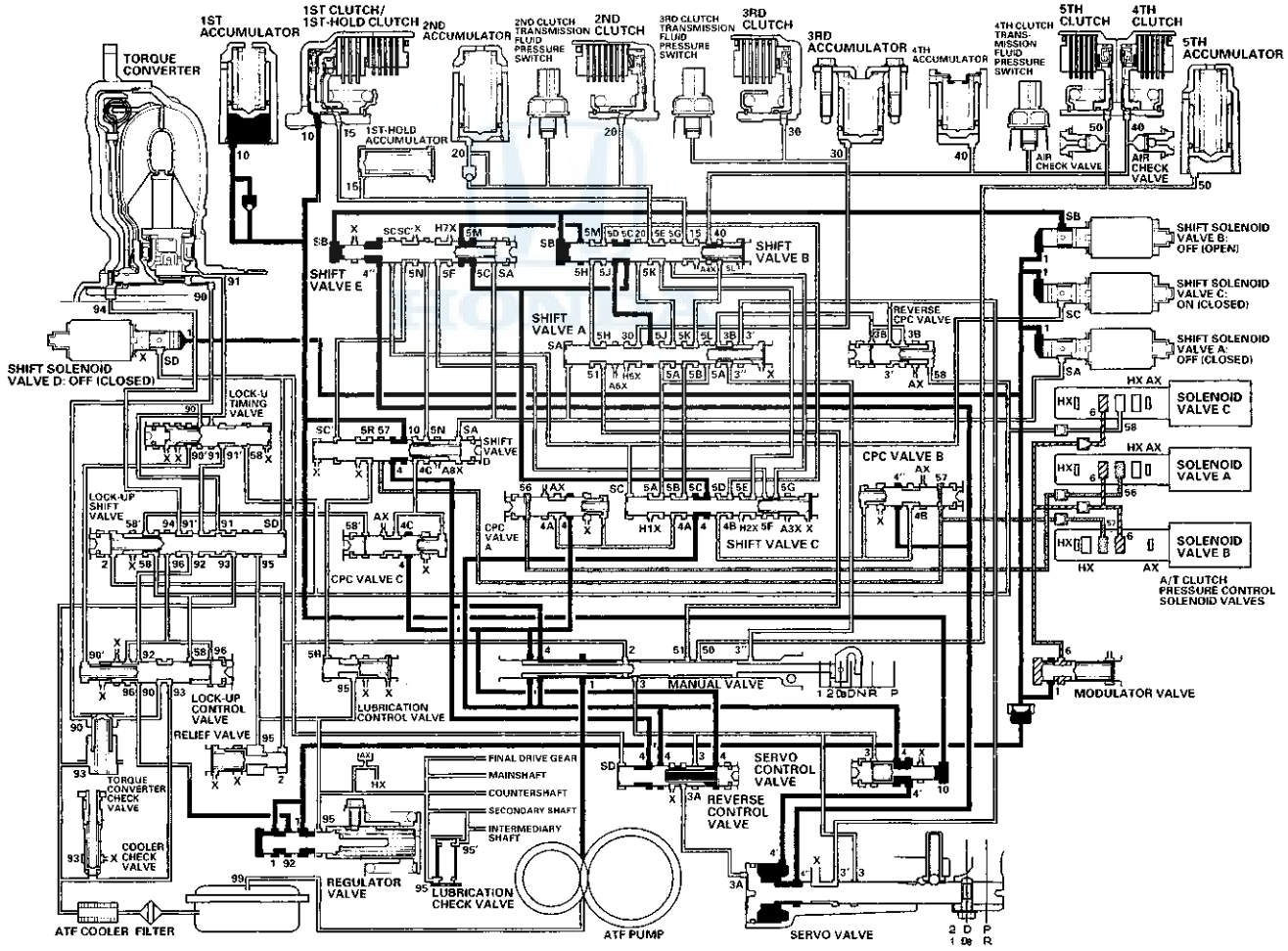
System Description (cont'd)

Hydraulic Flow (cont'd)

D Position: Shifting between 4th gear and 5th gear

As the speed of the vehicle reaches the programmed value, the PCM turns shift solenoid valve C ON, and shift solenoid valve C covers the shift solenoid valve C pressure port (SC) to shift valve C. Shift solenoid valves A and B remain OFF. Shift valve C is moved to the left side to switch the line pressure port (4) and the CPC A pressure port (4A) leading to the 4th clutch. Shift valve C also uncovers the CPC B pressure port (4B) leading to the 5th clutch. The PCM actuates A/T clutch pressure control solenoid valves A and B. A/T clutch pressure control solenoid valve A pressure (56) is applied to CPC valve A, and A/T clutch pressure control solenoid valve B pressure (57) is applied to CPC valve B. CPC valve B regulates line pressure (4''), and line pressure (4'') becomes CPC B pressure (4B). CPC B pressure (4B) flows to shift valve A via shift valves C and B, and becomes 5th clutch pressure (51) at shift valve A. The 4th clutch pressure (40) is changed to CPC pressure, and the 5th clutch is engaged by the CPC pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

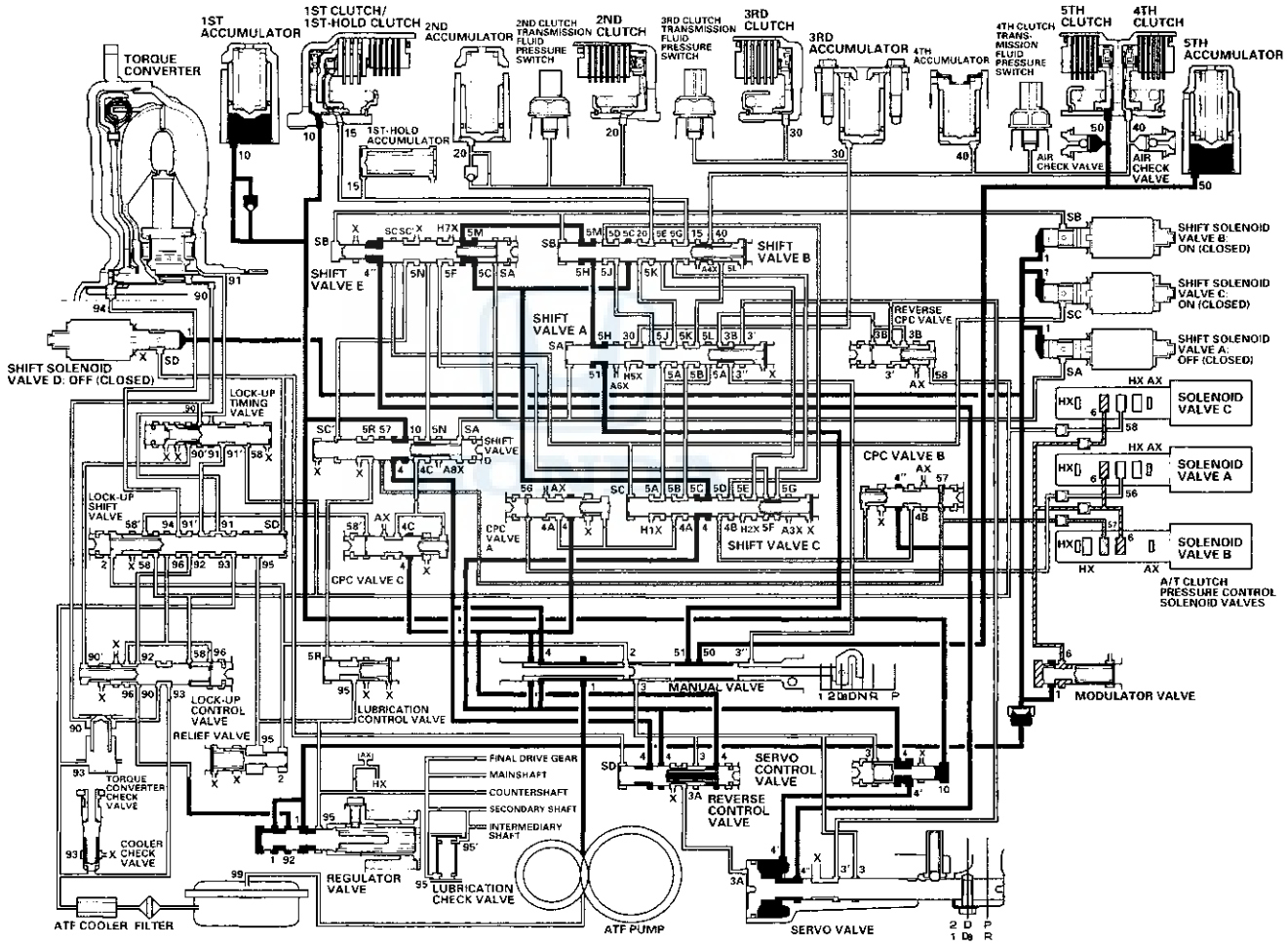
NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



D Position: Driving in 5th gear

The PCM turns shift solenoid valve B ON, and shift solenoid valve B covers the shift solenoid valve B pressure port (SB) to shift valve B. Shift solenoid valve A remains OFF, and shift solenoid valve C remains ON. Shift valve B is moved to the left side to switch the line pressure port (5H), CPC B pressure (5D) leading to the 5th clutch, and 4th clutch pressure (40) which releases 4th clutch pressure. CPC B pressure (5H) changes to line pressure (5H) and 5th clutch pressure (51) (50) is changed to line pressure, and the 5th clutch is engaged by line pressure. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

System Description (cont'd)

Hydraulic Flow (cont'd)

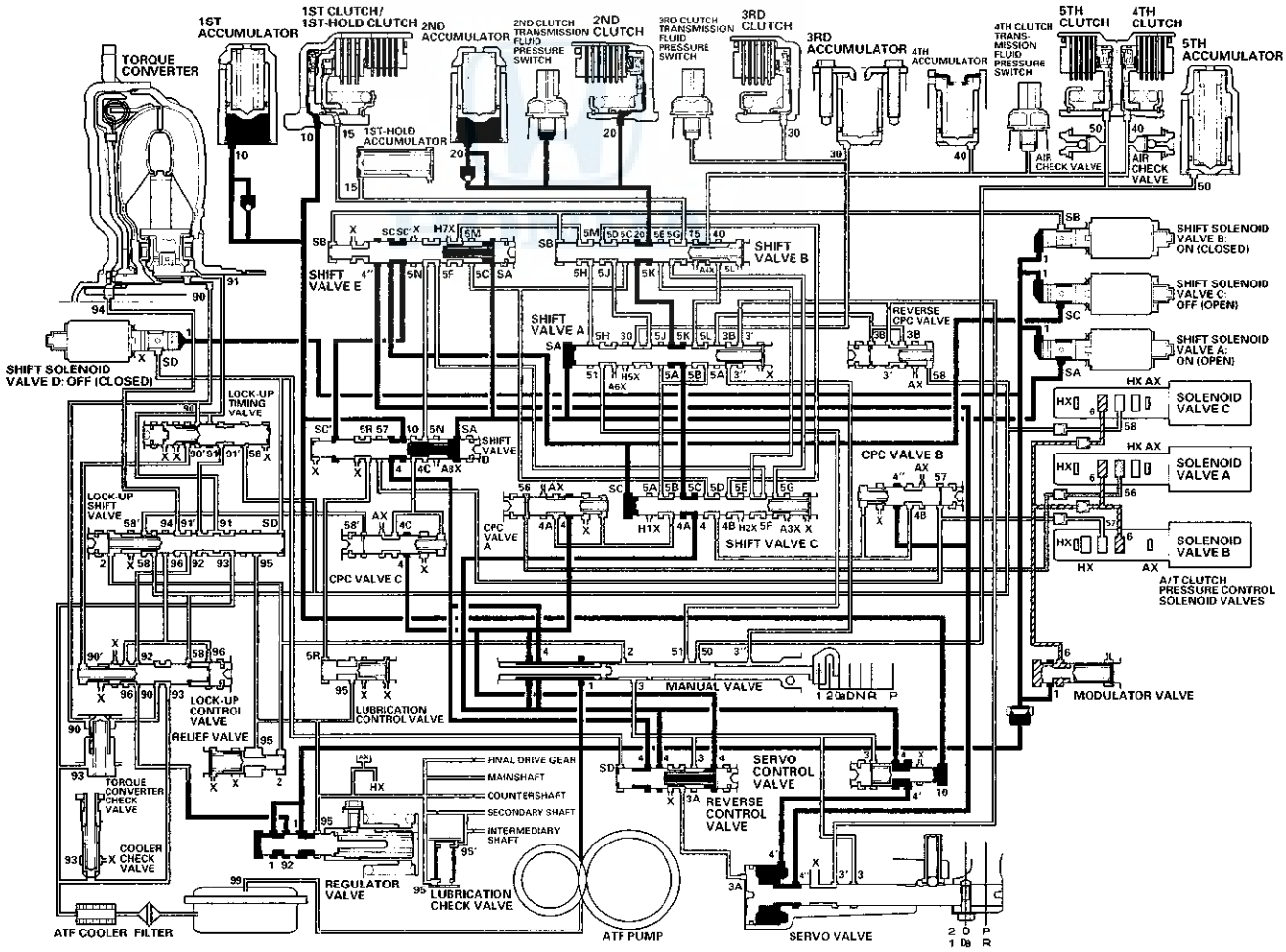
2 Position

Line pressure (1) regulated by the regulator valve flows to shift solenoid valves. The PCM switches the shift solenoid valves ON and OFF. The conditions of the shift solenoid valves and the positions of the shift valves are as follows:

- Shift solenoid valve A is ON, and opens the shift solenoid valve A pressure port (SA); shift valve A moves to the right side, and shift valve D remains to the left side.
- Shift solenoid valve B is turned ON, and closes the shift solenoid valve B pressure port (SB); shift valve B and shift valve E remain on the left side.
- Shift solenoid valve C is turned OFF, and opens the shift solenoid valve C pressure port (SC); shift valve C moves to the right side, and shift valve D remains on the left side.
- Shift solenoid valve D is OFF, and closes the shift solenoid valve D pressure port (SD).

Line pressure (4) from the manual valve becomes 2nd clutch pressure (20) at shift valve B, via shift valves C and A, and flows to the 2nd clutch. The 2nd clutch is engaged. Line pressure (4) from the manual valve also becomes 1st clutch pressure, and flows to the 1st clutch. The 1st clutch is also engaged, but no power is transmitted because of the one-way clutch.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



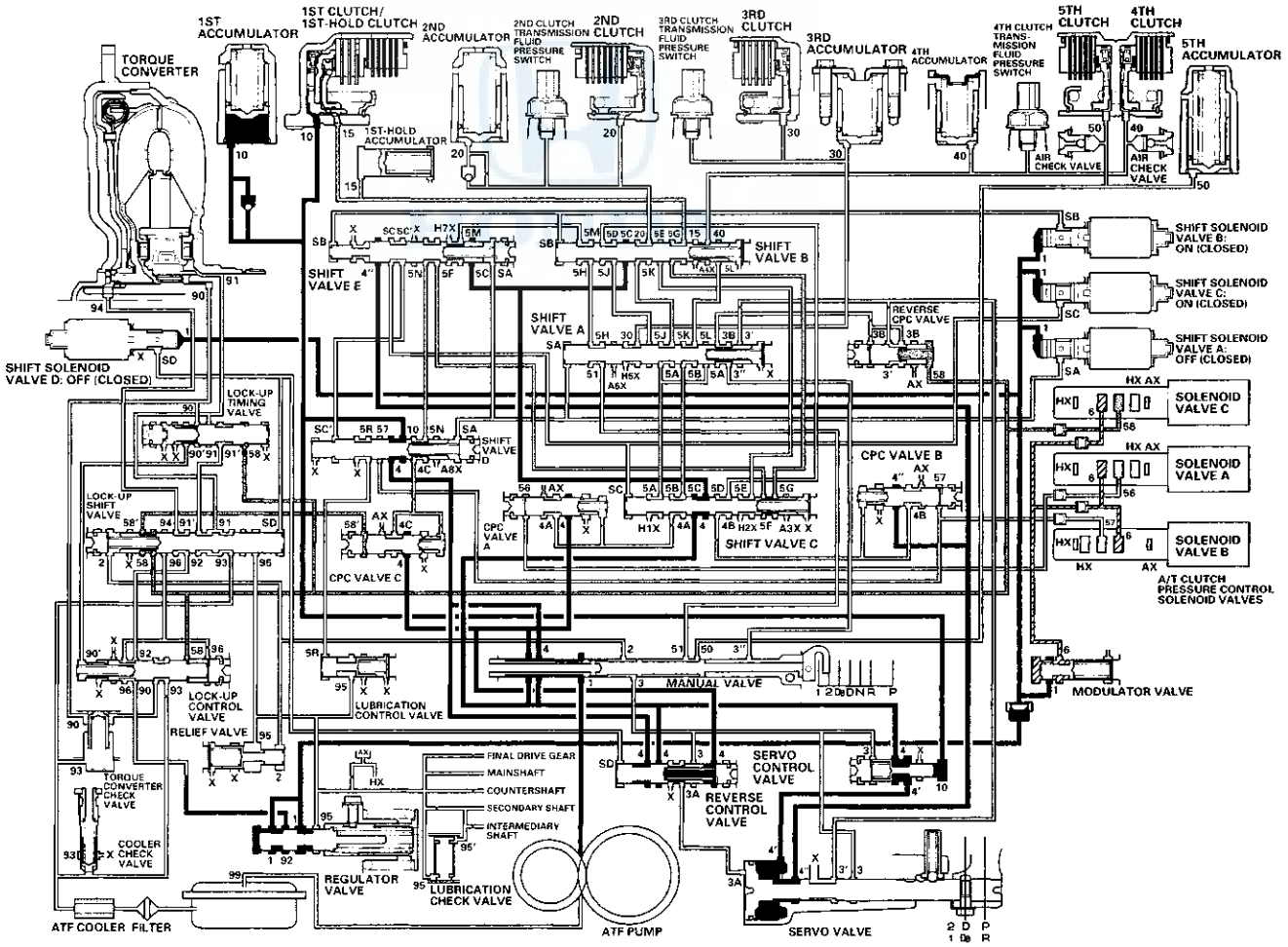
1 Position

Line pressure (1) regulated by the regulator valve flows to shift solenoid valves. The PCM switches the shift solenoid valves ON and OFF. The conditions of the shift solenoid valves and the positions of the shift valves are as follows:

- Shift solenoid valve A is OFF, and closes the shift solenoid valve A pressure port (SA); shift valve A remains on the left side.
- Shift solenoid valve B is turned ON, and closes the shift solenoid valve B pressure port (SB); shift valve B and shift valve E remain on the left side.
- Shift solenoid valve C is turned ON, and closes the shift solenoid valve C pressure port (SC); shift valve C and shift valve D remain on the left side.
- Shift solenoid valve D is OFF, and closes the shift solenoid valve D pressure port (SD).

Line pressure (4) becomes 1st clutch pressure (10) at shift valve D, and flows to the 1st clutch. The 1st clutch is engaged. The PCM actuates A/T clutch pressure control solenoid valve C, and A/T clutch pressure control solenoid valve C pressure (58) is applied to CPC valve C via the lock-up shift valve. CPC valve C regulates line pressure (4), and line pressure (4) becomes CPC C pressure (4C). CPC C pressure (4C) flows to shift valve B via shift valves D, E, and C, and becomes 1st-hold clutch pressure (15) at shift valve B. 1st-hold clutch pressure (15) is applied to the 1st-hold clutch, and the 1st-hold clutch is engaged.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

System Description (cont'd)

Hydraulic Flow (cont'd)

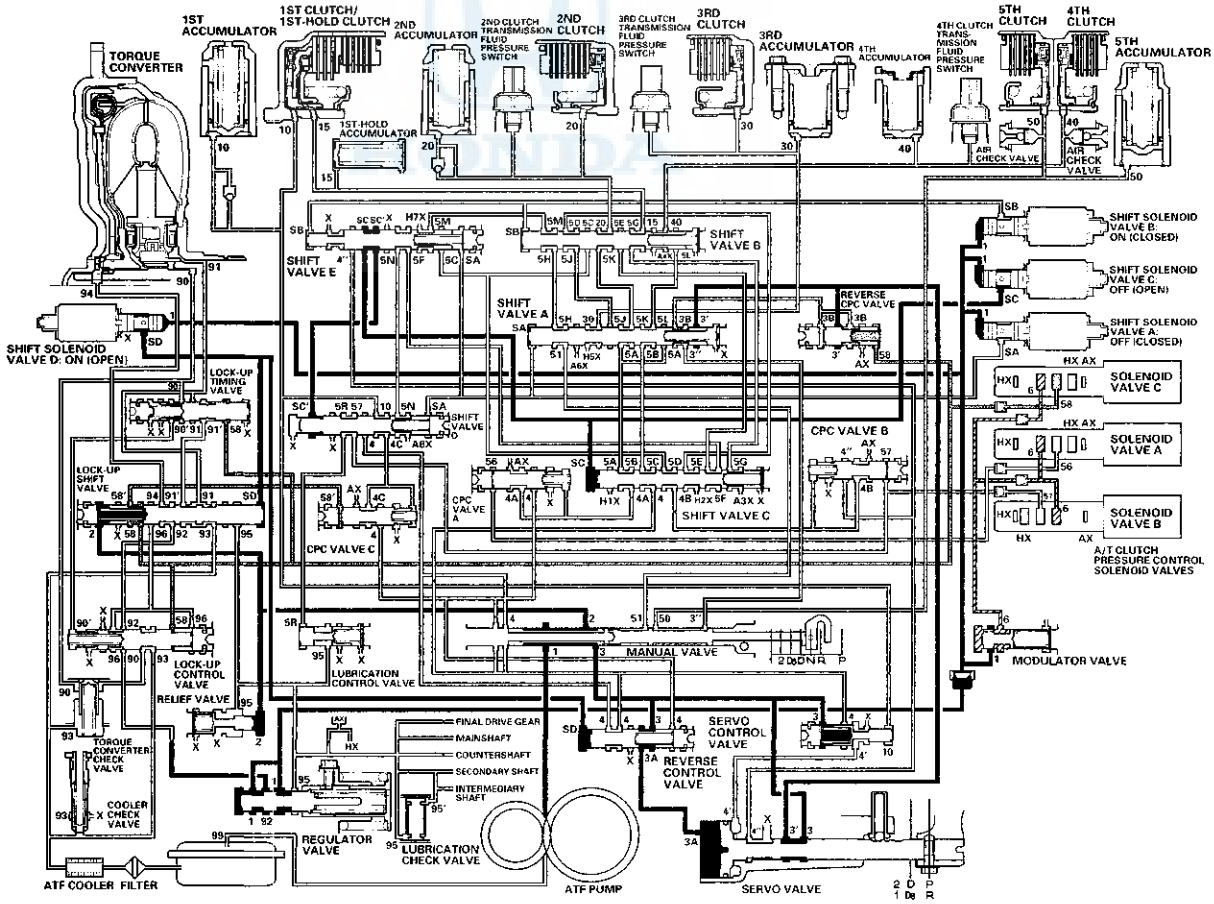
R Position: Shifting to R from P or N

The PCM switches the shift solenoid valves ON and OFF. The conditions of the shift solenoid valves and the positions of the shift valves are as follows:

- Shift solenoid valve A is OFF, and closes the shift solenoid valve A pressure port (SA); shift valve A remains on the left side.
- Shift solenoid valve B is turned ON, and closes the shift solenoid valve B pressure port (SB); shift valve B and shift valve E remain on the left side.
- Shift solenoid valve C is OFF, and opens the shift solenoid valve C pressure port (SC); shift valve C and shift valve D move to the right side.
- Shift solenoid valve D is turned ON, and opens the shift solenoid valve D pressure port (SD); reverse control valve moves to the right side.

The manual valve is moved to the R position, and line pressure (1) becomes line pressure (3) at the manual valve. Line pressure (3) passes through the reverse control valve, and becomes line pressure (3A), then flows to the servo valve. Line pressure (3A) pushes the servo valve to the reverse position. Line pressure (3) also flows to the reverse CPC valve, and becomes reverse CPC pressure (3B) (3''). Reverse CPC pressure (3'') becomes 5th clutch pressure (50) at the manual valve, and 5th clutch pressure (50) flows to the 5th clutch. The 5th clutch is engaged by the reverse CPC pressure.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



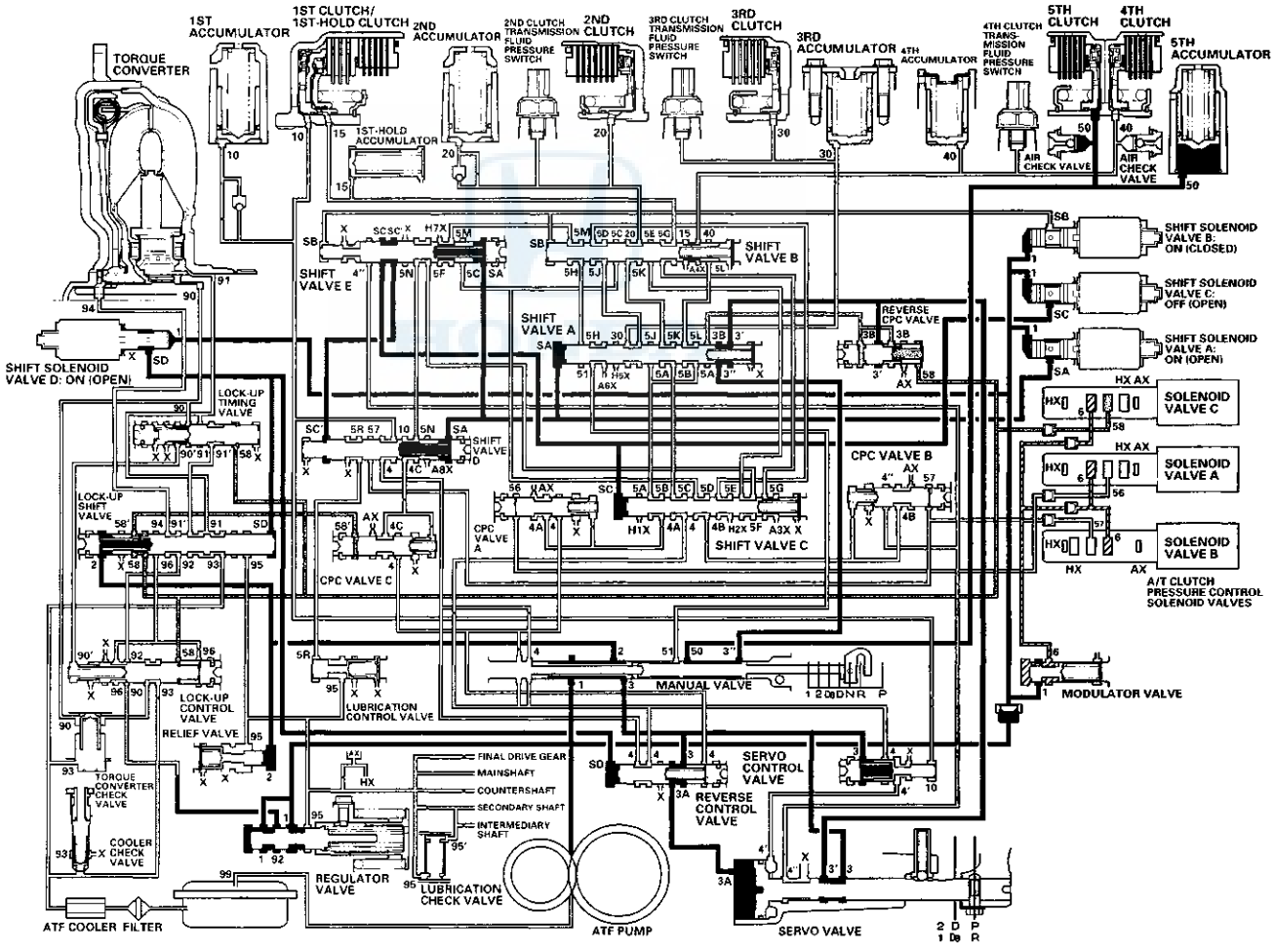
R Position: Driving in reverse gear

As the speed of the vehicle reaches the programmed value, the PCM turns shift solenoid valve A ON, and shift solenoid valve A uncovers the port of shift solenoid valve A pressure (SA) to shift valve A. Shift valve A is moved to the right side to switch the line pressure port (3') and the reverse CPC pressure port (3B) leading to the 5th clutch. Line pressure (3) flows to the manual valve via the servo valve and shift valve A, and becomes 5th clutch pressure (50) at the manual valve. The 5th clutch pressure (50) flows to the 5th clutch, and the 5th clutch is engaged by line pressure.

Reverse Inhibitor Control

When R is selected while the vehicle is moving forward at a speed over 6 mph (10 km/h), the PCM commands shift solenoid valve D to remain OFF so that shift solenoid valve D pressure (SD) is not applied to the reverse control valve. Line pressure (3) stops at the reverse control valve, and is not applied to the servo valve. No power is transmitted to the reverse direction.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

System Description (cont'd)

Hydraulic Flow (cont'd)

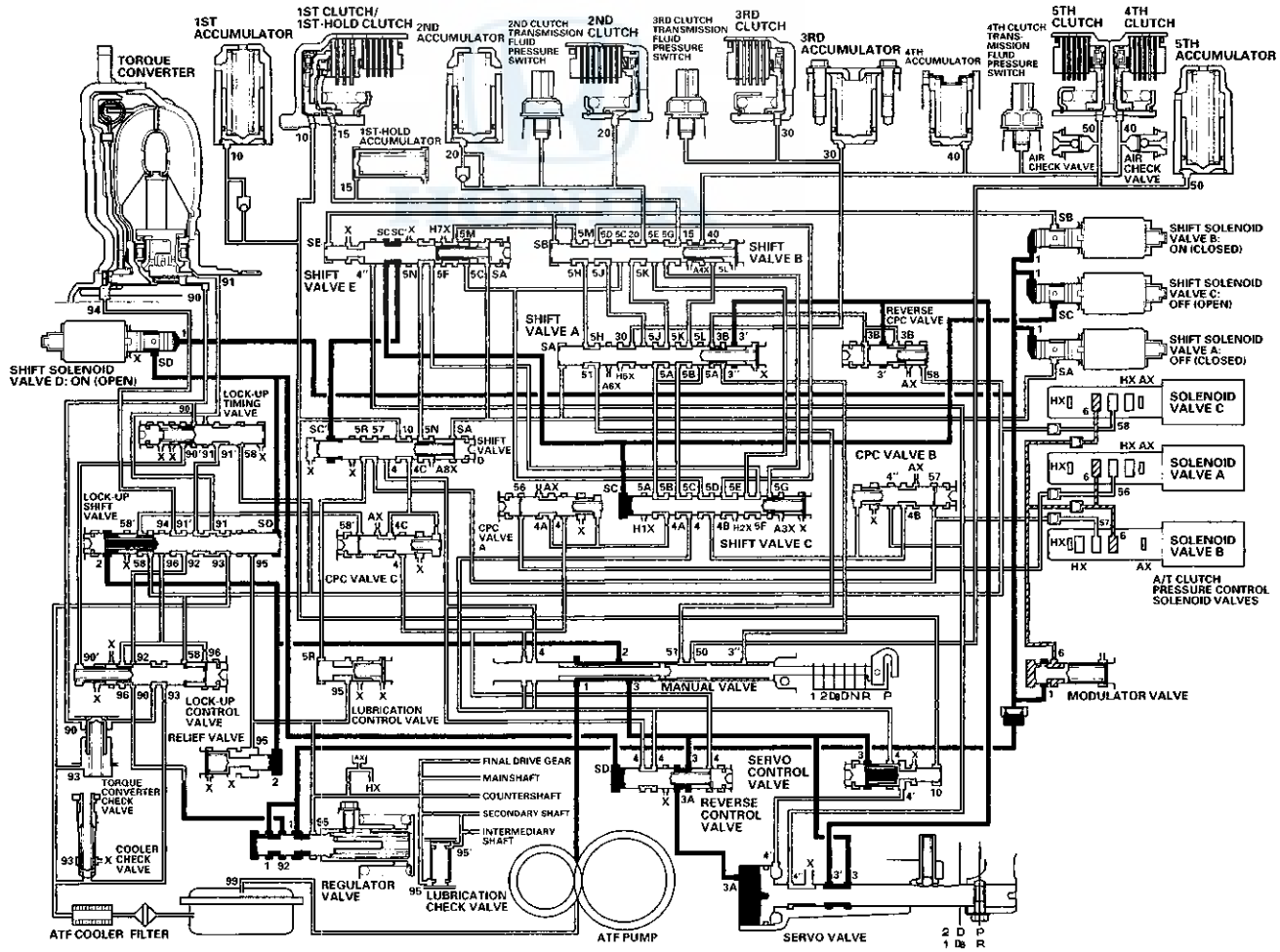
P Position

The PCM switches the shift solenoid valves ON and OFF. The conditions of the shift solenoid valves and the positions of the shift valves are as follows:

- Shift solenoid valve A is OFF, and closes the shift solenoid valve A pressure port (SA); shift valve A remains on the left side.
- Shift solenoid valve B is turned ON, and closes the shift solenoid valve B pressure port (SB); shift valve B and shift valve E remain on the left side.
- Shift solenoid valve C is OFF, and opens the shift solenoid valve C pressure port (SC); shift valve C and shift valve D move to the right side.
- Shift solenoid valve D is turned ON, and opens the shift solenoid valve D pressure port (SD); reverse control valve moves to the right side.

The manual valve is moved to the P position, and line pressure (1) becomes line pressure (3) at the manual valve. Line pressure (3) passes through the reverse control valve, and becomes line pressure (3A), then flows to the servo valve. Line pressure (3A) pushes the servo valve to the reverse position. Line pressure (3) flows to the manual valve via the reverse CPC valve and shift valve A, and stops at the manual valve. Hydraulic pressure is not applied the clutches.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



Lock-up System

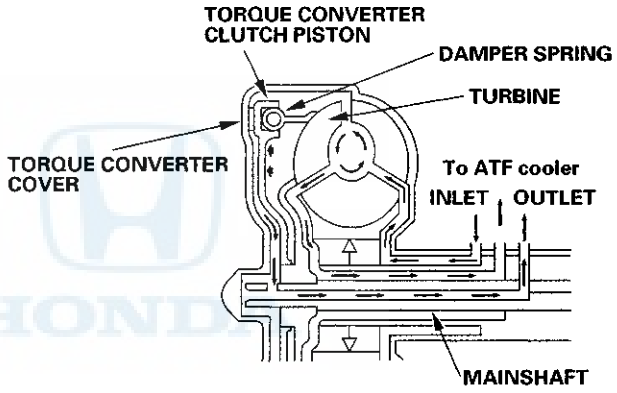
The lock-up mechanism of the torque converter clutch operates in D (2nd, 3rd, 4th, and 5th gears) and D3 (2nd and 3rd gears). The pressurized fluid is drained from the back of the torque converter through a fluid passage, causing the torque converter clutch piston to be held against the torque converter cover. As this takes place, the mainshaft rotates at the same speed as the engine crankshaft. Together with the hydraulic control, the PCM optimizes the timing and amount of the lock-up mechanism. When shift solenoid valve D is turned on by the PCM, shift solenoid valve D pressure switches the lock-up shift valve on and off. A/T clutch pressure control solenoid valve C, the lock-up control valve, and the lock-up timing valve control the degree of lock-up.

Torque Converter Clutch Lock-up ON (Engaging Torque Converter Clutch)
Fluid in the chamber between the torque converter cover and the torque converter clutch piston is drained off, and fluid entering from the chamber between the pump and stator exerts pressure through the torque converter clutch piston against the torque converter cover. The torque converter clutch piston engages with the torque converter cover; torque converter clutch lock-up ON, and the mainshaft rotates at the same as the engine.

Power flow

The power flows by way of:

Engine
↓
Drive plate
↓
Torque converter cover
↓
Torque converter clutch piston
↓
Damper spring
↓
Turbine
↓
Mainshaft

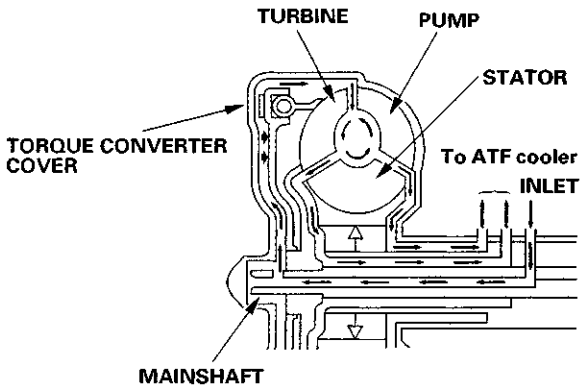


Torque Converter Clutch Lock-up OFF (Disengaging Torque Converter Clutch)
Fluid entered from the chamber between the torque converter cover and the torque converter clutch piston passes through the torque converter and goes out from the chambers between the turbine and the stator, and between the pump and the stator. As a result, the torque converter clutch piston moves away from the torque converter cover, and the torque converter clutch lock-up is released; torque converter clutch lock-up OFF.

Power flow

The power flows by way of:

Engine
↓
Drive plate
↓
Torque converter cover
↓
Pump
↓
Turbine
↓
Mainshaft



(cont'd)

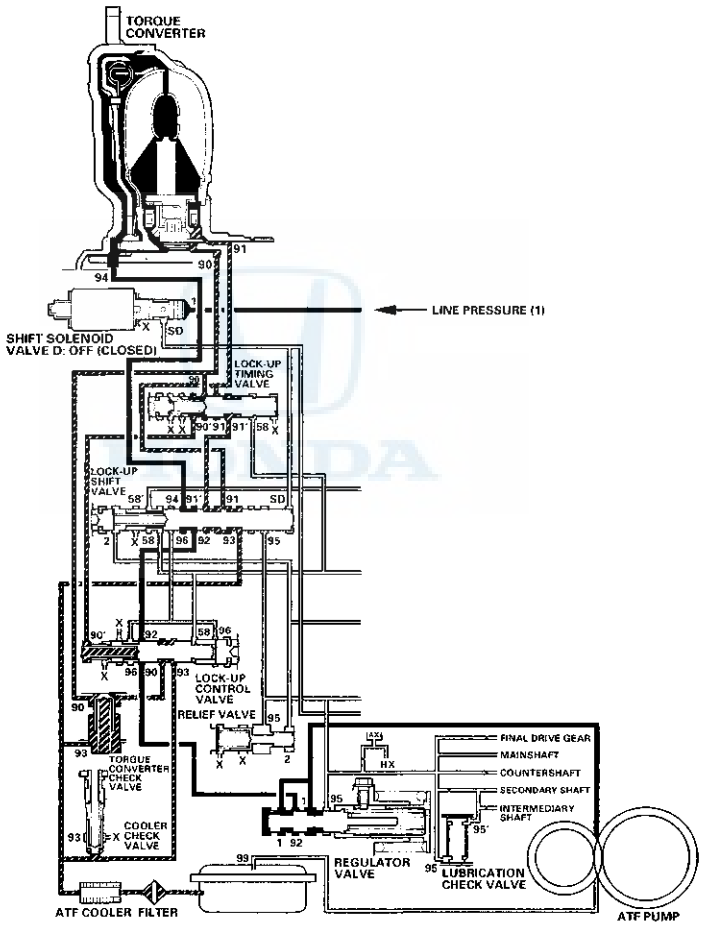
System Description (cont'd)

Lock-up System (cont'd)

No Lock-up

The PCM commands shift solenoid valve D to remain OFF, and shift solenoid valve D covers the shift solenoid valve D pressure port (SD) to the lock-up shift valve. The lock-up shift valve is in the right side, and uncovers the torque converter pressure port (92) leading to the left side of the torque converter. Torque converter pressure (92) from the regulator valve becomes torque converter pressure (94) at the lock-up shift valve, and enters into the left side of the torque converter to disengage the torque converter clutch. The torque converter clutch is OFF.

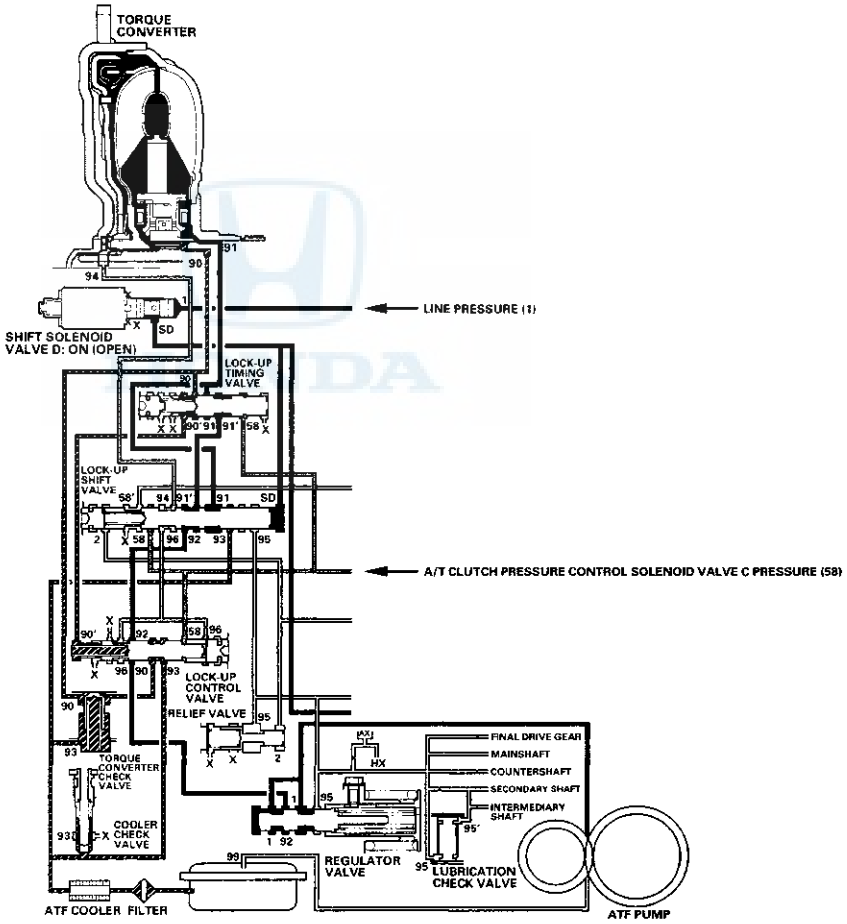
NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



Partial Lock-up

As the speed of the vehicle reaches the programmed value, the PCM turns shift solenoid valve D ON, and shift solenoid valve D uncovers the shift solenoid valve D pressure port (SD) to the lock-up shift valve. The lock-up shift valve is moved to the left side which uncovers the torque converter pressure port (91) leading to the right side of the torque converter to engage the torque converter clutch. The PCM also actuates A/T clutch pressure control solenoid valve C, and A/T clutch pressure control solenoid valve C pressure (58) is applied to the lock-up control valve and the lock-up timing valve. When A/T clutch pressure control solenoid valve C pressure (58) is low, torque converter pressure (91) from the lock-up timing valve is low. The torque converter clutch is engaged partially. A/T clutch pressure control solenoid valve C pressure (58) increases, and the lock-up timing valve is moved to the left side to uncover the torque converter pressure port leading to high. Under this condition, the torque converter clutch is engaged by pressure from the right side of the torque converter; this condition is partial lock-up.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



(cont'd)

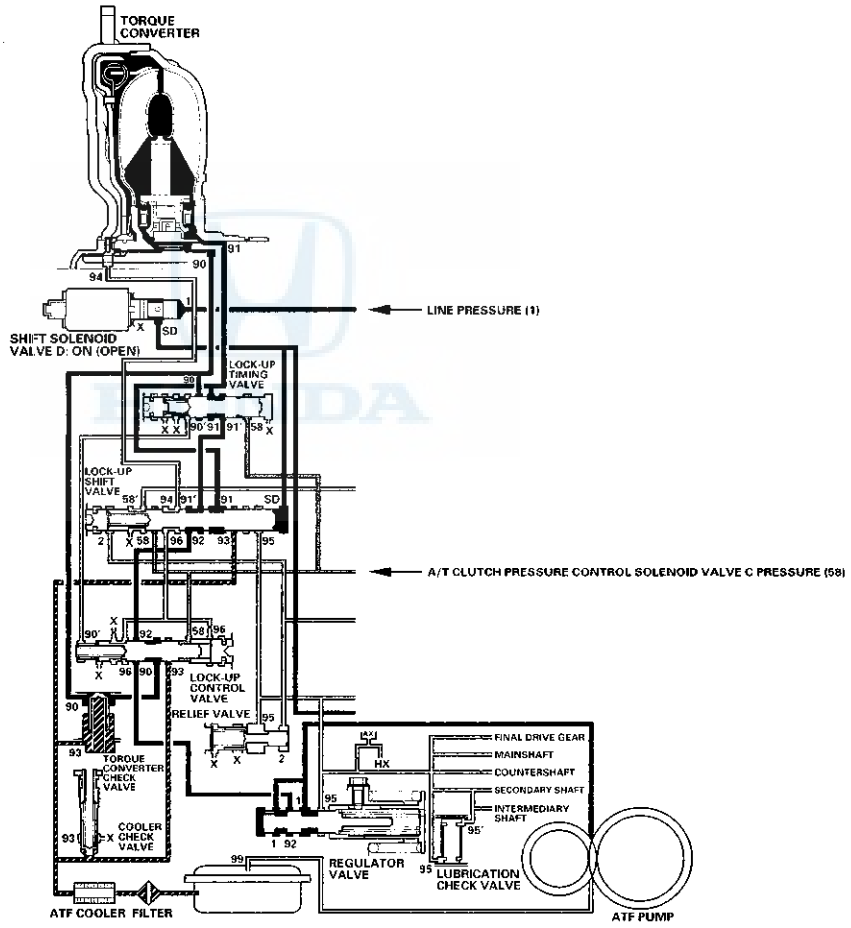
System Description (cont'd)

Lock-up System (cont'd)

Full Lock-up

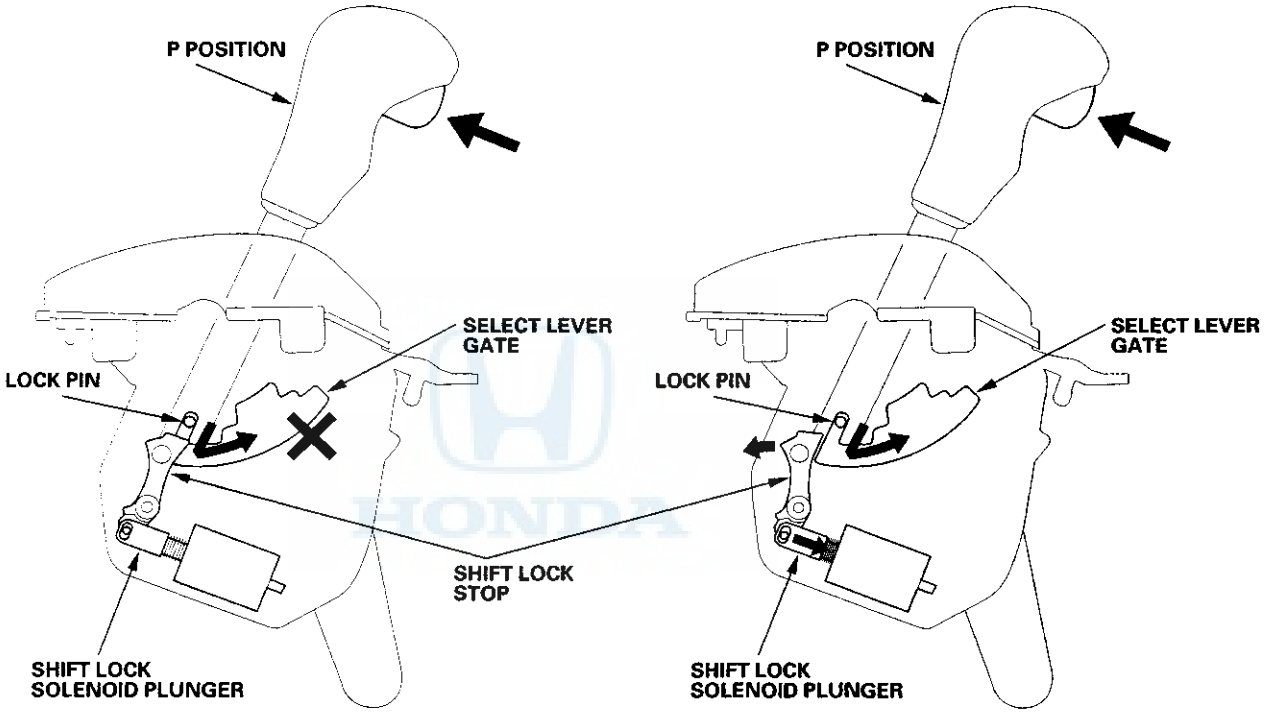
When the vehicle speed increases, the PCM actuates A/T clutch pressure control solenoid valve C to increase A/T clutch pressure control solenoid valve C pressure (58). A/T clutch pressure control solenoid valve C pressure (58) is applied to the lock-up control valve and the lock-up timing valve, and the lock-up control valve and the lock-up timing valve are moved to the left side. Torque converter pressure (94) from the left side of the torque converter releases at the lock-up control valve, and the lock-up timing valve uncovers the torque converter pressure port (91) leading to the right side of the torque converter. Torque converter back pressure is released fully, and the torque converter clutch is engaged fully.

NOTE: When used, "left" or "right" indicates direction on the hydraulic circuit.



Shift Lock System

The shift lock system prevents the shift lever from mis-shifting. The shift lock solenoid is usually OFF. After starting the engine in P, the shift lever cannot move to any other position from P because the shift lock stop stops the lock pin unless the brake pedal is pressed. When the brake pedal is pressed and the accelerator pedal is not pressed, the shift lock solenoid is ON; the shift lock solenoid plunger in the shift lock solenoid pulls the shift lock stop to release the lock pin. Pressing the shift lever button allows the shift lever to move to any other position. When the brake pedal and the accelerator pedal are pressed at the same time, the shift lock system is not unlocked.



SHIFT LOCK SOLENOID: OFF

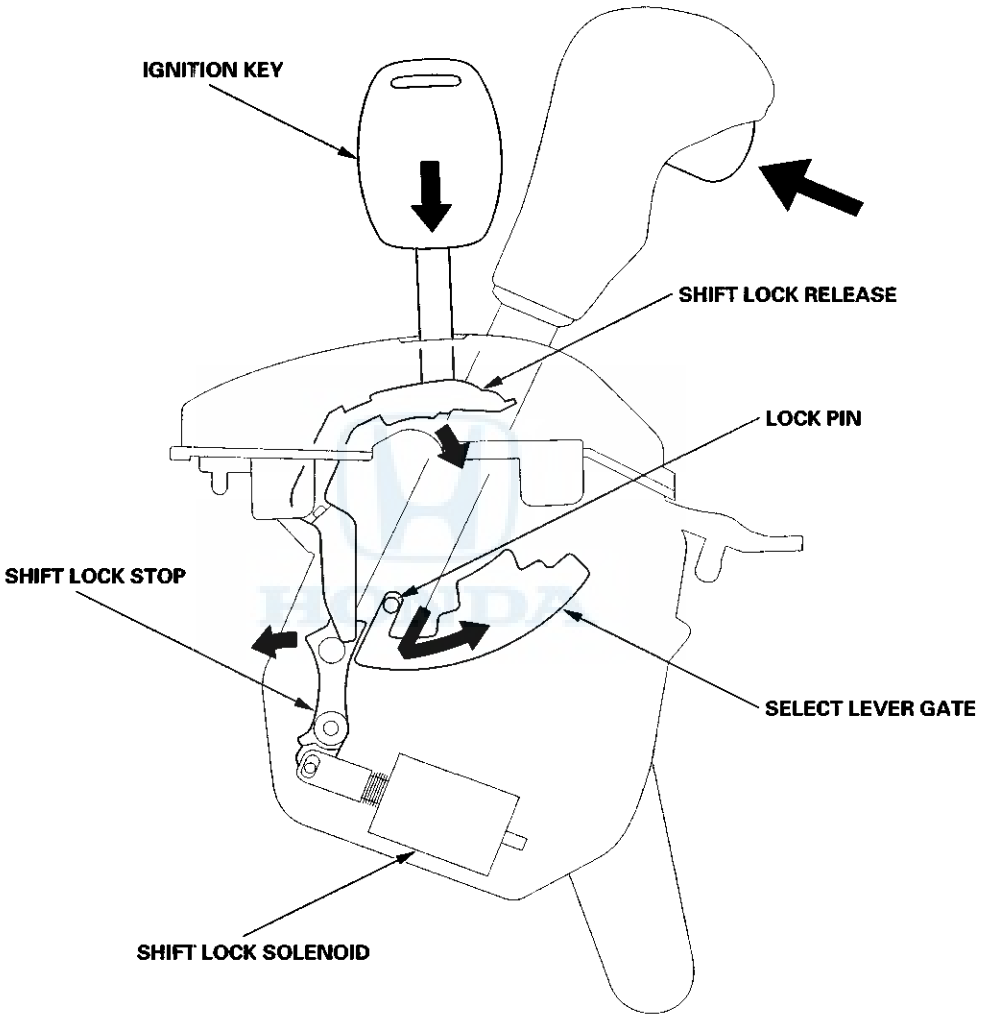
SHIFT LOCK SOLENOID: ON

(cont'd)

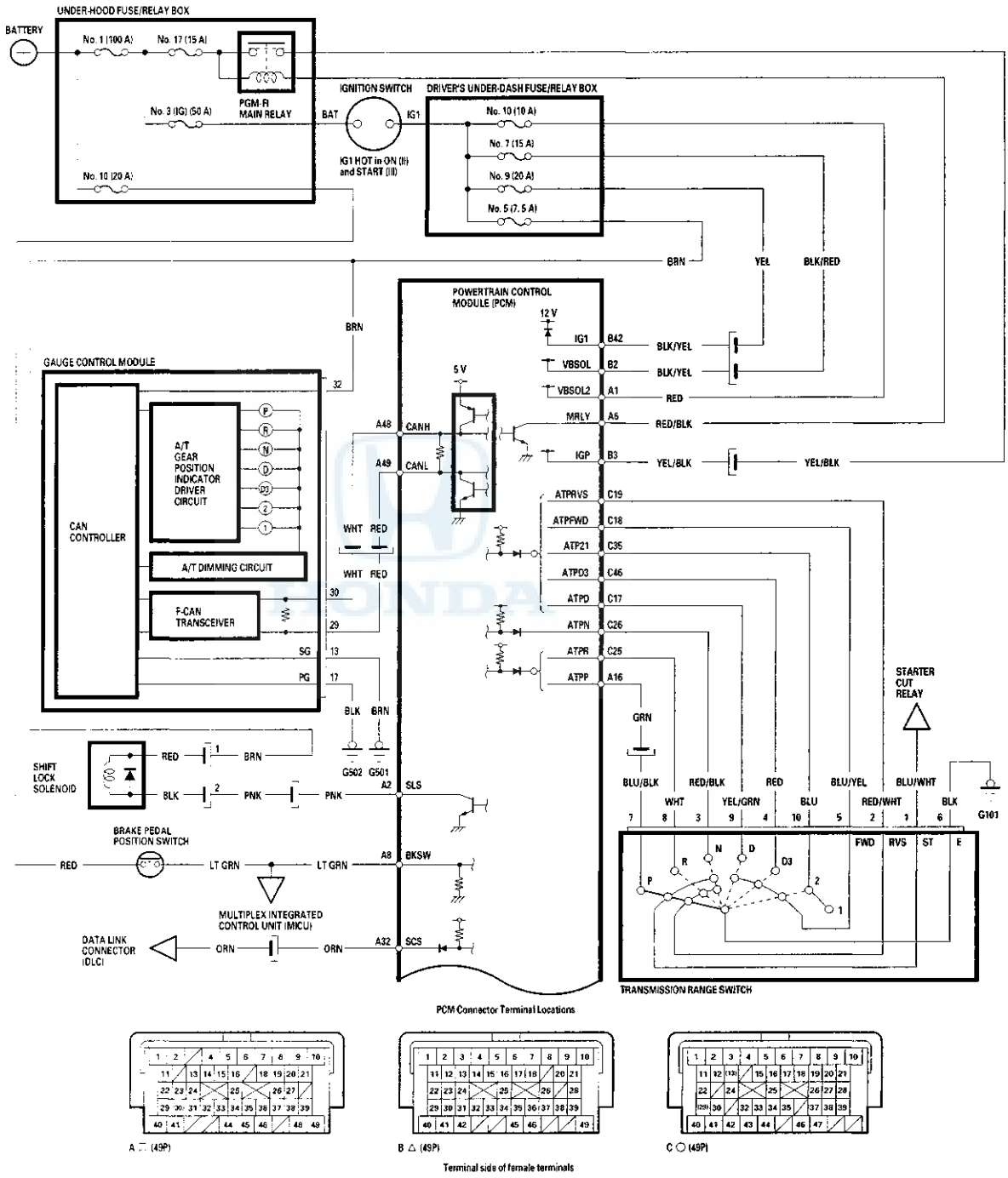
System Description (cont'd)

Shift Lock System (cont'd)

When the shift lock system does not operate due to mechanical or electrical trouble, you can unlock the shift lock temporarily by inserting the ignition key into the shift lock release hole and pressing the shift lock release. When the shift lock release is pressed, the shift lock stop releases the lock pin, and the shift lever can move to any other position.



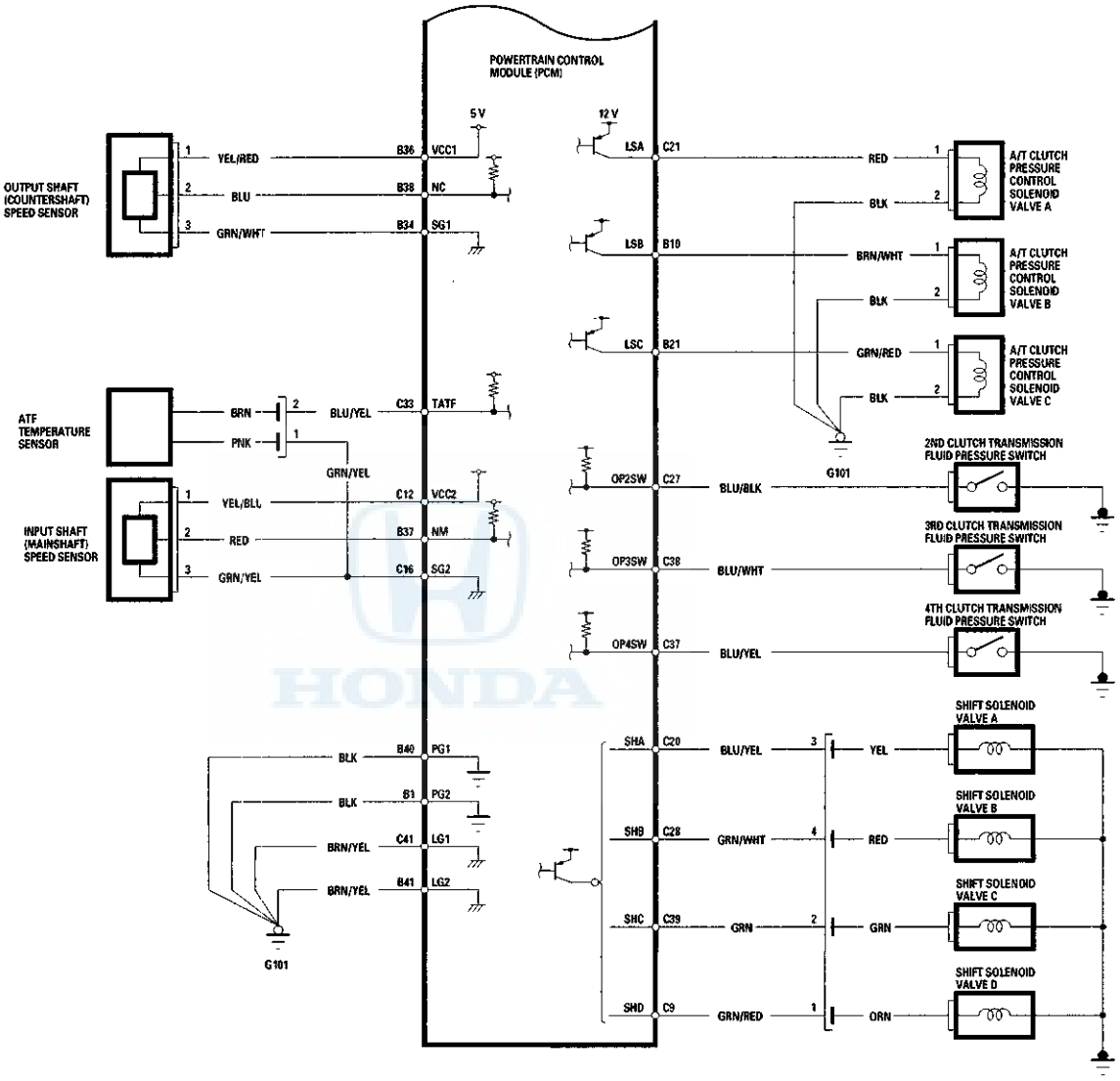
Circuit Diagram - PCM A/T Control System



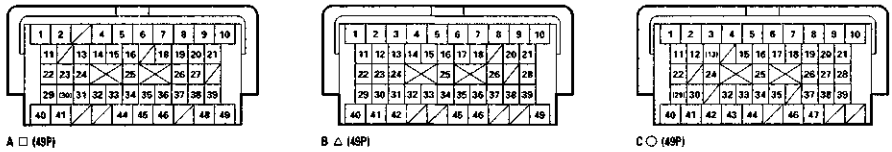
(cont'd)

System Description (cont'd)

Circuit Diagram - PCM A/T Control System (cont'd)



PCM Connector Terminal Locations



A □ (49P) B △ (49P) C ○ (49P)

Terminal side of female terminals

DTC P0705: Short in Transmission Range Switch Circuit (Multiple Shift-position Input)

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. With the brake pedal pressed, move the shift lever through all positions. Stop for at least 1 second in each position.
5. Monitor the OBD STATUS for P0705 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 6.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for an intermittent short in the wire between the transmission range switch and the PCM. If the HDS indicates NOT COMPLETED, go to step 3.
6. Turn the ignition switch to LOCK (0).
7. Disconnect the transmission range switch connector.
8. Turn the ignition switch to ON (II).
9. Check the ATPP, ATPR, ATPN, ATPD, ATPD3, ATP2, ATPFWD, and ATPRVS inputs with the HDS in the A/T Data List.

   Are there any ON-inputs?

   YES—Repair short in the ON-input circuit:

   - ATPP circuit: between PCM connector terminal A16 and transmission range switch connector terminal No. 7.
   - ATPR circuit: between PCM connector terminal C25 and transmission range switch connector terminal No. 8.
   - ATPN circuit: between PCM connector terminal C26 and transmission range switch connector terminal No. 3.
   - ATPD circuit: between PCM connector terminal C17 and transmission range switch connector terminal No. 9.
   - ATPD3 circuit: between PCM connector terminal C46 and transmission range switch connector terminal No. 4.
   - ATP21 circuit: between PCM connector terminal C35 and transmission range switch connector terminal No. 10.
   - ATPFWD circuit: between PCM connector terminal C18 and transmission range switch connector terminal No. 5.
   - ATPRVS circuit: between PCM connector terminal C19 and transmission range switch connector terminal No. 2.

   Go to step 12 after repairing the circuit.

   NO—Go to step 10.
10. Turn the ignition switch to LOCK (0).
11. Inspect the transmission range switch (see page 14-265).

    Is the transmission range switch OK?

    YES—Connect the transmission range switch connector, then go to step 16.

    NO—Replace the transmission range switch (see page 14-266), then go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

12. Start the engine.
13. With the brake pedal pressed, move the shift lever through all positions. Stop for at least 1 second in each position.
14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0705 indicated?

    YES—Check for intermittent short in the wire between the transmission range switch and the PCM, then go to step 12.

    NO—Go to step 15.
15. Monitor the OBD status for P0705 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the transmission range switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 12.
16. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
17. Start the engine.
18. With the brake pedal pressed, move the shift lever through all positions. Stop for at least 1 second in each position.
19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0705 indicated?

    YES—Check for intermittent short in the wire between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 17. If the PCM was substituted, go to step 1.

    NO—Go to step 20.
20. Monitor the OBD status for P0705 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for intermittent short in the wire between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 17. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 17.

DTC P0706: Open in Transmission Range Switch Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

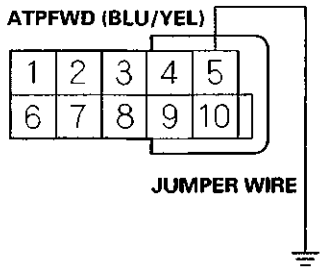
1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Block the rear wheels and raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely, or raise the vehicle on a lift.
4. Start the engine, and turn the VSA off (the light on the VSA OFF switch comes on). Run the engine in D until the vehicle speed reaches 25 mph (40 km/h), then slow down, and stop the wheels.
5. Verify the ATPFWD input with the HDS in the A/T Data List while the shift lever is in D, D3, and 2.

   Is ATPFWD ON in all D, D3, and 2?

   YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between the transmission range switch and the PCM. ■

   NO—Go to step 6.
6. Turn the ignition switch to LOCK (0).
7. Disconnect the transmission range switch connector.
8. Connect the transmission range switch connector terminal No. 5 to body ground with a jumper wire. Turn the ignition switch to ON (II), and verify the ATPFWD input in the A/T Data List.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

Is ATPFWD ON?

YES—Disconnect the jumper wire, and go to step 9.

NO—Disconnect the jumper wire, and repair open in the wire between PCM connector terminal C18 and the transmission range switch, then go to step 12.

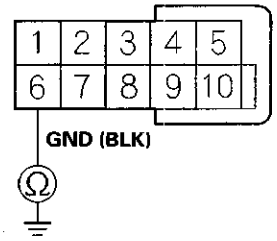
(cont'd)

DTC Troubleshooting (cont'd)

9. Turn the ignition switch to LOCK (0).

10. Check for continuity between transmission range switch connector terminal No. 6 and body ground.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 11.

NO—Repair open in the wire between the transmission range switch and body ground (G101), or repair poor body ground (G101), then go to step 12.

11. Inspect the transmission range switch (see page 14-265).

Is the transmission range switch OK?

YES—Connect the transmission range switch connector, then go to step 18.

NO—Replace the transmission range switch (see page 14-266), then go to step 15.

12. Reconnect all connectors.

13. Turn the ignition switch to ON (II).

14. Clear the DTC with the HDS.

15. Start the engine, and run it in D until the vehicle speed reaches 25 mph (40 km/h). Slow down, and stop the wheels.

16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0706 indicated?

YES—Check for poor connections or loose terminals between the transmission range switch and the PCM, then go to step 1.

NO—Go to step 17.

17. Monitor the OBD status for P0706 in the DTCs MENU with the HDS.

Does the HDS indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTC's troubleshooting. ■

NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the transmission range switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 15.

18. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

19. Start the engine, and run it in D until the vehicle speed reaches 25 mph (40 km/h). Slow down, and stop the wheels.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0706 indicated?

    YES—Check for poor connections or loose terminals between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 19. If the PCM was substituted, go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0706 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 19. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 19.

DTC P0711: Problem in ATF Temperature Sensor Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II), and wait for 20 seconds.

2. Check the ATF temperature with the HDS in the A/T Data List.

   Does the ATF temperature exceed the ambient air temperature?

   YES—Record the ATF temperature. Leave the engine off for at least 30 minutes, and go to step 3.

   NO—Record the ATF temperature. Test the stall speed RPM (see page 14-206) three times. Go to step 3 after stall speed testing.

3. Check the ATF temperature with the HDS.

   Does the ATF temperature change?

   YES—Leave the engine off for at least 30 minutes, and go to step 4.

   NO—Replace the ATF temperature sensor (see page 14-230), then go to step 6.

4. Check the ECT SENSOR with the HDS.

   Is the ECT SENSOR equal to the ambient air temperature?

   YES—Go to step 5.

   NO—Leave the engine off until the ECT SENSOR reads the same as ambient air temperature, then go to step 5.

(cont'd)

DTC Troubleshooting (cont'd)

5. Check the ATF TEMP SENSOR with the HDS.

   Does the ATF temperature read about the same as the ECT SENSOR?

   YES—Check for poor connections or loose terminals between the ATF temperature sensor and the PCM. If the connection is OK, go to step 14.

   NO—Replace ATF temperature sensor (see page 14-230), then go to step 6.

6. Turn the ignition switch to ON (II).

7. Clear the DTC with the HDS.

8. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

9. Turn the ignition switch to LOCK (0), and allow the engine to coolant cool to the ambient air temperature (the ECT SENSOR reads the same as the ambient air temperature).

10. Block the rear wheels and raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely, or raise the vehicle on a lift.

11. Turn the ignition switch to ON (II), and wait for 20 seconds, then start the engine. Warm the engine up to normal operating temperature (the radiator fan comes on). Start off in D, accelerate with the throttle opened at least 4 degrees, and run the vehicle at speeds over 19 mph (30 km/h) for at least 5 minutes. Or test-drive the vehicle for at least 20 seconds while the ATF temperature reads —4 °F to 230 °F (—20 °C to 110 °C) by monitoring with the HDS. Slow down, and stop the wheels.

12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0711 indicated?

    YES—Check for poor connections or loose terminals between the ATF temperature sensor and the PCM, then go to step 1.

    NO—Go to step 13.

13. Monitor the OBD status for P0711 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections and loose terminals at the ATF temperature sensor and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 8.

14. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

15. Turn the ignition switch to ON (II). Start the engine, and warm the engine up to normal operating temperature (the radiator fan comes on).

16. Turn the ignition switch to LOCK (0), and allow the engine to coolant cool to the ambient air temperature (the ECT SENSOR reads the same as the ambient air temperature).

17. Block the rear wheels and raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely, or raise the vehicle on a lift.

18. Turn the ignition switch to ON (II), and wait for 20 seconds, then start the engine. Warm the engine up to normal operating temperature (the radiator fan comes on). Start off in D, accelerate with the throttle opened at least 4 degrees, and run the vehicle at speeds over 19 mph (30 km/h) for at least 5 minutes. Or test-drive the vehicle for at least 20 seconds while the ATF temperature reads −4 °F to 230 °F (−20 °C to 110 °C) by monitoring with the HDS. Slow down, and stop the wheels.

19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0711 indicated?

    YES—Check for poor connections or loose terminals between the ATF temperature sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 15. If the PCM was substituted, go to step 1.

    NO—Go to step 20.

20. Monitor the OBD status for P0711 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the ATF temperature sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 15. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 15.

DTC P0712: Short in ATF Temperature Sensor Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).

2. Check the ATF temperature sensor voltage with the HDS in the A/T Data List.

   Is the ATF Temp Sensor (V) 0.07 V or less?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for an intermittent short to body ground in the ATFT wire between the ATF temperature sensor and the PCM.■

3. Turn the ignition switch to LOCK (0).

4. Disconnect the ATF temperature sensor connector at the transmission end cover.

5. Turn the ignition switch to ON (II).

6. Check the ATF temperature sensor voltage with the HDS.

   Is the ATF Temp Sensor (V) 0.07 V or less?

   YES—Go to step 7.

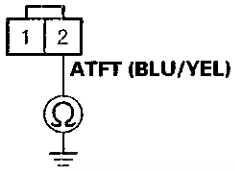
   NO—Replace ATF temperature sensor (see page 14-230), then go to step 11.

(cont'd)

DTC Troubleshooting (cont'd)

7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector C (49P).
10. Check for continuity between ATF temperature sensor connector terminal No. 2 and body ground.

ATF TEMPERATURE SENSOR CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C33 and ATF temperature sensor connector terminal No. 2, then go to step 11.

NO—Go to step 17.

11. Reconnect all connectors.
12. Turn the ignition switch to ON (II).
13. Clear the DTC with the HDS.
14. Start the engine in P, and wait for at least 10 seconds.
15. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0712 indicated?

YES—Check for intermittent short to body ground in the wire between the ATF temperature sensor and the PCM, then go to step 1.

NO—Go to step 16.

16. Monitor the OBD status for P0712 in the DTCs MENU with the HDS.

Does the HDS indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 15, go to the indicated DTC's troubleshooting. ■

NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the ATF temperature sensor and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 14.

17. Reconnect all connectors.

18. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

19. Start the engine in P, and wait for at least 10 seconds.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0712 indicated?

    YES—Check for intermittent short to body ground in the wire between the ATF temperature sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 19. If the PCM was substituted, go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0712 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the ATF temperature sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 19. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 19.

DTC P0713: Open in ATF Temperature Sensor Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).

2. Check the ATF temperature sensor voltage with the HDS in the A/T Data List.

   Does the ATF Temp Sensor (V) exceed 4.93 V?

   YES—Go to step 3.

   NO—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the ATF temperature sensor and the PCM. ■

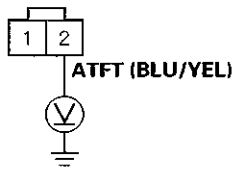
3. Turn the ignition switch to LOCK (0).

4. Disconnect the ATF temperature sensor connector at the transmission end cover.

5. Turn the ignition switch to ON (II).

6. Measure the voltage between ATF temperature sensor connector terminal No. 2 and body ground.

ATF TEMPERATURE SENSOR CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Go to step 7.

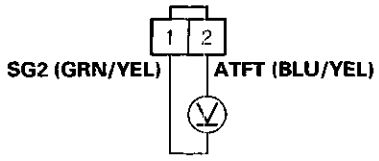
NO—Go to step 8.

(cont'd)

DTC Troubleshooting (cont'd)

7. Measure the voltage between ATF temperature sensor connector terminals No. 1 and No. 2.

ATF TEMPERATURE SENSOR CONNECTOR



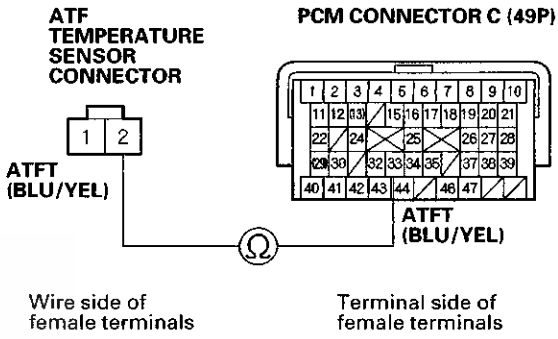
Wire side of female terminals

Is there about 5 V?

YES—Replace the ATF temperature sensor (see page 14-230), then go to step 12.

NO—Repair open in the wire between PCM connector terminal C16 and the ATF temperature sensor connector, then go to step 12.

8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connector C (49P).
11. Check for continuity between PCM connector terminal C33 and ATF temperature sensor connector terminal No. 2.



Is there continuity?

YES—Check for poor connections or loose terminals between the ATF temperature sensor and the PCM. If the connections are OK, go to step 18.

NO—Repair open in the wire between PCM connector terminal C33 and the ATF temperature sensor, then go to step 12.

12. Reconnect all connectors.

13. Turn the ignition switch to ON (II).

14. Clear the DTC with the HDS.

15. With the shift lever in P, turn the ignition switch to ON (II), and wait for at least 20 seconds. Then start the engine, and wait for at least 10 seconds.

16. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0713 indicated?

    YES—Check for poor connections or loose terminals between the ATF temperature sensor and the PCM, then go to step 1.

    NO—Go to step 17.

17. Monitor the OBD status for P0713 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the ATF temperature sensor and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 15.

18. Reconnect all connectors.

19. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

20. With the shift lever in P, turn the ignition switch to ON (II), and wait for at least 20 seconds. Then start the engine, and wait for at least 10 seconds.

21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0713 indicated?

    YES—Check for poor connections or loose terminals between the ATF temperature sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1.

    NO—Go to step 22.

22. Monitor the OBD status for P0713 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the ATF temperature sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 20.

DTC Troubleshooting (cont'd)

DTC P0716: Problem in Input Shaft (Mainshaft) Speed Sensor Circuit

DTC P0717: Problem in Input Shaft (Mainshaft) Speed Sensor Circuit (No Signal Input)

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

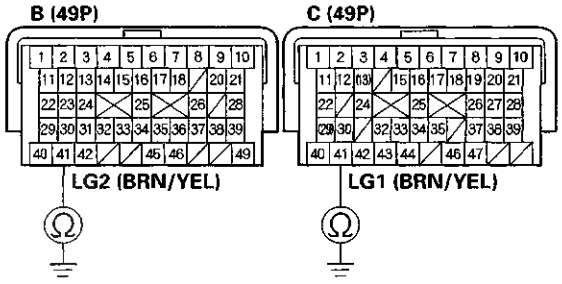
1. Check for proper input shaft (mainshaft) speed sensor installation (see page 14-227). If the sensor is installed improperly, correct the problem, then go to step 28.
2. Turn the ignition switch to ON (II).
3. Clear the DTC with the HDS.
4. Block the rear wheels and raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely, or raise the vehicle on a lift.
5. Start the engine, and turn the VSA off (the light on the VSA OFF switch comes on). Run the vehicle in either 2nd, 3rd, 4th, or 5th gear (not 1st) in D at speeds over 12 mph (20 km/h) for at least 10 seconds. Slow down and stop the wheels.
6. Monitor the OBD status for P0716 or P0717 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 7.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for loose or poor connections at the PCM and input shaft (mainshaft) speed sensor connectors. If the HDS indicates NOT COMPLETED, go to step 5.
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect PCM connectors B (49P) and C (49P).
10. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

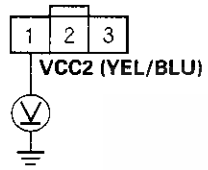
Is there continuity?

YES—Go to step 11.

NO—Repair open in the wires between PCM connector terminals B41, C41 and body ground (G101), or repair poor body ground (G101), then go to step 27.

11. Connect PCM connectors B (49P) and C (49P).
12. Disconnect the input shaft (mainshaft) speed sensor connector.
13. Turn the ignition switch to ON (II).
14. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 1 and body ground.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there about 5 V?

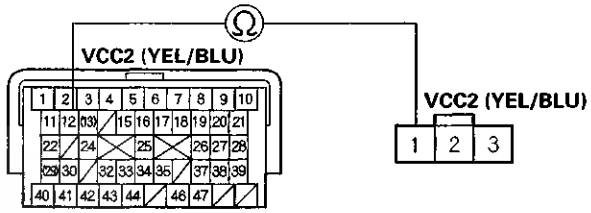
YES—Go to step 19.

NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).
16. Jump the SCS line with the HDS.
17. Disconnect PCM connector C (49P).
18. Check for continuity between PCM connector terminal C12 and input shaft (mainshaft) speed sensor connector terminal No. 1.

PCM CONNECTOR C (49P)

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Terminal side of female terminals

Wire side of female terminals

Is there continuity?

YES—Go to step 33.

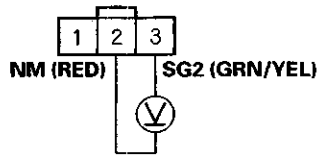
NO—Repair open in the wire between PCM connector terminal C12 and the input shaft (mainshaft) speed sensor, then go to step 27.

(cont'd)

DTC Troubleshooting (cont'd)

19. Measure the voltage between input shaft (mainshaft) speed sensor connector terminals No. 2 and No. 3.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Replace the input shaft (mainshaft) speed sensor (see page 14-227), then go to step 27.

NO—Go to step 20.

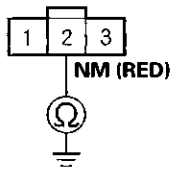
20. Turn the ignition switch to LOCK (0).

21. Jump the SCS line with the HDS.

22. Disconnect PCM connector B (49P).

23. Check for continuity between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

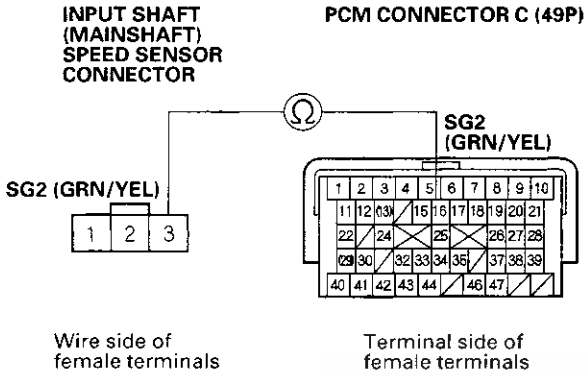
Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal B37 and the input shaft (mainshaft) speed sensor, then go to step 27.

NO—Go to step 24.

24. Connect PCM connectors B (49P) and C (49P).

25. Check for continuity between PCM connector terminal C16 and input shaft (mainshaft) speed sensor connector terminal No. 3.

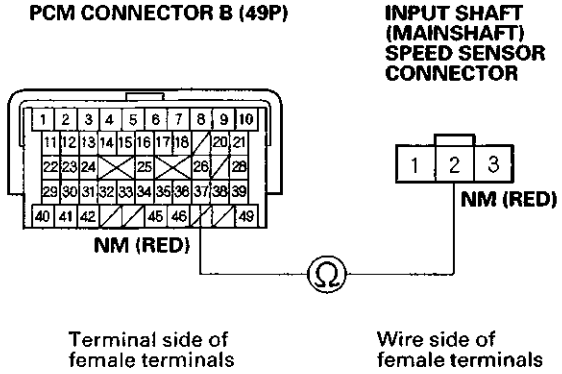


Is there continuity?

YES—Go to step 26.

NO—Repair open in the wire between the input shaft (mainshaft) speed sensor connector and PCM connector terminal C16, then go to step 27.

26. Check for continuity between PCM connector terminal B37 and input shaft (mainshaft) speed sensor connector terminal No. 2.



Is there continuity?

YES—Go to step 33.

NO—Repair open in the wire between PCM connector terminal B37 and the input shaft (mainshaft) speed sensor, then go to step 27.

(cont'd)

DTC Troubleshooting (cont'd)

27. Reconnect all connectors.
28. Turn the ignition switch to ON (II).
29. Clear the DTC with the HDS.
30. Start the engine. Run the vehicle in either 2nd, 3rd, 4th, or 5th gear (not 1st) in D at speeds over 12 mph (20 km/h) for at least 10 seconds. Slow down and stop the wheels.
31. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0716 or P0717 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM, then go to step 1.

    NO—Go to step 32.
32. Monitor the OBD status for P0716 or P0717 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other temporary DTCs or DTCs were indicated in step 31, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 30.
33. Reconnect all connectors.
34. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
35. Start the engine. Run the vehicle in either 2nd, 3rd, 4th, or 5th gear (not 1st) in D at speeds over 12 mph (20 km/h) for at least 10 seconds. Slow down and stop the wheels.
36. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0716 or P0717 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 35. If the PCM was substituted, go to step 1.

    NO—Go to step 37.
37. Monitor the OBD status for P0716 or P0717 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other DTCs were indicated in step 36, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 35. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 35.

DTC P0718: Input Shaft (Mainshaft) Speed Sensor Intermittent Failure

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears at speeds over 12 mph (20 km/h). Slow down, and stop the wheels.
4. Monitor the OBD status for P0718 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 5.

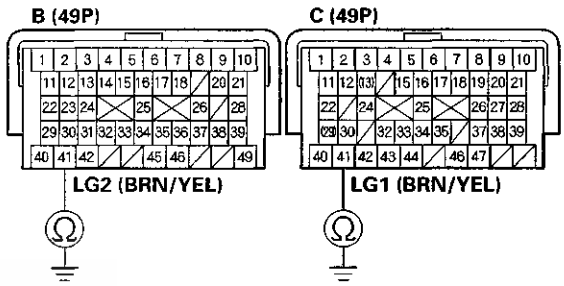
   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM. If the HDS indicates NOT COMPLETED, go to step 3.
5. Turn the ignition switch to LOCK (0).
6. Disconnect the input shaft (mainshaft) speed sensor connector, and inspect the connector and connector terminals to be sure they are making good contact.

   Are the input shaft (mainshaft) speed sensor connector terminals OK?

   YES—Go to step 7.

   NO—Repair the connector terminals, then go to step 23.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connectors B (49P) and C (49P).
9. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

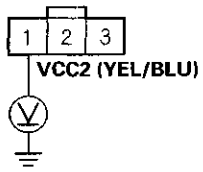
NO—Repair open in the wires between PCM connector terminals B41, C41 and body ground (G101), or repair poor body ground (G101), then go to step 23.

(cont'd)

DTC Troubleshooting (cont'd)

10. Connect PCM connectors B (49P) and C (49P).
11. Turn the ignition switch to ON (II).
12. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 1 and body ground.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

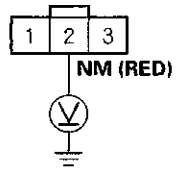
Is there about 5 V?

YES—Go to step 13.

NO—Go to step 19.

13. Measure the voltage between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there about 5 V?

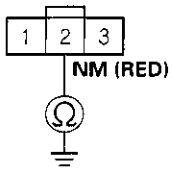
YES—Replace the input shaft (mainshaft) speed sensor (see page 14-227), then go to step 23.

NO—Go to step 14.

14. Turn the ignition switch to LOCK (0).
15. Jump the SCS line with the HDS.
16. Disconnect PCM connector B (49P).

17. Check for continuity between input shaft (mainshaft) speed sensor connector terminal No. 2 and body ground.

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there continuity?

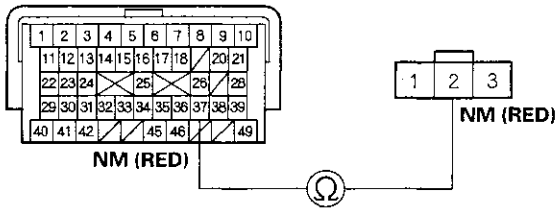
YES—Repair short to body ground in the wire between PCM connector terminal B37 and the input shaft (mainshaft) speed sensor connector, then go to step 23.

NO—Go to step 18.

18. Check for continuity between PCM connector terminal B37 and input shaft (mainshaft) speed sensor connector terminal No. 2.

PCM CONNECTOR B (49P)

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Terminal side of female terminals

Wire side of female terminals

Is there continuity?

YES—Go to step 29.

NO—Repair open in the wire between PCM connector terminal B37 and the input shaft (mainshaft) speed sensor, then go to step 23.

19. Turn the ignition switch to LOCK (0).

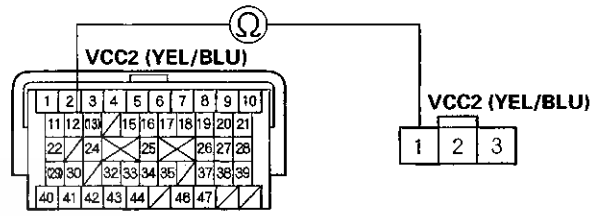
20. Jump the SCS line with the HDS.

21. Disconnect PCM connector C (49P).

22. Check for continuity between PCM connector terminal C12 and input shaft (mainshaft) speed sensor connector terminal No. 1.

PCM CONNECTOR C (49P)

INPUT SHAFT (MAINSHAFT) SPEED SENSOR CONNECTOR



Terminal side of female terminals

Wire side of female terminals

Is there continuity?

YES—Go to step 29.

NO—Repair open in the wire between PCM connector terminal C12 and the input shaft (mainshaft) speed sensor, then go to step 23.

(cont'd)

DTC Troubleshooting (cont'd)

23. Reconnect all connectors.

24. Turn the ignition switch to ON (II).

25. Clear the DTC with the HDS.

26. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears at speeds over 12 mph (20 km/h). Slow down, and stop the wheels.

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0718 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM, then go to step 1.

    NO—Go to step 28.

28. Monitor the OBD status for P0718 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 26.

29. Reconnect all connectors.

30. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

31. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears at speeds over 12 mph (20 km/h). Slow down, and stop the wheels.

32. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0718 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 31. If the PCM was substituted, go to step 1.

    NO—Go to step 33.

33. Monitor the OBD status for P0718 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 32, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 31. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 31.

DTC P0721: Problem in Output Shaft (Countershaft) Speed Sensor Circuit

DTC P0722: Problem in Output Shaft (Countershaft) Speed Sensor Circuit (No Signal Input)

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page **14-4**).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Check for proper output shaft (countershaft) speed sensor installation (see page 14-228). If the sensor is installed improperly, correct the problem, then go to step 27.

2. Turn the ignition switch to ON (II).

3. Clear the DTC with the HDS.

4. Block the rear wheels and raise the front of the vehicle, make sure it is securely supported, and allow the front wheels to rotate freely, or raise the vehicle on a lift.

5. Start the engine, and turn the VSA off (the light on the VSA OFF switch comes on). Run the vehicle in either 2nd, 3rd, 4th, or 5th gear (not 1st) in D with the engine speed at 2,000 rpm or higher, for at least 10 seconds. Slow down and stop the wheels.

6. Monitor the OBD status for P0721 or P0722 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 7.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for loose or poor connections between the PCM and output shaft (countershaft) speed sensor connectors. If the HDS indicates NOT COMPLETED, go to step 5.

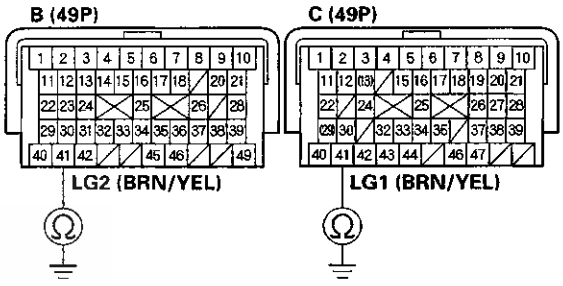
7. Turn the ignition switch to LOCK (0).

8. Jump the SCS line with the HDS.

9. Disconnect PCM connectors B (49P) and C (49P).

10. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Go to step 11.

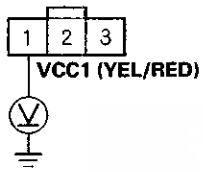
NO—Repair open in the wires between PCM connector terminals B41, C41 and body ground (G101), or repair poor body ground (G101), then go to step 26.

(cont'd)

DTC Troubleshooting (cont'd)

11. Connect PCM connectors B (49P) and C (49P).
12. Disconnect the output shaft (countershaft) speed sensor connector.
13. Turn the ignition switch to ON (II).
14. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 1 and body ground.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there about 5 V?

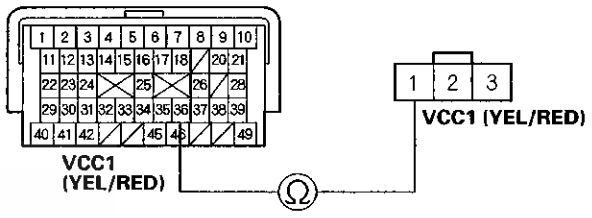
YES—Go to step 19.

NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).
16. Jump the SCS line with the HDS.
17. Disconnect PCM connector B (49P).
18. Check for continuity between PCM connector terminal B36 and output shaft (countershaft) speed sensor connector terminal No. 1.

PCM CONNECTOR B (49P)

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Terminal side of female terminals

Wire side of female terminals

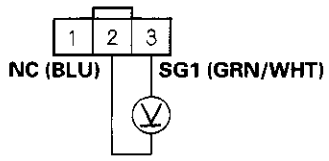
Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between PCM connector terminal B36 and the output shaft (countershaft) speed sensor, then go to step 26.

19. Measure the voltage between output shaft (countershaft) speed sensor connector terminals No. 2 and No. 3.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Replace the output shaft (countershaft) speed sensor (see page 14-228), then go to step 26.

NO—Go to step 20.

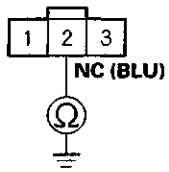
20. Turn the ignition switch to LOCK (0).

21. Jump the SCS line with the HDS.

22. Disconnect PCM connector B (49P).

23. Check for continuity between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there continuity?

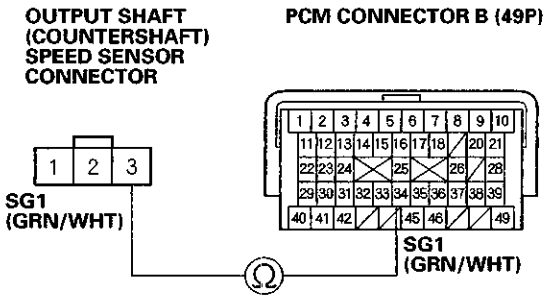
YES—Repair short to body ground in the wire between PCM connector terminal B38 and the output shaft (countershaft) speed sensor, then go to step 26.

NO—Go to step 24.

(cont'd)

DTC Troubleshooting (cont'd)

24. Check for continuity between PCM connector terminal B34 and output shaft (countershaft) speed sensor connector terminal No. 3.

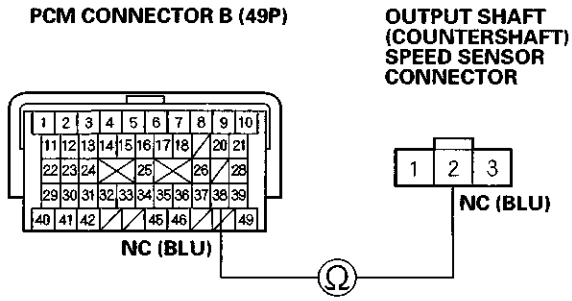


Is there continuity?

YES—Go to step 25.

NO—Repair open in the wire between output shaft (countershaft) speed sensor connector and PCM connector terminal B34, then go to step 26.

25. Check for continuity between PCM connector terminal B38 and output shaft (countershaft) speed sensor connector terminal No. 2.



Is there continuity?

YES—Go to step 32.

NO—Repair open in the wire between PCM connector terminal B36 and the output shaft (countershaft) speed sensor, then go to step 26.

26. Reconnect all connectors.

27. Turn the ignition switch to ON (II).

28. Clear the DTC with the HDS.

29. Start the engine. Run the vehicle in either 2nd, 3rd, 4th, or 5th gear (not 1st) in D at speeds over 12 mph (20 km/h) for at least 10 seconds. Slow down and stop the wheels.

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0721 or P0722 indicated?

    YES—Check for poor connections and loose terminals at the output shaft (countershaft) speed sensor and the PCM, then go to step 1.

    NO—Go to step 31.

31. Monitor the OBD status for P0721 or P0722 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the output shaft (countershaft) speed sensor and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 29.

32. Reconnect all connectors.

33. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

34. Start the engine. Run the vehicle in either 2nd, 3rd, 4th, or 5th gear (not 1st) in D at speeds over 12 mph (20 km/h) for at least 10 seconds. Slow down and stop the wheels.

35. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0721 or P0722 indicated?

    YES—Check for poor connections or loose terminals the output shaft (countershaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 34. If the PCM was substituted, go to step 1.

    NO—Go to step 36.

36. Monitor the OBD status for P0721 or P0722 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 35, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the output shaft (countershaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 34. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 34.

DTC Troubleshooting (cont'd)

DTC P0723: Output Shaft (Countershaft) Speed Sensor Intermittent Failure

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears under the same conditions as those indicated by the freeze data. Slow down, and stop the wheels.
4. Monitor the OBD status for P0723 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 4.

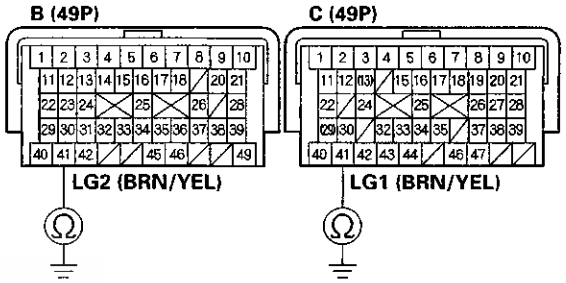
   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between the output shaft (countershaft) speed sensor and the PCM. If the HDS indicates NOT COMPLETED, go to step 3.
5. Turn the ignition switch to LOCK (0).
6. Disconnect the output shaft (countershaft) speed sensor connector, and inspect the connector and connector terminals to be sure they are making good contact.

   Are the output shaft (countershaft) speed sensor connector terminals OK?

   YES—Go to step 7.

   NO—Repair the connector terminals, then go to step 23.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connectors B (49P) and C (49P).
9. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

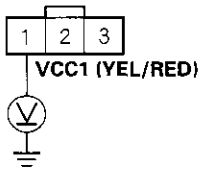
Is there continuity?

YES—Go to step 10.

NO—Repair open in the wires between PCM connector terminals B41, C41 and body ground (G101), or repair poor body ground (G101), then go to step 23.

10. Connect PCM connectors B (49P) and C (49P).
11. Turn the ignition switch to ON (II).
12. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 1 and body ground.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

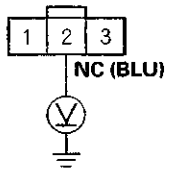
Is there about 5 V?

YES—Go to step 13.

NO—Go to step 19.

13. Measure the voltage between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there about 5 V?

YES—Replace the output shaft (countershaft) speed sensor (see page 14-228), then go to step 23.

NO—Go to step 14.

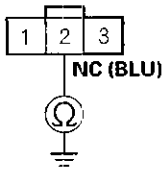
14. Turn the ignition switch to LOCK (0).
15. Jump the SCS line with the HDS.
16. Disconnect PCM connector B (49P).

(cont'd)

DTC Troubleshooting (cont'd)

17. Check for continuity between output shaft (countershaft) speed sensor connector terminal No. 2 and body ground.

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Wire side of female terminals

Is there continuity?

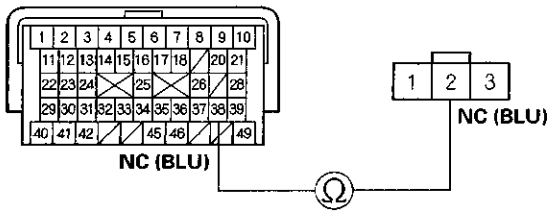
YES—Repair short to body ground in the wire between PCM connector terminal B38 and the output shaft (countershaft) speed sensor connector, then go to step 23.

NO—Go to step 18.

18. Check for continuity between PCM connector terminal B38 and output shaft (countershaft) speed sensor connector terminal No. 2.

PCM CONNECTOR B (49P)

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Terminal side of female terminals

Wire side of female terminals

Is there continuity?

YES—Go to step 29.

NO—Repair open in the wire between PCM connector terminal B38 and the output shaft (countershaft) speed sensor, then go to step 23.

19. Turn the ignition switch to LOCK (0).

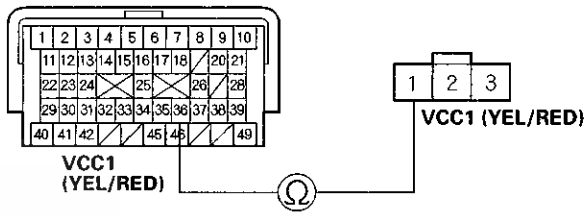
20. Jump the SCS line with the HDS.

21. Disconnect PCM connector B (49P).

22. Check for continuity between PCM connector terminal B36 and output shaft (countershaft) speed sensor connector terminal No. 1.

PCM CONNECTOR B (49P)

OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CONNECTOR



Terminal side of female terminals

Wire side of female terminals

Is there continuity?

YES—Go to step 29.

NO—Repair open in the wire between PCM connector terminal B36 and the output shaft (countershaft) speed sensor, then go to step 23.

23. Reconnect all connectors.

24. Turn the ignition switch to ON (II).

25. Clear the DTC with the HDS.

26. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears at speeds over 12 mph (20 km/h). Slow down, and stop the wheels.

27. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0723 indicated?

    YES—Check for poor connections or loose terminals between the output shaft (countershaft) speed sensor and the PCM, then go to step 1.

    NO—Go to step 28.

28. Monitor the OBD status for P0723 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the output shaft (countershaft) speed sensor and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 26.

29. Reconnect all connectors.

30. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

31. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears at speeds over 12 mph (20 km/h). Slow down, and stop the wheels.

32. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0723 indicated?

    YES—Check for poor connectors or loose terminals between the output shaft (countershaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 31. If the PCM was substituted, go to step 1.

    NO—Go to step 33.

33. Monitor the OBD status for P0723 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 32, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the output shaft (countershaft) speed sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 31. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 31.

DTC Troubleshooting (cont'd)

DTC P0731: Problem in 1st Clutch and 1st Clutch Hydraulic Circuit

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 11.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.

4. Measure the line pressure (see page 14-207).

   Is the line pressure within the service limits?

   YES—Go to step 5.

   NO—Repair the ATF pump and the regulator valve, or replace the transmission, then go to step 11.

5. Measure the 1st clutch pressure (see page 14-207).

   Is the 1st clutch pressure within the service limits?

   YES—Go to step 6.

   NO—Shift valves B and C are stuck. Repair these valves and the related hydraulic circuit, or replace the transmission, then go to step 11.

6. Turn the ignition switch to ON (II).

7. Clear the DTC with the HDS.

8. Test-drive the vehicle: Start off in D, accelerate at 10 % opened-throttle or more, and run the vehicle in 1st gear at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.

9. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0731 indicated?

   YES—Repair the 1st clutch, or replace the transmission, then go to step 11.

   NO—Go to step 10.

10. Monitor the OBD status for P0731 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs were indicated in step 9, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, repair the 1st clutch, or replace the transmission, then go to step 11. If the HDS indicates NOT COMPLETED, go to step 8.

11. Test-drive the vehicle: Start off in D, accelerate at 10 % opened-throttle or more, and run the vehicle in 1st gear at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.

12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0731 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 1.

    NO—Go to step 13.

13. Monitor the OBD status for P0731 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 4. If the HDS indicates NOT COMPLETED, go to step 11.

DTC P0732: Problem in 2nd Clutch and 2nd Clutch Hydraulic Circuit

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 11.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.

4. Measure the line pressure (see page 14-207).

   Is the line pressure within the service limits?

   YES—Go to step 5.

   NO—Repair the ATF pump and the regulator valve, or replace the transmission, then go to step 11.

5. Measure the 2nd clutch pressure (see page 14-207).

   Is the 2nd clutch pressure within the service limits?

   YES—Go to step 6.

   NO—Shift valves A, B, and C are stuck. Repair these valves and the related hydraulic circuit, or replace the transmission, then go to step 11.

(cont'd)

DTC Troubleshooting (cont'd)

6. Turn the ignition switch to ON (II).
7. Clear the DTC with the HDS.
8. Test-drive the vehicle in 2nd gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.
9. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0732 indicated?

   YES—Repair the 2nd clutch, or replace the transmission, then go to step 11.

   NO—Go to step 10.

10. Monitor the OBD status for P0732 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs were indicated in step 9, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, repair the 2nd clutch, or replace the transmission, then go to step 11. If the HDS indicates NOT COMPLETED, go to step 8.

11. Test-drive the vehicle in 2nd gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.
12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0732 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 1.

    NO—Go to step 13.

13. Monitor the OBD status for P0732 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 4. If the HDS indicates NOT COMPLETED, go to step 11.

DTC P0733: Problem in 3rd Clutch and 3rd Clutch Hydraulic Circuit

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 11.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Measure the line pressure (see page 14-207).

   Is the line pressure within the service limits?

   YES—Go to step 5.

   NO—Repair the ATF pump and the regulator valve, or replace the transmission, then go to step 11.
5. Measure the 3rd clutch pressure (see page 14-207).

   Is the 3rd clutch pressure within the service limits?

   YES—Go to step 6.

   NO—Shift valves A, B, and C are stuck. Repair these valves and the related hydraulic circuit, or replace the transmission, then go to step 11.
6. Turn the ignition switch to ON (II).
7. Clear the DTC with the HDS.
8. Test-drive the vehicle in 3rd gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.
9. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0733 indicated?

   YES—Repair the 3rd clutch, or replace the transmission, then go to step 11.

   NO—Go to step 10.
10. Monitor the OBD status for P0733 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs were indicated in step 9, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, repair the 3rd clutch, or replace the transmission, then go to step 11. If the HDS indicates NOT COMPLETED, go to step 8.

(cont'd)

DTC Troubleshooting (cont'd)

11. Test-drive the vehicle in 3rd gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.

12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0733 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 1.

    NO—Go to step 13.

13. Monitor the OBD status for P0733 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 4. If the HDS indicates NOT COMPLETED, go to step 11.

DTC P0734: Problem in 4th Clutch and 4th Clutch Hydraulic Circuit

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 11.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.

4. Measure the line pressure (see page 14-207).

   Is the line pressure within the service limits?

   YES—Go to step 5.

   NO—Repair the ATF pump and the regulator valve, or replace the transmission, then go to step 11.

5. Measure the 4th clutch pressure (see page 14-207).

   Is the 4th clutch pressure within the service limits?

   YES—Go to step 6.

   NO—Shift valves A, B, C, and D are stuck. Repair these valves and the related hydraulic circuit, or replace the transmission, then go to step 11.

6. Turn the ignition switch to ON (II).

7. Clear the DTC with the HDS.

8. Test-drive the vehicle in 4th gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.

9. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0734 indicated?

   YES—Repair the 4th clutch, or replace the transmission, then go to step 11.

   NO—Go to step 10.

10. Monitor the OBD status for P0734 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs were indicated in step 9, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, repair the 4th clutch, or replace the transmission, then go to step 11. If the HDS indicates NOT COMPLETED, go to step 8.

11. Test-drive the vehicle in 4th gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.

12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0734 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 1.

    NO—Go to step 13.

13. Monitor the OBD status for P0734 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTC's troubleshooting. ■

    NO—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 4. If the HDS indicates NOT COMPLETED, go to step 11.

DTC Troubleshooting (cont'd)

DTC P0735: Problem in 5th Clutch and 5th Clutch Hydraulic Circuit

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information with the HDS (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 11.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Measure the line pressure (see page 14-207).

   Is the line pressure within the service limits?

   YES—Go to step 5.

   NO—Repair the ATF pump and the regulator valve, or replace the transmission, then go to step 11.
5. Measure the 5th clutch pressure (see page 14-207).

   Is the 5th clutch pressure within the service limits?

   YES—Go to step 6.

   NO—Shift valves A, B, C, and D are stuck. Repair these valves and the related hydraulic circuit, replace the transmission, then go to step 11.
6. Turn the ignition switch to ON (II).
7. Clear the DTC with the HDS.
8. Test-drive the vehicle in 5th gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.
9. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0735 indicated?

   YES—Repair the 5th clutch, or replace the transmission, then go to step 11.

   NO—Go to step 10.
10. Monitor the OBD status for P0735 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs were indicated in step 9, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, repair the 5th clutch, or replace the transmission, then go to step 11. If the HDS indicates NOT COMPLETED, go to step 8.

11. Test-drive the vehicle in 5th gear in D at speeds over 7 mph (12 km/h) for at least 12 seconds. Slow down and stop the wheels.

12. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0735 indicated?

    YES—Check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 1.

    NO—Go to step 13.

13. Monitor the OBD status for P0735 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the input shaft (mainshaft) speed sensor, the output shaft (countershaft) speed sensor, and the PCM, then go to step 4. If the HDS indicates NOT COMPLETED, go to step 11.

DTC P0741: Torque Converter Clutch Hydraulic Circuit Stuck OFF

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 14.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 14.

4. Turn the ignition switch to ON (II).

5. Clear the DTC with the HDS.

6. Select Shift Solenoid Valve D in the Miscellaneous Test Menu, and check that the shift solenoid valve D operates with the HDS.

   Is a clicking sound heard?

   YES—Go to step 7.

   NO—Replace shift solenoid valve D (see page 14-211), then go to step 14.

7. Run the engine until the engine coolant temperature reaches 176 °F (80 °C).

(cont'd)

DTC Troubleshooting (cont'd)

8. Select Clutch Pressure Control (Linear) Solenoid Valve C in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve C with the HDS.

   Does the HDS indicate NORMAL?

   YES—Go to step 9.

   NO—Follow the instructions indicated on the HDS for the test result. If the HDS has not determined the cause of the failure, go to step 11. If any part is replaced, go to step 12.

9. Test-drive the vehicle on a level road with a steady throttle at 60 mph (96 km/h) for at least 22 seconds, or test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.

10. Monitor the OBD status for P0741 in the DTCs MENU with the HDS.

    Does the HDS indicate FAILED?

    YES—Repair the torque converter clutch hydraulic circuit, the lock-up shift valve, or the lock-up control valve, or replace the torque converter, then go to step 14.

    NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 9.

11. Inspect A/T clutch pressure control solenoid valve C (see page 14-223).

    Does A/T clutch pressure control solenoid valve C work properly?

    YES—Repair the hydraulic system related to the lock-up shift valve, the lock-up control valve, and the lock-up timing valve, or replace the transmission, then go to step 14.

    NO—Replace A/T clutch pressure control solenoid valve C (see page 14-226), then go to step 12.

12. Turn the ignition switch to ON (II).

13. Clear the DTC with the HDS.

14. Test-drive the vehicle on a level road with a steady throttle at 60 mph (96 km/h) for at least 22 seconds, or test-drive the vehicle for several minutes under the same conditions as those indicated by the freeze data.

15. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0741 indicated?

    YES—Go to step 8.

    NO—Go to step 16.

16. Monitor the OBD status for P0741 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 15, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 14.

DTC P0746: A/T Clutch Pressure Control Solenoid Valve A Stuck OFF

DTC P0747: A/T Clutch Pressure Control Solenoid Valve A Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 13.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Turn the ignition switch to ON (II).
5. Clear the DTC with the HDS.
6. Test-drive the vehicle with the shift lever in D for at least 20 seconds, and let the transmission shift through all five gears. Then slow down to a stop.
7. Monitor the OBD status for P0746 or P0747 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.
8. Clear the DTC with the HDS.
9. Select Clutch Pressure Control (Linear) Solenoid Valve A in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve A with the HDS.

   Does the HDS indicate NORMAL?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Follow the instructions indicated on the HDS according to the test result. If the HDS has not determined the cause of the failure, go to step 10. If any part is replaced, go to step 11.
10. Inspect A/T clutch pressure control solenoid valve A (see page 14-215).

    Does A/T clutch pressure control solenoid valve A work properly?

    YES—Repair the hydraulic system related with shift valve A, or replace the transmission, then go to step 13.

    NO—Replace A/T clutch pressure control solenoid valve A (see page 14-221), then go to step 11.
11. Turn the ignition switch to ON (II).
12. Clear the DTC with the HDS.
13. Test-drive the vehicle with the shift lever in D for at least 20 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

(cont'd)

DTC Troubleshooting (cont'd)

14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0746 or P0747 indicated?

    YES—Go to step 8.

    NO—Go to step 15.

15. Monitor the OBD STATUS for P0746 or P0747 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 13.

DTC P0751: Shift Solenoid Valve A Stuck OFF

DTC P0752: Shift Solenoid Valve A Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 12.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.

4. Turn the ignition switch to ON (II).

5. Clear the DTC with the HDS.

6. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

7. Monitor the OBD status for P0751 or P0752 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.

8. Clear the DTC with the HDS.

9. Select Shift Solenoid Valve A in the Miscellaneous Test Menu, and check that shift solenoid valve A operates with the HDS.

   Is a clicking sound heard?

   YES—Go to step 10.

   NO—Replace the shift solenoid valve A (see page 14-211), then go to step 12.

10. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

11. Monitor the OBD status for P0751 or P0752 in the DTCs MENU with the HDS.

    Does the HDS indicate FAILED?

    YES—Repair shift valve A, or replace the transmission, then go to step 12.

    NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 10.

12. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0751 or P0752 indicated?

    YES—Go to step 8.

    NO—Go to step 14.

14. Monitor the OBD STATUS for P0751 or P0752 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 12.

DTC Troubleshooting (cont'd)

DTC P0756: Shift Solenoid Valve B Stuck OFF

DTC P0757: Shift Solenoid Valve B Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 12.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Turn the ignition switch to ON (II).
5. Clear the DTC with the HDS.
6. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.
7. Monitor the OBD status for P0756 or P0757 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.
8. Clear the DTC with the HDS.
9. Select Shift Solenoid Valve B in the Miscellaneous Test Menu, and check that shift solenoid valve B operates with the HDS.

   Is a clicking sound heard?

   YES—Go to step 10.

   NO—Replace shift solenoid valve B (see page 14-211), then go to step 12.
10. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.
11. Monitor the OBD status for P0756 or P0757 in the DTCs MENU with the HDS.

    Does the HDS indicate FAILED?

    YES—Repair shift valve B, or replace the transmission, then go to step 12.

    NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 10.
12. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0756 or P0757 indicated?

    YES—Go to step 8.

    NO—Go to step 14.

14. Monitor the OBD STATUS for P0756 or P0757 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 12.

DTC P0761: Shift Solenoid Valve C Stuck OFF

DTC P0762: Shift Solenoid Valve C Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 12.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.

4. Turn the ignition switch to ON (II).

5. Clear the DTC with the HDS.

6. Test-drive the vehicle with the shift lever in D for at least 20 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

7. Monitor the OBD status for P0761 or P0762 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.

(cont'd)

DTC Troubleshooting (cont'd)

8. Clear the DTC with the HDS.

9. Select Shift Solenoid Valve C in the Miscellaneous Test Menu, and check that shift solenoid valve C operates with the HDS.

   Is a clicking sound heard?

   YES—Go to step 10.

   NO—Replace shift solenoid valve C (see page 14-211), then go to step 12.

10. Test-drive the vehicle with the shift lever in D for at least 20 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

11. Monitor the OBD status for P0761 or P0762 in the DTCs MENU with the HDS.

    Does the HDS indicate FAILED?

    YES—Repair shift valve C, or replace the transmission, then go to step 12.

    NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 10.

12. Test-drive the vehicle with the shift lever in D for at least 20 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0761 or P0762 indicated?

    YES—Go to step 8.

    NO—Go to step 14.

14. Monitor the OBD STATUS for P0761 or P0762 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 12.

DTC P0766: Shift Solenoid Valve D Stuck OFF

DTC P0767: Shift Solenoid Valve D Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 12.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Turn the ignition switch to ON (II).
5. Clear the DTC with the HDS.
6. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.
7. Monitor the OBD status for P0766 or P0767 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.
8. Clear the DTC with the HDS.
9. Select Shift Solenoid Valve D in the Miscellaneous Test Menu, and check that shift solenoid valve D operates with the HDS.

   Is a clicking sound heard?

   YES—Go to step 10.

   NO—Replace shift solenoid valve D (see page 14-211), then go to step 12.
10. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.
11. Monitor the OBD status for P0766 or P0767 in the DTCs MENU with the HDS.

    Does the HDS indicate FAILED?

    YES—Repair shift valve D, or replace the transmission, then go to step 12.

    NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 10.
12. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

(cont'd)

DTC Troubleshooting (cont'd)

13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0766 or P0767 indicated?

    YES—Go to step 8.

    NO—Go to step 14.

14. Monitor the OBD STATUS for P0766 or P0767 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 12.

DTC P0776: A/T Clutch Pressure Control Solenoid Valve B Stuck OFF

DTC P0777: A/T Clutch Pressure Control Solenoid Valve B Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 13.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.

4. Turn the ignition switch to ON (II).

5. Clear the DTC with the HDS.

6. Test-drive the vehicle with the shift lever in D for at least 20 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

7. Monitor the OBD status for P0776 or P0777 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.

8. Clear the DTC with the HDS.

9. Select Clutch Pressure Control (Linear) Solenoid Valve B in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve B with the HDS.

   Does the HDS indicate NORMAL?

   YES—Intermittent failure, the system is OK at this time.■

   NO—Follow the instructions indicated on the HDS according to the test result. If the HDS has not determined the cause of the failure, go to step 10. If any part is replaced, go to step 11.

10. Inspect A/T clutch pressure control solenoid valve B (see page 14-218).

    Does A/T clutch pressure control solenoid valve B work properly?

    YES—Repair the hydraulic system related with shift valve B, or replace the transmission, then go to step 13.

    NO—Replace A/T clutch pressure control solenoid valve B (see page 14-221), then go to step 13.

11. Turn the ignition switch to ON (II).

12. Clear the DTC with the HDS.

13. Test-drive the vehicle with the shift lever in D for at least 20 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0776 or P0777 indicated?

    YES—Go to step 8.

    NO—Go to step 15.

15. Monitor the OBD STATUS for P0776 or P0777 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 13.

DTC Troubleshooting (cont'd)

DTC P0796: A/T Clutch Pressure Control Solenoid Valve C Stuck OFF

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 13.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Turn the ignition switch to ON (II).
5. Clear the DTC with the HDS.
6. Start the engine. With the brake pedal pressed, shift to D, and wait for at least 3 seconds, then shift to R. Drive the vehicle for at least 3 seconds, then slow down and stop.
7. Monitor the OBD status for P0796 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.
8. Clear the DTC with the HDS.
9. Select Clutch Pressure Control (Linear) Solenoid Valve C in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve C with the HDS.

   Does the HDS indicate NORMAL?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Follow the instructions indicated on the HDS according to the test result. If the HDS has not determined the cause of the failure, go to step 10. If any part is replaced, go to step 11.
10. Inspect A/T clutch pressure control solenoid valve C (see page 14-223).

    Does A/T clutch pressure control solenoid valve C work properly?

    YES—Repair the hydraulic system related with shift valve C, or replace the transmission, then go to step 13.

    NO—Replace A/T clutch pressure control solenoid valve C (see page 14-226), then go to step 13.
11. Turn the ignition switch to ON (II).
12. Clear the DTC with the HDS.
13. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears. Then slow down to a stop.

14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0796 indicated?

    YES—Go to step 8.

    NO—Go to step 15.

15. Monitor the OBD STATUS for P0796 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 13.

DTC P0797: A/T Clutch Pressure Control Solenoid Valve C Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.

3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 13.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.

4. Turn the ignition switch to ON (II).

5. Clear the DTC with the HDS.

6. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

7. Monitor the OBD status for P0797 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.

(cont'd)

DTC Troubleshooting (cont'd)

8. Clear the DTC with the HDS.

9. Select Clutch Pressure Control (Linear) Solenoid Valve C in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve C with the HDS.

   Does the HDS indicate NORMAL?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Follow the instructions indicated on the HDS according to the test result. If the HDS has not determined the cause of the failure, go to step 10. If any part is replaced, go to step 11.

10. Inspect A/T clutch pressure control solenoid valve C (see page 14-223).

    Does A/T clutch pressure control solenoid valve C work properly?

    YES—Repair the hydraulic system related with shift valve C, or replace the transmission, then go to step 13.

    NO—Replace A/T clutch pressure control solenoid valve C (see page 14-226), then go to step 13.

11. Turn the ignition switch to ON (II).

12. Clear the DTC with the HDS.

13. Test-drive the vehicle with the shift lever in D for at least 11 seconds, and let the transmission shift through all five gears. Then slow down to a stop.

14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0797 indicated?

    YES—Go to step 8.

    NO—Go to step 15.

15. Monitor the OBD STATUS for P0797 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 13.

DTC P0812: Open in Transmission Range Switch ATPR Switch Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

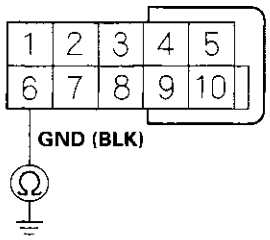
1. Turn the ignition switch to ON (II).
2. Shift to R, and verify the A/T R Switch signal with the HDS in the A/T Data List.

   Is the A/T R Switch ON?

   YES—Intermittent failure, the system is OK at this time.■

   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Disconnect the transmission range switch connector.
5. Check for continuity between transmission range switch connector terminal No. 6 and body ground.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

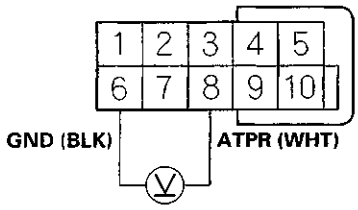
Is there continuity?

YES—Go to step 6.

NO—Repair open in the wire between transmission range switch and body ground (G101), or repair poor body ground (G101), then go to step 9.

6. Turn the ignition switch to ON (II).
7. Measure the voltage between transmission range switch connector terminals No. 6 and No. 8.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

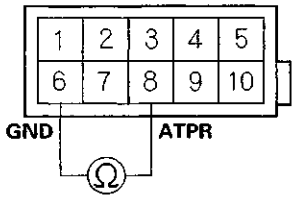
Is there around battery voltage?

YES—Go to step 8.

NO—Repair open in the wire between the transmission range switch and PCM connector terminal C25, then go to step 9.

8. Check for continuity between transmission range switch connector terminals No. 6 and No. 8 while the shift lever is in R, and when the shift lever is shifted to any position other than R.

TRANSMISSION RANGE SWITCH CONNECTOR



Terminal side of male terminals

Is there continuity when the shift lever is in R, and no continuity when the shift lever is shifted to any position other than R?

YES—Go to step 15.

NO—Replace the transmission range switch (see page 14-266), then go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

9. Reconnect all connectors.
10. Turn the ignition switch to ON (II).
11. Clear the DTC with the HDS.
12. Test-drive the vehicle in R at speeds below 3 mph (5 km/h) for at least 2 seconds, then increase the speed and test-drive at speeds over 3 mph (5 km/h) for at least 2 seconds. Slow down and stop the wheels.
13. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0812 indicated?

    YES—Check for poor connections or loose terminals between the transmission range switch and the PCM, then go to step 1.

    NO—Go to step 14.
14. Monitor the OBD status for P0812 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other DTCs were indicated in step 13, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the transmission range switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 12.
15. Reconnect all connectors.
16. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
17. Test-drive the vehicle in R at speeds below 3 mph (5 km/h) for at least 2 seconds, then increase the speed and test-drive at speeds over 3 mph (5 km/h) for at least 2 seconds. Slow down and stop the wheels.
18. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0812 indicated?

    YES—Check for poor connections or loose terminals between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 17. If the PCM was substituted, go to step 1.

    NO—Go to step 19.
19. Monitor the OBD status for P0812 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 17. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 17. ■

DTC P0842: Short in 2nd Clutch Transmission Fluid Pressure Switch Circuit, or 2nd Clutch Transmission Fluid Pressure Switch Stuck ON

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check the 2nd Pressure Switch signal with the HDS in the A/T Data List when not in 2nd gear.

   Is the 2nd Pressure Switch OFF?

   YES—Go to step 4.

   NO—Go to step 7.
4. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
5. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then slow down to a stop.
6. Monitor the OBD status for P0842 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

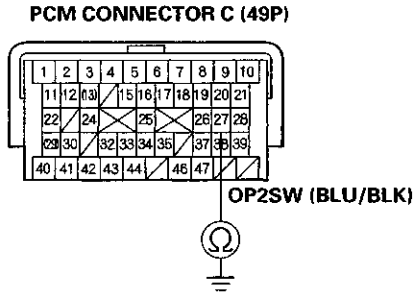
   YES—Go to step 7.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check the OP2SW wire for an intermittent short to body ground in the wire between the 2nd clutch transmission fluid pressure switch and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
7. Turn the ignition switch to LOCK (0).
8. Disconnect the 2nd clutch transmission fluid pressure switch connector.
9. Turn the ignition switch to ON (II).
10. Check the 2nd Pressure Switch signal with the HDS in the A/T Data List.

    Is the 2nd Pressure Switch OFF?

    YES—Replace the 2nd clutch transmission fluid pressure switch (see page 14-228), then go to step 15.

    NO—Go to step 11.
11. Turn the ignition switch to LOCK (0).
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector C (49P).
14. Check for continuity between PCM connector terminal C27 and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C27 and the 2nd clutch transmission fluid pressure switch, then go to step 15.

NO—Go to step 22.

(cont'd)

DTC Troubleshooting (cont'd)

15. Reconnect all connectors.

16. Turn the ignition switch to ON (II).

17. Clear the DTC with the HDS.

18. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

19. Test-drive the vehicle in 2nd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 3rd gear, then 4th gear. Drive for at least 2 seconds in each gear. Slow down and stop the wheels.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0842 indicated?

    YES—Check for intermittent short to body ground in the wire between the 2nd clutch transmission fluid pressure switch and the PCM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0842 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the 2nd clutch transmission fluid pressure switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 18.

22. Reconnect all connectors.

23. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

24. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

25. Test-drive the vehicle in 2nd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 3rd gear, then 4th gear. Drive for at least 2 seconds in each gear. Slow down and stop the wheels.

26. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0842 indicated?

    YES—Check for intermittent short to body ground in the wire between the 2nd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1.

    NO—Go to step 27.

27. Monitor the OBD status for P0842 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 26, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the 2nd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

DTC P0843: Open in 2nd Clutch Transmission Fluid Pressure Switch Circuit, or 2nd Clutch Transmission Fluid Pressure Switch Stuck OFF

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
4. Shift to 2 while pressing the brake pedal, and verify with the HDS in the A/T Data List that the SHIFT COMMAND indicates 2nd.
5. Check the 2nd Pressure Switch signal with the HDS in the A/T Data List.

   Is the 2nd Pressure Switch ON?

   YES—Go to step 6.

   NO—Go to step 8.
6. Test-drive the vehicle in 2nd gear in D for at least 2 seconds, then slow down to a stop.
7. Monitor the OBD status for P0843 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 9.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections and loose terminals at the 2nd clutch transmission fluid pressure switch and the PCM. If the HDS indicates NOT COMPLETED, go to step 6.
8. Measure the 2nd clutch pressure (see page 14-207).

   Is the 2nd clutch pressure within the service limits?

   YES—Go to step 9.

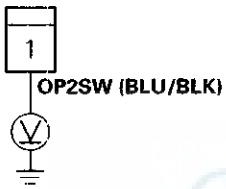
   NO—Repair shift valves A, B, and C, and related hydraulic circuit, or replace the transmission, then go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

9. Turn the ignition switch to LOCK (0).
10. Disconnect the 2nd clutch transmission fluid pressure switch connector.
11. Turn the ignition switch to ON (II).
12. Measure the voltage between the 2nd clutch transmission fluid pressure switch connector terminal and body ground.

2ND CLUTCH TRANSMISSION FLUID PRESSURE SWITCH CONNECTOR



Wire side of female terminals

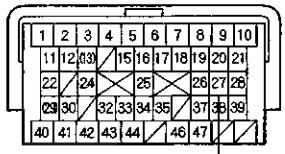
Is there battery voltage?

YES—Replace the 2nd clutch transmission fluid pressure switch (see page 14-228), then go to step 17.

NO—Go to step 13.

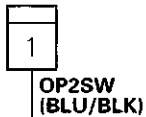
13. Turn the ignition switch to LOCK (0).
14. Jump the SCS line with the HDS.
15. Disconnect PCM connector C (49P).
16. Check for continuity between PCM connector terminal C27 and the 2nd clutch transmission fluid pressure switch connector terminal.

PCM CONNECTOR C (49P)



Terminal side of female terminals

2ND CLUTCH TRANSMISSION FLUID PRESSURE SWITCH CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 24.

NO—Repair open in the wire between PCM connector terminal C27 and the 2nd clutch transmission fluid pressure switch, then go to step 17.

17. Reconnect all connectors.

18. Turn the ignition switch to ON (II).

19. Clear the DTC with the HDS.

20. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

21. Test-drive the vehicle in 2nd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 3rd gear, then 4th gear. Drive for at least 2 seconds in each gear. Slow down and stop the wheels.

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0843 indicated?

    YES—Check for poor connections or loose terminals between the 2nd clutch transmission fluid pressure switch and the PCM, then go to step 1.

    NO—Go to step 23.

23. Monitor the OBD status for P0843 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the 2nd clutch transmission fluid pressure switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 20.

24. Reconnect all connectors.

25. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

26. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

27. Test-drive the vehicle in 2nd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 3rd gear, then 4th gear. Drive for at least 2 seconds in each gear. Slow down and stop the wheels.

28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0843 indicated?

    YES—Check for poor connections or loose terminals between the 2nd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 26. If the PCM was substituted, go to step 1.

    NO—Go to step 29.

29. Monitor the OBD status for P0843 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the 2nd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 26. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 26.

DTC Troubleshooting (cont'd)

DTC P0847: Short in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck ON

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check the 3rd Pressure Switch signal with the HDS in the A/T Data List when not in 3rd gear.

   Is the 3rd Pressure Switch OFF?

   YES—Go to step 4.

   NO—Go to step 7.
4. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
5. Test-drive the vehicle in 4th gear in D for at least 2 seconds, then slow down to a stop.
6. Monitor the OBD status for P0847 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

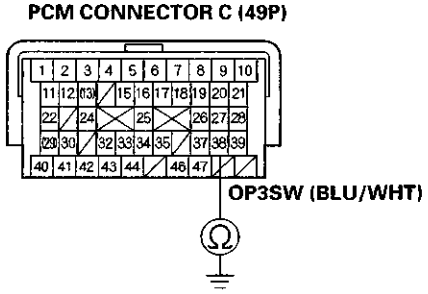
   YES—Go to step 7.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check the OP3SW wire for an intermittent short to body ground in the wire between the 3rd clutch transmission fluid pressure switch and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
7. Turn the ignition switch to LOCK (0).
8. Disconnect the 3rd clutch transmission fluid pressure switch connector.
9. Turn the ignition switch to ON (II).
10. Check the 3rd Pressure Switch signal with the HDS in the A/T Data List.

    Is the 3rd Pressure Switch OFF?

    YES—Replace the 3rd clutch transmission fluid pressure switch (see page 14-229), then go to step 15.

    NO—Go to step 11.
11. Turn the ignition switch to LOCK (0).
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector C (49P).
14. Check for continuity between PCM connector terminal C38 and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C38 and the 3rd clutch transmission fluid pressure switch, then go to step 15.

NO—Go to step 22.

15. Reconnect all connectors.

16. Turn the ignition switch to ON (II).

17. Clear the DTC with the HDS.

18. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

19. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 4th gear, and drive for at least 2 seconds. Slow down and stop the wheels.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0847 indicated?

    YES—Check for intermittent short to body ground in the wire between the 3rd clutch transmission fluid pressure switch and the PCM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0847 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the 3rd clutch transmission fluid pressure switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 18.

22. Reconnect all connectors.

23. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

24. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

25. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 4th gear, and drive for at least 2 seconds. Slow down and stop the wheels.

26. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0847 indicated?

    YES—Check for intermittent short to body ground in the wire between the 3rd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1.

    NO—Go to step 27.

27. Monitor the OBD status for P0847 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 26, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the 3rd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

DTC Troubleshooting (cont'd)

DTC P0848: Open in 3rd Clutch Transmission Fluid Pressure Switch Circuit, or 3rd Clutch Transmission Fluid Pressure Switch Stuck OFF

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
4. Test-drive the vehicle in 3rd gear in D, and verify with the HDS in the A/T Data List that the SHIFT COMMAND indicates 3rd.
5. Check the 3rd Pressure Switch signal with the HDS in the A/T Data List.

   Is the 3rd Pressure Switch ON?

   YES—Go to step 6.

   NO—Go to step 8.

6. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then slow down to a stop.
7. Monitor the OBD status for P0848 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 9.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the 3rd clutch transmission fluid pressure switch and the PCM. If the HDS indicates NOT COMPLETED, go to step 6.

8. Measure the 3rd clutch pressure (see page 14-207).

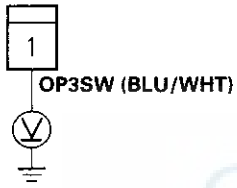
   Is the 3rd clutch pressure within the service limits?

   YES—Go to step 9.

   NO—Repair shift valves A, B, and C, and related hydraulic circuit, or replace the transmission, then go to step 20.

9. Turn the ignition switch to LOCK (0).
10. Disconnect the 3rd clutch transmission fluid pressure switch connector.
11. Turn the ignition switch to ON (II).
12. Measure the voltage between the 3rd clutch transmission fluid pressure switch connector terminal and body ground.

3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH CONNECTOR



Wire side of female terminals

Is there battery voltage?

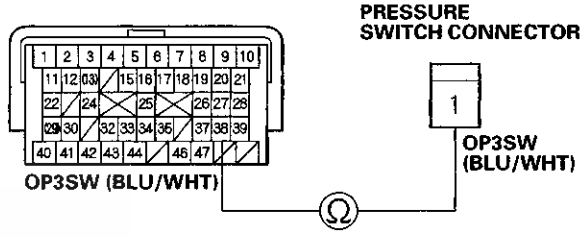
YES—Replace the 3rd clutch transmission fluid pressure switch (see page 14-229), then go to step 17.

NO—Go to step 13.

13. Turn the ignition switch to LOCK (0).
14. Jump the SCS line with the HDS.
15. Disconnect PCM connector C (49P).
16. Check for continuity between PCM connector terminal C38 and the 3rd clutch transmission fluid pressure switch connector terminal.

PCM CONNECTOR C (49P)

3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH CONNECTOR



Terminal side of female terminals

Wire side of female terminals

Is there continuity?

YES—Go to step 24.

NO—Repair open in the wire between PCM connector terminal C38 and the 3rd clutch transmission fluid pressure switch, then go to step 17.

(cont'd)

DTC Troubleshooting (cont'd)

17. Reconnect all connectors.
18. Turn the ignition switch to ON (II).
19. Clear the DTC with the HDS.
20. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
21. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 4th gear, and drive for at least 2 seconds. Slow down and stop the wheels.
22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0848 indicated?

    YES—Check for poor connections or loose terminals between the 3rd clutch transmission fluid pressure switch and the PCM, then go to step 1.

    NO—Go to step 23.
23. Monitor the OBD status for P0848 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the 3rd clutch transmission fluid pressure switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 20.
24. Reconnect all connectors.
25. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
26. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
27. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 4th gear, and drive for at least 2 seconds. Slow down and stop the wheels.
28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0848 indicated?

    YES—Check for poor connections or loose terminals between the 3rd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 26. If the PCM was substituted, go to step 1.

    NO—Go to step 29.
29. Monitor the OBD status for P0848 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the 3rd clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 26. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 26.

DTC P0872: Short in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck ON

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check the 4th Pressure Switch signal with the HDS in the A/T Data List when not in 4th gear.

   Is the 4th Pressure Switch OFF?

   YES—Go to step 4.

   NO—Go to step 7.
4. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
5. Test-drive the vehicle in 5th gear in D for at least 2 seconds, then slow down to a stop.
6. Monitor the OBD status for P0872 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

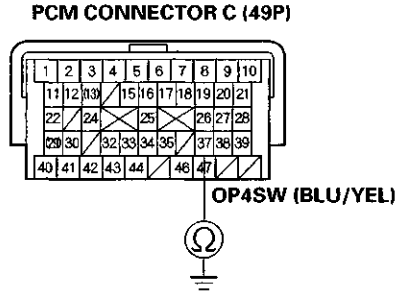
   YES—Go to step 7.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check the OP4SW wire for an intermittent short to body ground in the wire between the 4th clutch transmission fluid pressure switch and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
7. Turn the ignition switch to LOCK (0).
8. Disconnect the 4th clutch transmission fluid pressure switch connector.
9. Turn the ignition switch to ON (II).
10. Check the 4th Pressure Switch signal with the HDS in the A/T Data List.

    Is the 4th Pressure Switch OFF?

    YES—Replace the 4th clutch transmission fluid pressure switch (see page 14-229), then go to step 19.

    NO—Go to step 11.
11. Turn the ignition switch to LOCK (0).
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector C (49P).
14. Check for continuity between PCM connector terminal C37 and body ground.



Terminal side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C37 and the 4th clutch transmission fluid pressure switch, then go to step 15.

NO—Go to step 22.

(cont'd)

DTC Troubleshooting (cont'd)

15. Reconnect all connectors.
16. Turn the ignition switch to ON (II).
17. Clear the DTC with the HDS.
18. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
19. Test-drive the vehicle in 4th gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 5th gear, and drive for at least 2 seconds. Slow down and stop the wheels.
20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0872 indicated?

    YES—Check for intermittent short to body ground in the wire between the 4th clutch transmission fluid pressure switch and the PCM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0872 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the 4th clutch transmission fluid pressure switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 18.

22. Reconnect all connectors.
23. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
24. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
25. Test-drive the vehicle in 4th gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 5th gear, and drive for at least 2 seconds. Slow down and stop the wheels.
26. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0872 indicated?

    YES—Check for intermittent short to body ground in the wire between the 4th clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1.

    NO—Go to step 27.

27. Monitor the OBD status for P0872 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 26, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between the 4th clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

DTC P0873: Open in 4th Clutch Transmission Fluid Pressure Switch Circuit, or 4th Clutch Transmission Fluid Pressure Switch Stuck OFF

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).
4. Test-drive the vehicle in 5th gear in D, and verify with the HDS in the A/T Data List that the SHIFT COMMAND indicates 4th.
5. Check the 4th Pressure Switch signal with the HDS in the A/T Data List.

   Is the 4th Pressure Switch ON?

   YES—Go to step 6.

   NO—Go to step 8.

6. Test-drive the vehicle in 4th gear in D for at least 2 seconds, then slow down to a stop.
7. Monitor the OBD status for P0873 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 9.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the 4th clutch transmission fluid pressure switch and the PCM. If the HDS indicates NOT COMPLETED, go to step 6.

8. Measure the 4th clutch pressure (see page 14-207).

   Is the 4th clutch pressure within the service limits?

   YES—Go to step 9.

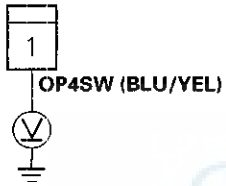
   NO—Repair shift valves A, B, C, and D, and related hydraulic circuit, or replace the transmission, then go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

9. Turn the ignition switch to LOCK (0).
10. Disconnect the 4th clutch transmission fluid pressure switch connector.
11. Turn the ignition switch to ON (II).
12. Measure the voltage between the 4th clutch transmission fluid pressure switch connector terminal and body ground.

4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH CONNECTOR



Wire side of female terminals

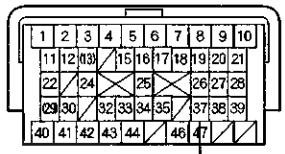
Is there battery voltage?

YES—Replace the 4th clutch transmission fluid pressure switch (see page 14-229), then go to step 17.

NO—Go to step 13.

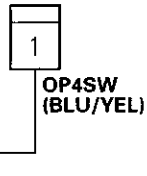
13. Turn the ignition switch to LOCK (0).
14. Jump the SCS line with the HDS.
15. Disconnect PCM connector C (49P).
16. Check for continuity between PCM connector terminal C37 and the 4th clutch transmission fluid pressure switch connector terminal.

PCM CONNECTOR C (49P)



Terminal side of female terminals

4TH CLUTCH TRANSMISSION FLUID PRESSURE SWITCH CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 24.

NO—Repair open in the wire between PCM connector terminal C37 and the 4th clutch transmission fluid pressure switch, then go to step 17.

17. Reconnect all connectors.

18. Turn the ignition switch to ON (II).

19. Clear the DTC with the HDS.

20. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

21. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 4th gear, and drive for at least 2 seconds. Slow down and stop the wheels.

22. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0873 indicated?

    YES—Check for poor connections or loose terminals between the 4th clutch transmission fluid pressure switch and the PCM, then go to step 1.

    NO—Go to step 23.

23. Monitor the OBD status for P0873 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the 4th clutch transmission fluid pressure switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 20.

24. Reconnect all connectors.

25. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

26. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

27. Test-drive the vehicle in 3rd gear in D for at least 2 seconds, then press the accelerator pedal so that the transmission upshifts to 4th gear, and drive for at least 2 seconds. Slow down and stop the wheels.

28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0873 indicated?

    YES—Check for poor connections or loose terminals between the 4th clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 26. If the PCM was substituted, go to step 1.

    NO—Go to step 29.

29. Monitor the OBD status for P0873 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the 4th clutch transmission fluid pressure switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 26. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 26.

DTC Troubleshooting (cont'd)

DTC P0962: Problem in A/T Clutch Pressure Control Solenoid Valve A Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0962 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Clutch Pressure Control (Linear) Solenoid Valve A in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve A with the HDS.

   Does the HDS indicate NORMAL?

   YES—Go to step 6.

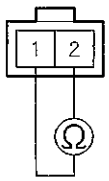
   NO—Go to step 8.
6. In the Clutch Pressure Control Solenoid Valve Control menu, select A/T Clutch Pressure Control Solenoid Valve A at 1.0 A.
7. Monitor the OBD status for P0962 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the A/T clutch pressure control solenoid valve A connector.
10. Measure the resistance between A/T clutch pressure control solenoid valve A connector terminals No. 1 and No. 2.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A CONNECTOR



Terminal side of male terminals

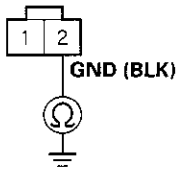
Is there 3– 10 Ω ?

YES—Go to step 11.

NO—Replace A/T clutch pressure control solenoid valve A (see page 14-221), then go to step 21.

11. Check for continuity between A/T clutch pressure control solenoid valve A connector terminal No. 2 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A CONNECTOR



Wire side of female terminals

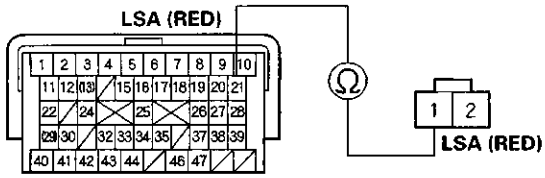
Is there continuity?

YES—Go to step 12.

NO—Repair open in the wire between A/T clutch pressure control solenoid valve A and body ground (G101), or repair poor body ground (G101), then go to step 21.

12. Jump the SCS line with the HDS.
13. Disconnect PCM connector C (49P).
14. Check for continuity between PCM connector terminal C21 and A/T clutch pressure control solenoid valve A connector terminal No. 1.

PCM CONNECTOR C (49P) **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A CONNECTOR**



Terminal side of female terminals

Wire side of female terminals

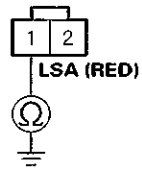
Is there continuity?

YES—Go to step 15.

NO—Repair open in the wire between A/T clutch pressure control solenoid valve A connector terminal No. 1 and PCM connector terminal C21, then go to step 21.

15. Check for continuity between A/T clutch pressure control solenoid valve A connector terminal No. 1 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C21 and A/T clutch pressure control solenoid valve A, then go to step 21.

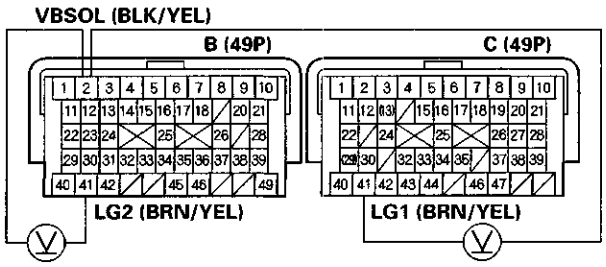
NO—Go to step 16.

(cont'd)

DTC Troubleshooting (cont'd)

16. Disconnect PCM connector B (49P).
17. Turn the ignition switch to ON (II).
18. Measure the voltage between PCM connector terminals B2 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

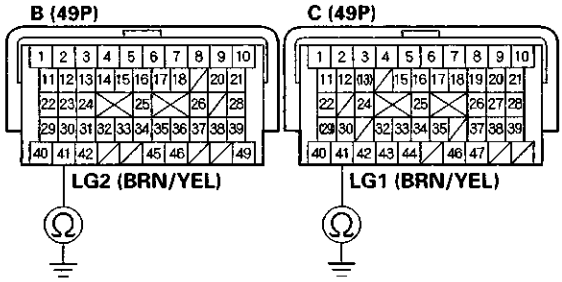
Is there battery voltage?

YES—Go to step 27.

NO—Go to step 19.

19. Turn the ignition switch to LOCK (0).
20. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Check for a blown No. 7 (15 A) fuse in the under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the under-dash fuse/relay box, then go to step 21.

NO—Repair open in the wires between PCM connector terminals B41, C41, and body ground (G101), or repair poor body ground (G101), then go to step 21.

21. Reconnect all connectors.

22. Turn the ignition switch to ON (II).

23. Clear the DTC with the HDS.

24. Start the engine, and wait for at least 1 second.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0962 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM, then go to step 1.

    NO—Go to step 26.

26. Monitor the OBD status for P0962 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

27. Reconnect all connectors.

28. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

29. Start the engine, and wait for at least 1 second.

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0962 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 29. If the PCM was substituted, go to step 1.

    NO—Go to step 31.

31. Monitor the OBD status for P0962 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 29. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 29.

DTC Troubleshooting (cont'd)

DTC P0963: Problem in A/T Clutch Pressure Control Solenoid Valve A

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0963 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Clutch Pressure Control (Linear) Solenoid Valve A in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve A with the HDS.

   Does the HDS indicate NORMAL?

   YES—Go to step 6.

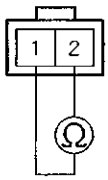
   NO—Go to step 8.
6. In the Clutch Pressure Control Solenoid Valve Control menu, select A/T Clutch Pressure Control Solenoid Valve A at 0.2 A.
7. Monitor the OBD status for P0963 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the A/T clutch pressure control solenoid valve A connector.
10. Measure the resistance between A/T clutch pressure control solenoid valve A connector terminals No. 1 and No. 2.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A CONNECTOR



Terminal side of male terminals

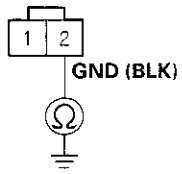
Is there 3– 10 Ω ?

YES—Go to step 11.

NO—Replace A/T clutch pressure control solenoid valve A (see page 14-221), then go to step 12.

11. Check for continuity between A/T clutch pressure control solenoid valve A connector terminal No. 2 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between A/T clutch pressure control solenoid valve A and body ground (G101), or repair poor body ground (G101), then go to step 12.

12. Reconnect all connectors.
13. Turn the ignition switch to ON (II).
14. Clear the DTC with the HDS.
15. Start the engine, and wait for at least 1 second.
16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0963 indicated?

YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM, then go to step 1.

NO—Go to step 17.

17. Monitor the OBD status for P0963 in the DTCs MENU with the HDS.

Does the HDS indicate PASSED?

YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTC's troubleshooting. ■

NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 15.

18. Reconnect all connectors.
19. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
20. Start the engine, and wait for at least 1 second.
21. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0963 indicated?

YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1.

NO—Go to step 22.

22. Monitor the OBD status for P0963 in the DTCs MENU with the HDS.

Does the HDS indicate PASSED?

YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTC's troubleshooting. ■

NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 20.

DTC Troubleshooting (cont'd)

DTC P0966: Problem in A/T Clutch Pressure Control Solenoid Valve B Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0966 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Clutch Pressure Control (Linear) Solenoid Valve B in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve B with the HDS.

   Does the HDS indicate NORMAL?

   YES—Go to step 6.

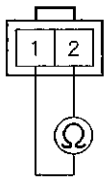
   NO—Go to step 8.
6. In the Clutch Pressure Control Solenoid Valve Control menu, select A/T Clutch Pressure Control Solenoid Valve B at 1.0 A.
7. Monitor the OBD status for P0966 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the A/T clutch pressure control solenoid valve B connector.
10. Measure the resistance between A/T clutch pressure control solenoid valve B connector terminals No. 1 and No. 2.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B CONNECTOR



Terminal side of male terminals

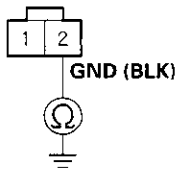
Is there 3— 10 Ω ?

YES—Go to step 11.

NO—Replace A/T clutch pressure control solenoid valve B (see page 14-221), then go to step 21.

11. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 2 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B CONNECTOR



Wire side of female terminals

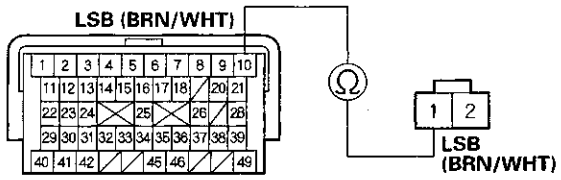
Is there continuity?

YES—Go to step 12.

NO—Repair open in the wire between A/T clutch pressure control solenoid valve B and body ground (G101), or repair poor body ground (G101), then go to step 21.

12. Jump the SCS line with the HDS.
13. Disconnect PCM connector B (49P).
14. Check for continuity between PCM connector terminal B10 and A/T clutch pressure control solenoid valve B connector terminal No. 1.

PCM CONNECTOR B (49P) **A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B CONNECTOR**



Terminal side of female terminals

Wire side of female terminals

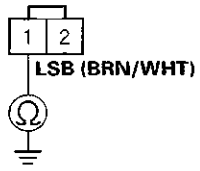
Is there continuity?

YES—Go to step 15.

NO—Repair open in the wire between A/T clutch pressure control solenoid valve B connector terminal No. 1 and PCM connector terminal B10, then go to step 21.

15. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 1 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal B10 and A/T clutch pressure control solenoid valve B, then go to step 21.

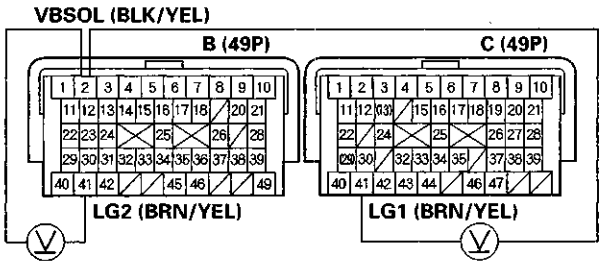
NO—Go to step 16.

(cont'd)

DTC Troubleshooting (cont'd)

16. Disconnect PCM connector C (49P).
17. Turn the ignition switch to ON (II).
18. Measure the voltage between PCM connector terminals B2 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

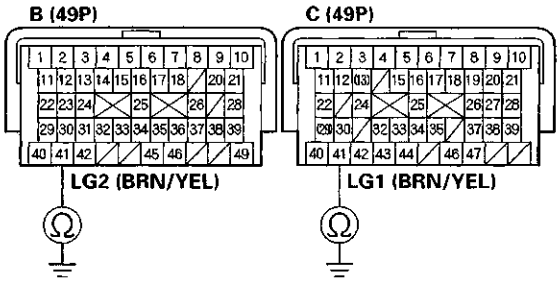
Is there battery voltage?

YES—Go to step 27.

NO—Go to step 19.

19. Turn the ignition switch to LOCK (0).
20. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Check for a blown No. 7 (15 A) fuse in the under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the under-dash fuse/relay box, then go to step 21.

NO—Repair open in the wires between PCM connector terminals B41, C41, and body ground (G101), or repair poor body ground (G101), then go to step 21.

21. Reconnect all connectors.
22. Turn the ignition switch to ON (II).
23. Clear the DTC with the HDS.
24. Start the engine, and wait for at least 1 second.
25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0966 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM, then go to step 1.

    NO—Go to step 26.

26. Monitor the OBD status for P0966 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

27. Reconnect all connectors.
28. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
29. Start the engine, and wait for at least 1 second.
30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0966 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 28. If the PCM was substituted, go to step 1.

    NO—Go to step 31.

31. Monitor the OBD status for P0966 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 29. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 29.

DTC Troubleshooting (cont'd)

DTC P0967: Problem in A/T Clutch Pressure Control Solenoid Valve B

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0967 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Clutch Pressure Control (Linear) Solenoid Valve B in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve B with the HDS.

   Does the HDS indicate NORMAL?

   YES—Go to step 6.

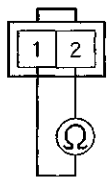
   NO—Go to step 8.
6. In the Clutch Pressure Control Solenoid Valve Control menu, select A/T Clutch Pressure Control Solenoid Valve B at 0.2 A.
7. Monitor the OBD status for P0967 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the A/T clutch pressure control solenoid valve B connector.
10. Measure the resistance between A/T clutch pressure control solenoid valve B connector terminals No. 1 and No. 2.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B CONNECTOR



Terminal side of male terminals

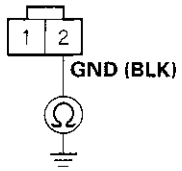
Is there 3– 10 Ω ?

YES—Go to step 11.

NO—Replace A/T clutch pressure control solenoid valve B (see page 14-221), then go to step 12.

11. Check for continuity between A/T clutch pressure control solenoid valve B connector terminal No. 2 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the A/T clutch pressure control solenoid valve B and body ground (G101), or repair poor body ground (G101), then go to step 12.

12. Reconnect all connectors.
13. Turn the ignition switch to ON (II).
14. Clear the DTC with the HDS.
15. Start the engine, and wait for at least 1 second.
16. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0967 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM, then go to step 1.

    NO—Go to step 17.

17. Monitor the OBD status for P0967 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 15.

18. Reconnect all connectors.
19. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
20. Start the engine, and wait for at least 1 second.
21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0967 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1.

    NO—Go to step 22.

22. Monitor the OBD status for P0967 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 20.

DTC Troubleshooting (cont'd)

DTC P0970: Problem in A/T Clutch Pressure Control Solenoid Valve C Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0970 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Clutch Pressure Control (Linear) Solenoid Valve C in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve C with the HDS.

   Does the HDS indicate NORMAL?

   YES—Go to step 6.

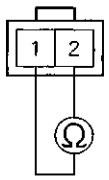
   NO—Go to step 8.
6. In the Clutch Pressure Control Solenoid Valve Control menu, select A/T Clutch Pressure Control Solenoid Valve C at 1.0 A.
7. Monitor the OBD status for P0970 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the A/T clutch pressure control solenoid valve C connector.
10. Measure the resistance between A/T clutch pressure control solenoid valve C connector terminals No. 1 and No. 2.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C CONNECTOR



Terminal side of male terminals

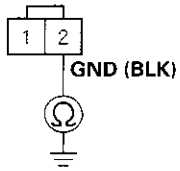
Is there 3– 10 Ω ?

YES—Go to step 11.

NO—Replace A/T clutch pressure control solenoid valve C (see page 14-226), then go to step 21.

11. Check for continuity between A/T clutch pressure control solenoid valve C connector terminal No. 2 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 12.

NO—Repair open in the wire between A/T clutch pressure control solenoid valve C and body ground (G101), or repair poor body ground (G101), then go to step 21.

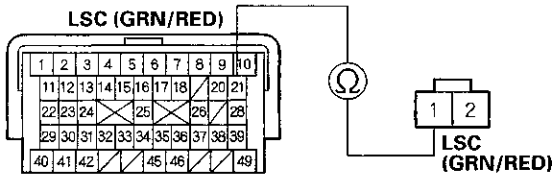
12. Jump the SCS line with the HDS.

13. Disconnect PCM connector B (49P).

14. Check for continuity between PCM connector terminal B21 and A/T clutch pressure control solenoid valve C connector terminal No. 1.

PCM CONNECTOR B (49P)

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C CONNECTOR



Terminal side of female terminals

Wire side of female terminals

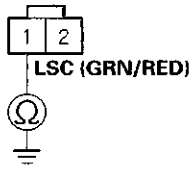
Is there continuity?

YES—Go to step 15.

NO—Repair open in the wire between A/T clutch pressure control solenoid valve C connector terminal No. 1 and PCM connector terminal B21, then go to step 21.

15. Check for continuity between A/T clutch pressure control solenoid valve C connector terminal No. 1 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal B21 and A/T clutch pressure control solenoid valve C, then go to step 21.

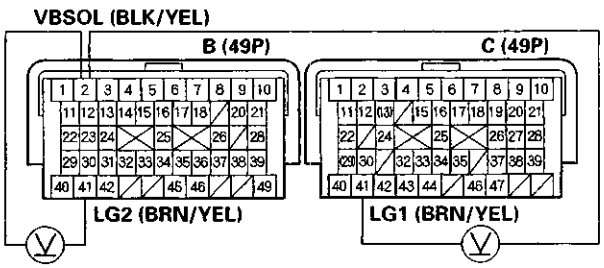
NO—Go to step 16.

(cont'd)

DTC Troubleshooting (cont'd)

16. Disconnect PCM connector C (49P).
17. Turn the ignition switch to ON (II).
18. Measure the voltage between PCM connector terminals B2 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

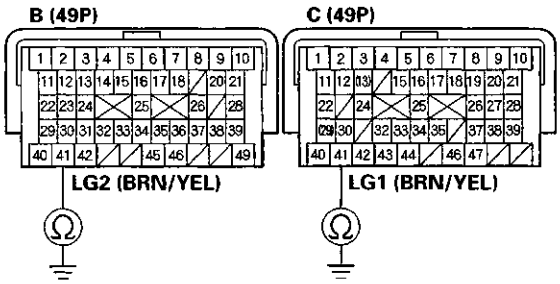
Is there battery voltage?

YES—Go to step 27.

NO—Go to step 19.

19. Turn the ignition switch to LOCK (0).
20. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Check for a blown No. 7 (15 A) fuse in the under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal B2 and the under-dash fuse/relay box, then go to step 21.

NO—Repair open in the wires between PCM connector terminals B41, C41, and body ground (G101), or repair poor body ground (G101), then go to step 21.

21. Reconnect all connectors.

22. Turn the ignition switch to ON (II).

23. Clear the DTC with the HDS.

24. Start the engine, and wait for at least 1 second.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0970 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM, then go to step 1.

    NO—Go to step 26.

26. Monitor the OBD status for P0970 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

27. Reconnect all connectors.

28. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

29. Start the engine, and wait for at least 1 second.

30. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0970 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 28. If the PCM was substituted, go to step 1.

    NO—Go to step 31.

31. Monitor the OBD status for P0970 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 29. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 29.

DTC Troubleshooting (cont'd)

DTC P0971: Problem in A/T Clutch Pressure Control Solenoid Valve C

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0971 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Clutch Pressure Control (Linear) Solenoid Valve C in the Miscellaneous Test Menu, and test A/T clutch pressure control solenoid valve C with the HDS.

   Does the HDS indicate NORMAL?

   YES—Go to step 6.

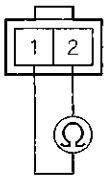
   NO—Go to step 8.
6. In the Clutch Pressure Control Solenoid Valve Control menu, select A/T Clutch Pressure Control Solenoid Valve C at 0.2 A.
7. Monitor the OBD status for P0971 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the A/T clutch pressure control solenoid valve C connector.
10. Measure the resistance between A/T clutch pressure control solenoid valve C connector terminals No. 1 and No. 2.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C CONNECTOR



Terminal side of male terminals

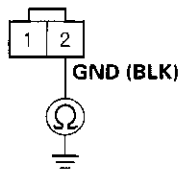
Is there 3 - 10 Ω ?

YES—Go to step 11.

NO—Replace A/T clutch pressure control solenoid valve C (see page 14-226), then go to step 12.

11. Check for continuity between A/T clutch pressure control solenoid valve C connector terminal No. 2 and body ground.

A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Go to step 18.

NO—Repair open in the wire between the A/T clutch pressure control solenoid valve C and body ground (G101), or repair poor body ground (G101), then go to step 12.

12. Reconnect all connectors.
13. Turn the ignition switch to ON (II).
14. Clear the DTC with the HDS.
15. Start the engine, and wait for at least 1 second.
16. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0971 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM, then go to step 1.

    NO—Go to step 17.

17. Monitor the OBD status for P0971 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 15.

18. Reconnect all connectors.
19. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
20. Start the engine, and wait for at least 1 second.
21. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0971 indicated?

    YES—Check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1.

    NO—Go to step 22.

22. Monitor the OBD status for P0971 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between A/T clutch pressure control solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 20. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 20.

DTC Troubleshooting (cont'd)

DTC P0973: Short in Shift Solenoid Valve A Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. With the brake pedal pressed, shift to R, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0973 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve A in the Miscellaneous Test Menu, and test the shift solenoid valve A with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

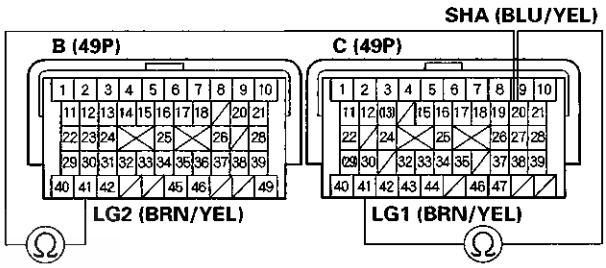
   NO—Go to step 8.
6. Start the engine. With the brake pedal pressed, shift to R, and wait for at least 1 second.
7. Monitor the OBD status for P0973 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for intermittent short to body ground in the wire between shift solenoid valve A and the PCM. If the HDS indicates NOT COMPLETED, go to step 6.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure the resistance between PCM connector terminals C20 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there less than 12 Ω ?

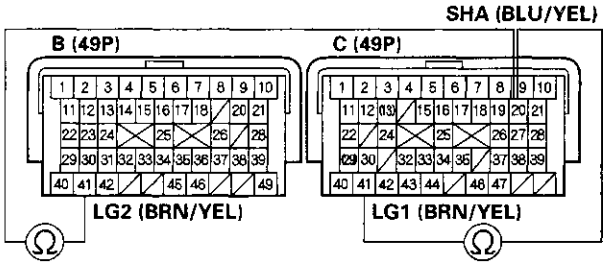
YES—Go to step 12.

NO—Go to step 26.

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminals C20 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C20 and the shift solenoid wire harness connector, then go to step 20.

NO—Go to step 14.

14. Inspect shift solenoid valve A (see page 14-211).

Is shift solenoid valve A OK?

YES—Go to step 15.

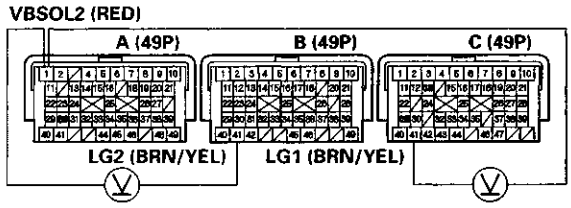
NO—Replace shift solenoid valve A or the shift solenoid wire harness (see page 14-211), then go to step 23.

15. Disconnect PCM connector A (49P).

16. Turn the ignition switch to ON (II).

17. Measure the voltage between PCM connector terminals A1 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there battery voltage?

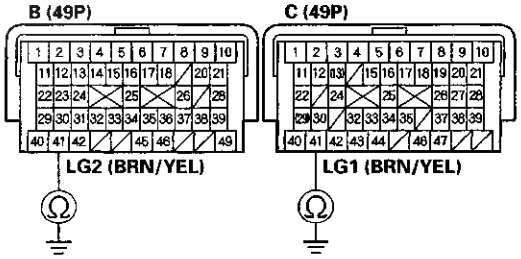
YES—Go to step 26.

NO—Go to step 18.

18. Turn the ignition switch to LOCK (0).

19. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Check for a blown No. 10 (10 A) fuse in the under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal A1 and the under-dash fuse/relay box, then go to step 20.

NO—Repair open in the wires between PCM connector terminals B41, C41, and body ground (G101), or repair poor body ground (G101), then go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

20. Reconnect all connectors.
21. Turn the ignition switch to ON (II).
22. Clear the DTC with the HDS.
23. Start the engine in P. With the brake pedal pressed, shift to the R, and wait for at least 1 second, then move the shift lever back into P.
24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0973 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve A and the PCM, then go to step 1.

    NO—Go to step 25.
25. Monitor the OBD status for P0973 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between shift solenoid valve A and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 23.
26. Reconnect all connectors.
27. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
28. Start the engine in P. With the brake pedal pressed, shift to the R, and wait for at least 1 second, then move the shift lever back into P.
29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0973 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 28. If the PCM was substituted, go to step 1.

    NO—Go to step 30.
30. Monitor the OBD status for P0973 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 29, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between shift solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 28. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 28.

DTC P0974: Open in Shift Solenoid Valve A Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine in P, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0974 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve A in the Miscellaneous Test Menu, and test shift solenoid valve A with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

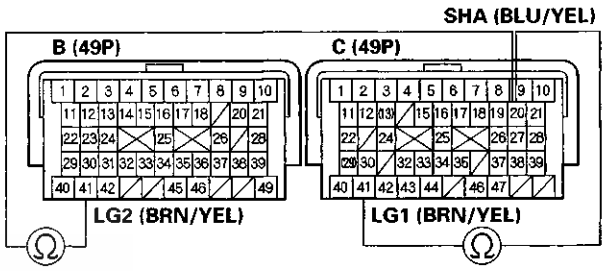
   NO—Go to step 8.
6. Start the engine in P, and wait for at least 1 second.
7. Monitor the OBD status for P0974 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between shift solenoid valve A and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure the resistance between PCM connector terminals C20 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there 12–25 Ω ?

YES—Go to step 22.

NO—Go to step 12.

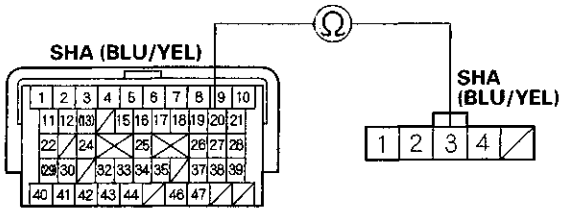
(cont'd)

DTC Troubleshooting (cont'd)

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminal C20 and shift solenoid wire harness connector terminal No. 3.

PCM CONNECTOR C (49P) **SHIFT SOLENOID WIRE HARNESS CONNECTOR**



Terminal side of female terminals

Wire side of female terminals

Is there continuity?

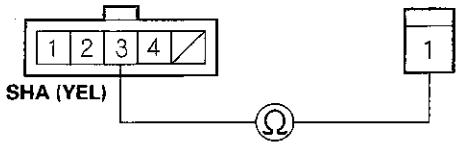
YES—Go to step 14.

NO—Repair open in the wire between PCM connector terminal C20 and the shift solenoid wire harness connector, then go to step 16.

14. Remove the shift solenoid wire harness (see page 14-211).

15. Check for continuity between shift solenoid wire harness connector terminal No. 3 and the shift solenoid valve A connector terminal.

SHIFT SOLENOID WIRE HARNESS CONNECTOR **SHIFT SOLENOID VALVE A CONNECTOR**



Terminal side of male terminals

Wire side of female terminals

Is there continuity?

YES—Replace shift solenoid valve A (see page 14-211), then go to step 19.

NO—Replace the shift solenoid wire harness (see page 14-211), then go to step 19.

16. Reconnect all connectors.

17. Turn the ignition switch to ON (II).

18. Clear the DTC with the HDS.

19. Start the engine in P. With the brake pedal pressed, shift to R, and wait for at least 1 second, then move the shift lever back into P.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0974 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve A and the PCM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0974 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve A and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 19.

22. Reconnect all connectors.

23. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

24. Start the engine in P. With the brake pedal pressed, shift to R, and wait for at least 1 second, then move the shift lever back into P.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0974 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1.

    NO—Go to step 26.

26. Monitor the OBD status for P0974 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve A and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

DTC Troubleshooting (cont'd)

DTC P0976: Short in Shift Solenoid Valve B Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine in P, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0976 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve B in the Miscellaneous Test Menu, and test shift solenoid valve B with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

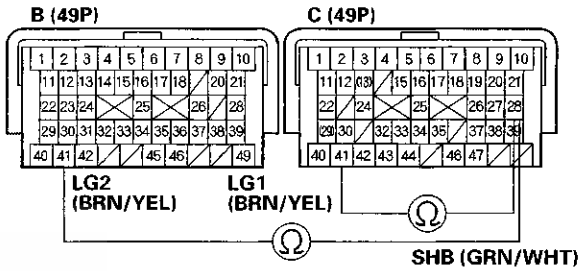
   NO—Go to step 8.
6. Start the engine in P, and wait for at least 1 second.
7. Monitor the OBD status for P0976 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for intermittent short to body ground in the wire between shift solenoid valve B and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure the resistance between PCM connector terminals C28 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there less than 12 Ω ?

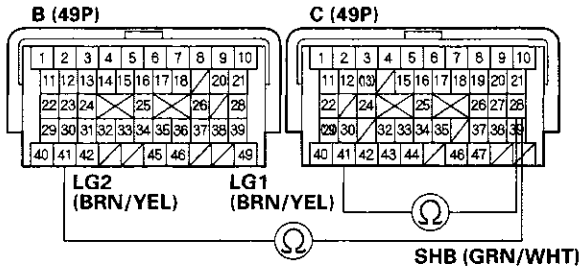
YES—Go to step 12.

NO—Go to step 25.

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminals C28 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C28 and the shift solenoid wire harness connector, then go to step 19.

NO—Go to step 14.

14. Inspect shift solenoid valve B (see page 14-211).

Is shift solenoid valve B OK?

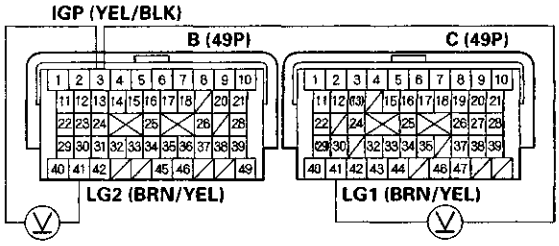
YES—Go to step 15.

NO—Replace shift solenoid valve B or the shift solenoid wire harness (see page 14-211), then go to step 22.

15. Turn the ignition switch to ON (II).

16. Measure the voltage between PCM connector terminals B3 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there battery voltage?

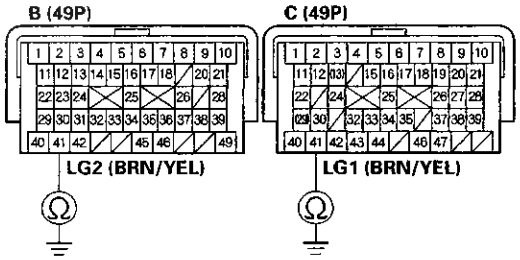
YES—Go to step 25.

NO—Go to step 17.

17. Turn the ignition switch to LOCK (0).

18. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Check for a blown No. 17 (15 A) fuse in the under-hood fuse/relay box. If the fuse is OK, check the PGM-FI main relay and repair open in the wire between PCM connector terminal B3 and the under-hood fuse/relay box, then go to step 19.

NO—Repair open in the wires between PCM connector terminals B41, C41, and body ground (G101), or repair poor body ground (G101), then go to step 19.

(cont'd)

DTC Troubleshooting (cont'd)

19. Reconnect all connectors.

20. Turn the ignition switch to ON (II).

21. Clear the DTC with the HDS.

22. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 3rd or 4th gear for at least 1 second, then slow down to a stop.

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0976 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve B and the PCM, then go to step 1.

    NO—Go to step 24.

24. Monitor the OBD status for P0976 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between shift solenoid valve B and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 22.

25. Reconnect all connectors.

26. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

27. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 3rd or 4th gear for at least 1 second, then slow down to a stop.

28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0976 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 27. If the PCM was substituted, go to step 1.

    NO—Go to step 29.

29. Monitor the OBD status for P0976 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between shift solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 27. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 27.

DTC P0977: Open in Shift Solenoid Valve B Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle in 3rd or 4th gear in D for at least 1 second, then slow down to a stop.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0977 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve B in the Miscellaneous Test Menu, and test shift solenoid valve B with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

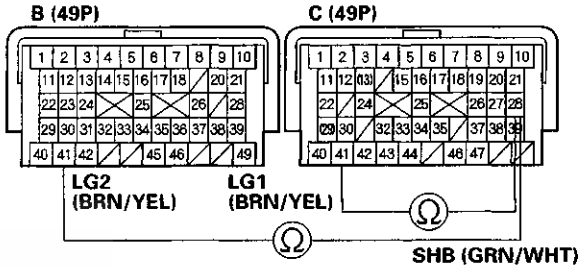
   NO—Go to step 8.
6. Test-drive the vehicle in 3rd or 4th gear in D for at least 1 second, then slow down to a stop.
7. Monitor the OBD status for P0977 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between shift solenoid valve B and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure the resistance between PCM connector terminals C28 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there 12—25 Ω ?

YES—Go to step 22.

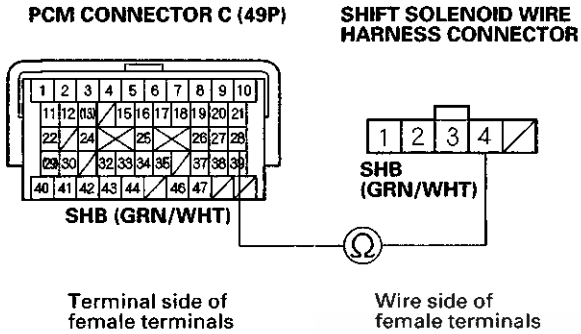
NO—Go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminal C28 and shift solenoid wire harness connector terminal No. 4.



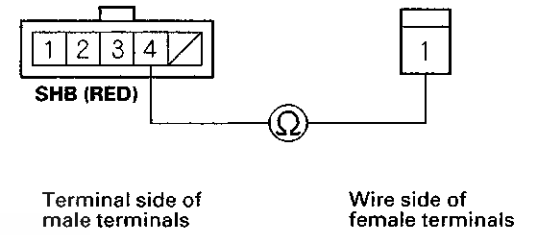
Is there continuity?

YES—Go to step 14.

NO—Repair open in the wire between PCM connector terminal C28 and the shift solenoid wire harness connector, then go to step 16.

14. Remove the shift solenoid wire harness (see page 14-211).

15. Check for continuity between shift solenoid wire harness connector terminal No. 4 and the shift solenoid valve B connector terminal.



Is there continuity?

YES—Replace shift solenoid valve B (see page 14-211), then go to step 19.

NO—Replace the shift solenoid wire harness (see page 14-211), then go to step 19.

16. Reconnect all connectors.

17. Turn the ignition switch to ON (II).

18. Clear the DTC with the HDS.

19. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 3rd or 4th gear for at least 1 second, then slow down to a stop.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0977 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve B and the PCM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0977 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve B and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 19.

22. Reconnect all connectors.

23. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

24. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 3rd or 4th gear for at least 1 second, then slow down to a stop.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0977 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1.

    NO—Go to step 26.

26. Monitor the OBD status for P0977 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve B and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

DTC Troubleshooting (cont'd)

DTC P0979: Short in Shift Solenoid Valve C Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and run the vehicle in 1st gear in D for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0979 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve C in the Miscellaneous Test Menu, and test shift solenoid valve C with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

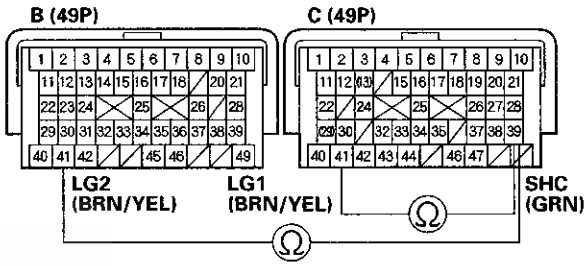
   NO—Go to step 8.
6. Start the engine, and run the vehicle in 1st gear in D for at least 1 second.
7. Monitor the OBD status for P0979 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for intermittent short to body ground in the wire between shift solenoid valve C and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure the resistance between PCM connector terminals C39 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there less than 12 Ω ?

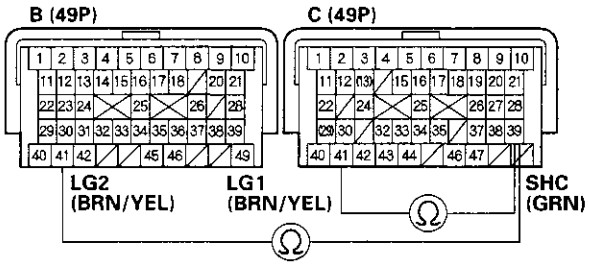
YES—Go to step 12.

NO—Go to step 25.

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminals C39 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C39 and the shift solenoid wire harness connector, then go to step 19.

NO—Go to step 14.

14. Inspect shift solenoid valve C (see page 14-211).

Is shift solenoid valve C OK?

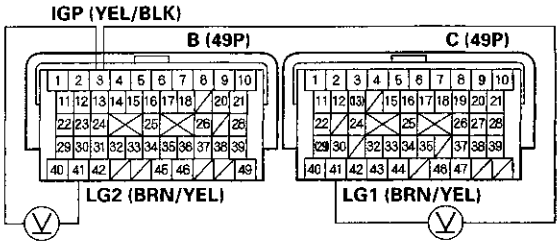
YES—Go to step 15.

NO—Replace shift solenoid valve C or the shift solenoid wire harness (see page 14-211), then go to step 22.

15. Turn the ignition switch to ON (II).

16. Measure the voltage between PCM connector terminals B3 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there battery voltage?

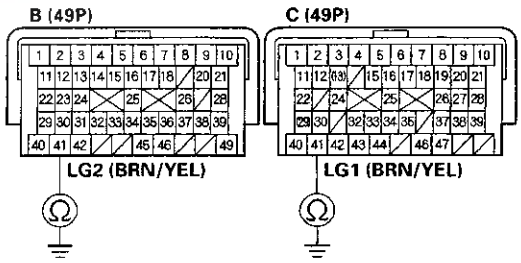
YES—Go to step 25.

NO—Go to step 17.

17. Turn the ignition switch to LOCK (0).

18. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Check for a blown No. 17 (15 A) fuse in the under-hood fuse/relay box. If the fuse is OK, check the PGM-FI main relay and repair open in the wire between PCM connector terminal B3 and the under-hood fuse/relay box, then go to step 19.

NO—Repair open in the wires between PCM connector terminals B41, C41, and body ground (G101), or repair poor body ground (G101), then go to step 19.

(cont'd)

DTC Troubleshooting (cont'd)

19. Reconnect all connectors.

20. Turn the ignition switch to ON (II).

21. Clear the DTC with the HDS.

22. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 1st gear for at least 1 second, then slow down to a stop.

23. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0979 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve C and the PCM, then go to step 1.

    NO—Go to step 24.

24. Monitor the OBD status for P0979 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between shift solenoid valve C and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 22.

25. Connect PCM connectors B (49P) and C (49P).

26. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

27. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 1st gear for at least 1 second, then slow down to a stop.

28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0979 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 27. If the PCM was substituted, go to step 1.

    NO—Go to step 29.

29. Monitor the OBD status for P0979 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 28, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for shift solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 27. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 27.

DTC P0980: Open in Shift Solenoid Valve C Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine in P, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0980 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve C in the Miscellaneous Test Menu, and test shift solenoid valve C with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

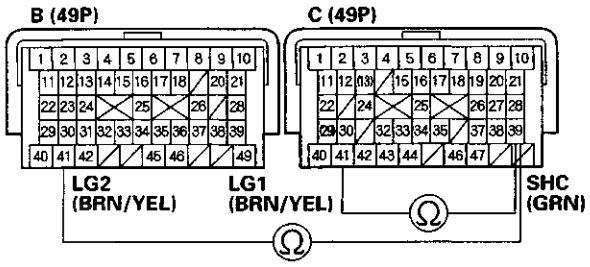
   NO—Go to step 8.
6. Start the engine in P, and wait for at least 1 second.
7. Monitor the OBD status for P0980 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between shift solenoid valve C and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure the resistance between PCM connector terminals C39 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there 12—25 Ω ?

YES—Go to step 22.

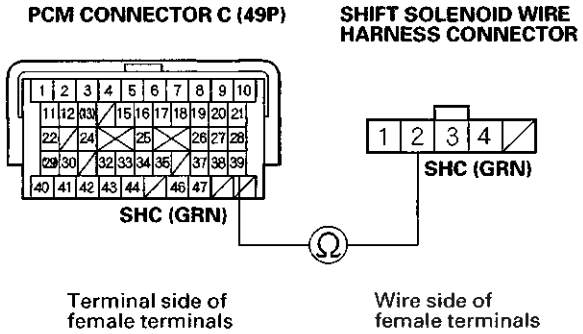
NO—Go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminal C39 and shift solenoid wire harness connector terminal No. 2.



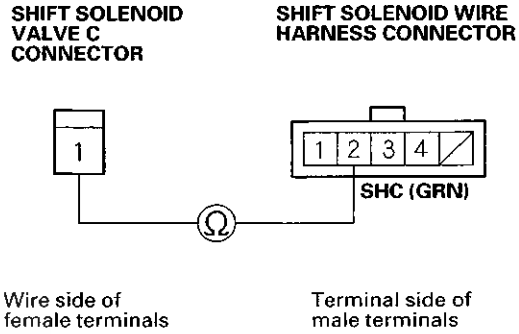
Is there continuity?

YES—Go to step 14.

NO—Repair open in the wire between PCM connector terminal C39 and the shift solenoid wire harness connector, then go to step 16.

14. Remove the shift solenoid wire harness (see page 14-211).

15. Check for continuity between shift solenoid wire harness connector terminal No. 2 and the shift solenoid valve C connector terminal.



Is there continuity?

YES—Replace shift solenoid valve C (see page 14-211), then go to step 19.

NO—Replace the shift solenoid wire harness (see page 14-211), then go to step 19.

16. Reconnect all connectors.

17. Turn the ignition switch to ON (II).

18. Clear the DTC with the HDS.

19. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 1st gear for at least 1 second, then slow down to a stop.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0980 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve C and the PCM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0980 in the DTC MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve C and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 19.

22. Reconnect all connectors.

23. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

24. Start the engine in P, wait for at least 1 second, then test-drive the vehicle in D. Drive the vehicle in 1st gear for at least 1 second, then slow down to a stop.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0980 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1.

    NO—Go to step 26.

26. Monitor the OBD status for P0980 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting.■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve C and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

DTC Troubleshooting (cont'd)

DTC P0982: Short in Shift Solenoid Valve D Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine in P, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0982 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve D in the Miscellaneous Test Menu, and test shift solenoid valve D with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

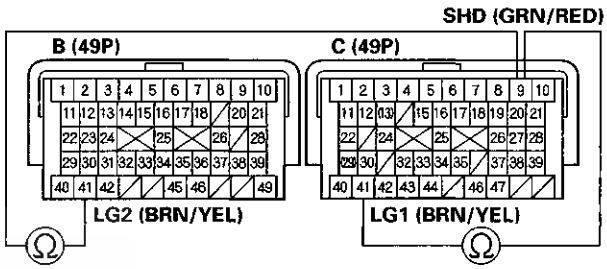
   NO—Go to step 8.
6. Start the engine in P, and wait for at least 1 second.
7. Monitor the OBD status for P0982 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for intermittent short to body ground in the wire between shift solenoid valve E and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure resistance between PCM connector terminals C9 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there less than 12 Ω ?

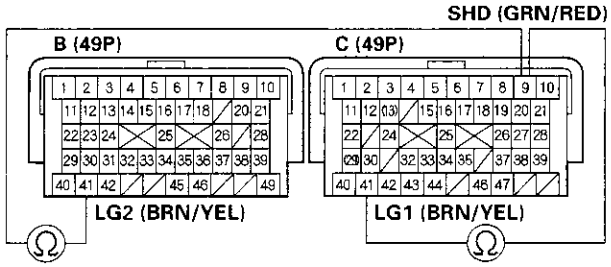
YES—Go to step 12.

NO—Go to step 26.

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminals C9 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal C9 and the shift solenoid wire harness connector, then go to step 20.

NO—Go to step 14.

14. Inspect shift solenoid valve D (see page 14-211).

Is shift solenoid valve D OK?

YES—Go to step 15.

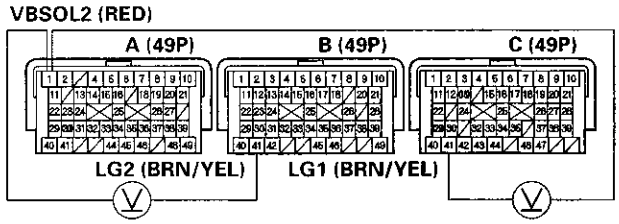
NO—Replace shift solenoid valve D or the shift solenoid wire harness (see page 14-211), then go to step 23.

15. Disconnect PCM connector A (49P).

16. Turn the ignition switch to ON (II).

17. Measure the voltage between PCM connector terminals A1 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there battery voltage?

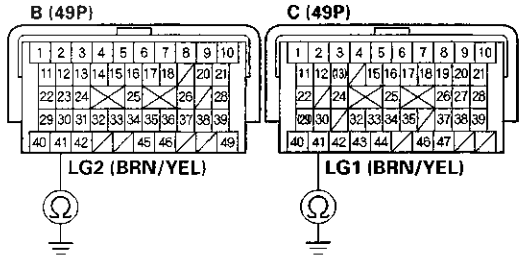
YES—Go to step 26.

NO—Go to step 18.

18. Turn the ignition switch to LOCK (0).

19. Check for continuity between PCM connector terminals B41 and body ground, and between C41 and body ground.

PCM CONNECTORS



Terminal side of female terminals

Is there continuity?

YES—Check for a blown No. 10 (10 A) fuse in the under-dash fuse/relay box. If the fuse is OK, repair open in the wire between PCM connector terminal A1 and the under-dash fuse/relay box, then go to step 20.

NO—Repair open in the wires between PCM connector terminals B41, C41, and body ground (G101), or repair poor body ground (G101), then go to step 20.

(cont'd)

DTC Troubleshooting (cont'd)

20. Reconnect all connectors.

21. Turn the ignition switch to ON (II).

22. Clear the DTC with the HDS.

23. Start the engine in P, and wait for at least 1 second. With the brake pedal pressed, shift to the N, and wait for at least 1 second.

24. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0982 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve D and the PCM, then go to step 1.

    NO—Go to step 25.

25. Monitor the OBD status for P0982 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between shift solenoid valve D and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 23.

26. Reconnect all connectors.

27. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

28. Start the engine in P, and wait for at least 1 second. With the brake pedal pressed, shift to the N, and wait for at least 1 second.

29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0982 indicated?

    YES—Check for intermittent short to body ground in the wire between shift solenoid valve D and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 28. If the PCM was substituted, go to step 1.

    NO—Go to step 30.

30. Monitor the OBD status for P0982 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 29, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for intermittent short to body ground in the wire between shift solenoid valve D and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 28. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 28.

DTC P0983: Open in Shift Solenoid Valve D Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine in P. With the brake pedal pressed, shift to N, and wait for at least 1 second.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0983 indicated?

   YES—Go to step 8.

   NO—Go to step 5.
5. Select Shift Solenoid Valve D in the Miscellaneous Test Menu, and test shift solenoid valve D with the HDS.

   Is a clicking sound heard?

   YES—Go to step 6.

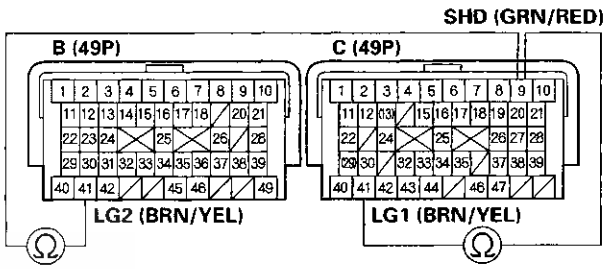
   NO—Go to step 8.
6. Start the engine in P. With the brake pedal pressed, shift to N, and wait for at least 1 second.
7. Monitor the OBD status for P0983 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Go to step 8.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between shift solenoid valve D and the PCM. If the HDS indicates NOT COMPLETED, go to step 5.
8. Turn the ignition switch to LOCK (0).
9. Jump the SCS line with the HDS.
10. Disconnect PCM connectors B (49P) and C (49P).
11. Measure resistance between PCM connector terminals C9 and B41 or C41.

PCM CONNECTORS



Terminal side of female terminals

Is there 12–25 Ω ?

YES—Go to step 22.

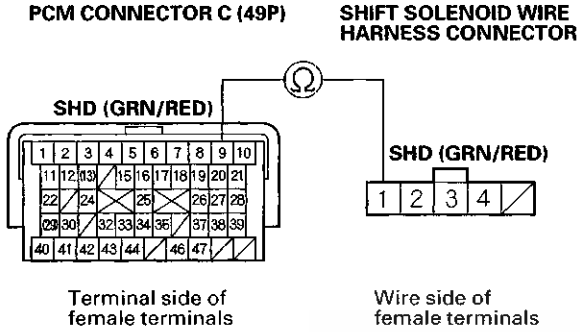
NO—Go to step 12.

(cont'd)

DTC Troubleshooting (cont'd)

12. Disconnect the shift solenoid wire harness connector.

13. Check for continuity between PCM connector terminal C9 and shift solenoid wire harness connector terminal No. 1.



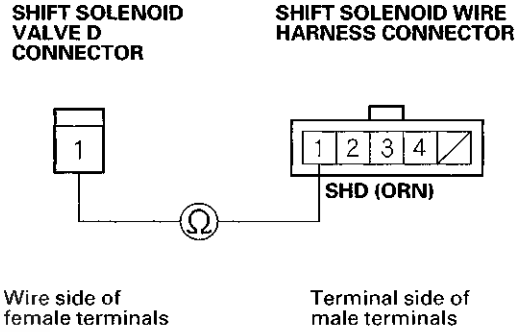
Is there continuity?

YES—Go to step 14.

NO—Repair open in the wire between PCM connector terminal C9 and the shift solenoid wire harness connector, then go to step 16.

14. Remove the shift solenoid wire harness (see page 14-211).

15. Check for continuity between shift solenoid wire harness connector terminal No. 1 and the shift solenoid valve D connector terminal.



Is there continuity?

YES—Replace shift solenoid valve D (see page 14-211), then go to step 19.

NO—Replace the shift solenoid wire harness (see page 14-211), then go to step 19.

16. Reconnect all connectors.

17. Turn the ignition switch to ON (II).

18. Clear the DTC with the HDS.

19. Start the engine in P, and wait for at least 1 second. With the brake pedal pressed, shift to the N, and wait for at least 1 second.

20. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0983 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve D and the PCM, then go to step 1.

    NO—Go to step 21.

21. Monitor the OBD status for P0983 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 20, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve D and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 19.

22. Connect PCM connectors B (49P) and C (49P).

23. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).

24. Start the engine in P, and wait for at least 1 second. With the brake pedal pressed, shift to the N, and wait for at least 1 second.

25. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0983 indicated?

    YES—Check for poor connections or loose terminals between shift solenoid valve D and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1.

    NO—Go to step 26.

26. Monitor the OBD status for P0983 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between shift solenoid valve D and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 24. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 24.

DTC Troubleshooting (cont'd)

DTC P1717: Open in Transmission Range Switch ATPRVS Switch Circuit

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Turn the ignition switch to ON (II).
2. Shift to R, and verify the A/T R Switch signal with the HDS in the A/T Data List.

   Is the A/T R Switch ON?

   YES—Go to step 3.

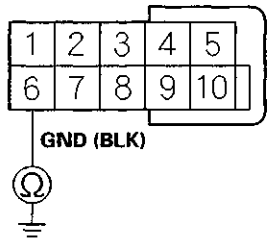
   NO—Check for proper transmission range switch installation (see page 14-266), adjust the shift cable (see page 14-260), then recheck. ■
3. Check the Reverse Switch (ATPRVS) signal with the HDS.

   Is the Reverse Switch (ATPRVS) ON?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect the transmission range switch connector.
6. Check for continuity between transmission range switch connector terminal No. 6 and body ground.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

Is there continuity?

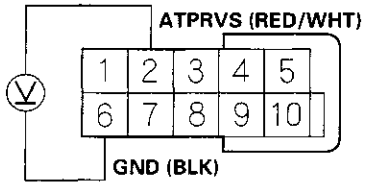
YES—Go to step 7.

NO—Repair open in the wire between transmission range switch connector terminal No. 6 and body ground (G101), or repair poor body ground (G101), then go to step 10.

7. Turn the ignition switch to ON (II).

8. Measure the voltage between transmission range switch connector terminals No. 2 and No. 6.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

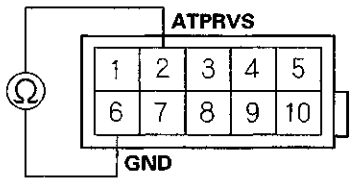
Is there around battery voltage?

YES—Go to step 9.

NO—Repair open in the wire between PCM connector terminal C19 and the transmission range switch, then go to step 10.

9. Check for continuity between the No. 2 and No. 6 terminals at the transmission range switch, when the shift lever is in P, R, and N, and no continuity when the shift lever is in D, D3, 2, and 1.

TRANSMISSION RANGE SWITCH CONNECTOR



Terminal side of male terminals

Is there continuity when the shift lever is in P, R, and N, and no continuity when the shift lever is in D, D3, 2, and 1?

YES—Go to step 16.

NO—Replace the transmission range switch (see page 14-266), then go to step 13.

(cont'd)

DTC Troubleshooting (cont'd)

10. Reconnect all connectors.
11. Turn the ignition switch to ON (II).
12. Clear the DTC with the HDS.
13. Start the engine in P. With the brake pedal pressed, shift to R, and wait for at least 2 seconds in R, then shift to N.
14. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1717 indicated?

    YES—Check for poor connections or loose terminals between the transmission range switch and the PCM, then go to step 1.

    NO—Go to step 15.
15. Monitor the OBD status for P1717 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the transmission range switch and the PCM, then go to step 1. If the HDS indicates NOT COMPLETED, go to step 13.
16. Reconnect all connectors.
17. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
18. Start the engine in P. With the brake pedal pressed, shift to R, and wait for at least 2 seconds in R, then shift to N.
19. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1717 indicated?

    YES—Check for poor connections or loose terminals between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 18. If the PCM was substituted, go to step 1.

    NO—Go to step 20.
20. Monitor the OBD status for P1717 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTC's troubleshooting. ■

    NO—If the HDS indicates FAILED, check for poor connections or loose terminals between the transmission range switch and the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 18. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 18.

DTC P1743: Problem in Shift Control System; Shift Valve E Stuck OFF

DTC P1744: Problem in Shift Control System; Shift Valve E Stuck ON

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 9.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Turn the ignition switch to ON (II).
5. Clear the DTC with the HDS.
6. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears. Then slow down to a stop.
7. Monitor the OBD status for P1743 or P1744 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Repair shift valve E in the main valve body (see page 14-290), replace the main valve body, or replace the transmission, then go to step 9.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 6.
8. Clear the DTC with the HDS.
9. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears. Then slow down to a stop.
10. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1743 or P1744 indicated?

    YES—Go to step 5.

    NO—Go to step 11.
11. Monitor the OBD status for P1743 or P1744 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete.■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 9.

HONDA

DTC Troubleshooting (cont'd)

DTC P1745: Problem in Shift Control System; Servo Control Valve Stuck OFF or Servo Valve Stuck OFF

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Warm up the engine to normal operating temperature (the radiator fan comes on).
2. Make sure that the transmission is filled to the proper level, and check for fluid leaks.
3. Drain the ATF (see step 4 on page 14-232) through a strainer. Inspect the strainer for metal debris or excessive clutch material.

   Does the strainer have metal debris or excessive clutch material?

   YES—Replace the transmission, then go to step 9.

   NO—Replace the ATF (see step 6 on page 14-232), then go to step 4.
4. Turn the ignition switch to ON (II).
5. Clear the DTC with the HDS.
6. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears. Then slow down to a stop.
7. Monitor the OBD status for P1745 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES—Repair the servo control valve in the main valve body (see page 14-290), the servo valve in the regulator valve body (see page 14-293), or replace the main valve body, the regulator valve body, or replace the transmission, then go to step 9.

   NO—If the HDS indicates PASSED, intermittent failure, the system is OK at this time. If the HDS indicates NOT COMPLETED, go to step 4.
8. Clear the DTC with the HDS.
9. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears. Then slow down to a stop.
10. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P1745 indicated?

    YES—Go to step 5.

    NO—Go to step 11.
11. Monitor the OBD status for P1745 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES—Troubleshooting is complete. ■

    NO—If the HDS indicates FAILED, go to step 8. If the HDS indicates NOT COMPLETED, go to step 9.

DTC P1780: Problem in Shift Control System

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot with the HDS, and review General Troubleshooting Information (see page 14-4).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears. Then slow down to a stop.
4. Check for Temporary DTCs or DTCs with the HDS.

   NOTE: DTC P1780 means there is one or more A/T DTCs stored for the shift control system.

   Are there other DTCs?

   YES—Refer to the troubleshooting as indicated by the DTC. ■

   NO—Go to step 5.
5. Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8).
6. Test-drive the vehicle with the shift lever in D, and let the transmission shift through all five gears. Then slow down to a stop.
7. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P1780 indicated?

   YES—If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 6. If the PCM was substituted, go to step 1.

   NO—Go to step 8.
8. Monitor the OBD status for P1780 in the DTCs MENU with the HDS.

   Does the HDS indicate PASSED?

   YES—If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see page 11-282). If any other DTCs were indicated in step 7, go to the indicated DTC's troubleshooting. ■

   NO—If the HDS indicates FAILED, check for poor connections and loose terminals at the PCM. If the PCM was updated, substitute a known-good PCM (see page 14-8), then go to step 6. If the PCM was substituted, go to step 1. If the HDS indicates NOT COMPLETED, go to step 6.

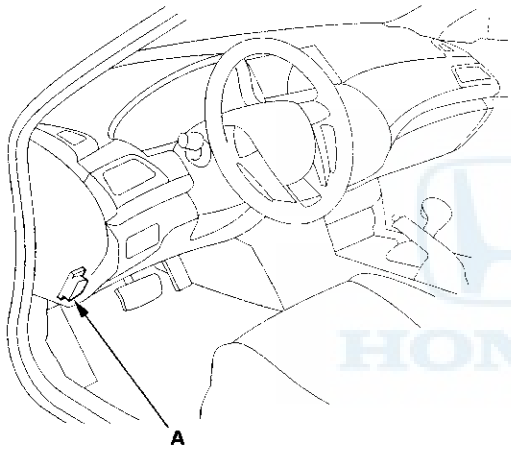
Road Test

1. Warm up the engine to normal operating temperature (the radiator fan comes on).

2. Apply the parking brake, and block both rear wheels. Start the engine, then shift to the D while pressing the brake pedal. Press the accelerator pedal, and release it suddenly. The engine should not stall.

3. Repeat step 2 in all shift lever positions.

4. Connect the HDS to the DLC (A) located under the driver's side of the dashboard, and go to the A/T Date List.



5. Turn the ignition switch to ON (II).

6. Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).

7. Prepare the HDS to take a HIGH SPEED SNAPSHOT (refer to the HDS user's guide for more details if needed):

   - Select High Speed icon.
   - Select these parameters:
     - Vehicle Speed
     - Output Shaft (Countershaft) Speed (rpm)
     - Input Shaft (Mainshaft) Speed (rpm)
     - Engine Speed
     - TP Sensor
     - APP Sensor A (V)
     - ATF Temp Sensor (V)
     - Battery Voltage
     - Shift Control
     - Brake Switch
   - Set the Trigger Type to Parameter.
   - Adjust the Parameter setting to APP Sensor A above 1.1 V.
   - Set the recording time to 60 seconds.
   - Set the trigger point to −30 seconds.

8. Find a suitable level road. When you are ready to do the test, press OK with the HDS.

9. Monitor the HDS, and accelerate quickly until the APP Sensor A reads 1.2 V. Maintain a steady throttle until the transmission shifts to 5th gear, then slow the vehicle and come to a stop.

10. Save the snapshot if the entire event was recorded, or increase the recording time setting as necessary, and repeat step 9.

11. Adjust the parameter setting to 2.4 V. Test-drive the vehicle again. While monitoring the HDS, accelerate quickly until the APP Sensor A reads 2.5 V. Maintain a steady throttle until the transmission shifts to 5th gear (or reasonable speed), then slow the vehicle and come to a stop.

12. Save the snapshot if the entire event was recorded, or increase the recording time setting as necessary, and repeat step 11.

13. Accelerate quickly until the accelerator pedal is to the floor. Maintain a steady pedal until the transmission shifts to 4th gear, then slow to a stop, and save the snapshot.

14. Review each snapshot individually, and compare the Shift Command, the APP Sensor A voltage, and the Vehicle Speed to following the table:

Upshift: D Position

APP Sensor A voltage: 1.2 V	
1st → 2nd	7—11 mph (13—17 km/h)
2nd → 3rd	15—19 mph (24—30 km/h)
3rd → 4th	23—29 mph (38—46 km/h)
4th → 5th	37—45 mph (61—71 km/h)
Lock-up ON	34—40 mph (55—63 km/h)
APP Sensor A voltage: 2.5 V	
1st → 2nd	17—21mph (27—33 km/h)
2nd → 3rd	35—41 mph (55—65 km/h)
3rd → 4th	52—60 mph (84—96 km/h)
4th → 5th	76—86 mph (123—137 km/h)
Lock-up ON	76—84 mph (121—135 km/h)
Fully-opened throttle APP Sensor A voltage: 4.5 V	
1st → 2nd	37—43 mph (59—69 km/h)
2nd → 3rd	64—72 mph (103—115 km/h)
3rd → 4th	96—106 mph (154—170 km/h)
Lock-up ON	99—109 mph (158—174 km/h)

Downshift: D Position (reference)

APP Sensor A voltage: 1.2 V	
Lock-up OFF	33—39 mph (53—61 km/h)
5th → 4th	32—38 mph (51—61 km/h)
4th → 3rd	16—20 mph (26—32 km/h)
3rd → 1st	6—10 mph (10—16 km/h)
APP Sensor A voltage: 2.5 V	
Lock-up OFF	65—73 mph (104—116 km/h)
Fully-opened throttle APP Sensor A voltage: 4.5 V	
Lock-up OFF	105—115 mph (168—184 km/h)
5th → 4th	106—116 mph (170—186 km/h)
4th → 3rd	76—86 mph (123—137 km/h)
3rd → 2nd	49—57 mph (79—91 km/h)
2nd → 1st	25—31 mph (40—50 km/h)

15. Drive the vehicle in 4th or 5th gear in D, then shift to 2. The vehicle should immediately begin to slow down from engine braking.

16. Shift to 1, accelerate from a stop at full throttle, and check for abnormal noise and clutch slippage. Also check that upshifts do not occur.

17. Shift to 2, accelerate from a stop at full throttle, and check for abnormal noise and clutch slippage. Also check that upshifts and downshifts do not occur.

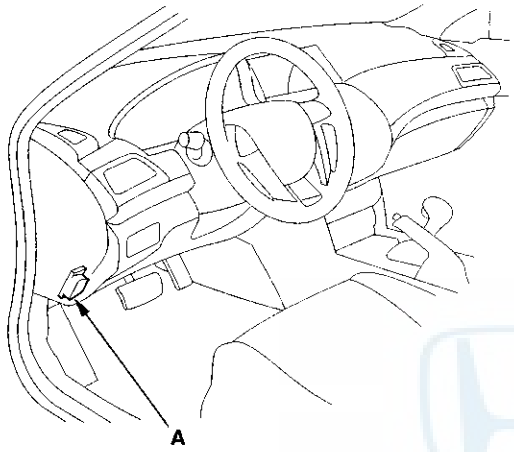
18. Shift to R, accelerate from a stop at full throttle momentarily, and check for abnormal noise and clutch slippage.

19. Park the vehicle on a slope (about 16 degrees), apply the brake, and shift into P. Release the brake; the vehicle should not move.

    NOTE: Always use the brake to hold the vehicle, when stopped on an incline in gear. Depending on the grade of the incline, the vehicle could roll backwards if the brake is released.

Stall Speed Test

1. Make sure the transmission fluid is filled to the proper level (see page 14-231).
2. Apply the parking brake, and block all four wheels.
3. Connect the HDS to the DLC (A) located under the driver's side of the dashboard, and go to the A/T Data List.



4. Turn the ignition switch to ON (II).
5. Make sure the HDS communicates with the PCM. If the does not, go to the DLC circuit troubleshooting (see page 11-259).
6. Make sure the A/C switch OFF.
7. After the engine has warmed up to normal operating temperature (the radiator fan comes on), shift to 2.
8. Firmly press and hold the brake pedal, then press the accelerator pedal for 6 to 8 seconds, and note the engine speed. Do not move the shift lever or remove your foot off the brake, while raising the engine speed.
9. Allow 2 minutes for cooling, then repeat the test in D, 1, and R.

   NOTE:
   - Do not test stall speed for more than 10 seconds at a time.
   - Record the engine speed at 6—8 seconds after pressing the accelerator pedal. Higher engine speed will be indicated for 5 seconds.
   - Stall speed tests should be used for diagnostic purposes only.
   - The stall speed should be the same in D, 2, 1, and R.
   - Do not test stall speed with the A/T oil pressure gauges installed.

   Stall Speed rpm
   Specification: 1,850 rpm
   Service Limit: 1,700—2,000 rpm

10. If any of the stall speeds are out of the service limit, refer to the problems and probable causes listed in the table.

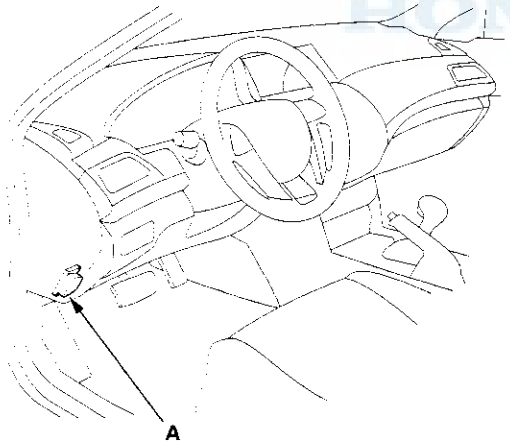
Problem	Probable causes
Stall speed rpm high in D, 2, 1, and R	• ATF pump output low • Clogged ATF strainer • Regulator valve stuck • Slipping clutch
Stall speed rpm high in 1	Slippage of 1st clutch or 1st gear one-way clutch
Stall speed rpm high in 2	Slippage of 2nd clutch
Stall speed rpm high in R	Slippage of 5th clutch
Stall speed rpm low in D, 2, 1, and R	• Engine output low • Engine throttle valve closed • Torque converter one-way clutch slipping

Pressure Test

Special Tools Required
- A/T oil pressure gauge set 07406-0020400 or 07406-0020401
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure hose adapter 07MAJ-PY40120

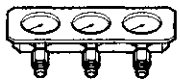
NOTE:
- Disable the VSA by pressing the VSA OFF switch.
- ABS or VSA DTC(s) may come on during the test-drive. If the ABS or VSA DTC(s) come on, clear the DTC(s) with the HDS.

1. Make sure the transmission fluid is filled to the proper level (see page 14-231).
2. Raise the vehicle on a lift, or apply parking brake, block both rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
3. Allow the front wheels to rotate freely.
4. Remove the splash shield.
5. Connect the HDS to the DLC (A) located under the driver's side of the dashboard, and go to the A/T Data List.



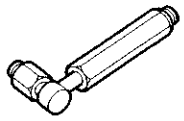
6. Turn the ignition switch to ON (II).
7. Make sure the HDS communicates with the PCM. If it does not, go to DLC circuit troubleshooting (see page 11-259).
8. Connect the A/T oil pressure gauge to the line pressure inspection port (A). Do not allow dust or other foreign particles to enter the hole while connecting the A/T oil pressure gauge.

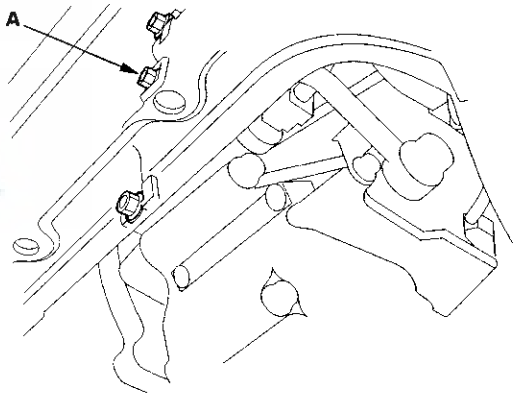
A/T OIL PRESSURE GAUGE SET 07406-0020400 or 07406-0020401



A/T PRESSURE HOSE, 2,210 mm 07MAJ-PY4011A

A/T PRESSURE HOSE ADAPTER 07MAJ-PY40120





(cont'd)

Pressure Test (cont'd)

9. Start the engine, and warm it up to normal operating temperature (the radiator fan comes on).

10. Measure the line pressure at the line pressure inspection port while holding the engine speed at 2,000 rpm with the shift lever in P or N.

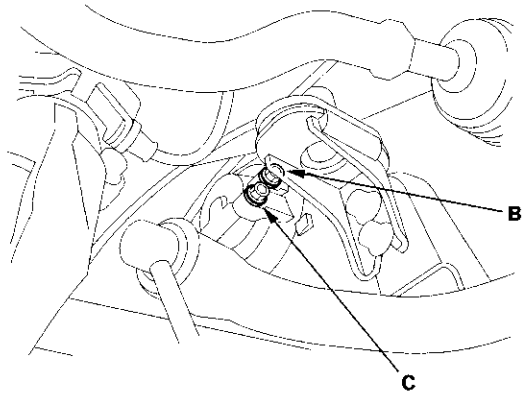
    NOTE: Higher pressure may be indicated if measurements are made in the shift lever position other than P or N.

Pressure	Fluid Pressure	
	Standard	Service Limit
Line (A)	950—1,010 kPa (9.7—10.3 kgf/cm², 140—146 psi)	900 kPa (9.2 kgf/cm², 130 psi)

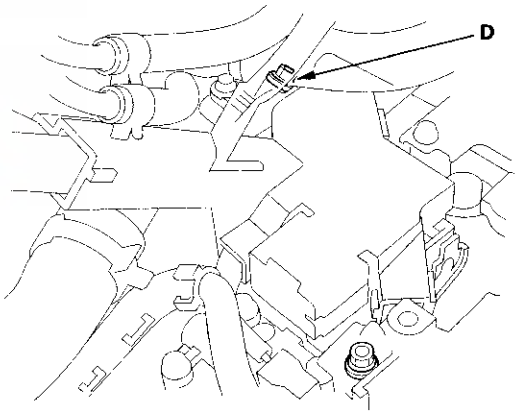
11. Turn the engine off, then disconnect the oil pressure gauge from the line pressure inspection port.

12. Install the sealing bolt to the line pressure inspection port with a new sealing washer, and tighten the bolt to 18 N·m (1.8 kgf·m, 13 lbf·ft). Do not reuse the old sealing washer.

13. Connect the A/T oil pressure gauge to the 1st clutch pressure inspection port (B) and the 1st-hold clutch pressure inspection port (C).



14. Connect the A/T oil pressure gauge to the 2nd clutch pressure inspection port (D).



15. Start the engine, and shift to 1.

16. Measure the 1st clutch pressure at the 1st clutch pressure inspection port and the 1st-hold clutch pressure at the 1st-hold clutch pressure inspection port while holding the engine speed at 2,000 rpm.

17. Shift to 2, and measure the 2nd clutch pressure at the 2nd clutch pressure inspection port while holding the engine speed at 2,000 rpm.

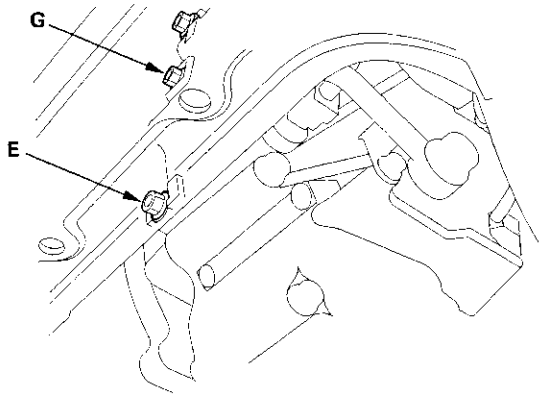
Pressure	Fluid Pressure	
	Standard	Service Limit
1st clutch (B) 2nd clutch (D)	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)
1st-hold clutch (C)	680—760 kPa (6.9—7.7 kgf/cm², 100—110 psi)	630 kPa (6.4 kgf/cm², 91 psi)

18. Turn the engine off, remove the air cleaner assembly, then disconnect the A/T oil pressure gauge from the 2nd clutch pressure inspection port.

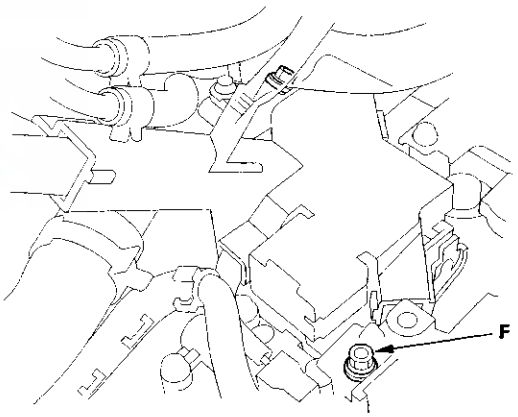
19. Disconnect the A/T oil pressure gauge from the 1st clutch pressure and the 1st-hold clutch pressure inspection ports.

20. Install the sealing bolts in the 1st clutch pressure, the 1st-hold clutch pressure, and the 2nd clutch pressure inspection ports with new sealing washers, and tighten the bolts to 18 N·m (1.8 kgf·m, 13 lbf·ft). Do not reuse the old sealing washers.

21. Connect the A/T oil pressure gauge to the 3rd clutch pressure inspection port (E) and the 5th clutch pressure inspection port (G).



22. Connect the A/T oil pressure gauge to the 4th clutch pressure inspection port (F).



23. Start the engine, and shift to D3, then press the accelerator pedal slowly until reaching 3rd gear.

24. Measure the 3rd clutch pressure at the 3rd clutch pressure inspection port while holding the engine speed at 2,000 rpm.

(cont'd)

Pressure Test (cont'd)

25. Shift to D, and measure the 4th clutch pressure at the 4th clutch pressure inspection port.

26. Measure the 5th clutch pressure at the 5th clutch pressure inspection port while holding the engine speed at 2,000 rpm.

Pressure	Fluid Pressure	
	Standard	Service Limit
3rd clutch (E) 4th clutch (F) 5th clutch (G)	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)

27. Bring the engine back to an idle, then apply the brake pedal to stop the wheels from rotating.

28. Shift to R, then release the brake pedal. Measure the 5th clutch pressure at the 5th clutch pressure inspection port while holding the engine speed at 2,000 rpm.

Pressure	Fluid Pressure	
	Standard	Service Limit
5th clutch (G) in R	940—1,020 kPa (9.6—10.4 kgf/cm², 140—148 psi)	890 kPa (9.1 kgf/cm², 130 psi)

29. Turn the engine off, then disconnect the A/T oil pressure gauge from the 3rd, 4th, and 5th clutch pressure inspection ports.

30. Install the sealing bolts in the 3rd, 4th, and 5th clutch pressure inspection ports with new sealing washers, and tighten the bolts to 18 N·m (1.8 kgf·m, 13 lbf·ft). Do not reuse the old sealing washers.

31. If any of the pressures are out of the service limit, refer to the problems and probable causes listed in the table.

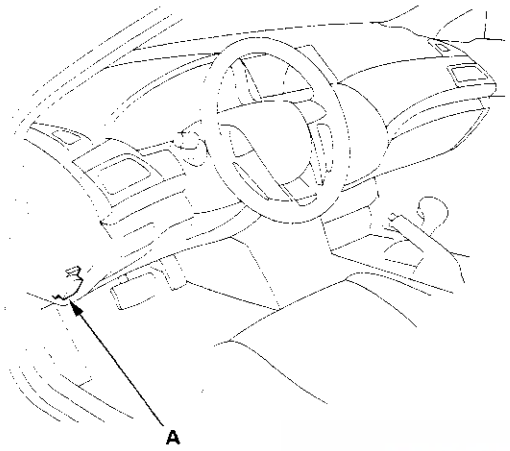
Problem	Probable causes
No or low line pressure	• Torque converter • ATF pump • Regulator valve • Torque converter check valve • Clogged ATF strainer
No or low 1st clutch pressure	• 1st clutch • O-rings
No or low 2nd clutch pressure	• 2nd clutch • O-rings
No or low 3rd clutch pressure	• 3rd clutch • O-rings
No or low 4th clutch pressure	• 4th clutch • O-rings
No or low 5th clutch pressure	• 5th clutch • O-rings
No or low 5th clutch pressure in R	• Servo valve • 5th clutch • O-rings
No or low 1st-hold clutch pressure	• 1st-hold clutch • O-rings

32. Install the splash shield.

33. Check the ATF level (see page 14-231).

Shift Solenoid Valve Test, Replacement, and Shift Solenoid Wire Harness Replacement

1. Connect the HDS to the DLC (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II). Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).

3. Select Shift Solenoid Valves A, B, C, and D in the Miscellaneous Test Menu with the HDS.

4. Check that shift solenoid valves A, B, C, and D operate with the HDS. A clicking sound should be heard.

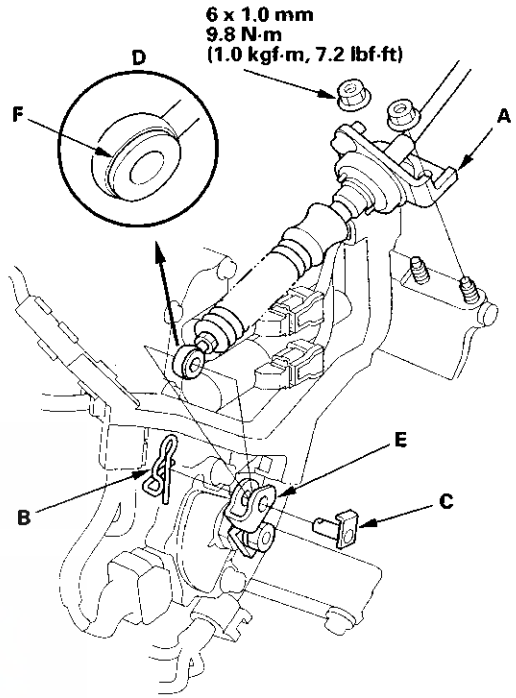
   - If a clicking sound is heard, the valves are OK. The test is complete, disconnect the HDS.
   - If no clicking sound is heard, go to step 5, and test the solenoid valves.

5. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

6. Remove the air cleaner assembly (see page 11-436).

7. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket, and remove the battery base and the battery base bracket in the engine compartment.

8. Remove the nuts securing the shift cable bracket (A).



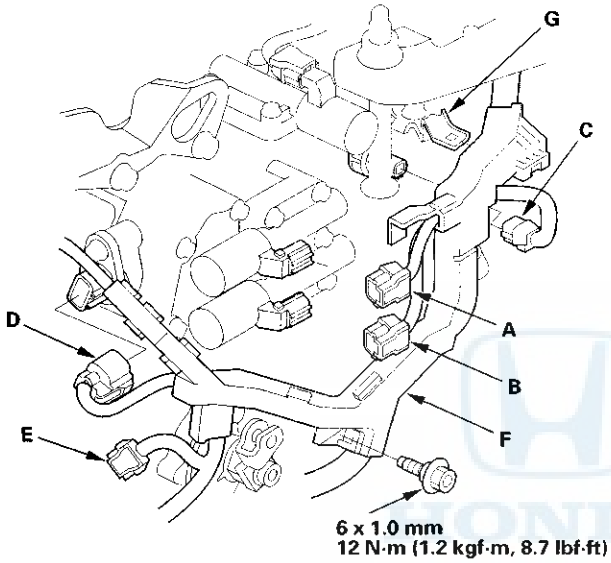
9. Remove the spring clip (B) and the control pin (C), then separate the shift cable end (D) from the selector control lever (E).

10. Check the bushing (F) in the shift cable end for proper fit and wear. If the bushing is loose or worn, replace the shift cable (see page 14-260).

(cont'd)

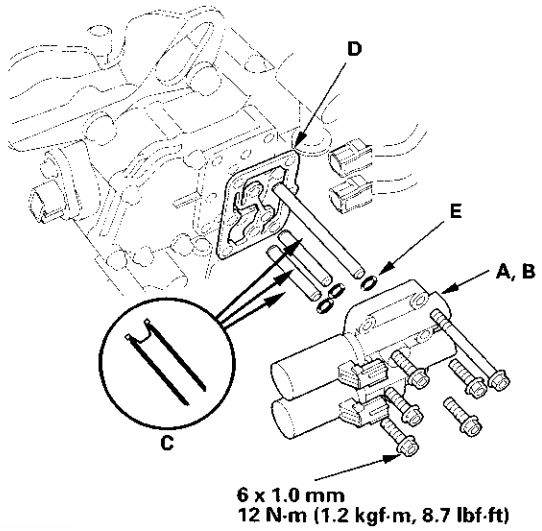
Shift Solenoid Valve Test, Replacement, and Shift Solenoid Wire Harness Replacement (cont'd)

11. Disconnect the A/T clutch pressure control solenoid valve A connector (A), the A/T clutch pressure control solenoid valve B connector (B), the 4th clutch transmission fluid pressure switch connector (C), shift solenoid wire harness connector (D), and the input shaft (mainshaft) speed sensor connector (E).



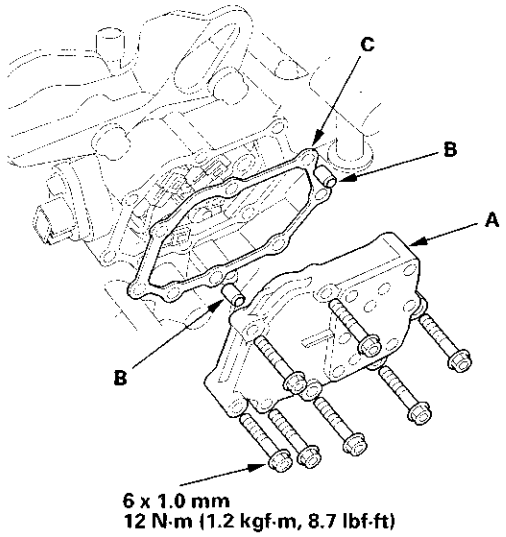
12. Remove the bolt securing the harness cover (F), and remove the harness cover from its bracket (G).

13. Remove A/T clutch pressure control solenoid valves A and B, the ATF pipes (C), and the gasket (D).



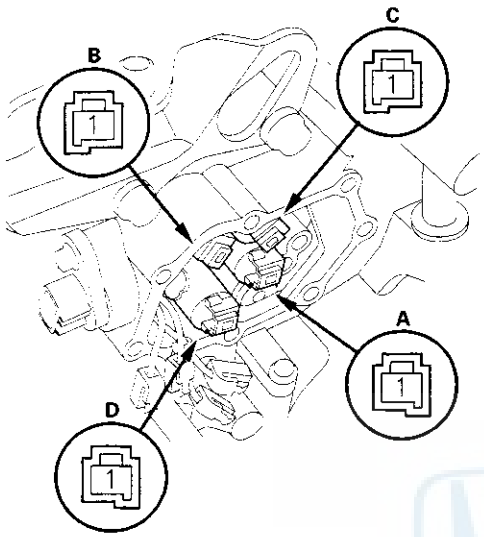
14. Replace the gasket and the O-rings (E) with new ones when installing A/T clutch pressure control solenoid valves A and B.

15. Remove the solenoid valve cover (A), the dowel pins (B), and the gasket (C).



16. Replace the gasket with a new one when installing the solenoid valve cover.

17. Disconnect the connectors from shift solenoid valve A, shift solenoid valve B, shift solenoid valve C, and shift solenoid valve D.



18. Measure the resistance of each shift solenoid valve between the connector terminal and the body ground.

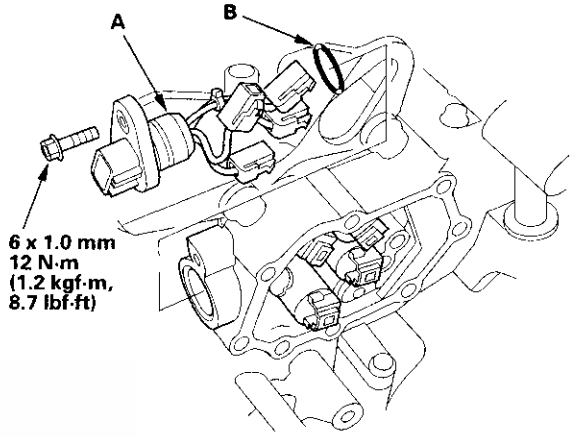
    Standard: 12—25 Ω

    - If the resistance is out of standard, go to step 21 and replace shift solenoid valve.
    - If the resistance is within the standard, go to step 19 and check solenoid valve for a clicking sound.

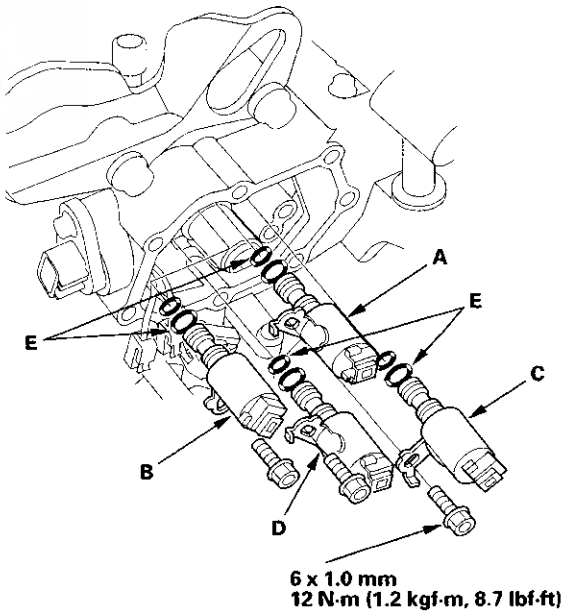
19. Connect a jumper wire from the negative battery terminal to the body ground, and connect another jumper wire from the positive battery terminal to each solenoid valve terminal individually.

    - If a clicking sound is heard, go to step 20 and replace the shift solenoid wire harness.
    - If no clicking sound is heard, go to step 21 and replace the shift solenoid valve.

20. Remove the shift solenoid wire harness connector (A), and replace it. Install a new O-ring (B) on the shift solenoid wire harness connector, and install the connector in the transmission housing, then go to step 30.



21. Remove the mounting bolts, then remove the shift solenoid valves.



(cont'd)

Shift Solenoid Valve Test, Replacement, and Shift Solenoid Wire Harness Replacement (cont'd)

22. Install new O-rings (two O-rings per solenoid valve) (E) on the reused solenoid valves.

    NOTE: A new solenoid valve comes with new O-rings. If you install a new solenoid valve, use the O-rings provided with it.

23. Install shift solenoid valve D (black connector) by holding the shift solenoid valve body; make sure the mounting bracket contacts the accumulator body.

    NOTE: Do not hold the solenoid valve by the connector when installing the solenoid valve. Be sure to hold the solenoid valve body.

24. Install shift solenoid valve A (black connector) by holding the shift solenoid valve body; make sure the mounting bracket contacts the accumulator body.

25. Install shift solenoid valve C (brown connector) by holding the shift solenoid valve body; make sure the mounting bracket contacts the bracket of shift solenoid valve A.

    NOTE: Do not install shift solenoid valve C before installing shift solenoid valve A. If shift solenoid valve C is installed before installing shift solenoid valve A, it may damage the hydraulic control system.

26. Install shift solenoid valve B (brown connector) by holding the shift solenoid valve body; make sure the mounting bracket contacts the accumulator body.

27. Connect the harness terminals to the solenoids:

    - YEL wire connector to shift solenoid valve A.
    - RED wire connector to shift solenoid valve B.
    - GRN wire connector to shift solenoid valve C.
    - ORN wire connector to shift solenoid valve D.

28. Install the shift solenoid valve cover, the dowel pins, and a new gasket.

29. Install a new solenoid valve body gasket on the solenoid valve cover, and install the ATF pipes with their filter side into the transmission housing. Install new O-rings over the ATF pipes.

30. Install A/T clutch pressure control solenoid valves A and B.

31. Install the harness cover on its bracket, and secure it with the bolt.

32. Check the connectors for rust, dirt, or oil, clean or repair if necessary, then connect the connectors securely.

33. Apply molybdenum grease to the hole in the bushing in the shift cable end. Attach the shift cable end to the selector control lever, then insert the control pin into the selector control lever hole through the shift cable end, and secure the control pin with the spring clip.

34. Secure the shift cable bracket with the nuts.

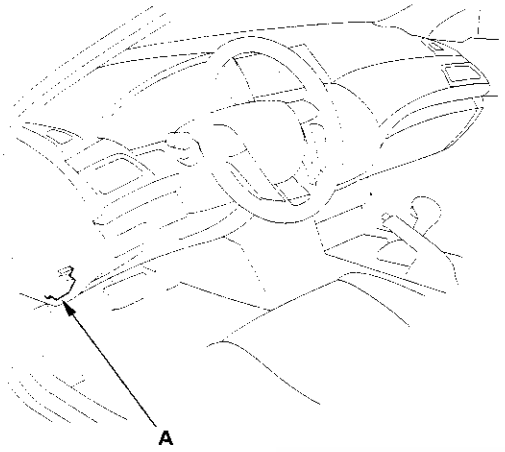
35. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt.

36. Install the air cleaner assembly (see page 11-436).

37. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

A/T Clutch Pressure Control Solenoid Valve A Test

1. Connect the HDS to the DLC (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
   Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).

3. Select Clutch Pressure Control (Linear) Solenoid Valve A in the Miscellaneous Test Menu with the HDS.

4. Test A/T clutch pressure control solenoid valve A with the HDS.

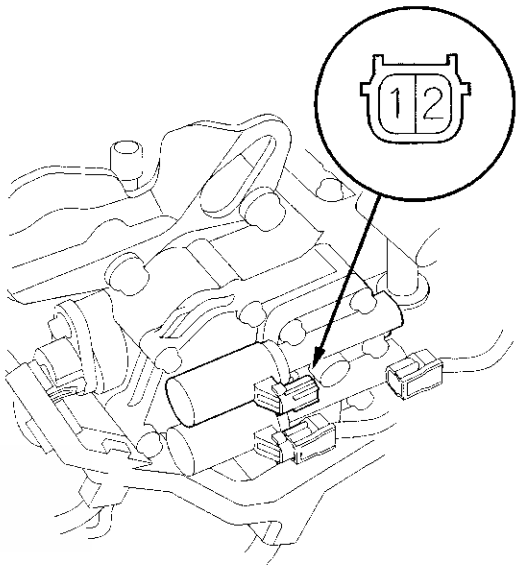
   - If the valve tests OK, the test is complete. Disconnect the HDS.
   - If the valve does not test OK, follow the instructions on the HDS.
   - If the valve does not test OK, and the HDS does not determine the cause, go to step 5.

5. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

6. Remove the air cleaner assembly (see page 11-436).

7. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket, and remove the battery base and the battery base bracket in the engine compartment.

8. Disconnect the A/T clutch pressure control solenoid valve A connector.



9. Measure the A/T clutch pressure control solenoid valve A resistance at the connector terminals.

   Standard: 3—10 Ω

   - If the resistance is out of standard, replace A/T clutch pressure control solenoid valve A (see page 14-221).
   - If the resistance is within the standard, go to step 10.

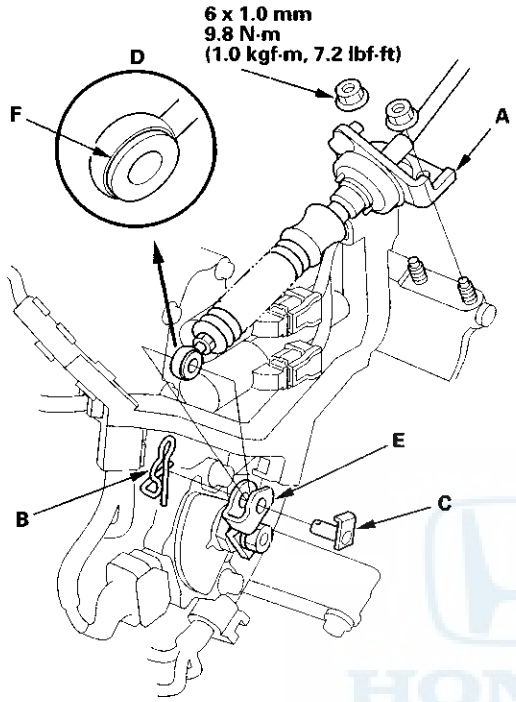
10. Connect a jumper wire from the negative battery terminal to solenoid valve A connector terminal No. 2, and connect another jumper wire from the positive battery terminal to connector terminal No. 1.

    - If a clicking sound is heard, the valve is OK. Reconnect the connector, and install all removed parts.
    - If no clicking sound is heard, go to step 11.

(cont'd)

A/T Clutch Pressure Control Solenoid Valve A Test (cont'd)

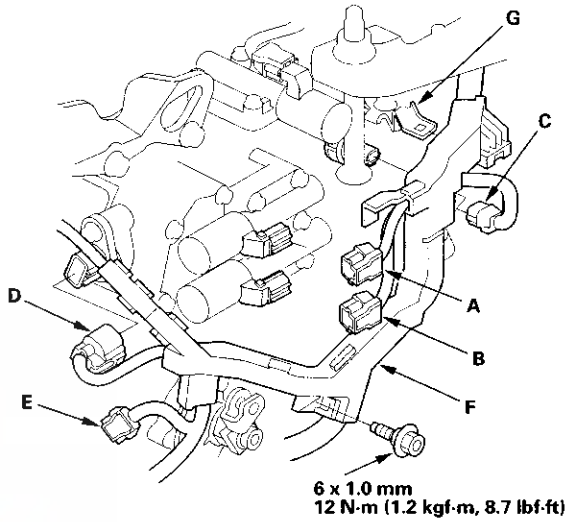
11. Remove the nuts securing the shift cable bracket (A).



12. Remove the spring clip (B) and the control pin (C), then separate the shift cable end (D) from the selector control lever (E).

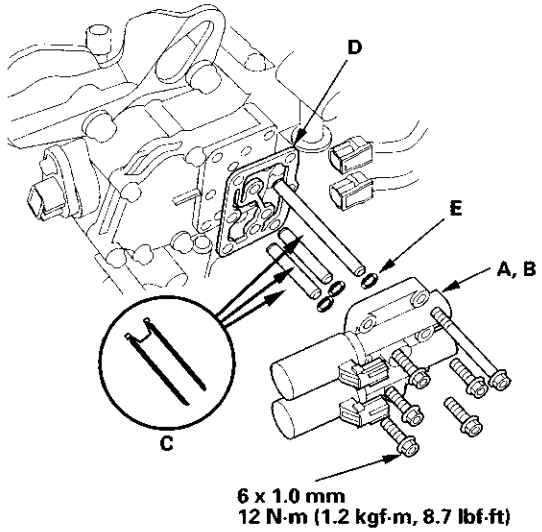
13. Check the bushing (F) in the shift cable end for proper fit and wear. If the bushing is loose or worn, replace the shift cable (see page 14-260).

14. Disconnect the A/T clutch pressure control solenoid valve A connector (A), the A/T clutch pressure control solenoid valve B connector (B), the 4th clutch transmission fluid pressure switch connector (C), the shift solenoid wire harness connector (D), and the input shaft (mainshaft) speed sensor connector (E).



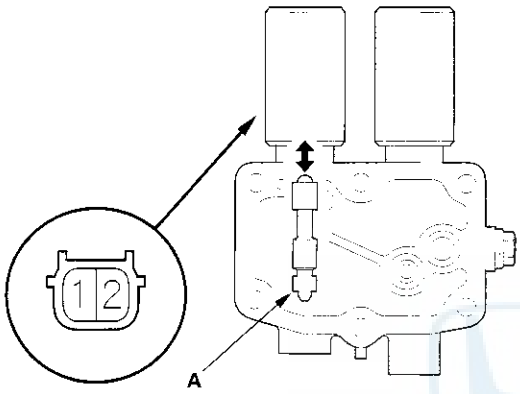
15. Remove the bolt securing the harness cover (F), and remove the harness cover from its bracket (G).

16. Remove A/T clutch pressure control solenoid valves A and B, the ATF pipes (C), the gasket (D), and the O-rings (E).



17. Check the fluid passage of the solenoid valve for contamination.

18. Connect a jumper wire from the negative battery terminal to A/T clutch pressure control solenoid valve A connector terminal No. 2, and connect another jumper wire from the positive battery terminal to connector terminal No. 1. Make sure A/T clutch pressure control solenoid valve A moves.



19. Disconnect one of the jumper wires, and check valve movement at the fluid passage in the valve body mounting surface. If the valve binds or moves sluggishly, or if the solenoid valve does not operate, replace A/T clutch pressure control solenoid valves A and B.

20. Clean the mounting surface and fluid passage of the solenoid valve body and the solenoid valve cover.

21. Install a new solenoid valve body gasket on the solenoid valve cover, and install the ATF pipes with the filter end in the transmission housing. Install new O-rings over the ATF pipes.

22. Install A/T clutch pressure control solenoid valves A and B.

23. Install the harness cover on its bracket, and secure it with the bolt.

24. Check the connectors for rust, dirt, or oil, clean or repair if necessary, then connect the connectors securely.

25. Apply molybdenum grease to the hole in the bushing in the shift cable end. Attach the shift cable end to the selector control lever, then insert the control pin into the selector control lever hole through the shift cable end, and secure the control pin with the spring clip.

26. Secure the shift cable bracket with the nuts.

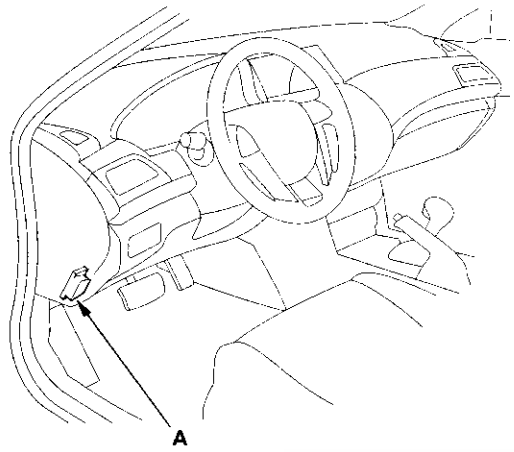
27. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt.

28. Install the air cleaner assembly (see page 11-436).

29. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

A/T Clutch Pressure Control Solenoid Valve B Test

1. Connect the HDS to the DLC (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
   Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).

3. Select Clutch Pressure Control (Linear) Solenoid Valve B in the Miscellaneous Test Menu with the HDS.

4. Test A/T clutch pressure control solenoid valve B with the HDS.

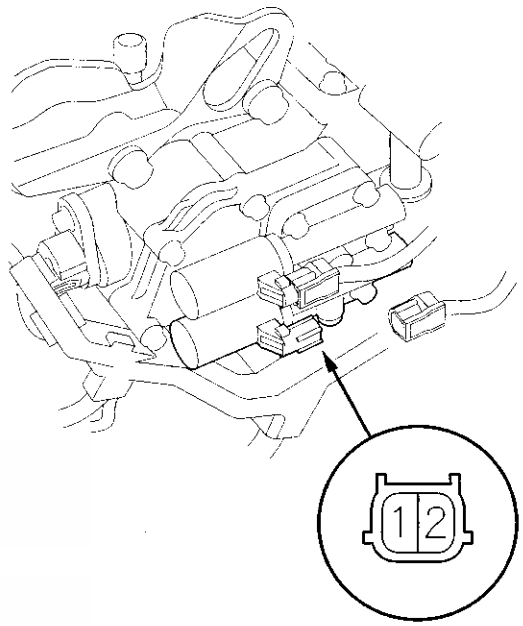
   - If the valve tests OK, the test is complete. Disconnect the HDS.
   - If the valve does not test OK, follow the instructions on the HDS.
   - If the valve does not test OK, and the HDS does not determine the cause, go to step 5.

5. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

6. Remove the air cleaner assembly (see page 11-436).

7. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket, and remove the battery base and the battery base bracket in the engine compartment.

8. Disconnect the A/T clutch pressure control solenoid valve B connector.



9. Measure the A/T clutch pressure control solenoid valve B resistance at the connector terminals.

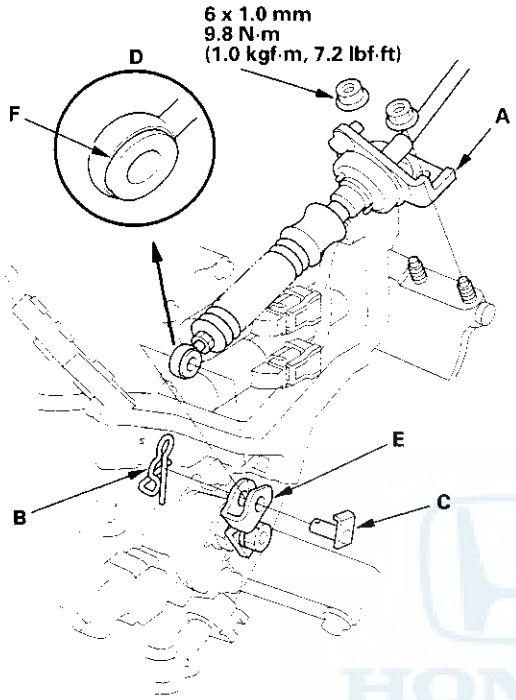
   Standard: 3—10 Ω

   - If the resistance is out of standard, replace A/T clutch pressure control solenoid valve B (see page 14-221).
   - If the resistance is within the standard, go to step 10.

10. Connect a jumper wire from the negative battery terminal to solenoid valve B connector terminal No. 2, and connect another jumper wire from the positive battery terminal to connector terminal No. 1.

    - If a clicking sound is heard, the valve is OK. Reconnect the connector, and install all removed parts.
    - If no clicking sound is heard, go to step 11.

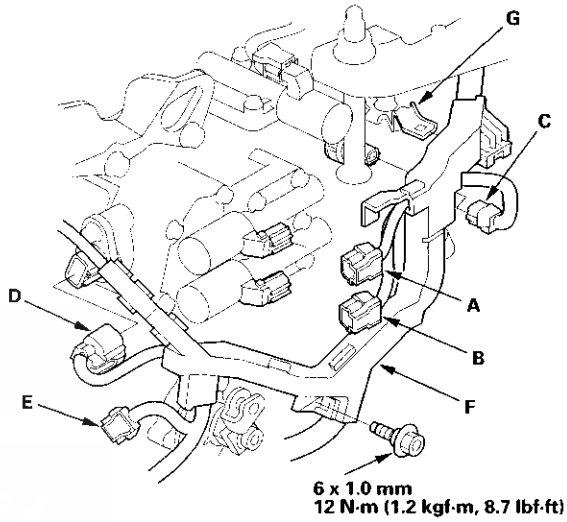
11. Remove the nuts securing the shift cable bracket (A).



12. Remove the spring clip (B) and the control pin (C), then separate the shift cable end (D) from the selector control lever (E).

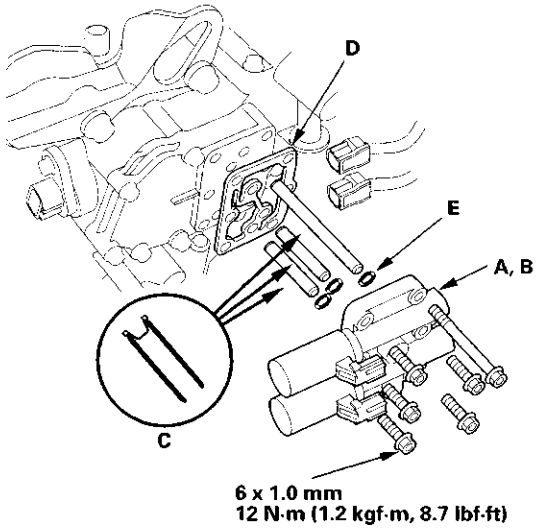
13. Check the bushing (F) in the shift cable end for proper fit and wear. If the bushing is loose or worn, replace the shift cable (see page 14-260).

14. Disconnect the A/T clutch pressure control solenoid valve A connector (A), the A/T clutch pressure control solenoid valve B connector (B), the 4th clutch transmission fluid pressure switch connector (C), the shift solenoid wire harness connector (D), and the input shaft (mainshaft) speed sensor connector (E).



15. Remove the bolt securing the harness cover (F), and remove the harness cover from its bracket (G).

16. Remove A/T clutch pressure control solenoid valves A and B, the ATF pipes (C), the gasket (D), and the O-rings (E).

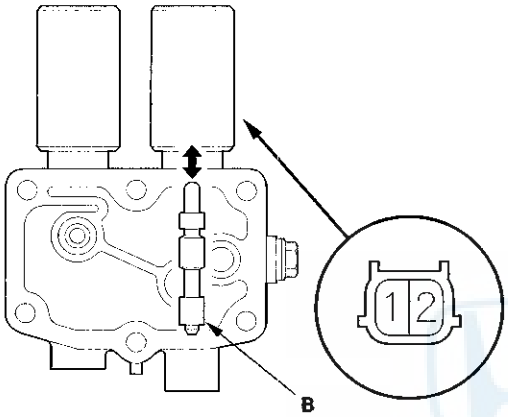


(cont'd)

A/T Clutch Pressure Control Solenoid Valve B Test (cont'd)

17. Check the fluid passage of the solenoid valve for contamination.

18. Connect a jumper wire from the negative battery terminal to A/T clutch pressure control solenoid valve B connector terminal No. 2, and connect another jumper wire from the positive battery terminal to connector terminal No. 1. Make sure A/T clutch pressure control solenoid valve B moves.



19. Disconnect one of the jumper wires, and check valve movement at the fluid passage in the valve body mounting surface. If the valve binds or moves sluggishly, or if the solenoid valve does not operate, replace A/T clutch pressure control solenoid valves A and B.

20. Clean the mounting surface and fluid passage of the solenoid valve body and the solenoid valve cover.

21. Install a new solenoid valve body gasket on the solenoid valve cover, and install the ATF pipes with the filter end in the transmission housing. Install new O-rings over the ATF pipes.

22. Install A/T clutch pressure control solenoid valves A and B.

23. Install the harness cover on its bracket, and secure it with the bolt.

24. Check the connectors for rust, dirt, or oil, clean or repair if necessary, then connect the connectors securely.

25. Apply molybdenum grease to the hole in the bushing in the shift cable end. Attach the shift cable end to the selector control lever, then insert the control pin into the selector control lever hole through the shift cable end, and secure the control pin with the spring clip.

26. Secure the shift cable bracket with the nuts.

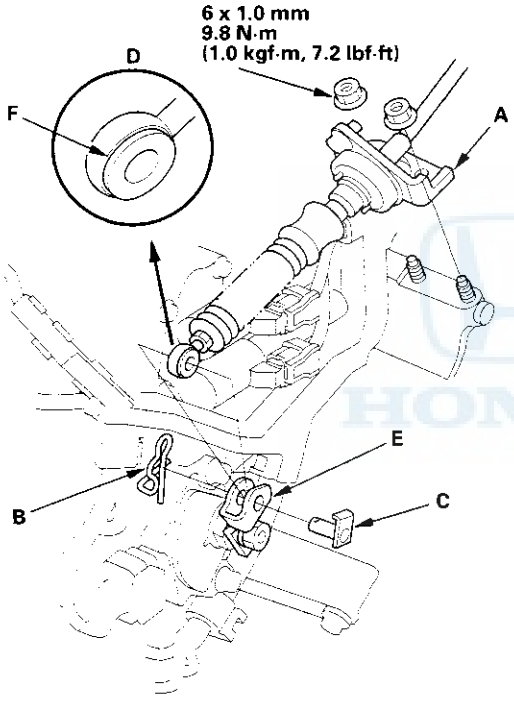
27. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt.

28. Install the air cleaner assembly (see page 11-436).

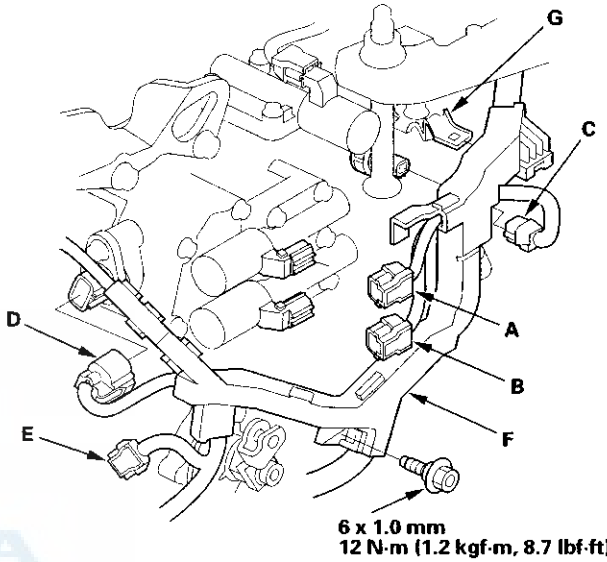
29. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

A/T Clutch Pressure Control Solenoid Valve A and B Replacement

1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the air cleaner assembly (see page 11-436).
3. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket, and remove the battery base and the battery base bracket in the engine compartment.
4. Remove the nuts securing the shift cable bracket (A).



5. Remove the spring clip (B) and the control pin (C), then separate the shift cable end (D) from the selector control lever (E).
6. Check the bushing (F) in the shift cable end for proper fit and wear. If the bushing is loose or worn, replace the shift cable (see page 14-260).
7. Disconnect the A/T clutch pressure control solenoid valve A connector (A), the A/T clutch pressure control solenoid valve B connector (B), the 4th clutch transmission fluid pressure switch connector (C), the shift solenoid wire harness connector (D), and the input shaft (mainshaft) speed sensor connector (E).

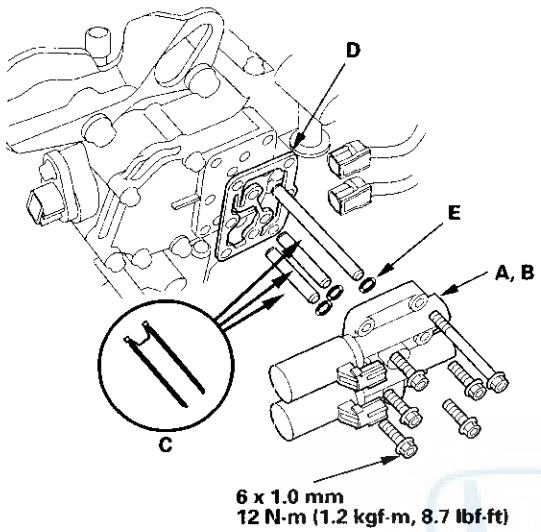


8. Remove the bolt securing the harness cover (F), and remove the harness cover from its bracket (G).

(cont'd)

A/T Clutch Pressure Control Solenoid Valve A and B Replacement (cont'd)

9. Remove A/T clutch pressure control solenoid valves A and B, the ATF pipes (C), the gasket (D), and the O-rings (E).



10. Check the fluid passage of the A/T clutch pressure control solenoid valve for dust or dirt, and clean the passage.

11. Install a new solenoid valve body gasket on the solenoid valve cover, and install the ATF pipes with the filter end in the transmission housing. Install new O-rings over the ATF pipes.

12. Install A/T clutch pressure control solenoid valves A and B.

13. Install the harness cover on its bracket, and secure it with the bolt.

14. Check the connectors for rust, dirt, or oil, clean or repair if necessary, then connect the connectors securely.

15. Apply molybdenum grease to the hole in the bushing in the shift cable end. Attach the shift cable end to the selector control lever, then insert the control pin into the selector control lever hole through the shift cable end, and secure the control pin with the spring clip.

16. Secure the shift cable bracket with the nuts.

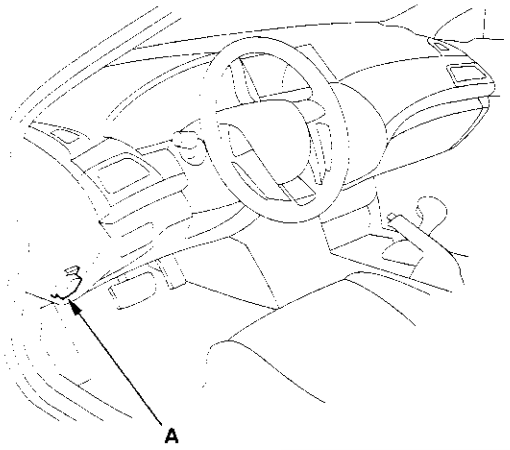
17. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt.

18. Install the air cleaner assembly (see page 11-436).

19. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

A/T Clutch Pressure Control Solenoid Valve C Test

1. Connect the HDS to the DLC (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
   Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-259).

3. Select Clutch Pressure Control (Linear) Solenoid Valve C in the Miscellaneous Test Menu with the HDS.

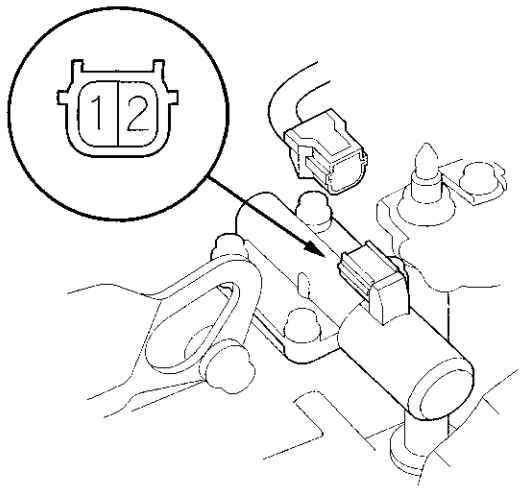
4. Test A/T clutch pressure control solenoid valve C with the HDS.

   - If the valve tests OK, the test is complete. Disconnect the HDS.
   - If the valve does not test OK, follow the instructions on the HDS.
   - If the valve does not test OK, and the HDS does not determine the cause, go to step 5.

5. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

6. Remove the air cleaner assembly (see page 11-436).

7. Disconnect the A/T clutch pressure control solenoid valve C connector.



8. Measure the A/T clutch pressure control solenoid valve C resistance at the connector terminals.

   Standard: 3—10 Ω

   - If the resistance is out of standard, replace A/T clutch pressure control solenoid valve C (see page 14-226).
   - If the resistance is within the standard, go to step 9.

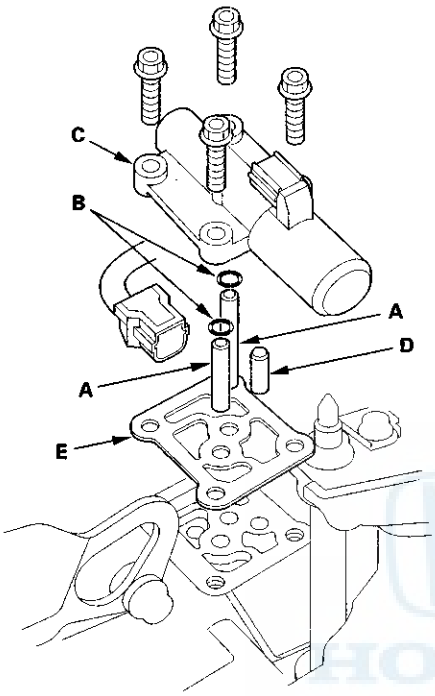
9. Connect a jumper wire from the negative battery terminal to solenoid valve C connector terminal No. 2, and connect another jumper wire from the positive battery terminal to connector terminal No. 1.

   - If a clicking sound is heard, the valve is OK. Reconnect the connector, and install all removed parts.
   - If no clicking sound is heard, go to step 10.

(cont'd)

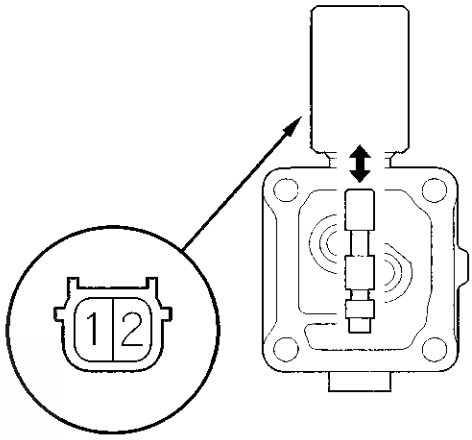
A/T Clutch Pressure Control Solenoid Valve C Test (cont'd)

10. Remove A/T clutch pressure control solenoid valve C, the ATF joint pipes (A), the O-rings (B), the ATF pipe (D), and the gasket (E).



11. Check the fluid passage of the solenoid valve for contamination.

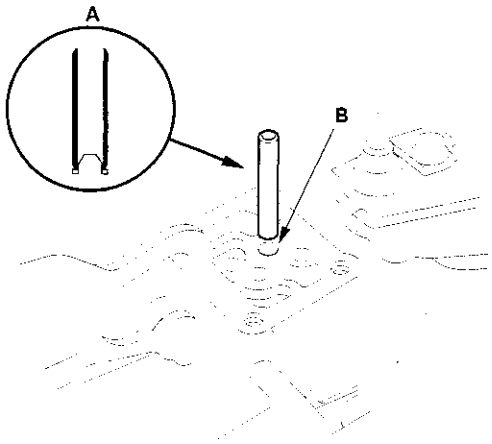
12. Connect a jumper wire from the negative battery terminal to A/T clutch pressure control solenoid valve C connector terminal No. 2, and connect another jumper wire from the positive battery terminal to connector terminal No. 1. Make sure A/T clutch pressure control solenoid valve C moves.



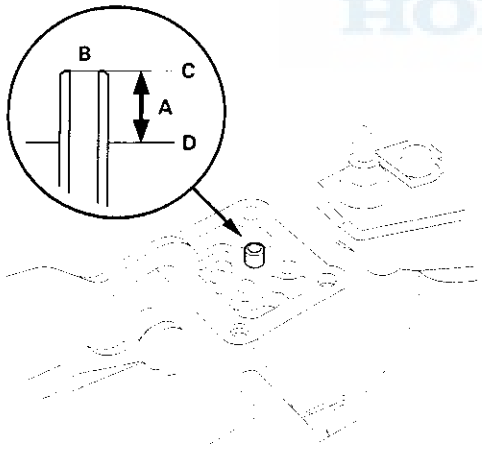
13. Disconnect one of the jumper wires, and check valve movement at the fluid passage in the valve body mounting surface. If the valve binds or moves sluggishly, or if the solenoid valve does not operate, replace A/T clutch pressure control solenoid valve C.

14. Clean the mounting surfaces and the fluid passages of the solenoid valve body and the transmission housing.

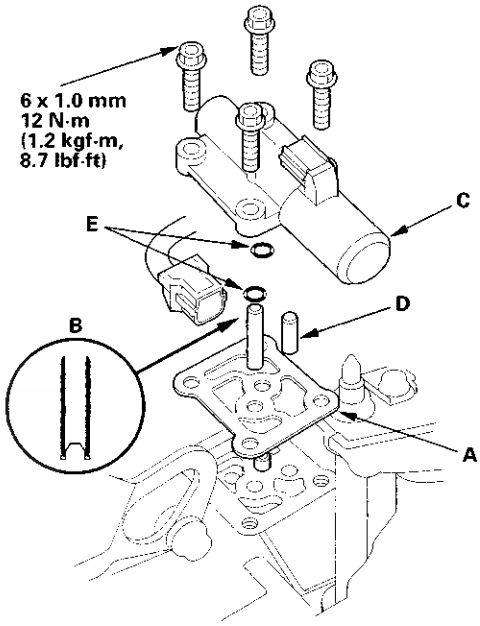
15. Install the 8 x 53 mm ATF joint pipe (A) with the filter end into its mounting hole (B).



16. Check the height (A) of the 8 x 53 mm ATF joint pipe (B) between the top (C) of the pipe and the solenoid valve body mounting surface (D). The height is about 7.0 mm (0.3 in.). If the height is over 7.0 mm (0.3 in.), push the pipe until it bottoms in the accumulator body.



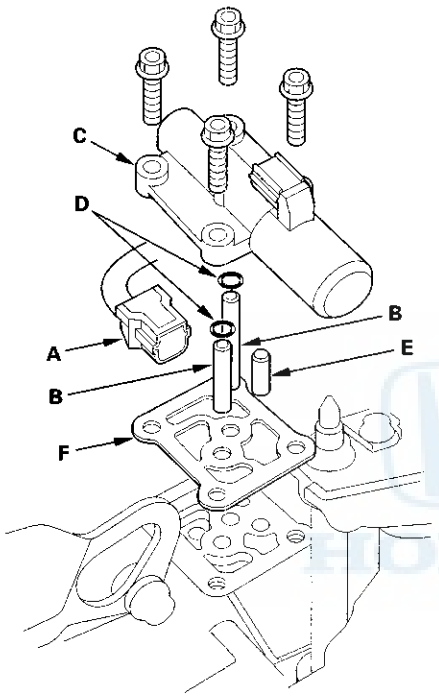
17. Install a new gasket (A) on the transmission housing, and install the 8 x 34.5 mm ATF joint pipe (B) with the filter end into the transmission housing and the 8 x 25.2 mm ATF pipe (D).



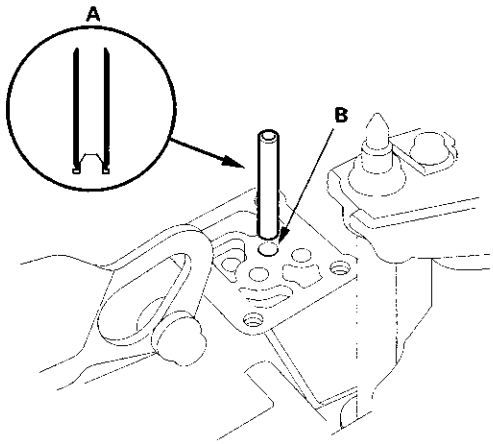
18. Install new O-rings (E) over the ATF joint pipes.
19. Install A/T clutch pressure control solenoid valve C.
20. Check the connector for rust, dirt, or oil, then connect the connector securely.
21. Install the air cleaner assembly (see page 11-436).
22. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

A/T Clutch Pressure Control Solenoid Valve C Replacement

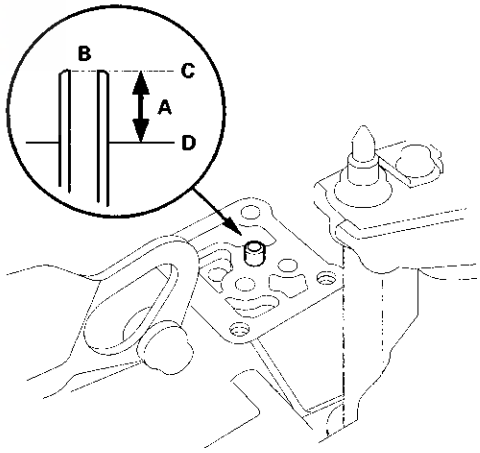
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the air cleaner assembly (see page 11-436).
3. Disconnect the A/T clutch pressure control solenoid valve C connector (A).



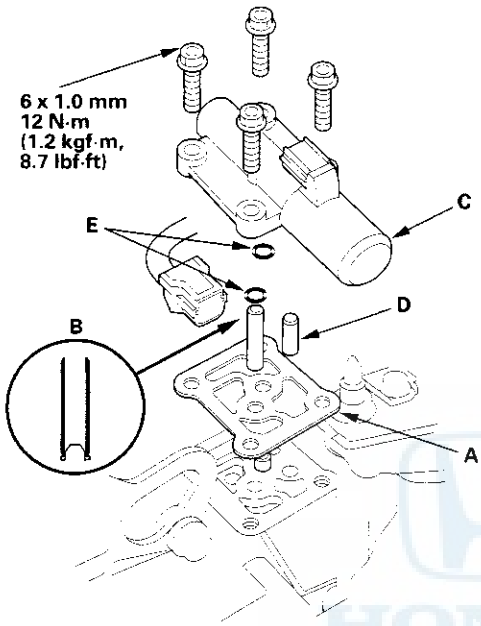
4. Remove A/T clutch pressure control solenoid valve C, the ATF joint pipes (B), the O-rings (D), the ATF pipe (E), and the gasket (F).
5. Clean the mounting surfaces and the fluid passages of the solenoid valve body and the transmission housing.
6. Install the 8 x 53 mm ATF joint pipe (A) with the filter end into its mounting hole (B).



7. Check the height (A) of the 8 x 53 mm ATF joint pipe (B) between the top (C) of the pipe and the solenoid valve body mounting surface (D). The height is about 7.0 mm (0.3 in.). If the height is over 7.0 mm (0.3 in.), push the pipe until it bottoms in the accumulator body.



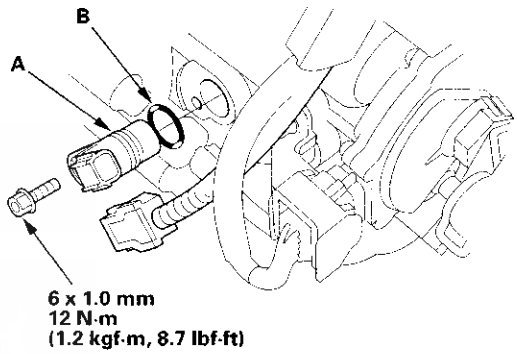
8. Install a new gasket (A) on the transmission housing, and install the 8 x 34.5 mm ATF joint pipe (B) with the filter end into the transmission housing and the 8 x 25.2 mm ATF pipe (D).



9. Install new O-rings (E) over the ATF joint pipes.
10. Install A/T clutch pressure control solenoid valve C.
11. Check the connector for rust, dirt, or oil, then connect the connector securely.
12. Install the air cleaner assembly (see page 11-436).
13. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Input Shaft (Mainshaft) Speed Sensor Replacement

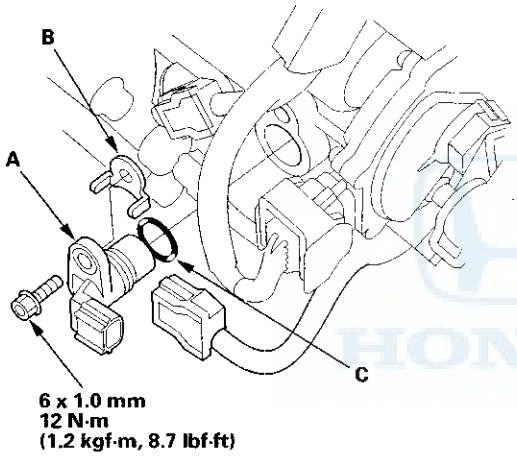
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket, and remove the battery base and the battery base bracket in the engine compartment.
3. Disconnect the input shaft (mainshaft) speed sensor connector, and remove the input shaft (mainshaft) speed sensor (A).



4. Install a new O-ring (B) on a new input shaft (mainshaft) speed sensor, then install the input shaft (mainshaft) speed sensor.
5. Check the connector for rust, dirt, or oil, then connect the connector securely.
6. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt.
7. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Output Shaft (Countershaft) Speed Sensor Replacement

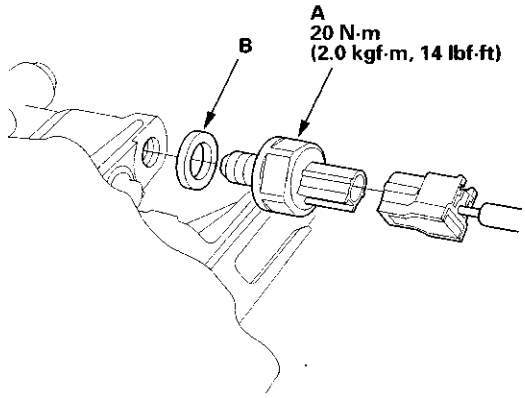
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket, and remove the battery base and the battery base bracket in the engine compartment.
3. Disconnect the output shaft (countershaft) speed sensor connector, and remove the output shaft (countershaft) speed sensor (A) and the sensor washer (B).



4. Install a new O-ring (C) on a new output shaft (countershaft) speed sensor, then install the output shaft (countershaft) speed sensor and the sensor washer.
5. Check the connector for rust, dirt, or oil, then connect the connector securely.
6. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt.
7. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

2nd Clutch Transmission Fluid Pressure Switch Replacement

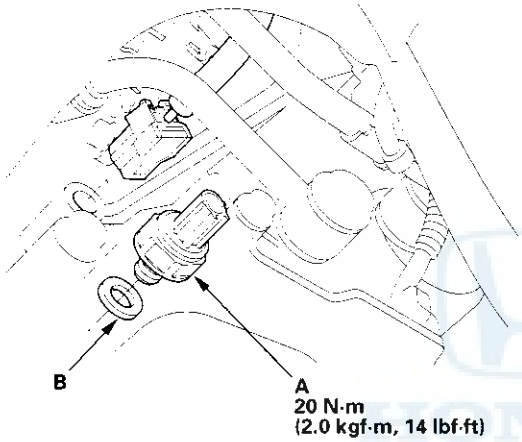
1. Disconnect the 2nd clutch transmission fluid pressure switch connector, and remove the 2nd clutch transmission fluid pressure switch (A).



2. Install a new 2nd clutch transmission fluid pressure switch and a new sealing washer (B), and tighten the switch.
3. Make sure there is no water, oil, dust, or foreign particles inside the connector.
4. Connect the connector securely.

3rd Clutch Transmission Fluid Pressure Switch Replacement

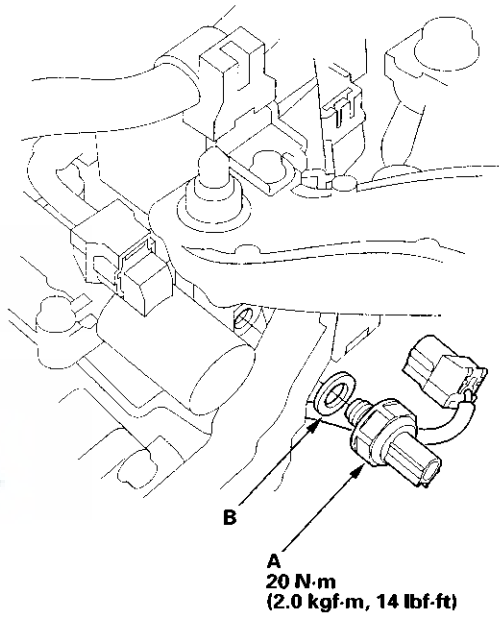
1. Raise the vehicle on a lift, or apply the parking brake, block both rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the splash shield.
3. Disconnect the 3rd clutch transmission fluid pressure switch connector, and remove the 3rd clutch transmission fluid pressure switch (A).



4. Install a new 3rd clutch transmission fluid pressure switch and a new sealing washer (B), and tighten the switch.
5. Make sure there is no water, oil, dust, or foreign particles inside the connector.
6. Connect the connector securely.
7. Install the splash shield.

4th Clutch Transmission Fluid Pressure Switch Replacement

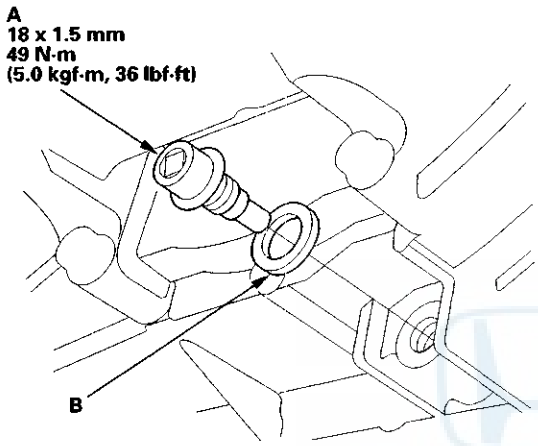
1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the air cleaner assembly (see page 11-436).
3. Disconnect the 4th clutch transmission fluid pressure switch connector, and remove the 4th clutch transmission fluid pressure switch (A).



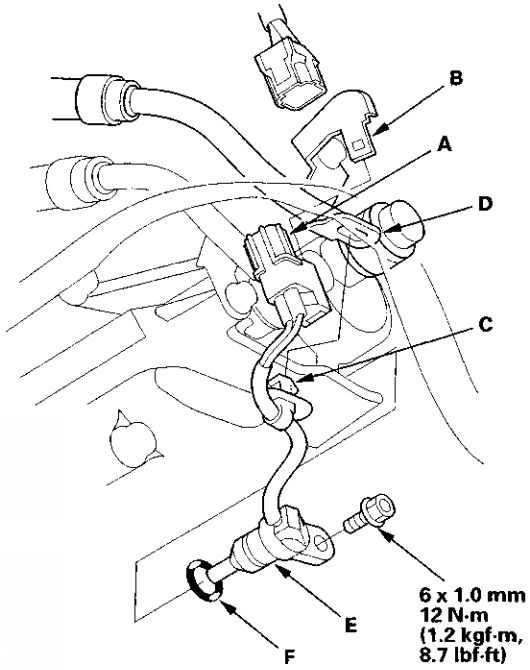
4. Install a new 4th clutch transmission fluid pressure switch and a new sealing washer (B), and tighten the switch.
5. Make sure there is no water, oil, dust, or foreign particles inside the connector.
6. Connect the connector securely.
7. Install the air cleaner assembly (see page 11-436).
8. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

ATF Temperature Sensor Replacement

1. Raise the vehicle on a lift, or apply the parking brake, block both rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the splash shield.
3. Remove the drain plug (A), and drain the automatic transmission fluid (ATF).



4. Reinstall the drain plug with a new sealing washer (B).
5. Disconnect the ATF temperature sensor connector (A), then remove the connector from the connector bracket (B).



6. Remove the harness clamp (C) from its bracket (D).
7. Remove the ATF temperature sensor (E), and replace the sensor.
8. Install a new O-ring (F) on a new ATF temperature sensor, and install the ATF temperature sensor.
9. Check the connector for rust, dirt, or oil. Connect the connector securely, and install it on its bracket.
10. Install the harness clamp on its bracket.
11. Refill the transmission with ATF (see step 6 on page 14-232).
12. Install the splash shield.

ATF Level Check

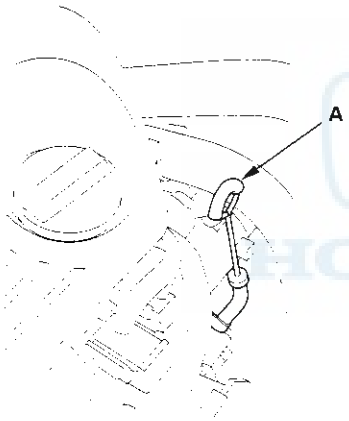
NOTE: Keep all foreign particles out of the transmission.

1. Park the vehicle on the level ground.

2. Warm up the engine to normal operating temperature (the radiator fan comes on), and turn the engine off. Do not allow the engine to warm up longer than the time it takes for the radiator fan to come on twice.

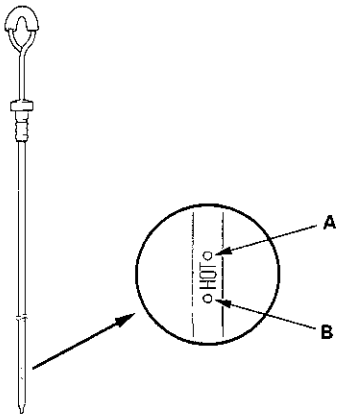
   NOTE: Check the fluid level within 60—90 seconds after turning the engine off. Higher fluid level may be indicated if the radiator fan comes on twice or more.

3. Remove the dipstick (yellow loop) (A) from the dipstick guide tube, and wipe it with a clean cloth.



4. Insert the dipstick into the guide tube.

5. Remove the dipstick and check the fluid level. It should be between the upper mark (A) and the lower mark (B).



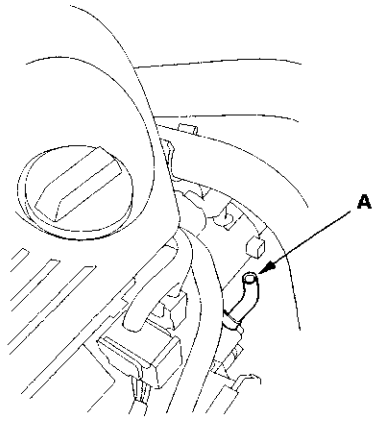
6. If the level is below the lower mark, check for fluid leaks at the transmission, and the hose and the line joints. If a problem is found, fix it before filling the transmission.

   NOTE: If the vehicle is driven when the ATF level is below the lower mark, one or more of these symptoms may occur:
   - Transmission damage.
   - Vehicle does not move in any gear.
   - Vehicle accelerates poorly, and flares when starting off in D and R.
   - The engine vibrates at idle.

7. If the level is above the upper mark, drain the ATF to the proper level (see step 4 on page 14-232).

   NOTE: If the vehicle is driven when the ATF level is above the upper mark, the vehicle may creep forward while in N, or have shifting problems.

8. If necessary, fill the transmission with the ATF through the dipstick guide tube opening (A) to bring the fluid level between the upper mark and the lower mark of the dipstick. Do not fill past the upper mark. Always use Honda ATF-Z1 Automatic Transmission Fluid (ATF). Using a non-Honda ATF can affect shift quality.



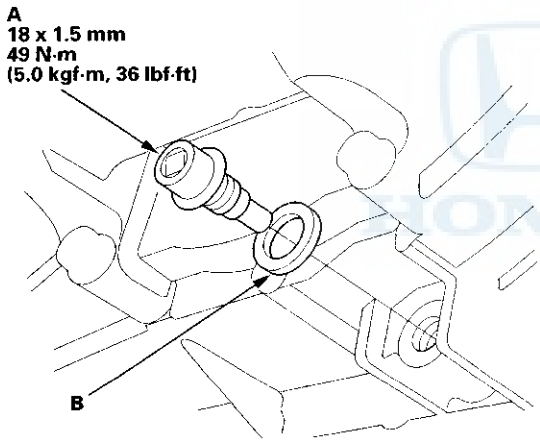
9. Insert the dipstick back into the dipstick guide tube.

ATF Replacement

NOTE: Keep all foreign particles out of the transmission.

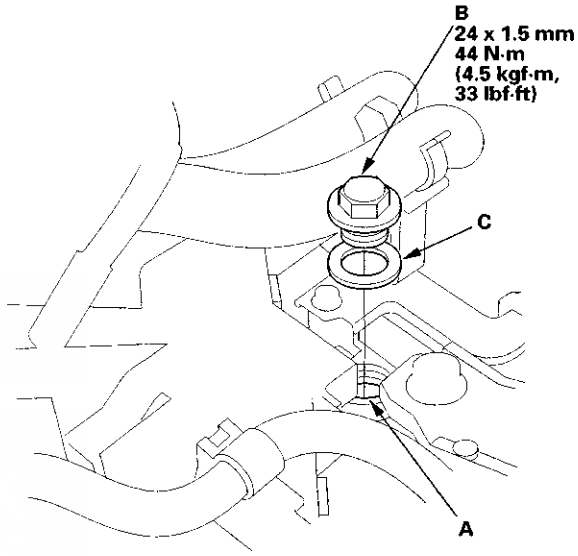
1. Warm up the engine to normal operating temperature (the radiator fan comes on), and turn the engine off.
2. Raise the vehicle on a lift, or apply the parking brake, block both rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
3. Remove the splash shield.
4. Remove the ATF filler bolt and drain plug (A), and drain the automatic transmission fluid (ATF).

   NOTE: If a cooler cleaning is done, refer to ATF Cooler Cleaning in the 2008-2009 Accord Service Manual (see page 14-258).



5. Reinstall the drain plug with a new sealing washer (B).
6. Refill the transmission with the recommended fluid through the filler hole (A). Always use Honda ATF-Z1 Automatic Transmission Fluid (ATF). Using a non-Honda ATF can affect shift quality.

   Automatic Transmission Fluid Capacity:
   3.3 L (3.5 US qt) at change
   7.5 L (7.9 US qt) at overhaul



7. Install the ATF filler bolt (B) and a new sealing washer (C).
8. Check the ATF level (see page 14-231).

Transmission Removal

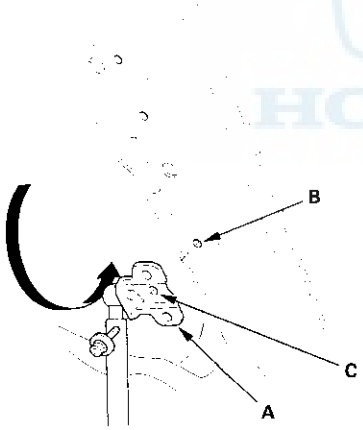
Special Tools Required
- Engine support hanger, A and Reds AAR-T1256
- 2008 V6 Attachment arm SIL02C000033
- Engine hanger balancer bar VSB02C000019
- Front subframe adapter VSB02C000016

These special tools are available through the Honda Tool and Equipment Program 888-424-6857.

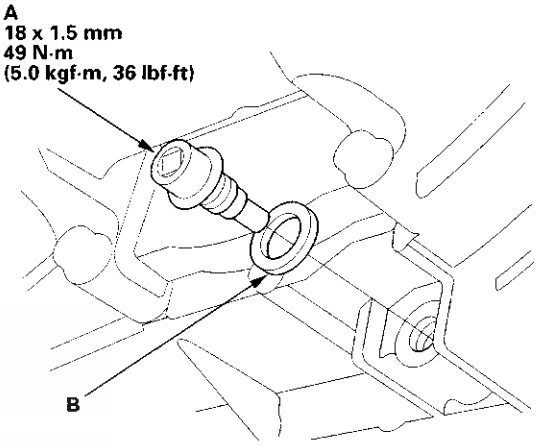
NOTE:
- Use fender covers to avoid damaging painted surfaces.
- Special tool Reds engine support hanger AAR-T1256 must be used with the side engine mount installed.

1. Remove the support strut mounting bracket (A) on both sides of the hood. Rotate the brackets over and reattach them to the hood vertical position (B) with a bolt in center hole (C) of the bracket.

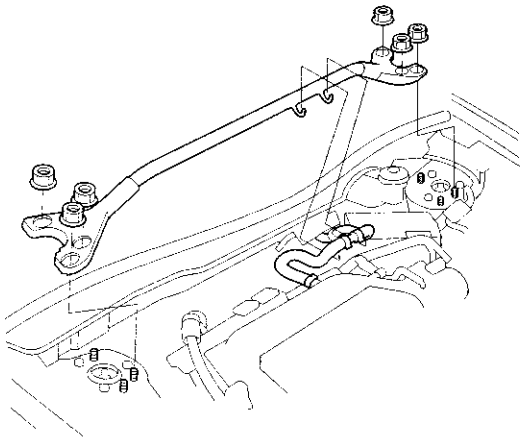
   NOTE: Do not attempt to close the hood with the support strut in the vertical position; it will damage the support strut and the hood.



2. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
3. Remove the upper grille cover.
4. Remove the air cleaner assembly (see page 11-436).
5. Raise the vehicle on a lift, and make sure it is securely supported.
6. Remove the wheels.
7. Remove the splash shield.
8. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket from under the vehicle, and remove the battery base and the battery base bracket in the engine compartment.
9. Remove the drain plug (A), and drain the automatic transmission fluid (ATF).



10. Reinstall the drain plug with a new sealing washer (B).
11. Remove the strut brace.



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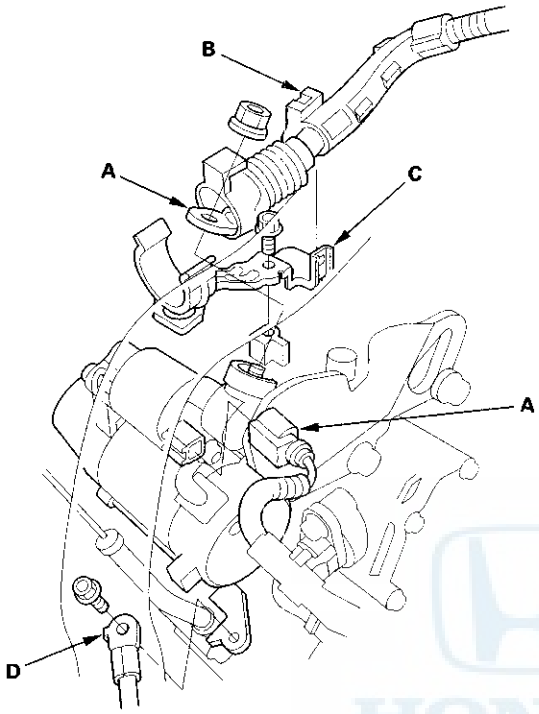
Transmission Removal (cont'd)

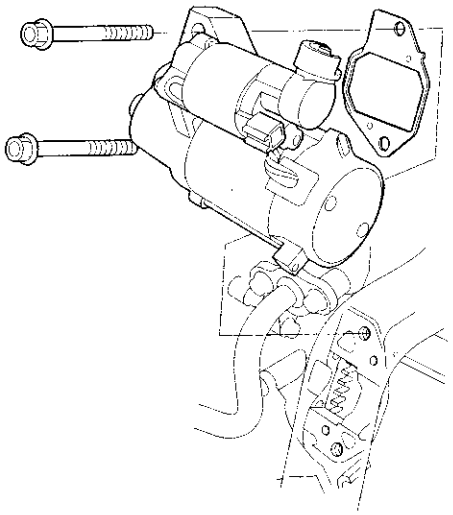
12. Remove the starter cables (A) from the starter.



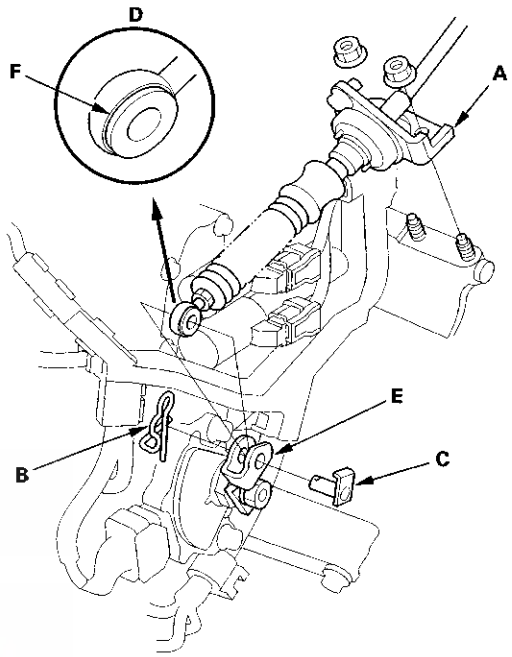
13. Remove the harness clamp (B) from the clamp bracket (C), and remove the clamp bracket.

14. Remove the transmission ground terminal (D).

15. Remove the starter and the gasket from the transmission.



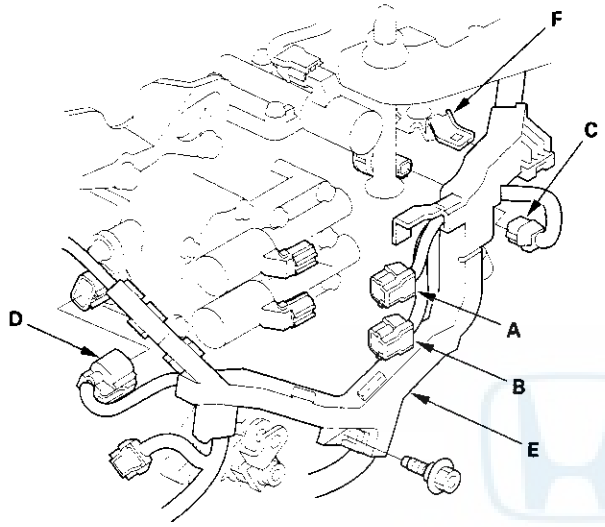
16. Remove the nuts securing the shift cable bracket (A).



17. Remove the spring clip (B) and the control pin (C), then separate the shift cable end (D) from the selector control lever (E).

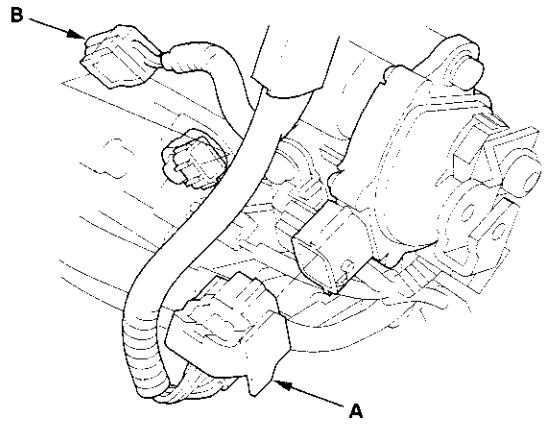
18. Check the bushing (F) in the shift cable end for proper fit and wear. If the bushing is loose or worn, replace the shift cable (see page 14-260).

19. Disconnect the A/T clutch pressure control solenoid valve A connector (A), the A/T clutch pressure control solenoid valve B connector (B), the 4th clutch transmission fluid pressure switch connector (C), and the shift solenoid wire harness connector (D).

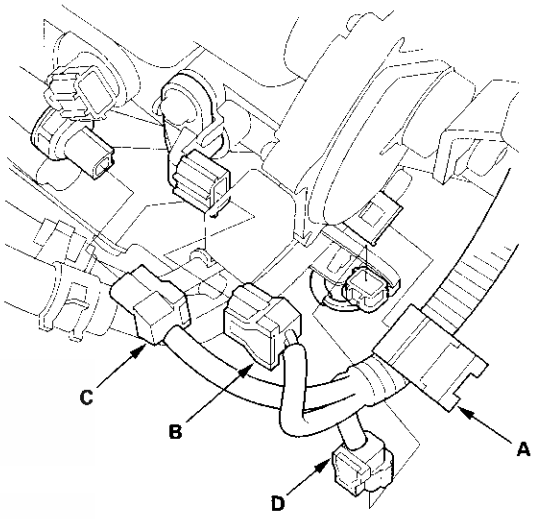


20. Remove the bolt securing the harness cover (E), and remove the harness cover from its bracket (F).

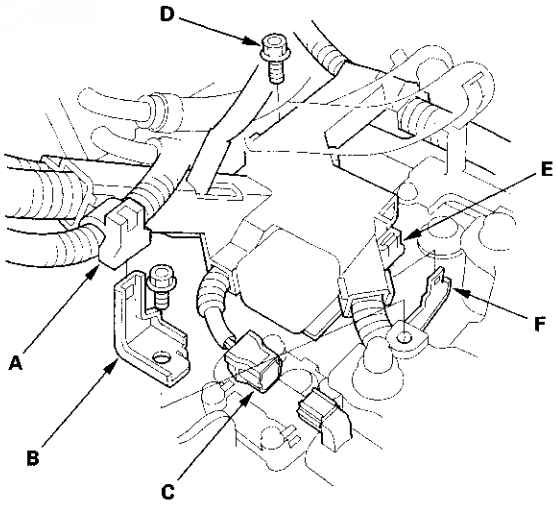
21. Disconnect the transmission range switch connector (A) and the input shaft (mainshaft) speed sensor connector (B).



22. Remove the harness clamp (A) from its bracket, and disconnect the output shaft (countershaft) speed sensor connector (B), the 3rd clutch transmission fluid pressure switch connector (C), and the ATF temperature sensor connector (D).



23. Remove the harness clamp (A) from its bracket (B), and remove the bracket.



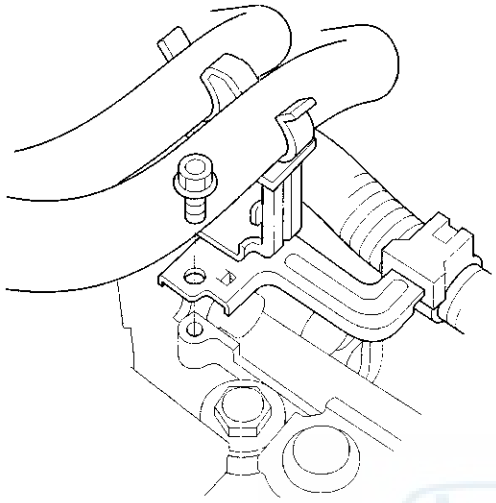
24. Disconnect the A/T clutch pressure control solenoid valve C connector (C).

25. Remove the harness cover mounting bolt (D), and remove the harness cover (E) from its bracket (F).

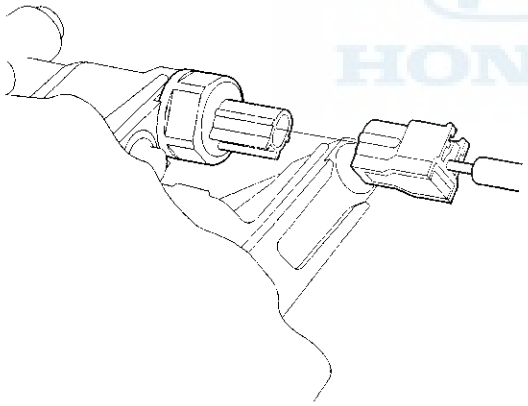
(cont'd)

Transmission Removal (cont'd)

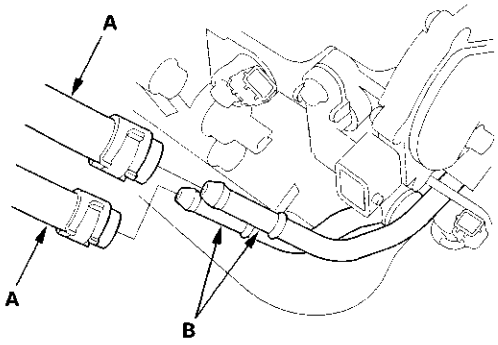
26. Remove the bolt securing the harness clamp bracket.



27. Disconnect the 2nd clutch transmission fluid pressure switch connector.

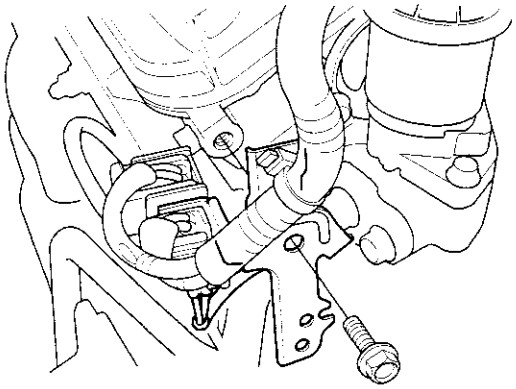


28. Remove the ATF cooler hoses (A) from the ATF cooler lines (B). Turn the ends of the cooler hoses up to prevent ATF from flowing out, then plug the cooler hoses and lines.

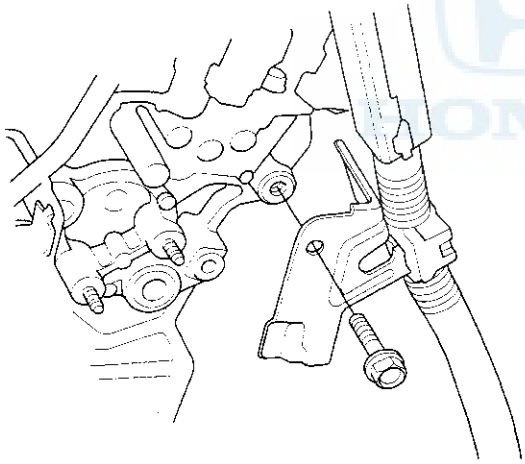


29. Check for any signs of leakage at the hose joints.

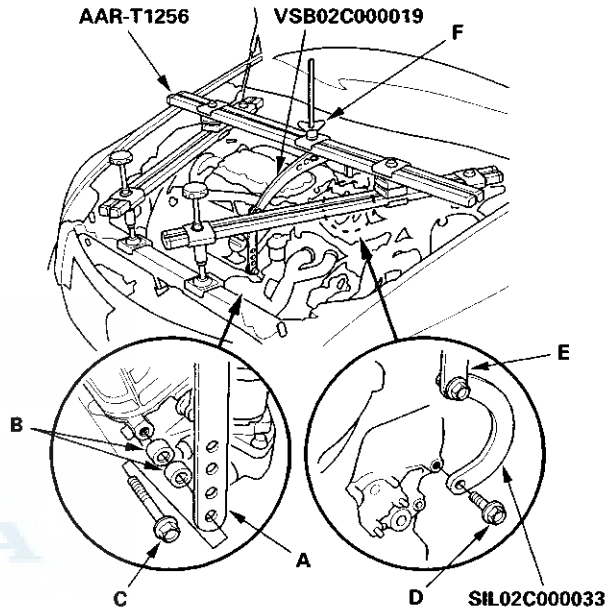
30. Remove the connector bracket from the front cylinder head; use the bracket bolt hole to attach the engine hanger balance bar front arm.



31. Remove the harness clamp bracket from the rear cylinder head; use the bracket bolt hole to attach the engine hanger balance bar rear arm.



32. Install the engine hanger balance bar (VSB02C000019). Attach the front arm (A) to the front cylinder head with several spacers (B) and the bolt (10 x 1.25 mm) (C). Attach the 2008 V6 attachment arm (SIL02C000033) to the rear cylinder head and the bolt (8 x 1.25 mm) (D), then attach the rear arm (E) to the 2008 V6 attachment arm.

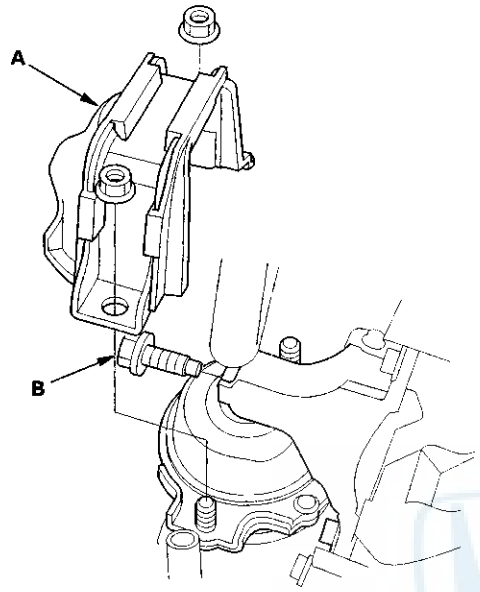


33. Install the engine support hanger (AAR-T1256) to the vehicle, and attach the hook to the engine balancer bar slot. Tighten the wing nut (F) by hand, and lift and support the engine.

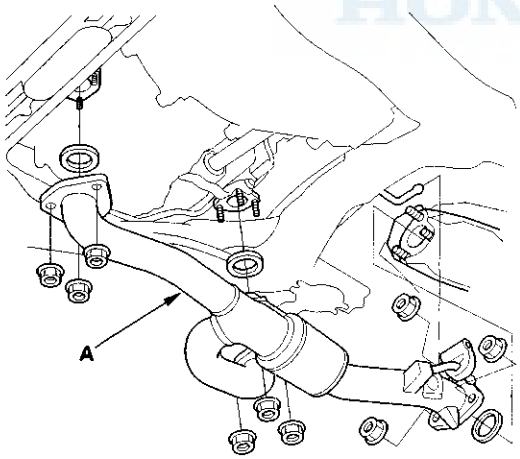
(cont'd)

Transmission Removal (cont'd)

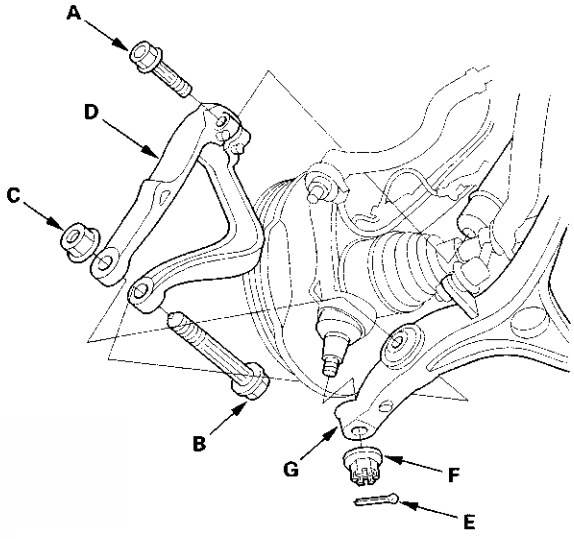
34. Remove the front mount stop (A) and the front mount bolt (B).



35. Remove exhaust pipe A.

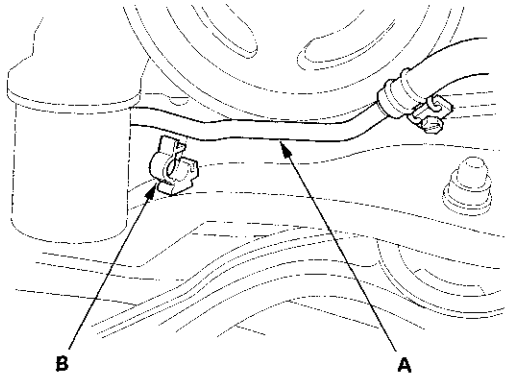


36. Remove the damper pinch bolts (A), the damper fork bolts (B) and the self-locking nuts (C), and remove the damper forks (D).

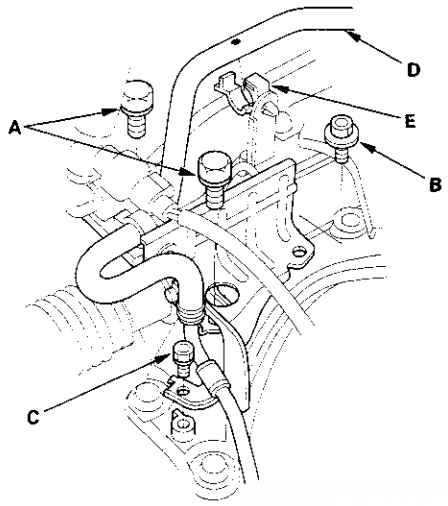


37. Remove the cotter pins (E) and the castle nuts (F), and separate the lower arms (G) from the knuckle, refer to the 2008-2009 Accord Service Manual (see step 5 on page 18-21).

38. Remove the power steering fluid line (A) from its clamp (B) at the right front of the subframe.

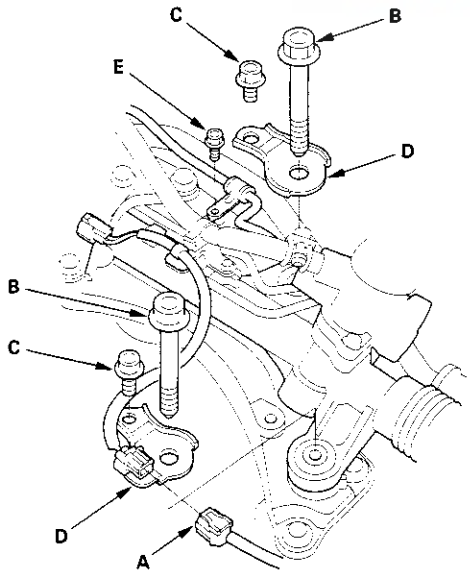


39. Remove the steering gearbox mounting bolts (A).



40. Remove the bolt (B) securing the steering gearbox heat shield, and remove the bolt (C) securing the power steering fluid line clamp. Remove the power steering fluid hose (D) from its clamp (E).

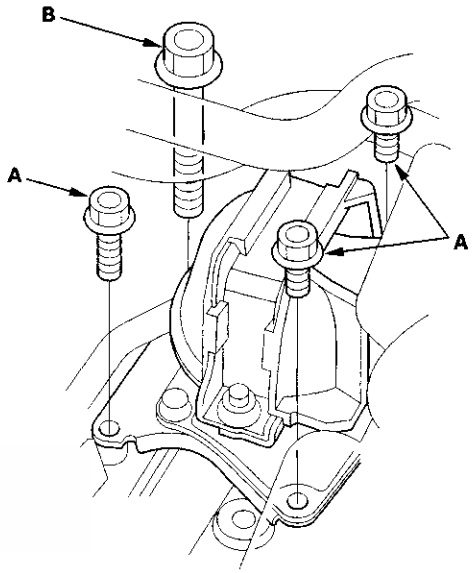
41. Disconnect the engine mount control system connector (A) at the steering gearbox stiffener.



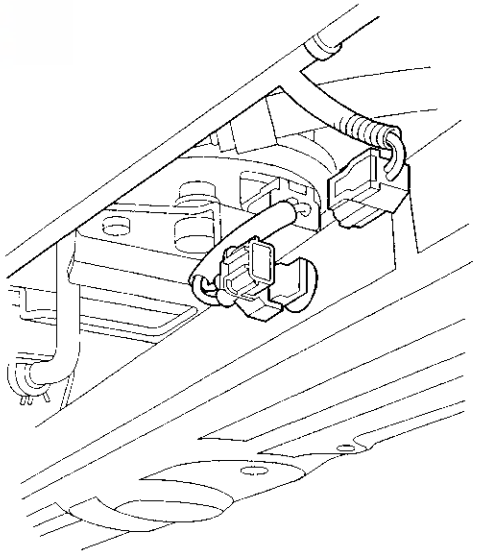
42. Remove the steering gearbox mounting bolts (B), bolts (C), and the stiffeners (D).

43. Remove the bolt (E) securing the power steering fluid line clamp.

44. Remove the rear mount base bracket bolts: 10 x 1.25 mm (A) (three bolts) and 12 x 1.25 mm (B).



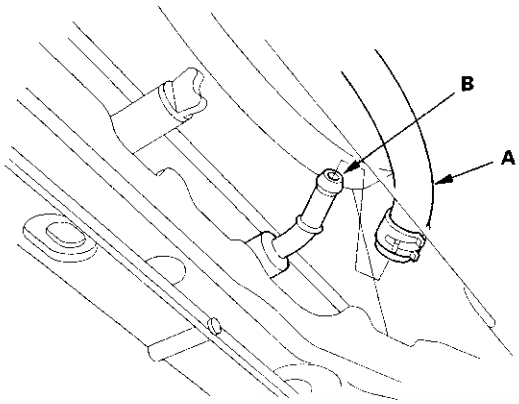
45. Disconnect the engine mount control system connector at the front of the front subframe.



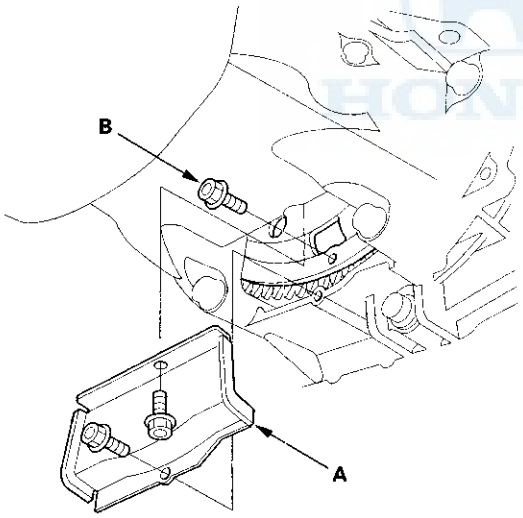
(cont'd)

Transmission Removal (cont'd)

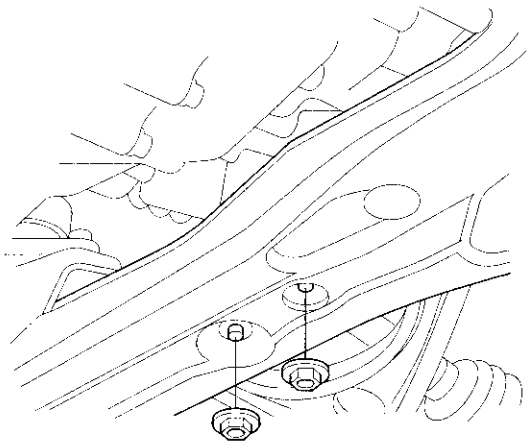
46. Remove the ATF cooler hose (A) from the ATF cooler line (B). Turn the end of the cooler hose up to prevent ATF from flowing out, then plug the hose and the cooler line.



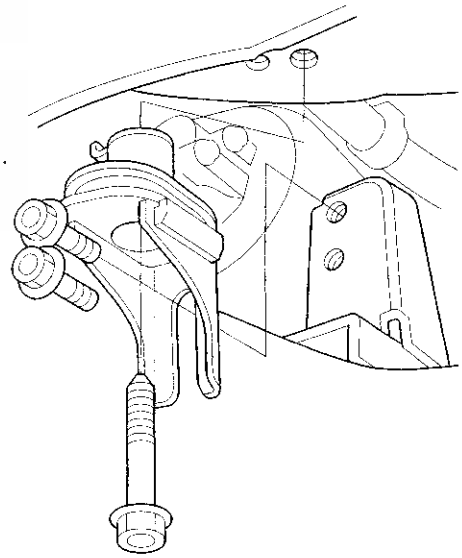
47. Remove the torque converter cover (A), and remove the drive plate bolts (B) (8) while rotating the crankshaft pulley.



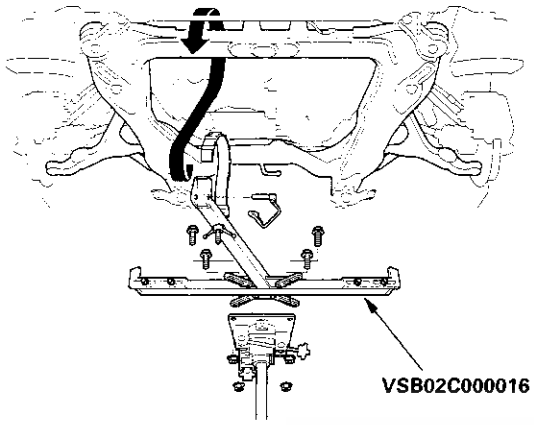
48. Remove the transmission lower mount nuts.



49. Remove the both mid-stiffeners.

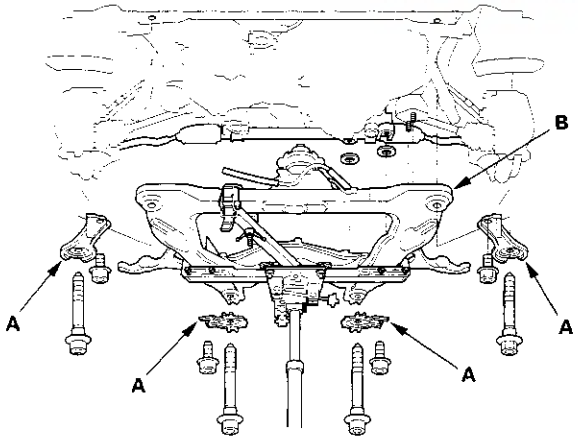


50. Attach the front subframe adapter (VSB02C000016) to the subframe by looping the belt over the front of the subframe, then secure the belt with its stop.

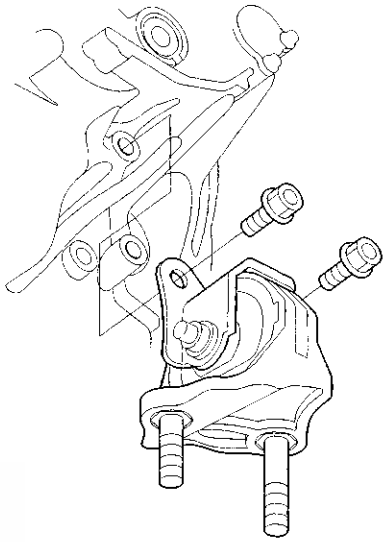


51. Raise the jack and line up the slots in the arms with the bolt holes on the corner of the jack base, then attach them with the bolts.

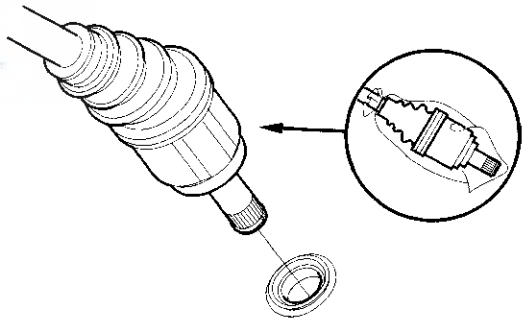
52. Remove the four bolts securing the stiffeners (A) and the four bolts securing the front subframe (B), and lower the front subframe.



53. Remove the transmission lower mount.



54. Pry out the driveshafts from the differential and the intermediate shaft and place them in plastic bags.

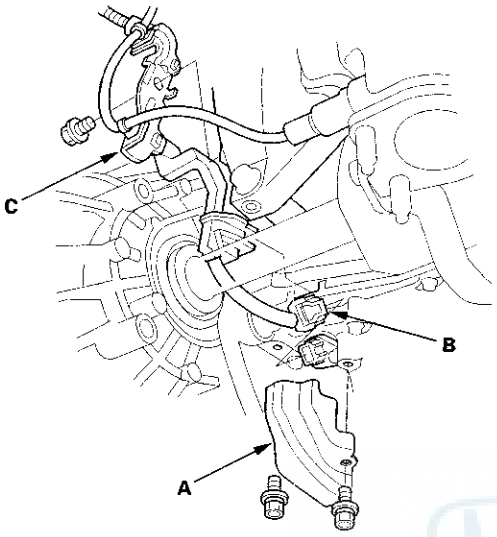


55. Coat all precision machined surfaces with clean engine oil, then put plastic bags over driveshaft ends.

(cont'd)

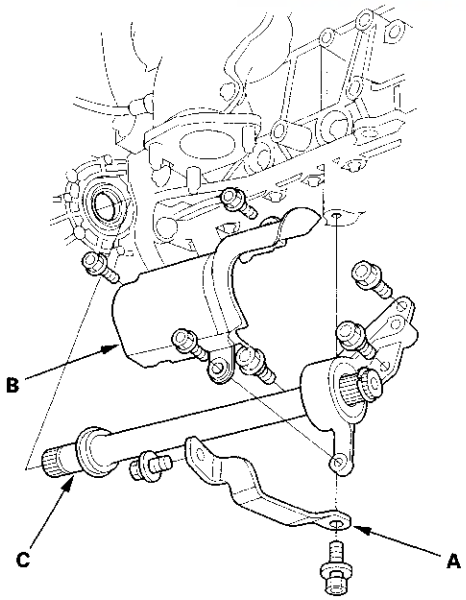
Transmission Removal (cont'd)

56. Remove the crankshaft position (CKP) sensor cover (A), and disconnect the CKP sensor connector (B).



57. Remove the bolt securing the sensor harness clamp bracket (C).

58. Remove the exhaust manifold bracket (A), and remove the bolts securing the heat shield (B).

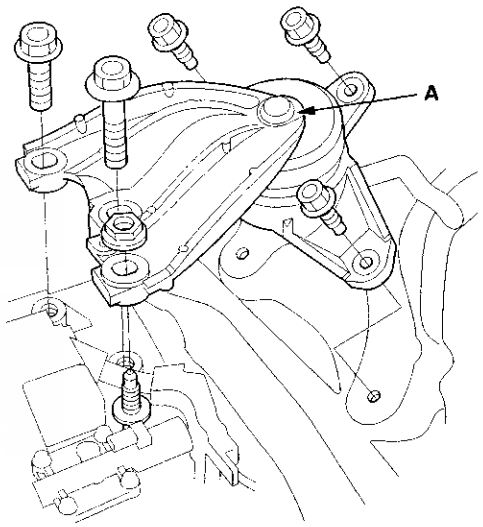


59. Remove the intermediate shaft (C) and the heat shield.

60. Coat all precision finished surfaces with clean engine oil, then put plastic bags over intermediate shaft ends.

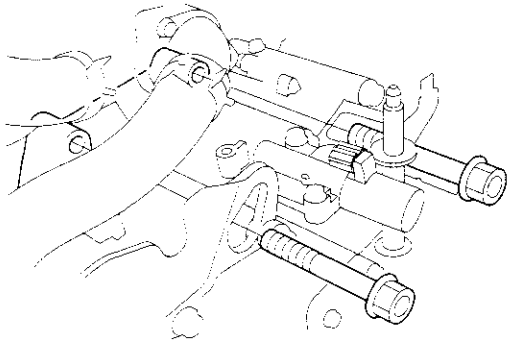
61. Place a jack under the transmission, raise it just enough to take it off of the mount, and remove the transmission upper mount and the mount bracket.

    NOTE: Do not remove the TORX bolt (A) from the upper transmission mount. If the TORX bolt is removed, the upper transmission mount must be replaced as an assembly.

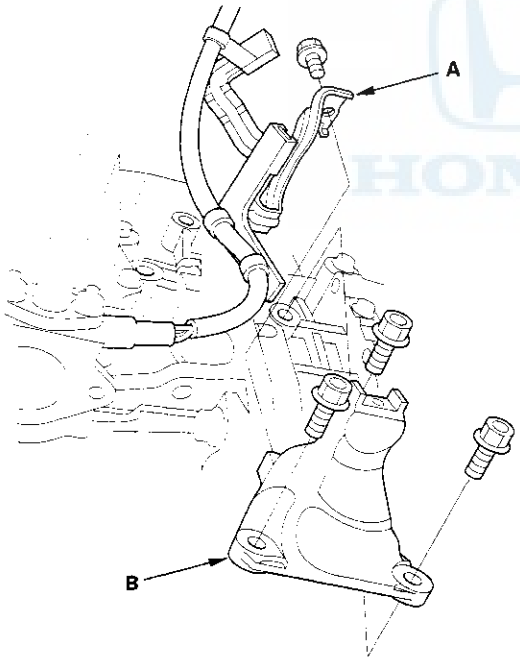


62. Remove the jack.

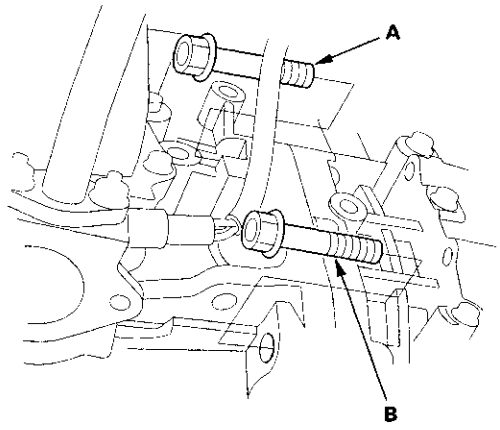
63. Remove the upper transmission housing mounting bolts.



64. Remove the sensor harness clamp bracket (A) from the front mount bracket (B), and remove the mount bracket.

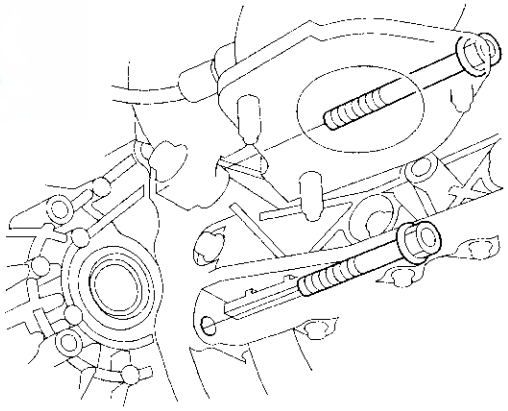


65. Remove the front transmission housing mounting bolt (A) using a socket 22 mm long.



66. Remove the front transmission housing mounting bolt (B).

67. Remove the rear transmission housing mounting bolts.



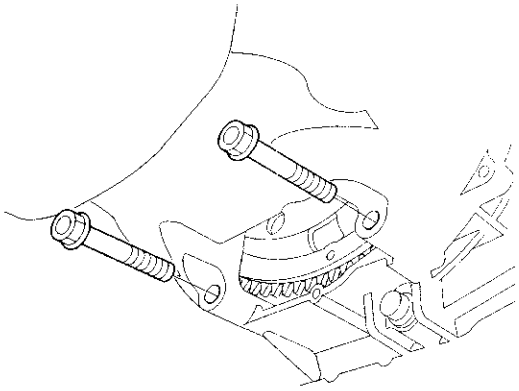
68. Lower the transmission by loosening the wing nut on the engine support hanger, and tilt the engine just enough for the end of the transmission to clear the side frame.

69. Place a jack under the transmission.

(cont'd)

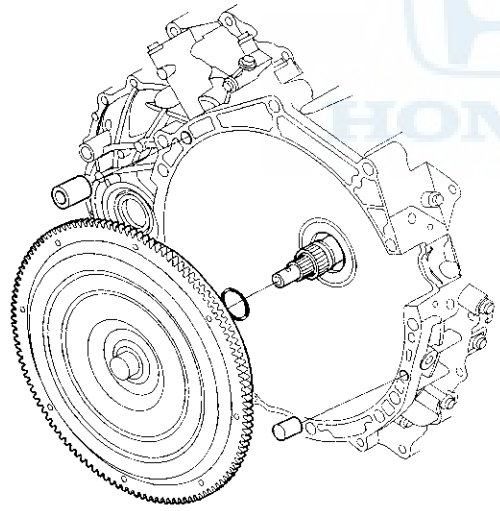
Transmission Removal (cont'd)

70. Remove the lower transmission housing mounting bolts.

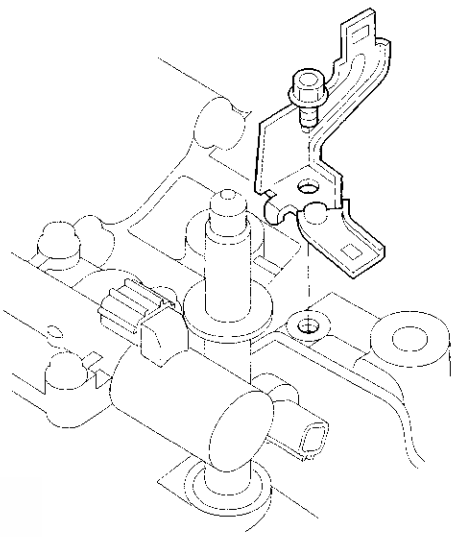


71. Slide the transmission away from the engine to remove it from the vehicle.

72. Remove the torque converter and the dowel pins.



73. Remove the clamp bracket from the transmission.



74. Inspect the drive plate, and replace it if it is damaged (see page 14-258).

Transmission Installation

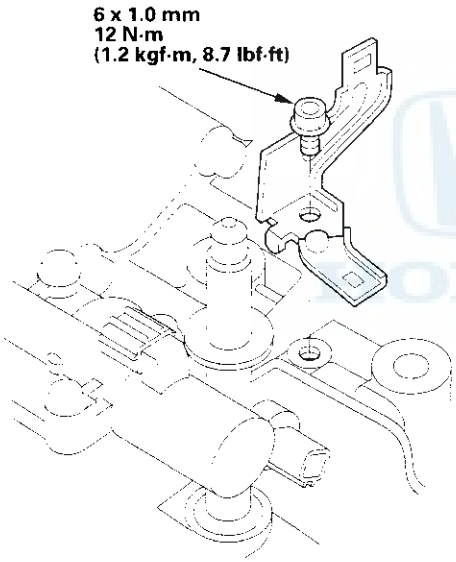
Special Tools Required
- Subframe alignment pin 070AG-SJAA10S
- 2008 V6 Attachment arm SIL02C000033
- Engine support hanger, A and Reds AAR-T1256
- Engine hanger balancer bar VSB02C000019
- Front subframe adapter VSB02C000016

These special tools are available through the Honda Tool and Equipment Program 888-424-6857.

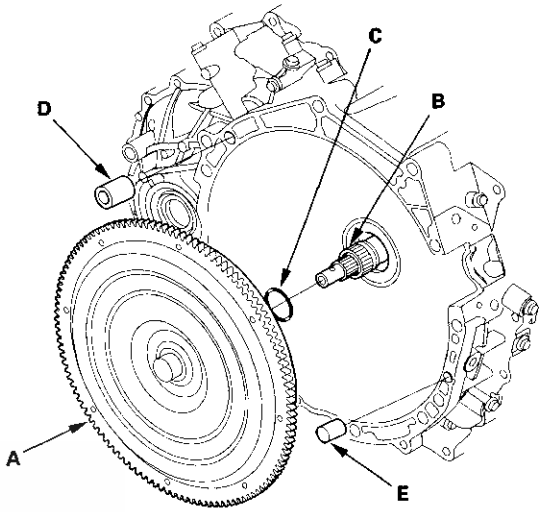
NOTE: Use fender covers to avoid damaging painted surfaces.

1. Clean the ATF cooler, refer to the 2008-2009 Accord Service Manual (see page 14-258).

2. Install the clamp bracket.

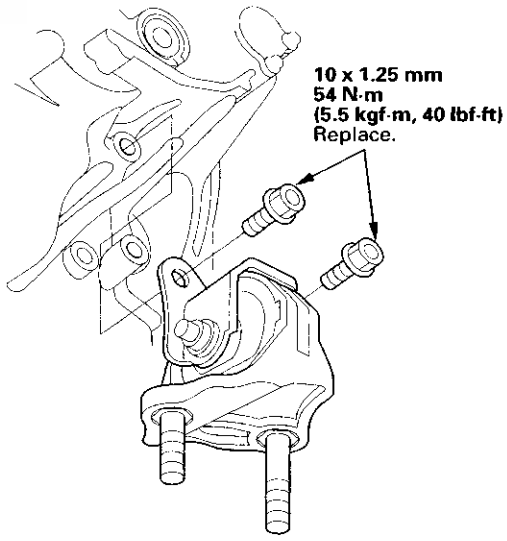


3. Install the torque converter (A) on the mainshaft (B) with a new O-ring (C).



4. Install the 14 mm dowel pin (D) and the 10 mm dowel pin (E) in the torque converter housing.

5. Install the transmission lower mount with new bolts.

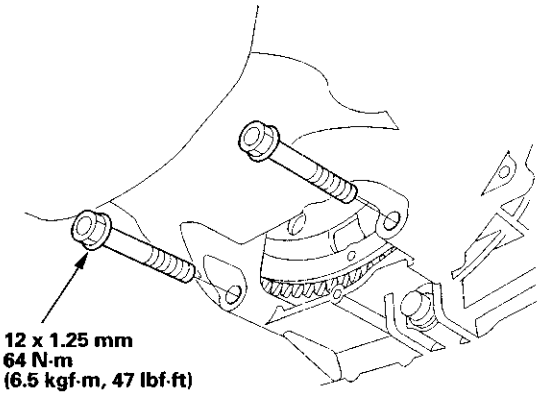


6. Place the transmission on a jack, and raise it to engine level.

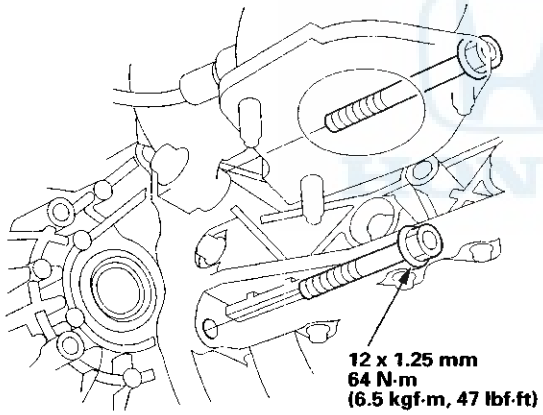
(cont'd)

Transmission Installation (cont'd)

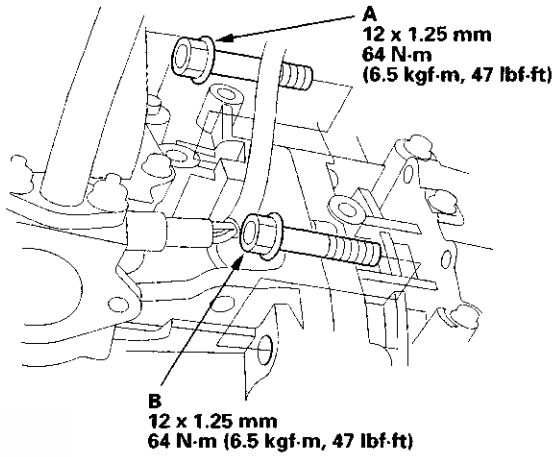
7. Attach the transmission to the engine, and install the lower transmission housing mounting bolts.



8. Install the rear transmission housing mounting bolts.

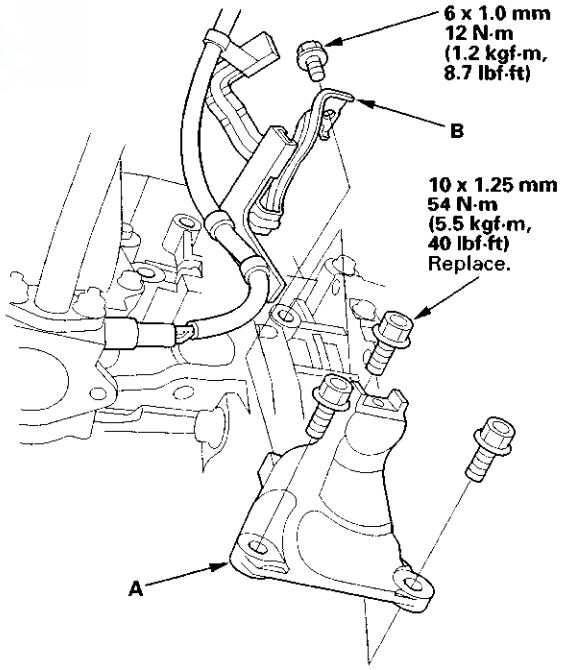


9. Install the front transmission housing mounting bolt (A) using a socket 22 mm long and a torque wrench.



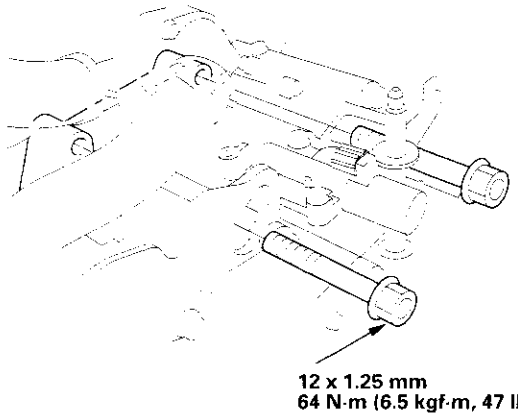
10. Install the front transmission housing mounting bolt (B).

11. Install the front mount bracket (A) with new bolts.

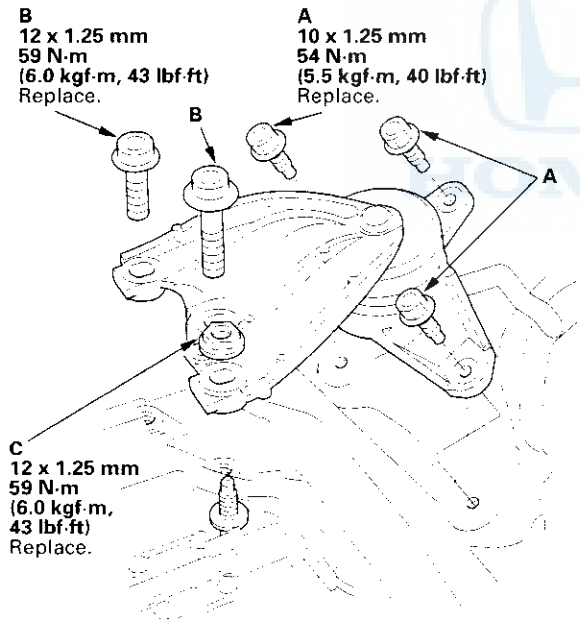


12. Install the sensor harness clamp bracket (B) on the mount bracket.

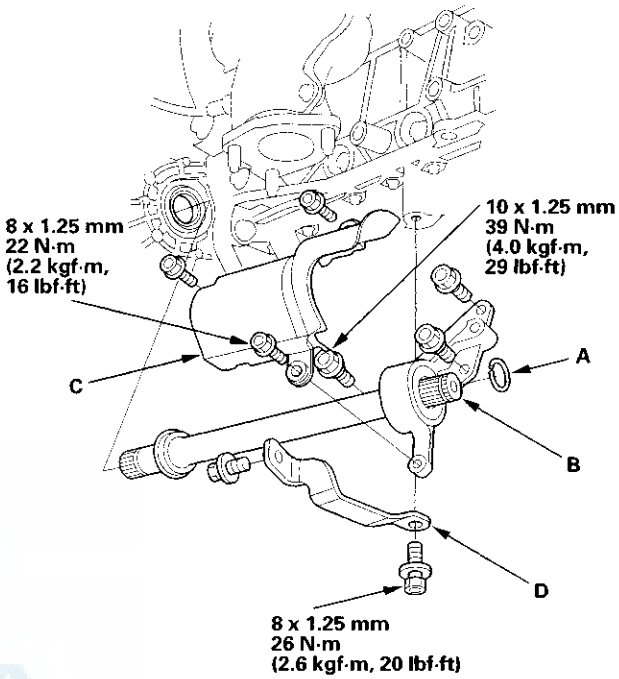
13. Install the upper transmission housing mounting bolts.



14. Install the transmission upper mount and the mount bracket with new bolts (A) (B) and nut (C).



15. Install a new set ring (A) on the intermediate shaft (B).



16. Plug the driveshaft hole to prevent dirt and solvent from entering the transmission. Clean the areas where the intermediate shaft contacts the transmission (differential) with solvent, and dry with compressed air. Apply ATF to the intermediate shaft splines, put the heat shield (C) on the intermediate shaft, then install the intermediate shaft; be sure not to allow dust or other foreign particles to enter the transmission.

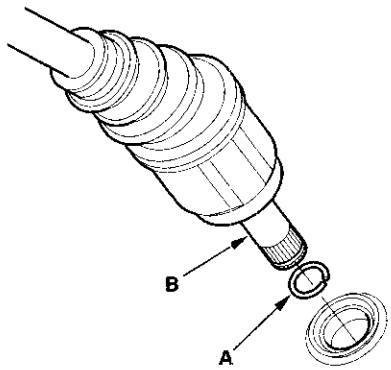
17. Install the heat shield with the mounting bolts.

18. Install the exhaust manifold bracket (D).

(cont'd)

Transmission Installation (cont'd)

19. Install a new set ring (A) on the left driveshaft (B).

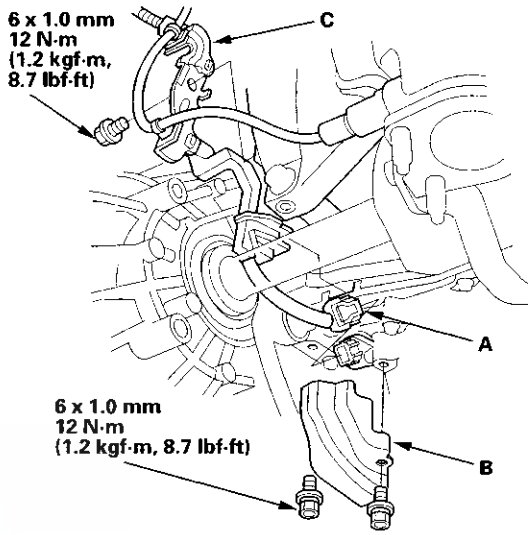


20. Clean the areas where the left driveshaft contacts the transmission (differential) with solvent, and dry with compressed air. Then install the left driveshaft; be sure not to allow dust or other foreign particles to enter the transmission. Turn the steering knuckle fully outward, and slide the driveshaft into the differential until you feel its set ring fully engage the side gear.

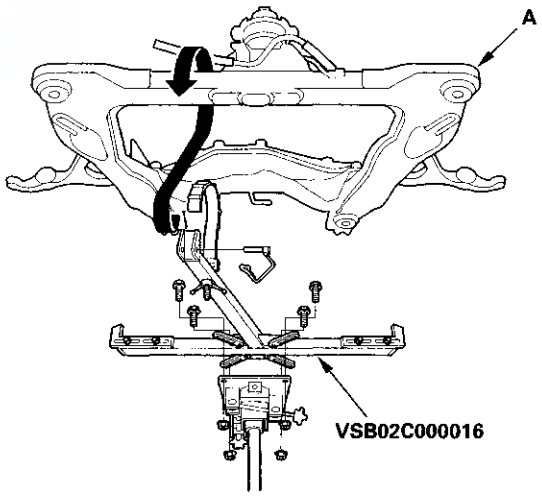
21. Apply right driveshaft inboard-joint splines with the recommended grease.

22. Slide the right driveshaft over the intermediate shaft splines until you feel the driveshaft fully engage the intermediate shaft set ring.

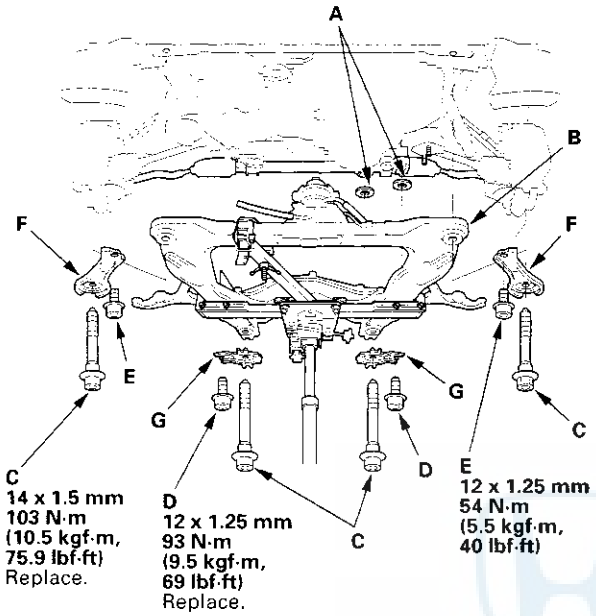
23. Connect the crankshaft position (CKP) sensor connector (A), and install the CKP sensor cover (B) and the sensor harness clamp bracket (C).



24. Support the front subframe (A) with the front subframe adapter (VSB02C000016) and a jack.

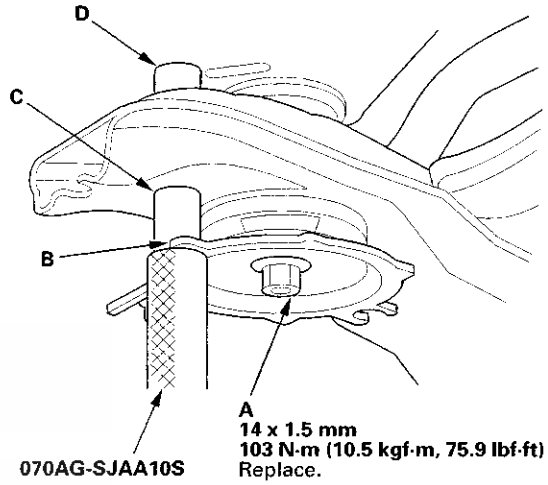


25. Position the steering gearbox washers (A) on the front subframe (B), and lift the subframe up to body.



26. Loosely install new subframe mounting bolts (C), new rear stiffener mounting bolts (D), the front stiffener mounting bolts (E), and the front stiffeners (F) and the rear stiffeners (G).

27. Loosely tighten the right rear subframe mounting bolt (A); insert the subframe alignment pin (070AG-SJAA10S) through the positioning slot (B) on the rear stiffener, through the positioning hole (C) on the subframe, and into the positioning hole (D) on the body, then tighten the subframe mounting bolt.



28. Loosely tighten the left rear subframe mounting bolt in the same manner in step 27.

29. Loosely tighten the right and left front subframe mounting bolts.

30. Loosen the right rear mounting bolt, then tighten the bolt to the specified torque with the guide pin in the positioning hole.

31. Tighten the left rear mounting bolt to the specified torque with the guide pin in the positioning hole.

32. Tighten the right and left front mounting bolts to the specified torque.

33. Check that the positioning holes and slot are aligned using the subframe alignment pin

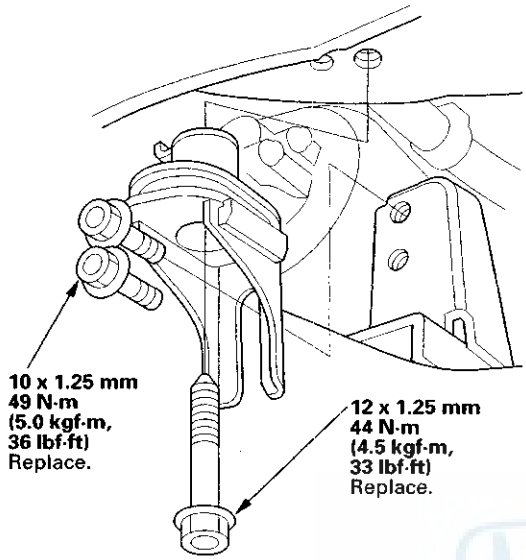
34. Tighten the rear and front stiffener mounting bolts to the specified torque.

35. Remove the jack and the front subframe adapter.

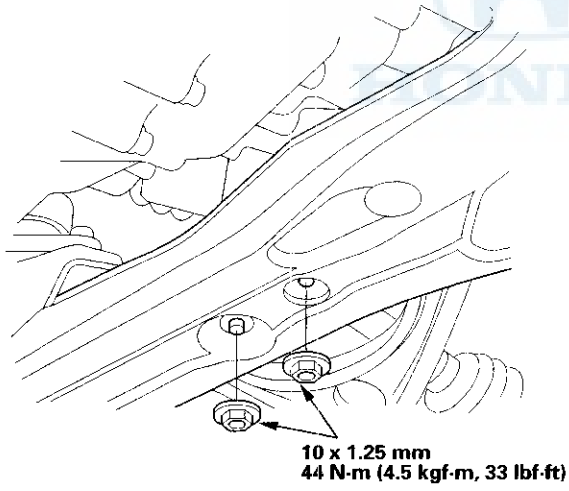
(cont'd)

Transmission Installation (cont'd)

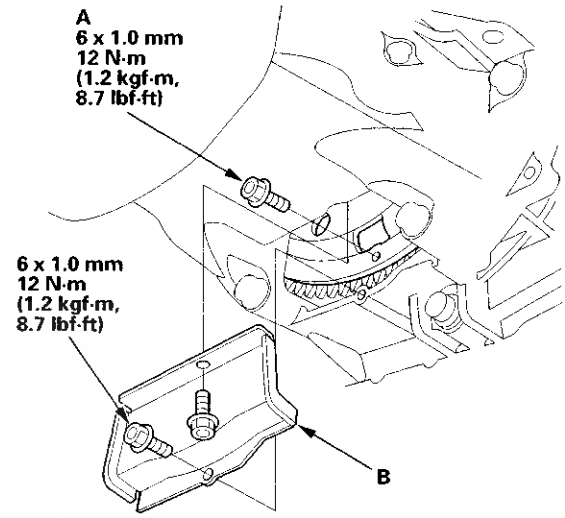
36. Install both mid-stiffener with new bolts.



37. Install the transmission lower mount nuts.

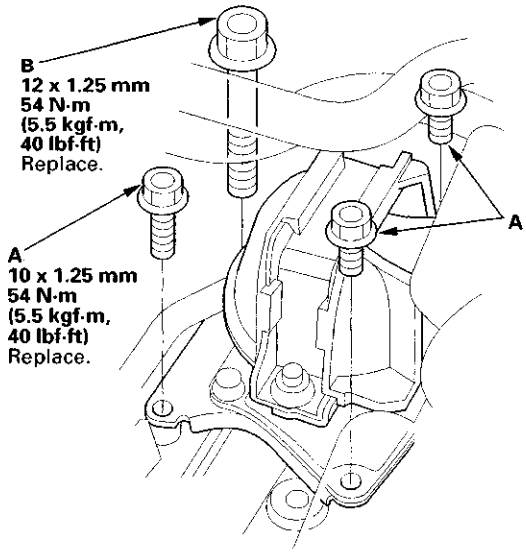


38. Attach the torque converter to the drive plate with eight bolts (A). Rotate the crankshaft pulley as necessary to tighten the bolts to 1/2 of the specified torque, then to the final torque, in a crisscross pattern. After tightening the last bolt, check that the crankshaft rotates freely.

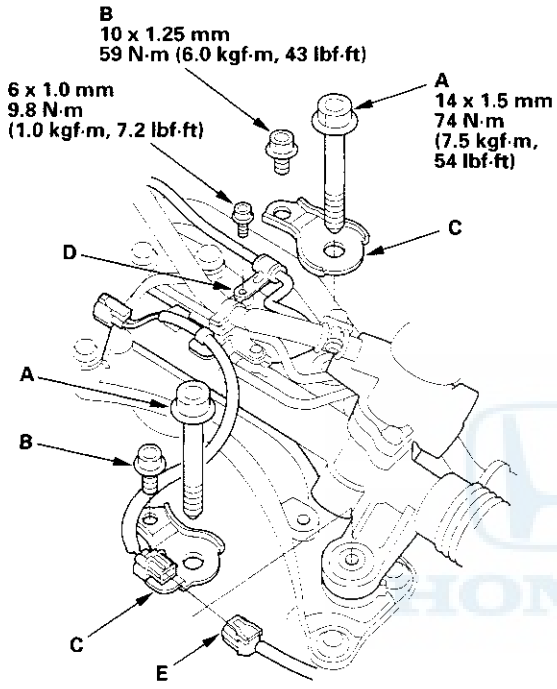


39. Install the torque converter cover (B).

40. Secure the rear mount base bracket with new bolts: 10 x 1.25 mm (A) (three bolts) and 12 x 1.25 mm (B).



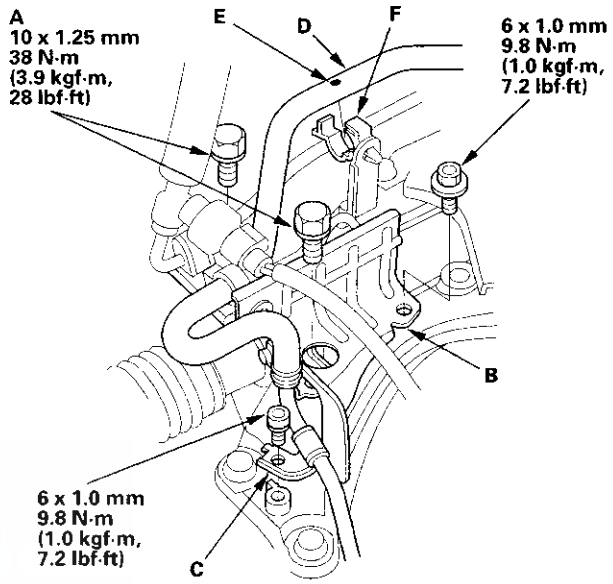
41. Align the bolt holes in the front subframe and the gearbox mounting washers with the steering gearbox, and secure the steering gearbox with the mounting bolts (A), the bolts (B), and the stiffeners (C).



42. Secure the power steering fluid line clamp (D) with the bolt.

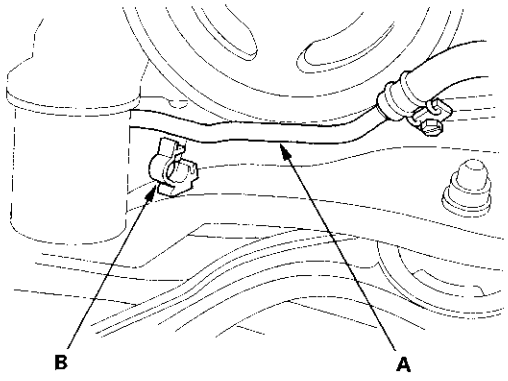
43. Connect the engine mount control system connector (E).

44. Position the steering gearbox bracket over the gearbox, and secure the gearbox with the bolts (A).



45. Secure the steering gearbox heat shield (B) and the power steering fluid line clamp (C) with the bolts. Install the power steering fluid hose (D) at the dot (E) in its clamp (F).

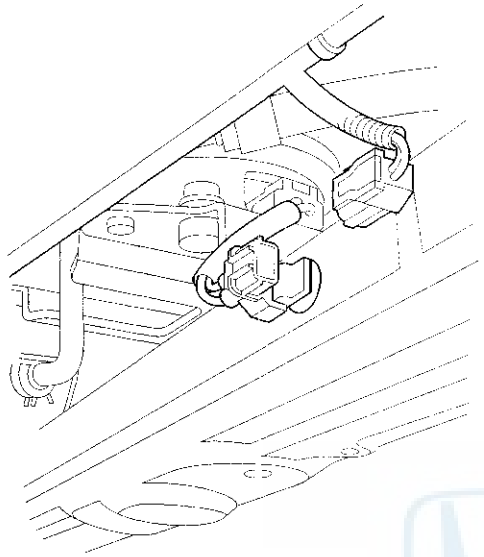
46. Secure the power steering fluid line (A) with the clamp (B).



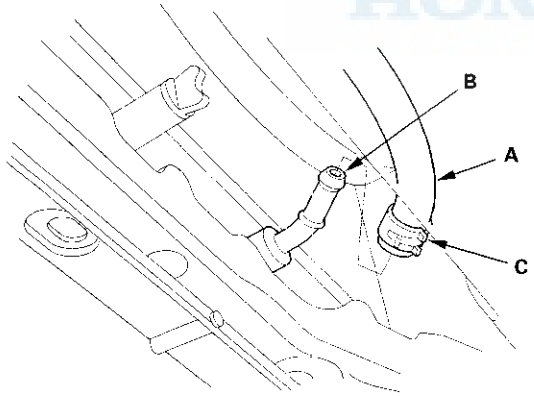
(cont'd)

Transmission Installation (cont'd)

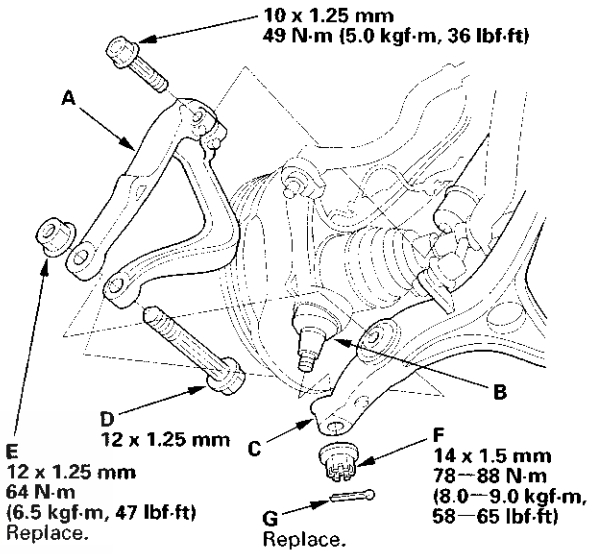
47. Connect the engine mount control system connector at the front of the subframe.



48. Connect the ATF cooler hose (A) to the ATF cooler line (B), and secure the hose with its clip (C) (see page 14-259).

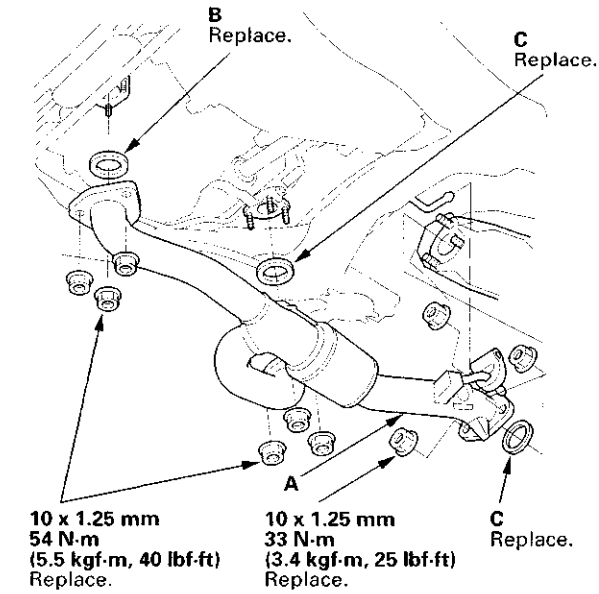


49. Install the damper forks (A) with the damper pinch bolts, and install the ball joints (B) to each lower arms (C).

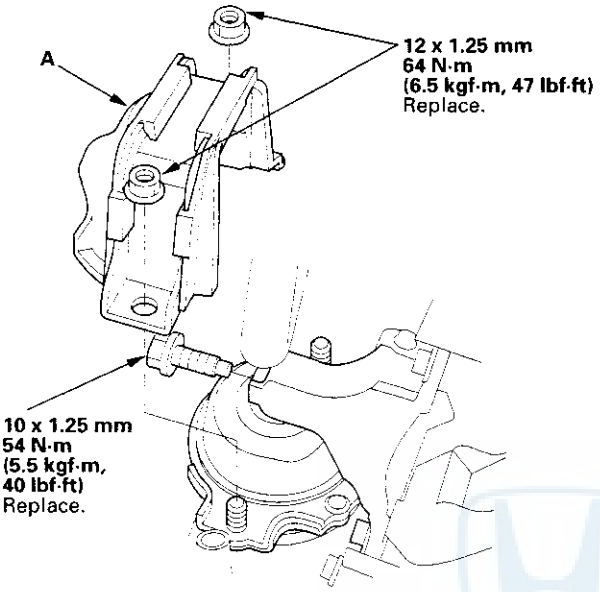


50. Install new damper fork bolts (D) and new self-locking nuts (E), and secure the ball joints with the castle nuts (F) and new cotter pins (G).

51. Install exhaust pipe A with new self-locking nuts and new gaskets (B) (C).

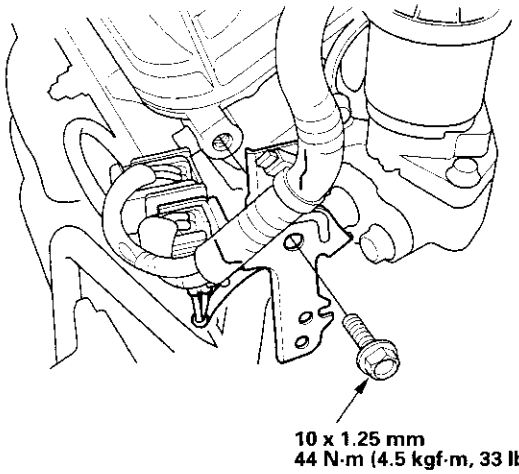


52. Install a new front mount bolt, and install the front mount stop (A) with new nuts.

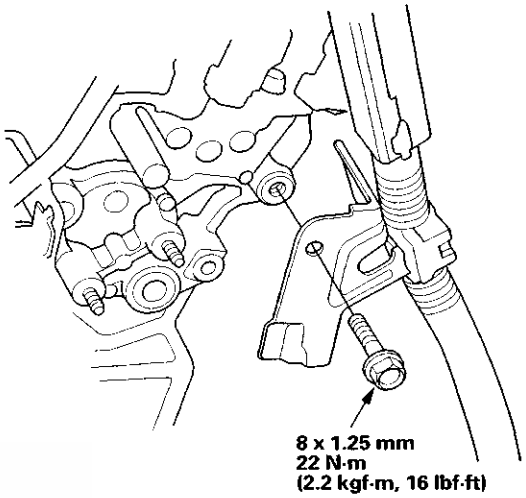


53. Remove the engine support hanger and the engine hanger balancer bar.

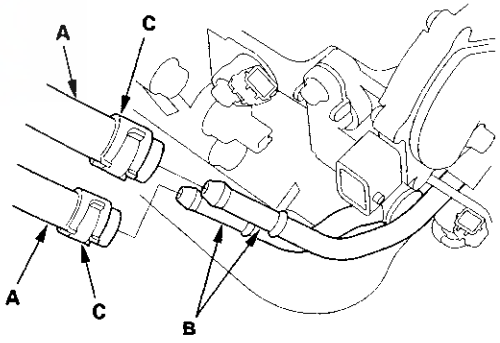
54. Install the connector bracket to the front cylinder head.



55. Install the harness clamp bracket to the rear cylinder head.



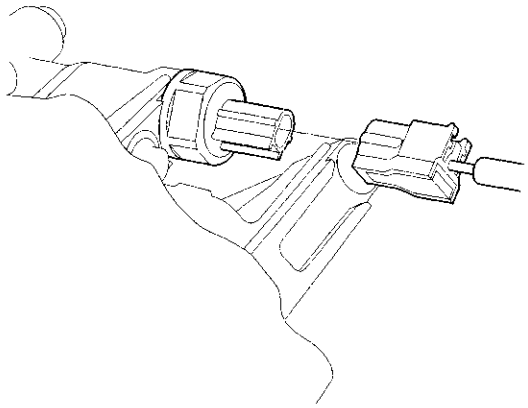
56. Connect the ATF cooler hoses (A) to the ATF cooler lines (B), and secure the hoses with the clips (C) (see page 14-259).



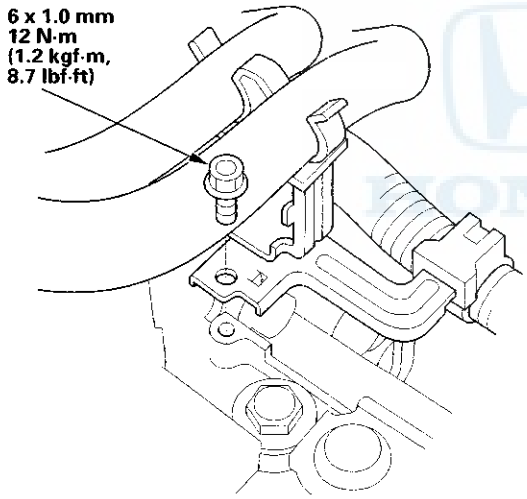
(cont'd)

Transmission Installation (cont'd)

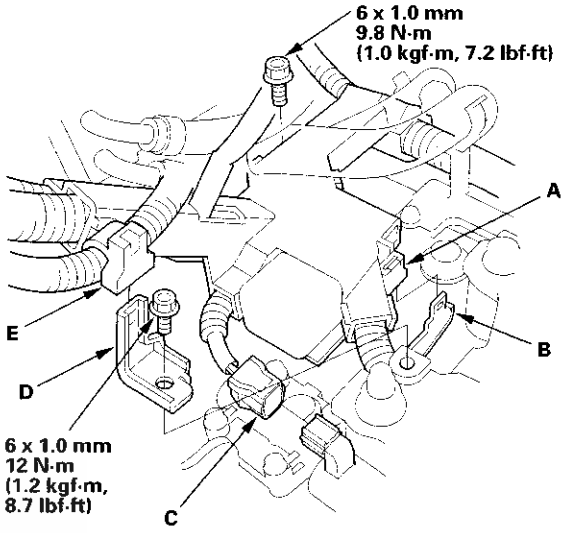
57. Connect the 2nd clutch transmission fluid pressure switch connector.



58. Secure the harness clamp bracket with the bolt.



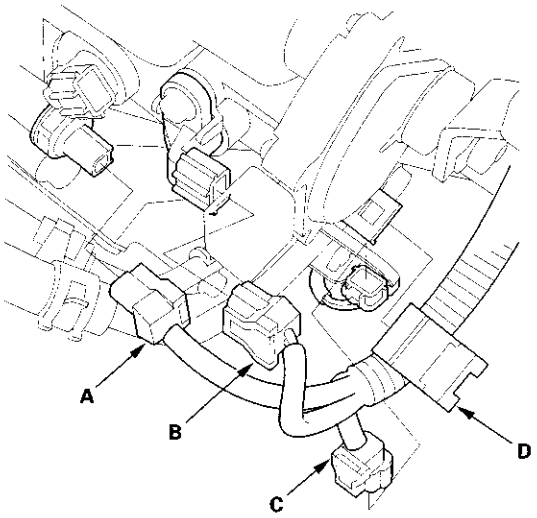
59. Install the harness cover (A) on its bracket (B), and secure it with the mounting bolt.



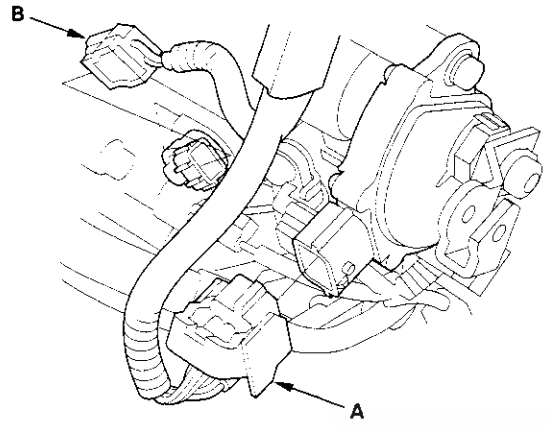
60. Connect the A/T clutch pressure control solenoid valve C connector (C).

61. Install the harness clamp bracket (D), and install the harness clamp (E) on the bracket.

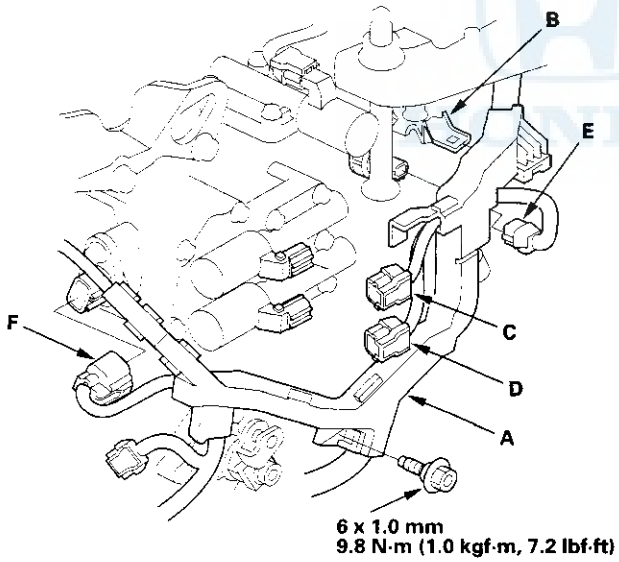
62. Connect the 3rd clutch transmission fluid pressure switch connector (A), the output shaft (countershaft) speed sensor connector (B), and the ATF temperature sensor connector (C). Install the harness clamp (D) on its bracket.



63. Connect the transmission range switch connector (A) and the input shaft (mainshaft) speed sensor connector (B).

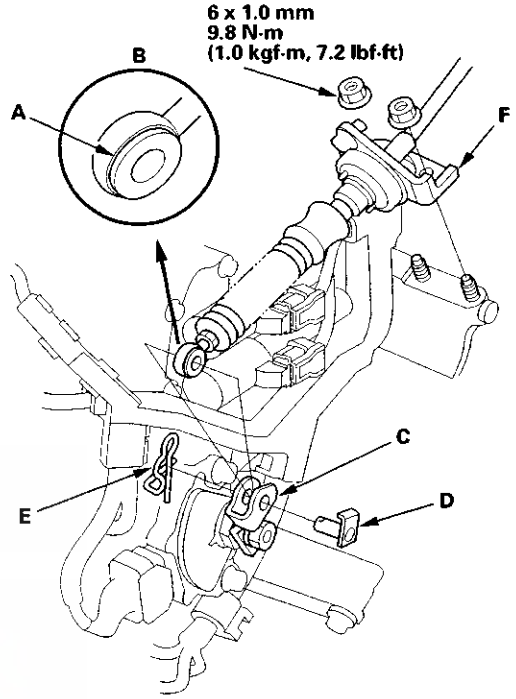


64. Install the harness cover (A) on its bracket (B), and secure it with the bolt.



65. Connect the A/T clutch pressure control solenoid valve A connector (C), the A/T clutch pressure control solenoid valve B connector (D), the 4th clutch transmission fluid pressure switch connector (E), and the shift solenoid wire harness connector (F).

66. Apply molybdenum grease to the hole in the bushing (A) in the shift cable end (B).



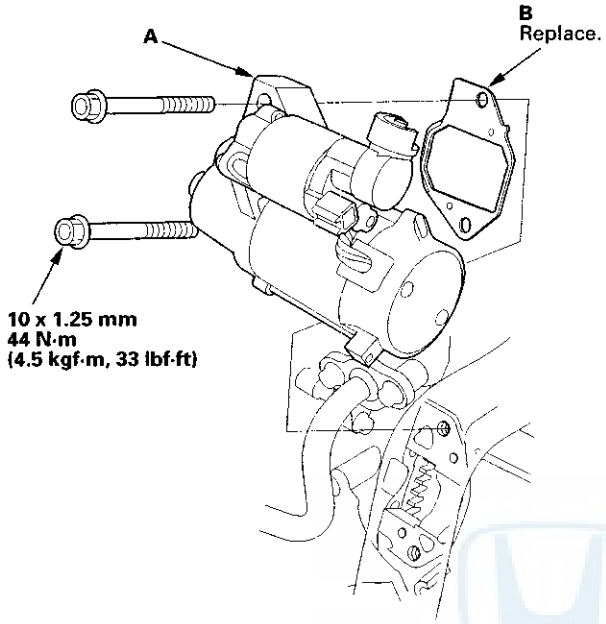
67. Attach the shift cable end to the selector control lever (C), then insert the control pin (D) into the selector control lever hole through the shift cable end, and secure the control pin with the spring clip (E).

68. Secure the shift cable bracket (F) with the nuts.

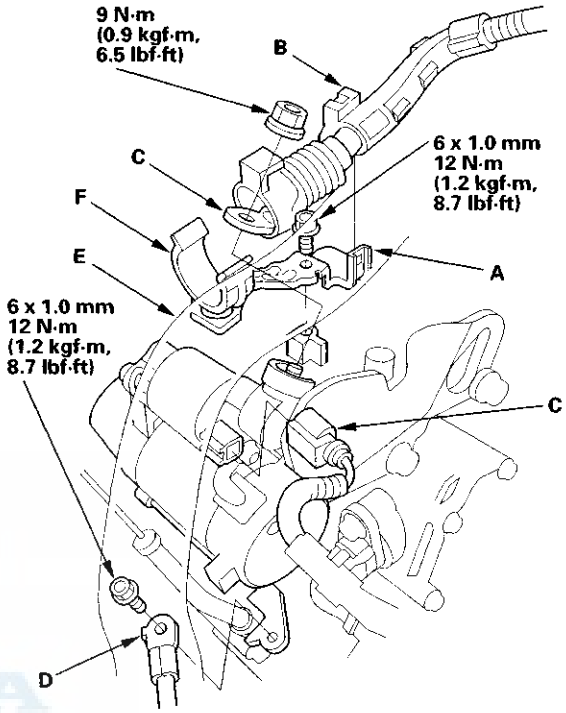
(cont'd)

Transmission Installation (cont'd)

69. Install the starter (A) and a new gasket (B).



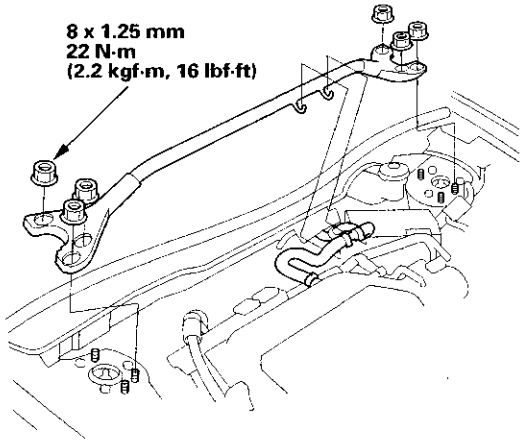
70. Install the harness clamp bracket (A), and install the harness clamp (B) on its bracket.



71. Install the starter cables (C).

72. Install the transmission ground terminal (D), and install the water hose (E) in its clamp (F).

73. Install the strut brace.



74. Refill the transmission with ATF (see step 6 on page 14-232).

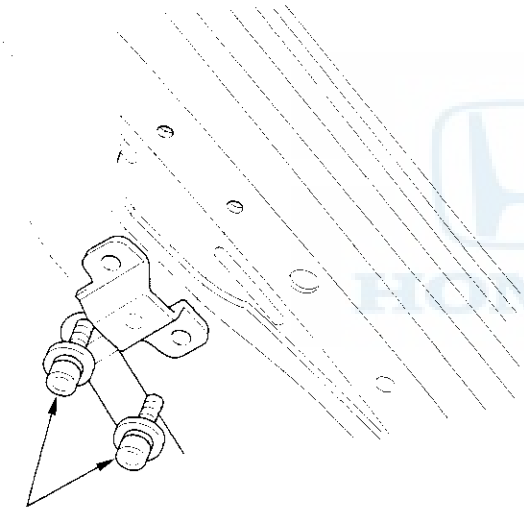
75. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt from under the vehicle.

76. Install the air cleaner assembly (see page 11-436).

77. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

78. Install the upper grille cover.

79. Reinstall the support strut brackets with the bolts to proper locations on both sides of the hood.



6 x 1.0 mm
9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)

80. Install the splash shield.

81. Install the wheels.

82. Set the parking brake. Start the engine, and shift the transmission through all positions three times. Check the shift lever operation, A/T gear position indicator operation, and shift cable adjustment.

83. Check and adjust the front wheel alignment (see page 18-4).

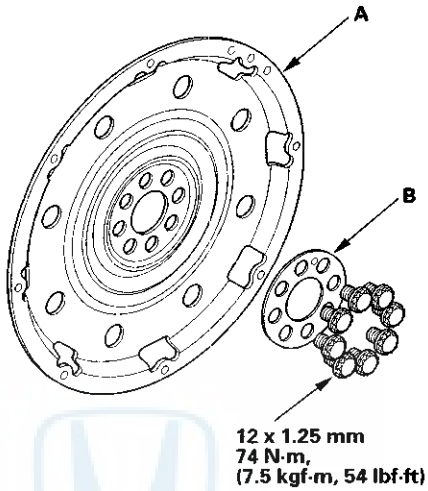
84. Start the engine in P or N, and warm it up to normal operating temperature (the radiator fan comes on).

85. Turn off the engine, and check the ATF level (see page 14-231).

86. Do the road test (see page 14-204).

Drive Plate Removal and Installation

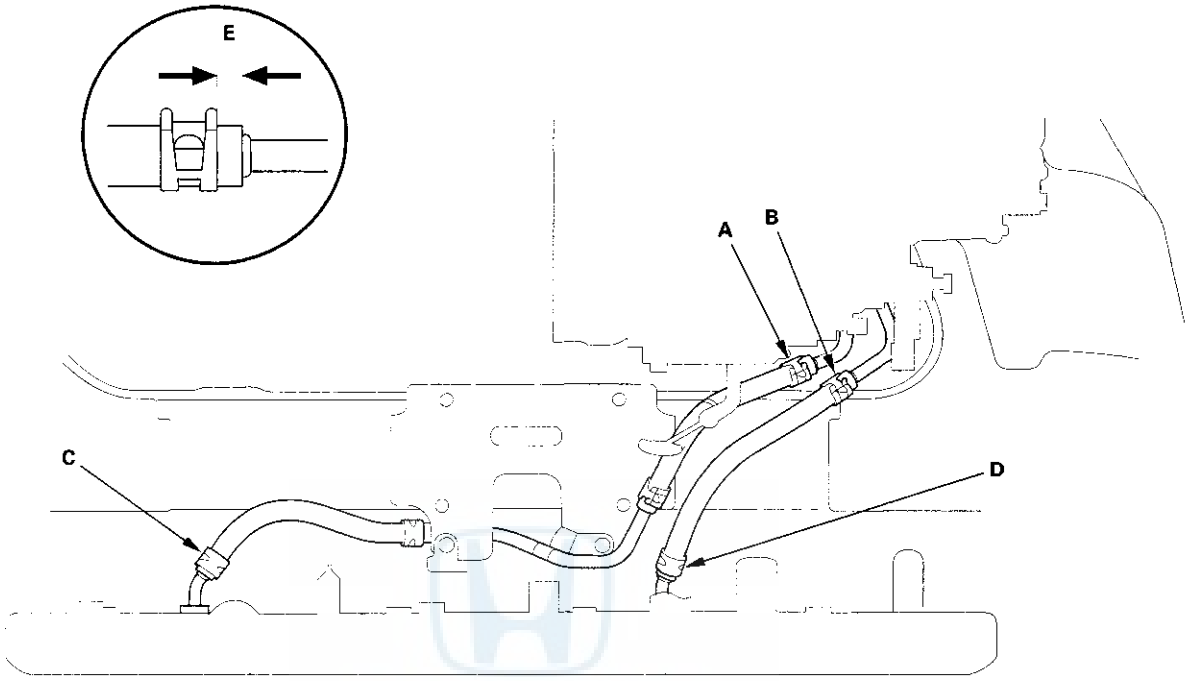
1. Remove the transmission assembly (see page 14-233).
2. Remove the drive plate (A) and the washer (B) from the engine crankshaft.



3. Install the drive plate and the washer on the engine crankshaft, and tighten the eight bolts in a crisscross pattern in at least two steps.
4. Install the transmission assembly (see page 14-245).

ATF Cooler Hose Replacement

Exploded View



NOTE: When installing the hose clamps, make sure not to interfere to the surrounding parts.

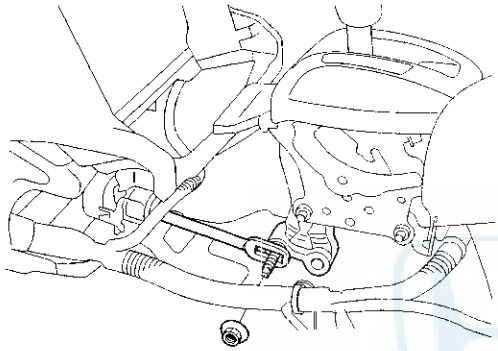
1. Install the ATF cooler hoses over the ATF cooler lines with the clips at appropriate points in reference to the following list.

Point	Distance from Hose End to Clip (E)	Hose End Contact Point
A	6—8 mm (0.24—0.31 in.)	Bulge
B		
C	2—4 mm (0.08—0.16 in.)	Bulge
D		

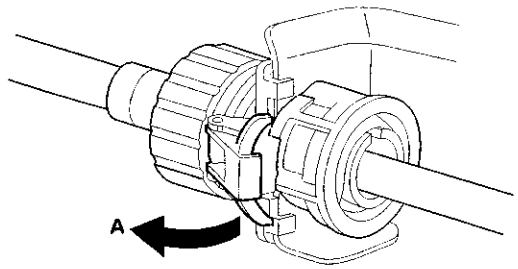
2. Refill the transmission with ATF to the proper level (see page 14-232).

Shift Cable Replacement

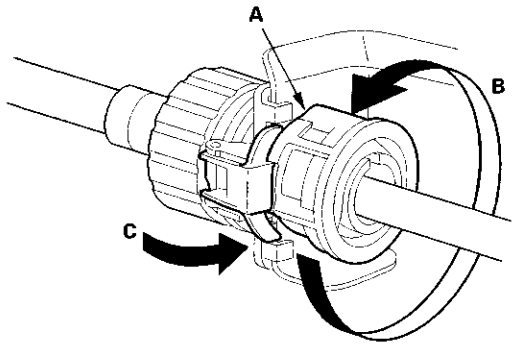
1. Raise the vehicle on a lift, or apply parking brake, block both rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Remove the center console, refer to the 2008-2009 Accord Service Manual (see page 20-148)
3. Shift the shift lever to R.
4. Remove the nut securing the shift cable end.



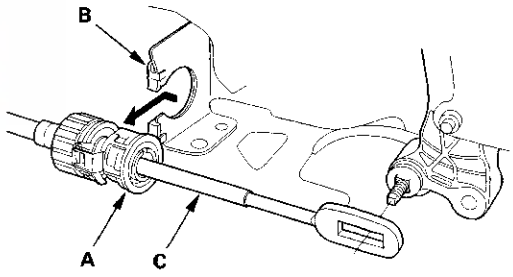
5. Unlock the retainer lock (A).



6. Rotate the socket holder retainer (A) counterclockwise (B) until it stops, and push the retainer lock (C) into the socket holder retainer to lock the retainer.



7. Push the socket holder retainer (A) against the socket holder bracket (B), then slide it to remove the shift cable (C) from the socket holder bracket.



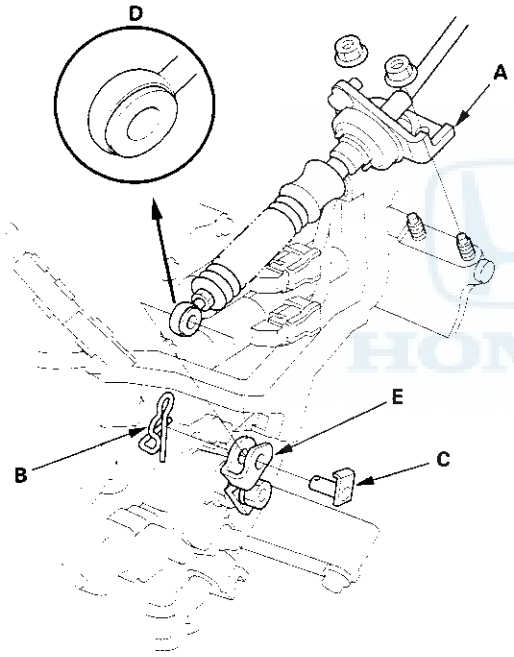
8. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

9. Remove the air cleaner assembly (see page 11-436).

10. Remove the splash shield.

11. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket, and remove the battery base and the battery base bracket in the engine compartment.

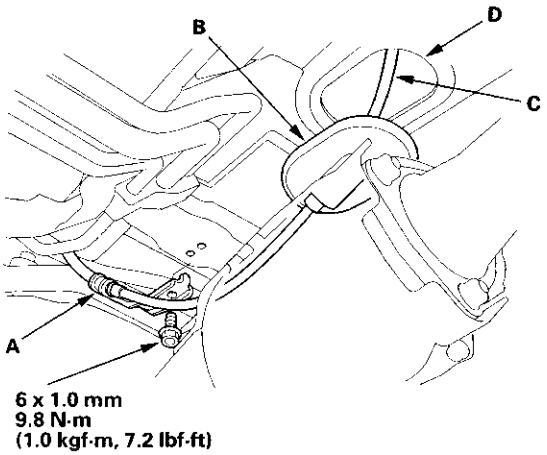
12. Remove the nuts securing the shift cable bracket (A).



13. Remove the spring clip (B) and the control pin (C), then separate the shift cable end (D) from the selector control lever (E).

14. Remove the heat shield under the shift cable grommet.

15. Remove the nut securing the shift cable bracket (A).



16. Remove the shift cable grommet (B), and pull out the shift cable (C).

17. Insert a new shift cable through the grommet hole (D), and install the grommet in its hole. Do not bend the shift cable excessively.

18. Secure the shift cable bracket with the nut.

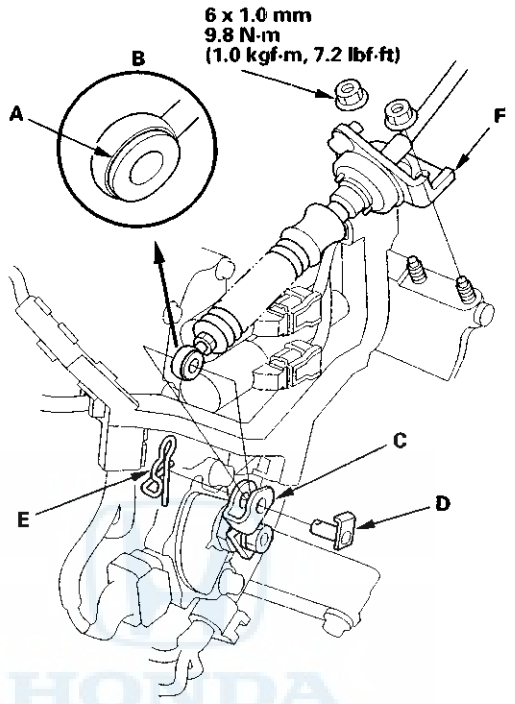
19. Install the heat shield.

20. Make sure that the transmission is in R at the selector control lever.

(cont'd)

Shift Cable Replacement (cont'd)

21. Apply molybdenum grease to the hole in the bushing (A) in the shift cable end (B).



22. Attach the shift cable end to the selector control lever (C), then insert the control pin (D) into the selector control lever hole through the shift cable end, and secure the control pin with the spring clip (E).

23. Secure the shift cable bracket (F) with the nuts.

24. Install the shift cable on the shift cable end, and adjust the shift cable, refer to the 2008-2009 Accord Service Manual (see page 14-272).

25. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt from under the vehicle.

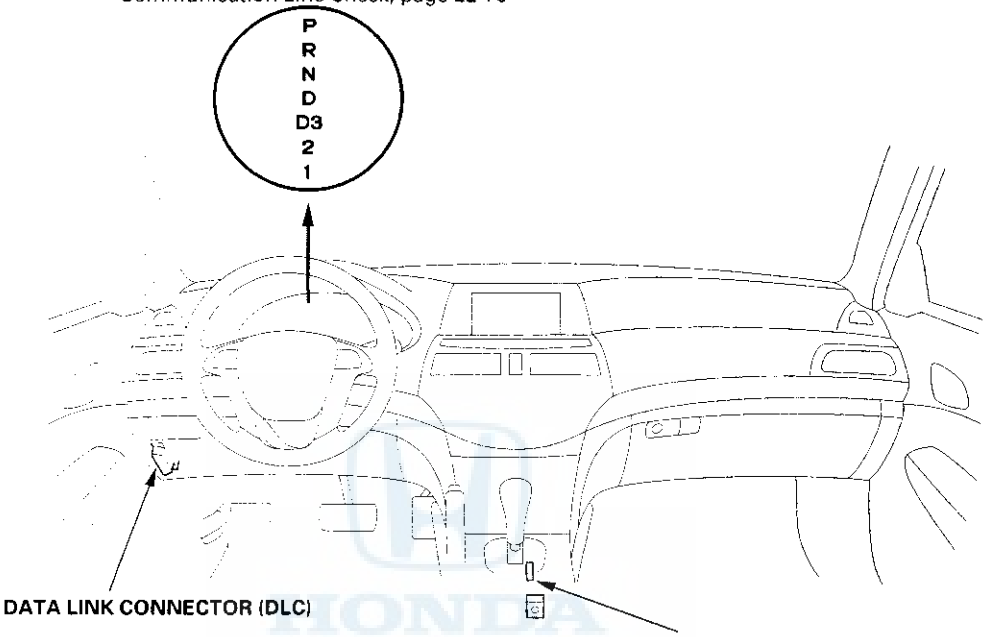
26. Install the splash shield.

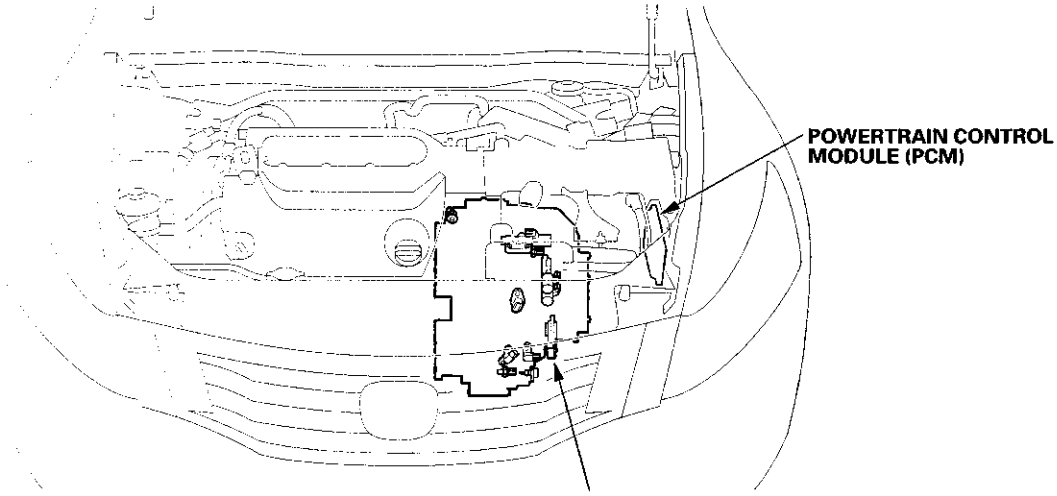
27. Install the air cleaner assembly (see page 11-436).

28. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

Component Location Index

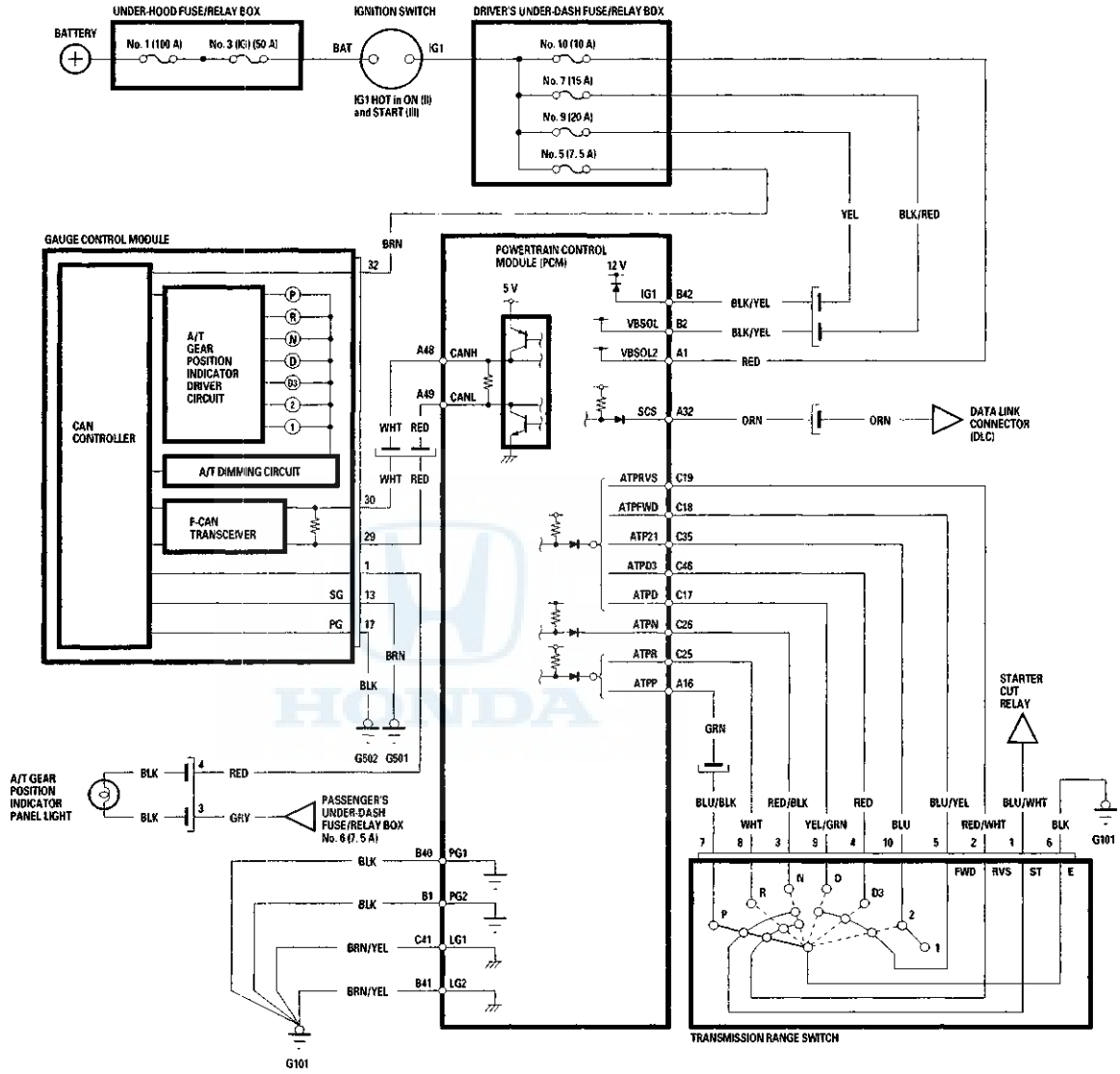
A/T GEAR POSITION INDICATOR
F-CAN Communication Circuit Troubleshooting, page 11-248
Gauge Control Module Self-diagnostic Function
Indicator Drive Circuit Check, page 22-69
Communication Line Check, page 22-70





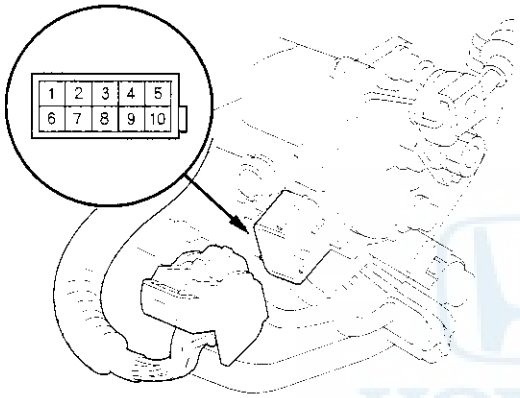
A/T Gear Position Indicator

Circuit Diagram



Transmission Range Switch Test

1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the air cleaner assembly (see page 11-436).
3. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket from under the bracket, and remove the battery base and the battery base bracket in the engine compartment.
4. Disconnect the transmission range switch connector.



5. Check for continuity between terminals at the switch connector. There should be continuity between the terminals in the following table for each switch position.

Transmission Range Switch Harness Connector

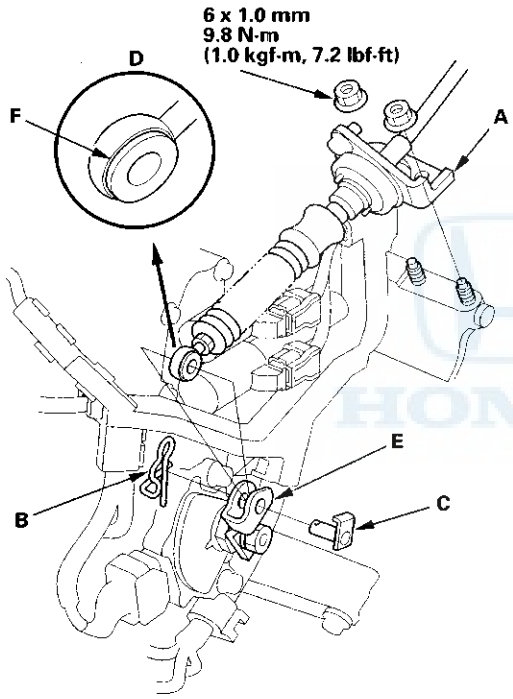
Position/Connector Terminal/Signal Connections										
	1	2	3	4	5	6	7	8	9	10
	ATP NP	ATP RVS	N	D3	ATP FWD	GND	P	R	D	ATP 2-1
P	○	○				○	○			
R		○				○		○		
N	○	○	○			○				
D					○	○			○	
D3				○	○	○				
2					○	○				○
1						○				○

6. Transmission range switch test is finished if the test results are OK. If there is no continuity between any terminals, check that the transmission range switch installation. If the switch installation is OK, replace the switch (see page 14-266).
7. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt from under the bracket.
8. Install the air cleaner assembly (see page 11-436).
9. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

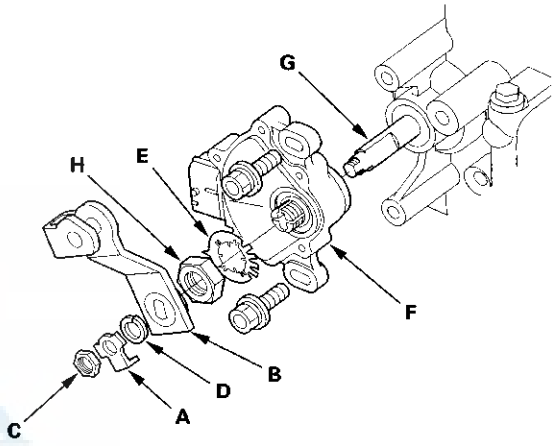
HONDA

Transmission Range Switch Replacement

1. Do the battery removal procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).
2. Remove the air cleaner assembly (see page 11-436).
3. Remove the 6 x 1.0 mm bolt securing the resonator bracket under the battery base bracket from under the bracket, and remove the battery base and the battery base bracket in the engine compartment.
4. Remove the nuts securing the shift cable bracket (A).

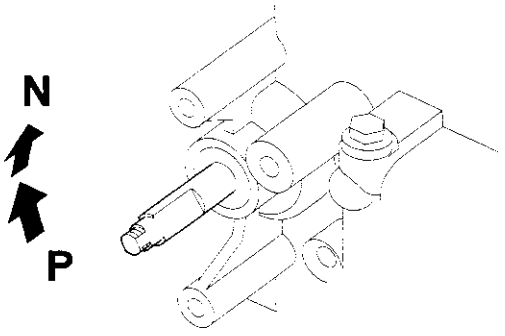


5. Remove the spring clip (B) and the control pin (C), then separate the shift cable end (D) from the selector control lever (E).
6. Check the bushing (F) in the shift cable end for proper fit and wear. If the bushing is loose or worn, replace the shift cable (see page 14-260).
7. Disconnect the transmission range switch connector.
8. Pry the lock tab of the lock washer (A) on the selector control lever (B), and remove the nut (C), the lock washer, the spring washer (D) and the selector control lever.

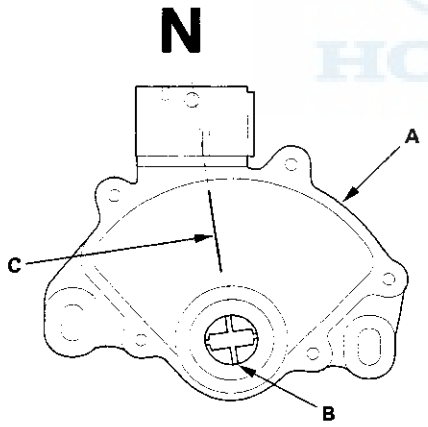


9. Pry the lock tabs of the lock washer (E) on the transmission range switch (F), hold the selector control shaft (G) with a 6.0 mm wrench, and loosen the locknut (H).
10. Remove the locknut and the lock washer, then remove the transmission range switch (two bolts).

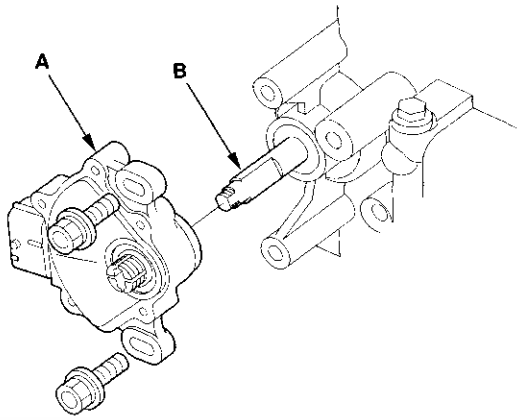
11. With a 6.0 mm wrench, turn the selector control shaft fully counterclockwise (viewed from the shaft end) to the P position. Turn the selector control shaft back two click-stopped positions so that it is in the N position.



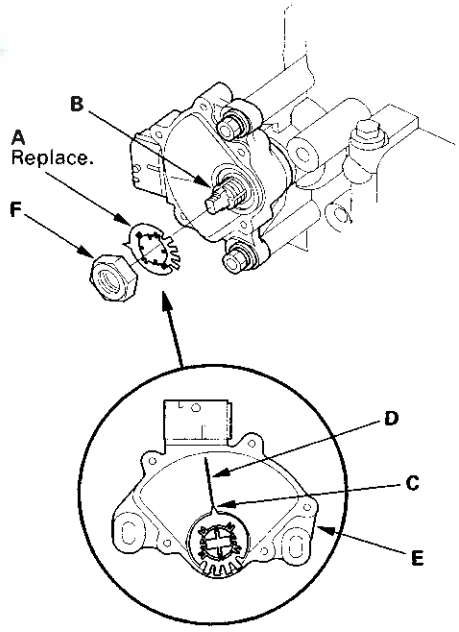
12. Set a new transmission range switch (A) to the N position. The transmission range switch clicks in the N position, and the selector control shaft hole (B) aligns with the N position line (C).



13. Install the transmission range switch (A) gently over the selector control shaft (B), and install the bolts loosely.



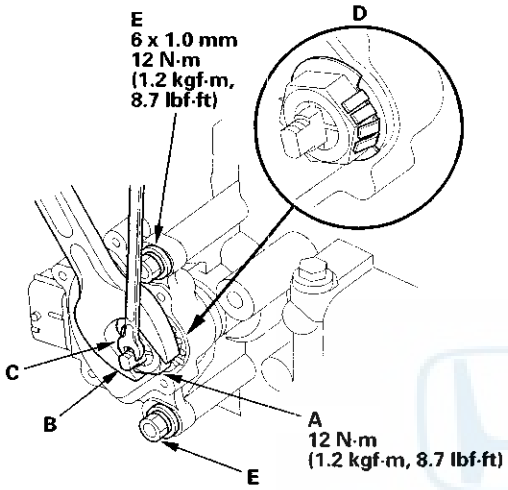
14. Install a new lock washer (A) over the selector control shaft (B) while aligning the indicator tab (C) of the lock washer with the N positioning line (D) on the transmission range switch (E), and install the locknut (F).



(cont'd)

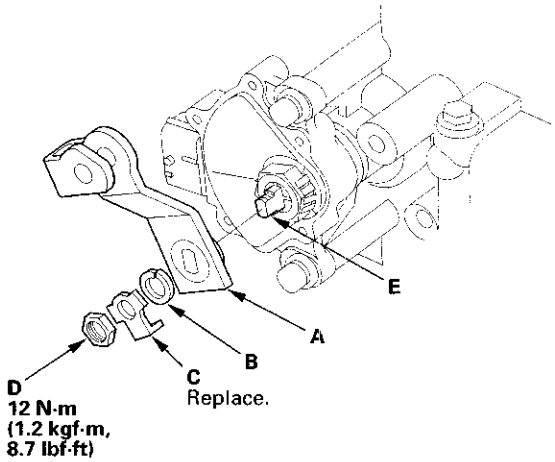
Transmission Range Switch Replacement (cont'd)

15. Push the locknut against the transmission housing to seat the transmission range switch into the selector control shaft, and tighten the locknut (A) to 12 N·m (1.2 kgf·m, 8.7 lbf·ft) while holding the selector control shaft (B) with a 6.0 mm wrench (C), then bend the lock tabs (D) of the lock washer against the locknut.



16. Tighten the bolts (E) securing the transmission range switch to 12 N·m (1.2 kgf·m, 8.7 lbf·ft).

17. Install the control lever (A), the spring washer (B), a new lock washer (C), and the locknut (D) on the selector control shaft (E). Bend the lock tab of the lock washer against the locknut.



18. Check the connectors for rust, dirt, or oil. Clean if needed, then connect the connector securely.

19. Apply molybdenum grease to the hole in the bushing in the shift cable end. Attach the shift cable end to the selector control lever, then insert the control pin into the selector control lever hole through the shift cable end, and secure the control pin with the spring clip.

20. Secure the shift cable bracket with the nuts.

21. Install the battery base bracket and the battery base, and secure the resonator bracket under the battery base bracket with the bolt from under the bracket.

22. Install the air cleaner assembly (see page 11-436).

23. Do the battery installation procedure, refer to the 2008-2009 Accord Service Manual (see page 22-90).

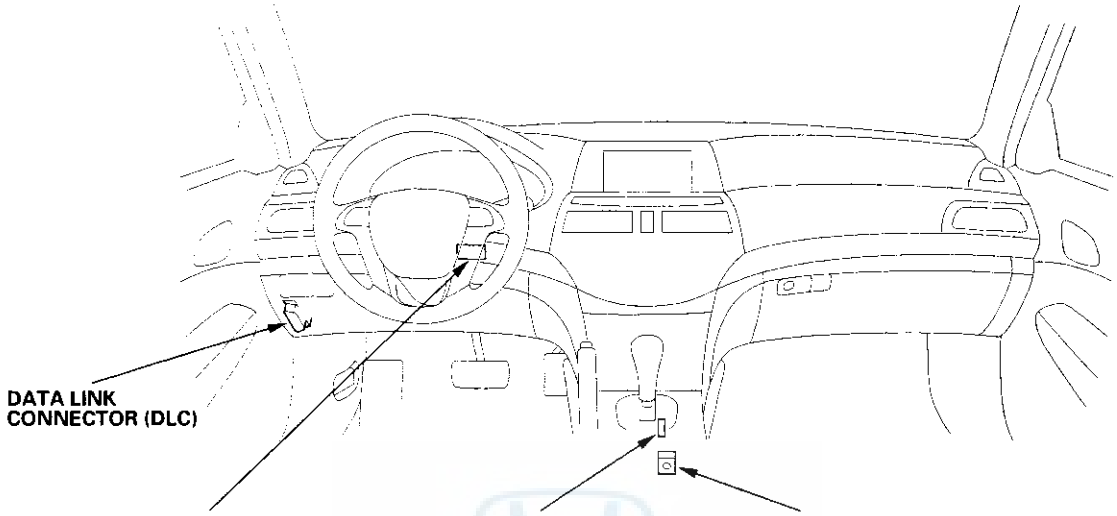
24. Turn the ignition switch to ON (II). Move the shift lever through all positions, and check the transmission range switch synchronization with the A/T gear position indicator.

25. Check that the engine starts in P and N, and does not start in any other shift lever position.

26. Check that the back-up lights come on when the shift lever is in R.

27. Allow the front wheels to rotate freely, then start the engine, and check the shift lever operation.

Component Location Index



STEERING LOCK ASSEMBLY
KEY INTERLOCK SOLENOID
Key Interlock System
Circuit Troubleshooting,
page 14-294
in the 2008-2009 Accord
Service Manual
Key Interlock Solenoid
Test, page 14-296
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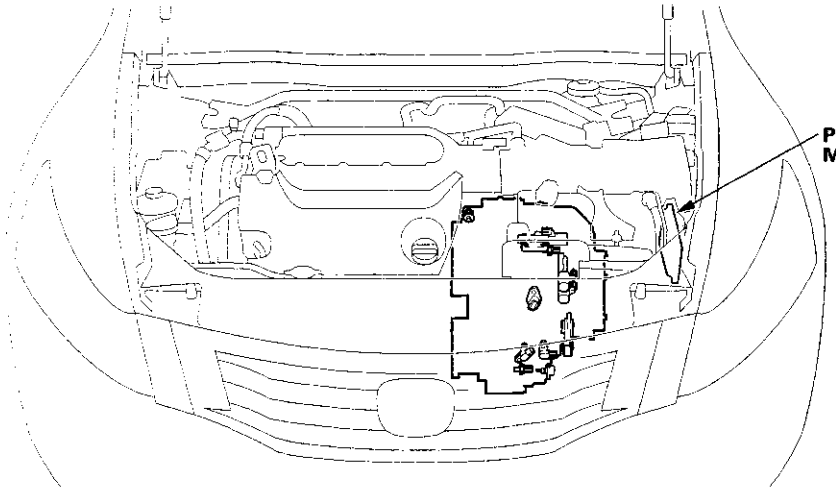
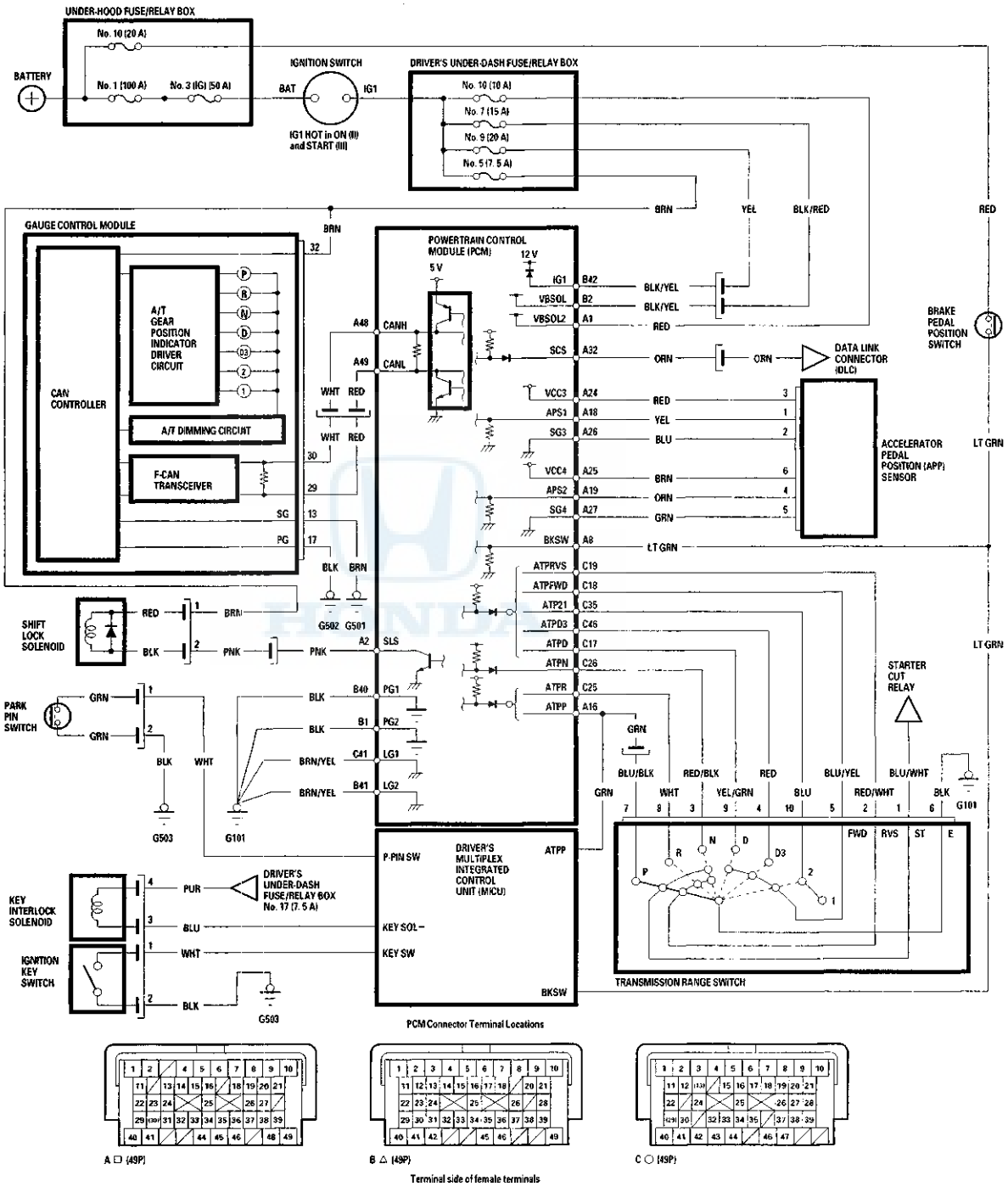
in the 2008-2009 Accord
Service Manual



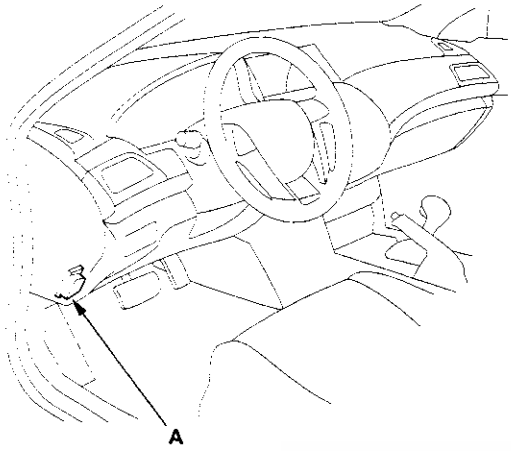
A/T Interlock System

Circuit Diagram



Shift Lock System Circuit Troubleshooting

1. Connect the HDS to the DLC (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II). Make sure the HDS communicates with the PCM. If it does not, go to the DLC circuit troubleshooting (see page 11-290).

3. Select Shift Lock Solenoid Test in the Miscellaneous Test Menu, and check that the shift lock solenoid operates with the HDS.

   Does the shift lock solenoid work properly?

   YES—Go to step 16.

   NO—Go to step 4.

4. Turn the ignition switch to LOCK (0).

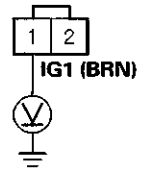
5. Remove the center console, refer to the 2008-2009 Accord Service Manual (see page 20-146).

6. Disconnect the shift lock solenoid connector, refer to the 2008-2009 Accord Service Manual (see page 14-334).

7. Turn the ignition switch to ON (II).

8. Measure the voltage between shift lock solenoid connector terminal No. 1 and body ground.

SHIFT LOCK SOLENOID CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 9.

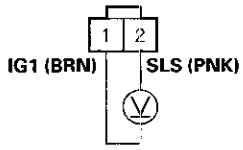
NO—Check for a blown No. 5 (7.5 A) fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between shift lock solenoid connector terminal No. 1 and the driver's under-dash fuse/relay box.■

(cont'd)

Shift Lock System Circuit Troubleshooting (cont'd)

9. Shift the shift lever in P, and press the brake pedal. Do not press the accelerator.
10. Measure the voltage between shift lock solenoid connector terminals No. 1 and No. 2 while pressing the brake pedal.

SHIFT LOCK SOLENOID CONNECTOR



Wire side of female terminals

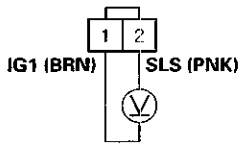
Is there battery voltage?

YES—Go to step 11.

NO—Go to step 12.

11. Release the brake pedal, and measure the voltage between shift lock solenoid connector terminals No. 1 and No. 2. The shift lever must be in P.

SHIFT LOCK SOLENOID CONNECTOR



Wire side of female terminals

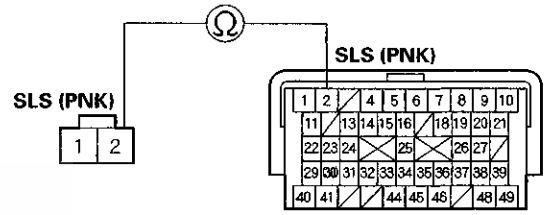
Is there battery voltage?

YES—Repair short to body ground in the wire between PCM connector terminal A2 and the shift lock solenoid connector. ■

NO—Check the shift lock mechanism. If the mechanism is OK, replace the shift lock solenoid, refer to the 2008-2009 Accord Service Manual (see page 14-296). ■

12. Turn the ignition switch to LOCK (0).
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (49P).
15. Check for continuity between PCM connector terminal A2 and shift lock solenoid connector terminal No. 2.

SHIFT LOCK SOLENOID CONNECTOR **PCM CONNECTOR A (49P)**



Wire side of female terminals

Terminal side of female terminals

Is there continuity?

YES—Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8), and recheck. If the symptom goes away with a known-good PCM, replace the original PCM (see page 11-282). ■

NO—Repair open in the wire between PCM connector terminal A2 and the shift lock solenoid connector. ■

16. Press the brake pedal.

    Are the brake lights ON?

    YES—Go to step 17.

    NO—Repair faulty brake light circuit. ■

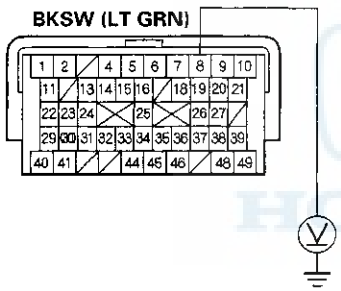
17. Turn the ignition switch to LOCK (0).

18. Jump the SCS line with the HDS.

19. Disconnect PCM connector A (49P).

20. Measure the voltage between PCM connector terminal A8 and body ground while pressing the brake pedal and when the brake pedal is released.

PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there battery voltage while pressing the brake pedal and about 0 V when the pedal is released?

YES—Go to step 21.

NO—Repair open in the wire between PCM connector terminal A8 and the brake pedal position switch. ■

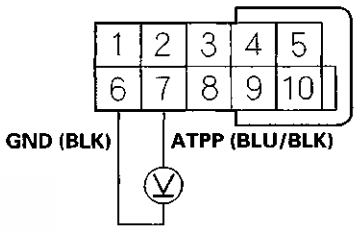
21. Connect PCM connector A (49P).

22. Disconnect the transmission range switch connector.

23. Turn the ignition switch to ON (II).

24. Measure the voltage between transmission range switch connector terminals No. 7 and No. 6.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

Is there around battery voltage?

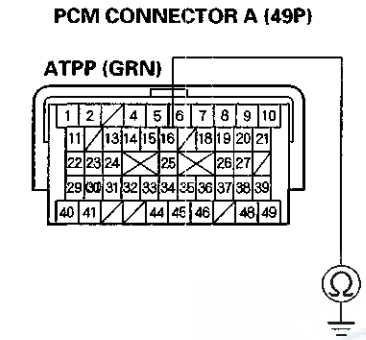
YES—Go to step 31.

NO—Go to step 25.

(cont'd)

Shift Lock System Circuit Troubleshooting (cont'd)

25. Turn the ignition switch to LOCK (0).
26. Jump the SCS line with the HDS.
27. Disconnect PCM connector A (49P).
28. Check for continuity between PCM connector terminal A16 and body ground.

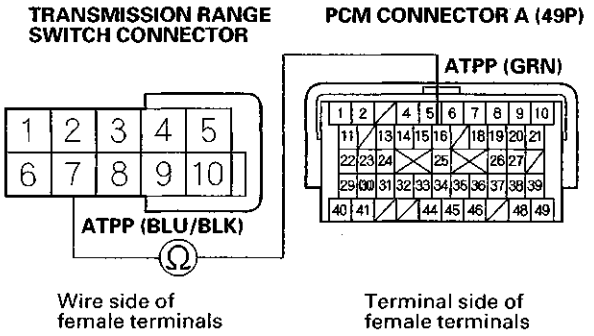


Is there continuity?

YES—Repair short to body ground in the wire between PCM connector terminal A16 and the transmission range switch connector. ■

NO—Go to step 29.

29. Check for continuity between PCM connector terminal A16 and transmission range switch connector terminal No. 7.



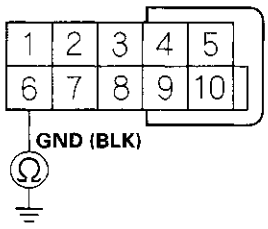
Is there continuity?

YES—Go to step 30.

NO—Repair open in the wire between PCM connector terminal A16 and the transmission range switch connector. ■

30. Check for continuity between transmission range switch connector terminal No. 6 and body ground.

TRANSMISSION RANGE SWITCH CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8), and recheck. If the symptom goes away with a known-good PCM, replace the original PCM (see page 11-282).■

NO—Repair open in the wire between transmission range switch connector terminal No. 6 and body ground (G101), or repair poor body ground (G101).■

31. Test the transmission range switch (see page 14-265).

Is the transmission range switch OK?

YES—Go to step 32.

NO—Replace the transmission range switch (see page 14-266).■

32. Check the APP SENSOR in the Data List with the HDS. Do not press the accelerator.

Is the accelerator pedal position sensor opening 11 % or above, or the sensor voltage 1.60 V or above?

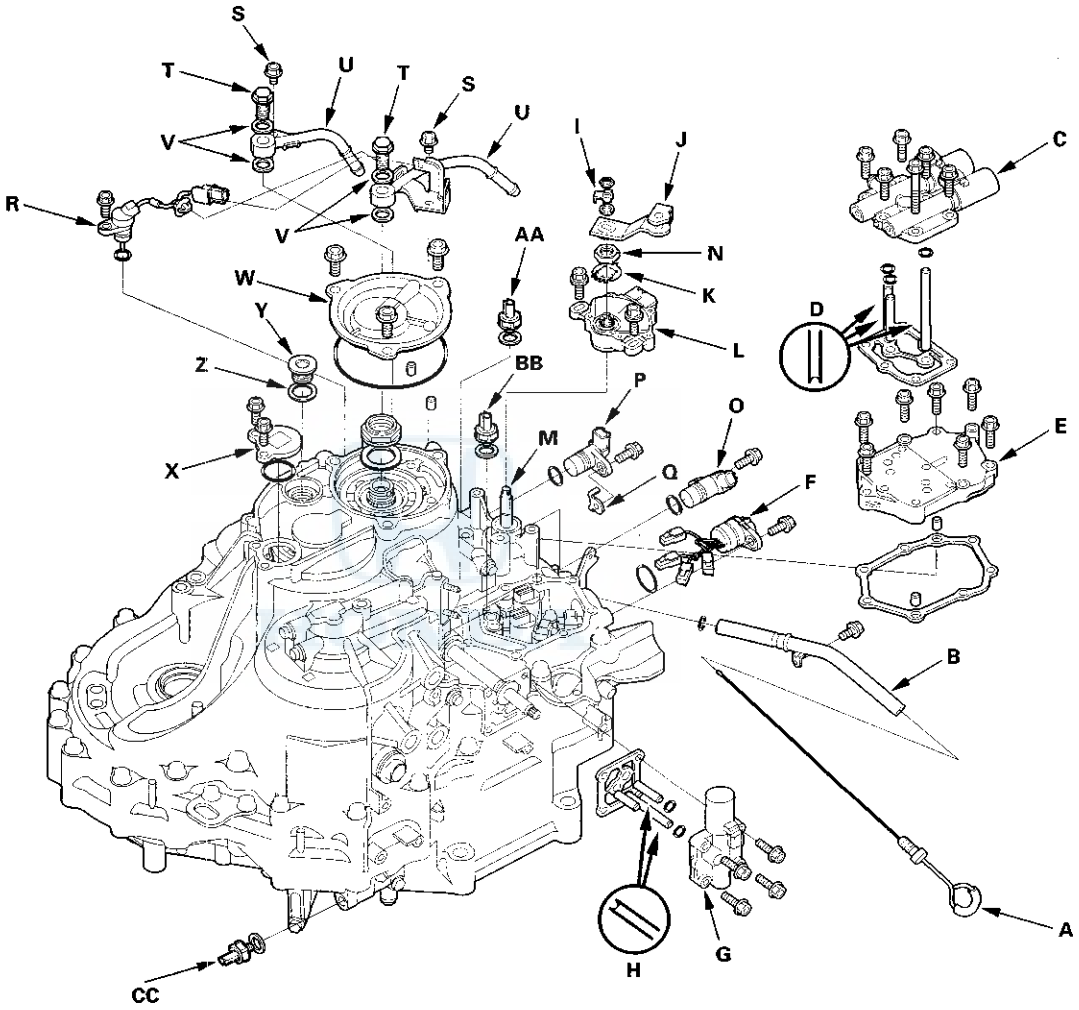
YES—Check the APP sensor (see page 11-327).■

NO—Update the PCM if it does not have the latest software (see page 11-281), or substitute a known-good PCM (see page 14-8), and recheck. If the symptom goes away with a known-good PCM, replace the original PCM (see page 11-282).■

Transmission Disassembly

Special Tools Required
Mainshaft holder 07GAB-PF50101

1. Remove the ATF dipstick (A) and the dipstick tube (B).



2. Remove A/T clutch pressure control solenoid valves A and B (C) (six bolts), the ATF feed pipes (D) (three), the O-rings (three), and the gasket.

3. Remove the solenoid valve cover (E) (seven bolts), the dowel pins (two), and the gasket.

4. Disconnect the solenoid valve connectors, then remove the solenoid wire harness connector (F).

5. Remove A/T clutch pressure control solenoid valve C (G) (four bolts), the ATF feed pipes (H) (three), the O-rings (two), and the gasket.

6. Pry the lock tab of the lock washer (I) on the selector control lever (J), and remove the nut, the lock washer, the spring washer, and the selector control lever.

7. Pry the lock tabs of the lock washer (K) on the transmission range switch (L), hold the selector control shaft (M) with a 6.0 mm wrench, and loosen the locknut (N).

8. Remove the locknut and the lock washer, then remove the transmission range switch (two bolts).

9. Remove the input shaft (mainshaft) speed sensor (O), the output shaft (countershaft) speed sensor (P), and the sensor washer (Q).

10. Remove the ATF temperature sensor connector and the harness clamp from the clamp bracket on the ATF cooler line, then remove the ATF temperature sensor (R).

11. Remove the 6.0 mm bolts (S), the line bolts (T), the ATF cooler lines (U), and the sealing washers (V).

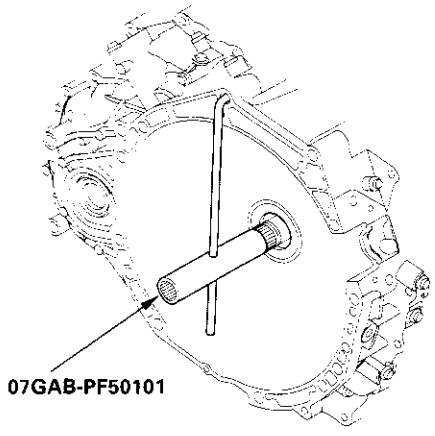
12. Remove the end cover (W) (three bolts), the snap ring cap (X) (two bolts), the sealing plug (Y), and the washer (Z).

13. Remove the 3rd clutch transmission fluid pressure switch (AA) and the sealing washer.

14. Remove the 4th clutch transmission fluid pressure switch (BB) and the sealing washer.

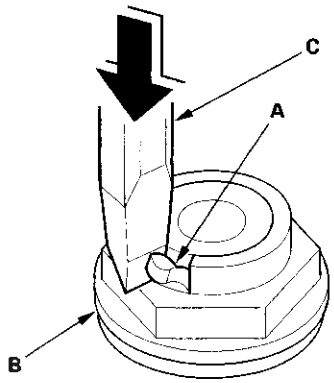
15. Remove the 2nd clutch transmission fluid pressure switch (CC) and the sealing washer.

16. Slip the mainshaft holder onto the mainshaft.

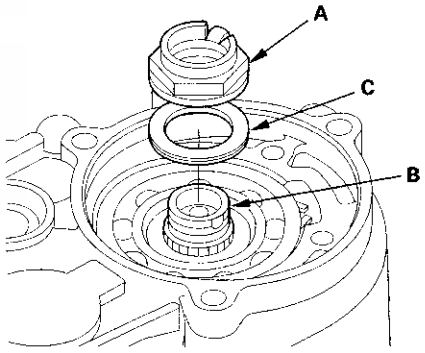


17. Cut the lock tab (A) off the mainshaft locknut (B) using a chisel (C).

    NOTE: Keep all of the chiseled particles out of the transmission.



18. Remove the locknut (A) from the mainshaft (B).

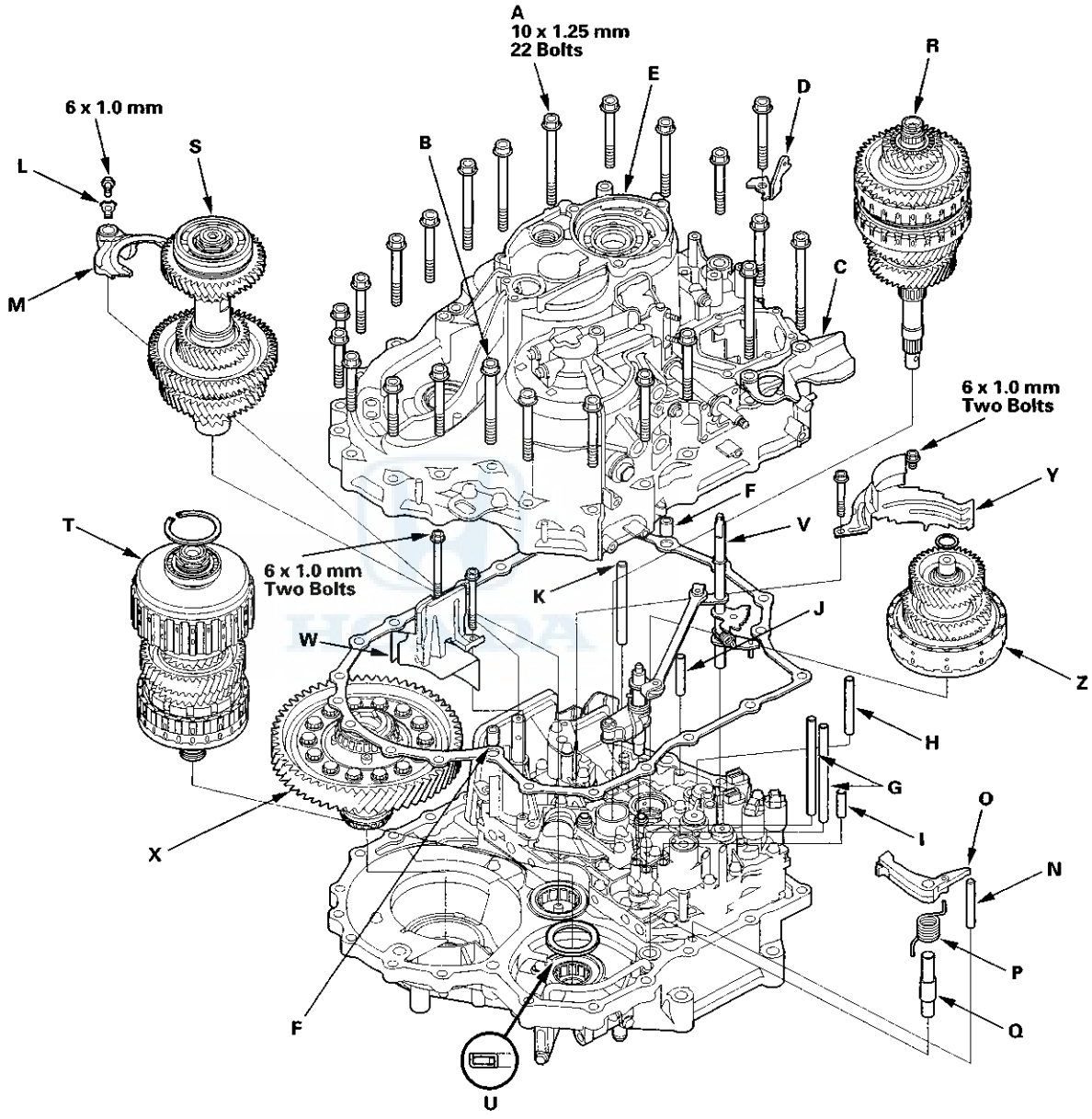


19. Pry the lock washer (C) and remove it.

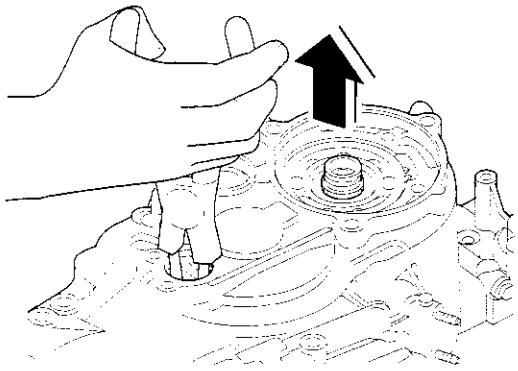
(cont'd)

Transmission Disassembly (cont'd)

20. Remove the transmission housing mounting bolts (A) (22 bolts), the 12 x 1.25 mm bolt (B), the transmission hanger (C), and the ground terminal bracket (D).



21. While expanding the snap ring of the countershaft bearing with snap ring pliers, lift the transmission housing.



22. Release the snap ring pliers, and remove the transmission housing (E), the two dowel pins (F), and the gasket.

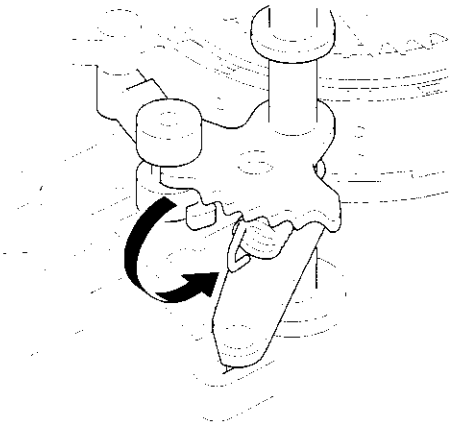
23. Remove the 8 x 151.5 mm ATF feed pipes (G) (two), the 8 x 85 mm pipe (H), and the 8 x 40 mm pipe (I) from the accumulator body.

24. Remove the 8 x 57.5 mm ATF feed pipe (J) and the 10 x 123 mm pipe (K) from the torque converter housing.

25. Remove the mainshaft holder from the mainshaft.

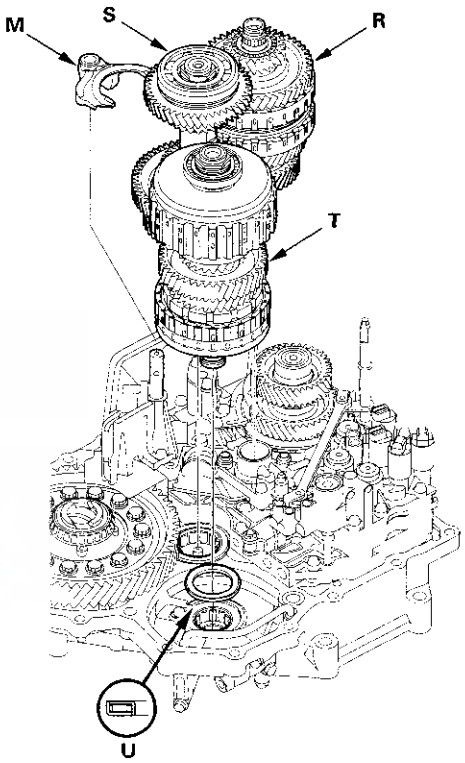
26. Pry the lock tab of the lock washer (L) on the shift fork (M), then remove the bolt and the lock washer.

27. Unhook the detent spring from the detent arm.



28. Remove the park pawl stop (N), the park pawl (O), the pawl spring (P), and the pawl shaft (Q).

29. Remove the mainshaft (R), the countershaft (S), the shift fork (M), and the secondary shaft (T) together, and remove the needle bearing (U) from the torque converter housing.



30. Remove the selector control shaft and the park lever link (V).

31. Remove the baffle plate (W).

32. Remove the differential assembly (X).

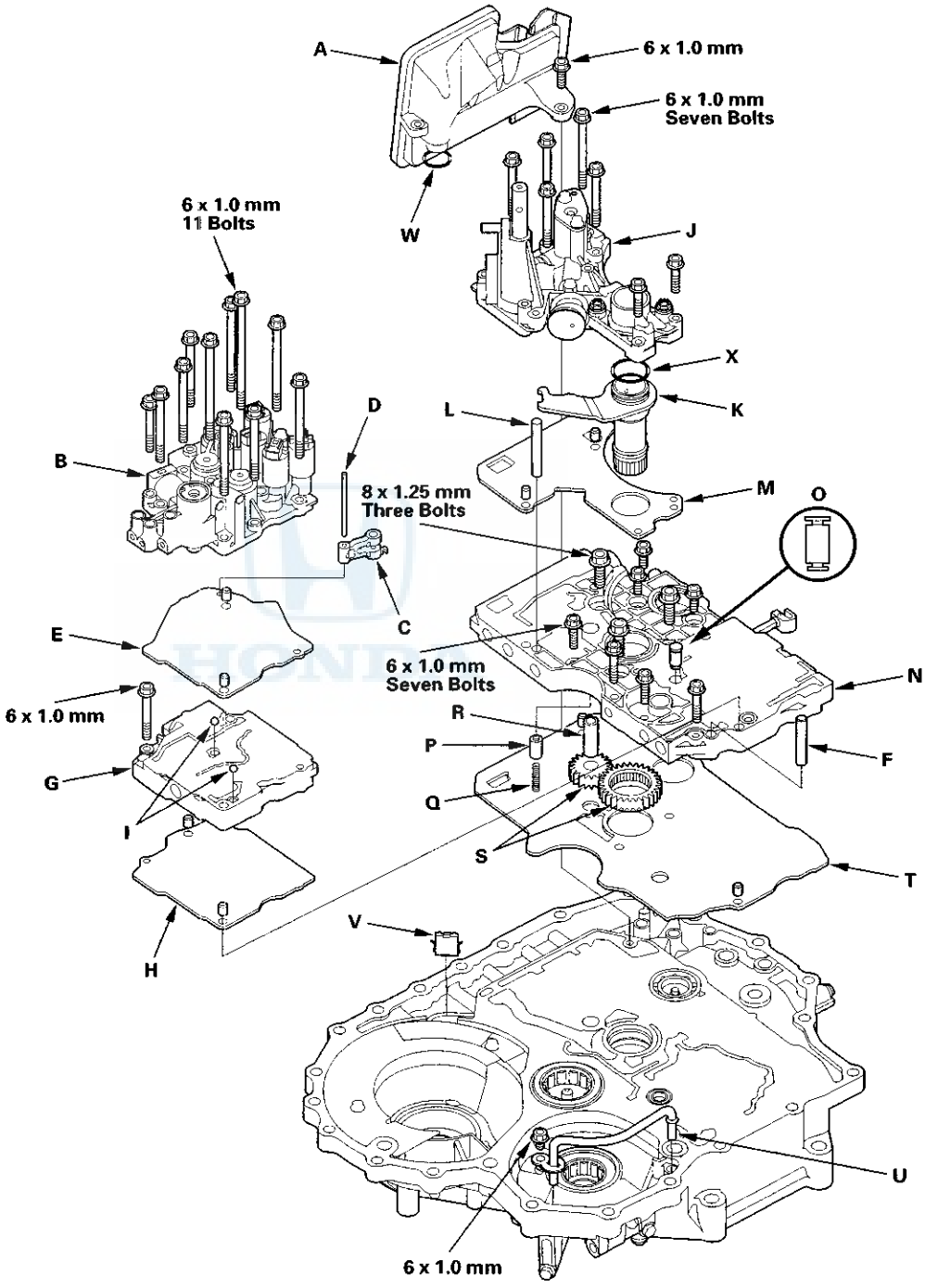
33. Remove the baffle plate (Y).

34. Remove the intermediary shaft (Z).

(cont'd)

Transmission Disassembly (cont'd)

35. Remove the ATF strainer (A) (one bolt).



36. Remove the accumulator body (B) (11 bolts), the dowel pins (two), the detent arm (C), the arm shaft (D), and the separator plate (E).

37. Remove the 8 x 62 mm ATF feed pipe (F) from the main valve body.

38. Remove the secondary valve body (G) (one bolt), the dowel pins (two), and the separator plate (H). Do not let the check balls (I) (two) fall out.

39. Remove the regulator valve body (J) (seven bolts), the stator shaft (K), the stator shaft stop (L), the dowel pins (two), and the separator plate (M).

40. Remove the main valve body (N) (8 mm: three bolts, 6 mm: seven bolts). Do not let the lubrication check valve (O) fall out.

41. Remove the torque converter check valve (P) and the valve spring (Q).

42. Remove the ATF pump driven gear shaft (R), then remove the ATF pump gears (S).

43. Remove the dowel pins (two) and the main separator plate (T).

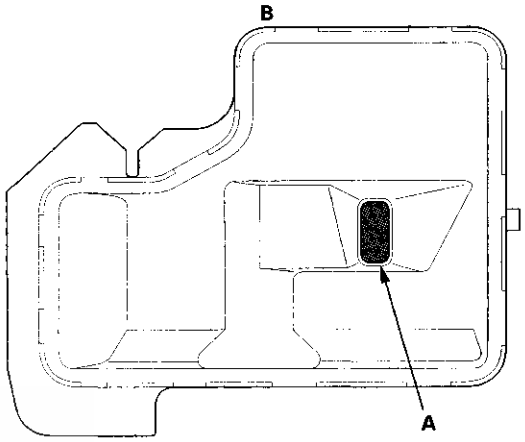
44. Remove the ATF passage pipe (U) (one bolt).

45. Remove the ATF magnet (V), clean it, then reinstall it in the torque converter housing.

46. Remove the O-ring (W) from the ATF strainer, and replace it with a new O-ring when reassembling the transmission.

47. Remove the O-ring (X) from the stator shaft, and replace it with a new O-ring when reassembling the transmission.

48. Clean the inlet opening (A) of the ATF strainer (B) thoroughly with compressed air, then check that it is good condition and that the inlet opening is not clogged.

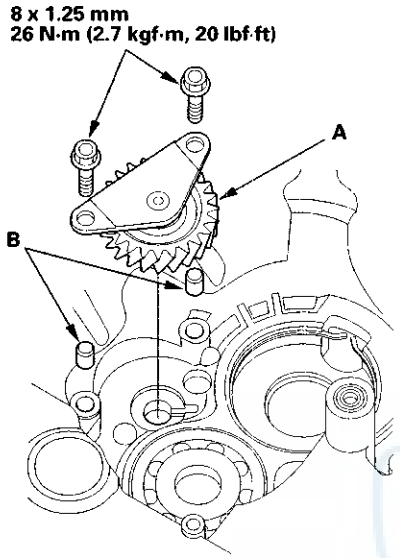


49. Check the ATF strainer for clogs, debris, or damage. If the strainer is clogged or damaged, replace it.

HONDA

Reverse Idler Gear Removal/ Installation

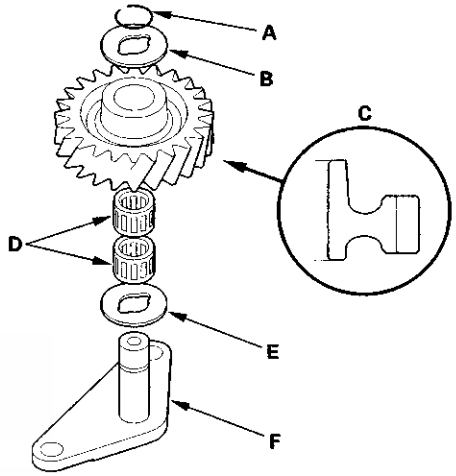
1. Remove the reverse idler gear assembly (A) from the transmission housing.



2. Install the reverse idler gear assembly with the two dowel pins (B) in the transmission housing.

Reverse Idler Gear Disassembly/ Inspection/Reassembly

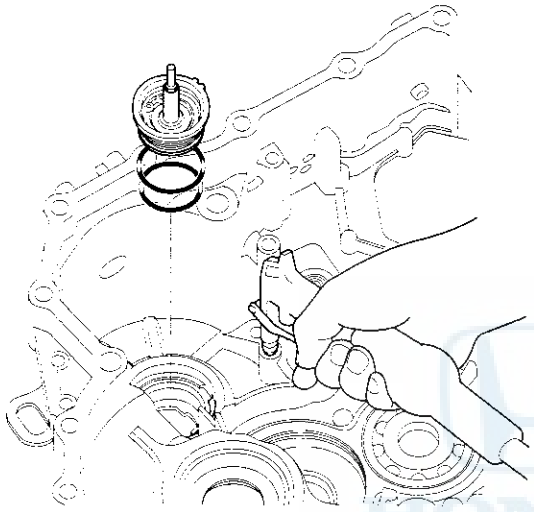
1. Remove the snap ring (A), then remove the thrust washer (B), the reverse idler gear (C), the needle bearings (D), and the thrust washer (E) from the reverse idler gear shaft/holder (F).



2. Inspect the reverse idler gear and the gear shaft for excessive wear and damage.
3. Inspect the needle bearings for galling and rough movement.
4. Install the thrust washer and the needle bearings over the gear shaft.
5. Install the reverse idler gear in the direction shown.
6. Install the thrust washer, then install the snap ring to secure the idler gear.

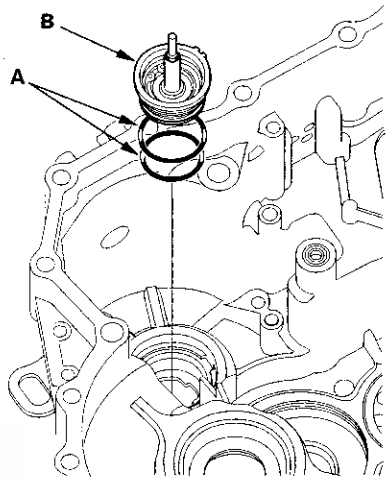
Secondary Shaft ATF Feed Pipe Cap Removal

1. Cover the tip of the 1st-hold clutch ATF feed pipe with a shop rag.
2. Apply air pressure to the ATF feed pipe hole of the 1st-hold clutch pressure circuit, and remove the ATF feed pipe cap from the transmission housing.



Secondary Shaft ATF Feed Pipe Cap Installation

1. Install new O-rings (A) on the ATF feed pipe cap (B).

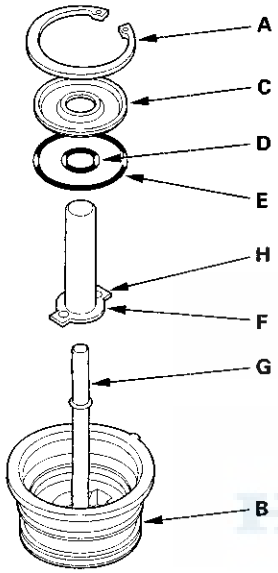


2. Install the ATF feed pipe cap in the transmission housing. Do not pinch the O-rings.

Secondary Shaft ATF Feed Pipe Cap, Feed Pipe Replacement

1. Remove the ATF feed pipe cap from the transmission housing (see page 14-283).

2. Remove the snap ring (A) from the feed pipe cap (B), then remove the feed pipe guide (C), the O-rings (D) (E), and the 1st clutch ATF feed pipe (F).



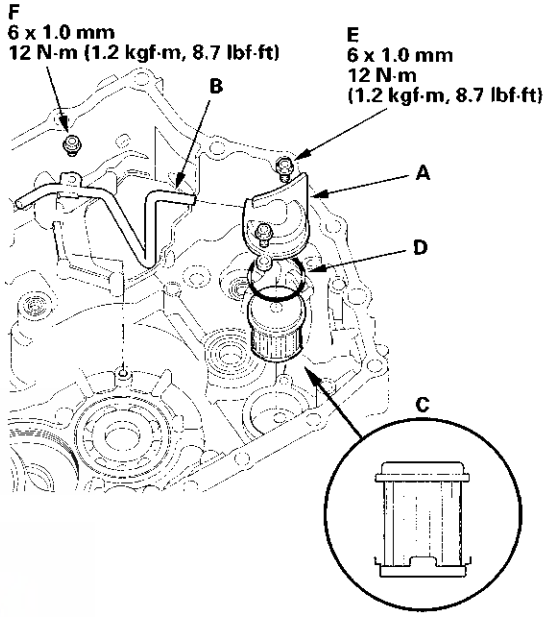
3. Replace the 1st clutch ATF feed pipe or 1st-hold clutch ATF feed pipe/ATF feed pipe cap assembly. The 1st-hold clutch ATF feed pipe/ATF feed pipe cap is not available separately.

4. Install a new O-ring (D) over the 1st clutch ATF feed pipe, then install the feed pipe over the 1st-hold clutch ATF feed pipe (G) while aligning the feed pipe tabs (H) with the guide in the cap.

5. Install a new O-ring (E) in the cap and the feed pipe guide, then secure the guide with the snap ring.

ATF Filter Removal/Inspection/ Installation

1. Remove the three 6.0 mm bolts securing the ATF filter cover (A) and the ATF pipe (B).



2. Remove the ATF pipe from the ATF filter cover, and remove the ATF filter (C) from the cover.

3. Clean the ATF filter, then check that it is in good condition, and is not clogged. Replace the ATF filter if it is clogged or damaged.

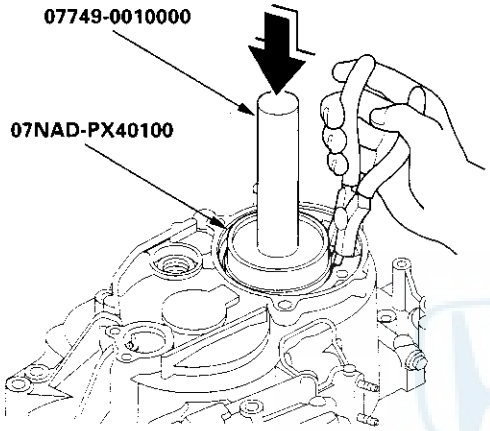
4. Install the ATF filter with a new O-ring (D) in the filter cover, and install the ATF pipe in the cover, then install them in the transmission housing.

5. Secure the ATF filter cover with the two bolts (E), then secure the ATF pipe with the bolt (F).

Mainshaft Bearing Removal

Special Tools Required
- Driver 07749-0010000
- Attachment, 78 x 80 mm 07NAD-PX40100

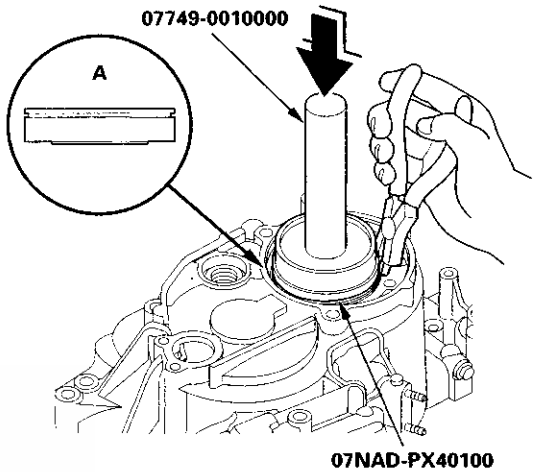
1. To remove the mainshaft bearing, expand the snap ring using snap ring pliers, then push the bearing out. Do not remove the snap ring unless it's necessary to clean the groove in the transmission housing.



Mainshaft Bearing Installation

Special Tools Required
- Driver 07749-0010000
- Attachment, 78 x 80 mm 07NAD-PX40100

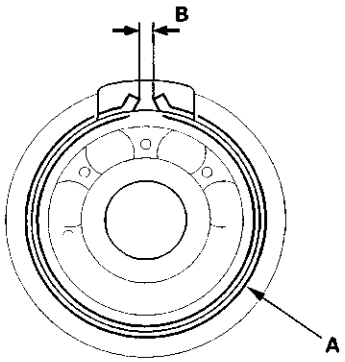
1. Install the bearing (A) in the direction shown.



2. Expand the snap ring using snap ring pliers, and insert the bearing part-way into the transmission housing.

3. Release the snap ring pliers, then push the bearing down into transmission housing until the snap ring snaps in place around it.

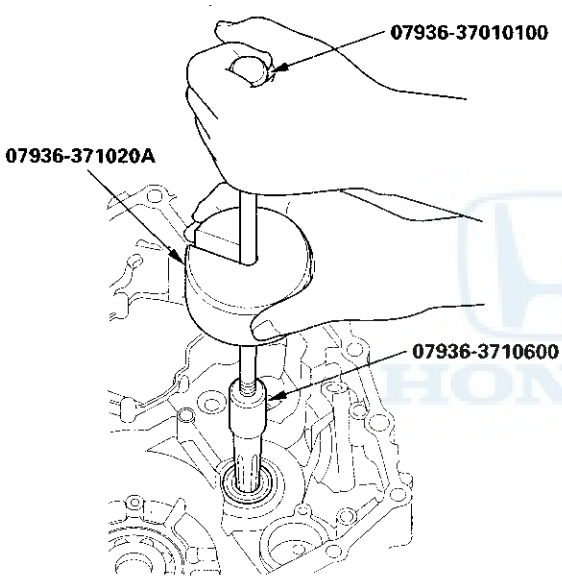
4. After installing the bearing, check that the snap ring (A) is seated in the bearing and housing groove, and that the snap ring end gap (B) is 0—7 mm (0—0.28 in.).



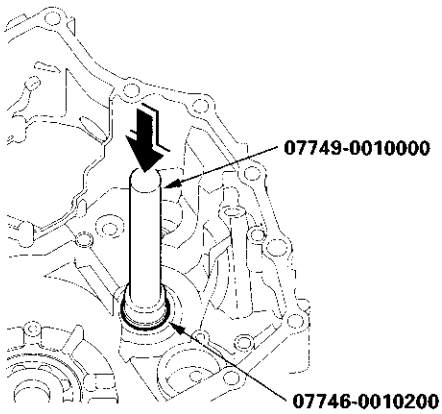
Intermediary Shaft Bearing Replacement

Special Tools Required
- Bearing remover shaft set, 20 mm 07936-3710600
- Bearing remover shaft handle 07936-3710100
- Sliding hammer weight 07936-371020A
- Driver 07749-0010000
- Attachment, 37 x 40 mm 07746-0010200

1. Remove the intermediary shaft bearing from the transmission housing using the 20 mm bearing remover shaft set, the bearing shaft handle, and the sliding hammer weight.



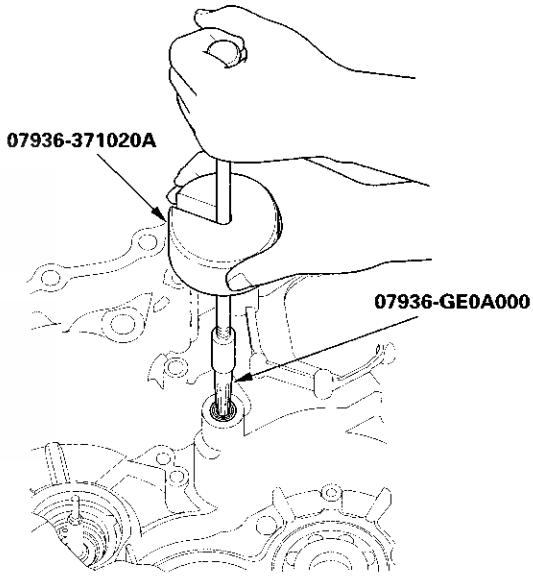
2. Install a new bearing until it bottoms in the transmission housing using the driver and the 37 x 40 mm attachment.



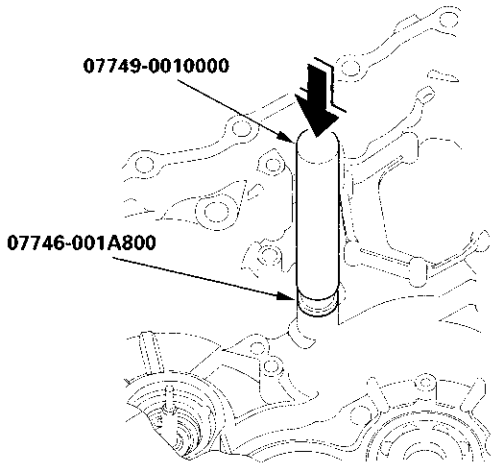
Park Lever Shaft Bearing Replacement

Special Tools Required
- Bearing remover, 10 mm 07936-GE0A000
- Sliding hammer weight 07936-371020A
- Driver 07749-0010000
- Attachment, 22 x 24 mm 07746-001A800

1. Remove the park lever shaft bearing from the transmission housing using the 10 mm bearing remover head, the 10 mm bearing remover shaft, and the sliding hammer weight.



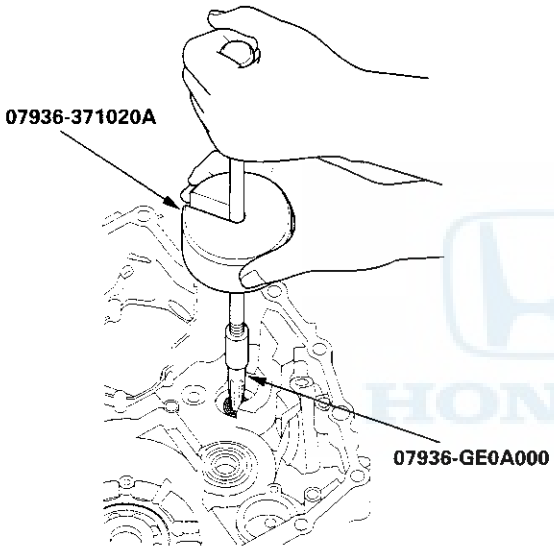
2. Install a new bearing until it bottoms in the transmission housing using the driver and the 22 x 24 mm attachment.



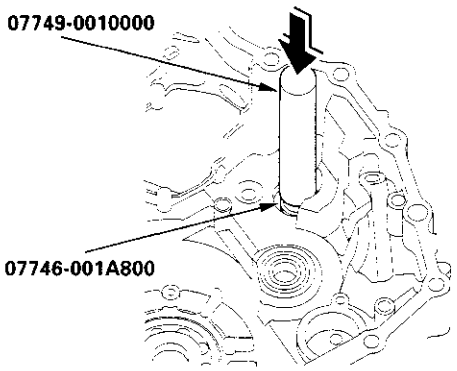
Selector Control Shaft Bearing Replacement

Special Tools Required
- Bearing remover, 10 mm 07936-GE0A000
- Sliding hammer weight 07936-371020A
- Driver 07749-0010000
- Attachment, 22 x 24 mm 07746-001A800

1. Remove the control shaft bearing from the transmission housing using the 10 mm bearing remover head the 10 mm bearing remover shaft and the sliding hammer weight.



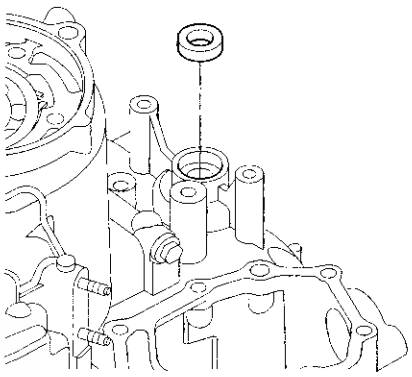
2. Install a new bearing in the transmission housing using the driver and the 22 x 24 mm attachment.



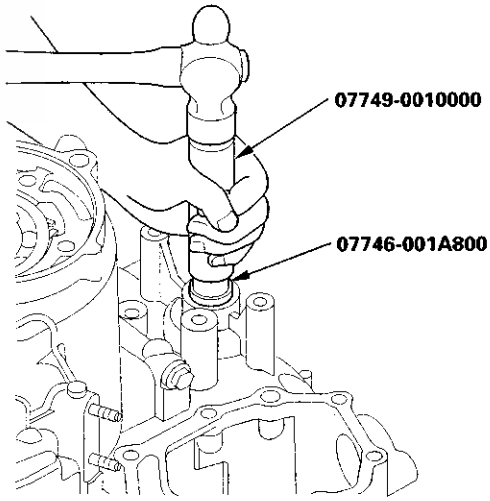
Selector Control Shaft Oil Seal Replacement

Special Tools Required
- Driver 07749-0010000
- Attachment, 22 x 24 mm 07746-001A800

1. Remove the oil seal from the transmission housing.



2. Install a new oil seal in the transmission housing using the driver and the 22 x 24 mm attachment.

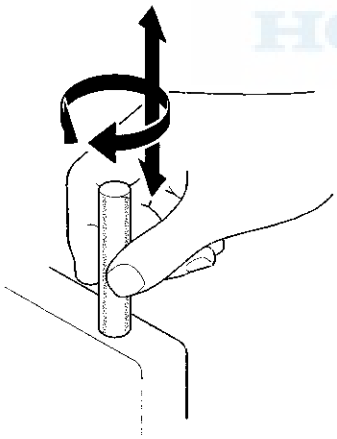


Valve Body Repair

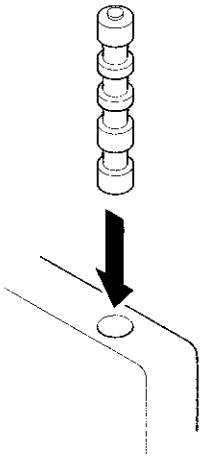
NOTE: This repair is only necessary if one or more of the valves in a valve body do not slide smoothly in their bores. Use this procedure to free the valves.

1. Soak a sheet of #600 abrasive paper in ATF for about 30 minutes.
2. Carefully tap the valve body so the sticking valve drops out of its bore. It may be necessary to use a small screwdriver to pry the valve free. Be careful not to scratch the bore with the screwdriver.
3. Inspect the valve for any scuff marks. Use the ATF-soaked #600 paper to polish off any burrs that are on the valve, then wash the valve in solvent and dry it with compressed air.
4. Roll up half of the ATF-soaked #600 paper and insert it in the valve bore of the sticking valve. Twist the paper slightly, so that it unrolls and fits into the bore tightly, then polish the bore by twisting the paper as you push it in and out.

   NOTE: The valve body is aluminum and does not require much polishing to remove any burrs.



5. Remove the #600 paper. Thoroughly wash the entire valve body in solvent, then dry it with compressed air.
6. Coat the valve with ATF, then drop it into its bore. It should drop to the bottom of the bore under its own weight. If not, repeat steps 4 and 5, then retest. If the valve still sticks, replace the valve body.

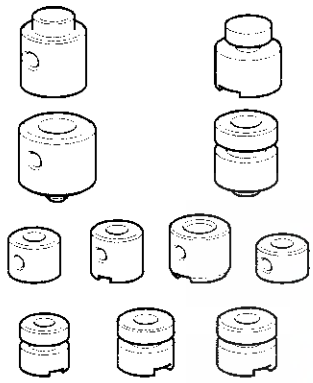


7. Remove the valve, and thoroughly clean it and the valve body with solvent. Dry all parts with compressed air, then reassemble using ATF as a lubricant.

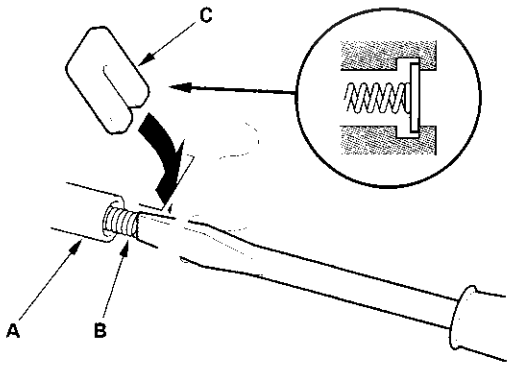
Valve Body Valve Installation

1. Coat all parts with ATF before assembly.

2. Install the valves and springs in the sequence shown for the main valve body (see page 14-290), the secondary valve body (see page 14-292), the regulator valve body (see page 14-293), and the accumulator body (see page 14-294). Refer to the following valve cap illustrations, and install each valve cap so the end shown facing up will be facing the outside of the valve body, then secure the valve cap with the valve cap clip.

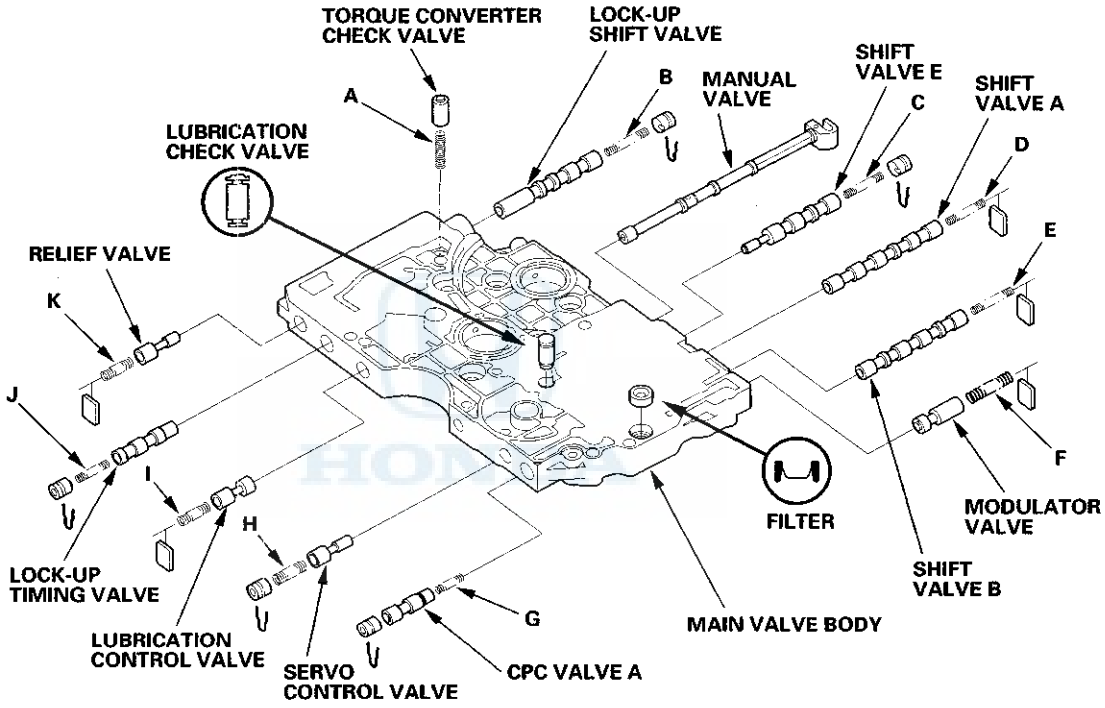


3. Install the valve (A) and the valve spring (B) in the valve body. Push the valve spring in using a screwdriver, then install the spring seat (C).



Main Valve Body Disassembly, Inspection, and Reassembly

1. Clean all parts thoroughly in solvent, and dry them with compressed air. Blow out all passages.
2. Inspect the main valve body for scoring and damage.
3. Check all valves for free movement. If any fail to slide freely, refer to valve body repair procedure (see page 14-288).
4. Coat all parts with ATF during assembly.
5. Replace the filter with a new one, and install it and the lubrication check valve in the direction shown.

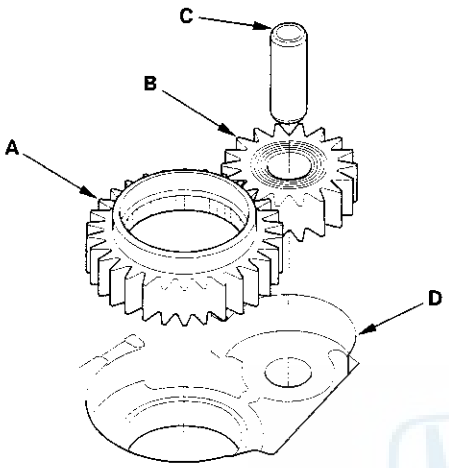


SPRING SPECIFICATIONS

Springs		Standard (New)-Unit: mm (in.)			
		Wire Diameter	O.D.	Free Length	No. of Coils
A	Torque converter check valve spring	1.1 (0.043)	8.6 (0.339)	35.0 (1.378)	12.6
B	Lock-up shift valve spring	1.0 (0.039)	6.6 (0.260)	35.5 (1.398)	18.2
C	Shift valve E spring	0.7 (0.028)	6.6 (0.260)	42.4 (1.669)	17.6
D	Shift valve A spring	0.9 (0.035)	6.6 (0.260)	50.5 (1.988)	23.3
E	Shift valve B spring	0.8 (0.031)	6.6 (0.260)	49.1 (1.933)	21.7
F	Modulator valve spring	1.6 (0.063)	10.4 (0.409)	33.5 (1.319)	9.8
G	CPC valve A spring	0.7 (0.028)	6.1 (0.240)	17.8 (0.701)	7.9
H	Servo control valve spring	0.9 (0.035)	9.6 (0.378)	30.2 (1.189)	8.4
I	Lubrication control valve spring	0.9 (0.035)	8.7 (0.343)	25.0 (0.984)	7.2
J	Lock-up timing valve spring	0.6 (0.024)	6.6 (0.260)	30.9 (1.217)	11.1
K	Relief valve spring	1.0 (0.039)	9.6 (0.378)	28.1 (1.106)	7.7

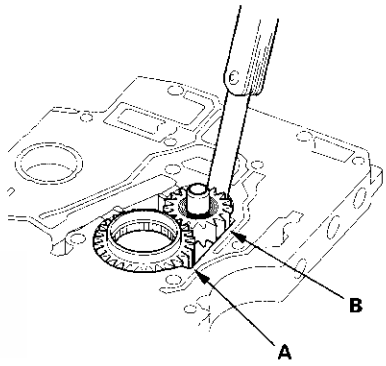
ATF Pump Inspection

1. Install the ATF pump drive gear (A), the driven gear (B), and the ATF pump driven gear shaft (C) in the main valve body (D). Lubricate all parts with ATF, and install the ATF pump driven gear with its grooved and chamfered side facing up.



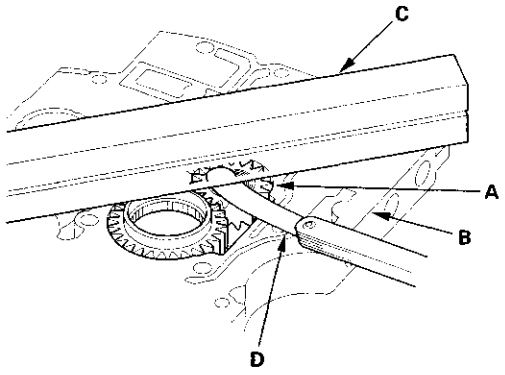
2. Measure the side clearance of the ATF pump drive gear (A) and the driven gear (B).

ATF Pump Gears Side (Radial) Clearance
Standard (New):
ATF Pump Drive Gear
0.210—0.265 mm (0.0083—0.00104 in.)
ATF Pump Driven Gear
0.070—0.125 mm (0.0028—0.0050 in.)



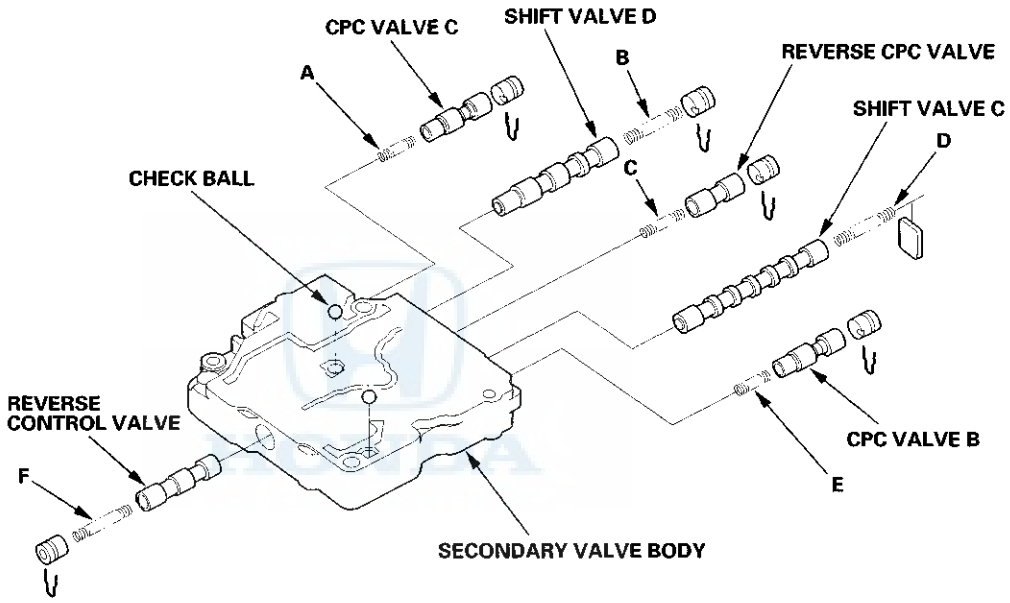
3. Remove the ATF pump driven gear shaft. Measure the thrust clearance between the ATF pump driven gear (A) and the valve body (B) using a straight edge (C) and a feeler gauge (D).

ATF Pump Drive/Driven Gear Thrust (Axial) Clearance
Standard (New): 0.03—0.06 mm (0.001—0.002 in.)
Service Limit: 0.07 mm (0.003 in.)



Secondary Valve Body Disassembly, Inspection, and Reassembly

1. Clean all parts thoroughly in solvent, and dry them with compressed air. Blow out all passages.
2. Do not use a magnet to remove the check balls, it may magnetize the check balls.
3. Inspect the secondary valve body for scoring and damage.
4. Check all valves for free movement. If any fail to slide freely, refer to valve body repair procedure (see page 14-288).
5. Coat all parts with ATF during assembly.

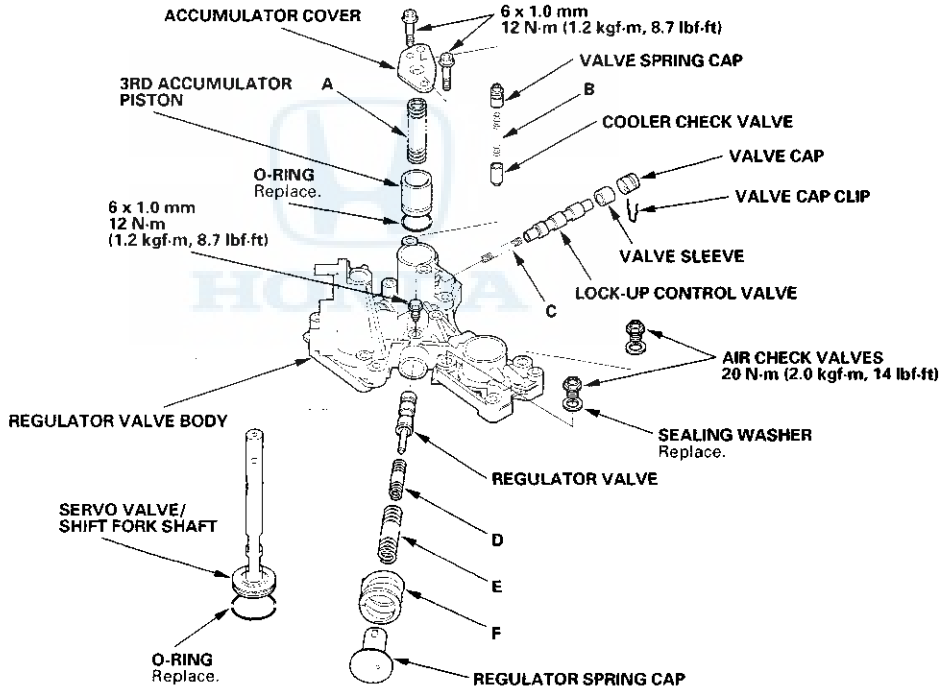


SPRING SPECIFICATIONS

Springs		Standard (New)-Unit: mm (in.)			
		Wire Diameter	O.D.	Free Length	No. of Coils
A	CPC valve C spring	0.7 (0.028)	6.1 (0.240)	17.8 (0.701)	7.9
B	Shift valve D spring	0.7 (0.028)	6.6 (0.260)	42.4 (1.669)	17.6
C	Reverse CPC valve spring	0.8 (0.031)	6.1 (0.240)	24.4 (0.961)	14.6
D	Shift valve C spring	0.8 (0.031)	6.6 (0.260)	49.1 (1.933)	21.7
E	CPC valve B spring	0.7 (0.028)	6.1 (0.240)	17.8 (0.701)	7.9
F	Reverse control valve spring	0.8 (0.031)	6.6 (0.260)	49.1 (1.933)	21.7

Regulator Valve Body Disassembly, Inspection, and Reassembly

1. Clean all parts thoroughly in solvent, and dry them with compressed air. Blow out all passages.
2. Inspect the regulator valve body for scoring and damage.
3. Hold the regulator spring cap in place while removing the stop bolt. The regulator spring cap is spring loaded. Once the stop bolt is removed, release the spring cap slowly so it does not pop out.
4. Check all valves for free movement. If any fail to slide freely, refer to valve body repair procedure (see page 14-288).
5. Coat all parts with ATF during assembly.
6. Align the hole in the regulator spring cap with the stop bolt hole, then press the spring cap into the valve body, and tighten the stop bolt.
7. Install the servo valve with a new O-ring, and the 3rd accumulator piston with a new O-ring.



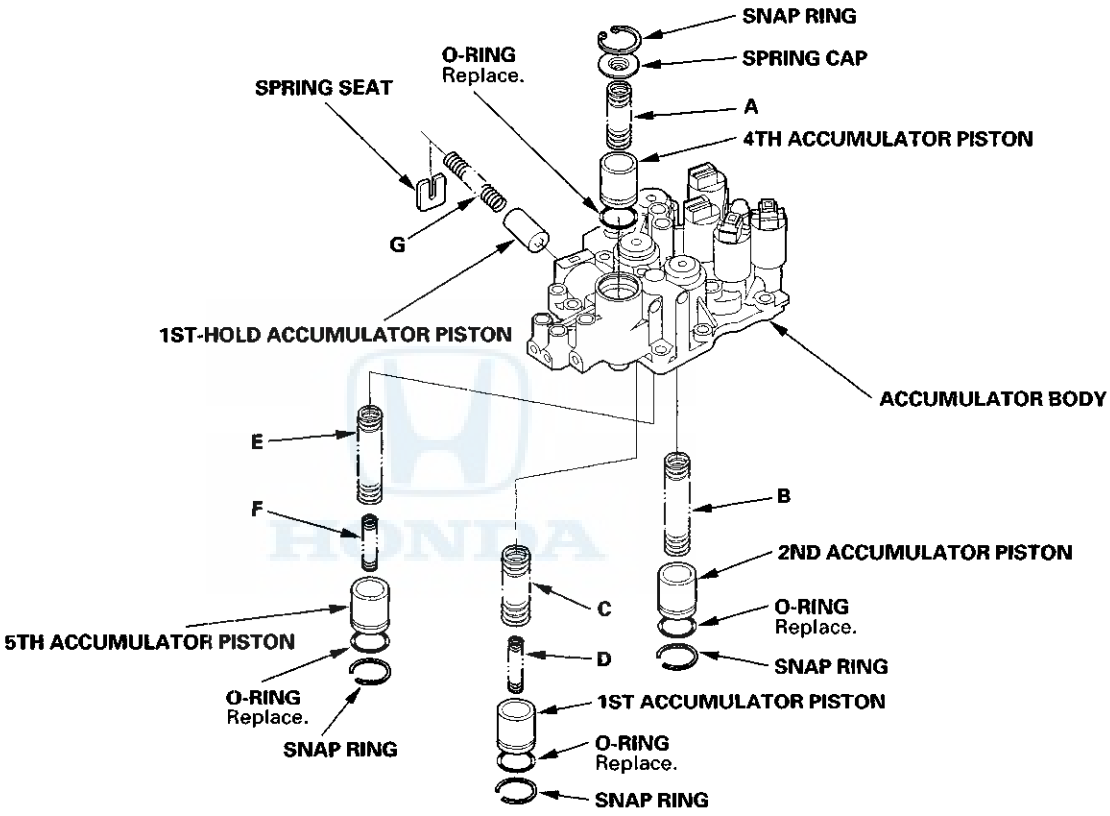
SPRING SPECIFICATIONS

Springs		Standard (New)-Unit: mm (in.)			
		Wire Diameter	O.D.	Free Length	No. of Coils
A	3rd accumulator spring	3.1 (0.122)	19.6 (0.772)	41.4 (1.630)	5.5
B	Cooler check valve spring	0.9 (0.035)	6.7 (0.264)	31.5 (1.240)	14.2
C	Lock-up control valve spring (type A)	0.7 (0.028)	6.6 (0.260)	42.9 (1.689)	14.2
	Lock-up control valve spring (type B)	0.8 (0.031)	6.6 (0.260)	44.3 (1.744)	25.5
D	Regulator valve spring B	1.4 (0.055)	8.8 (0.346)	44.0 (1.732)	12.0
E	Regulator valve spring A	1.85 (0.073)	14.7 (0.579)	86.9 (3.421)	16.2
F	Stator reaction spring	5.5 (0.217)	37.4 (1.472)	30.3 (1.193)	2.1

NOTE: As for the lock-up control valve spring, either type A or type B is applied.

Accumulator Body Disassembly, Inspection, and Reassembly

1. Clean all parts thoroughly in solvent, and dry them with compressed air. Blow out all passages.
2. Inspect the accumulator body for scoring and damage.
3. Coat all parts with ATF during assembly.
4. Replace the O-rings with new ones.



SPRING SPECIFICATIONS

Springs		Standard: (New)-Unit mm (in.)			
		Wire Diameter	O.D.	Free Length	No. of Coils
A	4th accumulator spring	3.3 (0.130)	19.6 (0.772)	39.1 (1.539)	5.8
B	2nd accumulator spring	3.1 (0.122)	19.6 (0.772)	53.4 (2.102)	7.5
C	1st accumulator spring A	2.3 (0.091)	19.6 (0.772)	60.8 (2.394)	9.5
D	1st accumulator spring B	2.5 (0.098)	12.8 (0.504)	46.0 (1.811)	9.5
E	5th accumulator spring A	2.4 (0.094)	19.6 (0.772)	65.5 (2.579)	12.0
F	5th accumulator spring B	2.6 (0.102)	13.2 (0.520)	50.5 (1.988)	10.1
G	1st-hold accumulator spring	2.0 (0.079)	13.1 (0.516)	42.9 (1.689)	9.8

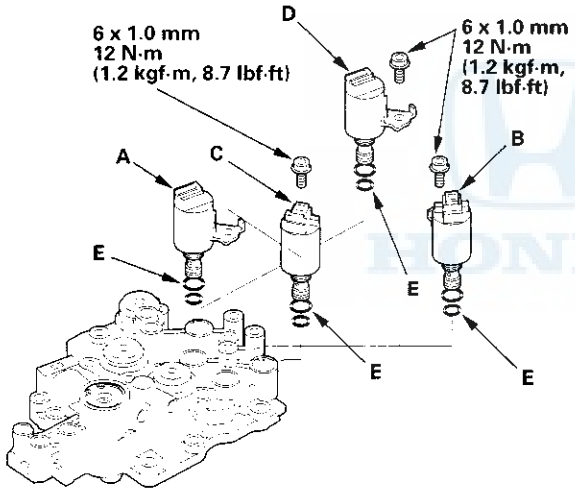
Shift Solenoid Valve Removal and Installation

NOTE:
- Do not hold the solenoid valve connector to remove and install the solenoid valve. Be sure to hold the solenoid valve body.
- Do not install shift solenoid valve C before installing shift solenoid valve A. If shift solenoid valve C is installed before installing shift solenoid valve A, it may damage the hydraulic control system.

1. Remove the mounting bolts, then remove the solenoid valves by holding the solenoid valve body.

2. Install new O-rings (two O-rings per shaft solenoid valve) (E) on each solenoid valves.

   NOTE: If you are installing a new solenoid valve, it comes with new O-rings already installed.



3. Install shift solenoid valve D (black connector) by holding the shift solenoid valve body; be sure the mounting bracket contacts the accumulator body.

4. Install shift solenoid valve A (black connector) by holding the shift solenoid valve body; be sure the mounting bracket contacts the accumulator body.

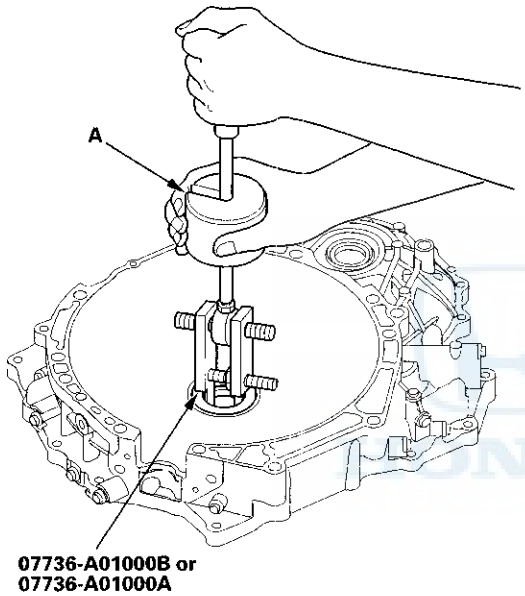
5. Install shift solenoid valve C (brown connector) by holding the shift solenoid valve body; be sure to position the mounting bracket on top of the bracket of shift solenoid valve A.

6. Install shift solenoid valve B (brown connector) by holding the shift solenoid valve body; be sure the mounting bracket contacts the accumulator body.

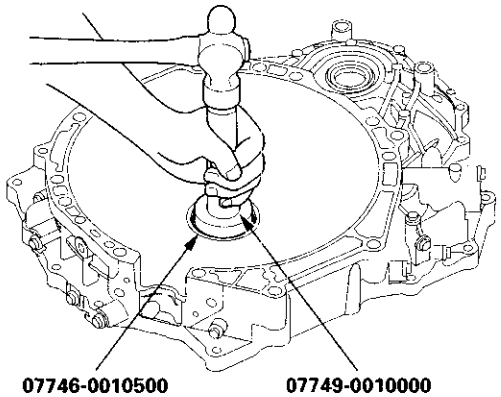
Mainshaft Bearing and Oil Seal Replacement

Special Tools Required
- Adjustable bearing puller, 25—40 mm 07736-A01000B or 07736-A01000A
- Driver 07749-0010000
- Attachment, 62 x 68 mm 07746-0010500
- Attachment, 72 x 75 mm 07746-0010600

1. Remove the mainshaft bearing and the oil seal using the 25—40 mm adjustable bearing puller and a commercially available 3/8 "-16 slide hammer (A).

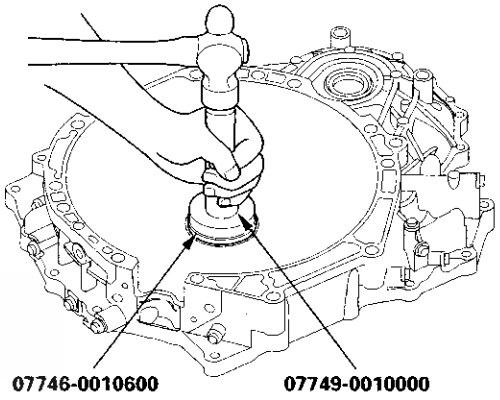


2. Install a new bearing until it bottoms in the torque converter housing using the driver and the 62 x 68 mm attachment.



3. Install a new oil seal flush to the torque converter housing using the driver and the 72 x 75 mm attachment.

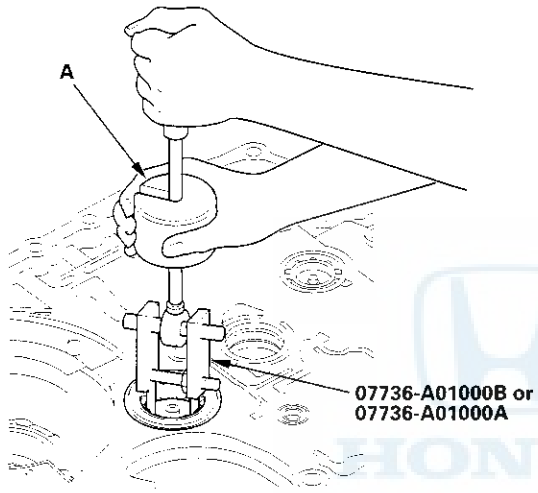
   NOTE: Do not drive the oil seal into the torque converter housing until it bottoms out, it will block the fluid return passage and cause transmission damage.



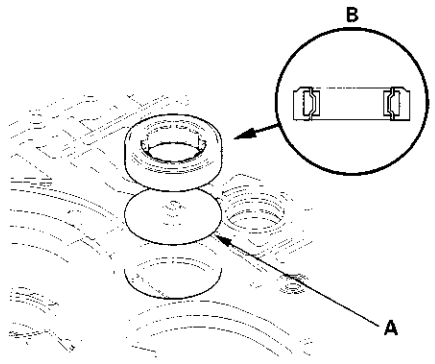
Countershaft Bearing Replacement

Special Tools Required
- Adjustable bearing puller, 25—40 mm 07736-A01000B or 07736-A01000A
- Driver 07749-0010000
- Attachment, 78 x 80 mm 07NAD-PX40100

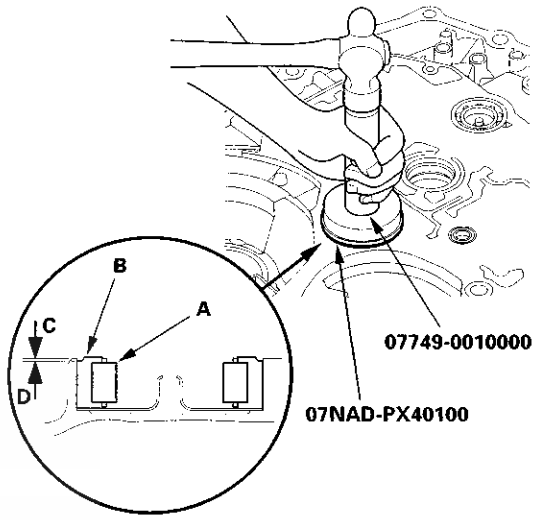
1. Remove the countershaft bearing from the torque converter housing using the 25—40 mm adjustable bearing puller and a commercially available 3/8 "-16 slide hammer (A).



2. Install the ATF guide plate (A) into the torque converter housing, then install a new bearing (B) in the direction shown.



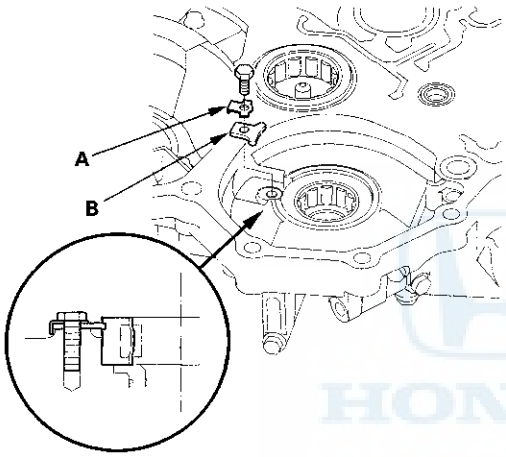
3. Install the bearing (A) in the torque converter housing using the driver and the 78 x 80 mm attachment; install the bearing outer notch-cut (B) to a depth (C) of 0—0.03 mm (0—0.001 in.) below the torque converter housing surface (D).



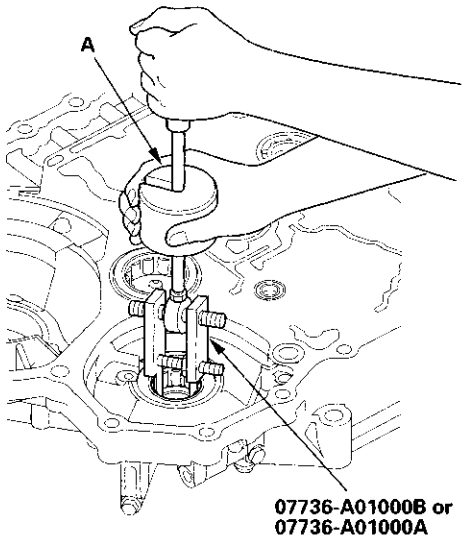
Secondary Shaft Bearing Replacement

Special Tools Required
- Adjustable bearing puller, 25—40 mm 07736-A01000B or 07736-A01000A
- Bearing remover shaft set, 30 mm 07936-8890300
- Bearing remover shaft handle 07936-3710100
- Sliding hammer weight 07936-371020A
- Driver 07749-0010000
- Attachment, 37 x 40 mm 07746-0010200
- Attachment, 62 x 68 mm 07746-0010500

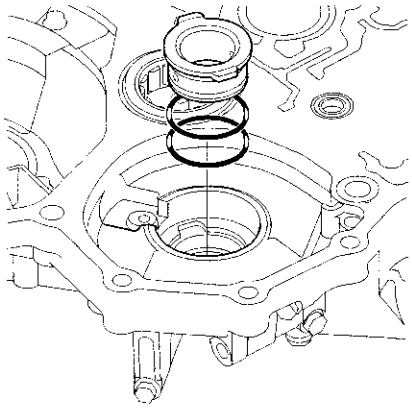
1. Remove the bolt, then remove the lock washer (A) and the bearing set plate (B).



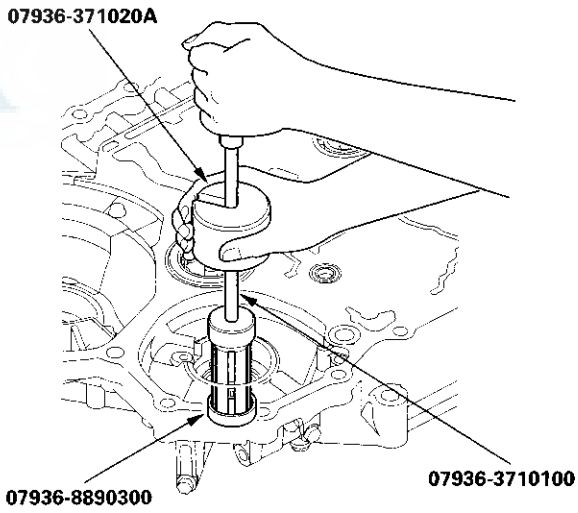
2. Remove the secondary shaft bearing from the torque converter housing using the 25—40 mm adjustable bearing puller and a commercially available 3/8 "-16 slide hammer (A).



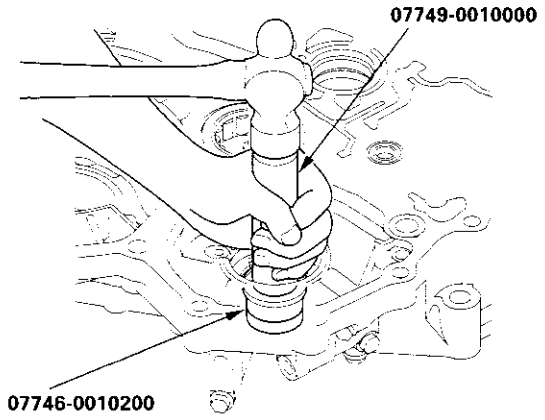
3. Remove the ATF guide collar from the torque converter housing.



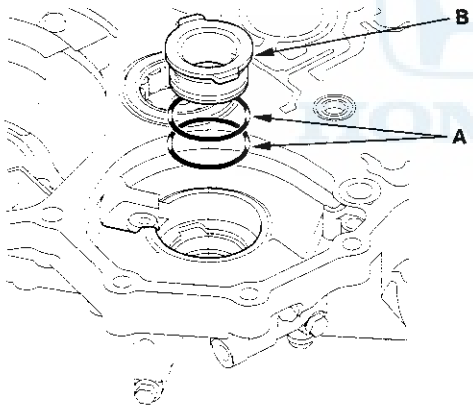
4. Remove the 29 x 39 x 9.5 mm secondary shaft bearing from the torque converter housing using the 30 mm bearing remover shaft set, the bearing remover shaft handle, and the sliding hammer weight.



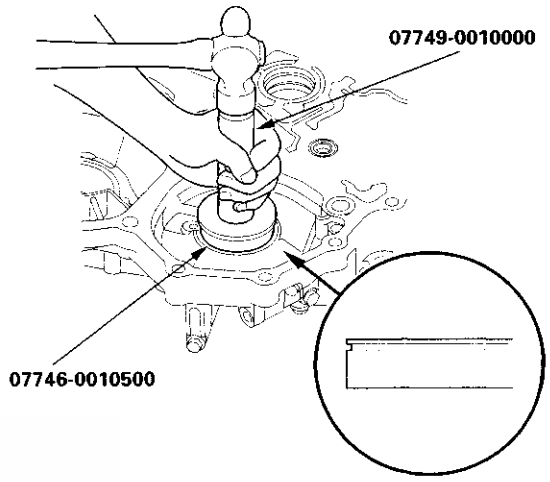
5. Install the 29 x 39 x 9.5 mm bearing into the torque converter housing using the driver and 37 x 40 mm the attachment.



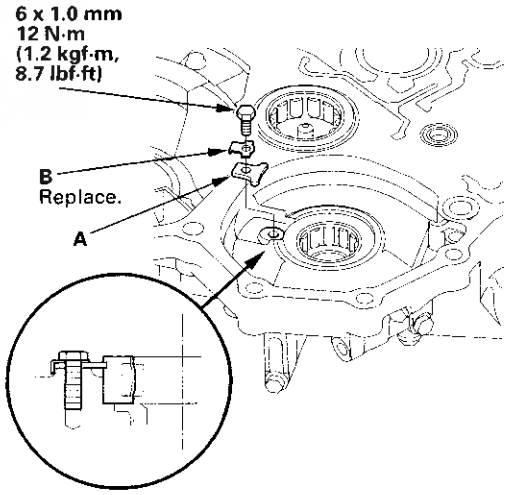
6. Install new O-rings (A) on the ATF guide collar (B), then install the guide collar in the torque converter housing.



7. Install the bearing in the direction shown in the torque converter housing using the driver and the 62 x 68 mm attachment.



8. Check that the bearing groove aligns with the set plate mounting surface, then install the set plate (A) by aligning it with the bearing groove.

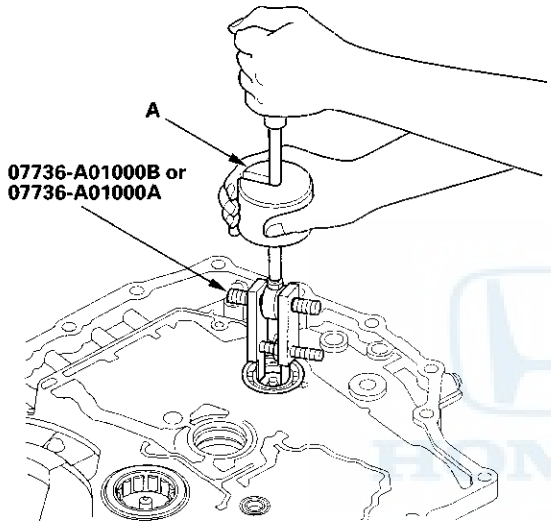


9. Install a new lock washer (B) and the bolt, then bend the lock tab of the lock washer against the bolt head.

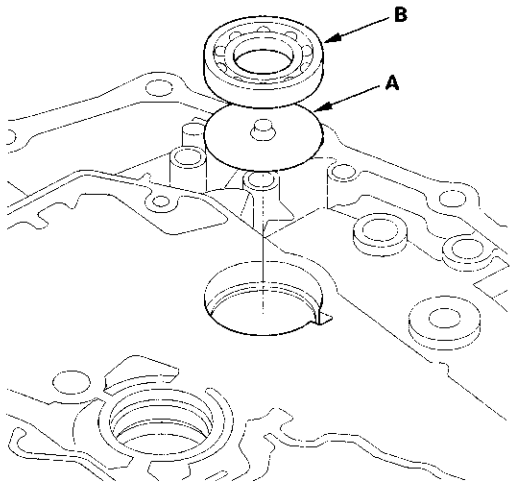
Intermediary Shaft Bearing Replacement

Special Tools Required
- Adjustable bearing puller, 25—40 mm 07736-A01000B or 07736-A01000A
- Driver 07749-0010000
- Attachment, 52 x 55 mm 07746-0010400

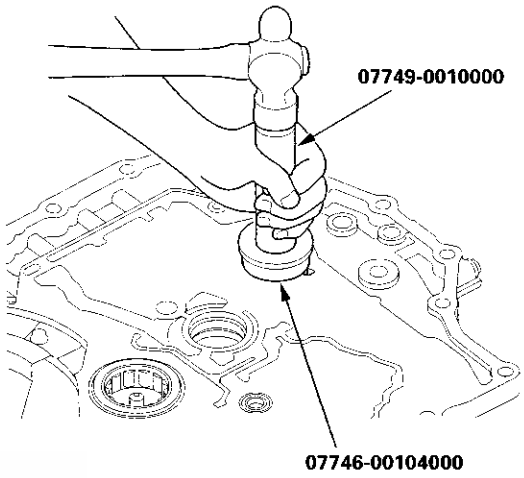
1. Remove the intermediary shaft bearing from the torque converter housing using the 25—40 mm adjustable bearing puller and a commercially available 3/8 "-16 slide hammer (A).



2. Install the ATF guide plate (A), then install a new bearing (B) in the housing.



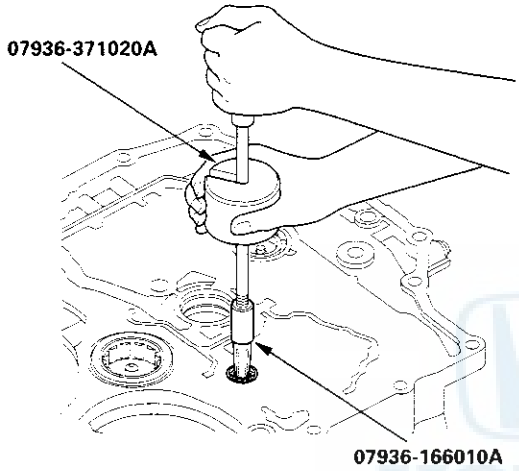
3. Drive the bearing into the torque converter housing using the driver and the 52 x 55 mm attachment.



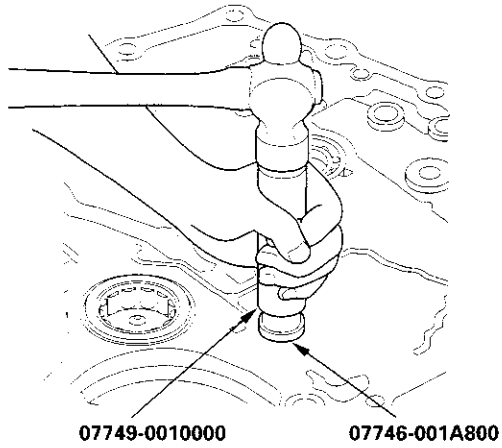
Park Lever Shaft Bearing Replacement

Special Tools Required
- Bearing remover shaft set, 12 mm 07936-166010A
- Sliding hammer weight 07936-371020A
- Driver 07749-0010000
- Attachment, 22 x 24 mm 07746-001A800

1. Remove the park lever shaft bearing from the torque converter housing using the 12 mm bearing remover shaft set and the sliding hammer weight.

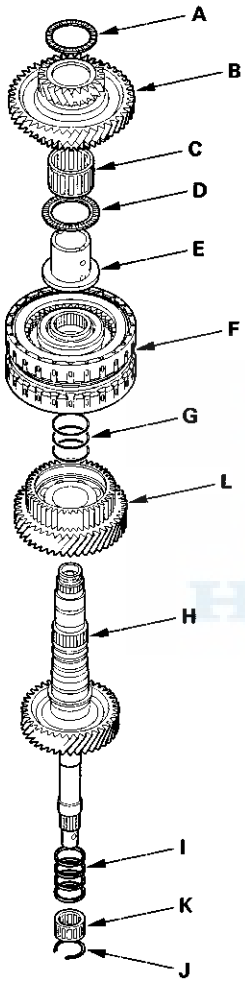


2. Install a new bearing until it bottoms out in the torque converter housing using the drive and the 22 x 24 mm attachment.



Mainshaft Disassembly, Inspection, and Reassembly

1. Remove the thrust needle bearing (A), the mainshaft 5th gear (B), the needle bearing (C), the thrust needle bearing (D), the mainshaft 5th gear collar (E), the 4th/5th clutch (F), and the O-rings (G) from the mainshaft (H).

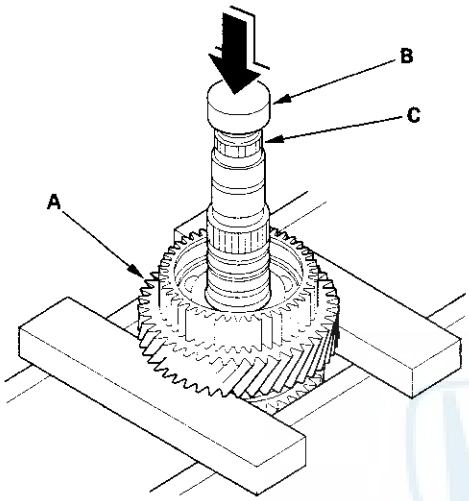


2. Inspect the condition of the sealing rings (I). If the sealing rings are worn, distorted, or damaged, remove the set ring (J) and the needle bearing (K), and replace the sealing rings with new ones.
3. Inspect the thrust needle bearing and the needle bearing for wear and rough movement.
4. Inspect the splines for excessive wear and damage.
5. Inspect 4th gear for wear and damage, and inspect the 4th gear bearing for wear and rough rotation.
6. Replace the mainshaft 4th gear (L) if the gear or the bearing is worn or damaged.
7. Check the shaft bearing surfaces for scoring and excessive wear.
8. Lubricate all parts with ATF during reassembly.
9. Wrap the shaft splines with tape to prevent O-ring damage, install new O-rings on the mainshaft, then remove the tape.
10. Install the 4th/5th clutch.
11. Install the mainshaft 5th gear collar, the thrust needle bearing, the needle bearing, the mainshaft 5th gear, and the thrust needle bearing.

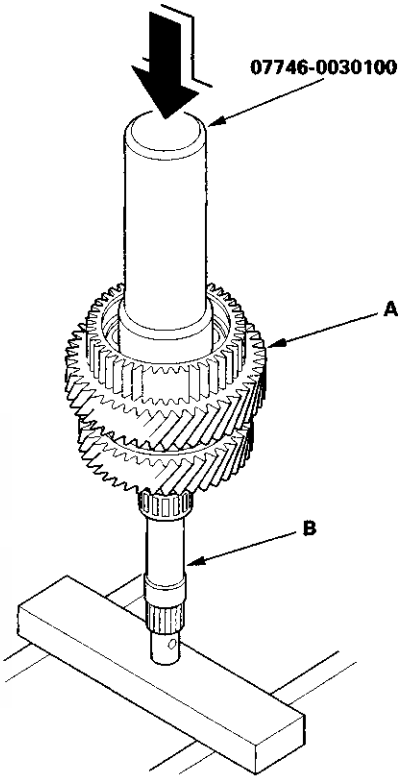
Mainshaft 4th Gear Replacement

Special Tools Required
Driver handle, 40 mm I.D. 07746-0030100

1. Remove the mainshaft 4th gear (A) with the press. Place a spacer (B) between the press and the mainshaft (C) to prevent damaging the mainshaft.



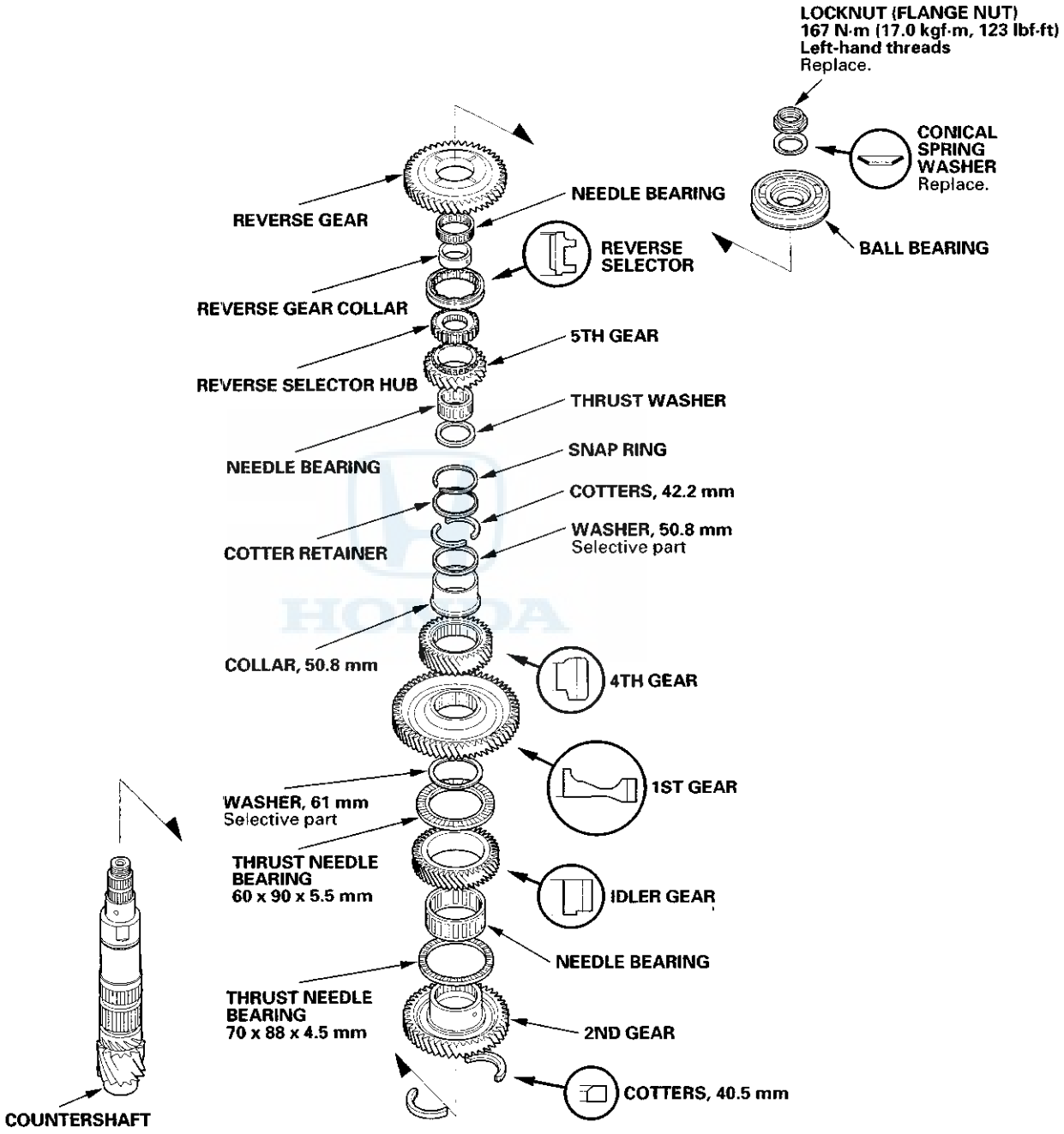
2. Slide a new mainshaft 4th gear (A) over the mainshaft (B), then press it into place using the 40 mm driver handle and a press.



HONDA

Countershaft Disassembly

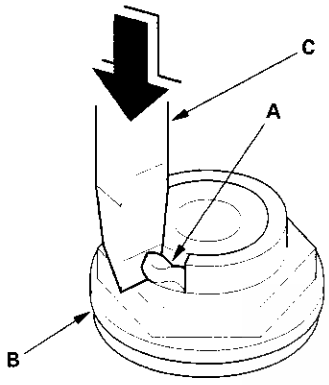
Exploded View



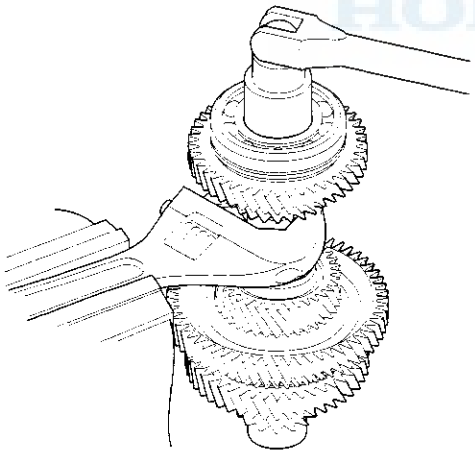
NOTE: Refer to the Exploded View as needed during the following procedure.

1. Cut the lock tab (A) off the countershaft locknut (B) using a chisel (C).

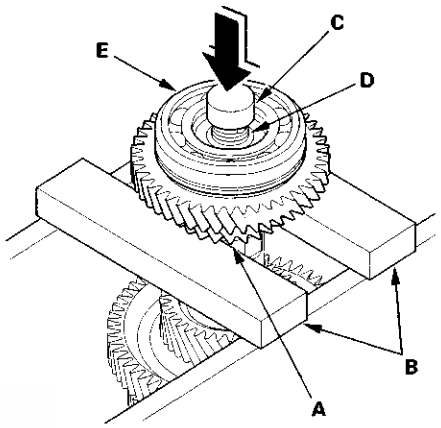
   NOTE: Keep all of the chiseled particles out of the countershaft.



2. Hold the countershaft securely using a wrench and a vise, loosen the locknut, and remove it. The locknut has left-hand threads.



3. Place the countershaft 5th gear (A) on press bases (B), and place a spacer (C) between the countershaft (D) and the press to prevent damaging the countershaft.



4. Support the bottom of the countershaft with one hand, then press the countershaft out of the press-fitted bearing (E) and the press-fitted reverse selector hub. The countershaft will drop down after pressing it out of the press-fitted reverse selector hub. Some reverse selector hubs are not press-fitted, and the countershaft will drop down after pressing it out of the press-fitted bearing.

5. Remove the remaining parts from the countershaft.

6. Inspect the bearing for galling and rough movement.

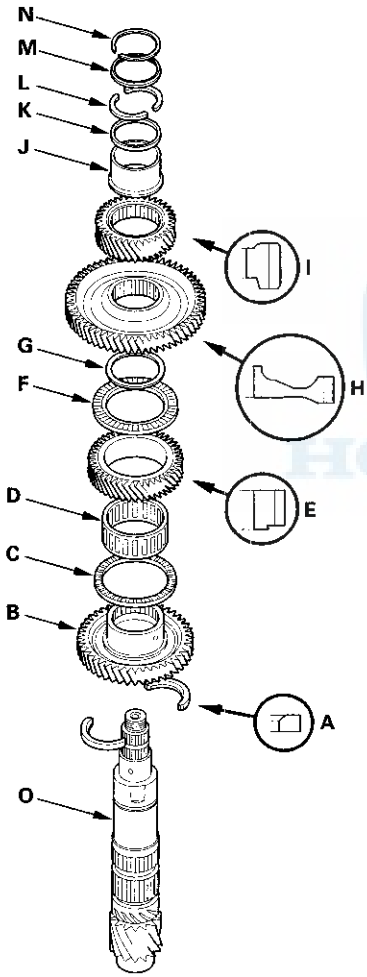
7. Check the shaft bearing surfaces for scoring and excessive wear, and check the shaft splines for excessive wear and damage.

   NOTE: If the countershaft is worn or damaged, replace the countershaft with the same letter (A, B, or C) for identification as the identifying letter on the final driven gear.

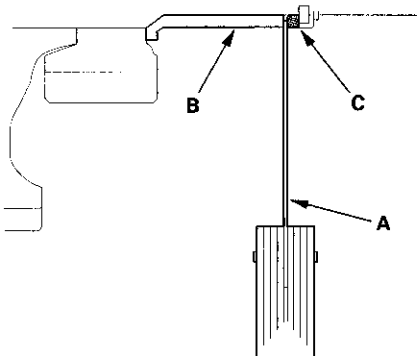
8. Check the idler gear axial clearance and the 4th gear axial clearance (see page 14-306).

Countershaft Idler Gear and 4th Gear Axial Clearance Inspection

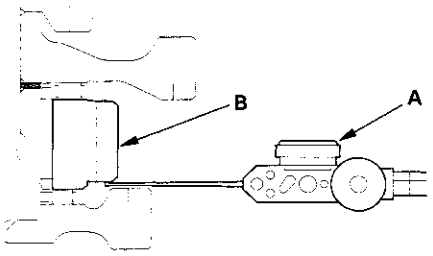
1. Install the 40.5 mm cotters (A), 2nd gear (B), the thrust needle bearing (C), the needle bearing (D), the idler gear (E), the thrust needle bearing (F), the original thickness 61 mm washer (G), 1st gear (H), 4th gear (I), the original thickness 50.8 mm collar (J), the 50.8 mm washer (K), the 42.2 mm cotters (L), the cotter retainer (M), and the snap ring (N) on the countershaft (O). Install the 40.5 mm cotters, the idler gear, 1st gear, and 4th gear in the direction shown.



2. Insert a feeler gauge blade (A) as thick as possible between the 50.8 mm collar (B) and the 50.8 mm washer (C).

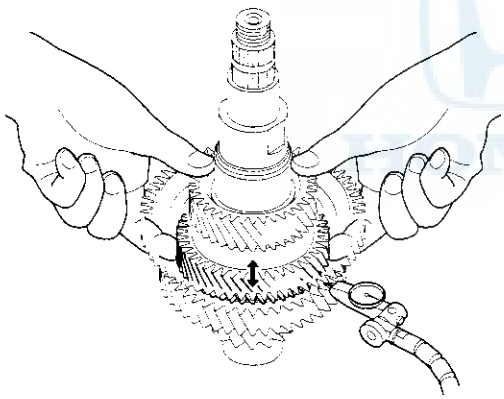


3. Set the dial indicator (A) on the idler gear (B).



4. Measure the idler gear axial clearance in at least three places while moving the idler gear. Use the average as the actual clearance.

Standard: 0.005—0.040 mm (0.0002—0.0016 in.)



5. If the clearance is out of the standard, remove the 61 mm washer and measure its thickness.

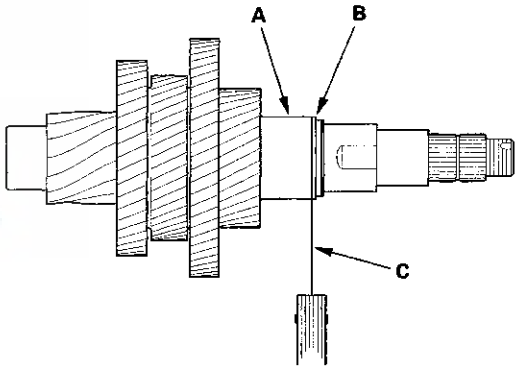
6. Select and install a new washer, then recheck the clearance.

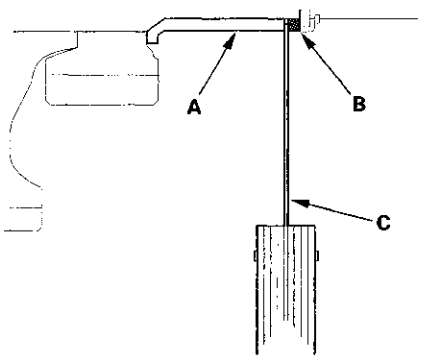
WASHER, 61 mm

No.	Part Number	Thickness
A	90582-RJF-T00	1.525 mm (0.0600 in.)
B	90583-RJF-T00	1.505 mm (0.0593 in.)
C	90584-RJF-T00	1.485 mm (0.0585 in.)
D	90585-RJF-T00	1.465 mm (0.0577 in.)
E	90586-RJF-T00	1.445 mm (0.0569 in.)
F	90587-RJF-T00	1.425 mm (0.0561 in.)
G	90588-RJF-T00	1.405 mm (0.0553 in.)

7. Measure the clearance between the 50.8 mm collar (A) and the 50.8 mm washer (B) with a feeler gauge (C) in at least three places. Use the average as the actual clearance.

Standard: 0.005—0.040 mm (0.0002—0.0016 in.)





(cont'd)

Countershaft Idler Gear and 4th Gear Axial Clearance Inspection (cont'd)

8. If the clearance is out of the standard, remove the 50.8 mm washer and measure its thickness.

9. Select and install a new washer, then recheck the clearance.

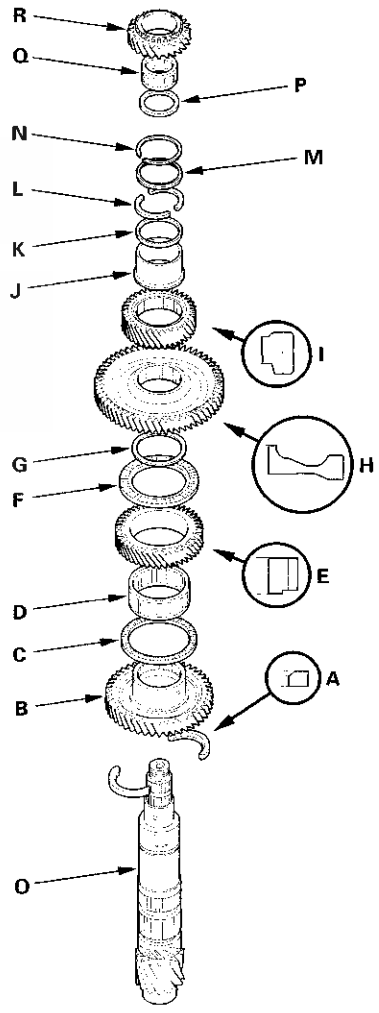
WASHER, 50.8 mm

No.	Part Number	Thickness
A	90519-RJF-T00	1.91 mm (0.0752 in.)
B	90520-RJF-T00	1.93 mm (0.0760 in.)
C	90521-RJF-T00	1.95 mm (0.0768 in.)
D	90522-RJF-T00	1.97 mm (0.0776 in.)
E	90523-RJF-T00	1.99 mm (0.0783 in.)
F	90524-RJF-T00	2.01 mm (0.0791 in.)
G	90525-RJF-T00	2.03 mm (0.0799 in.)
H	90526-RJF-T00	2.05 mm (0.0807 in.)
I	90527-RJF-T00	2.07 mm (0.0815 in.)
J	90528-RJF-T00	2.09 mm (0.0823 in.)
K	90529-RJF-T00	2.11 mm (0.0831 in.)
L	90530-RJF-T00	2.13 mm (0.0839 in.)
M	90531-RJF-T00	2.15 mm (0.0846 in.)
N	90532-RJF-T00	2.17 mm (0.0854 in.)
O	90533-RJF-T00	2.19 mm (0.0862 in.)
P	90534-RJF-T00	2.21 mm (0.0870 in.)
Q	90535-RJF-T00	2.23 mm (0.0878 in.)
R	90536-RJF-T00	2.25 mm (0.0886 in.)
S	90537-RJF-T00	2.27 mm (0.0894 in.)
T	90538-RJF-T00	2.29 mm (0.0902 in.)
U	90539-RJF-T00	2.31 mm (0.0909 in.)
V	90540-RJF-T00	2.33 mm (0.0917 in.)
W	90541-RJF-T00	2.35 mm (0.0925 in.)
X	90542-RJF-T00	2.37 mm (0.0933 in.)
Y	90543-RJF-T00	2.39 mm (0.0941 in.)
Z	90544-RJF-T00	2.41 mm (0.0949 in.)
AA	90545-RJF-T00	2.43 mm (0.0957 in.)
AB	90546-RJF-T00	2.45 mm (0.0965 in.)

Countershaft Reassembly

Special Tools Required
Driver handle, 40 mm I.D. 07746-0030100

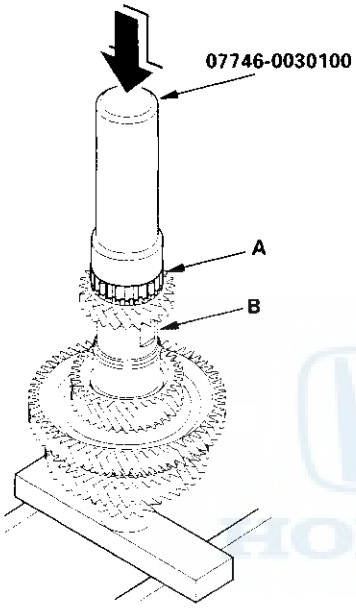
1. Install the 40.5 mm cotters (A), 2nd gear (B), the thrust needle bearing (C), the needle bearing (D), the idler gear (E), the thrust needle bearing (F), the selected 61 mm washer (G), 1st gear (H), 4th gear (I), the selected 50.8 mm collar (J), the 50.8 mm washer (K), the 42.2 mm cotters (L), the cotter retainer (M), and the snap ring (N) on the countershaft (O). Install the 40.5 mm cotters, the idler gear, 1st gear, and 4th gear in the direction shown.



2. Install the thrust washer (P), the needle bearing (Q), and 5th gear (R).

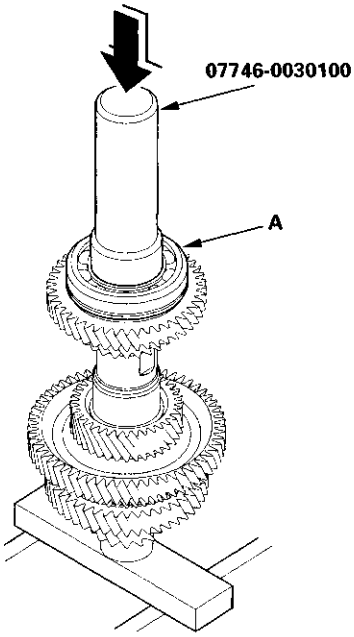
3. Slide the reverse selector hub (A) over the countershaft (B), then press it into place using the 40 mm driver handle and a press.

   NOTE: Some reverse selector hubs are not press-fitted, and can be installed without using the 40 mm driver and a press.

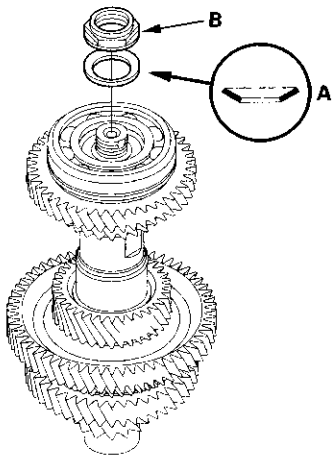


4. Install the reverse selector, the reverse gear collar, the needle bearing, and the reverse gear over the reverse selector hub.

5. Install the ball bearing (A) over the countershaft, then press it into place using the 40 mm driver handle and a press.



6. Install the conical spring washer (A) in the direction shown, and install a new locknut (B).

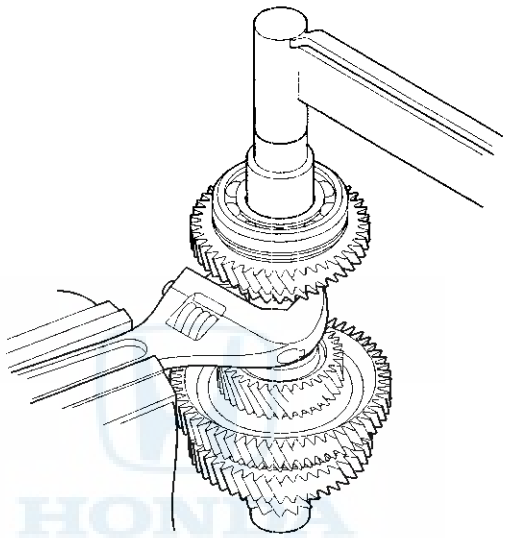


(cont'd)

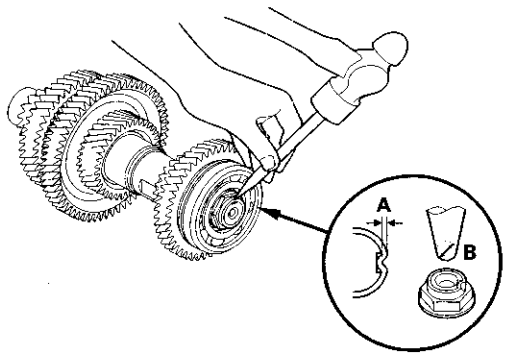
Countershaft Reassembly (cont'd)

7. Hold the countershaft securely with a wrench and a vise, and tighten the locknut to 167 N·m (17.0 kgf·m, 123 lbf·ft).

   NOTE:
   - Use a torque wrench to tighten the locknut. Do not use an impact wrench.
   - The locknut has left-hand threads.

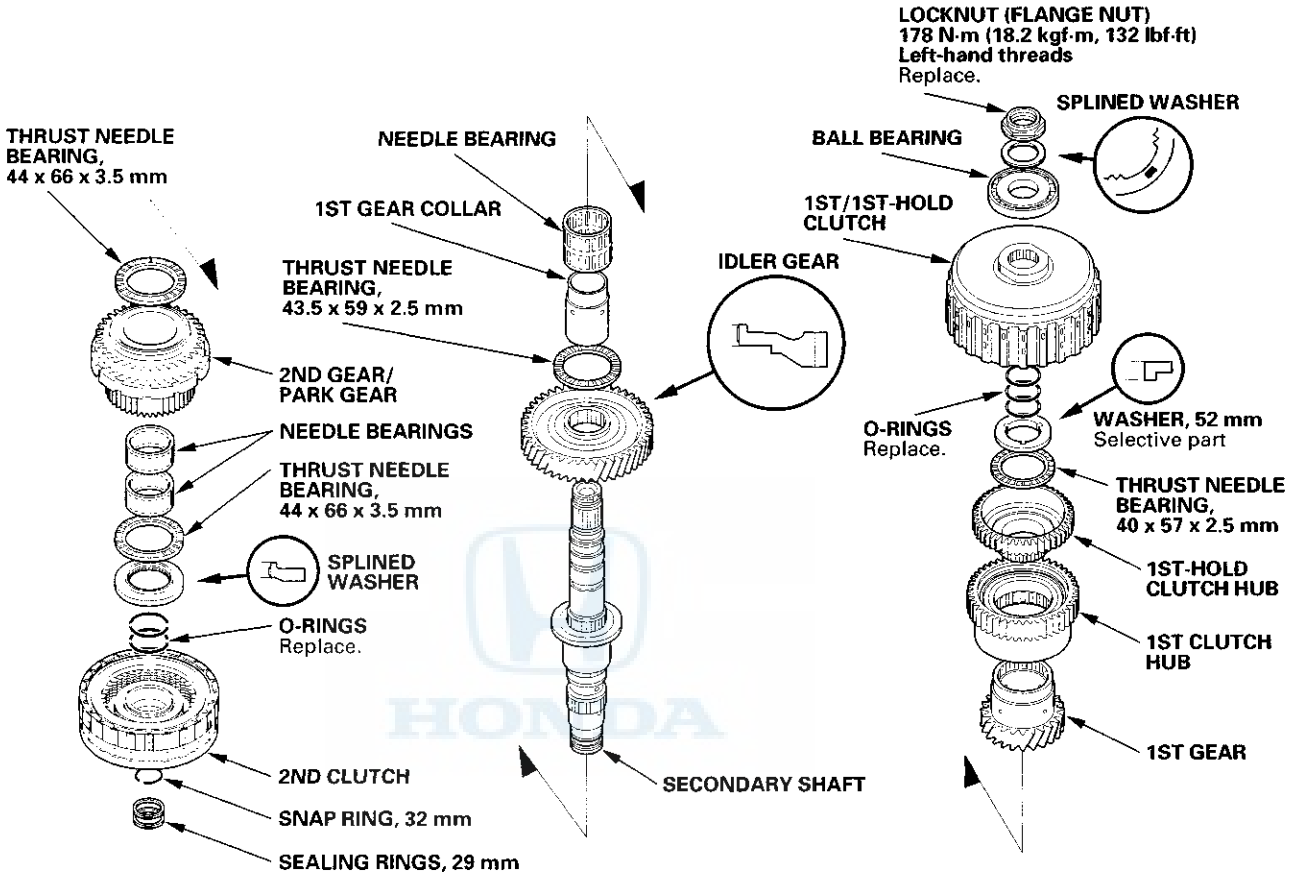


8. Stake the locknut into the shaft to a depth (A) of 0.7—1.3 mm (0.03—0.05 in.) using a 3.5 mm punch (B).



Secondary Shaft Disassembly

Exploded View



(cont'd)

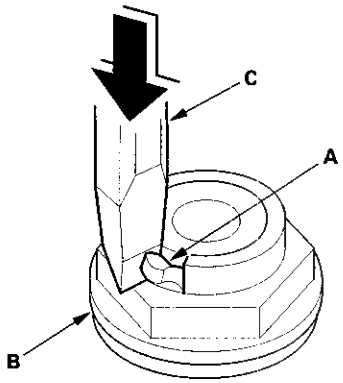
Secondary Shaft Disassembly (cont'd)

Special Tools Required
Wrench, 40 x 42 mm 07XAA-002010A

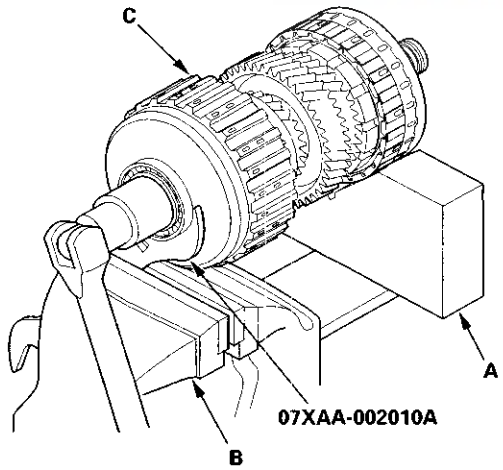
NOTE: Refer to the Exploded View as needed during the following procedure.

1. Cut the lock tab (A) off the secondary shaft locknut (B) using a chisel (C).

   NOTE: Keep all of the chiseled particles out of the secondary shaft.

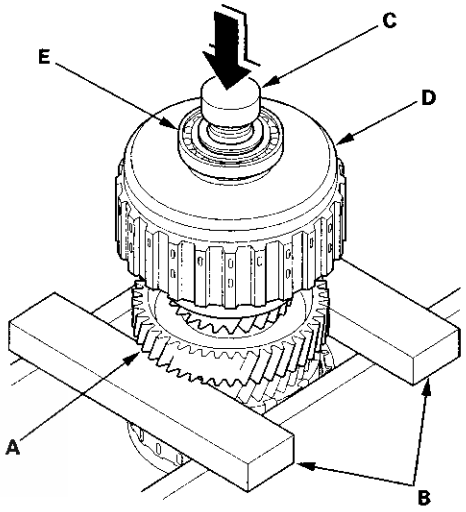


2. Place a V-block (A) on a vise (B), and put the secondary shaft (C) on the V-block and vise.



3. Attach the 40 x 42 mm wrench onto the 1st clutch guide, and secure the 40 x 42 mm wrench with the vise to hold the secondary shaft. Loosen the locknut, and remove it. Remove any burrs from splines on the shaft and the splined washer.

4. Place the idler gear (A) on press bases (B), and place a spacer (C) between the secondary shaft (D) and the press to prevent damaging the secondary shaft.



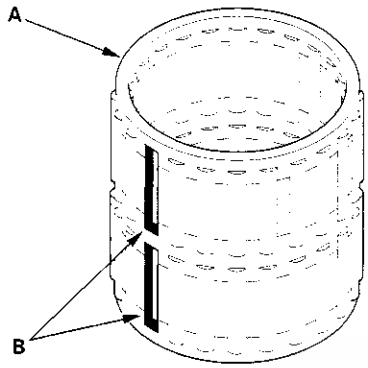
5. Support the bottom of the secondary shaft with one hand, then press the secondary shaft out of the press-fitted bearing (E). The secondary shaft will drop down after pressing it out of the press-fitted bearing.

6. Remove the 1st/1st-hold clutch, the 52 mm washer, the 40 x 57 x 2.5 mm thrust needle bearing, 1st gear assembly, the needle bearings, the 1st gear collar, the 43.5 x 59 x 2.5 mm thrust needle bearing, and the idler gear.

7. Remove the 32 mm snap ring, and remove the 2nd clutch, the splined washer, the needle bearing, the 2nd gear/park gear, and the thrust needle bearings.

8. Inspect the bearings for galling and rough movement.

   NOTE: The needle bearing (A) on the 1st gear collar contains the only two no-roller cavities (B); this is normal.



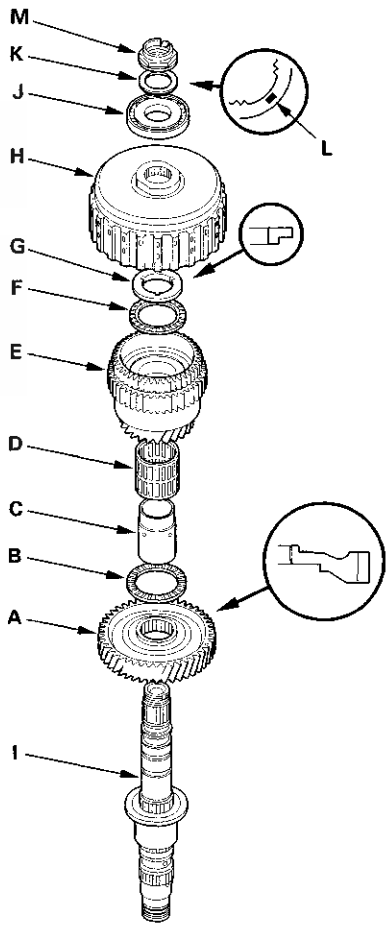
9. Check the shaft bearing surfaces for scoring and excessive wear, and check the shaft splines for excessive wear and damage.

10. Check the 1st gear axial clearance (see page 14-313), the 1st gear one-way clutch (see page 14-315), and the secondary shaft installation height (see page 14-319).

Secondary Shaft 1st Gear Axial Clearance Inspection

Special Tools Required
- Driver handle, 40 mm I.D. 07746-0030100
- Attachment, 30 mm I.D. 07746-0030300

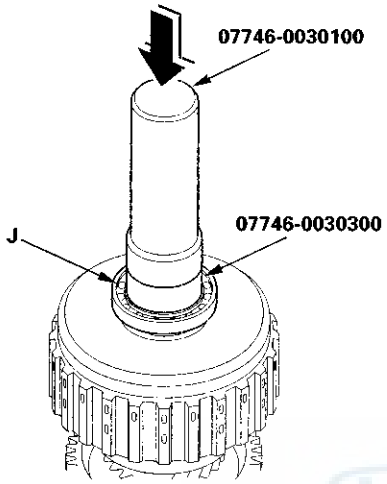
1. Install the idler gear (A), the thrust needle bearing (B), the 1st gear collar (C), the needle bearing (D), the 1st gear assembly (E), the thrust needle bearing (F), the original thickness 52 mm washer (G), and the 1st/1st-hold clutch (H) on the secondary shaft (I). Install the idler gear and the selected 52 mm washer in the direction shown. Do not install the O-rings during inspection.



(cont'd)

Secondary Shaft 1st Gear Axial Clearance Inspection (cont'd)

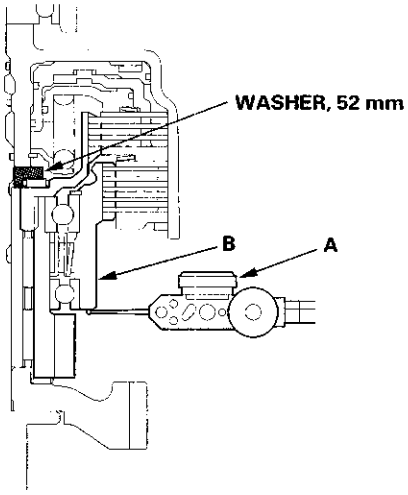
2. Install the ball bearing (J) over the 1st/1st-hold clutch guide using the 40 mm driver handle, the 30 mm attachment, and a press.



3. Install the splined washer (K) with the marked side (L) up over the ball bearing in the same manner as installing the ball bearing using the 40 mm driver handle, the 30 mm attachment, and the press.

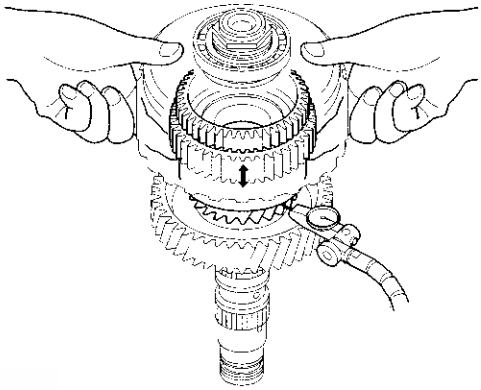
4. Install the old locknut (M), and tighten it to 29 N·m (3.0 kgf·m, 22 lbf·ft).

5. Set the dial indicator (A) on the 1st clutch hub (B).

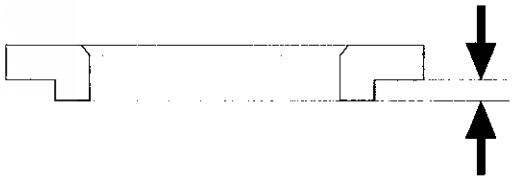


6. Measure the 1st gear axial clearance in at least three places while moving 1st gear. Use the average as the actual clearance.

Standard: 0.100—0.145 mm (0.004—0.006 in.)



7. If the clearance is out of the standard, remove the washer and measure its height difference.



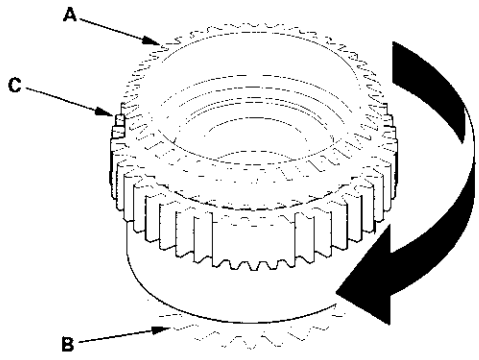
8. Select and install a new washer, then recheck the clearance.

WASHER, 52 mm

No.	Part Number	Thickness
A	90502-RJF-T00	2.705 mm (0.106 in.)
B	90503-RJF-T00	2.680 mm (0.106 in.)
C	90504-RJF-T00	2.655 mm (0.105 in.)
D	90505-RJF-T00	2.630 mm (0.104 in.)
E	90506-RJF-T00	2.605 mm (0.103 in.)
F	90507-RJF-T00	2.580 mm (0.102 in.)
G	90508-RJF-T00	2.555 mm (0.101 in.)
H	90509-RJF-T00	2.530 mm (0.100 in.)
I	90510-RJF-T00	2.505 mm (0.099 in.)
J	90511-RJF-T00	2.480 mm (0.098 in.)
K	90512-RJF-T00	2.455 mm (0.097 in.)
L	90513-RJF-T00	2.430 mm (0.096 in.)
M	90514-RJF-T00	2.405 mm (0.095 in.)

1st Gear One-way Clutch Inspection

1. Hold the 1st-hold clutch hub (A), and turn 1st gear (B) in the direction shown to be sure it turns freely. Also make sure 1st gear locks in the opposite direction.



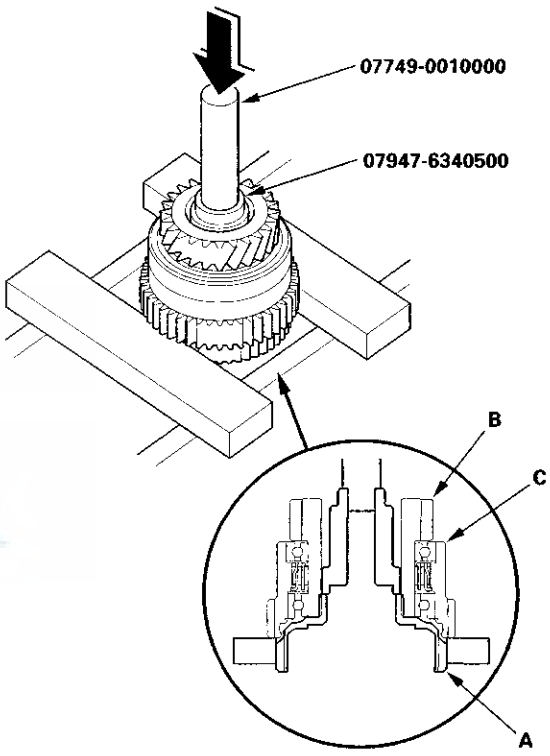
2. If any problem occurs on the 1st gear one-way clutch, replace the 1st clutch hub (C). The 1st gear one-way clutch is not available separately from the 1st clutch hub.

3. Also check 1st gear and the 1st-hold clutch hub for wear and damage. If 1st gear and the 1st-hold clutch hub are worn or damaged, replace the damaged part, refer to 1st Clutch Hub Replacement (see page 14-315).

1st Clutch Hub Replacement

Special Tools Required
- Driver 07749-0010000
- Driver attachment 07947-6340500
- Attachment, 78 x 90 mm 07GAD-SD40101

1. Remove the 1st-hold clutch hub (A) from 1st gear (B) using the driver, the driver attachment, and a press.

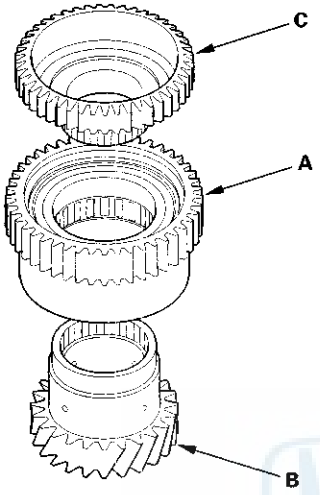


2. Remove the 1st clutch hub (C) from 1st gear.

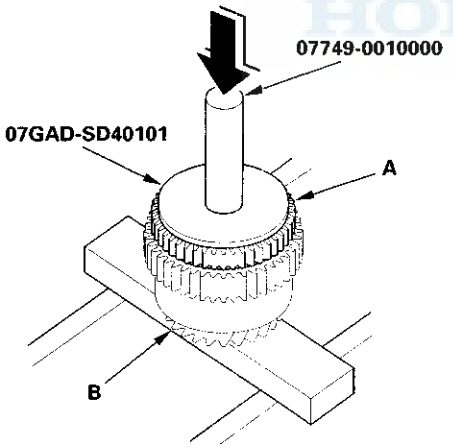
(cont'd)

1st Clutch Hub Replacement (cont'd)

3. Install a new 1st clutch hub (A) over 1st gear (B), and install the 1st-hold clutch hub (C) in 1st gear.



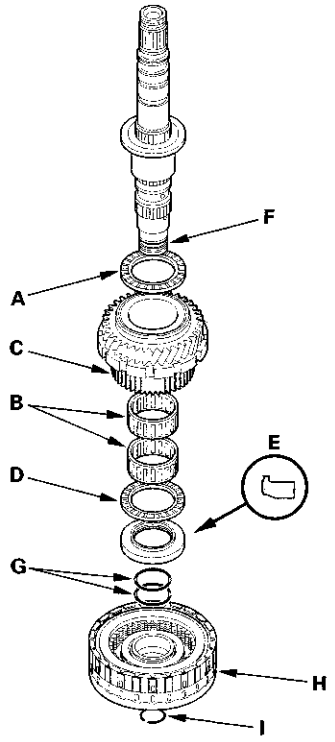
4. Install the 1st-hold clutch hub (A) in 1st gear (B) using the driver, the 78 x 90 mm attachment, and a press.



Secondary Shaft Reassembly

Special Tools Required
- Driver handle, 40 mm I.D. 07746-0030100
- Attachment, 30 mm I.D. 07746-0030300
- Wrench, 40 x 42 mm 07XAA-002010A

1. Install the 44 x 66 x 3.5 mm thrust needle bearing (A), the needle bearings (B), the 2nd gear/park gear (C), the 44 x 66 x 3.5 mm thrust needle bearing (D), and the splined washer (E) in the direction shown on the secondary shaft (F).



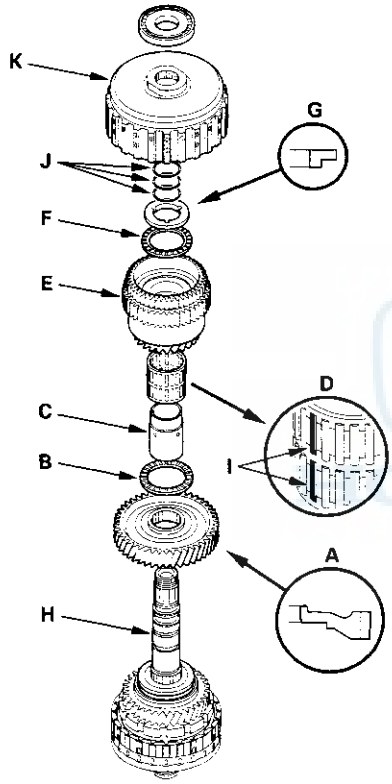
2. Wrap the shaft splines with tape, and install new O-rings (G) in the 2nd clutch O-ring grooves, then remove the tape.

   NOTE: To prevent damage to the O-rings, be sure to install the O-rings after installing the splined washer.

3. Install the 2nd clutch (H) on the secondary shaft, and secure the 2nd clutch with the snap ring (I).

4. Install the idler gear (A) in the direction shown, the 43.5 x 59 x 2.5 mm thrust needle bearing (B), the 1st gear collar (C), the needle bearing (D), the 1st gear assembly (E), the 40 x 57 x 2.5 mm thrust needle bearing (F), and the 52 mm washer (G) in the direction shown on the secondary shaft (H).

   NOTE: The needle bearing (D) contains two no-roller cavities (I); this is normal.

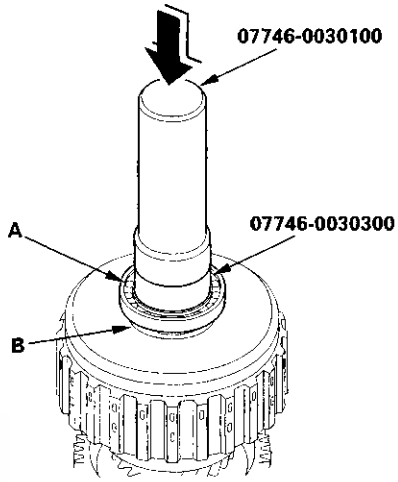


5. Wrap the shaft splines with tape, and install new O-rings (J) in the 1st/1st-hold clutch O-ring grooves, then remove the tape.

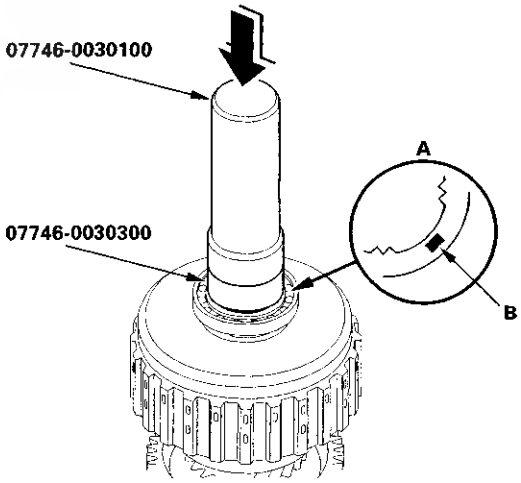
   NOTE: To prevent damage to the O-rings, be sure to install the O-rings after installing the 1st gear collar and the 52 mm washer.

6. Install the 1st/1st-hold clutch (K).

7. Install the ball bearing (A) over the 1st/1st-hold clutch guide (B) using the 40 mm driver handle, the 30 mm attachment, and a press.



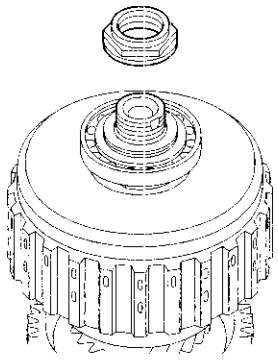
8. Install a new splined washer (A) with the marked side (B) up over the ball bearing using the 40 mm driver handle, the 30 mm attachment, and a press.



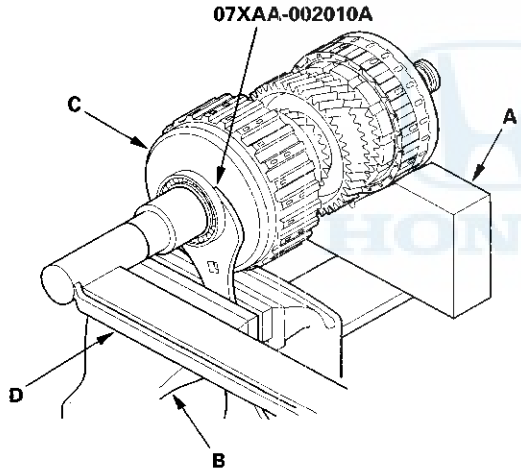
(cont'd)

Secondary Shaft Reassembly (cont'd)

9. Install a new locknut.



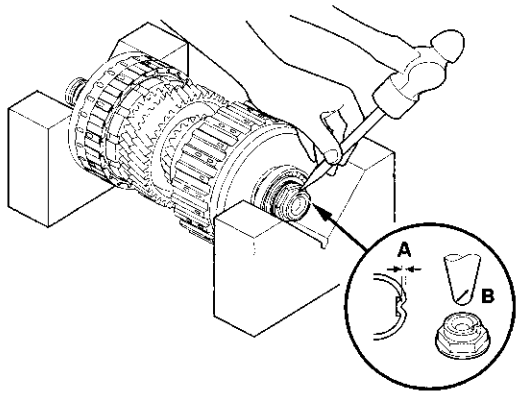
10. Place a V-block (A) on a vise (B), and put the secondary shaft (C) on the V-block and the vise.



11. Attach the 40 x 42 mm wrench onto the top of the 1st clutch guide, and secure the 40 x 42 mm wrench with the vise to hold the secondary shaft. Tighten the locknut to 178 N·m (18.2 kgf·m, 132 lbf·ft) using a torque wrench (D).

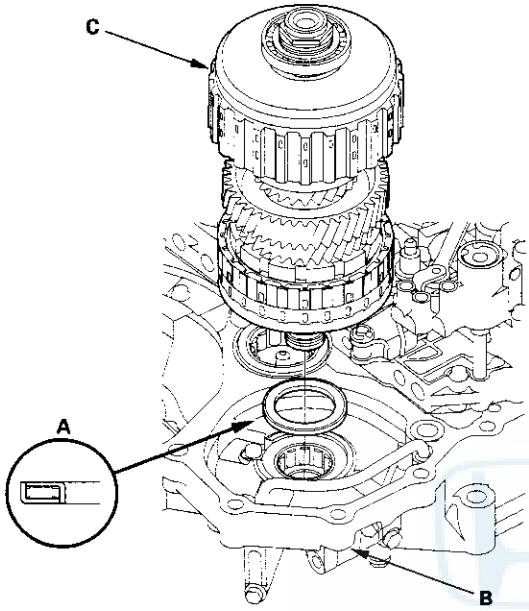
    NOTE:
    - Use a torque wrench to tighten the locknut. Do not use an impact wrench.
    - The locknut has left-hand threads.

12. Stake the locknut to a depth (A) of 0.7—1.3 mm (0.03—0.05 in.) using a 3.5 mm punch (B).

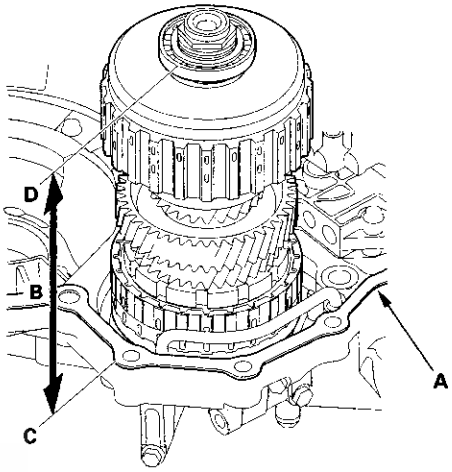


Secondary Shaft Installation Height Inspection/Adjustment

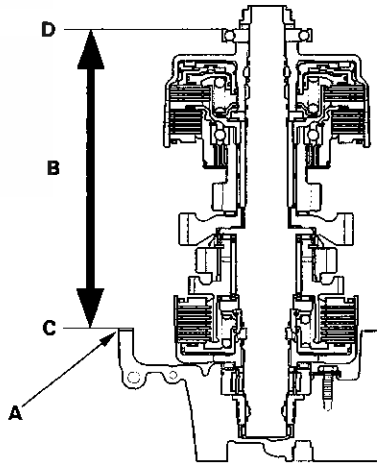
1. Install the thrust needle bearing (A) in the torque converter housing (B) in the direction shown, and install the secondary shaft assembly (C).



2. Install a new gasket (A) on the torque converter housing.



Secondary Shaft Cutaway View

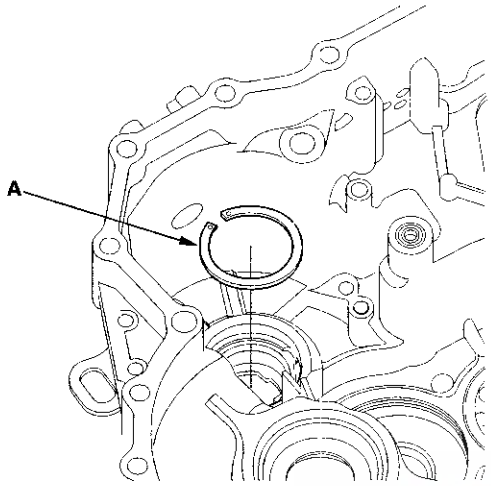


3. Measure the installed height (B) of the secondary shaft installation between the surface (C) of the gasket and the top of the ball bearing outer race (D), then note the measurement.

(cont'd)

Secondary Shaft Installation Height Inspection/Adjustment (cont'd)

4. Remove the 65 mm thrust shim (A) from the transmission housing, and measure its thickness.



5. Calculate the thickness of the 65 mm thrust shim using the formula.

Formula:
65 mm Thrust Shim Thickness
= Secondary Shaft Installation Height Standard
— Measurement

Secondary Shaft Installation Height Standard:
228.04—228.13 mm (8.9779—8.9815 in.)

6. Select the 65 mm thrust shim from the following table.

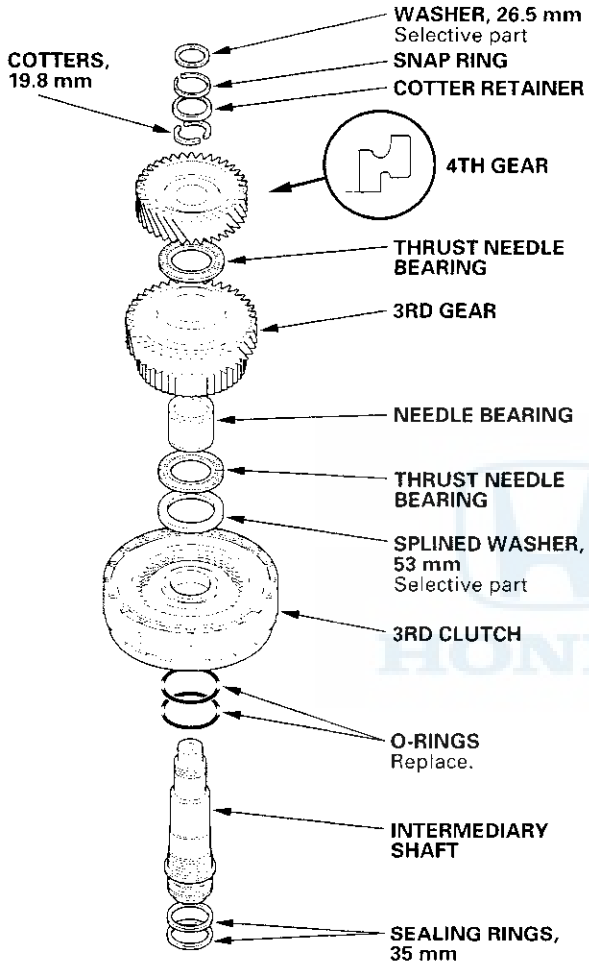
THRUST SHIM, 65 mm

No.	Part Number	Thickness
0A	90460-RDK-000	0.80 mm (0.031 in.)
A	90461-RDK-010	0.84 mm (0.033 in.)
B	90462-RDK-010	0.88 mm (0.035 in.)
C	90463-RDK-010	0.92 mm (0.036 in.)
D	90464-RDK-010	0.96 mm (0.038 in.)
E	90465-RDK-010	1.00 mm (0.039 in.)
F	90466-RDK-010	1.04 mm (0.041 in.)
G	90467-RDK-010	1.08 mm (0.043 in.)
H	90468-RDK-010	1.12 mm (0.044 in.)
I	90469-RDK-010	1.16 mm (0.046 in.)
J	90470-RDK-010	1.20 mm (0.047 in.)
K	90471-RDK-010	1.24 mm (0.049 in.)
L	90472-RDK-010	1.28 mm (0.050 in.)
M	90473-RDK-010	1.32 mm (0.052 in.)
N	90474-RDK-010	1.36 mm (0.054 in.)
O	90475-RDK-010	1.40 mm (0.055 in.)
P	90476-RDK-010	1.44 mm (0.057 in.)
Q	90477-RDK-010	1.48 mm (0.058 in.)
R	90478-RDK-010	1.52 mm (0.060 in.)
S	90479-RDK-010	1.56 mm (0.061 in.)
T	90480-RDK-010	1.60 mm (0.063 in.)
U	90481-RDK-000	1.64 mm (0.065 in.)
V	90482-RDK-000	1.68 mm (0.066 in.)
W	90483-RDK-000	1.72 mm (0.068 in.)
X	90484-RDK-000	1.76 mm (0.069 in.)
Y	90485-RDK-000	1.80 mm (0.071 in.)
Z	90486-RDK-000	1.84 mm (0.072 in.)
AA	90487-RDK-000	1.88 mm (0.074 in.)
AB	90488-RDK-000	1.92 mm (0.076 in.)
AC	90489-RDK-000	1.96 mm (0.077 in.)
AD	90490-RDK-000	2.00 mm (0.079 in.)
AE	90491-RDK-000	2.04 mm (0.080 in.)
AF	90492-RDK-000	2.08 mm (0.082 in.)
AG	90493-RDK-000	2.12 mm (0.083 in.)
AH	90494-RDK-000	2.16 mm (0.085 in.)
AI	90495-RDK-000	2.20 mm (0.087 in.)
AJ	90496-RDK-000	2.24 mm (0.088 in.)
AK	90497-RDK-000	2.28 mm (0.090 in.)
AL	90498-RDK-000	2.32 mm (0.091 in.)
AM	90499-RDK-000	0.76 mm (0.030 in.)

7. Install the thrust shim in the transmission housing.

Intermediary Shaft Disassembly, Inspection, and Reassembly

1. Remove the 26.5 mm washer, the snap ring, the cotter retainer, and the 19.8 mm cotters from the intermediary shaft.



2. Remove the intermediary shaft 4th gear using a press (see page 14-322), to disassemble the shaft and gears.

3. Inspect the bearings for galling and rough movement.

4. Check the shaft bearing surfaces for scoring and excessive wear, and check the shaft splines for excessive wear and damage.

5. Check the sealing rings for excessive wear and damage.

6. Check the 3rd gear axial clearance (see page 14-323), and the intermediary shaft installation height (see page 14-324).

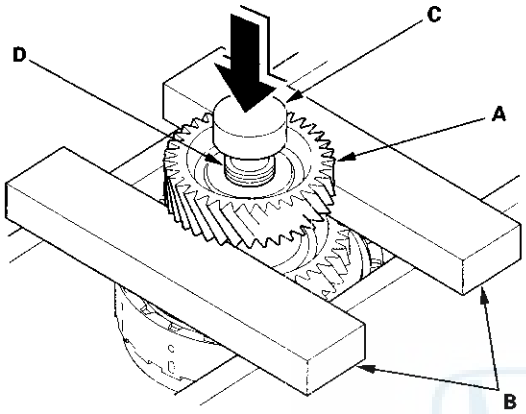
7. Before installing the O-rings, wrap the shaft splines with tape to prevent damage to the O-rings.

8. Lubricate all parts with ATF, and reassemble the shaft and gears.

9. Install the press-fitted 4th gear in the direction shown using the 40 mm driver handle and a press (see page 14-322).

Intermediary Shaft 4th Gear Removal

1. Place 4th gear (A) on press bases (B), and place a spacer (C) between the intermediary shaft (D) and the press to prevent damaging the intermediary shaft.



2. Support the bottom of the intermediary shaft with one hand, then press the intermediary shaft out of the press-fitted 4th gear. The intermediary shaft will drop down after pressing it out of the press-fitted gear.

3. Remove the remaining parts from the intermediary shaft.

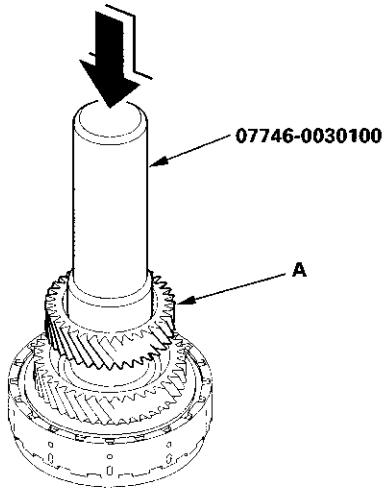
Intermediary Shaft 4th Gear Installation

Special Tools Required
Driver handle, 40 mm I.D. 07746-0030100

1. Wrap the shaft splines with tape, and install new O-rings in the 3rd clutch O-ring grooves, then remove the tape.

2. Install the 3rd clutch, 53 mm splined washer, the thrust needle bearing, the needle bearing, 3rd gear, the thrust needle bearing on the intermediary shaft.

3. Install 4th gear (A) using the 40 mm driver handle and a press.



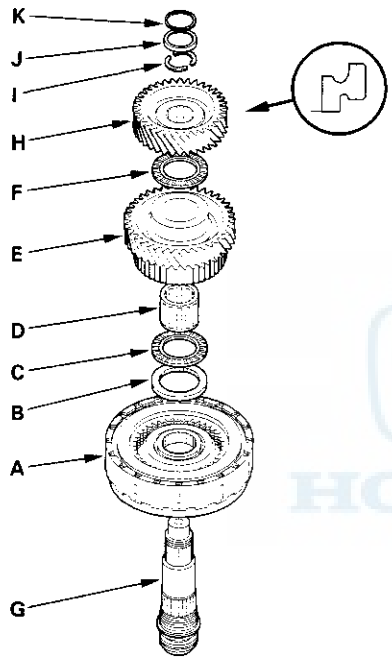
4. Install the 19.8 mm cotters, the cotter retainer, and the snap ring.

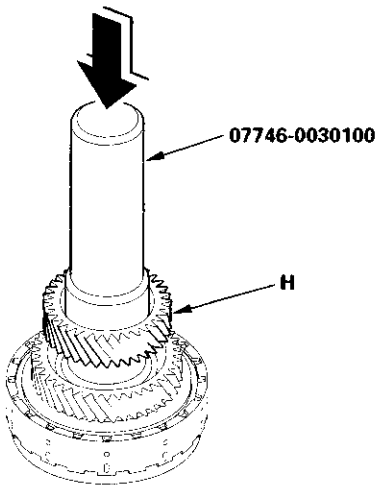
5. Install the 26.5 mm washer on the top of the intermediary shaft.

Intermediary Shaft 3rd Gear Axial Clearance Inspection

Special Tools Required
Driver handle, 40 mm I.D. 07746-0030100

1. Install the 3rd clutch (A), the original thickness 53 mm splined washer (B), the thrust needle bearing (C), the needle bearing (D), 3rd gear (E), and the thrust needle bearing (F) on the intermediary shaft (G). Do not install the O-rings during inspection.

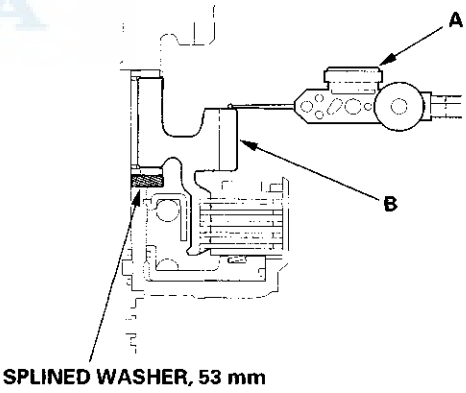




2. Install 4th gear (H) using the 40 mm driver handle and a press.

3. Install the cotters (I), the cotter retainer (J), and the snap ring (K).

4. Set the dial indicator (A) on 3rd gear (B).

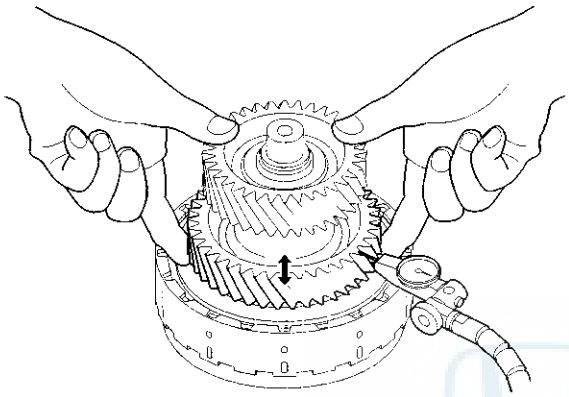


(cont'd)

Intermediary Shaft 3rd Gear Axial Clearance Inspection (cont'd)

5. Measure the 3rd gear axial clearance in at least three places while moving 3rd gear. Use the average as the actual clearance.

   Standard: 0.005—0.045 mm (0.0002—0.0018 in.)



6. If the clearance is out of the standard, remove the splined washer and measure its thickness.

7. Select and install a new splined washer, then recheck the clearance.

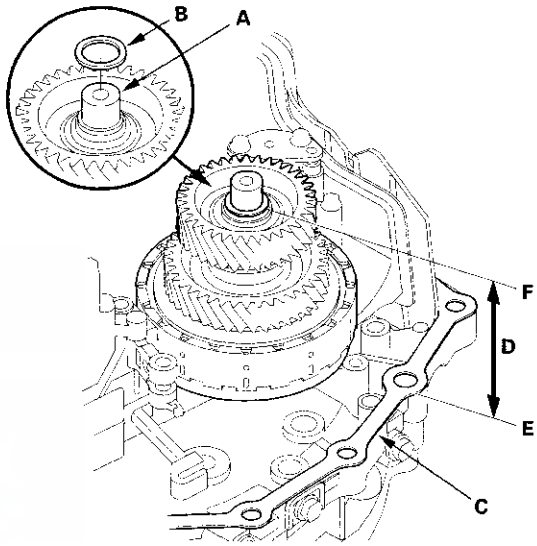
SPLINED WASHER, 53 mm

No.	Part Number	Thickness
A	90546-RDK-000	3.995 mm (0.1573 in.)
B	90547-RDK-000	4.015 mm (0.1581 in.)
C	90548-RDK-000	4.035 mm (0.1589 in.)
D	90549-RDK-000	4.055 mm (0.1596 in.)
E	90550-RDK-000	4.075 mm (0.1604 in.)
F	90551-RDK-000	4.095 mm (0.1612 in.)
G	90552-RDK-000	4.115 mm (0.1620 in.)
H	90553-RDK-000	4.135 mm (0.1628 in.)
I	90554-RDK-000	4.155 mm (0.1636 in.)
J	90555-RDK-000	4.175 mm (0.1644 in.)
K	90556-RDK-000	4.195 mm (0.1652 in.)
L	90557-RDK-000	4.215 mm (0.1659 in.)
M	90558-RDK-000	4.235 mm (0.1667 in.)
N	90559-RDK-000	4.255 mm (0.1675 in.)

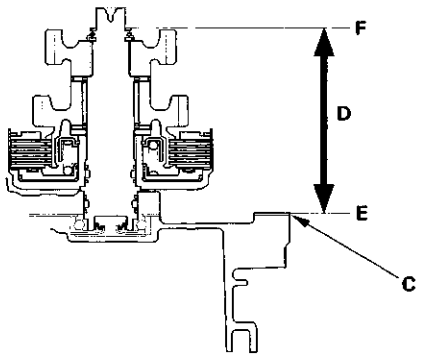
Intermediary Shaft Installation Height Inspection/Adjustment

1. Install the intermediary shaft (A) in the torque converter housing, and install the original thickness 26.5 mm washer (B) on the intermediary shaft.

   Intermediary Shaft Installation Height Standard:
   137.285—137.385 mm (5.40491—5.40885 in.)



Intermediary Shaft Cutaway View



2. Install a new gasket (C) on the torque converter housing.

3. Measure the installed height (D) of the intermediary shaft between the surface (E) of the gasket and the surface of the 26.5 mm washer (F).

4. If the measurement is out of standard, remove the 26.5 mm washer and measure its thickness.

5. Select and install a new washer, then recheck the installation height.

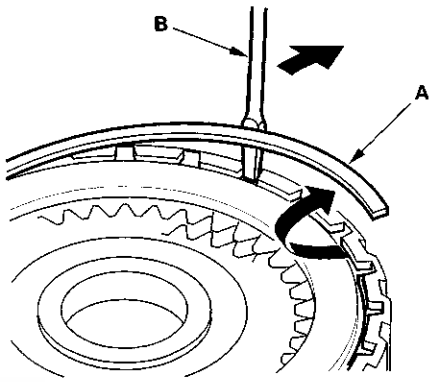
WASHER, 26.5 mm

No.	Part Number	Thickness
A	90564-RDK-000	1.05 mm (0.041 in.)
B	90565-RDK-000	1.13 mm (0.044 in.)
C	90566-RDK-000	1.21 mm (0.048 in.)
D	90567-RDK-000	1.29 mm (0.051 in.)
E	90568-RDK-000	1.37 mm (0.054 in.)
F	90569-RDK-000	1.45 mm (0.057 in.)
G	90570-RDK-000	1.53 mm (0.060 in.)
H	90571-RDK-000	1.61 mm (0.063 in.)
I	90572-RDK-000	1.69 mm (0.067 in.)
J	90573-RDK-000	1.77 mm (0.070 in.)
K	90574-RDK-000	1.85 mm (0.073 in.)
L	90575-RDK-000	1.93 mm (0.076 in.)
M	90576-RDK-000	2.01 mm (0.079 in.)
N	90577-RDK-000	2.09 mm (0.082 in.)
O	90578-RDK-000	0.97 mm (0.038 in.)

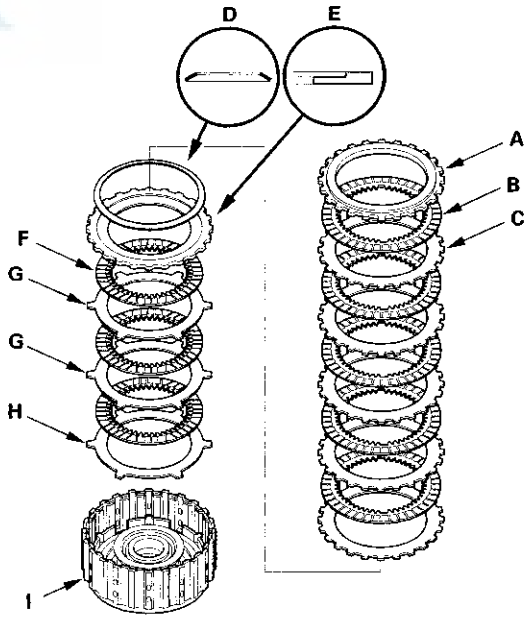
Clutch Disassembly

Special Tools Required
Clutch spring compressor set 07LAE-PX40000

1. Remove the snap ring (A) with a screwdriver (B).



2. Remove the 1st clutch end-plate (A), the 1st clutch discs (B) (5), the 1st clutch wave-plates (C) (5), the disc spring (D), 1st-hold clutch plate B (E), the 1st-hold clutch discs (F) (3), the 1st-hold clutch wave-plates (G) (2), and the 1st-hold clutch flat-plate (H) (1) from the 1st/1st-hold clutch drum (I).

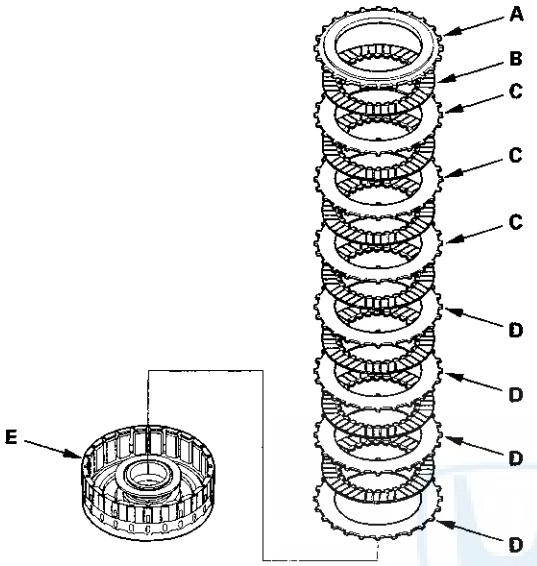


3. Make reference marks on the clutch wave-plate.

(cont'd)

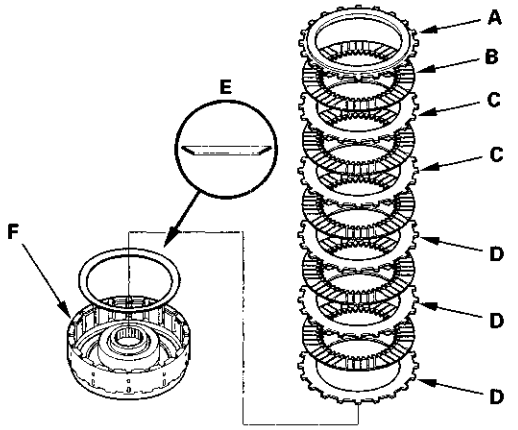
Clutch Disassembly (cont'd)

4. Remove the clutch end-plate (A), the clutch discs (B) (7), clutch wave-plates (C) (3), and the clutch flat-plates (D) (4) from the 2nd clutch drum (E).



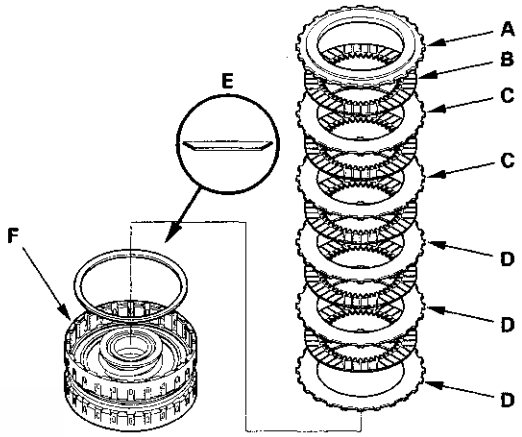
5. Make reference marks on the clutch wave-plates.

6. Remove the clutch end-plate (A), the clutch discs (B) (5), the clutch wave-plates (C) (2), the clutch flat-plates (D) (3), and the disc spring (E) from the 3rd clutch drum (F).



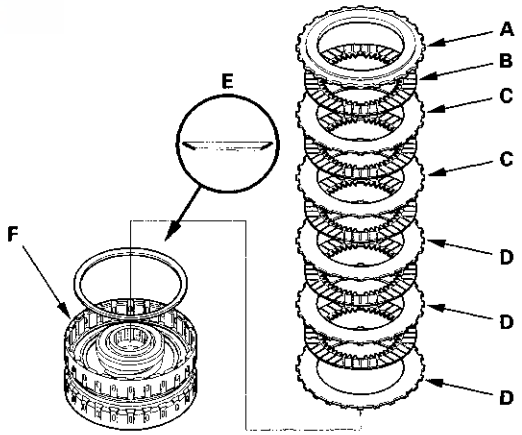
7. Make reference marks on the clutch wave-plates.

8. Remove the clutch end-plate (A), the clutch discs (B) (5), the clutch wave-plates (C) (2), the clutch flat-plates (D) (3), and the disc spring (E) from the 4th clutch drum (F).



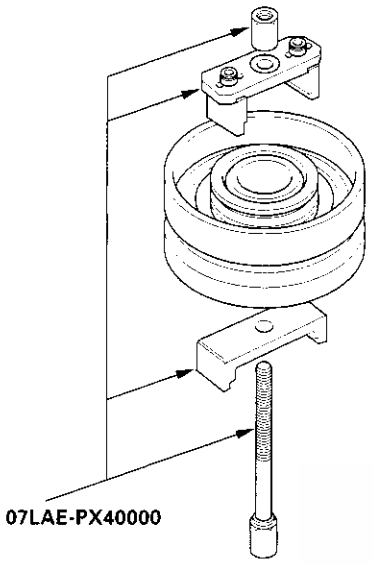
9. Make reference marks on the clutch wave-plates.

10. Remove the clutch end-plate (A), the clutch discs (B) (5), the clutch wave-plates (C) (2), the clutch flat-plates (D) (3), and the disc spring (E) from the 5th clutch drum (F).

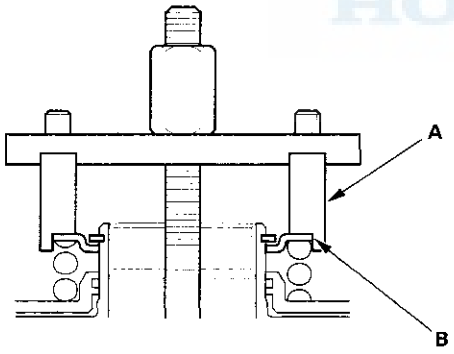


11. Make reference marks on the clutch wave-plates.

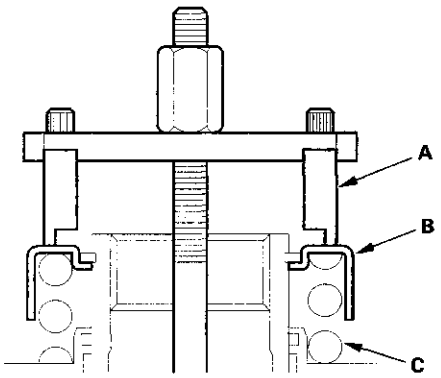
12. Install the clutch spring compressor set.



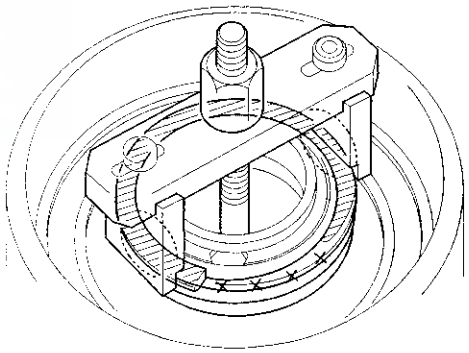
13. Be sure the clutch spring compressor set (A) is adjusted to have full contact with the spring retainer (B) on the 1st, 2nd, and 4th clutches.



14. Set the clutch spring compressor set (A) on the spring retainer (B) of the 3rd and 5th clutches so that it pushes on the clutch return spring (C).



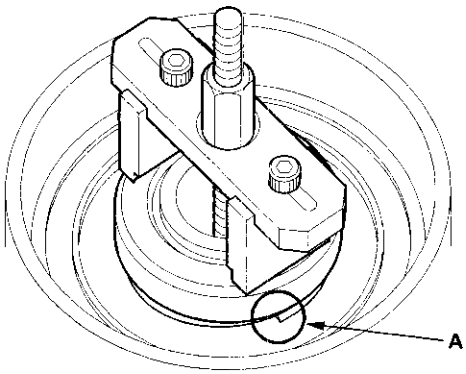
15. Check the placement of the clutch spring compressor set. If either end of the clutch spring compressor set is set over an area of the spring retainer that is unsupported by the return spring, the spring retainer may be damaged.



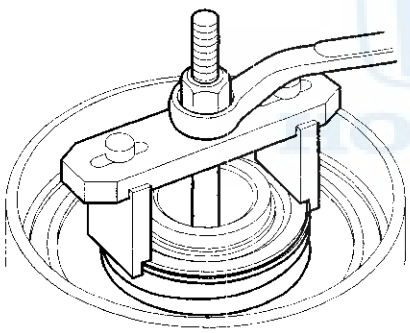
(cont'd)

Clutch Disassembly (cont'd)

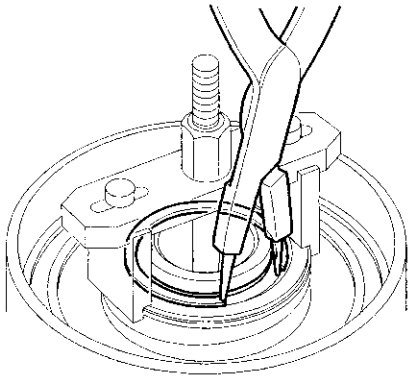
16. Check the placement of the clutch spring compressor set. If either end of the clutch spring compressor set is not set over the clutch return spring end (A), the spring retainer may be damaged.



17. Compress the return spring until the snap ring can be removed.

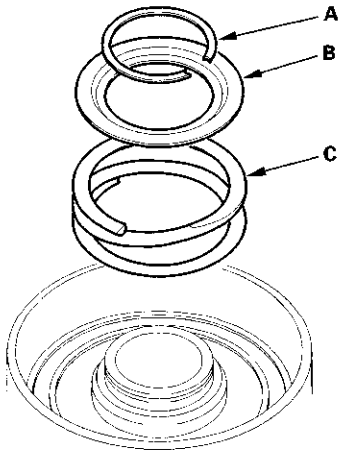


18. Remove the snap ring using snap ring pliers.

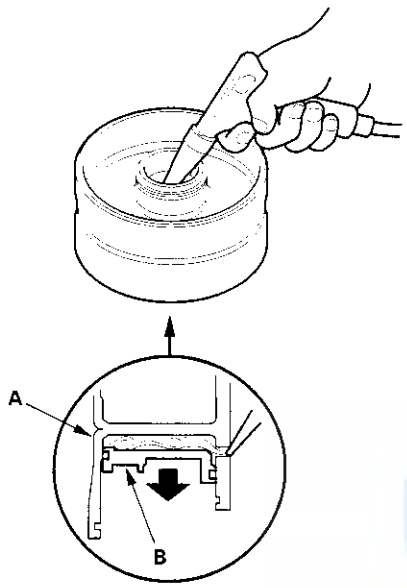


19. Remove the clutch spring compressor set.

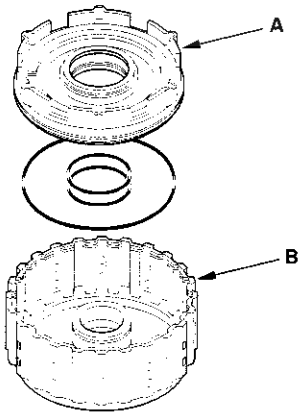
20. Remove the snap ring (A), the spring retainer (B), and the return spring (C).



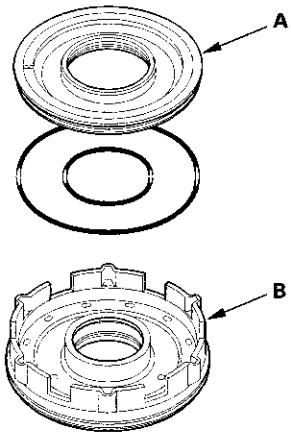
21. Wrap a shop rag around the clutch drum (A), and apply air pressure to the fluid passage to remove the clutch piston (B). Place a finger tip on the other passage while applying air pressure.



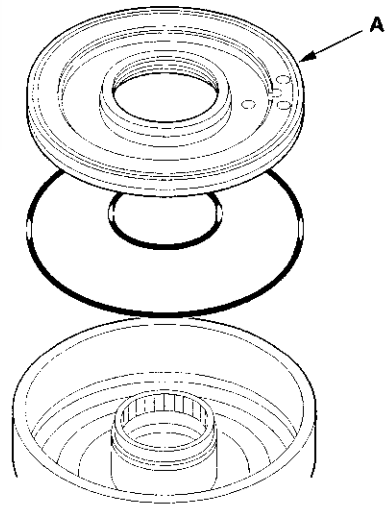
22. Remove the 1st/1st-hold clutch piston (A) from the clutch drum (B), and remove the O-rings from the 1st clutch piston.



23. Remove the 1st-hold clutch piston (A) from the 1st clutch piston (B), and remove the O-rings from the 1st-hold clutch piston.

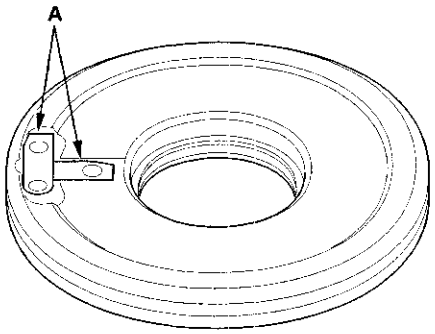


24. Remove the clutch piston (A), and remove the O-rings from the 2nd, 3rd, 4th, and 5th clutch pistons.



Clutch Inspection

1. Inspect the clutch pistons and clutch piston check valves (A). If the clutch piston check valves are loose or damaged, replace the clutch piston.



2. Check the spring retainer for wear and damage. If the spring retainer is worn or damaged, replace it.

3. Inspect the clutch discs, the clutch plates, and the clutch end-plate for wear, damage, and discoloration.

Clutch Discs
Standard Thickness: 1.94 mm (0.076 in.)

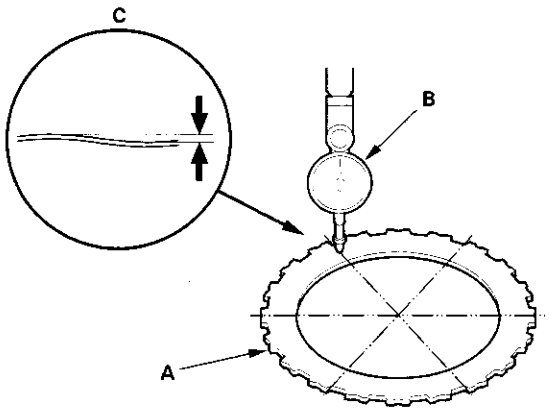
Clutch Flat-plates and Clutch Wave-plates
Standard Thickness

1st Clutch:	**1.6 mm (0.063 in.)**
1st-hold Clutch:	**1.8 mm (0.071 in.)**
2nd Clutch:	**1.8 mm (0.071 in.)**
3rd Clutch:	**2.0 mm (0.079 in.)**
4th Clutch:	**1.6 mm (0.063 in.)**
5th Clutch:	**1.6 mm (0.063 in.)**

- If the clutch discs are worn or damaged, replace them as a set. If the clutch discs are replaced, inspect the clearance between the clutch end-plate and the top disc (see page 14-332).
- If any clutch wave-plate is worn, damaged, or discolored, replace the damaged clutch wave-plate with a new clutch wave-plate, and inspect the other clutch wave-plates for phase difference (see page 14-331). If the clutch wave-plate is replaced, inspect the clearance between the clutch end-plate and the top disc (see page 14-332).
- If any clutch flat-plate is worn, damaged, or discolored, replace as a set. If the clutch flat-plate are replaced, inspect the clearance between the clutch end-plate and the top disc (see page 14-332).
- If the clutch end-plate is worn, damaged, or discolored, inspect the clearance between the clutch end-plate and the top disc (see page 14-332), then replace the clutch end-plate.

Clutch Wave-plate Phase Difference Inspection

1. Place the clutch wave-plate (A) on a surface plate, and set a dial indicator (B) on the clutch wave-plate.



2. Find the bottom (C) of a phase difference of the clutch wave-plate, zero the dial indicator and make a reference mark on the bottom of the clutch wave-plate.

3. Measure the phase differences of the 1st, 1st-hold, 2nd, 4th and the 5th clutch wave-plates.

   -1 Rotate the clutch wave-plate a bout 60-degrees while holding the clutch wave-plate by its circumference. The dial indicator should be at the top of a phase difference. Do not rotate the clutch wave-plate while holding its surface, always rotate it while holding its circumference.

   -2 Read the dial indicator. The dial indicator reads the phase difference of the clutch wave-plate between the bottom and top.

   Standard Phase Difference:
   1st Clutch: 0.17—0.30 mm (0.007—0.012 in.)
   1st-hold Clutch: 0.1—0.2 mm (0.004—0.008 in.)
   2nd Clutch: 0.11—0.21 mm (0.004—0.008 in.)
   4th Clutch: 0.1—0.2 mm (0.004—0.008 in.)
   5th Clutch: 0.12—0.22 mm (0.005—0.009 in.)

   -3 Rotate the clutch wave-plate a bout 60-degrees. The dial indicator should be at the bottom of a phase difference, and zero the dial indicator.

   -4 Measure the phase difference at the other two tops of the clutch wave-plate by following steps -1 thru -3.

4. Measure the phase difference of the 3rd clutch wave-plate.

   -1 Rotate the clutch wave-plate a bout 54-degrees or 72-degrees while holding the clutch wave-plate by its circumference. The dial indicator should be at the top of a phase difference. Do not rotate the clutch wave-plate while holding its surface, always rotate it while holding its circumference.

   -2 Read the dial indicator. The dial indicator reads the phase difference of the clutch wave-plate between the bottom and top.

   Standard Phase Difference:
   3rd Clutch: 0.1—0.2 mm (0.004—0.008 in.)

   -3 Rotate the clutch wave-plate a bout 54-degrees or 72-degrees. The dial indicator should be at the bottom of a phase difference, and zero the dial indicator.

   -4 Measure the phase difference at the other two tops of the clutch wave-plate by following steps -1 thru -3.

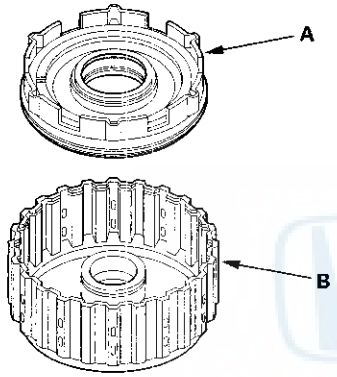
5. If two of the three measurements are within the standard, the clutch wave-plate is OK. If two of the measurements are out of the standard, replace the clutch wave-plate.

Clutch Clearance Inspection

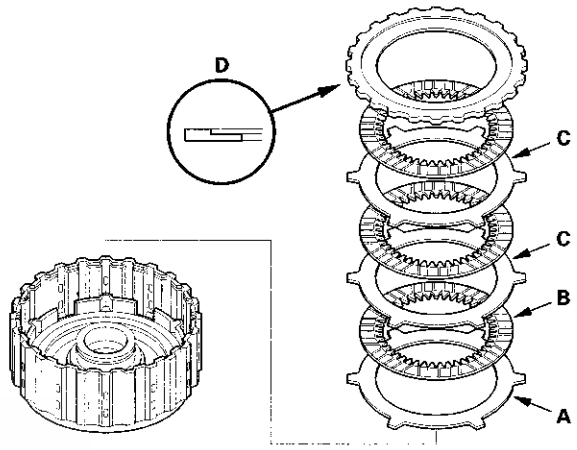
Special Tools Required
Clutch compressor attachment 07ZAE-PRP0100

1. Inspect the clutch piston, the clutch discs, plates, and the end-plate for wear and damage (see page 14-330), and inspect the clutch wave-plate phase difference (see page 14-331), if necessary.

2. Install the 1st-hold clutch piston in the 1st clutch piston, and install the 1st/1st-hold clutch piston (A) in the 1st clutch drum (B). Do not install the O-rings on the clutch pistons during inspection.

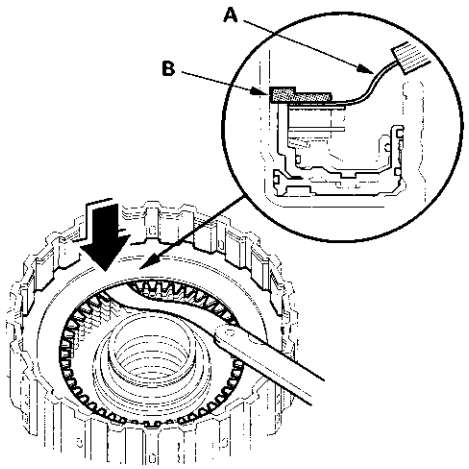


3. Install the 1st-hold clutch flat-plate (A), alternately install the clutch discs (B) (3) and the 1st-hold clutch wave-plates (C) (2), then install 1st-hold clutch plate B (D) with the flat side toward the top disc.



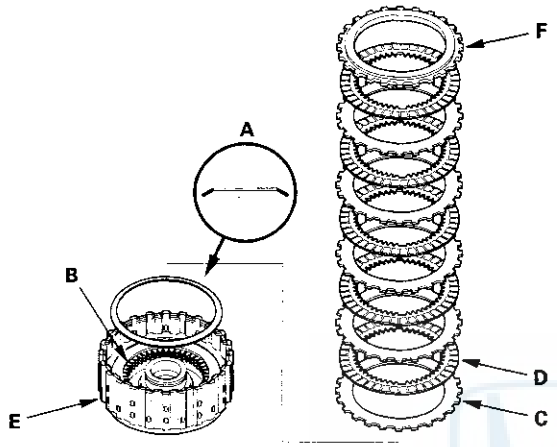
4. Measure the clearance between 1st-hold clutch plate B and the top disc using a feeler gauge (A) while pressing 1st-hold clutch plate B down. Take measurements in at least three places, and use the average as the actual clearance.

Clearance Between 1st-hold Clutch Plate B and Top Disc
Service Limit: 0.6—1.0 mm (0.024—0.039 in.)

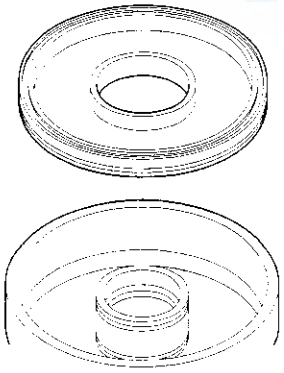


5. If the clearance is out of the standard, replace 1st-hold clutch plate B and the 1st-hold clutch discs as a set, and recheck.

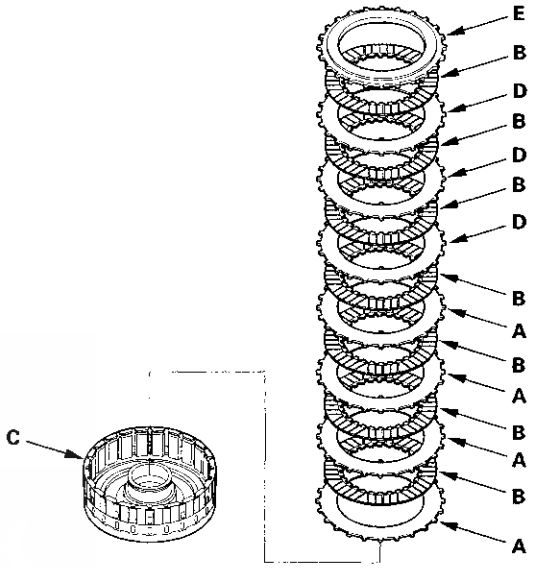
6. Install the disc spring (A) on 1st-hold clutch plate B in the direction shown. Starting with the 1st clutch wave-plate, alternately install the clutch wave-plates (C) (5) and the clutch discs (D) (5) in the 1st clutch drum (E), then install the clutch end-plate (F) with the flat side toward the top disc.



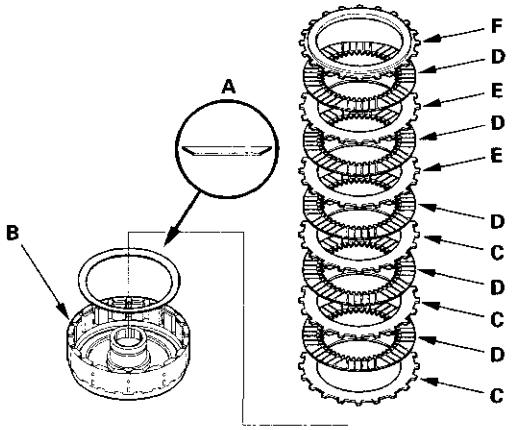
7. Install the clutch pistons in the 2nd, 3rd, 4th, and the 5th clutch drums. Do not install the O-rings on the clutch pistons during inspection.



8. Starting with the 2nd clutch flat-plate, alternately install the clutch flat-plates (A) (4) and the clutch discs (B) (4) in the 2nd clutch drum (C), and alternately install the clutch wave-plates (D) (3) and the clutch discs (B) (3). Install the clutch end-plate (E) with the flat side toward the top disc.



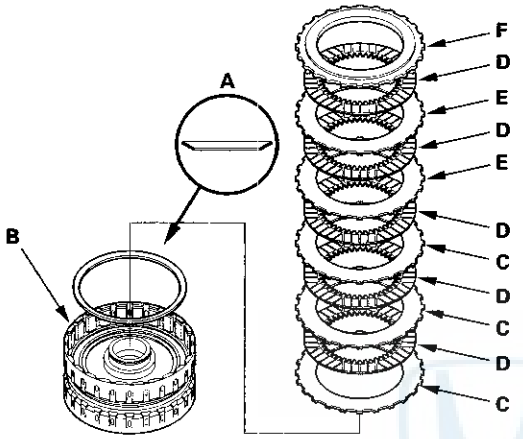
9. Install the disc spring (A) in the 3rd clutch drum (B) in the direction shown. Starting with the 3rd clutch flat-plate, alternately install the clutch flat-plates (C) (3) and clutch discs (D) (3), and alternately install the clutch wave-plates (E) (2) and the clutch discs (D) (2). Install the clutch end-plate (F) with the flat side toward the top disc.



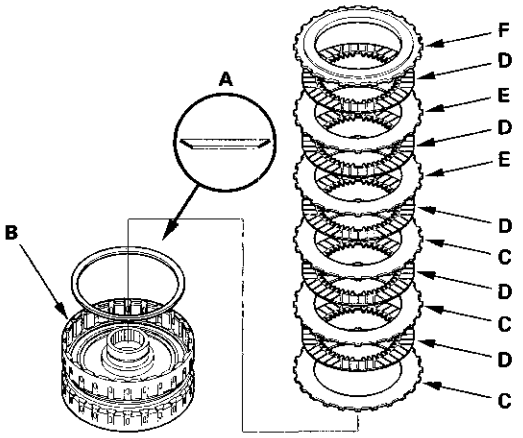
(cont'd)

Clutch Clearance Inspection (cont'd)

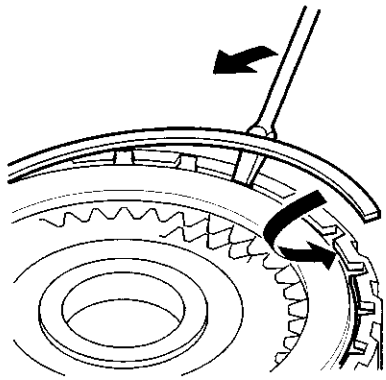
10. Install the disc spring (A) in the 4th clutch drum (B) in the direction shown. Starting with the 4th clutch flat-plate, alternately install the clutch flat-plates (C) (3) and clutch discs (D) (3), and alternately install the clutch wave-plates (E) (2) and the clutch discs (D) (2). Install the clutch end-plate (F) with the flat side toward the top disc.



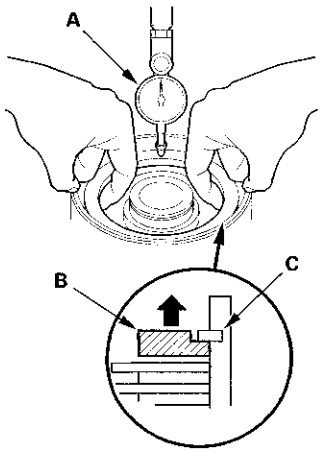
11. Install the disc spring (A) in the 5th clutch drum (B) in the direction shown. Starting with the 5th clutch flat-plate, alternately install the clutch flat-plates (C) (3) and clutch discs (D) (3), and alternately install the clutch wave-plates (E) (2) and the clutch discs (D) (2). Install the clutch end-plate (F) with the flat side toward the top disc.



12. Install the snap ring using a screwdriver to secure the clutch end-plate.

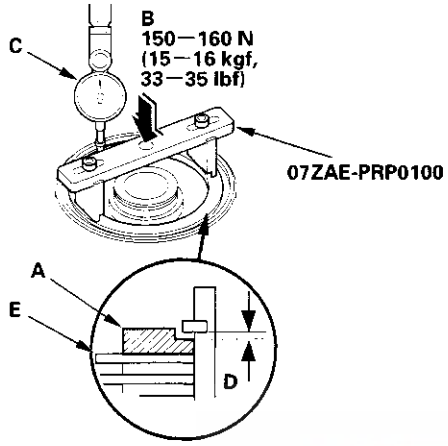


13. Set a dial indicator (A) on the clutch end-plate (B).



14. Zero the dial indicator with the clutch end-plate lifted up to the snap ring (C).

15. Release the clutch end-plate to lower it, then put the clutch compressor attachment on the end-plate (A).



16. Press the clutch compressor attachment down with 150—160 N (15—16 kgf, 33—35 lbf) (B) using a force gauge, and read the dial indicator (C).

17. The dial indicator reads the clearance (D) between the clutch end-plate and the top disc (E). Take measurements in at least three places, and use the average as the actual clearance.

Clearance Between Clutch End-Plate and Top Disc
Standard:
1st Clutch: 1.15—1.35 mm (0.045—0.053 in.)
2nd Clutch: 1.05—1.25 mm (0.041—0.049 in.)
3rd Clutch: 0.8—1.0 mm (0.031—0.039 in.)
4th Clutch: 0.75—0.95 mm (0.030—0.037 in.)
5th Clutch: 0.75—0.95 mm (0.030—0.037 in.)

18. If the clearance is out of the standard, select a new clutch end-plate from the following table.

1ST CLUTCH END-PLATES

Mark	Part Number	Thickness (t)
1	22551-RDK-003	3.1 mm (0.122 in.)
2	22552-RDK-003	3.2 mm (0.126 in.)
3	22553-RDK-003	3.3 mm (0.130 in.)
4	22554-RDK-003	3.4 mm (0.134 in.)
5	22555-RDK-003	3.5 mm (0.138 in.)
6	22556-RDK-003	3.6 mm (0.142 in.)
7	22557-RDK-003	3.7 mm (0.146 in.)
8	22558-RDK-003	3.8 mm (0.150 in.)
9	22559-RDK-003	3.9 mm (0.154 in.)

2ND CLUTCH END-PLATES

Mark	Part Number	Thickness (t)
1	22561-RDK-003	2.1 mm (0.083 in.)
2	22562-RDK-003	2.2 mm (0.087 in.)
3	22563-RDK-003	2.3 mm (0.091 in.)
4	22564-RDK-003	2.4 mm (0.094 in.)
5	22565-RDK-003	2.5 mm (0.098 in.)
6	22566-RDK-003	2.6 mm (0.102 in.)
7	22567-RDK-003	2.7 mm (0.106 in.)
8	22568-RDK-003	2.8 mm (0.110 in.)
9	22569-RDK-003	2.9 mm (0.114 in.)

(cont'd)

Clutch Clearance Inspection (cont'd)

3RD CLUTCH END-PLATES

Mark	Part Number	Thickness (t)
1	22591-RJB-E01	2.1 mm (0.083 in.)
2	22592-RJB-E01	2.2 mm (0.087 in.)
3	22593-RJB-E01	2.3 mm (0.091 in.)
4	22594-RJB-E01	2.4 mm (0.094 in.)
5	22595-RJB-E01	2.5 mm (0.098 in.)
6	22596-RJB-E01	2.6 mm (0.102 in.)
7	22597-RJB-E01	2.7 mm (0.106 in.)
8	22598-RJB-E01	2.8 mm (0.110 in.)
9	22599-RJB-E01	2.9 mm (0.114 in.)

4TH CLUTCH END-PLATES

Mark	Part Number	Thickness (t)
1	22571-RJB-E01	2.1 mm (0.083 in.)
2	22572-RJB-E01	2.2 mm (0.087 in.)
3	22573-RJB-E01	2.3 mm (0.091 in.)
4	22574-RJB-E01	2.4 mm (0.094 in.)
5	22575-RJB-E01	2.5 mm (0.098 in.)
6	22576-RJB-E01	2.6 mm (0.102 in.)
7	22577-RJB-E01	2.7 mm (0.106 in.)
8	22578-RJB-E01	2.8 mm (0.110 in.)
9	22579-RJB-E01	2.9 mm (0.114 in.)

5TH CLUTCH END-PLATES

Mark	Part Number	Thickness (t)
1	22571-RJB-003	2.1 mm (0.083 in.)
2	22572-RJB-003	2.2 mm (0.087 in.)
3	22573-RJB-003	2.3 mm (0.091 in.)
4	22574-RJB-003	2.4 mm (0.094 in.)
5	22575-RJB-003	2.5 mm (0.098 in.)
6	22576-RJB-003	2.6 mm (0.102 in.)
7	22577-RJB-003	2.7 mm (0.106 in.)
8	22578-RJB-003	2.8 mm (0.110 in.)
9	22579-RJB-003	2.9 mm (0.114 in.)

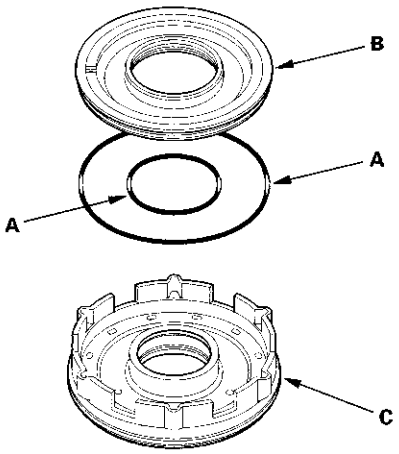
19. Install a new clutch end-plate, and recheck the clearance. If the thickest clutch end-plate is installed, but the clearance is still over the standard, replace the clutch discs and the clutch end-plates.

Clutch Reassembly

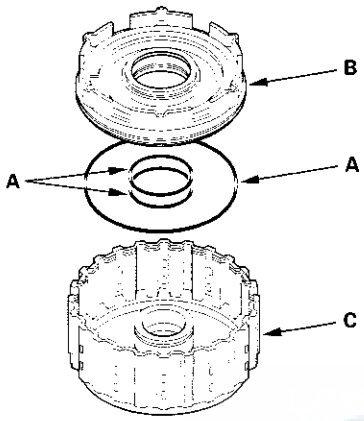
Special Tools Required
Clutch spring compressor set 07LAE-PX40000

1. Soak the clutch discs thoroughly in ATF for a minimum of 30 minutes.

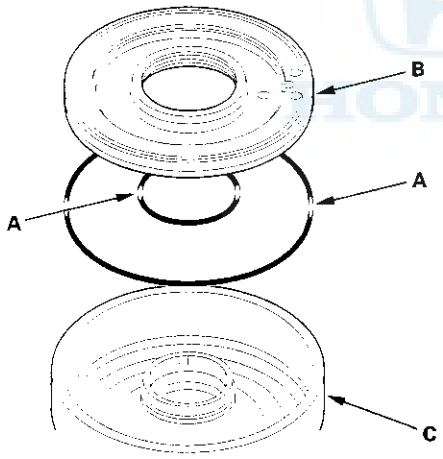
2. Install new O-rings (A) on the 1st-hold clutch piston (B), and install the 1st-hold clutch piston in the 1st clutch piston (C).



3. Install new O-rings (A) on the 1st clutch piston (B), and install the 1st/1st-hold clutch piston in the 1st/1st-hold clutch drum (C) while applying pressure and rotating to ensure proper seating. Do not pinch the O-ring.

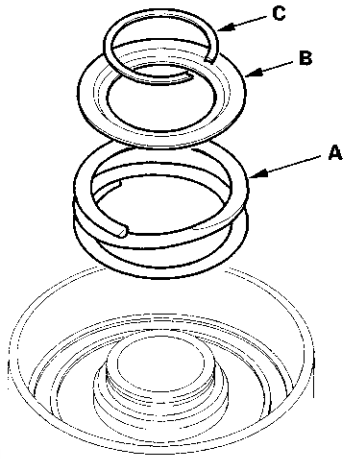


4. Install the O-rings (A) on the 2nd, 3rd, 4th and 5th clutch piston (B).

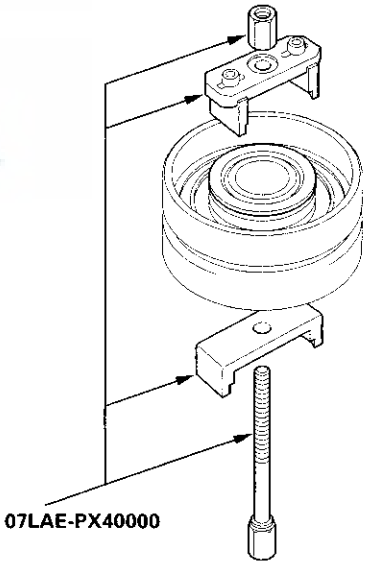


5. Install the clutch pistons in the clutch drums (C) while applying pressure and rotating to ensure proper seating. Do not pinch the O-ring.

6. Set the return spring (A) and the spring retainer (B), and position the snap ring (C) on the spring retainer.



7. Install the clutch spring compressor set.



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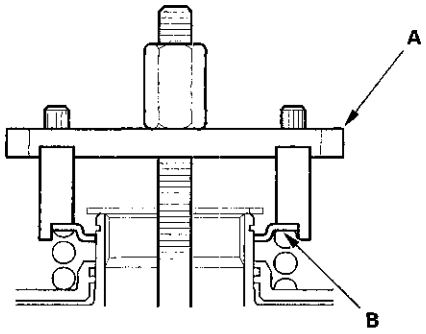
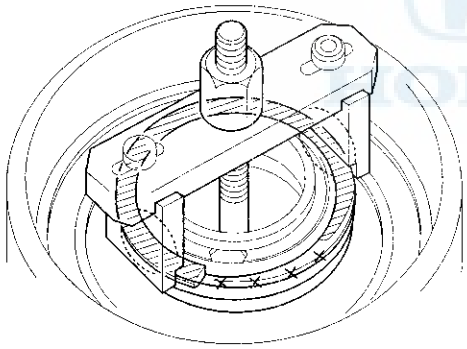
Clutch Reassembly (cont'd)

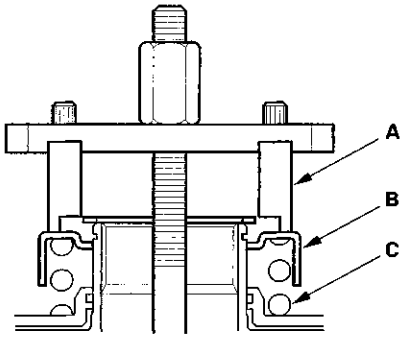
8. Be sure the clutch spring compressor set (A) is adjusted to have full contact with the spring retainer (B) on the 1st, 2nd, and 4th clutches.



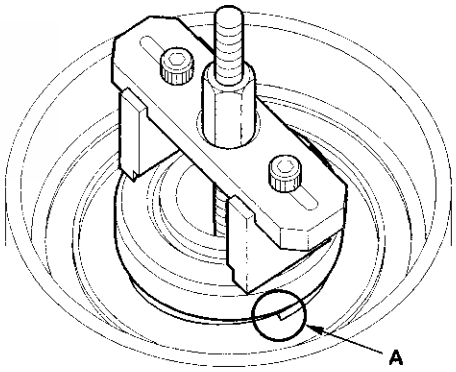
9. Check the placement of the clutch spring compressor set. If either end of the clutch spring compressor set is set over an area of the spring retainer that is unsupported by the return spring, the spring retainer may be damaged.



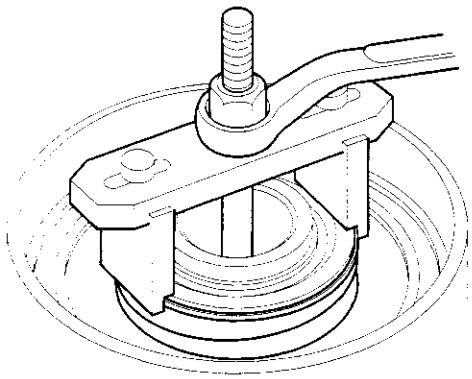
10. Set the clutch spring compressor set (A) on the spring retainer (B) of the 3rd and 5th clutches so that it compresses the clutch return spring (C).



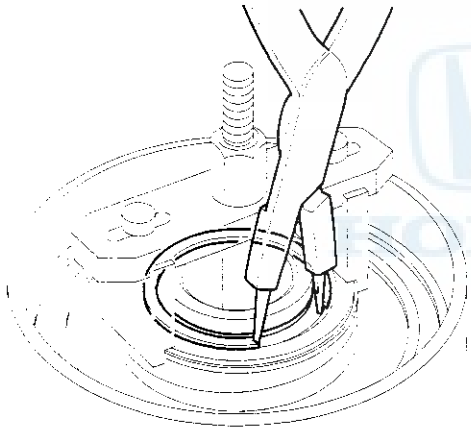
11. Check the placement of the clutch spring compressor set. If either end of the clutch spring compressor set is not set over the clutch return spring end (A), the spring retainer may be damaged.



12. Compress the return spring until the snap ring can be installed.

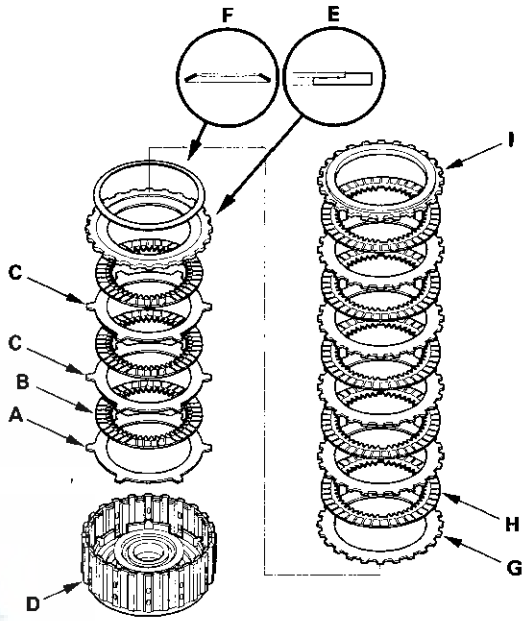


13. Install the snap ring using snap ring pliers.



14. Remove the clutch spring compressor set.

15. Install the 1st-hold clutch flat-plate (A), alternately install the clutch discs (B) (3) and the 1st-hold clutch wave-plates (C) (2) in the 1st/1st-hold clutch drum (D), then install 1st-hold clutch plate B (E) with the flat side toward the top disc.

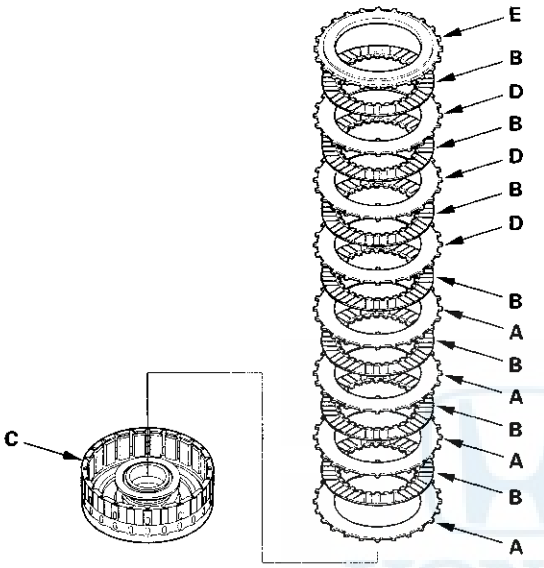


16. Install the disc spring (F) on 1st-hold clutch plate B in the direction shown. Starting with the 1st clutch wave-plate, alternately install the clutch wave-plates (G) (5) and the 1st clutch discs (H) (5), then install the clutch end-plate (I) with the flat side toward the top disc.

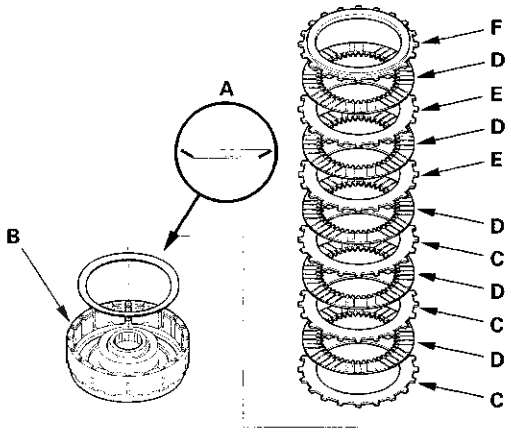
(cont'd)

Clutch Reassembly (cont'd)

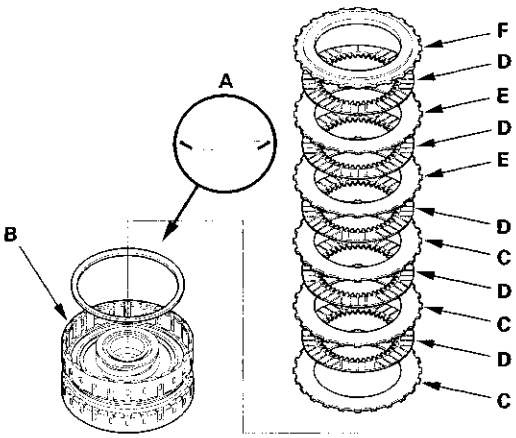
17. Starting with the 2nd clutch flat-plate, alternately install the clutch flat-plates (A) (4) and the clutch discs (B) (4) in the 2nd clutch drum (C), and alternately install the clutch wave-plates (D) (3) and the clutch discs (B) (3). Install the clutch end-plate (E) with the flat side toward the top disc.



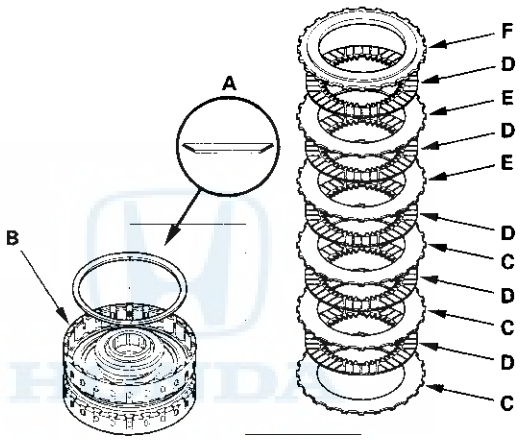
18. Install the disc spring (A) in the 3rd clutch drum (B) in the direction shown. Starting with the 3rd clutch flat-plate, alternately install the clutch flat-plates (C) (3) and the clutch discs (D) (3), and alternately install the clutch wave-plates (E) (2) and the clutch discs (D) (2). Install the clutch end-plate (F) with the flat side toward the top disc.



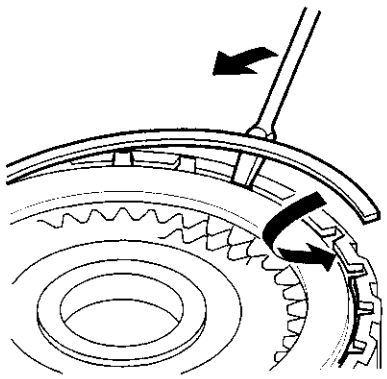
19. Install the disc spring (A) in the 4th clutch drum (B) in the direction shown. Starting with the 4th clutch flat-plate, alternately install the clutch flat-plates (C) (3) and the clutch discs (D) (3), and alternately install the clutch wave-plates (E) (2) and the clutch discs (D) (2). Install the clutch end-plate (F) with the flat side toward the top disc.



20. Install the disc spring (A) in the 5th clutch drum (B) in the direction shown. Starting with the 5th clutch flat-plate, alternately install the clutch flat-plates (C) (3) and the clutch discs (D) (3), and alternately install the clutch wave-plates (E) (2) and the clutch discs (D) (2). Install the clutch end-plate (F) with the flat side toward the top disc.



21. Install the snap ring using a screwdriver to secure the clutch end-plate.

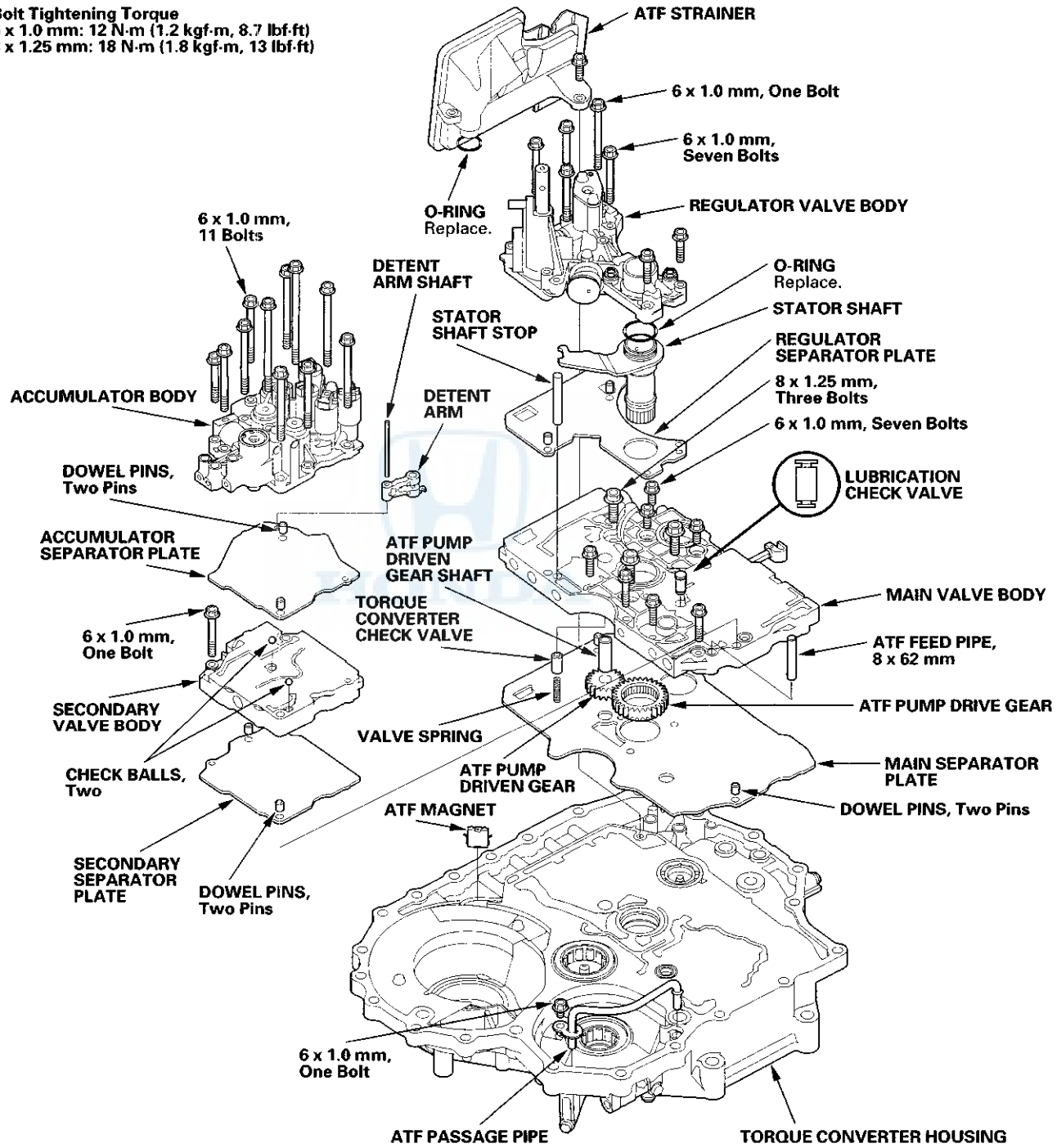


22. Check that the clutch piston moves by applying air pressure into the fluid passage.

Transmission Reassembly

Exploded View

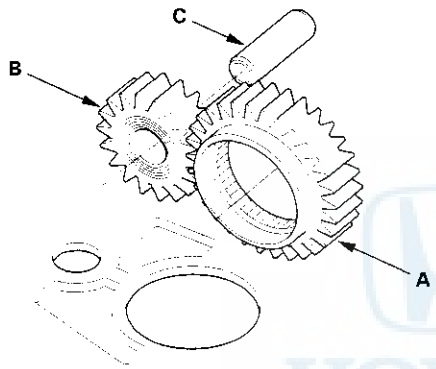
Bolt Tightening Torque
6 x 1.0 mm: 12 N·m (1.2 kgf·m, 8.7 lbf·ft)
8 x 1.25 mm: 18 N·m (1.8 kgf·m, 13 lbf·ft)



Special Tools Required
Mainshaft holder 07GAB-PF50101

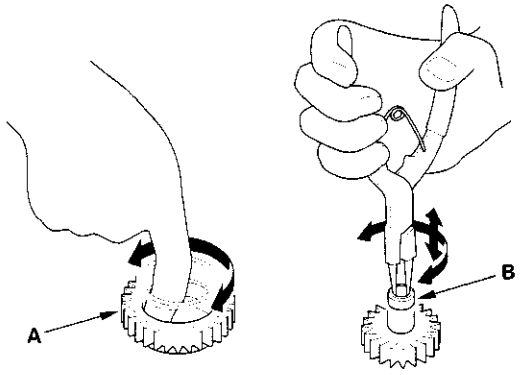
1. Make sure that the ATF magnet is cleaned and installed in the torque converter housing. Clean and install the ATF magnet, if necessary.

2. Install the main separator plate and the two dowel pins on the torque converter housing. Then install the ATF pump drive gear (A), the driven gear (B), and the ATF pump driven gear shaft (C). Install the ATF pump driven gear with its grooved and chamfered side facing down.



3. Install the torque converter check valve spring and the valve in the torque converter housing.

4. Install the main valve body (seven 6 mm bolts and three 8 mm bolts). Make sure the ATF pump drive gear (A) rotates smoothly in the normal operating direction, and the ATF pump driven gear shaft (B) moves smoothly in the axial and normal operating direction.



5. If the ATF pump drive gear and the ATF pump driven gear shaft do not move smoothly, loosen the main valve body bolts. Realign the ATF pump driven gear shaft, and retighten the bolts to the specified torques, then recheck. Failure to align the ATF pump driven gear shaft correctly will result in a seized ATF pump drive gear or ATF pump driven gear shaft.

6. Install the lubrication check valve in the main valve body, in the direction shown in the exploded view.

7. Install the secondary separator plate and the two dowel pins on the main valve body, and install the secondary valve body (one bolt).

8. Install the two check balls in the secondary valve body.

9. Install the accumulator separator plate and the two dowel pins on the secondary valve body.

10. Position the detent arm on the accumulator separator plate, and install the detent arm shaft into the detent arm through the separator plates to the main valve body.

11. Install the 8 x 62 mm ATF feed pipe in the main valve body, and install the accumulator body (11 bolts).

12. Install the regulator separator plate and the two dowel pins on the main valve body.

13. Install the stator shaft with a new O-ring, and install the regulator valve body (seven bolts).

14. Install the stator shaft stop in the main valve body.

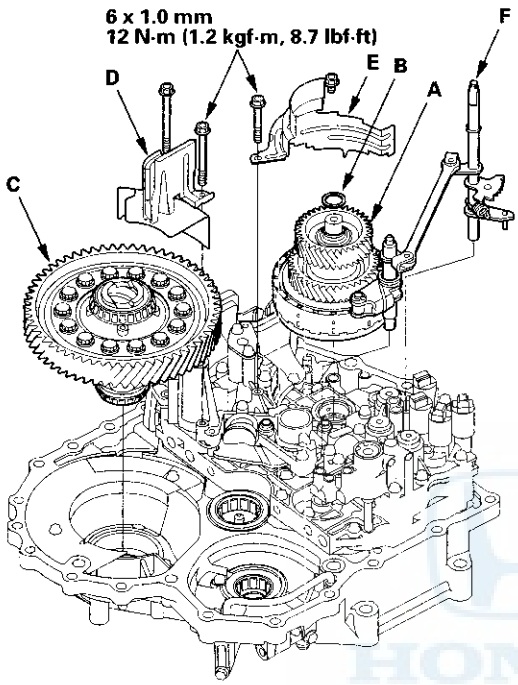
15. Install the ATF strainer with a new O-ring (one bolt).

16. Install the ATF passage pipe (one bolt) in the torque converter housing.

(cont'd)

Transmission Reassembly (cont'd)

17. Install the intermediary shaft (A) into the main valve body, and install the 26.5 mm washer (B) on the top of the intermediary shaft.



18. Install the differential assembly (C) in the torque converter housing.

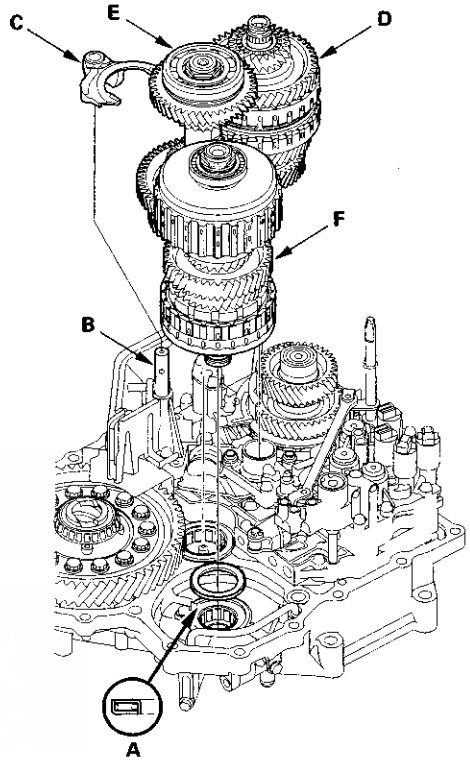
19. Install the baffle plate (D), and make sure if the differential is clear of the baffle plate.

20. Install the baffle plate (E), and make sure if the intermediary shaft is clear of the baffle plate.

21. Install the control shaft and the park lever link (F).

22. Assemble the mainshaft, the countershaft, and the secondary shaft.

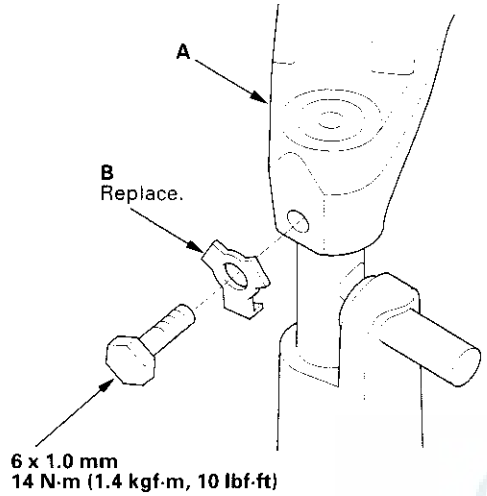
23. Install the needle bearing (A) on the secondary shaft roller bearing in the torque converter housing.



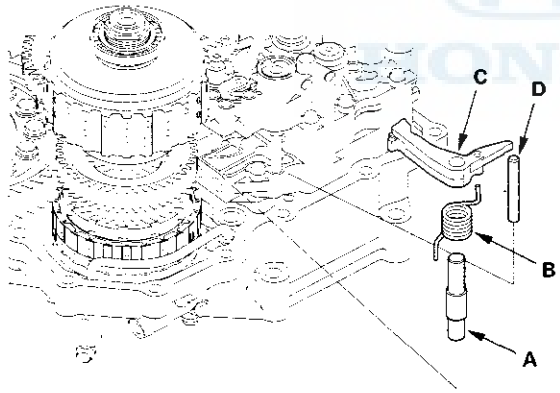
24. Turn the shift fork shaft (B) so the large chamfered hole is facing the fork bolt hole of the shift fork.

25. Engage the shift fork (C) with the reverse selector on the countershaft, and join the mainshaft (D), countershaft (E), and secondary shaft (F), then install them in the torque converter housing and the shift fork on the shift fork shaft.

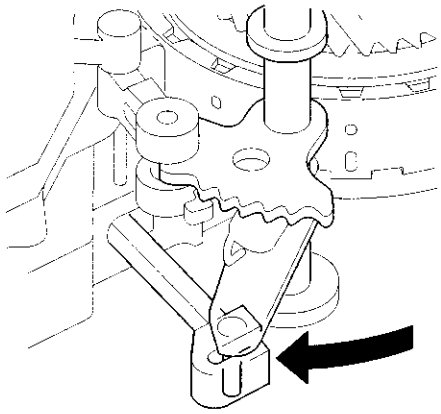
26. Secure the shift fork (A) to the shift fork shaft with the lock bolt and a new lock washer (B), then bend the lock tab of the lock washer against the bolt head.



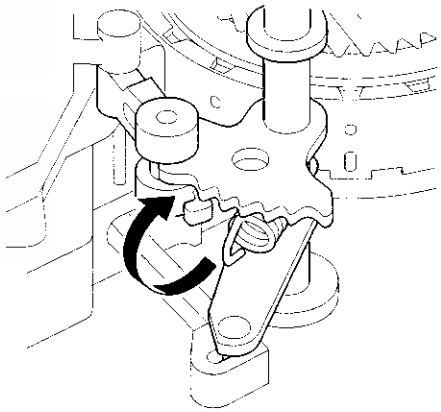
27. Install the park pawl shaft (A), the pawl spring (B), the park pawl (C), and the park pawl stop (D).



28. Align the control lever pin with the manual valve guide.



29. Hook the detent spring to the detent arm.



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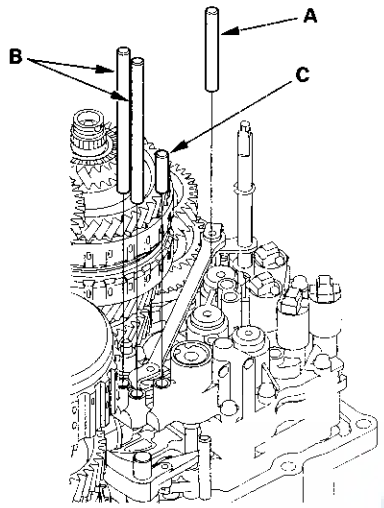
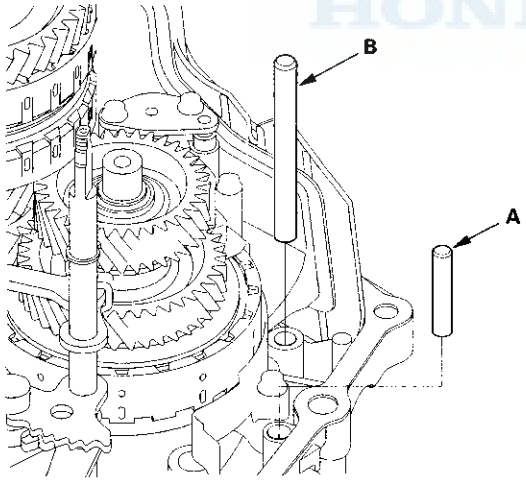
Transmission Reassembly (cont'd)

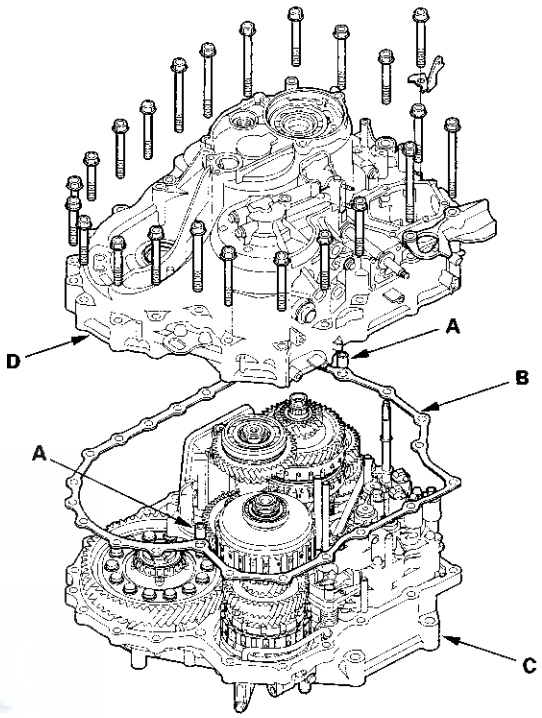
30. Install the 8 x 85 mm ATF feed pipe (A), the 8 x 151.5 mm pipes (B), and the 8 x 40 mm pipe (C) in the accumulator body.



31. Install the 8 x 57.5 mm ATF feed pipe (A) and the 10 x 123 mm pipe (B) in the torque converter housing.

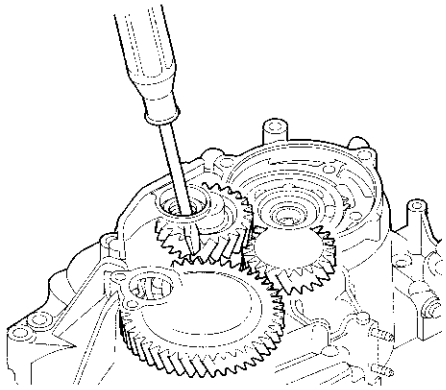


32. Install the two dowel pins (A) and a new gasket (B) on the torque converter housing (C).

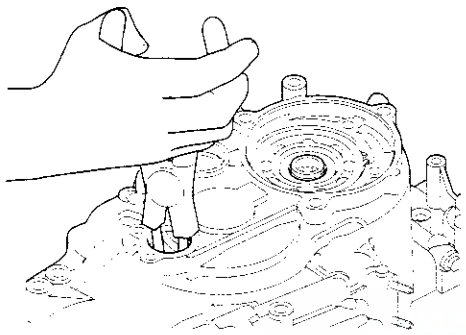


33. Place the transmission housing (D) on the torque converter housing.

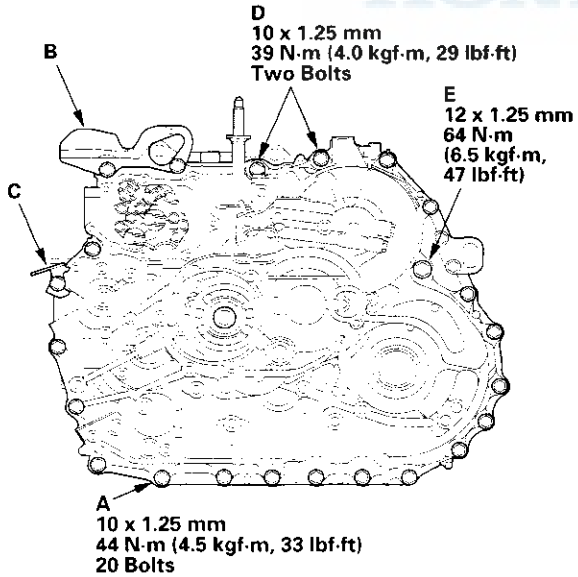
34. Wrap a screwdriver tip with tape to prevent damage to the reverse idler gear teeth. Engage the reverse idler gear with the reverse gears by rotating the idler gear using a screwdriver.



35. While expanding the snap ring of the countershaft bearing using snap ring pliers, install the transmission housing onto the bearing part-way. Then release snap ring pliers, and push down on the transmission housing until it bottoms and snap ring snaps into place in the transmission housing snap ring groove.



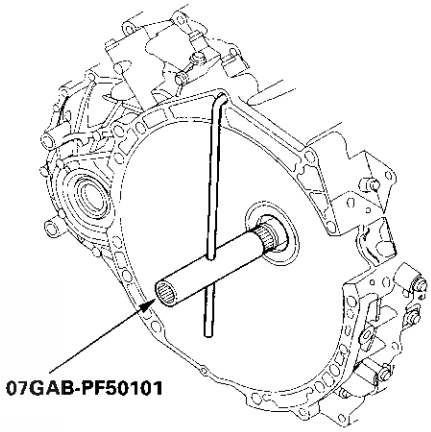
36. Install the transmission housing mounting bolts (A) (20 bolts) along with the transmission hanger (B) and the ground terminal bracket (C), and tighten the bolts in at least two steps in a criss-cross pattern to 44 N·m (4.5 kgf·m, 33 lbf·ft).



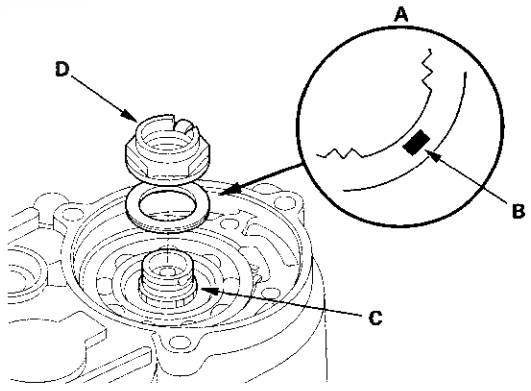
37. Install and tighten the two mounting bolts (D) to 39 N·m (4.0 kgf·m, 29 lbf·ft). Keep the mounting bolts free of grease or oil.

38. Install and tighten the 12 x 1.25 mm bolt (E) to 64 N·m (6.5 kgf·m, 47 lbf·ft).

39. Install the mainshaft holder onto the mainshaft.



40. Install a new lock washer (A) with the marked side (B) up over the mainshaft (C), and apply ATF to surfaces of the lock washer and the old locknut (D).

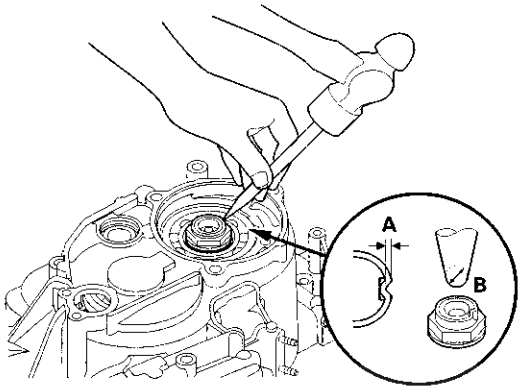


41. Install the old locknut, and tighten it to seat the lock washer to 178 N·m (18.2 kgf·m, 132 lbf·ft), then remove the old locknut.

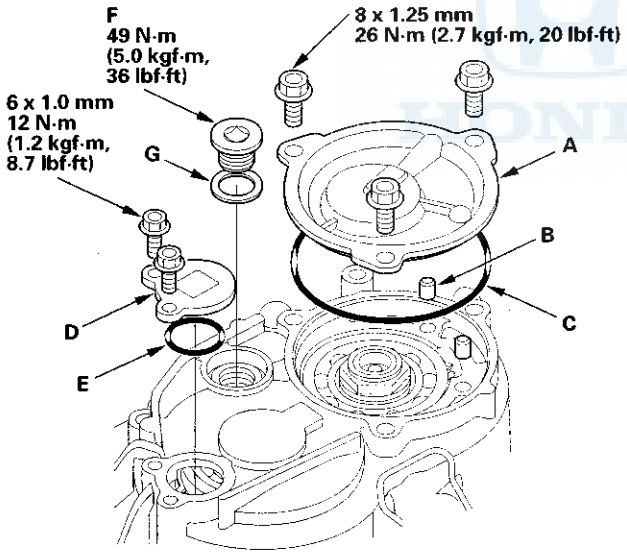
(cont'd)

Transmission Reassembly (cont'd)

42. Install a new locknut, and tighten it to 178 N·m (18.2 kgf·m, 132 lbf·ft), then stake the locknut to a depth (A) of 0.7—1.3 mm (0.03—0.05 in.) using a 3.5 mm punch (B).



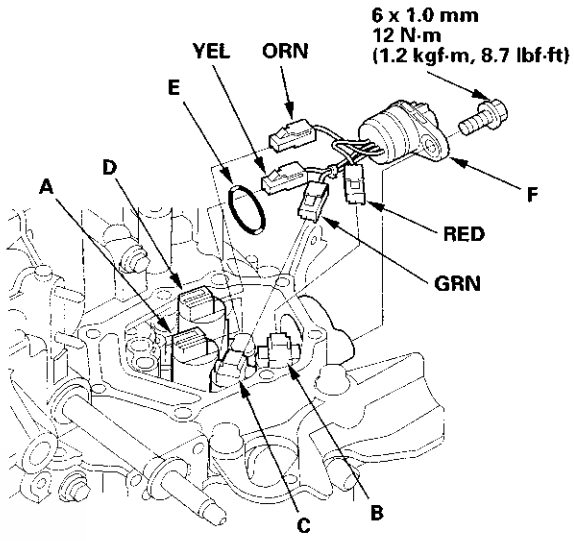
43. Install the end cover (A), the dowel pin (B), and a new O-ring (C).



44. Install the snap ring cap (D) and a new O-ring (E).

45. Apply thread lock sealant to the threads of the sealing plug (F), and install the sealing plug and a new sealing washer (G).

46. Install a new O-ring (E) on the solenoid wire harness connector (F).



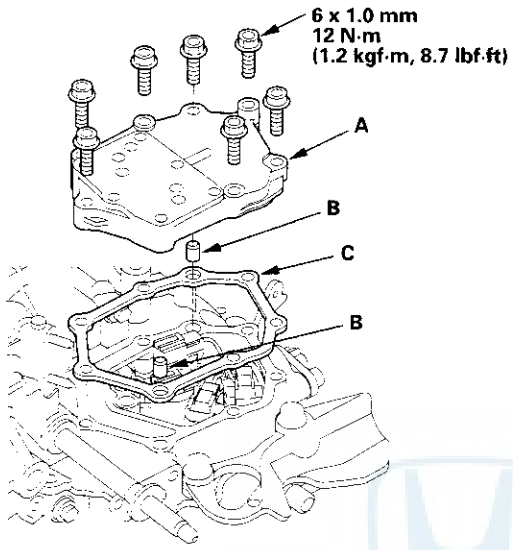
47. Route the solenoid wire harness through the transmission housing, and install the solenoid wire harness connector.

48. Connect the shift solenoid wire harness terminals to the shift solenoid valves:

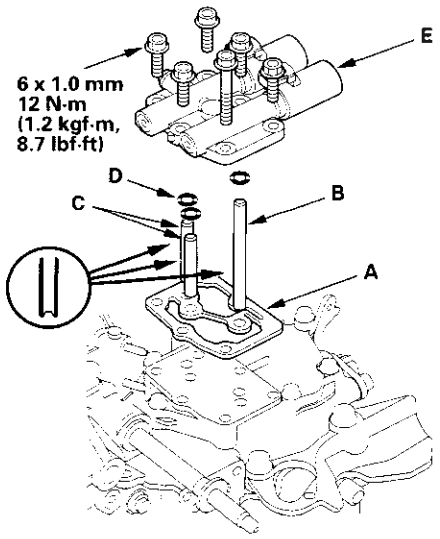
- YEL wire connector to shift solenoid valve A.
- RED wire connector to shift solenoid valve B.
- GRN wire connector to shift solenoid valve C.
- ORN wire connector to shift solenoid valve D.

49. Secure the solenoid wire harness connector with the bolt on the transmission housing.

50. Install the solenoid valve cover (A) with the two dowel pins (B) and a new gasket (C), and secure it with the seven bolts.

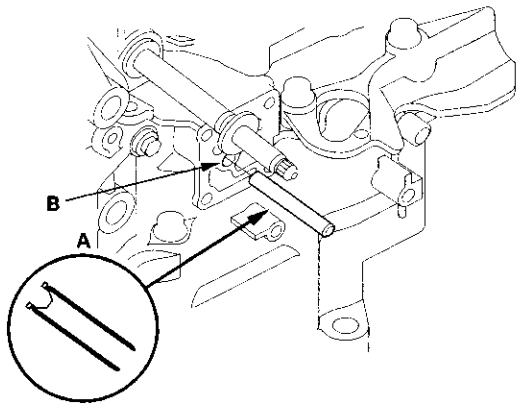


51. Place a new gasket (A) on the solenoid valve cover, then install the 8 x 105.8 mm ATF feed pipe (B) and the 8 x 58.3 mm pipes (C) with the filter end in the transmission housing.

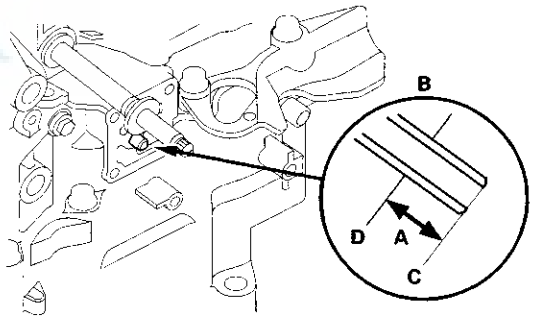


52. Install new O-rings (D) over the ATF feed pipes, and install A/T clutch pressure control solenoid valves A and B (E).

53. Install the 8 x 53 mm ATF joint pipe (A) with the filter end into its mounting hole (B).



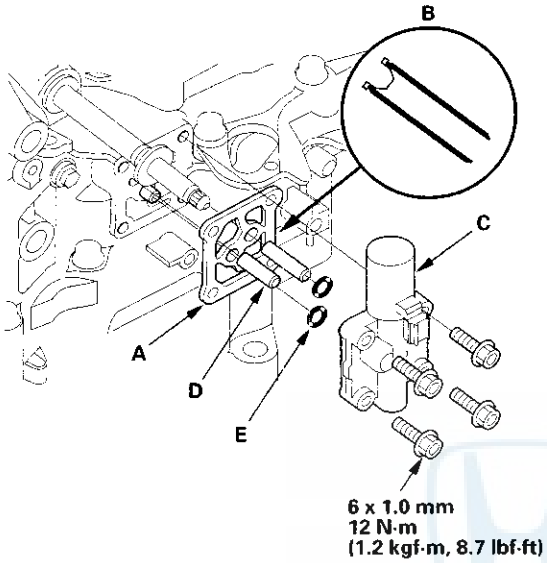
54. Check the height (A) of the 8 x 53 mm ATF joint pipe (B) between the top (C) of the pipe and the solenoid valve body mounting surface (D). The height is about 7 mm (0.3 in.). If the height is over 7 mm (0.3 in.), install the pipe securely until it stops the accumulator body.



(cont'd)

Transmission Reassembly (cont'd)

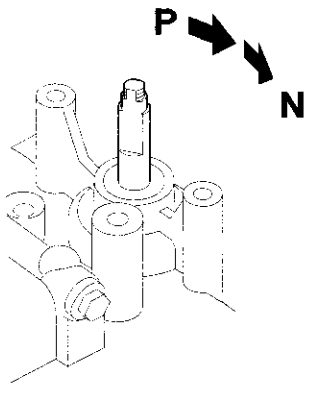
55. Install a new gasket (A) on the transmission housing. Install the 8 x 34.5 mm ATF pipe (B) with the filter end in the transmission housing, and install the 8 x 25.5 mm ATF pipe (D).



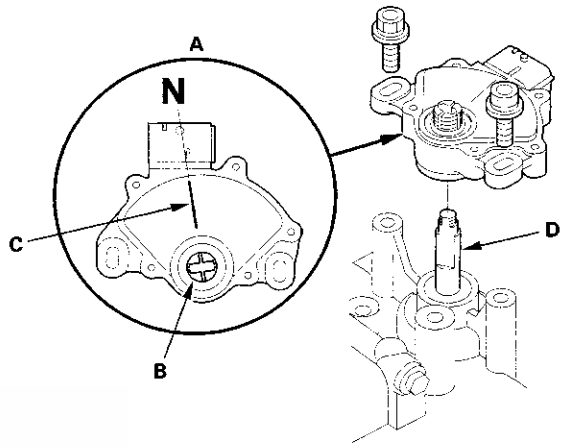
56. Install new O-rings (E) over the ATF joint pipes.

57. Install A/T clutch pressure control solenoid valve C.

58. With a 6.0 mm wrench, turn the selector control shaft fully counterclockwise (viewed from the shaft end) to the P position. Turn the selector control shaft back two click-stopped positions so that it is in the N position.

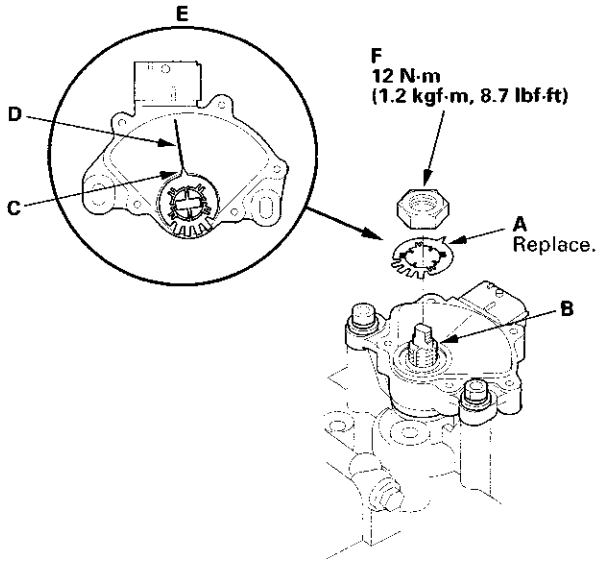


59. Set the transmission range switch (A) to the N position. The transmission range switch clicks in the N position, and the selector control shaft hole (B) aligns with the N positioning line (C).

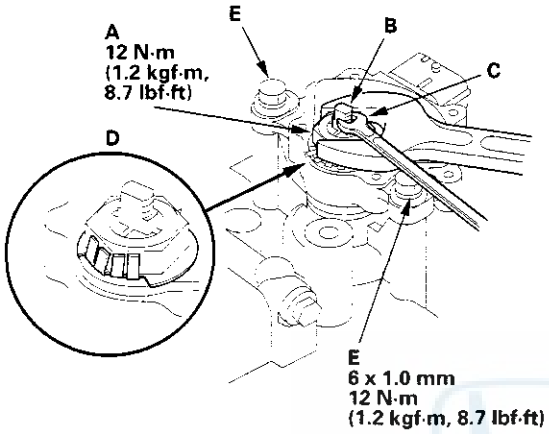


60. Install the transmission range switch gently over the selector control shaft (D), and install the bolts loosely.

61. Install a new lock washer (A) over the selector control shaft (B) by aligning the indicator tab (C) of the lock washer with the N positioning line (D) on the transmission range switch (E), and install the locknut (F).

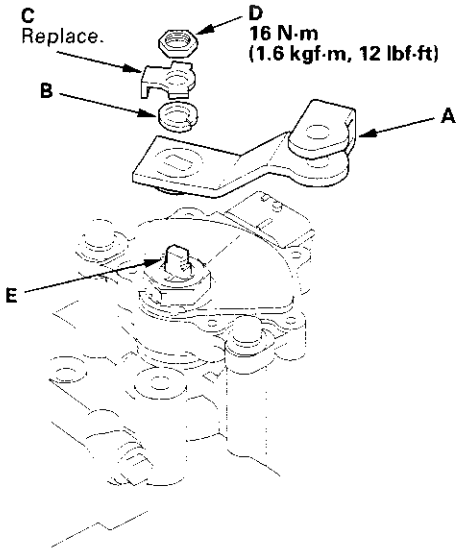


62. Push the locknut against the transmission housing to seat the range switch into the selector control shaft, and tighten the locknut (A) to 12 N·m (1.2 kgf·m, 8.7 lbf·ft) while holding the selector control shaft (B) with a 6 mm wrench (C), then bend the lock tabs (D) against the locknut.

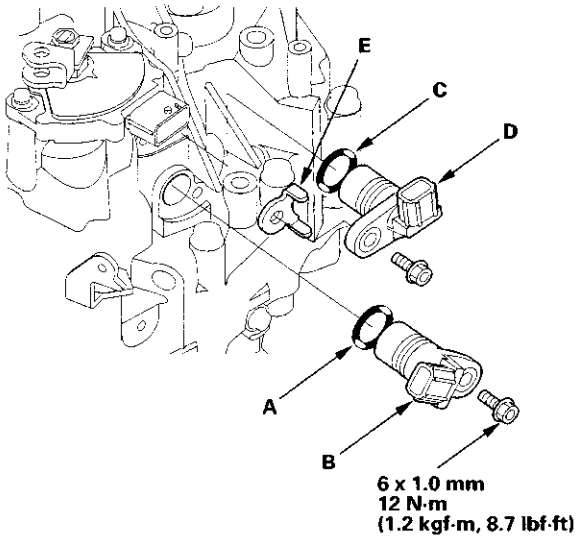


63. Tighten the bolt (E) securing the transmission range switch to 12 N·m (1.2 kgf·m, 8.7 lbf·ft).

64. Install the control lever (A), spring washer (B), a new lock washer (C), and locknut (D) on the selector control shaft (E). Bend the lock tab of the lock washer against the locknut.

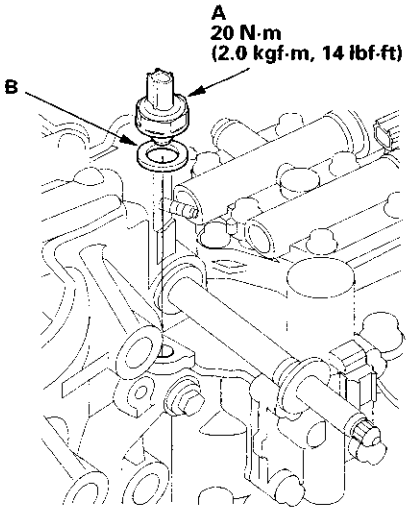


65. Install a new O-ring (A) on the input shaft (mainshaft) speed sensor (B), and install the input shaft (mainshaft) speed sensor.



66. Install a new O-ring (C) on the output shaft (countershaft) speed sensor (D), and install the output shaft (countershaft) speed sensor and the sensor washer (E).

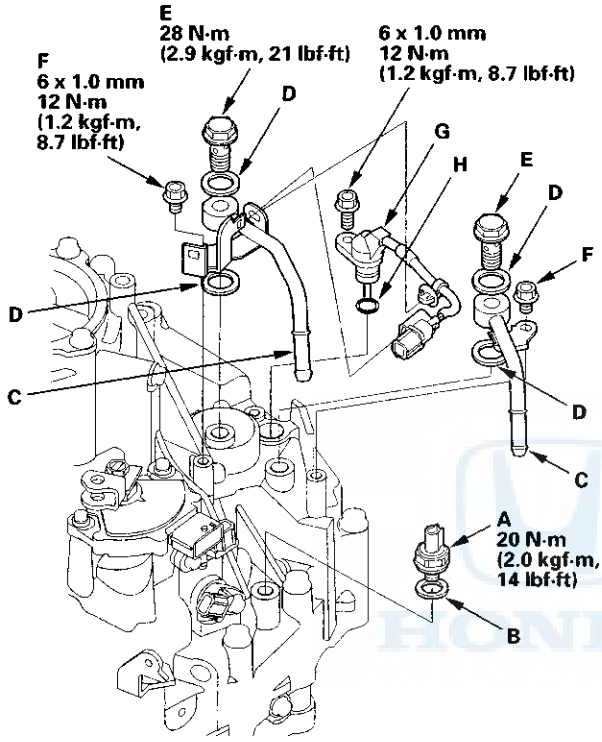
67. Install the 4th clutch transmission fluid pressure switch (A) with a new sealing washer (B). Tighten the switch by gripping the metal part, not the plastic part.



(cont'd)

Transmission Reassembly (cont'd)

68. Install the 3rd clutch transmission fluid pressure switch (A) with a new sealing washer (B). Tighten the switch by gripping the metal part, not the plastic part.

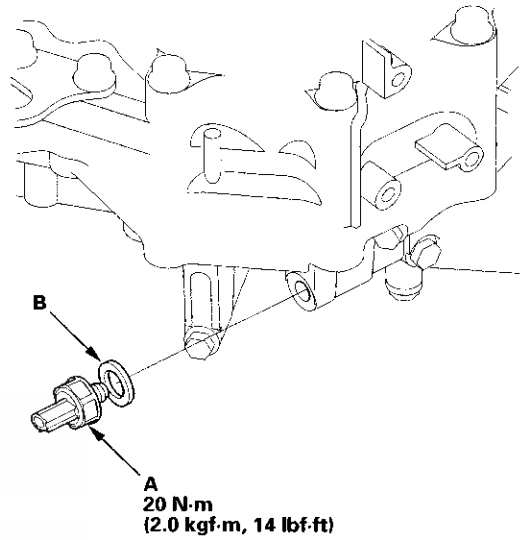


69. Install the ATF cooler lines (C) with new sealing washers (D) and the line bolts (E).

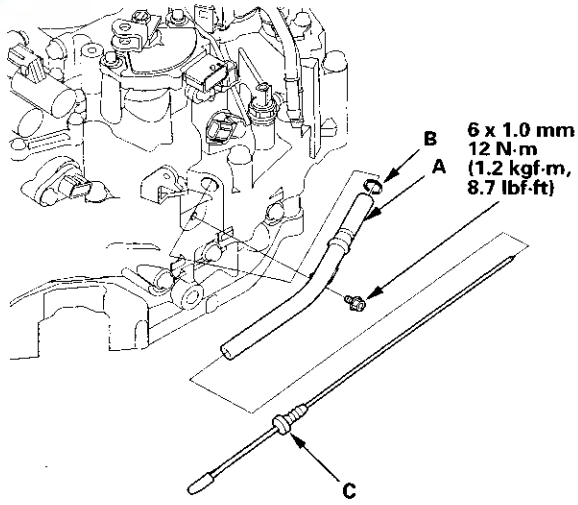
70. Secure the ATF lines with the 6.0 mm bolts (F). Tighten the bolts to 12 N·m (1.2 kgf·m, 8.7 lbf·ft).

71. Install the ATF temperature sensor (G) with a new O-ring (H). Install the harness clamp on the clamp bracket, and install the connector on the connector bracket.

72. Install the 2nd clutch transmission fluid pressure switch (A) with a new sealing washer (B). Tighten the switch by gripping the metal part, not the plastic part.

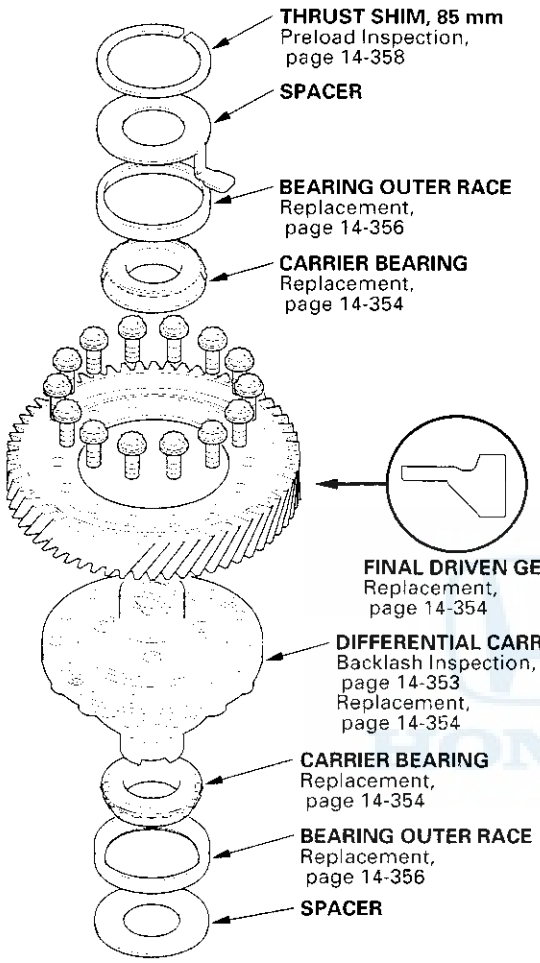


73. Install the ATF dipstick guide tube (A) with a new O-ring (B).



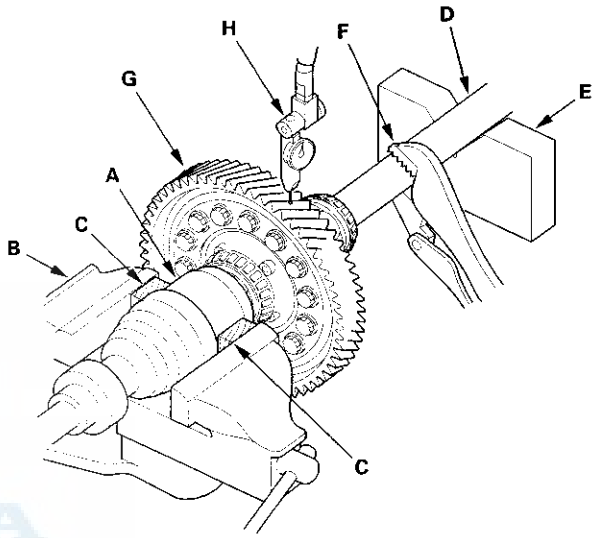
74. Install the ATF dipstick (C) in the guide tube.

Component Location Index



Backlash Inspection

1. Install the driveshaft and the intermediate shaft into the differential assembly.
2. Secure the driveshaft inboard joint (A) in a bench vise (B) with soft jaws (C). To prevent damage to the inboard joint, always use soft jaws or equivalent materials between the inboard joint and a vise.



3. Place the intermediate shaft (D) on a V-block (E), then hold the intermediate shaft using locking pliers (F).
4. Measure the backlash of the final driven gear (G) using a dial indicator (H).

   Standard: 1.4—2.0 mm (0.055—0.079 in.)

   - If the backlash is within the standard, go to step 5.
   - If the backlash is out of the standard, replace the differential assembly.

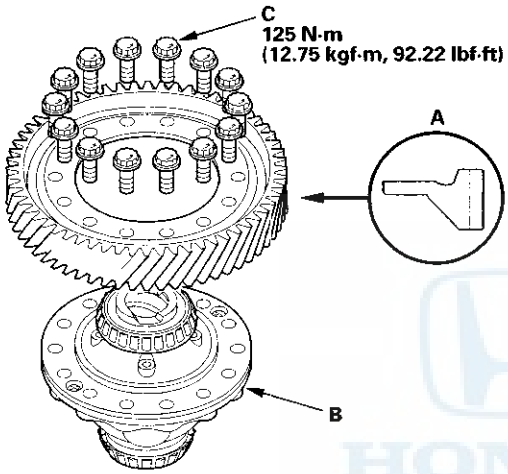
5. Remove the driveshaft inboard joint from the bench vise.
6. Remove the driveshaft and the intermediate shaft from the differential assembly.

Differential Carrier and Final Driven Gear Replacement

NOTE: Inspect and adjust the carrier bearing preload whenever the differential carrier is replaced.

1. Remove the final driven gear (A) from the differential carrier (B).

   NOTE: The final driven gear bolts (C) have left-hand threads.



2. Install the final driven gear on the differential carrier in the direction shown.

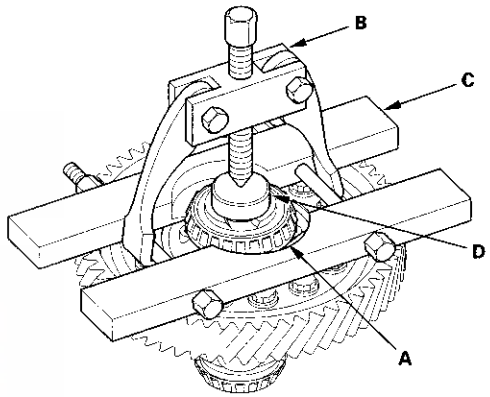
3. Tighten the bolts to the specified torque in a crisscross pattern in at least two steps.

Carrier Bearing Replacement

Special Tools Required
Attachment, 45 x 55 mm 07MAD-PR90100

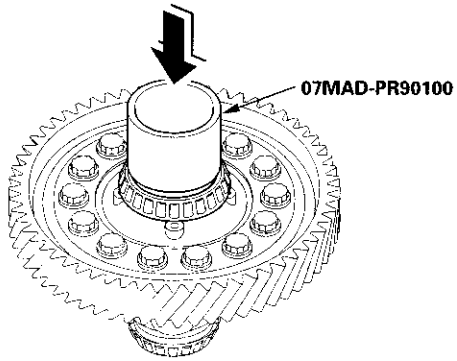
NOTE:
- The bearing and the outer race should be replaced as a set.
- Inspect and adjust the carrier bearing preload whenever the bearing is replaced.
- Check the bearing for wear and rough rotation. If the bearing is OK, removal is not necessary.

1. Remove the carrier bearing (A) with a commercially available bearing puller (B), a bearing separator (C), and a spacer (D).



2. Install new carrier bearings using the 45 x 55 mm attachment and a press.

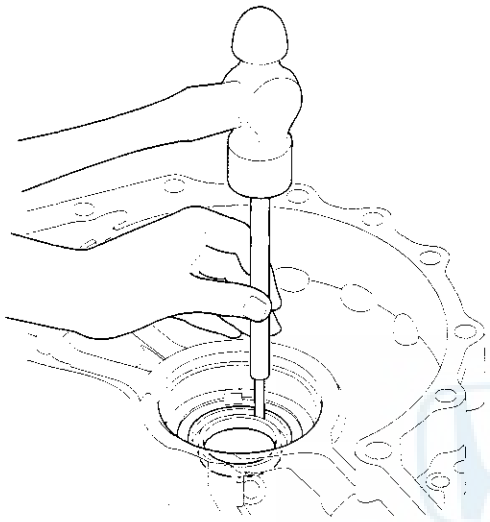
   NOTE:
   - Press the bearing on until it bottoms.
   - Use the small end of the 45 x 55 mm attachment to install the bearings.
   - Press the bearing on securely so there is no clearance between the bearing and the differential carrier.



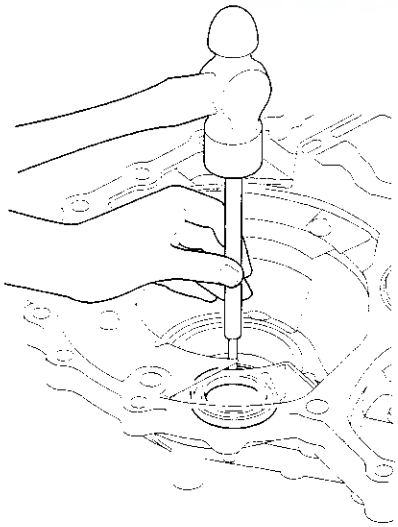
Oil Seal Replacement

Special Tools Required
- Driver 07749-0010000
- Oil seal driver attachment 07GAD-PG40100
- Oil seal driver attachment 07JAD-PN00100

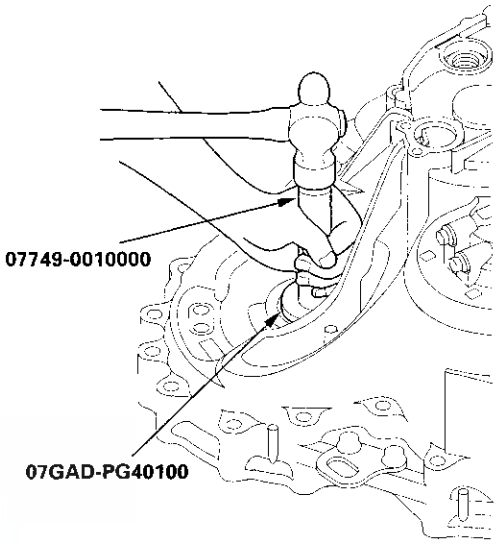
1. Remove the oil seal from the transmission housing.



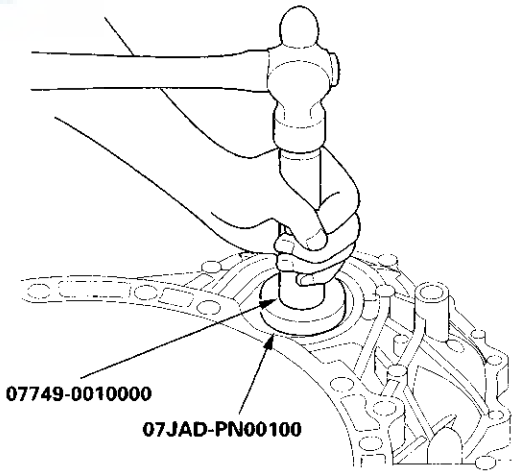
2. Remove the oil seal from the torque converter housing.



3. Install a new oil seal flush with the transmission housing using the driver and the oil seal driver attachment.



4. Install a new oil seal flush with the torque converter housing using the driver and the oil seal driver attachment.



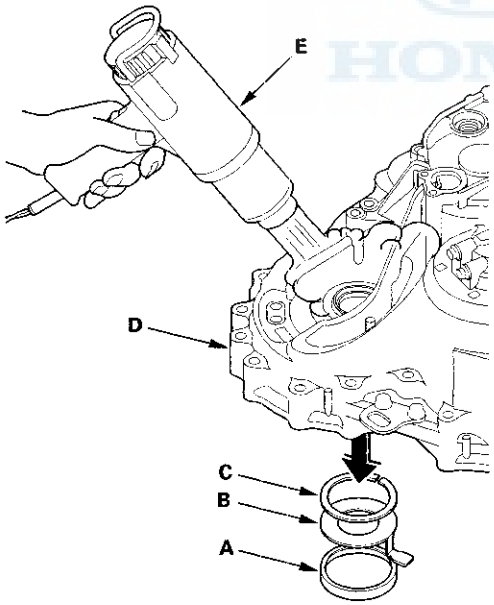
Carrier Bearing Outer Race Replacement

Special Tools Required
- Driver 07749-0010000
- Attachment, 83 mm 07HAD-SG00100
- Attachment, 78 x 90 mm 07GAD-SD40101

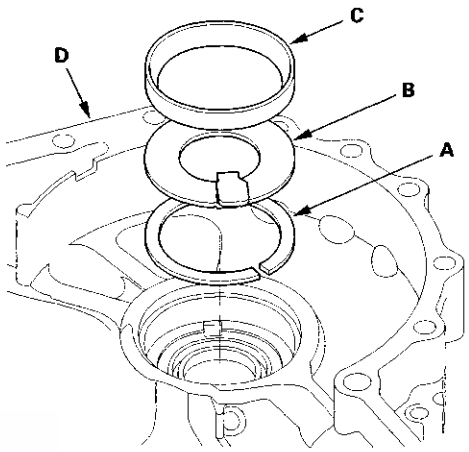
NOTE:
- Replace the bearing with a new one whenever the outer race is replaced.
- Do not use shim(s) from the toque converter housing side.
- Adjust the preload after replacing the bearing and the outer race.
- Coat all parts with ATF during installation.

1. Remove the bearing outer race (A), the spacer (B), and the 85 mm thrust shim (C) from the transmission housing (D) by heating the transmission housing to about 212 °F (100 °C) using a heat gun (E). Do not heat the transmission housing more than 212 °F (100 °C).

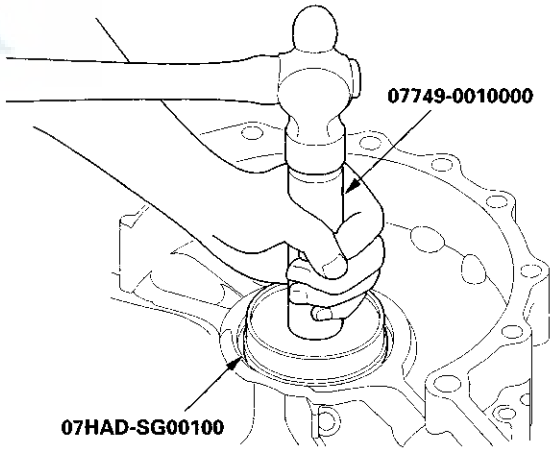
   NOTE: Let the transmission housing cool to room temperature before installing a new bearing outer race.



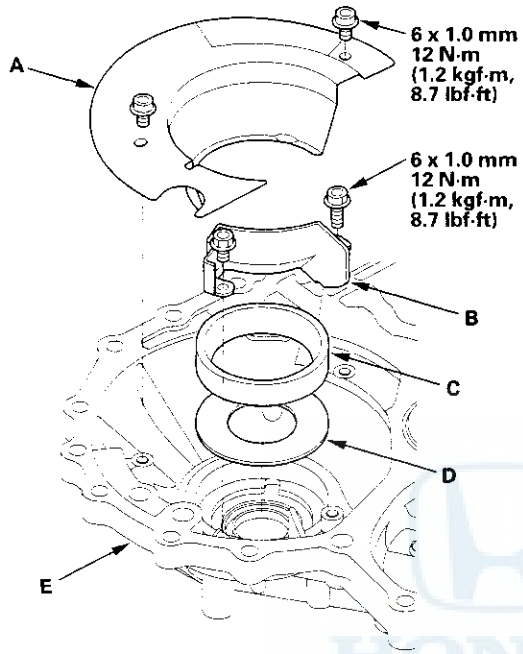
2. Install the 85 mm thrust shim (A), the spacer (B), and the outer race (C) in the transmission housing (D).



3. Using the driver and the 83 mm attachment, drive the outer race securely in the transmission housing so there is no clearance between the outer race, the spacer, the shim, and the transmission housing.

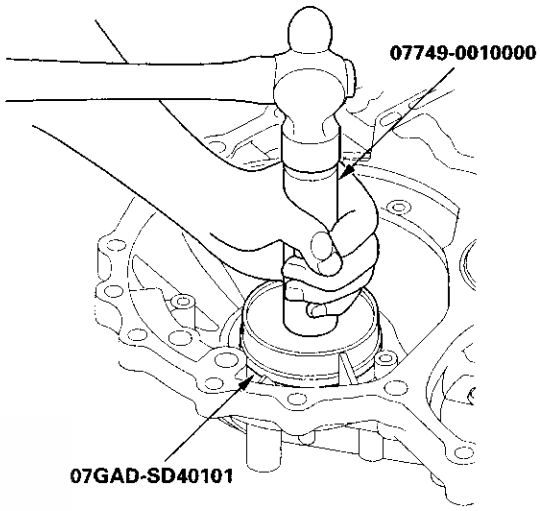


4. Remove the plates (A) (B), and remove the bearing outer race (C) and the spacer (D) from the torque converter housing (E).



5. Install the spacer and a new outer race in the torque converter housing.

6. Drive the bearing outer race securely in the torque converter housing using the driver and the 78 x 90 mm attachment.



7. Install the plates over the outer race in the torque converter housing.

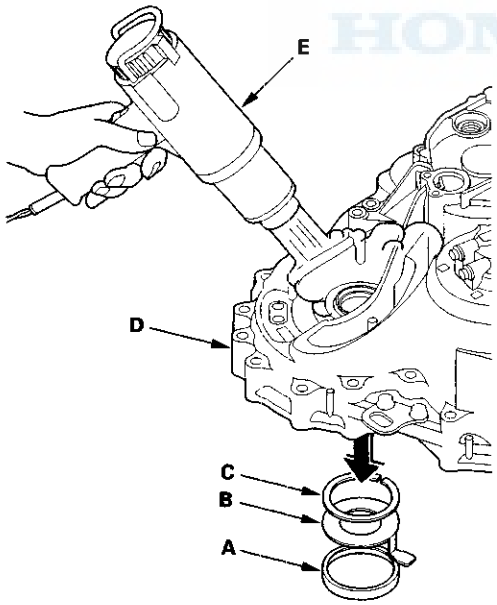
Carrier Bearing Preload Inspection

Special Tools Required
- Driver 07749-0010000
- Attachment, 83 mm 07HAD-SG00100
- Preload inspection tool 070AJ-0020101

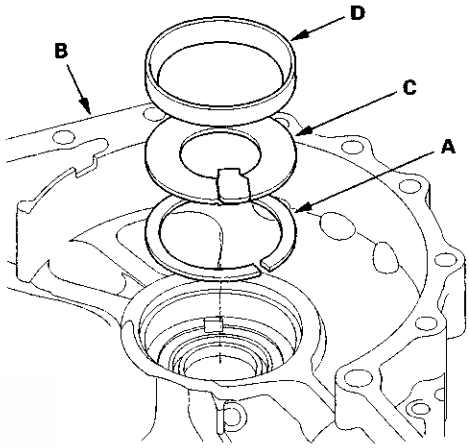
NOTE:
- If the transmission housing, the torque converter housing, the differential carrier, the tapered roller bearing, the bearing outer race, or the thrust shim were replaced, the bearing preload must be adjusted.
- Replace the tapered roller bearing when the outer race is to be replaced.
- Do not use a shim on the torque converter housing side.
- Coat all parts with ATF during installation.

1. Remove the bearing outer race (A), the spacer (B), and the 85 mm thrust shim (C) from the transmission housing (D) by heating the transmission housing to about 212 °F (100 °C) using a heat gun (E). Do not heat the transmission housing more than 212 °F (100 °C).

   NOTE: Let the transmission housing cool to room temperature before adjusting the bearing preload.

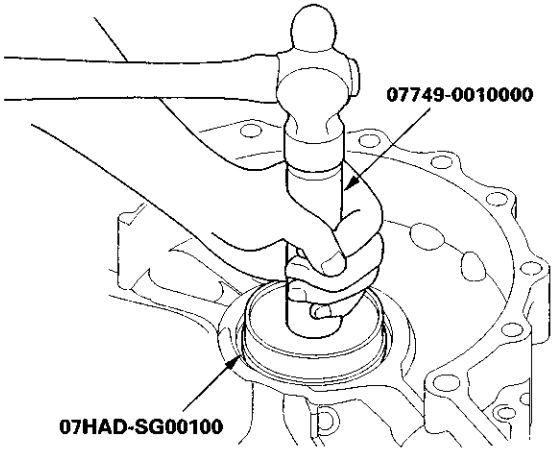


2. Install the 85 mm thrust shim (A) in the transmission housing (B). If you replace the 85 mm thrust shim with a new one, use the same thickness shim as the old one.

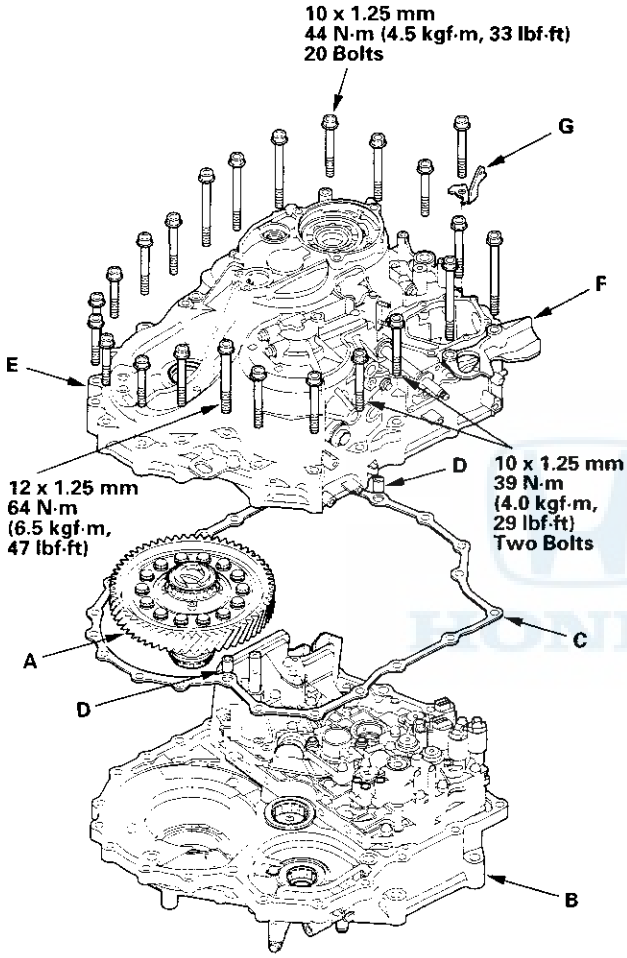


3. Install the spacer (C) and the bearing outer race (D) in the transmission housing.

4. Drive the outer race securely in the housing using the driver and the 83 mm attachment so there is no clearance between the outer race, the spacer, the shim, and the transmission housing.



5. Install the differential assembly (A) in the torque converter housing (B), and install the gasket (C) and the two dowel pins (D) on the torque converter housing.

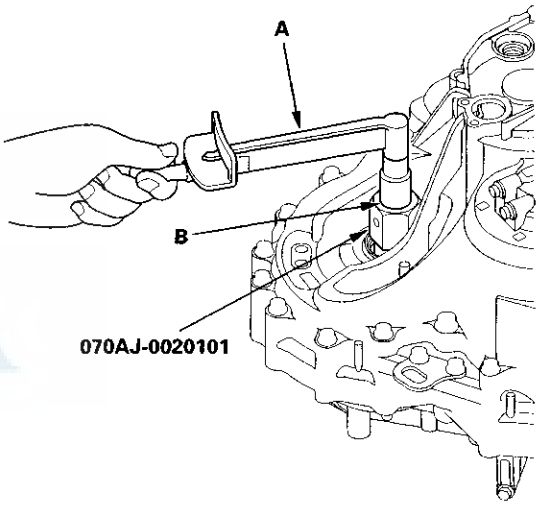


6. Install the transmission housing (E), and install the mounting bolts (23 bolts) with the transmission hanger (F) and the ground terminal bracket (G), then tighten the bolts to the specified torque.

7. Rotate the differential assembly in both directions to seat the bearings.

8. Measure the starting torque of the differential assembly using a preload inspection tool, a torque wrench (A), and a socket (B). Measure the starting torque at normal room temperature in both directions.

Standard
New Bearing:
3.9—5.1 N·m (40—52 kgf·cm, 35—45 lbf·in.)
Reused Bearing:
3.6—4.8 N·m (37—49 kgf·cm, 32—43 lbf·in.)



(cont'd)

Carrier Bearing Preload Inspection (cont'd)

9. If the starting torque is out of the standard, remove the 85 mm thrust shim and select a new 85 mm thrust shim from the following table. Install a new 85 mm thrust shim and recheck. To increase the starting torque, increase thickness of the 85 mm thrust shim. To decrease the starting torque, decrease the thickness of the 85 mm thrust shim. Changing the 85 mm thrust shim to the next size will increase or decrease the starting torque about 0.5—0.6 N·m (5—6 kgf·cm, 5—5 lbf·in.)

THRUST SHIM, 85 mm

No.	Part Number	Thickness
A	41440-RGR-000	1.350 mm (0.0531 in.)
B	41441-RGR-000	1.375 mm (0.0541 in.)
C	41442-RGR-000	1.400 mm (0.0551 in.)
D	41443-RGR-000	1.425 mm (0.0561 in.)
E	41444-RGR-000	1.450 mm (0.0571 in.)
F	41445-RGR-000	1.475 mm (0.0581 in.)
G	41446-RGR-000	1.500 mm (0.0591 in.)
H	41447-RGR-000	1.525 mm (0.0600 in.)
I	41448-RGR-000	1.550 mm (0.0610 in.)
J	41449-RGR-000	1.575 mm (0.0620 in.)
K	41450-RGR-000	1.600 mm (0.0630 in.)
L	41451-RGR-000	1.625 mm (0.0640 in.)
M	41452-RGR-000	1.650 mm (0.0650 in.)
N	41453-RGR-000	1.675 mm (0.0659 in.)
O	41454-RGR-000	1.700 mm (0.0669 in.)
P	41455-RGR-000	1.725 mm (0.0679 in.)
Q	41456-RGR-000	1.750 mm (0.0689 in.)
R	41457-RGR-000	1.775 mm (0.0699 in.)
S	41458-RGR-000	1.800 mm (0.0709 in.)
T	41459-RGR-000	1.825 mm (0.0719 in.)
U	41460-RGR-000	1.850 mm (0.0728 in.)
V	41461-RGR-000	1.875 mm (0.0738 in.)
W	41462-RGR-000	1.900 mm (0.0748 in.)
X	41463-RGR-000	1.925 mm (0.0758 in.)
Y	41464-RGR-000	1.950 mm (0.0768 in.)
Z	41465-RGR-000	1.975 mm (0.0778 in.)

(cont'd)

THRUST SHIM, 85 mm (cont'd)

No.	Part Number	Thickness
AA	41466-RGR-000	2.000 mm (0.0787 in.)
AB	41467-RGR-000	2.025 mm (0.0797 in.)
AC	41468-RGR-000	2.050 mm (0.0807 in.)
AD	41469-RGR-000	2.075 mm (0.0817 in.)
AE	41470-RGR-000	2.100 mm (0.0827 in.)
AF	41471-RGR-000	2.125 mm (0.0837 in.)
AG	41472-RGR-000	2.150 mm (0.0846 in.)
AH	41473-RGR-000	2.175 mm (0.0856 in.)
AI	41474-RGR-000	2.200 mm (0.0866 in.)
AJ	41475-RGR-000	2.225 mm (0.0876 in.)
AK	41476-RGR-000	2.250 mm (0.0886 in.)
AL	41477-RGR-000	2.275 mm (0.0896 in.)
AM	41478-RGR-000	2.300 mm (0.0906 in.)
AN	41479-RGR-000	2.325 mm (0.0915 in.)
AO	41480-RGR-000	2.350 mm (0.0925 in.)
AP	41481-RGR-000	1.250 mm (0.0492 in.)
AQ	41482-RGR-000	1.275 mm (0.0502 in.)
AR	41483-RGR-000	1.300 mm (0.0512 in.)
AS	41484-RGR-000	1.325 mm (0.0522 in.)

10. Install a new thrust shim, then recheck the starting torque.

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Driveline/Axle

Driveline/Axle

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Driveshaft Reassembly 16-7
Intermediate Shaft Removal 16-15
Intermediate Shaft Disassembly 16-16
Intermediate Shaft Reassembly 16-19
Intermediate Shaft Installation 16-25

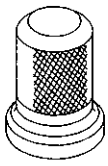
NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

Outline of Model Change

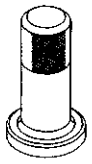
The J35Z2 and J35Z3 engine models have been added; related information is included.

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07GAD-PH70201	Oil Seal Driver, 64 mm	1
②	07JAD-PL90100	Oil Seal Driver, 65 mm	1
③	07LAF-SM40300	Support Base Attachment, 70 mm	1
④	07MAC-SL0A202	Ball Joint Remover, 28 mm	1
⑤	07MAD-PR90100	Installer Attachment, 45 mm	1
⑥	07746-0010300	Bearing Driver Attachment, 42 x 47 mm	1
⑦	07746-0010400	Bearing Driver Attachment, 52 x 55 mm	1
⑧	07746-0030400	Inner Bearing Driver Attachment, 35 mm	1
⑨	07749-0010000	Driver Handle, 15 x 135L	1
⑩	07947-SB00100	Oil Seal Driver, 44.5 mm	1
⑪	07965-SD90100	Support Base, 73 x 78/82.6 mm	1



①, ⑩



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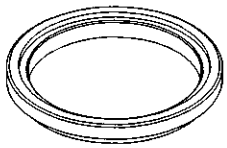

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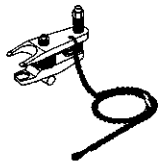

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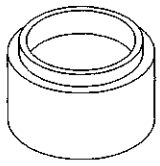

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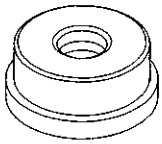

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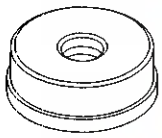

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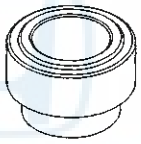

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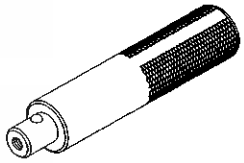

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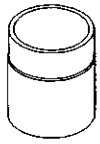
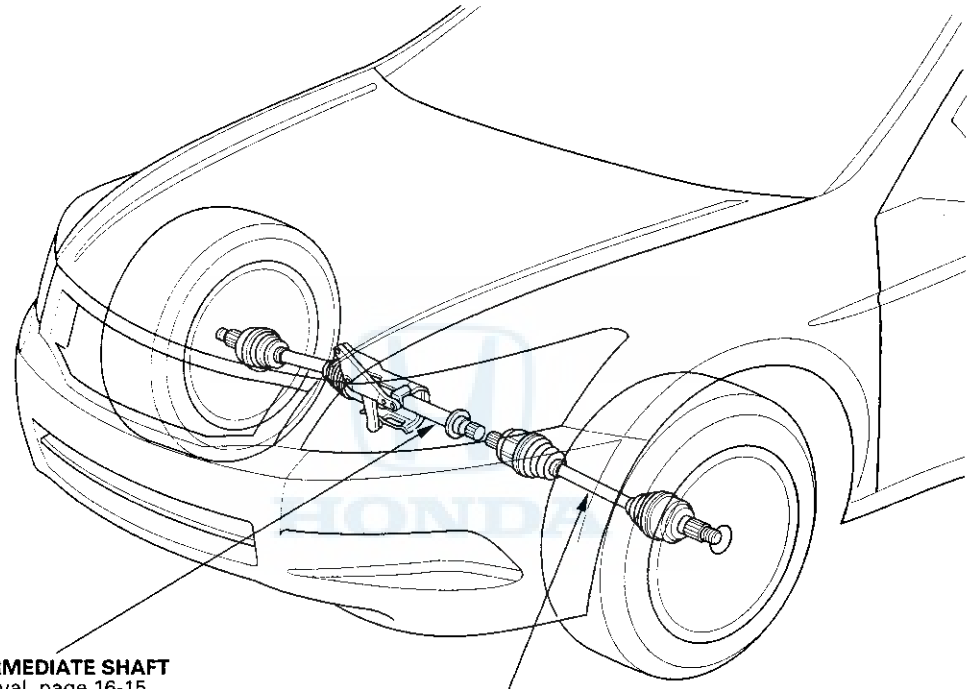


⑪

Component Location Index



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Disassembly (M/T model), page 16-16
Disassembly (A/T model), page 16-17
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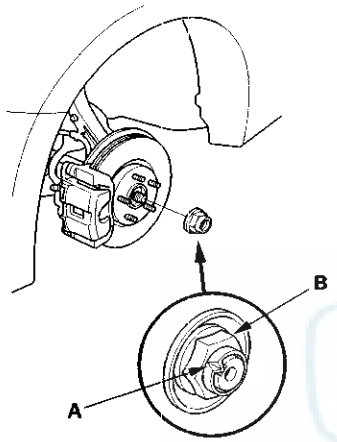
Installation, page 16-20
in the 2008-2009 Accord Service Manual

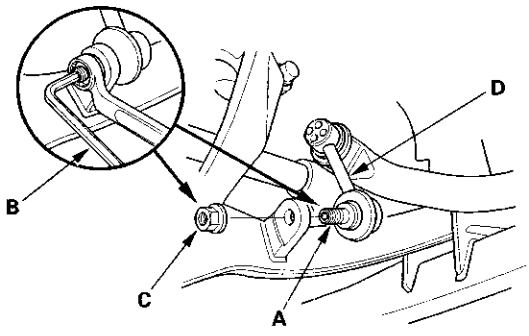
Driveshaft Removal

Special Tools Required
Ball joint remover, 28 mm 07MAC-SL0A202

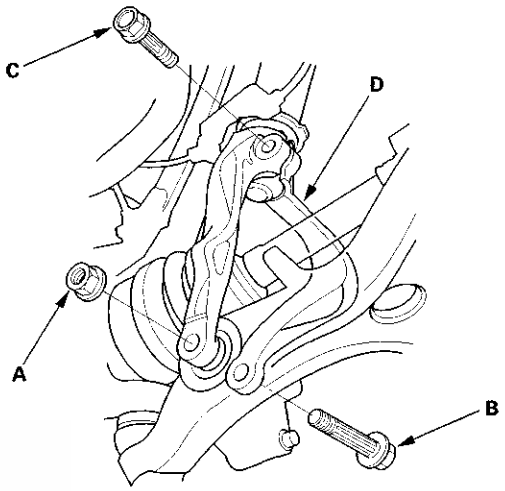
1. Raise the vehicle on a lift.
2. Remove the front wheels.
3. Pry up the locking tab (A) on the spindle nut (B), then remove the nut.



4. Drain the transmission fluid, then reinstall the drain plug with a new sealing washer:
   - Manual transmission (see page 13-14)
   - Automatic transmission (see page 14-232)
5. Hold the stabilizer link joint pin (A) with a hex wrench (B), and remove the flange nut (C). Separate the front stabilizer link (D) from the lower arm.

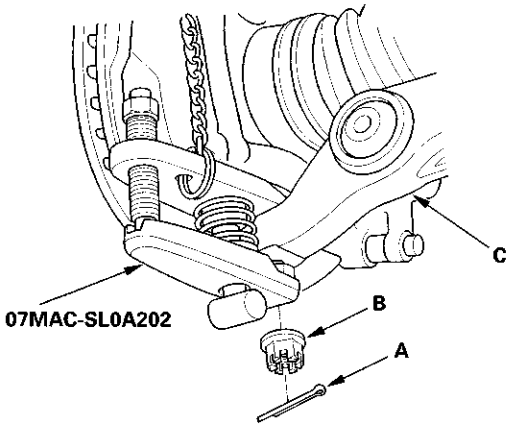


6. Remove the damper fork mounting nut (A), the damper fork mounting bolt (B), and the damper pinch bolt (C), then remove the damper fork (D).

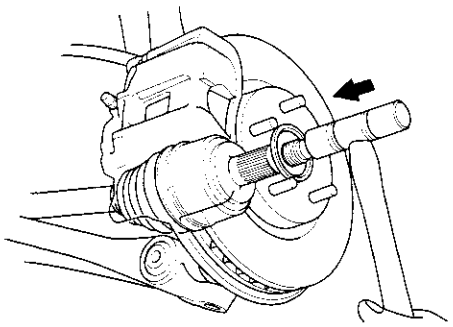


7. Remove the cotter pin (A) from the knuckle ball joint, and remove the castle nut (B), then separate the ball joint from the lower arm (C) using the ball joint remover, refer to the 2008-2009 Accord Service Manual (see page 18-11).

   NOTE:
   - Be careful not to damage the ball joint boot when installing the remover.
   - Do not force or hammer on the lower arm, or pry between the lower arm and the knuckle. You could damage the ball joint.

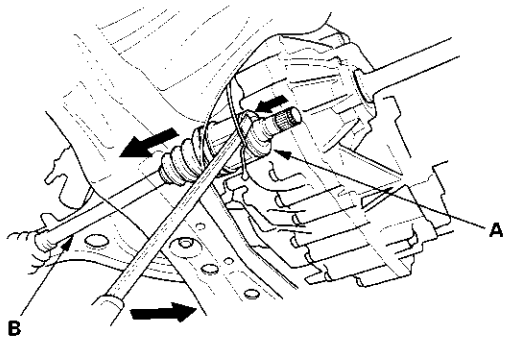


8. Pull the knuckle outward, and separate the outboard joint from the front hub using a plastic hammer.



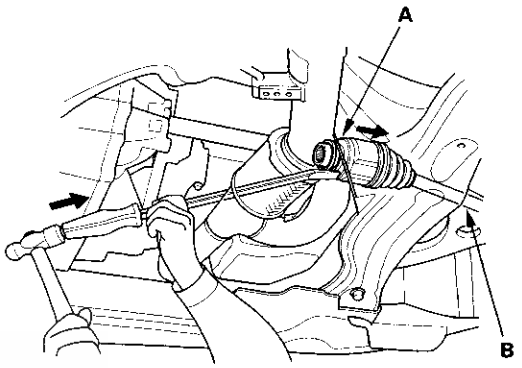
9. Left driveshaft: Pry the inboard joint (A) from the differential with a prybar. Remove the driveshaft as an assembly.

   NOTE:
   - Do not pull on the driveshaft (B), or the inboard joint may come apart. Pull the inboard joint straight out to avoid damaging the oil seal.
   - Be careful not to damage the oil seal with the prybar.

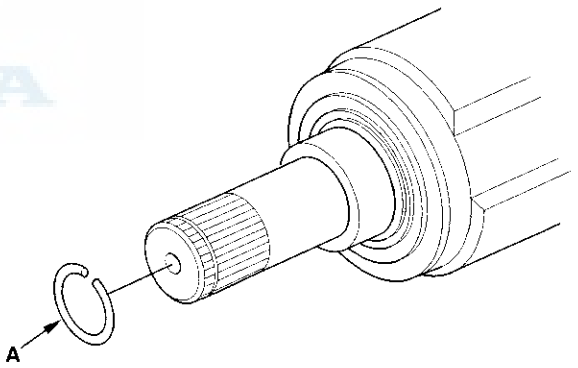


10. Right driveshaft: Drive the inboard joint (A) off of the intermediate shaft using a drift and a hammer. Remove the driveshaft as an assembly.

    NOTE: Do not pull on the driveshaft (B), or the inboard joint may come apart.



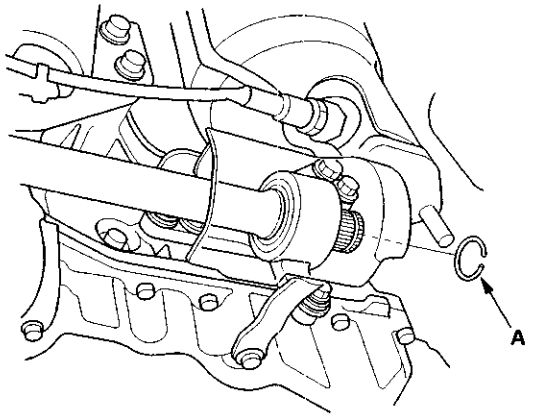
11. Remove the set ring (A) from the left driveshaft inboard joint.



(cont'd)

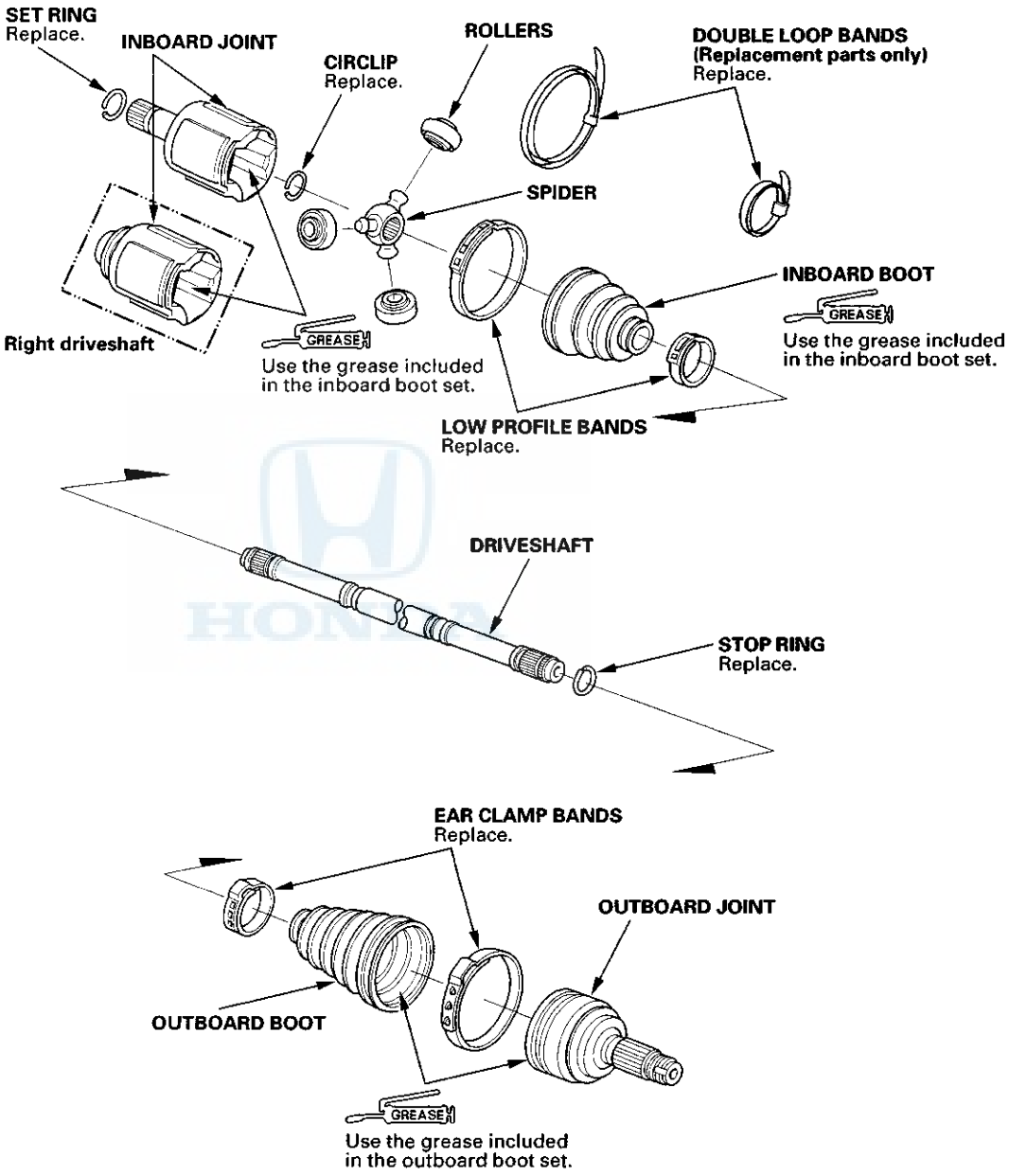
Driveshaft Removal (cont'd)

12. Remove the set ring (A) from the intermediate shaft.



Driveshaft Reassembly

Exploded View



(cont'd)

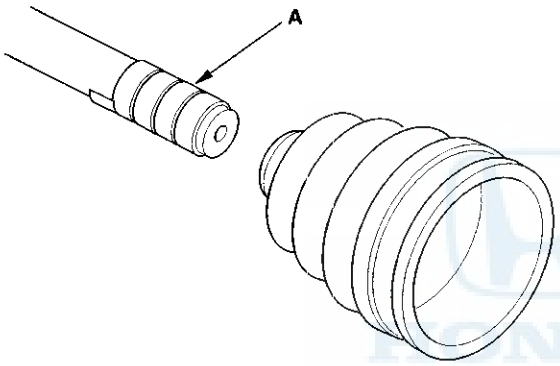
Driveshaft Reassembly (cont'd)

Special Tools Required
- Boot band tool, KD-3191 or equivalent, commercially available
- Boot band pliers, Kent-Moore J-35910 or equivalent, commercially available
- Boot band pliers, commercially available

NOTE: Refer to the Exploded View, as needed, during this procedure.

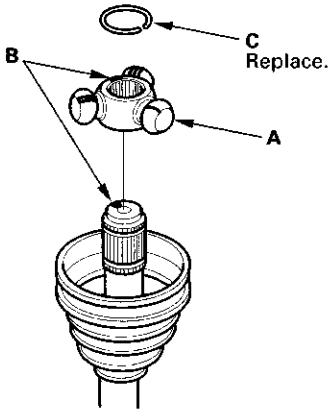
Inboard Joint Side

1. Wrap the splines with vinyl tape (A) to prevent damaging the inboard boot.



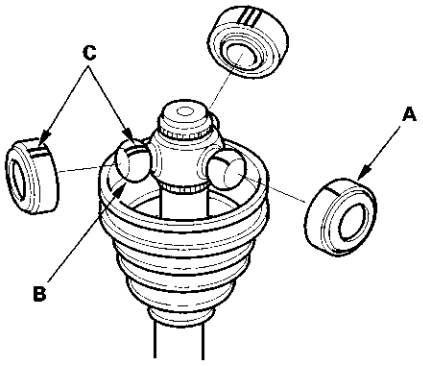
2. Install the inboard boot onto the driveshaft, then remove the vinyl tape. Be careful not to damage the inboard boot.

3. Install the spider (A) onto the driveshaft by aligning the marks (B) you made on the spider and the end of the driveshaft.



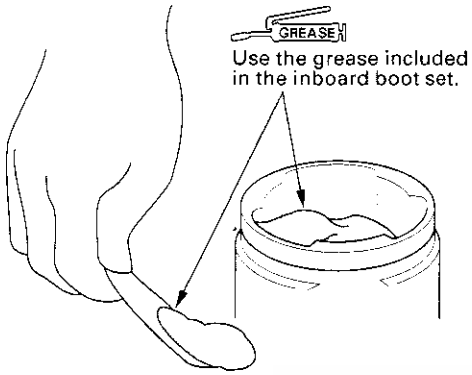
4. Install a new circlip (C) into the driveshaft groove. Always rotate the circlip in its groove to make sure it is fully seated.

5. Fit the rollers (A) onto the spider (B) with the high shoulders facing outward and note these items:
   - Reinstall the rollers in their original positions on the spider by aligning the marks (C) you made.
   - Hold the driveshaft pointed up to prevent the rollers from falling off.



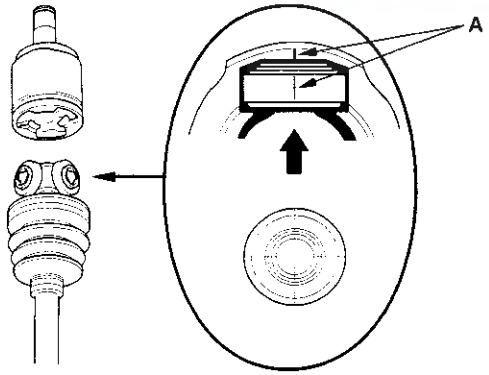
6. Pack the inboard joint with the joint grease included in the new inboard boot set.

Grease quantity
Inboard joint: 150—160 g (5.3—5.6 oz)

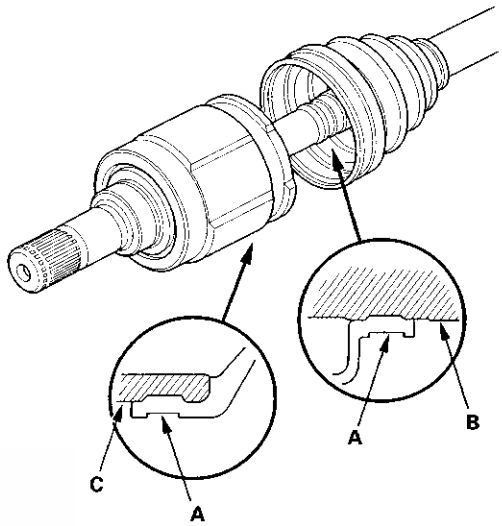


7. Fit the inboard joint onto the driveshaft and note these items:

- Reinstall the inboard joint onto the driveshaft by aligning the marks (A) you made on the inboard joint and the rollers.
- Hold the driveshaft so the inboard joint is pointing up to prevent it from falling off.

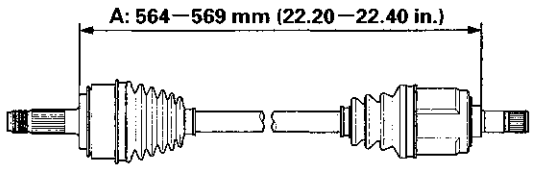


8. Fit the boot ends (A) onto the driveshaft (B) and the inboard joint (C).

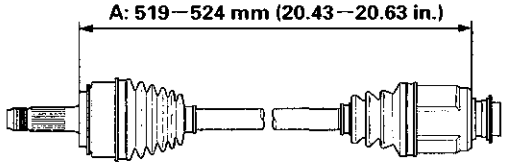


9. Adjust the length (A) of the driveshafts to the figure as shown, then adjust the boots to halfway between full compression and full extension. Bleed excess air from the boots by inserting a flat-tipped screwdriver between the boot and the joint.

Left driveshaft



Right driveshaft



10. Install new boot bands.

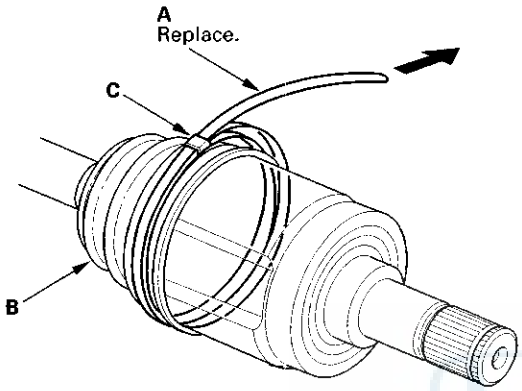
- For the double loop type, go to step 11.
- For the low profile type, go to step 20.

(cont'd)

Driveshaft Reassembly (cont'd)

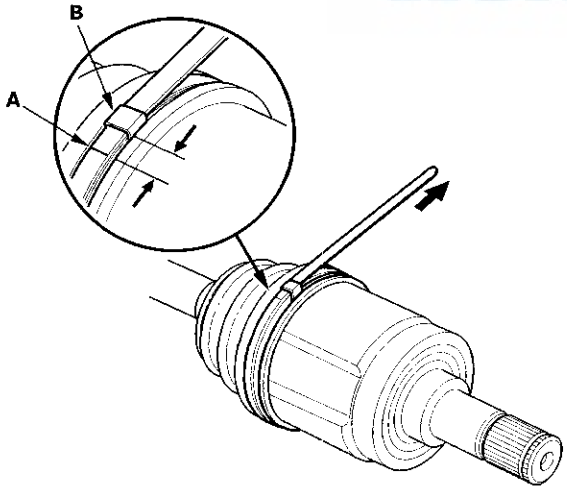
11. Fit the boot ends onto the driveshaft and the inboard joint, then install a new double loop band (A) onto the boot (B).

    NOTE: Pass the end of the new double loop band through the clip (C) twice in the direction of the forward rotation of the driveshaft.

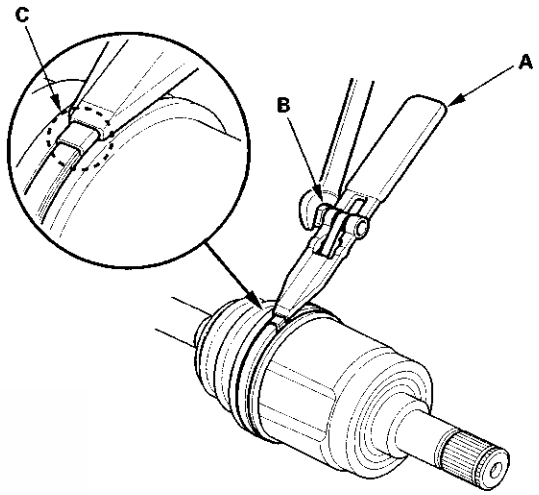


12. Pull up the slack in the band by hand.

13. Mark a position (A) on the band 10—14 mm (0.4—0.6 in.) from the clip (B).

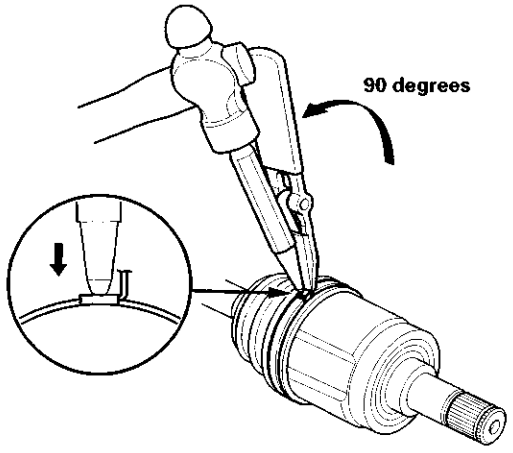


14. Thread the free end of the band through the nose section of the commercially available boot band tool KD-3191 or equivalent (A), and into the slot on the winding mandrel (B).

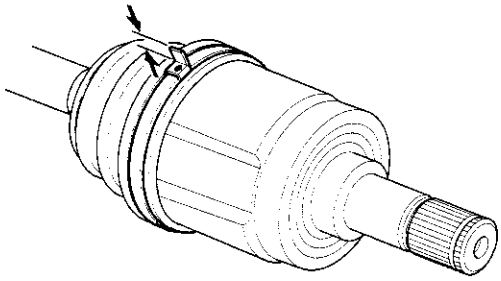


15. Using a wrench on the winding mandrel of the boot band tool, tighten the band until the marked spot (C) on the band meets the edge of the clip.

16. Lift up the boot band tool to bend the free end of the band 90 degrees to the clip. Center-punch the clip, then fold over the remaining tail onto the clip.

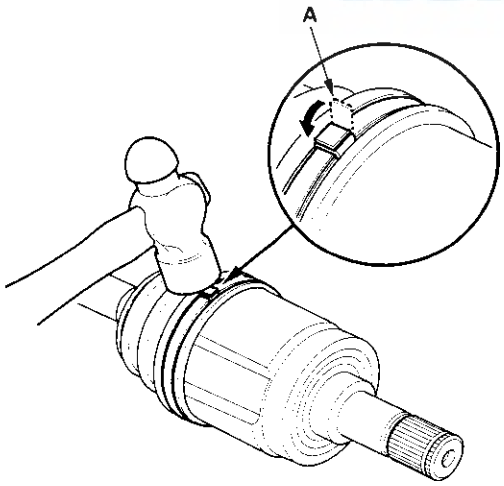


17. Unwind the boot band tool, and cut off the excess free end of the band to leave a 5—10 mm (0.2—0.4 in.) tail protruding from the clip.



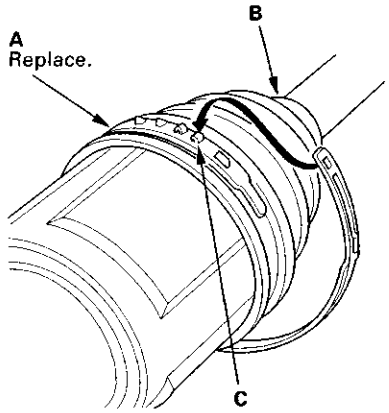
18. Bend the band end (A) by tapping it down with a hammer.

NOTE:
- Make sure the band and the clip do not interfere with anything on the vehicle and the band does not move.
- Clean any grease remaining on the surrounding surfaces.

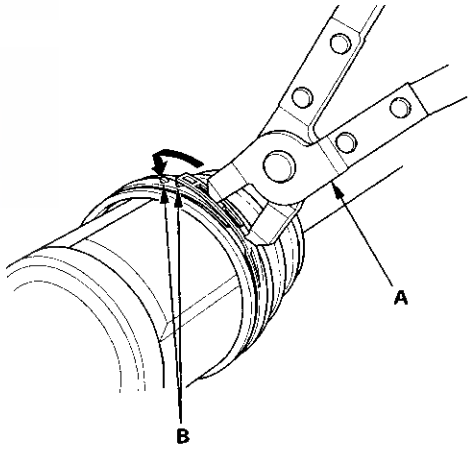


19. Repeat steps 11 through 18 for the band on the other end of the boot.

20. Install the new low profile band (A) onto the boot (B), then hook the tab (C) of the band.



21. Close the hook portion of the band with commercially available boot band pliers (A), then hook the tabs (B) of the band.



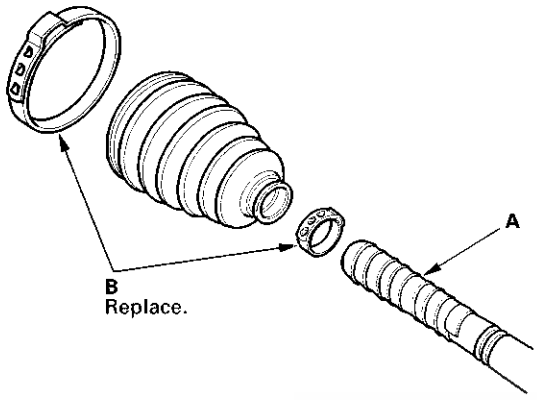
22. Install the boot band on the other end of the boot, and repeat steps 20 and 21.

(cont'd)

Driveshaft Reassembly (cont'd)

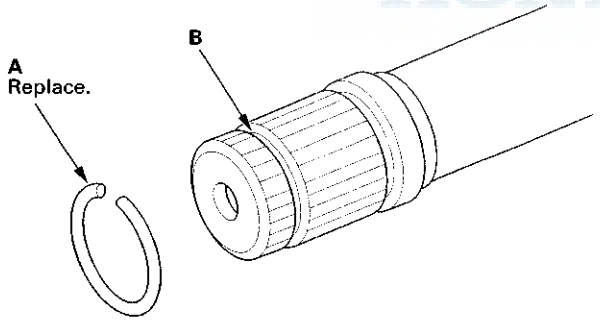
Outboard Joint Side

1. Wrap the splines with vinyl tape (A) to prevent damaging the outboard boot.



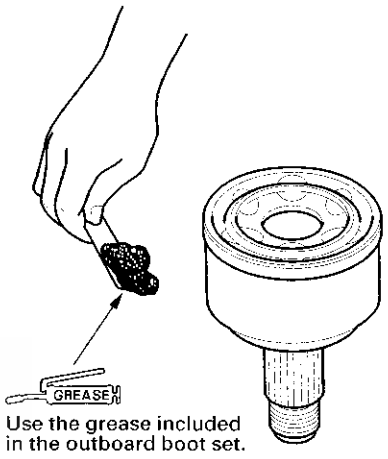
2. Install the new ear clamp bands (B) and the outboard boot, then remove the vinyl tape. Be careful not to damage the outboard boot.

3. Install a new stop ring (A) into the driveshaft groove (B).

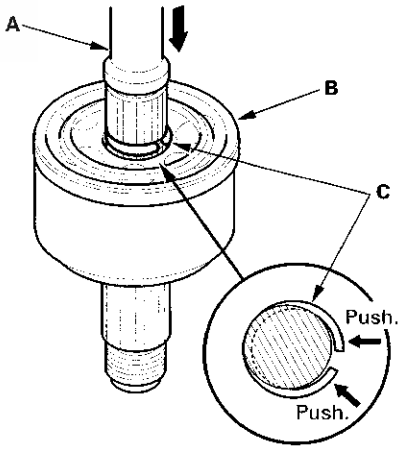


4. Pack about 35 g (1.2 oz) grease included in the new outboard boot set into the driveshaft hole in the outboard joint.

   NOTE: If you are installing a new outboard joint, the grease is already installed.

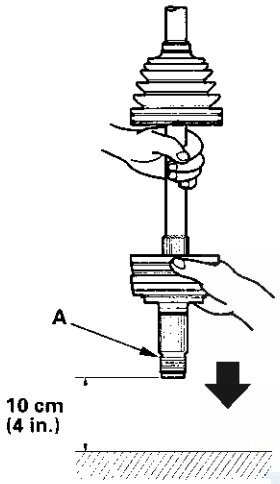


5. Insert the driveshaft (A) into the outboard joint (B) until the stop ring (C) is close to the joint.

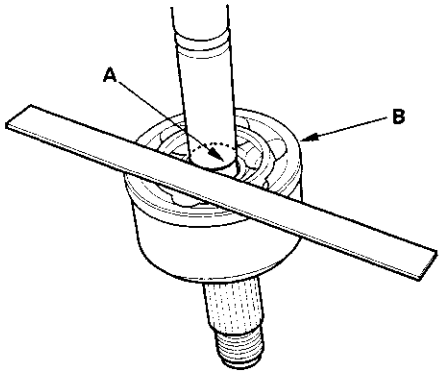


6. To completely seat the outboard joint, pick up the driveshaft and joint, and tap or hit the assembly onto a hard surface from a height of about 10 cm (4 in.).

   NOTE: Do not use a hammer as excessive force may damage the driveshaft. Be careful not to damage the threaded section (A) of the outboard joint.

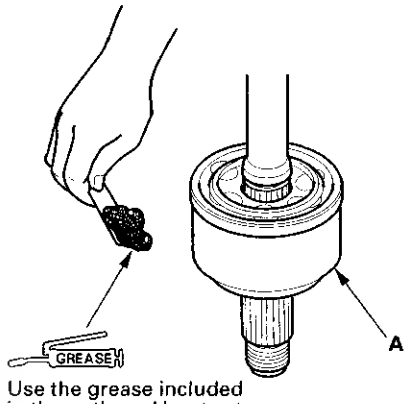


7. Check the alignment of the paint mark (A) you made with the outboard joint rim (B).



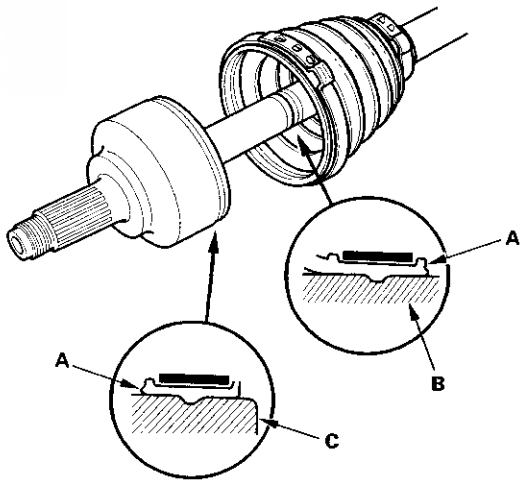
8. Pack the outboard joint (A) with the remaining joint grease included in the new outboard boot set.

   Total grease quantity
   outboard joint: 140—150 g (4.9—5.3 oz)



Use the grease included in the outboard boot set.

9. Fit the boot ends (A) onto the driveshaft (B) and the outboard joint (C). Bleed any excess air from the boot by inserting a flat-tipped screwdriver between the boot and the joint.

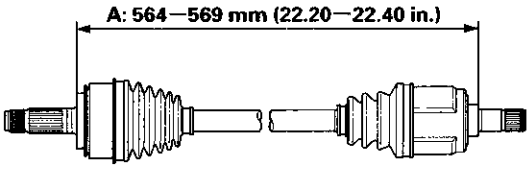


(cont'd)

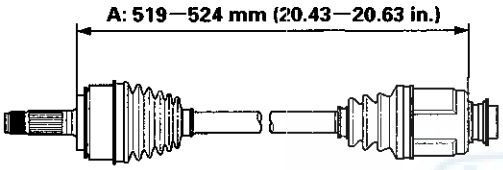
Driveshaft Reassembly (cont'd)

10. Inspect the length (A) of the driveshafts to the figure as shown, then adjust the boots to halfway between full compression and full extension.

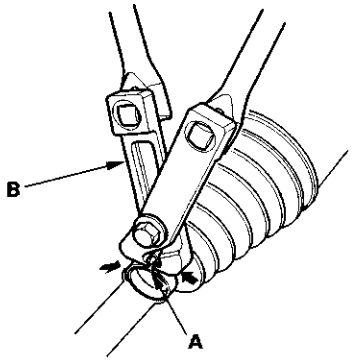
Left driveshaft



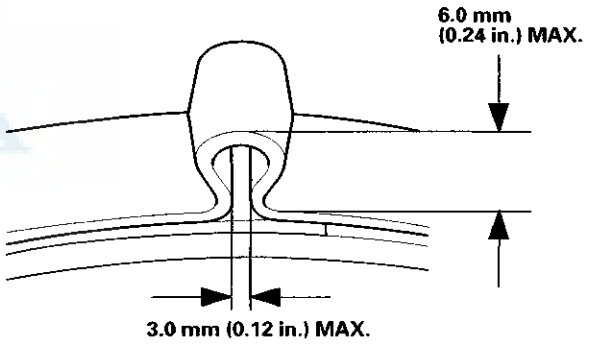
Right driveshaft



11. Close the ear portion (A) of the band with commercially available boot band pliers (Kent-Moore J-35910 or equivalent) (B).



12. Check the clearance between the closed ear portion of the band. If the clearance is not within the standard, close the ear portion of the band tighter.



13. Repeat steps 11 and 12 for the band on the other end of the boot.

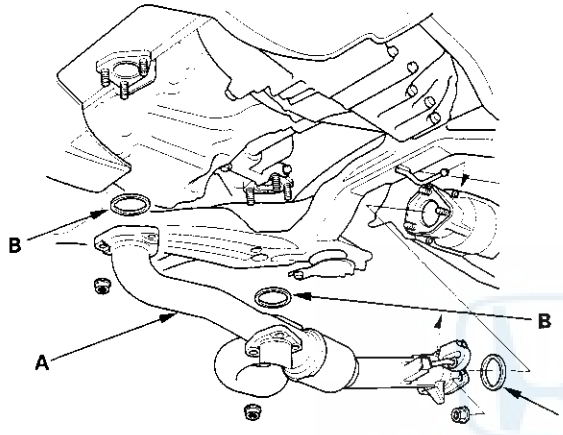
Intermediate Shaft Removal

1. Drain the transmission fluid, then reinstall the drain plug with a new sealing washer:

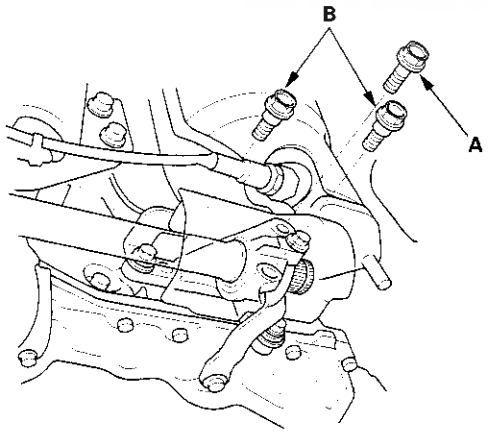
   - Manual transmission (see page 13-14)
   - Automatic transmission (see page 14-232)

2. Remove the right driveshaft (see page 16-4).

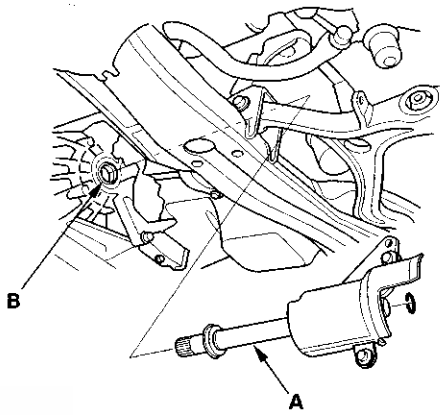
3. Remove exhaust pipe A and the gaskets (B).



4. Remove the flange bolt (A) and the two dowel bolts (B).



5. Remove the intermediate shaft (A) from the differential. Hold the intermediate shaft horizontally until it is clear of the differential to prevent damaging the oil seal (B).

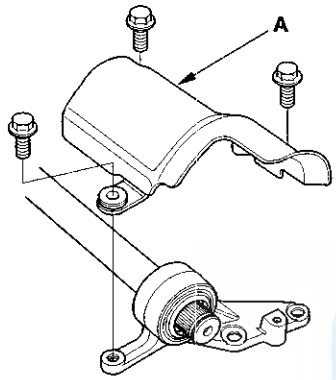


Intermediate Shaft Disassembly

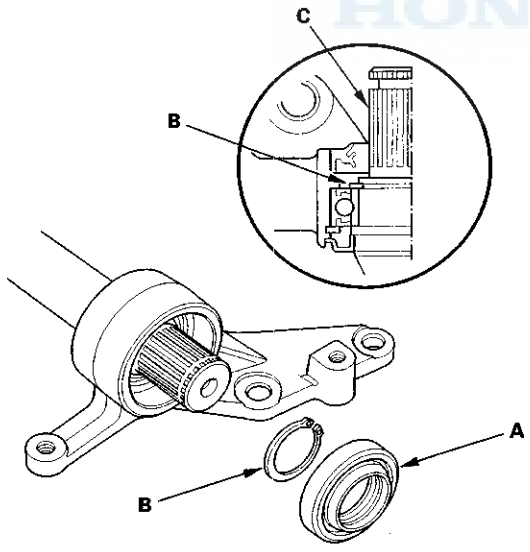
Special Tools Required
- Support base attachment, 70 mm 07LAF-SM40300
- Bearing driver attachment, 42 x 47 mm 07746-0010300
- Driver handle, 15 x 135L 07749-0010000
- Support base, 73 x 78/82.6 mm 07965-SD90100

M/T Model

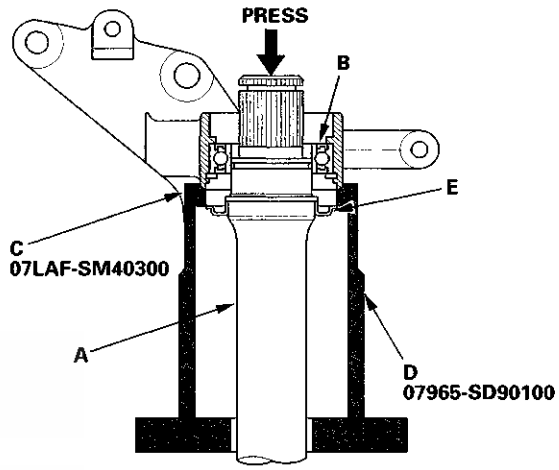
1. Remove the heat shield (A).



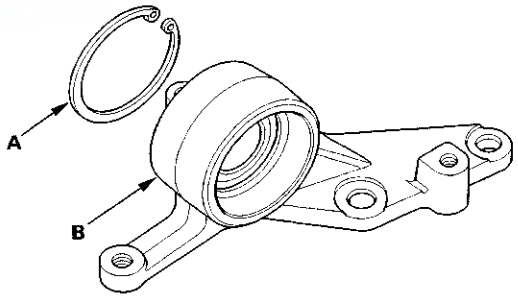
2. Remove the outer seal (A) and the external snap ring (B) from the intermediate shaft (C).



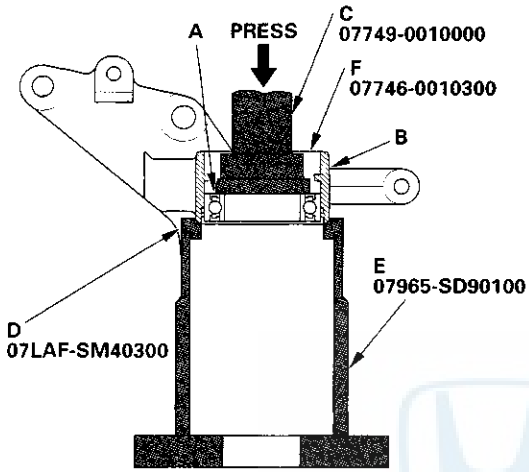
3. Press the intermediate shaft (A) out of the intermediate shaft bearing (B) using the 70 mm support base attachment (C), the 73 x 78/82.6 mm support base (D), and a press. Be careful not to damage the bearing support ring (E) on the intermediate shaft during disassembly.



4. Remove the internal snap ring (A) from the bearing support (B).



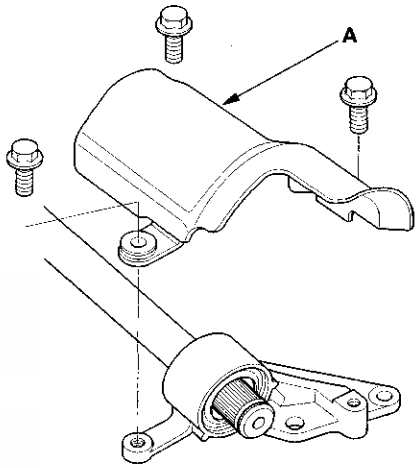
5. Press the intermediate shaft bearing (A) out of the bearing support (B) using the 15 x 135L driver handle (C), the 70 mm support base attachment (D), the 73 x 78/82.6 mm support base (E), the 42 x 47 mm bearing driver attachment (F), and a press.



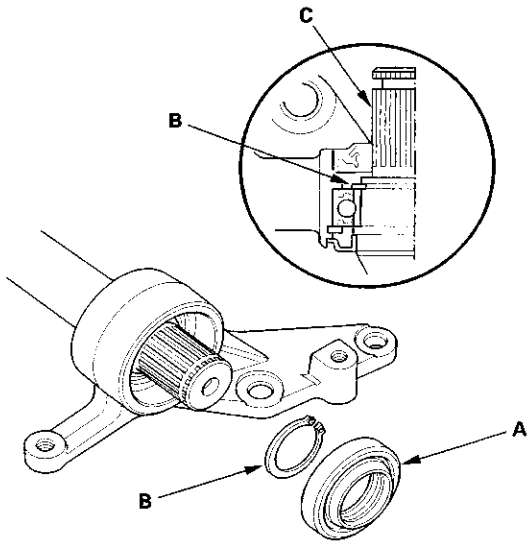
Special Tools Required
- Support base attachment, 70 mm 07LAF-SM40300
- Oil seal driver, 44.5 mm 07947-SB00100
- Support base, 73 x 78/82.6 mm 07965-SD90100

A/T Model

1. Remove the heat shield (A).



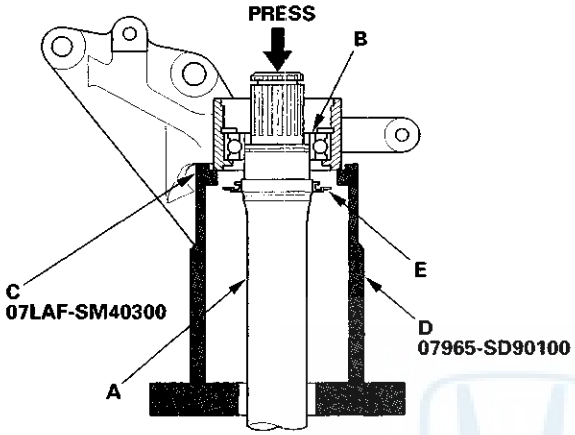
2. Remove the oil seal (A) and the external snap ring (B) from the intermediate shaft (C).



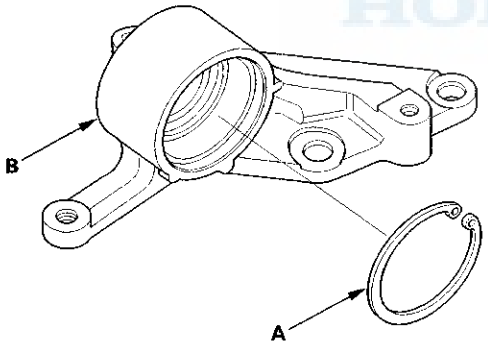
(cont'd)

Intermediate Shaft Disassembly (cont'd)

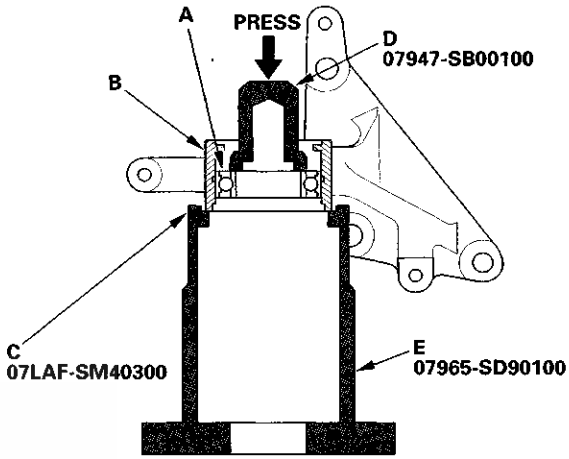
3. Press the intermediate shaft (A) out of the intermediate shaft bearing (B) using the 70 mm support base attachment (C), the 73 x 78/82.6 mm support base (D), and a press. Be careful not to damage the bearing support ring (E) on the intermediate shaft during disassembly.



4. Remove the internal snap ring (A) from the bearing support (B).

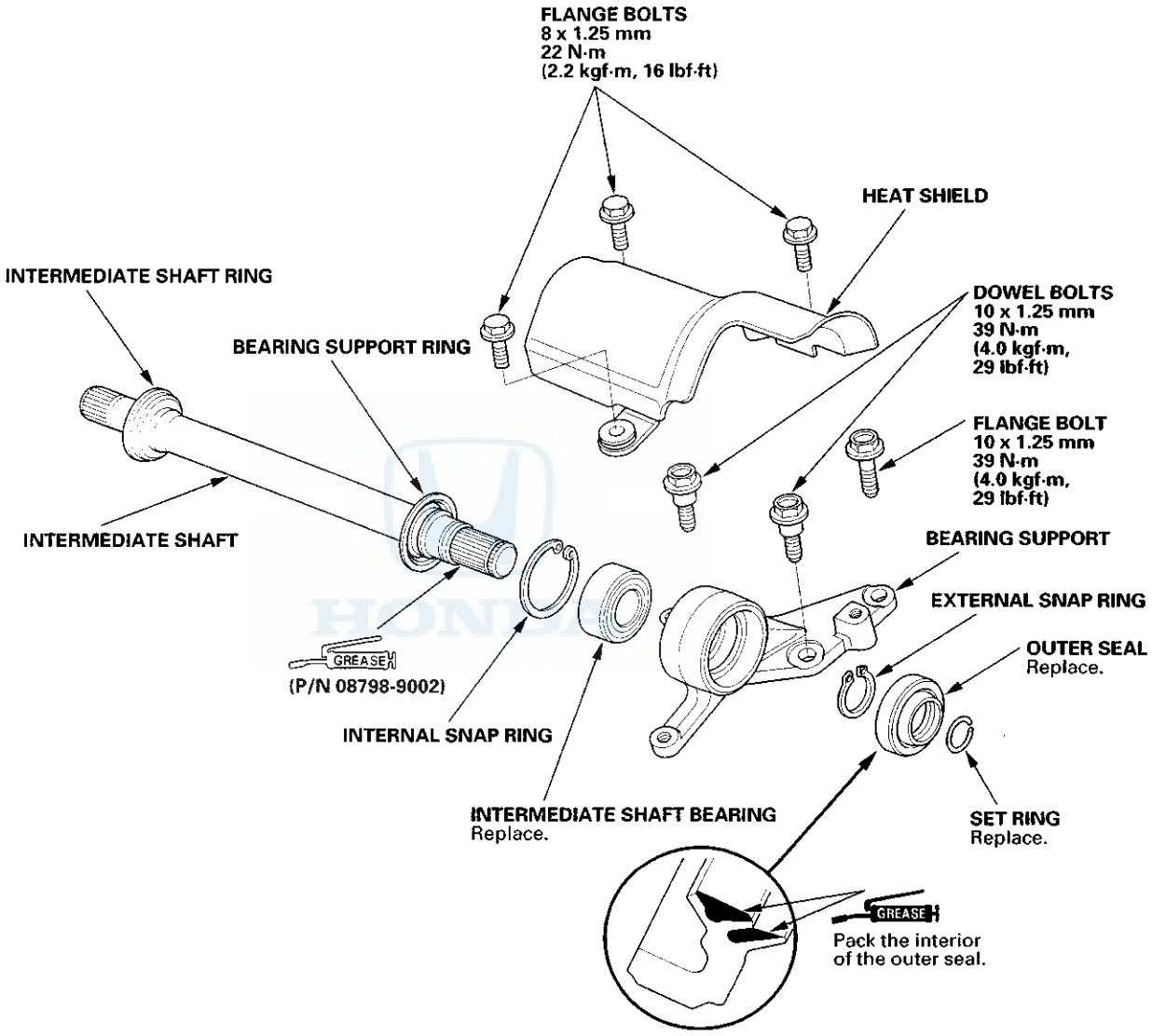


5. Press the intermediate shaft bearing (A) out of the bearing support (B) using the 70 mm support base attachment (C), the 44.5 mm oil seal driver (D), the 73 x 78/82.6 mm support base (E), and a press.



Intermediate Shaft Reassembly

Exploded View - M/T Model



(cont'd)

Intermediate Shaft Reassembly (cont'd)

Special Tools Required
- Oil seal driver, 65 mm 07JAD-PL90100
- Support base attachment, 70 mm 07LAF-SM40300
- Bearing driver attachment, 52 x 55 mm 07746-0010400
- Inner bearing driver attachment, 35 mm 07746-0030400
- Driver handle, 15 x 135L 07749-0010000
- Support base, 73 x 78/82.6 mm 07965-SD90100

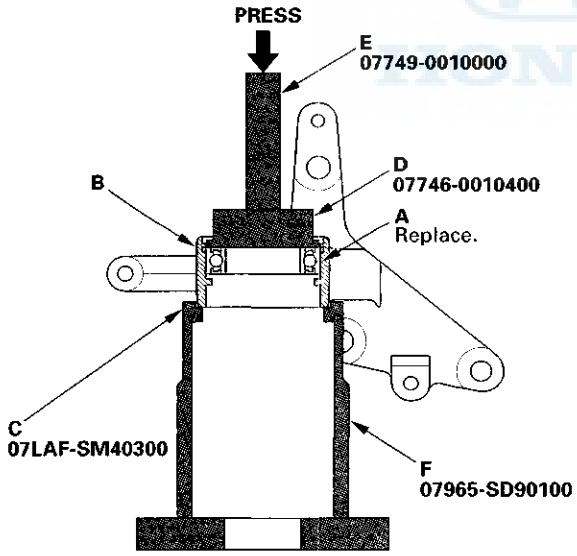
M/T Model

NOTE: Refer to the Exploded View, as needed, during this procedure.

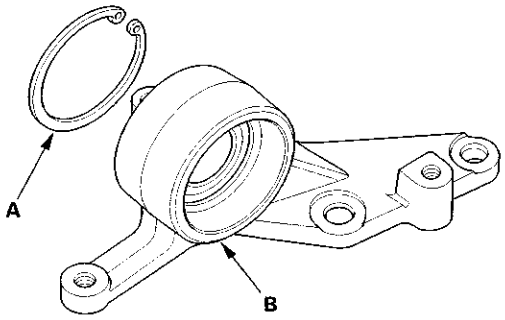
1. Clean the disassembled parts with solvent, and dry them with compressed air.

   NOTE: Do not wash the rubber parts with solvent.

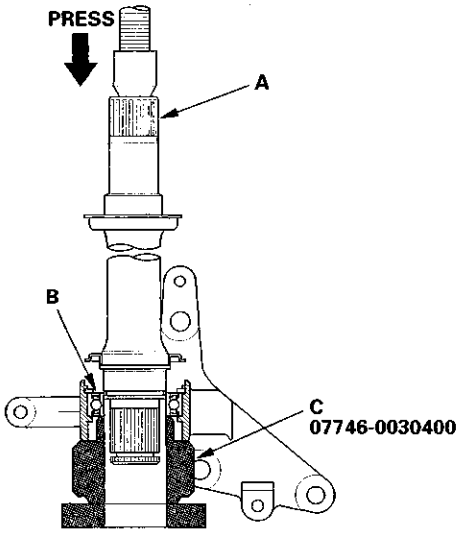
2. Press the new intermediate shaft bearing (A) into the bearing support (B) using the 70 mm support base attachment (C), the 52 x 55 mm bearing driver attachment (D), the 15 x 135L driver handle (E), the 73 x 78/82.6 mm support base (F), and a press.



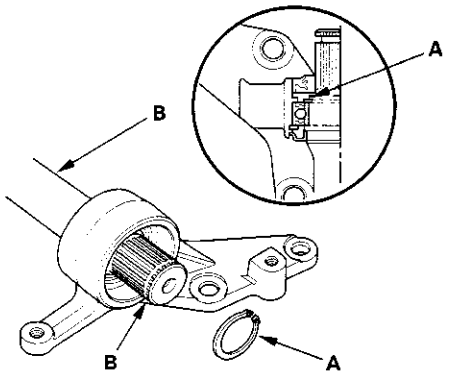
3. Install the internal snap ring (A) in the groove of the bearing support (B).



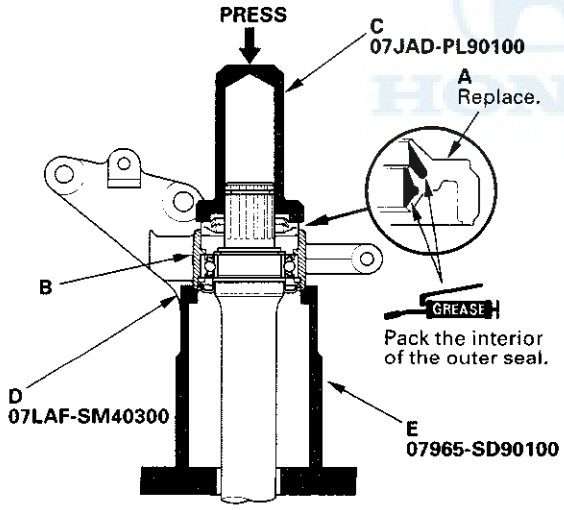
4. Press the intermediate shaft (A) into the shaft bearing (B) using the 35 mm inner bearing driver attachment (C) and a press.



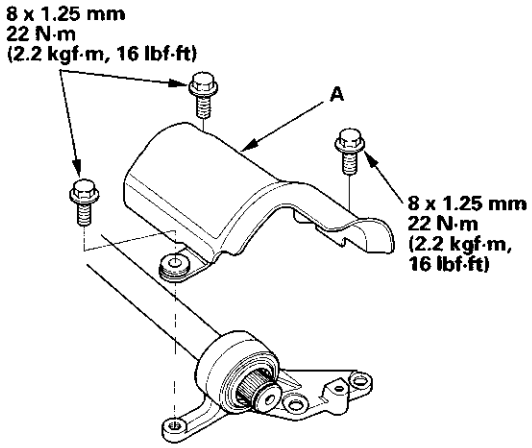
5. Install the external snap ring (A) into the groove of the intermediate shaft (B).



6. Install a new outer seal (A) into the bearing support (B) using the 65 mm oil seal driver (C), the 70 mm support base attachment (D), the 73 x 78/82.6 mm support base (E), and a press. Press the seal until it is 0±0.2 mm (0±0.008 in.) below the surface of the bearing support end.

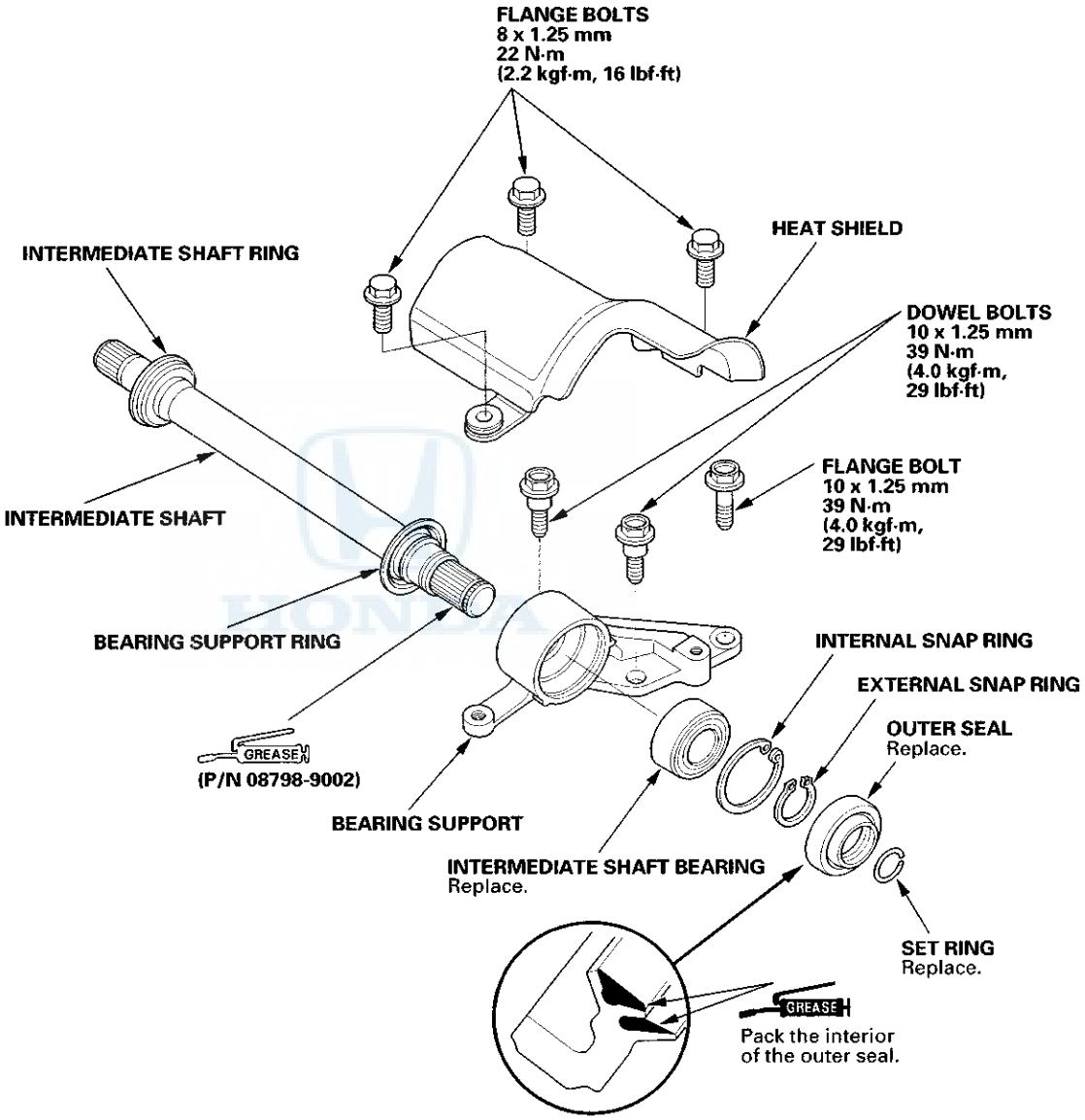


7. Install the heat shield (A).



Intermediate Shaft Reassembly (cont'd)

Exploded View - A/T Model



Special Tools Required
- Oil seal driver, 64 mm 07GAD-PH70201
- Support base attachment, 70 mm 07LAF-SM40300
- Installer attachment, 45 mm 07MAD-PR90100
- Bearing driver attachment, 52 x 55 mm 07746-0010400
- Inner bearing driver attachment, 35 mm 07746-0030400
- Driver handle, 15 x 135L 07749-0010000
- Support base, 73 x 78/82.6 mm 07965-SD90100

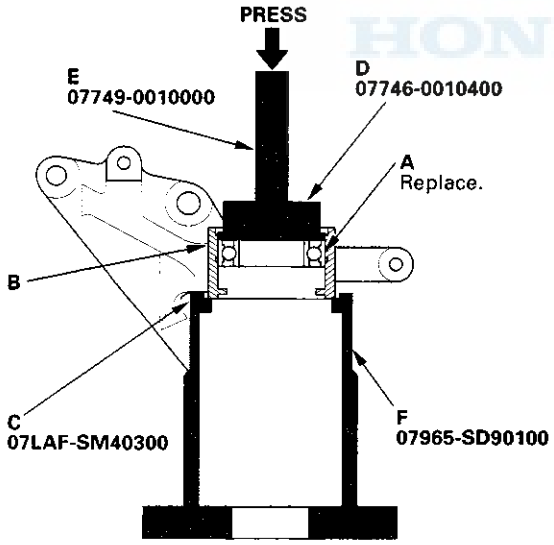
A/T Model

NOTE: Refer to the Exploded View, as needed, during this procedure.

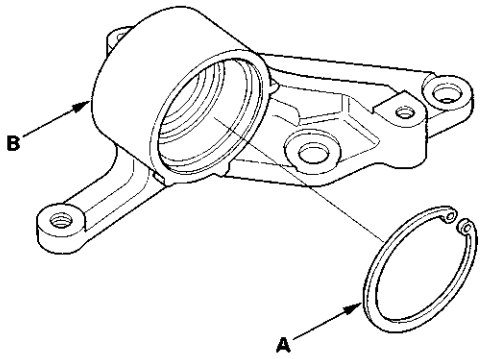
1. Clean the disassembled parts with solvent, and dry them with compressed air.

   NOTE: Do not wash the rubber parts with solvent.

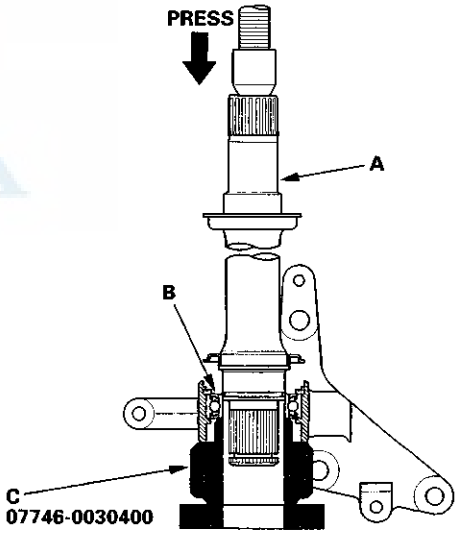
2. Press the new intermediate shaft bearing (A) into the bearing support (B) using the 70 mm support base attachment (C), the 52 x 55 mm bearing driver attachment (D), the 15 x 135L driver handle (E), the 73 x 78/82.6 mm support base (F), and a press.



3. Install the internal snap ring (A) into the groove of the bearing support (B).



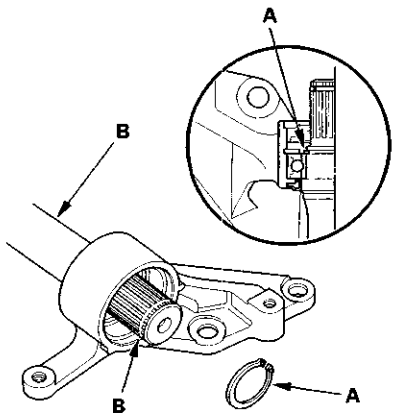
4. Press the intermediate shaft (A) into the shaft bearing (B) using the 35 mm inner bearing driver attachment (C) and a press.



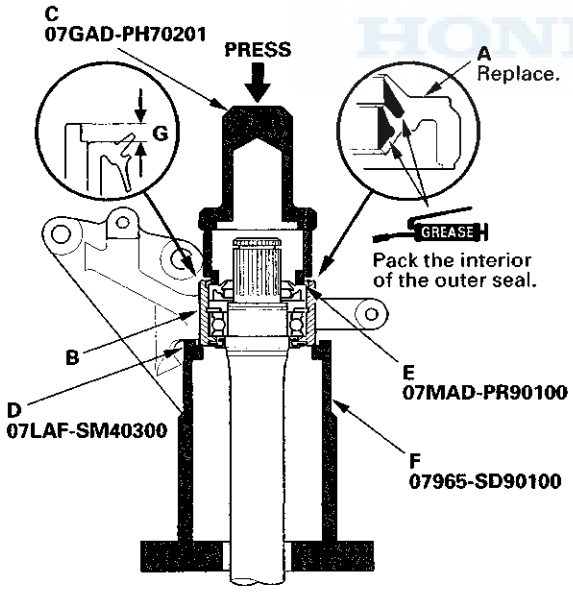
(cont'd)

Intermediate Shaft Reassembly (cont'd)

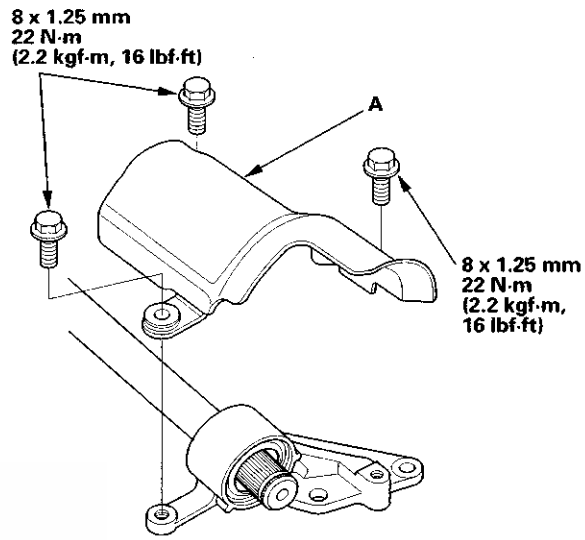
5. Install the external snap ring (A) into the groove of the intermediate shaft (B).



6. Install a new outer seal (A) into the bearing support (B) using the 64 mm oil seal driver (C), the 70 mm support base attachment (D), the 45 mm installer attachment (E), the 73 x 78/82.6 mm support base (F), and a press. Press in the seal until it is 4±0.2 mm (0.16±0.008 in.) (G) below the surface of the bearing support end.



7. Install the heat shield (A).

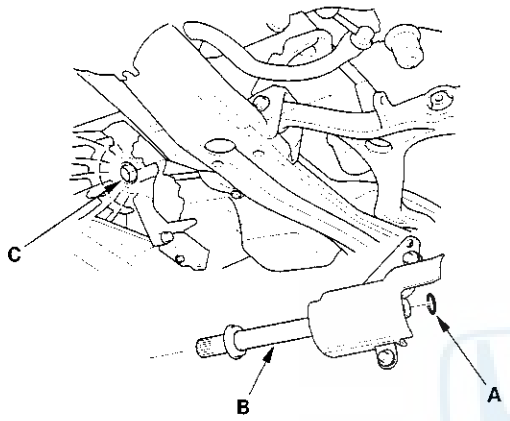


Intermediate Shaft Installation

1. Clean the areas where the intermediate shaft contacts the differential thoroughly with solvent or brake cleaner, and dry with compressed air.

   NOTE: Do not wash the rubber parts with solvent.

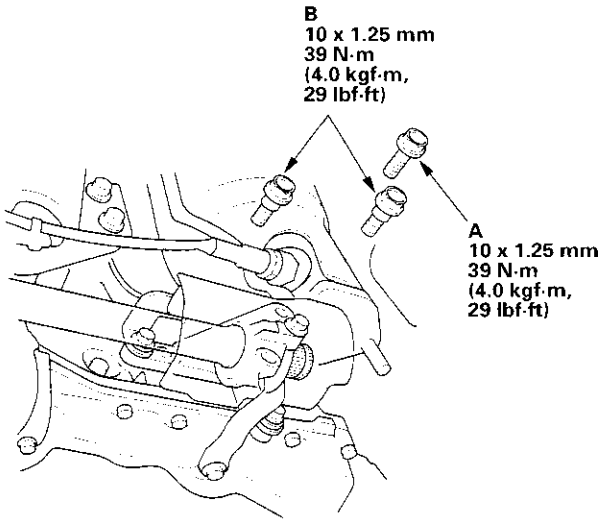
2. Install a new set ring (A) onto the set ring groove of the intermediate shaft (B).



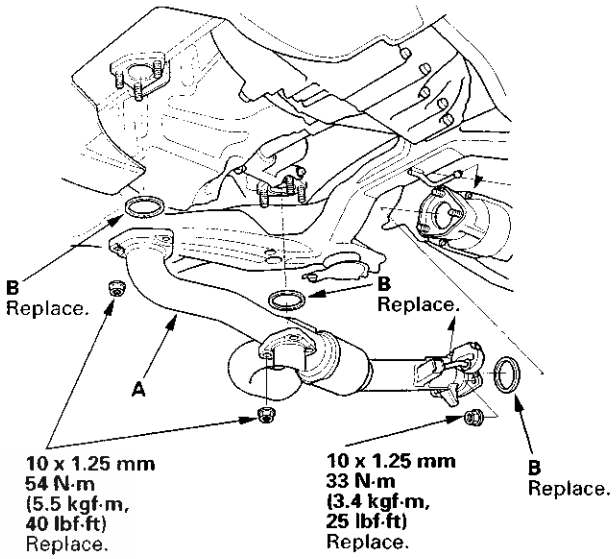
3. Insert the intermediate shaft into the differential correctly.

   NOTE: Insert the intermediate shaft carefully to prevent damaging the oil seal (C).

4. Install the flange bolt (A) and two dowel bolts (B).



5. Install exhaust pipe A with the new gaskets (B) and the new nuts.



6. Install the right driveshaft, refer to the 2008-2009 Accord Service Manual (see page 16-20).

7. Refill the transmission with the recommended transmission fluid:

   - Manual transmission (see page 13-14)
   - Automatic transmission (see page 14-232)

8. Check the wheel alignment, and adjust it if necessary (see page 18-4).

9. Test-drive the vehicle.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If steering maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

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Pump Overhaul 17-13
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Steering Gearbox Installation 17-29

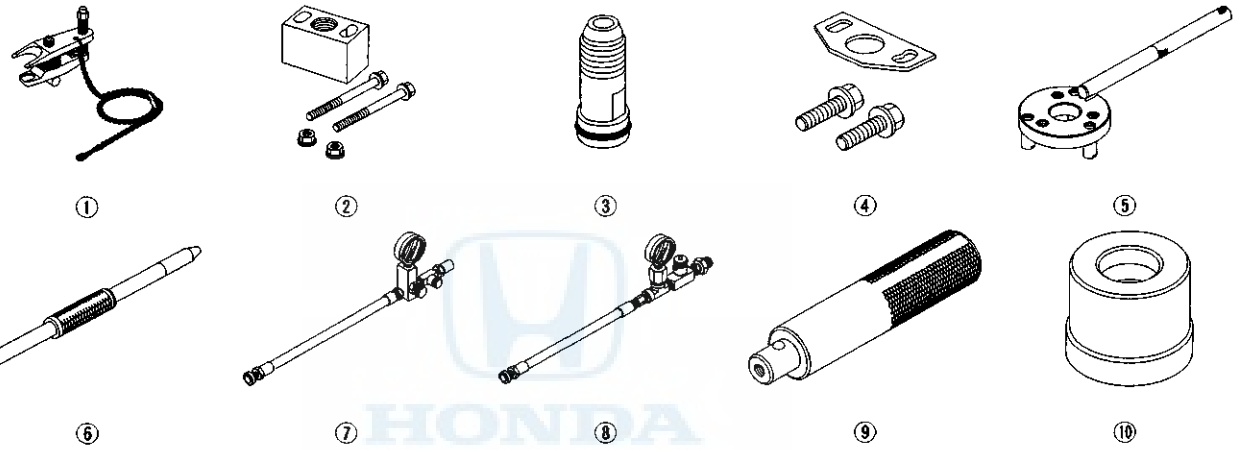
NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002, for items not shown in this section.

Outline of Model Changes

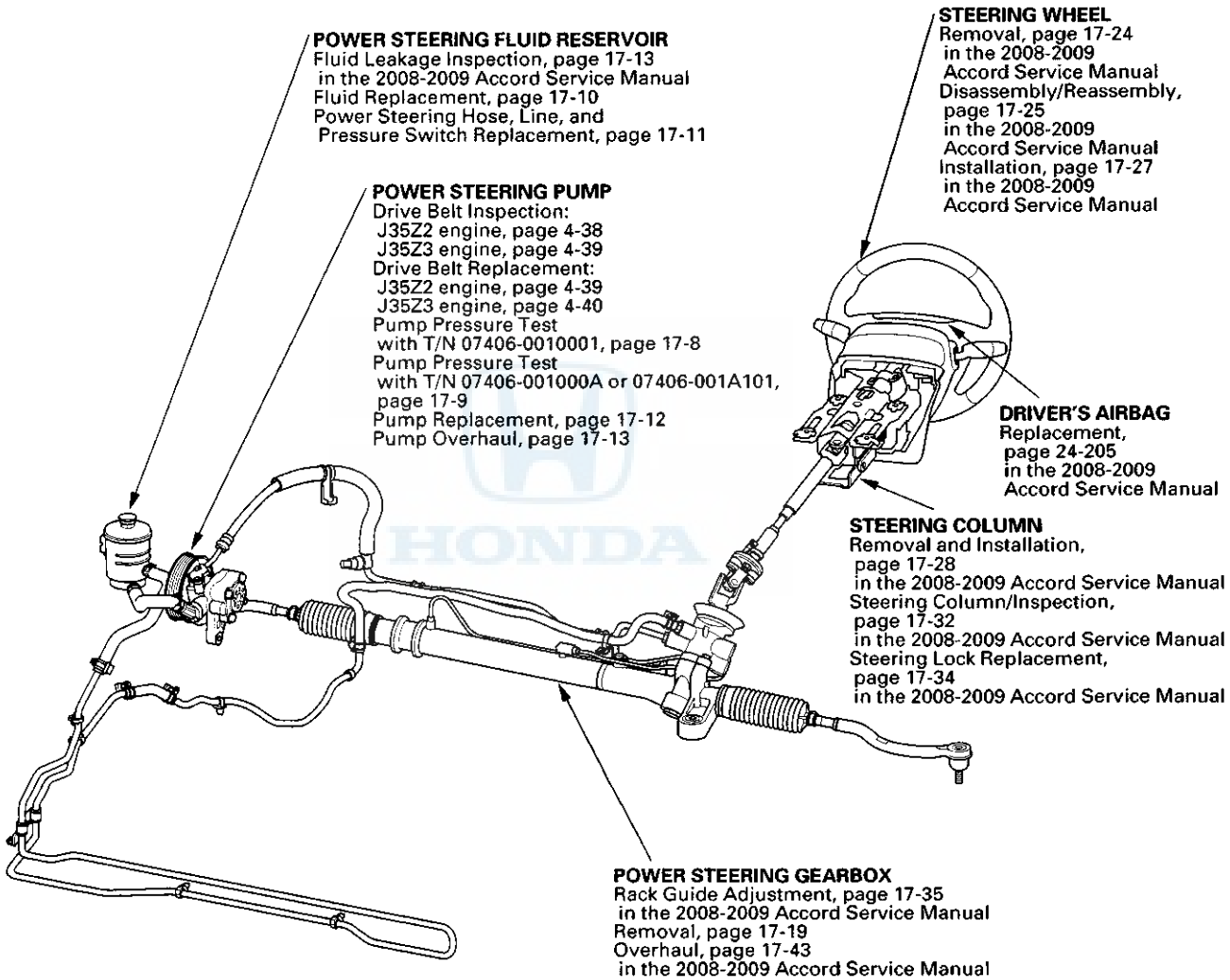
- The power steering pump has been changed.
- The steering gearbox Removal and Installation procedure has been changed.

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07MAC-SL0A202	Ball Joint Remover, 28 mm	1
②	07RAK-S040122	P/S Joint Adapter (Hose)	1
③	07VAK-P8A011A	P/S Joint Adapter (Pump)	1
④	07VAK-P8A012B	P/S Joint Adapter Plate (Pump)	1
⑤	07ZAB-S5A0100	Pulley Holder	1
⑥	070AG-SJAA10S	Subframe Alignment Pin	1
⑦	07406-0010001	P/S Pressure Gauge	1
⑧	07406-001000A or 07406-001A101	P/S Pressure Gauge	1
⑨	07749-0010000	Driver Handle, 15 x 135 L	1
⑩	07946-1870100	Attachment, 28 x 30 mm	1



Component Location Index



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Power Steering

Symptom Troubleshooting Index

Find the symptom in the chart below, and do the related procedures in the order listed until you find the cause.

Symptom	Procedure(s)	Also check for
Hard steering	Troubleshoot the system (see page 17-6).	• Modified suspension • Damaged suspension • Incorrect tire sizes, tire varieties, and air pressure
Assist (excessively light steering at high speed)	Check the rack guide adjustment, refer to the 2008-2009 Accord Service Manual (see page 17-35).	Front wheel alignment (see page 18-4)
Shock or vibration when the steering wheel is turned to full lock	1. Check the drive belt for slippage: J35Z2 engine (see page 4-38), J35Z3 engine (see page 4-39). 2. Check the power steering pump fluid pressure with T/N 07406-0010001 (see page 17-8), T/N 07406-001000A or T/N 07406-001A101 (see page 17-9). 3. Check the rack guide adjustment, refer to the 2008-2009 Accord Service Manual (see page 17-35). 4. Overhaul the steering gearbox, refer to the 2008-2009 Accord Service Manual (see page 17-43).	
Steering wheel will not return smoothly	1. Check cylinder lines for deformation (see page 17-11). 2. Check the ball joints for binding. 3. Check wheel alignment (see page 18-4). 4. Overhaul the steering gearbox, refer to the 2008-2009 Accord Service Manual (see page 17-43).	Damaged suspension
Uneven or rough steering	1. Check for low fluid level in the power steering reservoir due to possible leaks in the system (see page 17-10). 2. Check the drive belt: J35Z2 engine (see page 4-38), J35Z3 engine (see page 4-39). 3. Check for low or erratic engine idle speed (see page 11-384). 4. Check for air in the power steering system due to air entering inlet side of pump. 5. Check the rack guide adjustment, refer to the 2008-2009 Accord Service Manual (see page 17-35). 6. Overhaul the steering gearbox, refer to the 2008-2009 Accord Service Manual (see page 17-43).	
Steering wheel kicks back during wide turns	1. Check for low fluid level in the power steering reservoir due to possible leaks in the system (see page 17-10). 2. Check the drive belt: J35Z2 engine (see page 4-38), J35Z3 engine (see page 4-39). 3. Check the power steering pump fluid pressure with T/N 07406-0010001 (see page 17-8), T/N 07406-001000A or T/N 07406-001A101 (see page 17-9).	
Humming noise from the power steering system	1. Check when the noise occurs: • If the noise is heard during the first 2—3 minutes after starting the engine in cold weather, this is normal. • If the noise is heard when the wheel is turned with the vehicle stopped, this is normal due to the fluid pulsation. 2. Check for air bubbles in the power steering fluid, leak on inlet side of pump. 3. Check for particle contamination of fluid and a restricted filter in the reservoir. 4. Check for the high-pressure hose touching the subframe or body. 5. Check for automatic transmission torque converter noise.	• Pump pressure • Fluid contamination – Restriction in the high pressure line – Restriction in the low pressure line
Power steering rack rattle or chattering	1. Check for loose steering components (tie-rod and ball joints). Tighten or replace as necessary. 2. Check the steering column shaft for wobbling. If the steering column wobbles, replace the steering column assembly, refer to the 2008-2009 Accord Service Manual (see page 17-28). 3. Check the power steering pump pulley: • If the pulley is loose, tighten it (see step 33 on page 17-18). • If the pump shaft is loose, replace the pump (see page 17-12). 4. Check the rack guide adjustment, refer to the 2008-2009 Accord Service Manual (see page 17-35).	

Symptom	Procedure(s)	Also check for
Hissing from the power steering system/ foaming fluid	• Check the fluid level. If low, fill the reservoir to the proper level and check for leaks (see page 17-10). • Check the reservoir for leaks. • Check for crushed inlet hose or loose hose clamp allowing air into the suction side of the system (see page 17-11). • Check the power steering pump shaft oil seal for leaks.	• Air in the P/S fluid • Fluid contamination
Noise from the power steering pump	• Compare the pump noise at normal operating temperature to another like vehicle (pump noise during the first 2—3 minutes after starting the engine in cold weather is normal). • Remove and inspect the pump for wear and damage (see page 17-12).	• P/S pump pressure • Air in the P/S fluid
Squeaking from the power steering pump	Check the drive belt: J35Z2 engine (see page 4-38), J35Z3 engine (see page 4-39).	
Fluid leaks from the steering gearbox	• Fluid leaks from the top of the valve body unit. Overhaul the valve body unit, refer to the 2008-2009 Accord Service Manual (see page 17-43). • Fluid leaks from the driver's side boot. Replace the valve oil seal on the pinion shaft. Replace the cylinder end seal on the gearbox side. • Fluid leaks from the passenger's side boot. Replace the cylinder end seal on the cylinder side, refer to the 2008-2009 Accord Service Manual (see page 17-43). • Fluid leaks from pinion shaft near the lower steering joint bolt. Overhaul the valve body unit, refer to the 2008-2009 Accord Service Manual (see page 17-43). • Fluid leaks from the steering damping valve covers on the valve body unit. Overhaul the valve housing.	Fluid contamination
Fluid leaks from the power steering line	• Fluid leaks from the cylinder line connections (flare nuts). Tighten the connection and retest (see page 17-11). • Fluid leaks from a damaged cylinder line(s). Replace the cylinder line(s) (see page 17-11). • Fluid leaks from the pump outlet hose or return line fitting on the valve body unit (flare nuts). Tighten the fitting and retest. If it still leaks, replace the hose, the line (see page 17-11), or valve body unit as necessary.	Fluid contamination
Fluid leaks from the power steering pump	• Fluid leaks from the seal. Replace the pump seal (see page 17-13). • Fluid leaks from the power steering pump housing. Replace the leaking O-rings or seals (see page 17-13), and if necessary replace the power steering pump (see page 17-12).	Fluid contamination
Fluid leaks from the power steering reservoir	• Fluid leaks from around the reservoir cap because fluid level is too high. Drain the reservoir to the proper level (see page 17-10). If the fluid is aerated check for an air leak on the inlet side of pump. • Fluid leaks from reservoir. Check the reservoir for cracks and replace as necessary.	Fluid contamination
Fluid leaks from the power steering pump outlet hose (high-pressure)	• Check the fitting for loose bolts. If the bolts are tight, replace the fitting O-ring (see page 17-13). • Fluid leaks at the swagged joint. Replace the pump outlet hose (see page 17-13).	Fluid contamination
Fluid leaks from the power steering pump inlet hose (low-pressure)	Check the hose for damage, deterioration, or improper assembly (see page 17-13). Replace or repair as necessary.	Fluid contamination

Symptom Troubleshooting

Hard Steering

NOTE:
- Compare to a known-good vehicle that is the same trim level.
- Check for suspension damage.
- Check the steering alignment.
- Check the tire condition and pressure.

1. Check the power assist, refer to the 2008-2009 Accord Service Manual (see page 17-9).

   Is the initial turning load more than 29 N (3.0 kgf, 6.6 lbf) ?

   YES—Go to step 2.

   NO—Power assist is OK at this time. Compare to a known-good vehicle.■

2. Connect the P/S joint adapter (pump), P/S joint adapter plate (pump), P/S joint adapter (hose), and P/S pressure gauge T/N 07406-0010001 (see page 17-8), T/N 07406-001000A or T/N 07406-001A101 (see page 17-9) to the pump.

3. Measure steady-state fluid pressure from the pump at idle.

   Is the pressure 1,470 kPa (15 kgf/cm², 213 psi) or less?

   YES—Go to step 4.

   NO—Go to step 8.

4. Measure the pump relief pressure at idle.

   Is the pressure 8,830–9,310 kPa (90–95 kgf/cm², 1,280–1,350 psi) or more?

   YES—Go to step 5.

   NO—Go to step 9.

5. Using a spring scale, measure the power assist in both directions, to the left and to the right.

   Are the two measurements within 5.0 N (0.51 kgf, 1.12 lbf) of each other?

   YES—Go to step 6.

   NO—Go to step 11.

6. Measure the fluid pressure with both pressure gauge valves open (if so equipped), while turning the steering wheel fully to the left and fully to the right.

   Is the pressure 8,830–9,310 kPa (90–95 kgf/cm², 1,280–1,350 psi) or more in both directions?

   YES—Go to step 7.

   NO—Faulty steering gearbox. Overhaul the steering gearbox, refer to the 2008-2009 Accord Service Manual (see page 17-43).■

7. Adjust the rack guide, refer to the 2008-2009 Accord Service Manual (see page 17-35), and retest.

   Is the steering OK?

   YES—Repair is completed.■

   NO—Faulty steering gearbox. Overhaul the steering gearbox, refer to the 2008-2009 Accord Service Manual (see page 17-43).■

8. Check the outlet and return hoses and lines between the pump and the steering gearbox for clogging and deformation.

   Are the lines clogged or deformed?

   YES—Replace the lines.■

   NO—Faulty valve body unit. Overhaul the valve body, refer to the 2008-2009 Accord Service Manual (see page 17-43).■

9. Disassemble the pump (see page 17-13).

10. Check the flow control valve for smooth movement and leaks (see step 13 on page 17-15).

    Is the flow control valve OK?

    YES—Faulty pump assembly. Replace the pump assembly (see page 17-12).■

    NO—Faulty flow control valve. Replace the flow control valve (see page 17-13).■

11. Check the cylinder lines for deformation (see page 17-11).

    Are any of the line(s) deformed?

    YES—Replace the deformed line(s).■

    NO—Go to step 12.

12. Check for a bent rack shaft or misadjusted rack guide (too tight).

    Is the rack shaft bent or the rack guide adjusted too tight?

    YES—Replace the rack shaft, or readjust the rack guide preload.■

    NO—Faulty valve body unit. Replace the valve body unit.■

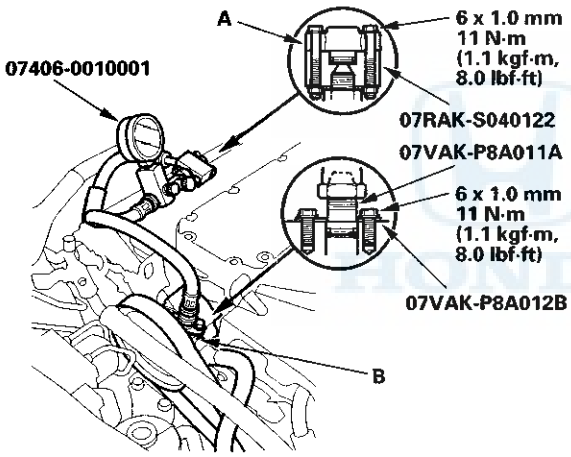
Pump Pressure Test with T/N 07406-0010001

Special Tools Required
- P/S joint adapter (pump) 07VAK-P8A011A
- P/S joint adapter plate (pump) 07VAK-P8A012B
- P/S joint adapter (hose) 07RAK-S040122
- P/S pressure gauge 07406-0010001

Check the fluid pressure as follows to determine whether the trouble is in the pump or steering gearbox.

1. Check the power steering fluid level (see page 17-10).

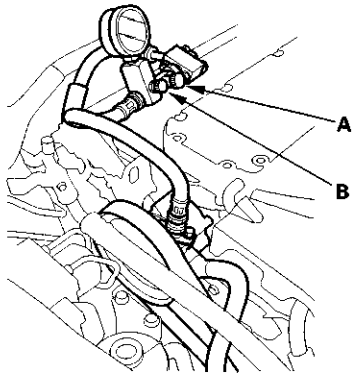
2. Disconnect the pump outlet hose (A) from the pump outlet with care so as not to spill the power steering fluid on the frame and other parts, then install the P/S joint adapter (pump) on the pump outlet (B) with the P/S joint adapter plate.



3. Connect the P/S joint adapter (hose) to the P/S pressure gauge, then connect the pump outlet hose to the P/S joint adapter (hose).

4. Install the P/S pressure gauge to the P/S joint adapter (pump).

5. Fully open the shut-off valve (A).



6. Fully open the pressure control valve (B).

7. Start the engine, and let it idle.

8. Turn the steering wheel from lock-to-lock several times to warm the fluid to operating temperature at 158 °F (70 °C).

9. Measure steady-state fluid pressure while the engine is idling. If the pump is in good condition, the gauge should read no more than 1,470 kPa (15 kgf/cm², 213 psi).
   If the reading is high, check for:

   - Clogged or deformed inlet or return line between the pump and the steering gearbox.
   - Clogged valve body unit.

10. Close the shut-off valve, then close the pressure control valve gradually until the pressure gauge needle is stable. Read the pressure.

NOTICE
Do not keep the shut-off valve closed more than 5 seconds or the pump could be damaged by over-heating.

11. Immediately open the shut-off valve fully. If the pump is in good condition, the gauge should read at least 8,830—9,310 kPa (90—95 kgf/cm², 1,280—1,350 psi). A low reading means the pump output is too low for full assist. Repair or replace the pump.

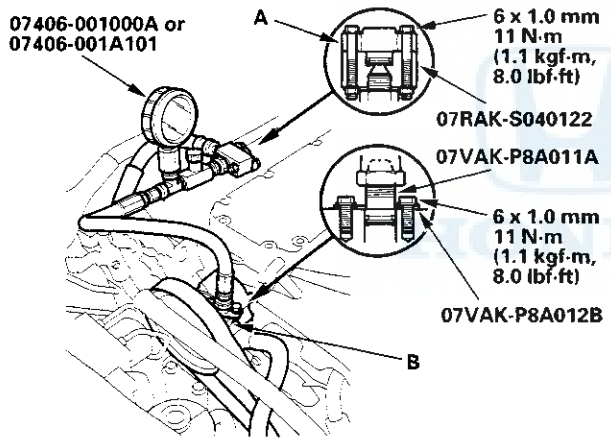
Pump Pressure Test with T/N 07406-001000A or T/N 07406-001A101

Special Tools Required
- P/S joint adapter (pump) 07VAK-P8A011A
- P/S joint adapter plate (pump) 07VAK-P8A012B
- P/S joint adapter (hose) 07RAK-S040122
- P/S pressure gauge 07406-001000A or 07406-001A101

Check the fluid pressure as follows to determine whether the trouble is in the pump or steering gearbox.

1. Check the power steering fluid level (see page 17-10).

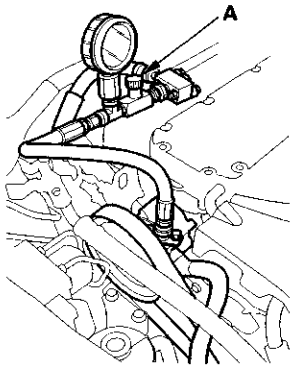
2. Disconnect the pump outlet hose (A) from the pump outlet with care so as not to spill the power steering fluid on the frame and other parts, then install the P/S joint adapter (pump) on the pump outlet (B) with the P/S joint adapter plate.



3. Connect the P/S joint adapter (hose) to the P/S pressure gauge, then connect the pump outlet hose to the P/S joint adapter (hose).

4. Install the P/S pressure gauge to the P/S joint adapter (pump).

5. Fully open the shut-off valve (A).



6. Start the engine, and let it idle.

7. Turn the steering wheel from lock-to-lock several times to warm the fluid to operating temperature at 158 °F (70 °C).

8. Measure steady-state fluid pressure while the engine is idling. If the pump is in good condition, the gauge should read no more than 1,470 kPa (15 kgf/cm², 213 psi).
   If the reading is high, check for:
   - Clogged or deformed inlet or return line between the pump and the steering gearbox.
   - Clogged valve body unit.

9. Close the shut-off valve gradually, and read the pressure.

   NOTICE
   Do not keep the shut-off valve closed more than 5 seconds or the pump could be damaged by over-heating.

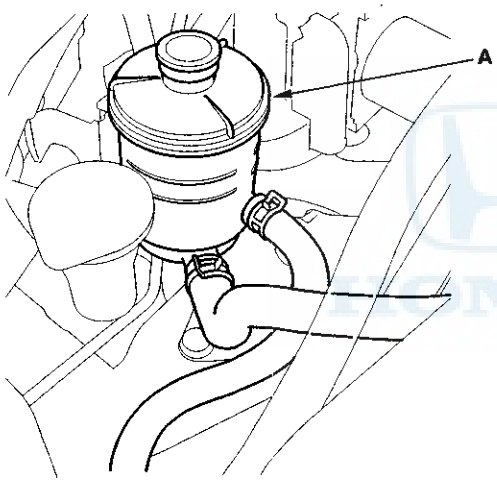
10. Immediately open the shut-off valve fully. If the pump is in good condition, the gauge should read at least 8,830—9,310 kPa (90—95 kgf/cm², 1,280—1,350 psi). A low reading means the pump output is too low for full assist. Repair or replace the pump.

Fluid Replacement

Check the reservoir (A) at regular intervals, and add the recommended fluid as necessary. Always use Honda Power Steering Fluid. Using any other type of power steering fluid or automatic transmission fluid can cause increased wear, fluid leaks, and poor steering in cold weather.

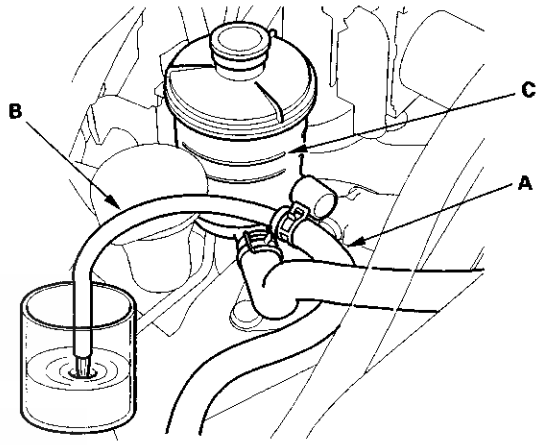
NOTE: If the fluid is contaminated, the screen in the reservoir may be partially blocked. Inspect the reservoir screen for any debris. If the reservoir screen is clogged, replace the reservoir.

System capacity:
1.09 L (1.15 US qt) at disassembly
Reservoir capacity:
0.32 L (0.34 US qt)



1. Remove the reservoir from its holder. Raise the reservoir, then disconnect the return hose (A) to drain the reservoir. Take care not to spill the fluid on the vehicle. Wipe off any spilled fluid at once.

   NOTE: Inspect the reservoir screen for any debris. If the reservoir screen is clogged, replace the reservoir.



2. Connect a hose (B) of suitable diameter to the disconnected return hose, and put the hose end in a suitable container.

3. Start the engine, let it run at idle, and turn the steering wheel from lock-to-lock several times. When fluid stops running out of the hose, shut off the engine. Discard the fluid.

   NOTE: Stop the motor immediately once the fluid stops running out of the hose to prevent pump damage.

4. Reinstall the return hose on the reservoir.

5. Fill the reservoir to the upper level line (C).

6. Start the engine and run it at idle, then turn the steering from lock-to-lock several times to bleed air from the system.

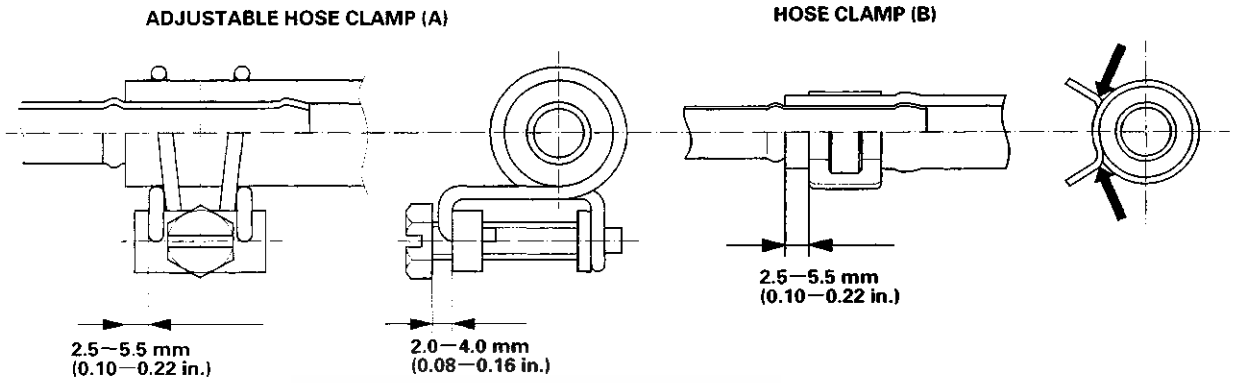
7. Recheck the fluid level and add some if necessary. Do not fill the reservoir beyond the upper level line.

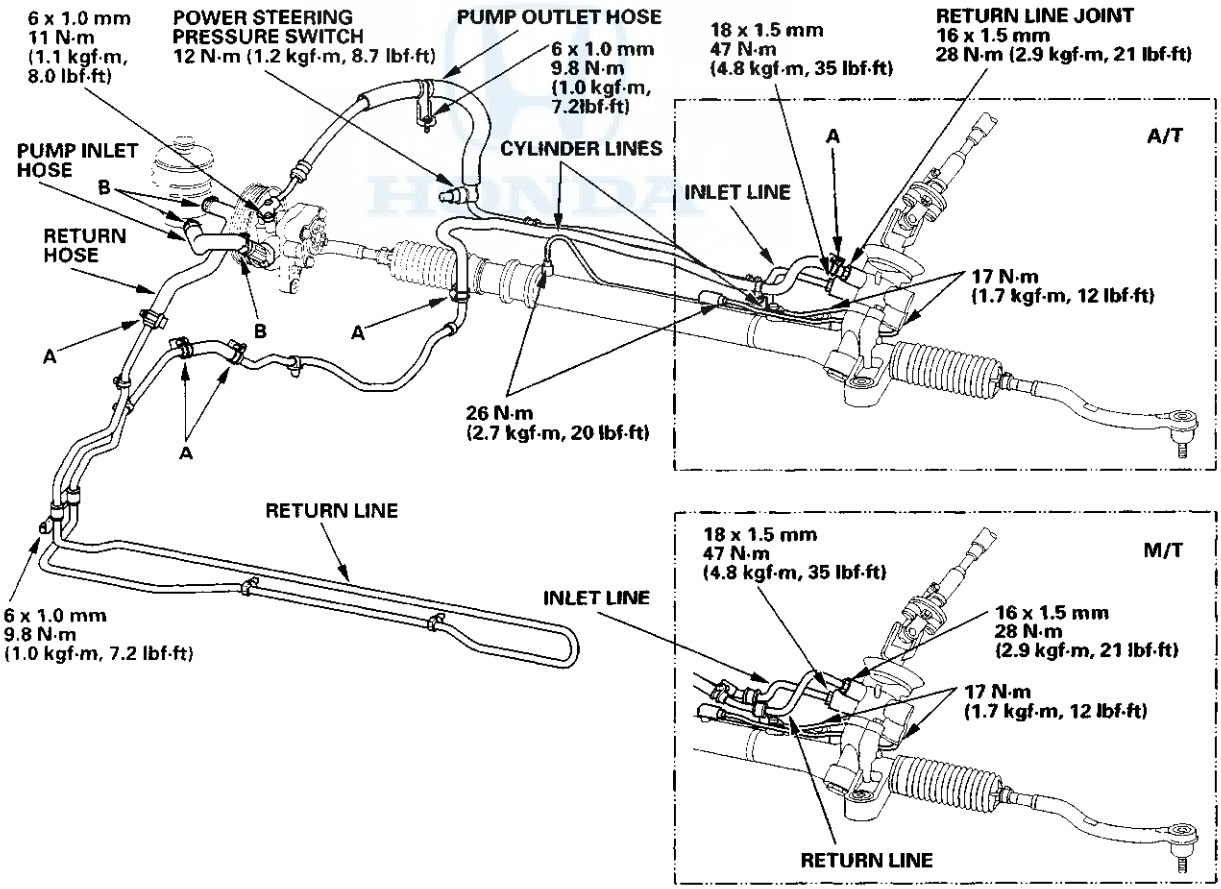
8. If the fluid is contaminated, dark, or discolored, repeat the procedure as necessary until the system is clean.

Power Steering Hose, Line, and Pressure Switch Replacement

Note these items during installation:

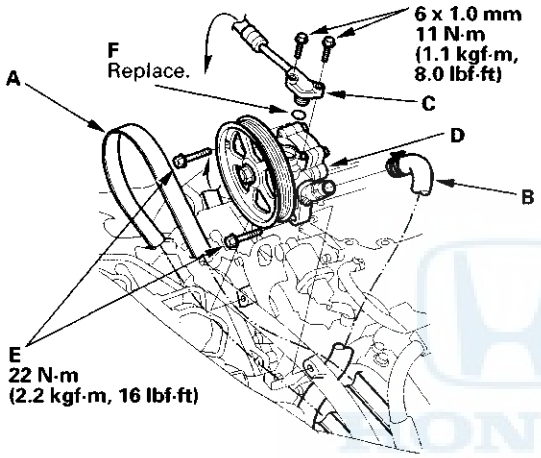
- Connect each hose to the corresponding line securely until it contacts the stop on the line. Install the clamp or adjustable clamp at the specified distance from the hose end as shown.
- Check all clamps for deterioration or deformation; replace the clamps with new ones if necessary.
- Add the recommended power steering fluid to the specified level on the reservoir and check for leaks.





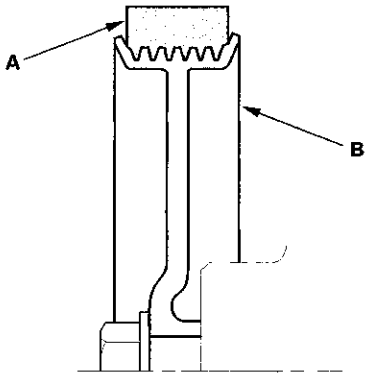
Pump Replacement

1. Place a suitable container under the vehicle to catch any spilled fluid.
2. Drain the power steering fluid from the reservoir (see page 17-10).
3. J35Z3 engine model: Remove the engine cover.
4. Remove the drive belt (A) from the pump pulley: J35Z2 engine (see page 4-39), J35Z3 engine (see page 4-40).



5. Cover the auto-tensioner, alternator, and A/C compressor with several shop towels to protect them from spilled power steering fluid. Disconnect the pump inlet hose (B) and pump outlet hose (C) from the pump (D), and plug them. Take care not to spill the fluid on the body or parts. Wipe off any spilled fluid at once. Do not turn the steering wheel with the pump removed.
6. Remove the pump mounting bolts (E).
7. Cover the opening of the pump with a piece of tape to prevent foreign material from entering the pump.
8. Transfer the pump inlet hose and pump outlet hose from the original pump onto the new pump with a new O-ring (F).
9. Loosely install the pump in the pump bracket with the mounting bolts, then tighten the pump fittings to the specified torque.
10. Tighten the pump mounting bolts to the specified torque.
11. Install the drive belt (A).

    Note these items during drive belt installation:
    - Inspect the belt for wear and cracks. Replace the belt if necessary.
    - Make sure that the belt is properly positioned on the pulleys (B).
    - Do not get power steering fluid or grease on the auto-tensioner, alternator, A/C compressor, and drive belt or pulley faces. Clean off any fluid or grease before installation.

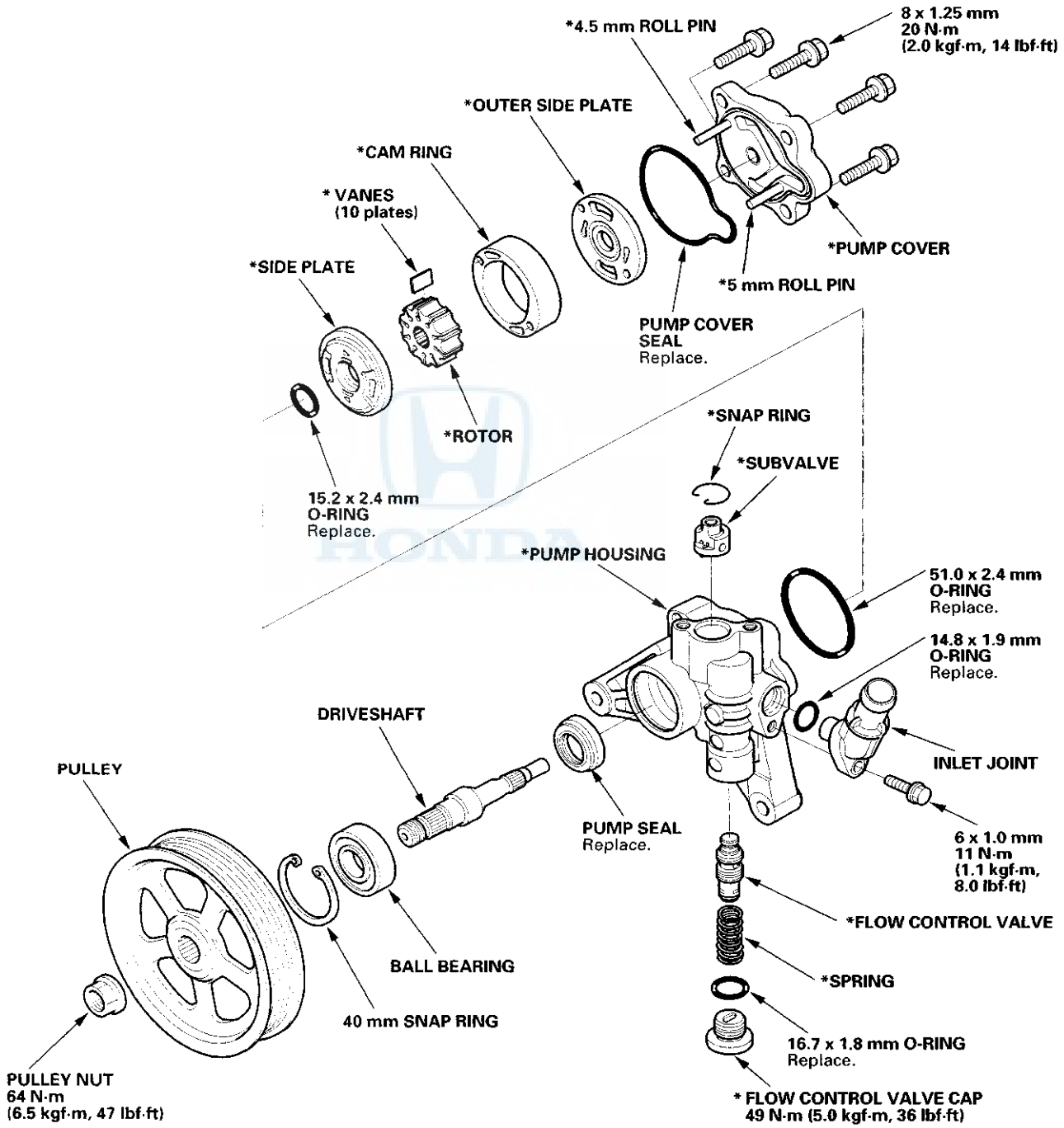


12. J35Z3 engine model: Install the engine cover.
13. Fill the reservoir to the upper level line (see page 17-10).
14. Start the engine, and check for leaks.

Pump Overhaul

Exploded View

Replace the pump as an assembly if any of the parts indicated with an asterisk (*) are worn or damaged.



(cont'd)

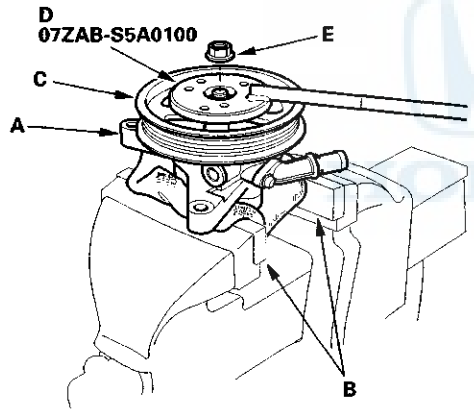
Pump Overhaul (cont'd)

Special Tools Required
- Pulley holder 07ZAB-S5A0100
- Attachment, 28 x 30 mm 07946-1870100
- Driver handle, 15 x 135 L 07749-0010000

Disassembly

NOTE: Refer to the Exploded View as needed during the following procedure.

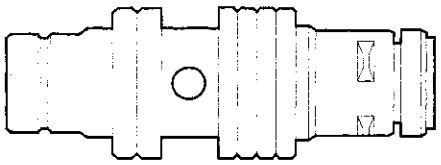
1. Remove the power steering pump (see page 17-12).
2. Drain the remaining fluid from the power steering pump.
3. Hold the power steering pump (A) in a vise with soft jaws (B), then hold the pulley (C) with the pulley holder (D), and remove the pulley nut (E) and pulley. Be careful not to damage the pump housing with the jaws of the vise.



4. Remove the inlet joint and O-ring.
5. Loosen the flow control valve cap with a hex wrench, and remove the cap, O-ring, spring, and flow control valve.
6. Remove the pump cover and pump cover seal.
7. Remove the outer side plate, cam ring, rotor, vanes, side plate and O-rings.
8. Remove the snap ring, then remove the subvalve from the pump housing.
9. Remove the snap ring, then remove the driveshaft by tapping the shaft end with a soft face hammer.
10. Remove the pump seal from the pump housing.

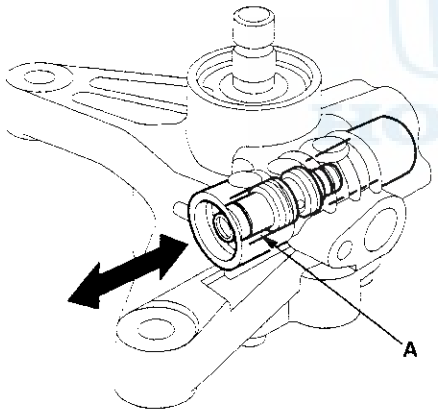
Inspection

11. Check the flow control valve for wear, burrs, and other damage to the edges of the grooves in the valve.



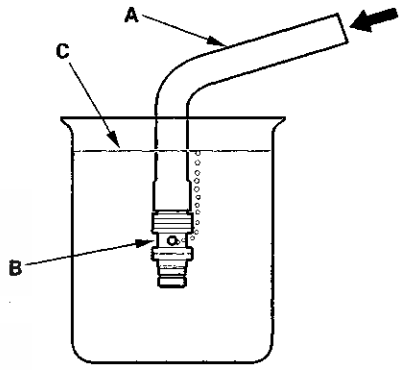
12. Inspect the bore of the flow control valve on the pump housing for scratches and wear.

13. Slip the flow control valve back in the pump housing, and check that it moves in and out smoothly. If OK, go to step 14; if not, replace the pump as an assembly. The flow control valve (A) is not available separately.

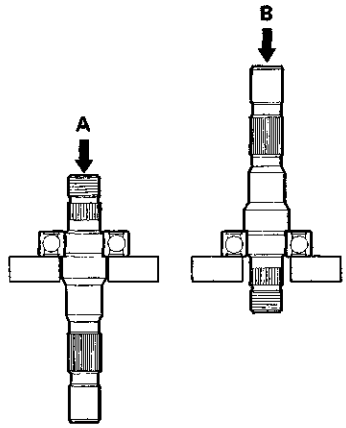


14. Attach a hose (A) to the end of the flow control valve (B) as shown. Then submerge the flow control valve in a container of power steering fluid (C), and apply compressed air in the hose.

    - If air bubbles leak through the valve at less than 98 kPa (1.0 kgf/cm², 14.2 psi), replace the pump as an assembly. The flow control valve is not available separately.
    - If the flow control valve is OK, set it aside for reassembly later.



15. Inspect the ball bearing by rotating the outer race slowly. If you feel any play (axial or radial) or roughness, remove the faulty ball bearing (A) and install a new one (B).

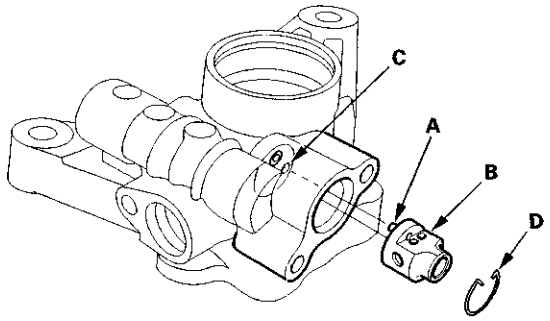


(cont'd)

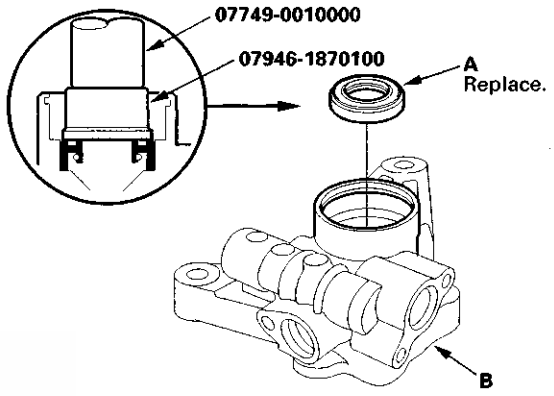
Pump Overhaul (cont'd)

Reassembly

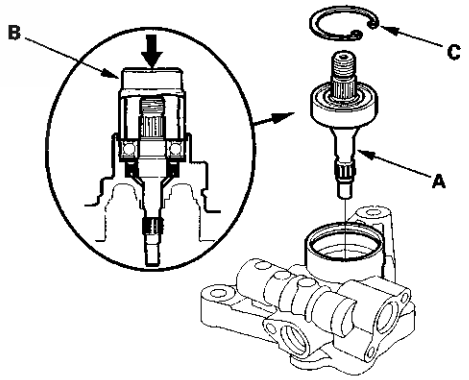
16. Align the pin (A) of the subvalve (B) with the oil passage (C) in the pump housing, and push the subvalve into place, then install the snap ring (D).



17. Install the new pump seal (A) (with its grooved side facing in) into the pump housing (B) by hand first, then drive it in using the driver handle and attachment until there is no step at the top of the pump seal, and the seal is fully seated in the pump housing.

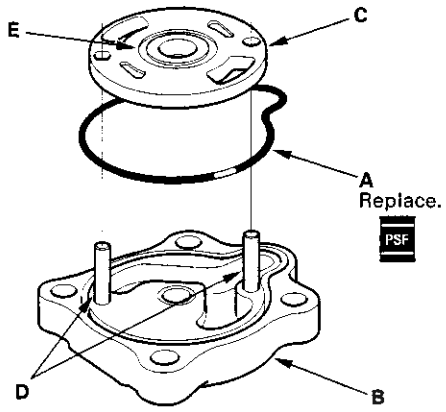


18. Position the driveshaft (A) in the pump housing, then press it in with the appropriate size socket wrench (B) as shown.



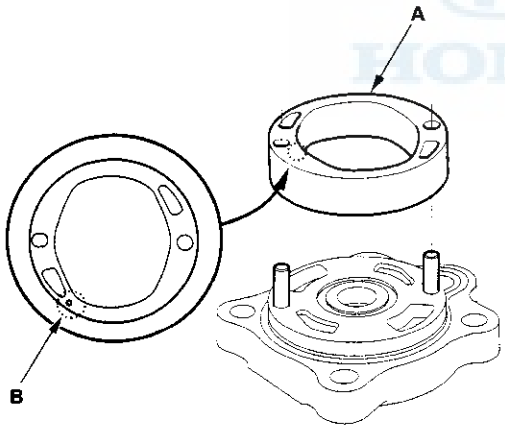
19. Install the 40 mm snap ring (C) with its beveled edge facing out.

20. Coat the new pump cover seal (A) with power steering fluid, and install it into the groove in the pump cover (B).

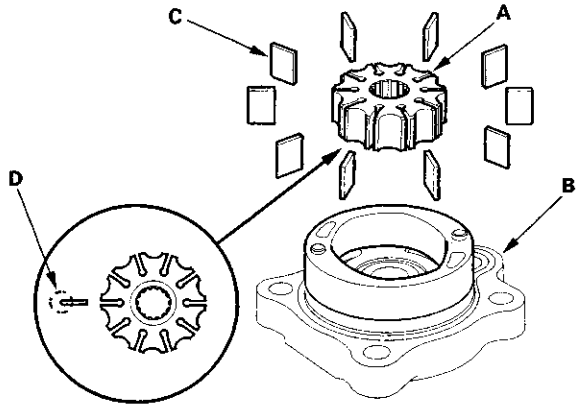


21. Install the outer side plate (C) over the two roll pins (D) with the groove (E) facing up.

22. Set the cam ring (A) over the two roll pins with the "•" mark (B) facing down.

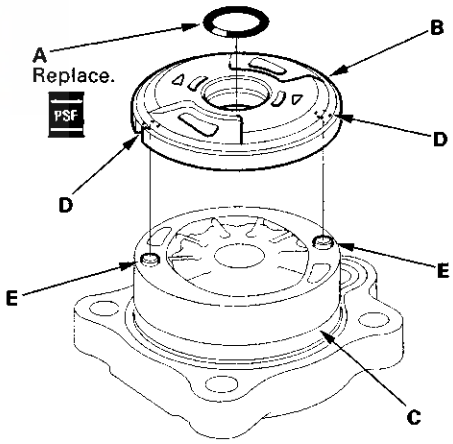


23. Install the rotor (A) to the pump cover (B).



24. Set the 10 vanes (C) in the grooves in the rotor. Make sure that the round ends (D) of the vanes are in contact with the sliding surface of the cam ring.

25. Coat the new 15.2 mm O-ring (A) with power steering fluid, and install it into the groove in the side plate (B).

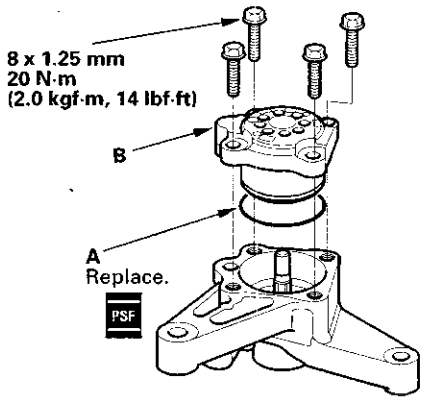


26. Install the side plate on the cam ring (C) by aligning the roll pin set holes (D) in the side plate with the roll pins (E).

(cont'd)

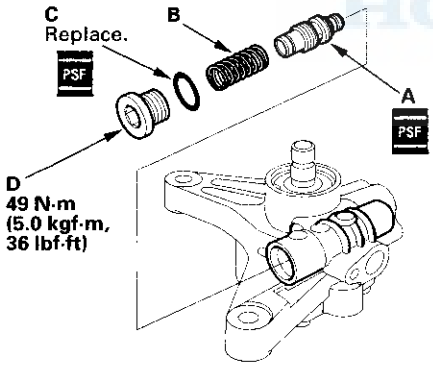
Pump Overhaul (cont'd)

27. Coat the new 51.0 mm O-ring (A) with power steering fluid, and position it in the bottom of the pump housing.



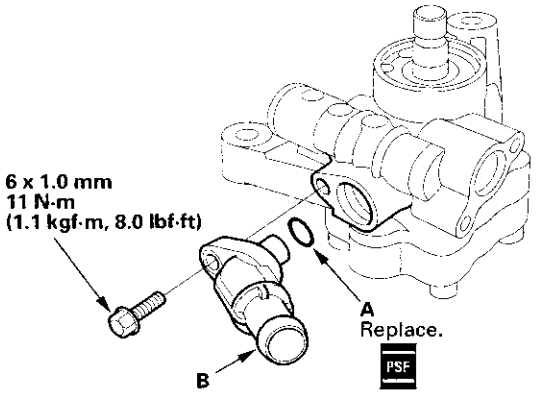
28. Install the pump cover assembly (B) in the pump housing. Tighten the bolts to the specified torque alternating in two or more steps.

29. Coat the flow control valve (A) with power steering fluid, then install it and the spring (B) in the pump housing.

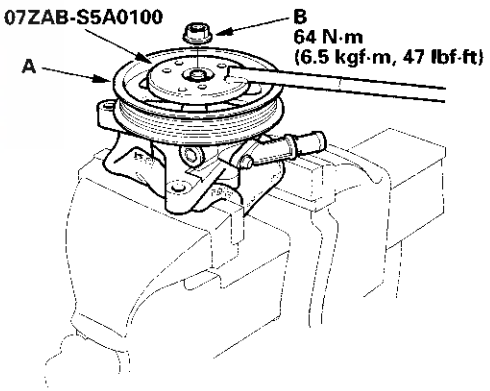


30. Coat the new 16.7 mm O-ring (C) with power steering fluid, and install it on the flow control valve cap (D), then install the cap on the pump housing. Tighten it to the specified torque.

31. Coat the new 14.8 mm O-ring (A) with power steering fluid, and install it on the inlet joint (B). Install the inlet joint on the pump housing.



32. Install the pulley (A), then loosely install the pulley nut (B). Hold the steering pump in a vise with soft jaws. Be careful not to damage the pump housing with the jaws of the vise.



33. Hold the pulley with the pulley holder, and tighten the pulley nut to the specified torque.

34. Check that the pump turns smoothly by turning the pulley by hand. If it is hard to turn, loosen the four flange bolts on the cover, then retighten them in same manner as in step 28. Retest. If the pump is still hard to turn, replace the pump.

35. Reinstall the power steering pump (see page 17-12).

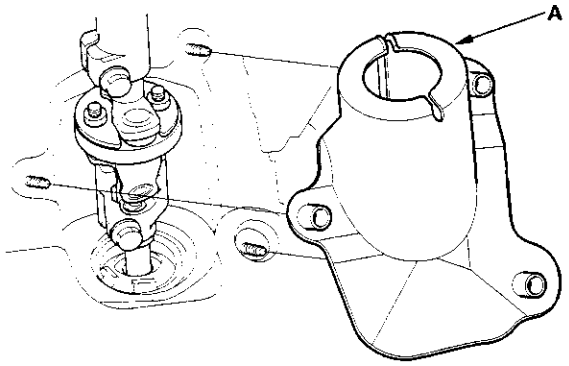
Steering Gearbox Removal

Special Tools Required
- Ball joint remover, 28 mm 07MAC-SL0A202
- 2008 V6 attachment arm SIL02C000033 *
- Engine hanger balance bar VSB02C000019 *
- Front subframe adapter VSB02C000016 *
- Engine support hanger, A and Reds AAR-T1256 *

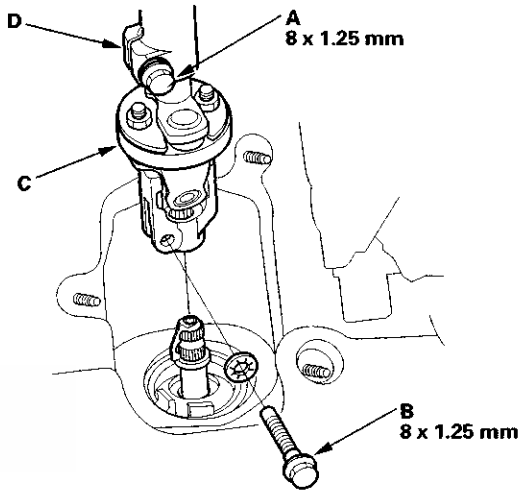
* : These special tools are available through the Honda Tool and Equipment Program, 888-424-6857.

Note these items during removal:
- Using clean solvent and a brush, wash any oil and dirt off the valve body unit, it's lines, and the end of the steering gearbox. Blow dry with compressed air.
- Be sure to remove the steering wheel before disconnecting the steering joint, or damage to the cable reel can occur.
- Lower the front subframe from the body and remove the steering gearbox through the gap produced by lowering the front subframe.

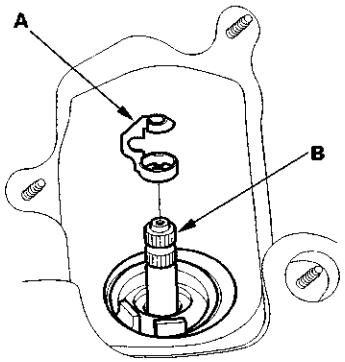
1. Drain the power steering fluid (see page 17-10).
2. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
3. Raise the vehicle, and support it with safety stands in the proper locations (see page 1-11).
4. Remove the front wheels.
5. Remove the steering wheel, refer to the 2008-2009 Accord Service Manual (see page 17-24) and driver's airbag, refer to the 2008-2009 Accord Service Manual (see page 24-205).
6. Remove steering joint cover (A).



7. Loosen the upper steering joint bolt (A), and remove the lower steering joint bolt (B). Disconnect the steering joint (C) by moving the steering joint toward the column. Do not disconnect the steering joint from the column shaft (D).



8. Remove the center guide (A) (if equipped) from the top of the pinion shaft (B), and discard it. The center guide is for factory assembly use only.

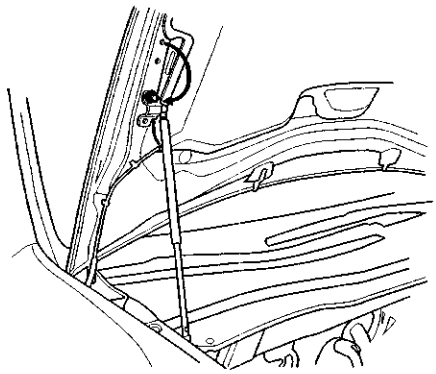


9. Apply vinyl tape to the splines on the pinion shaft.

(cont'd)

Steering Gearbox Removal (cont'd)

10. Remove the hood support rod, then use it as shown to prop the hood in the wide-open position.

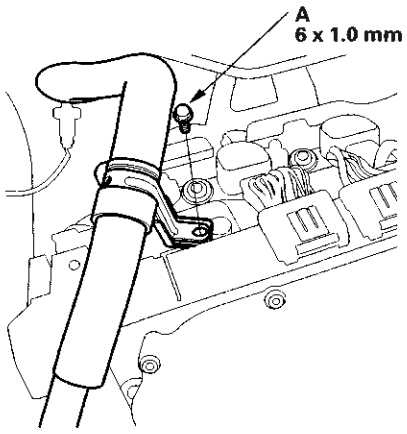


11. Remove the front grille cover.

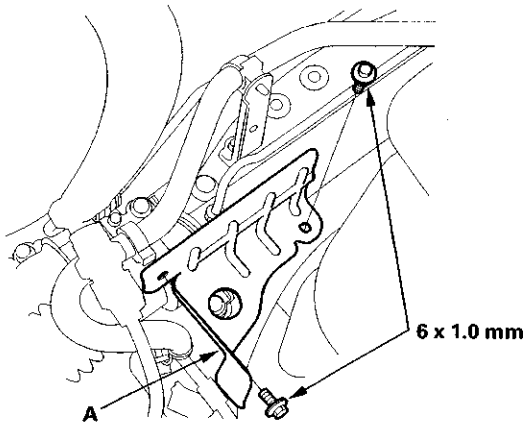
    - 2-door, refer to the 2008-2009 Accord Service Manual (see page 20-257).
    - 4-door, refer to the 2008-2009 Accord Service Manual (see page 20-257).

12. Remove the strut brace, refer to the 2008-2009 Accord Service Manual (see page 20-289).

13. With ACM: Remove the P/S pump outlet hose clamp bolt (A).

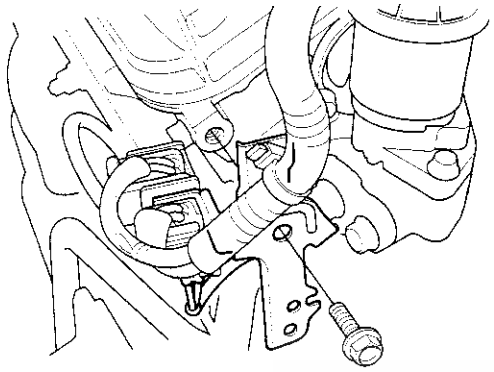


14. Remove the P/S heat shield (A).

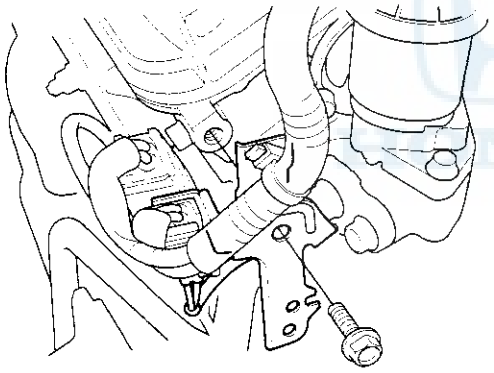


15. Remove the connector bracket from the front cylinder head; use the bracket bolt hole to attach the engine hanger balance bar front arm.

J35Z2 engine

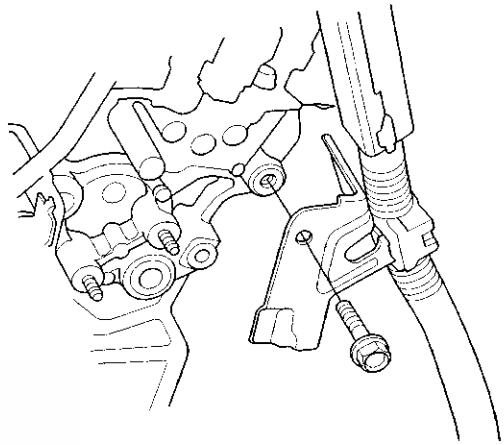


J35Z3 engine

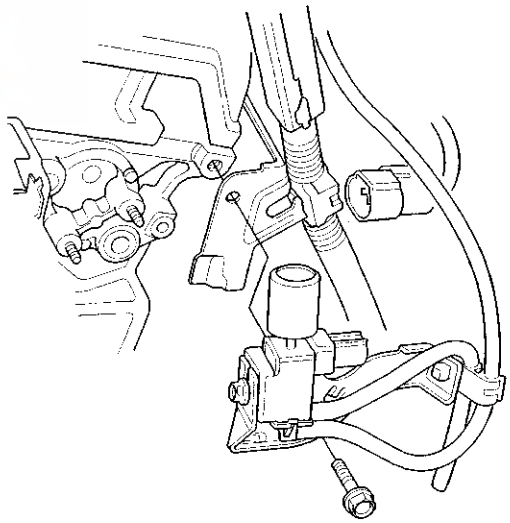


16. Remove the harness clamp bracket from the rear cylinder head; use the bracket bolt hole to attach the 2008 V6 attachment arm (SIL02C000033).

J35Z2 engine



J35Z3 engine



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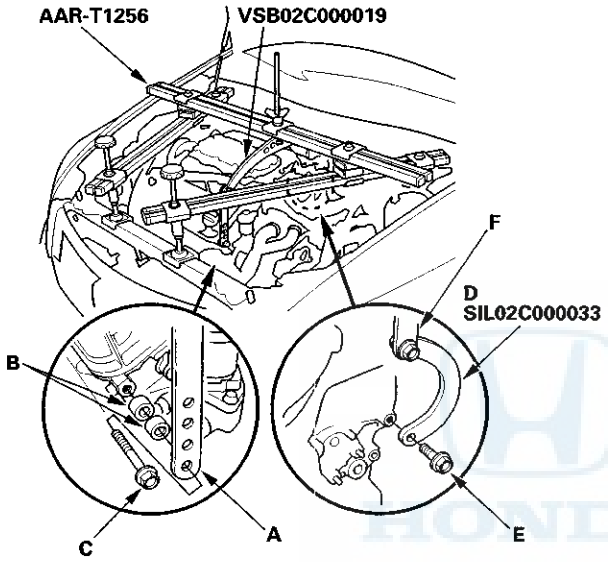
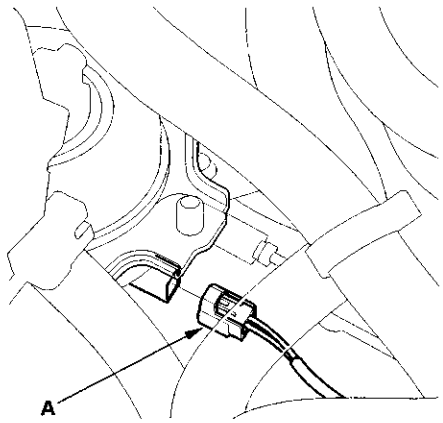
Steering Gearbox Removal (cont'd)

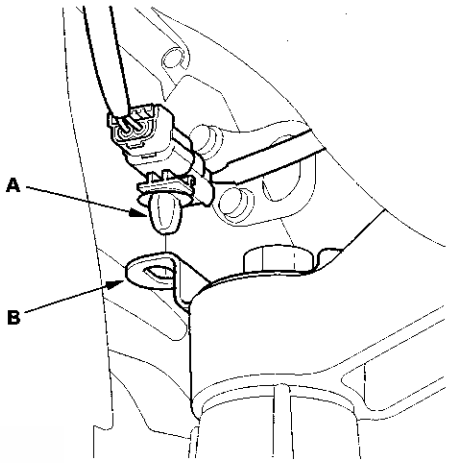
17. Lift and support the engine with engine support hanger (AAR-T1256) and the engine hanger balance bar (VSB02C000019). Attach the front arm (A) to the front cylinder head with several spacers (B) and the bolt (10 x 1.25 mm) (C). Attach the 2008 V6 attachment arm (D) to the rear cylinder head and the bolt (8 x 1.25 mm) (E), then attach the rear arm (F) to the 2008 V6 attachment arm.



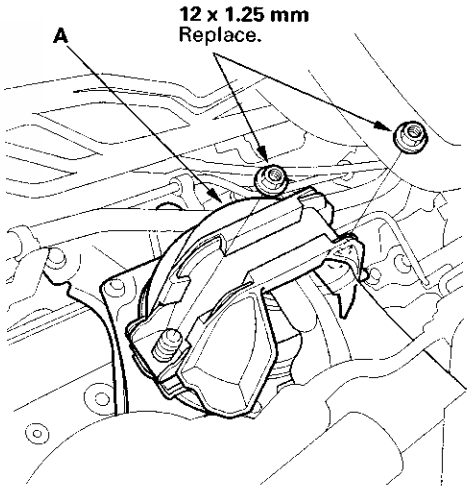
18. With ACM: Disconnect the rear active control engine mount (ACM) actuator connector (A).



19. With ACM: Disconnect the rear ACM harness clip (A) from the stiffener plate (B) on the driver's side of the steering gearbox.

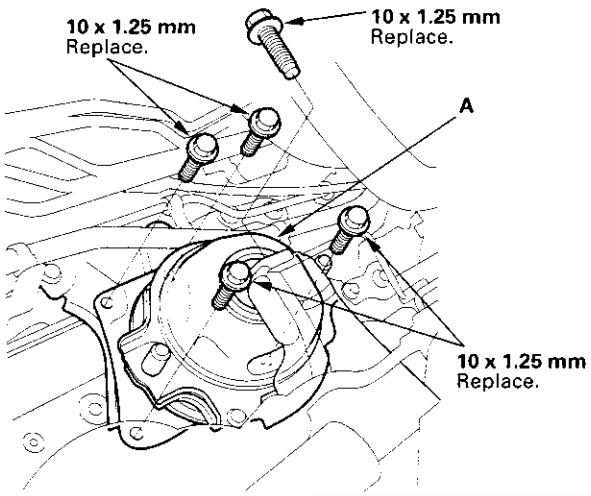


20. A/T: Remove the rear engine mount stop (A).

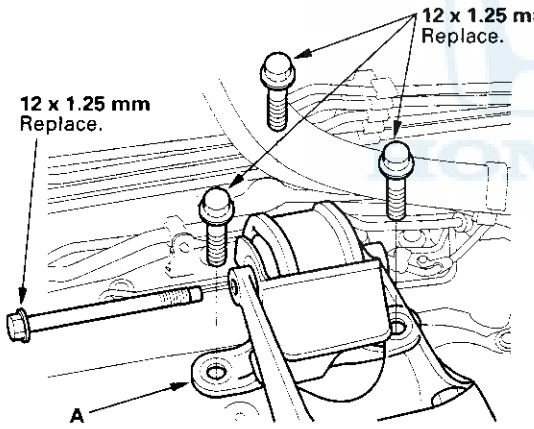


21. Remove the rear engine mount (A).

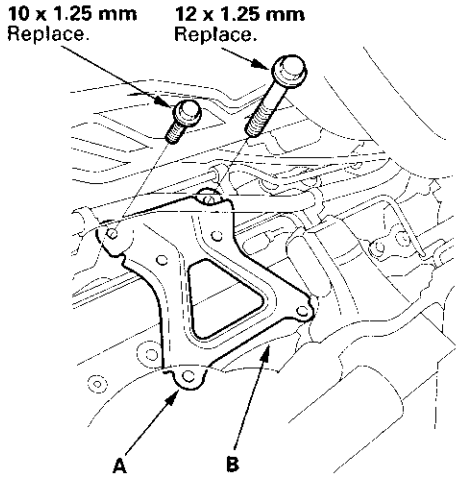
With ACM



Without ACM



22. With ACM: Remove the rear engine mount upper bracket (A) from the base bracket (B).



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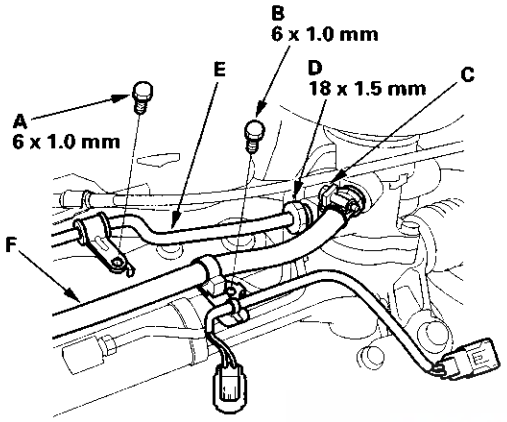
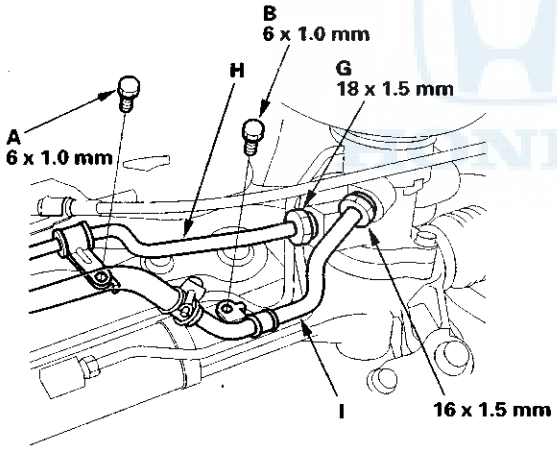
Steering Gearbox Removal (cont'd)

23. Remove the inlet line clamp bolt (A) and the return line clamp bolt (B).

A/T



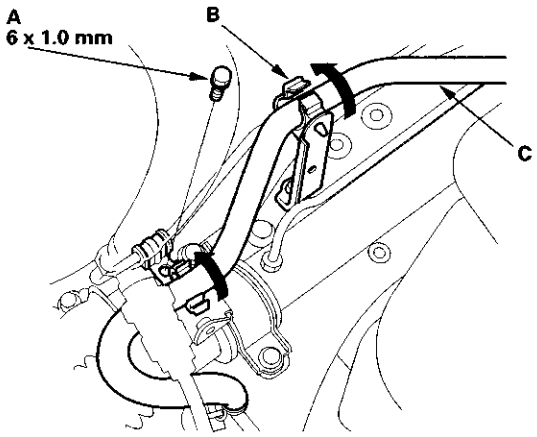
M/T



24. A/T: Loosen the adjustable hose clamp (C) and the flare nut (D), then disconnect the inlet line (E) and return hose (F).

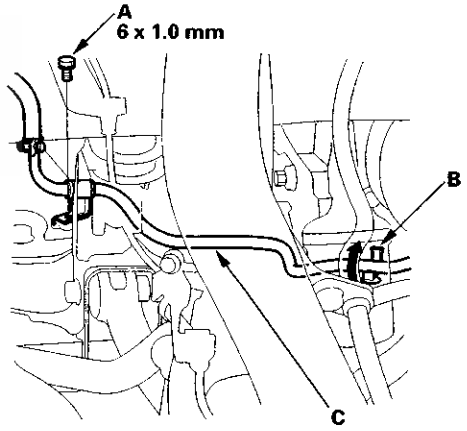
25. M/T: Loose the flare nuts (G), and disconnect the inlet line (H) and the return line (I).

26. Remove the inlet line clamp bolt (A).



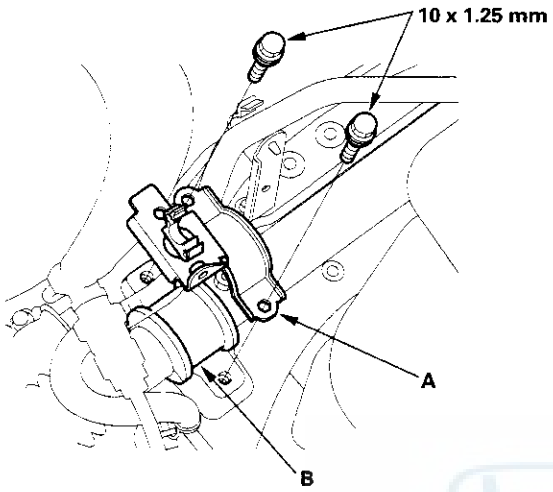
27. Release the return hose clamp (B), and remove the return hose (C).

28. Remove the return line clamp bolt (A).

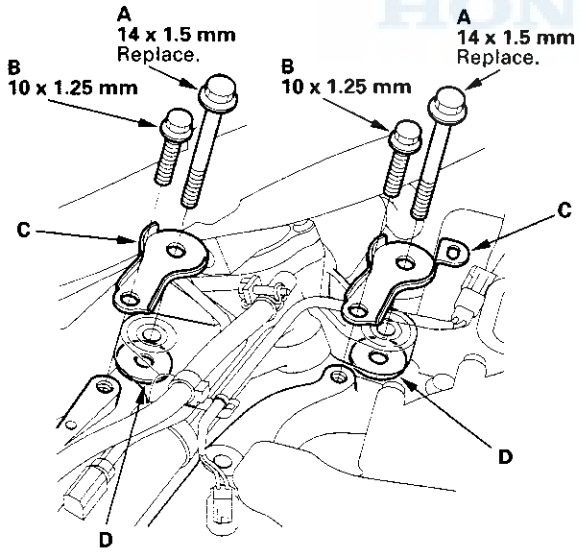


29. Release the return line clamp (B), and remove the return line (C).

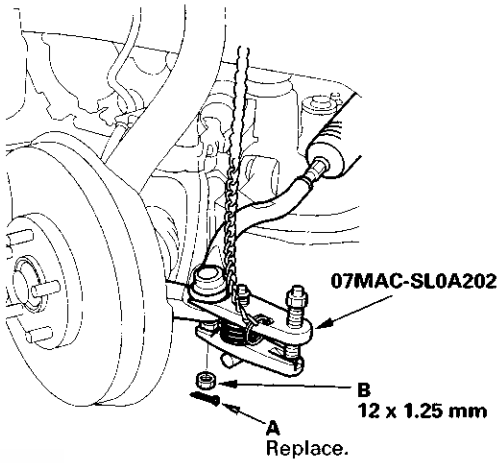
30. Remove the flange bolts from the passenger's side of the steering gearbox, then remove the gearbox mounting bracket (A) and the mounting cushion (B).



31. Remove the mounting bolts (A) and the flange bolts (B) from the driver's side of the steering gearbox, and remove the stiffener plates (C) and the washers (D).



32. Remove the cotter pin (A) from the tie-rod ball joint, then remove the nut (B) on both sides.



33. Separate the tie-rod ball joint and knuckle using the ball joint remover, refer to the 2008-2009 Accord Service Manual (see page 18-11).

34. Raise the vehicle on the lift.

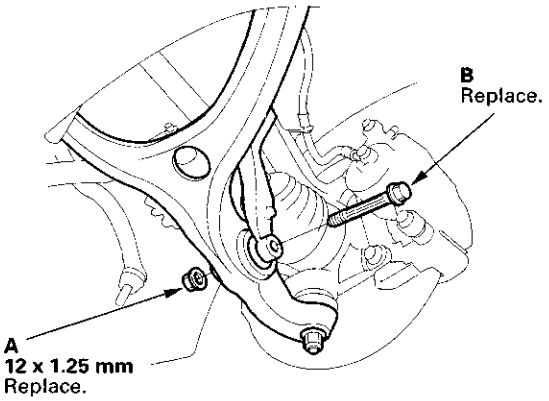
35. Remove the splash shield, refer to the 2008-2009 Accord Service Manual (see page 20-274).

36. Remove exhaust pipe A (see page 9-10).

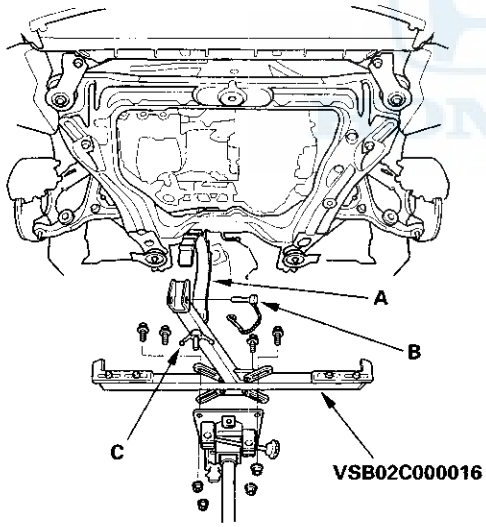
(cont'd)

Steering Gearbox Removal (cont'd)

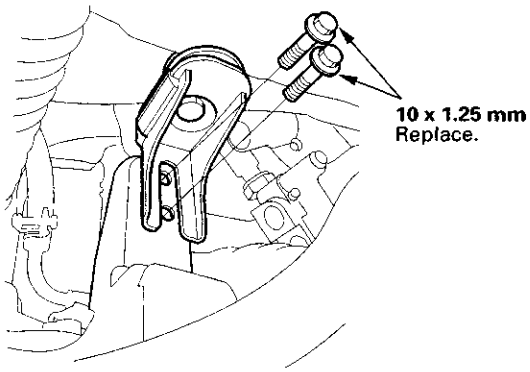
37. Remove the damper fork mounting nut (A) and the mounting bolt (B).



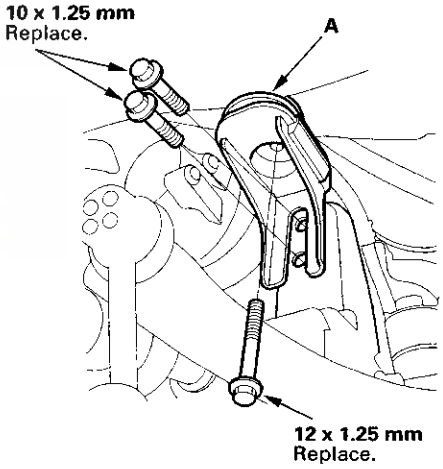
38. Attach the front subframe adapter (VSB02C000016) to the subframe by looping the strap (A) over the front of the subframe, then secure the strap with the stop (B), then tighten the wing nut (C).



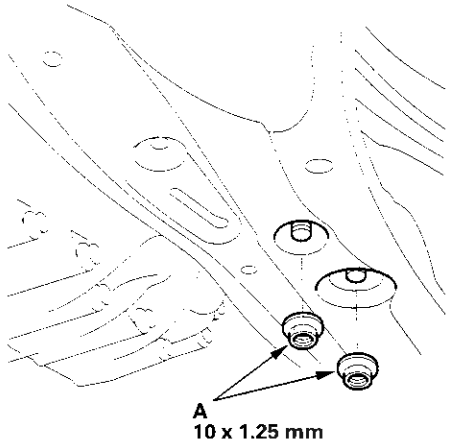
39. Remove the front subframe middle mounting bolts on the passenger's side.



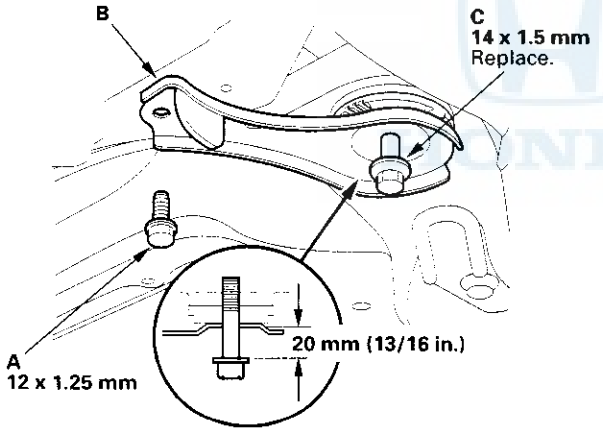
40. Remove the front subframe middle mount (A) on the driver's side.



41. Remove the flange nuts (A) from the lower transmission mount.

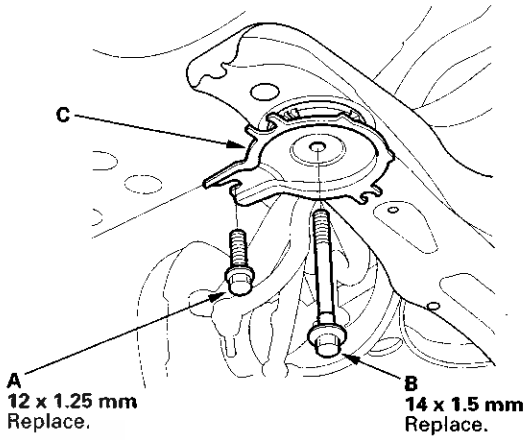


42. Remove the flange bolts (A) from the front subframe front stiffeners (B).

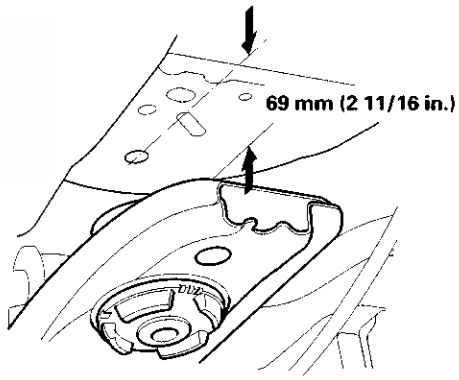


43. Loosen the front subframe mounting bolts (C) so they are about 20 mm (13/16 in.) from the mounting surface. Do not loosen the front subframe mounting bolts more than necessary.

44. Remove the flange bolts (A) and front subframe mounting bolts (B) from the front subframe rear stiffeners (C).



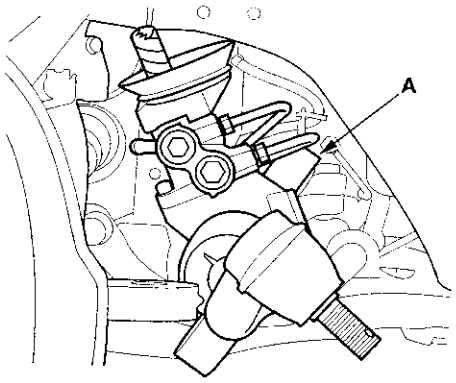
45. Lower the jack slowly until the front subframe has dropped about 69 mm (2 11/16 in.).



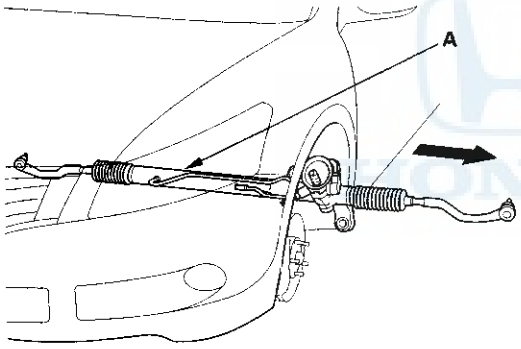
(cont'd)

Steering Gearbox Removal (cont'd)

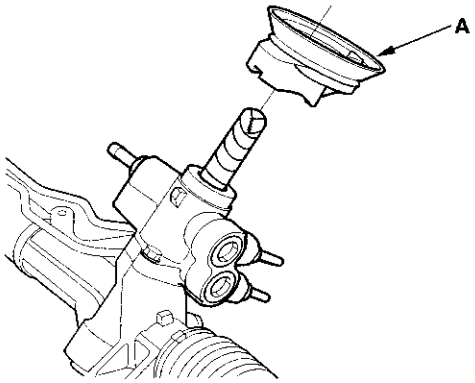
46. Carefully move the steering gearbox (A) toward the driver's side until the pinion shaft clears the fenderwell opening on the body.



47. Remove the steering gearbox (A) through the fenderwell opening on the driver's side.

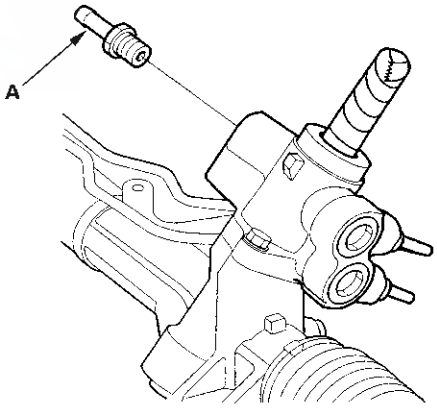


48. Remove the pinion shaft grommet (A) from the top of the valve housing.



49. After removing the steering gearbox, make sure that no power steering fluid gets on the gearbox mount cushions, the gearbox housing, the surface of the front subframe, and the stiffener. Wipe off any spilled fluid at once.

50. A/T: Remove the return line joint (A) if necessary.



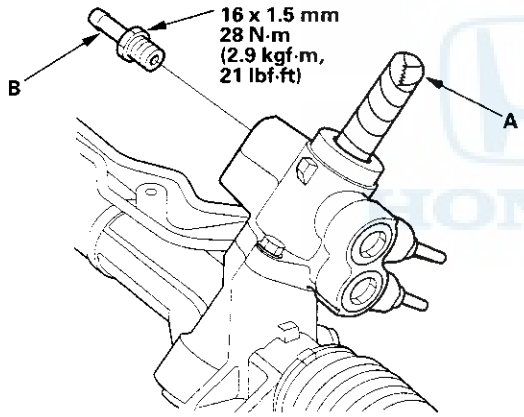
Steering Gearbox Installation

Special Tools Required
- Subframe alignment pin 070AG-SJAA10S
- 2008 V6 attachment arm SIL02C000033 *
- Engine hanger balance bar VSB02C000019 *
- Front subframe adapter VSB02C000016 *
- Engine support hanger, A and Reds AAR-T1256 *

* : These special tools are available through the Honda Tool and Equipment Program, 888-424-6857.

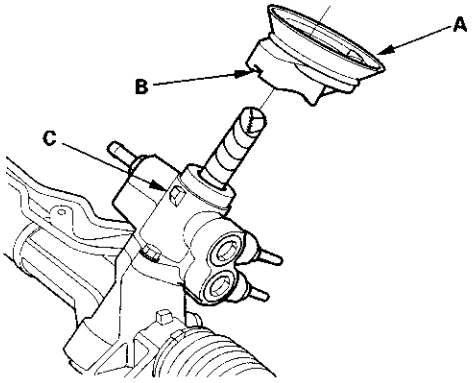
1. Before installing the steering gearbox, make sure that no power steering fluid is on the mating surface of the steering gearbox and the front subframe. To prevent the gearbox mounting bolts from loosening after the installation, remove any power steering fluid from the mount cushions and the bolt holes.

2. Wrap vinyl tape over the splines on the pinion shaft (A).

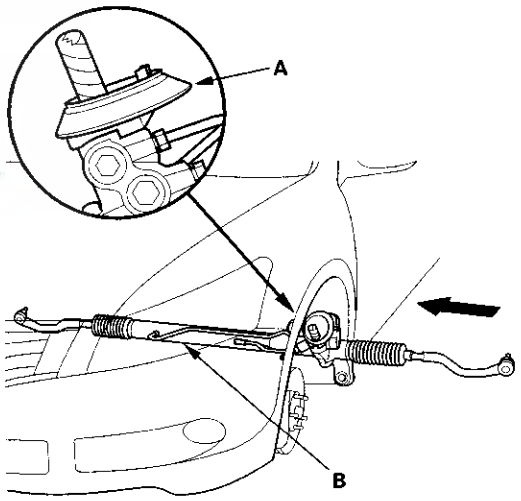


3. A/T: Install the return joint (B) if removed.

4. Install the pinion shaft grommet (A). Align the slot (B) in the pinion shaft grommet with the lug portion (C) on the valve housing. Make sure there is no gap between the grommet and the valve housing.



5. Turn the lip (A) of the pinion shaft grommet.

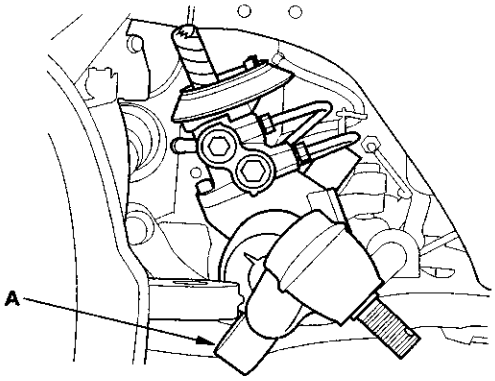


6. Slide the steering gearbox (B) between the front subframe and the body from the driver's side.

(cont'd)

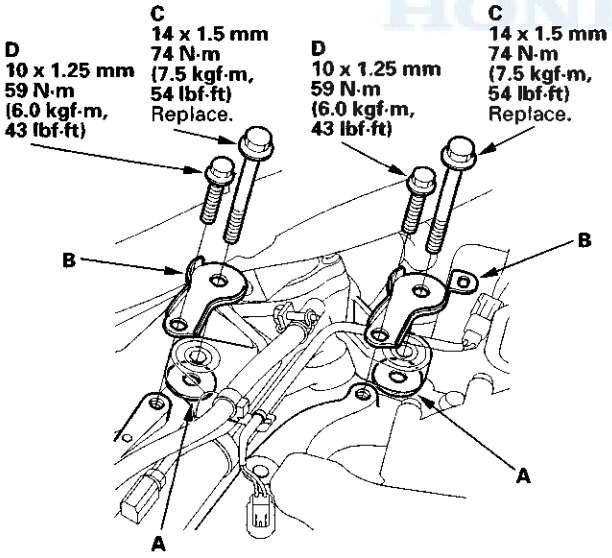
Steering Gearbox Installation (cont'd)

7. Carefully move the steering gearbox (A) toward the passenger's side until the pinion shaft clears the fenderwell opening on the body.

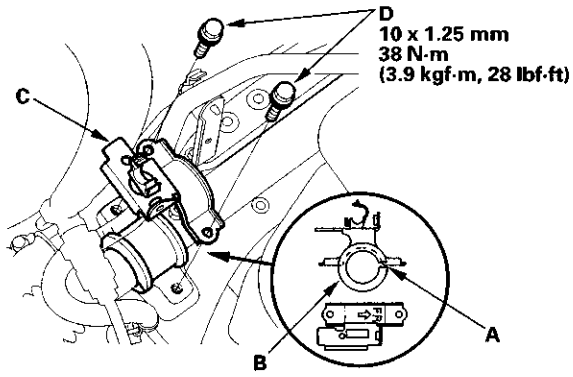


8. Continue moving the gearbox toward the passenger's side until the steering gearbox is in position.

9. Install the washers (A), the stiffener plates (B), the new mounting bolts (C), and the flange bolts (D) on the driver's side of the gearbox. Then loosely tighten the mounting bolts and the flange bolts.



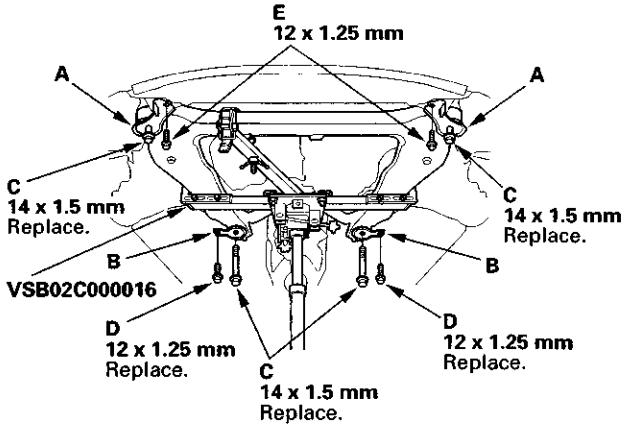
10. Position the cutout (A) on the mounting cushion (B) as shown, and install it on the right side of the steering gearbox.



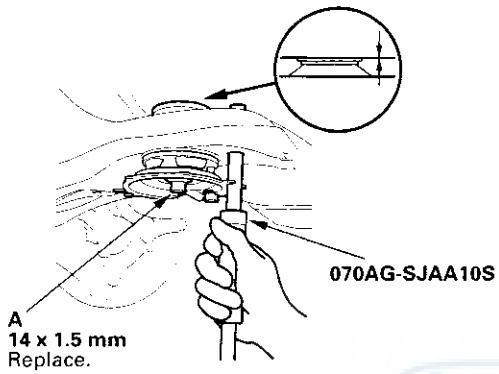
11. Install the gearbox mounting bracket (C) over the mounting cushion, and tighten the flange bolts (D) to the specified torque.

12. Tighten the flange bolts on the driver's side of the steering gearbox to the specified torque alternately in two steps.

13. Install the front subframe front stiffeners (A) and the front subframe rear stiffeners (B), then loosely install the new front subframe mounting bolts (C), the new flange bolts (D), and the flange bolts (E).

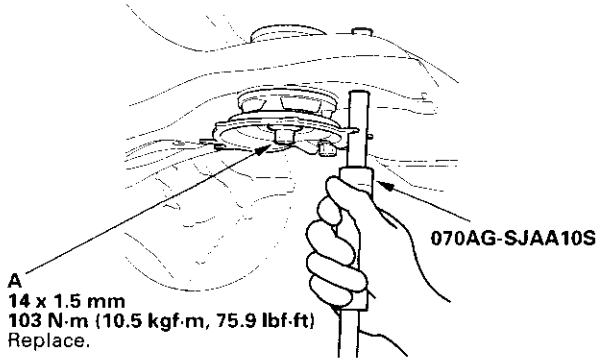


14. Align the front subframe using the 15.7 mm end of the subframe alignment pin. Vertically install the subframe alignment pin, and align the right-rear corner of the front subframe and the vehicle frame holes, then loosely tighten the subframe mounting bolt (A) until the front subframe contacts the body frame.



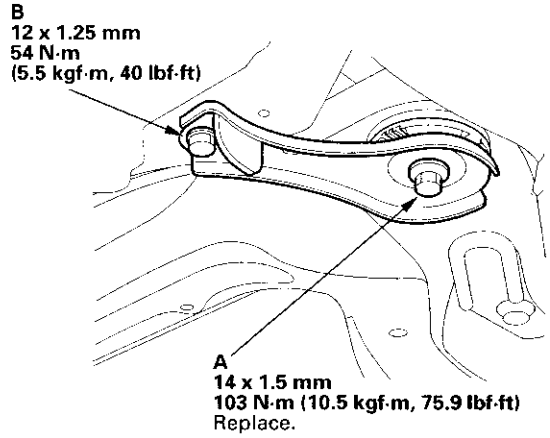
15. Loosely tighten the left-rear subframe mounting bolt with the same procedure as the right-rear using the subframe alignment pin.

16. Tighten the right-rear subframe mounting bolt (A) to the specified torque with the subframe alignment pin installed.



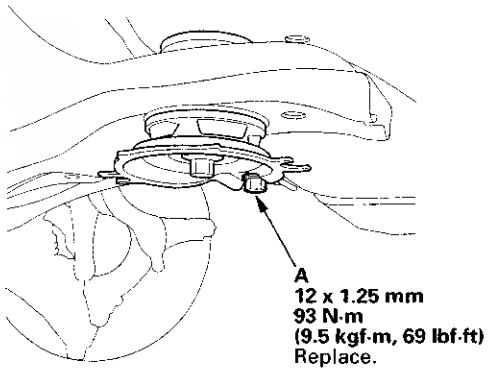
17. Tighten the left-rear subframe mounting bolt to the specified torque with the subframe alignment pin installed.

18. Tighten the subframe mounting bolts (A) to the specified torque.



19. Tighten the flange bolts (B) to the specified torque.

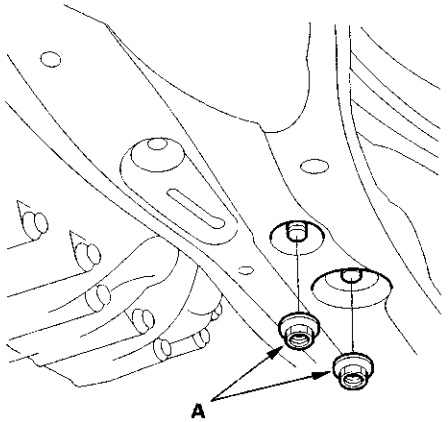
20. Tighten the flange bolts (A) to the specified torque.



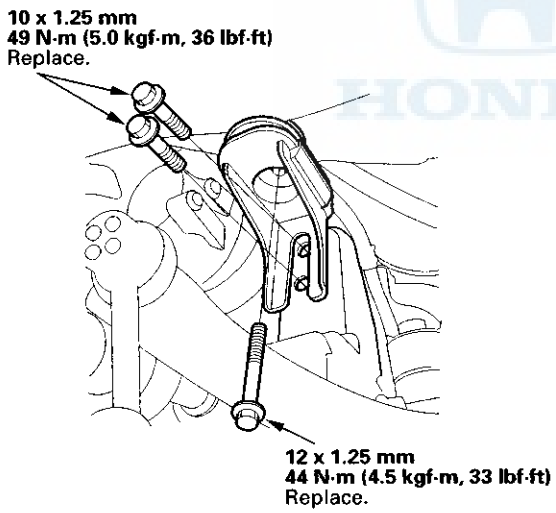
(cont'd)

Steering Gearbox Installation (cont'd)

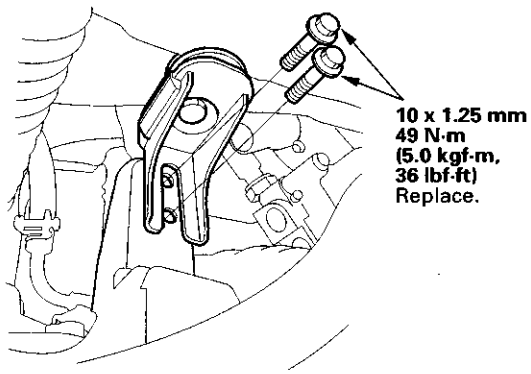
21. Install the flange nuts (A) to the lower transmission mount, and tighten them to the specified torque.



22. Install the new front subframe middle mounting bolts on the driver's side, and tighten them to the specified torque.

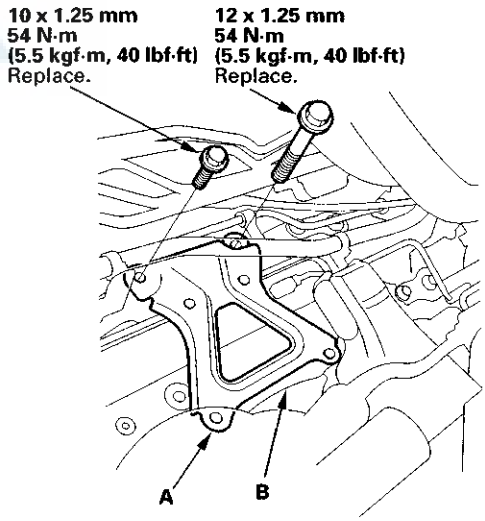


23. Install the new front subframe middle mounting bolts on the passenger's side, and tighten them to the specified torque.



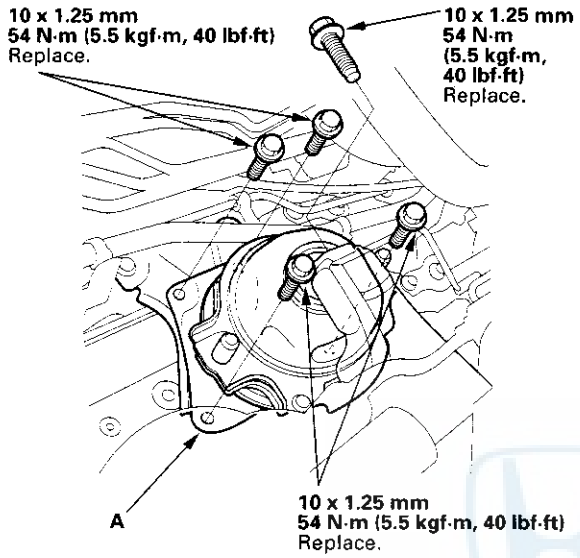
24. Lower the transmission jack supporting the front subframe.

25. With ACM: Install the rear engine mount upper bracket (A) to the base bracket (B) with new mounting bolts, and tighten them to the specified torque.

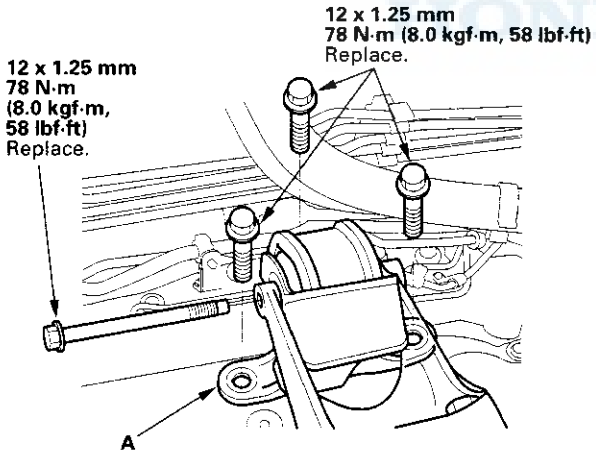


26. Install the rear engine mount (A) with new mounting bolts, and lightly tighten them.

With ACM



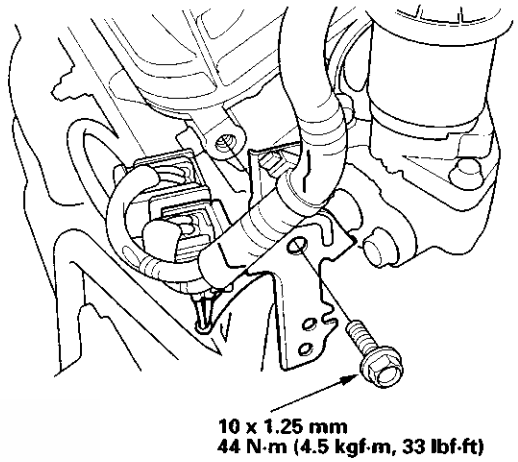
Without ACM



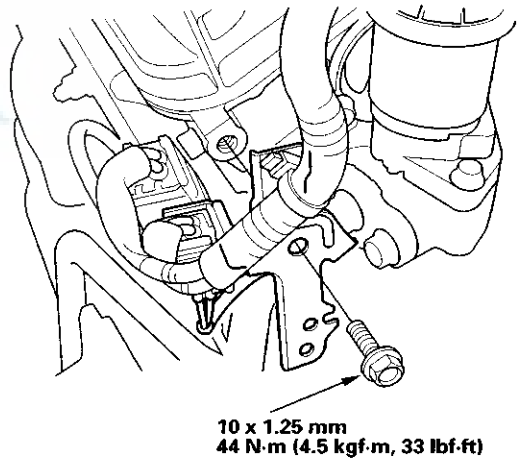
27. Remove the engine support hanger, the engine hanger balance bar, and the hanger adapter set.

28. Install the connector bracket to the front cylinder head.

J35Z2 engine



J35Z3 engine

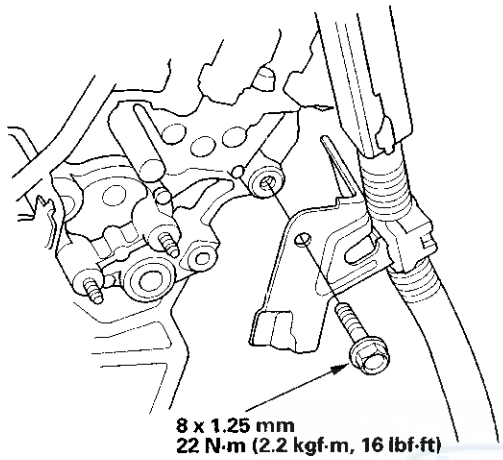


(cont'd)

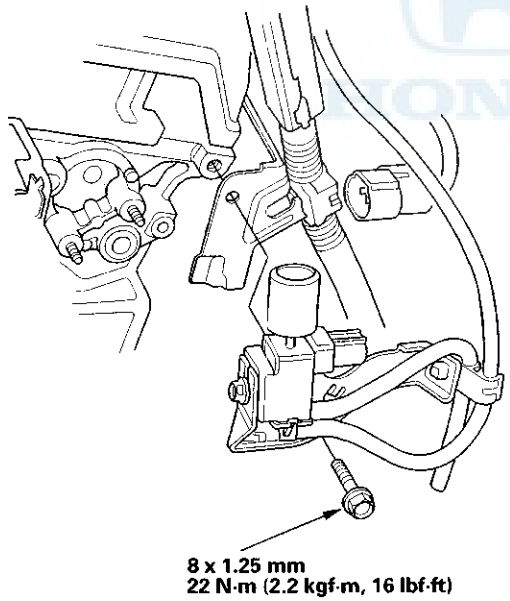
Steering Gearbox Installation (cont'd)

29. Install the harness clamp bracket to the rear cylinder head.

J35Z2 engine

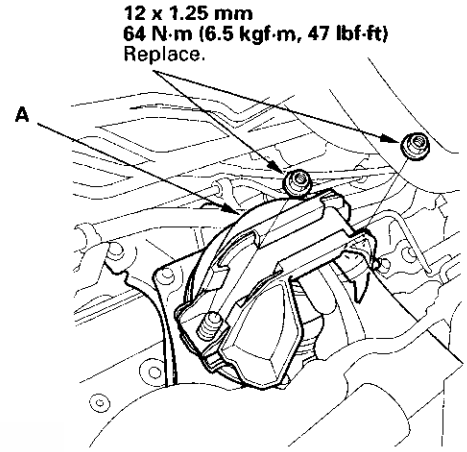


J35Z3 engine

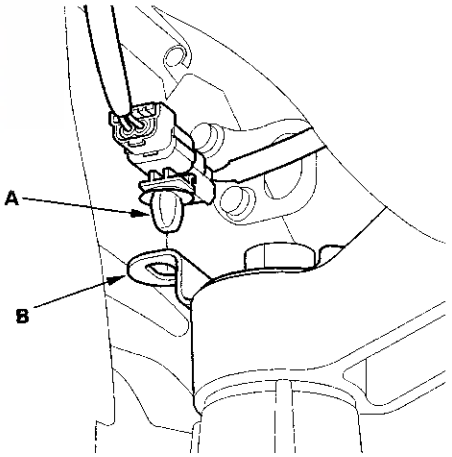


30. Tighten the rear engine mount mounting bolts to the specified torque.

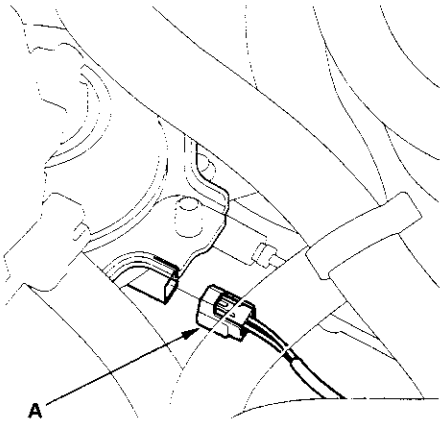
31. A/T: Install the rear engine mount stop (A) with the new mounting nuts, and tighten them to the specified torque.



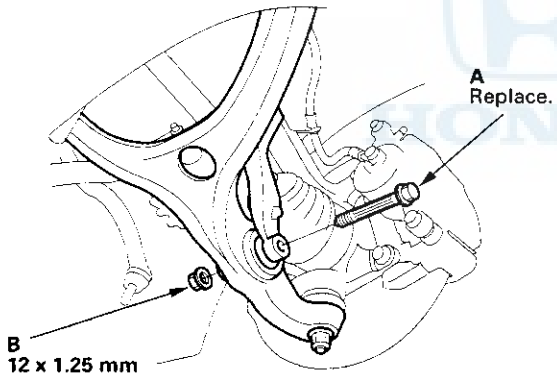
32. With ACM: Connect the rear active control engine mount (ACM) harness clip (A) to the stiffener plate (B) on the left side of the steering gearbox.



33. With ACM: Connect the rear ACM actuator connector (A).



34. Install the new damper fork mounting bolt (A) and the new mounting nut (B), and loosely tighten the nut.

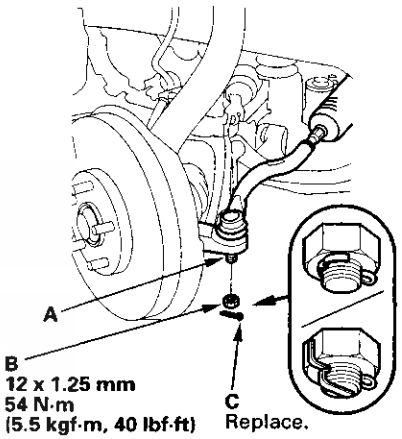


35. Install exhaust pipe A (see page 9-10).

36. Install the splash shield, refer to the 2008-2009 Accord Service Manual (see page 20-274).

37. Lower the vehicle.

38. On both sides, wipe off any grease contamination from the ball joint tapered section and threads. Reconnect the tie-rod ball joint (A) to the knuckle. Install the nut (B), and tighten it to the specified torque.



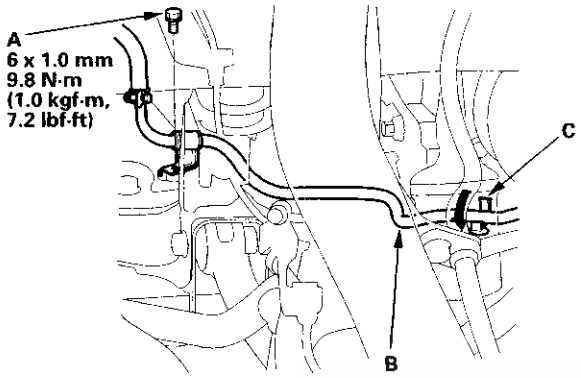
39. Install a new cotter pin (C), and bend it as shown.

(cont'd)

Steering Gearbox Installation (cont'd)

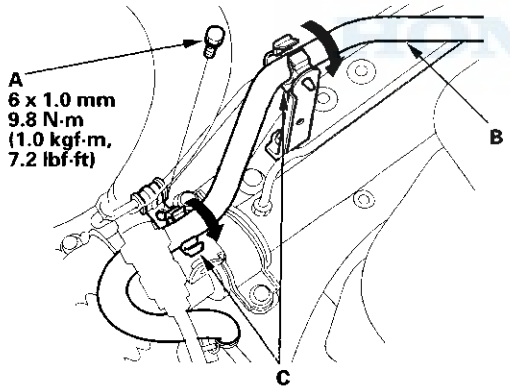
40. Loosely connect the return line and inlet line to the valve housing by hand.

41. Install the return line clamp bolt (A), and tighten it to the specified torque.



42. Install the return line (B) to the return hose clamp (C), and clamp it.

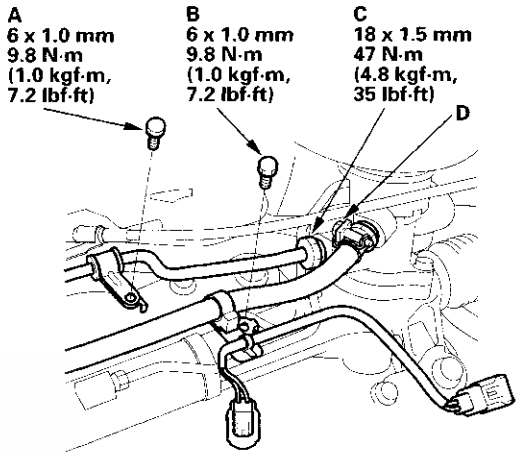
43. Install the inlet line clamp bracket bolt (A), and tighten it to the specified torque.



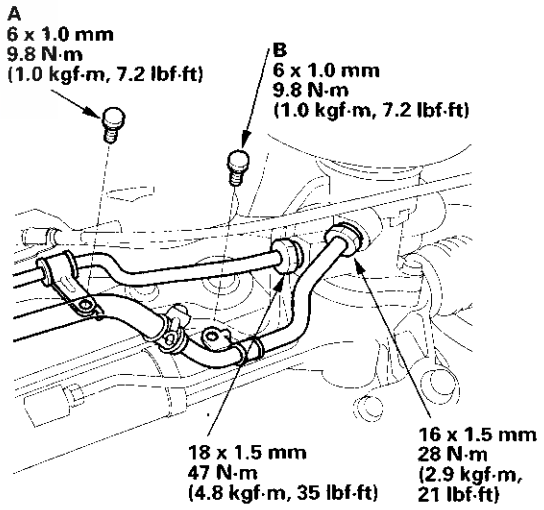
44. Install the return hose (B) to the return hose clamp (C), and clamp it.

45. Install the inlet line clamp bolt (A) and the return line clamp bolt (B), and tighten them to the specified torque.

A/T



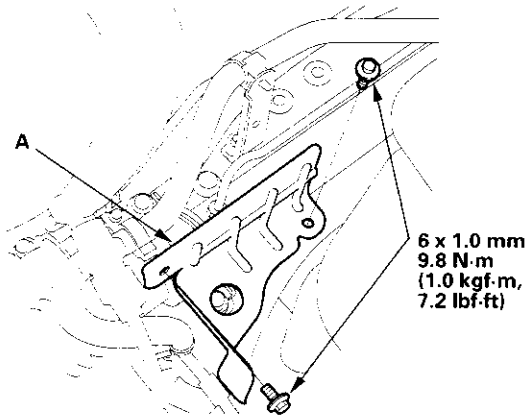
M/T



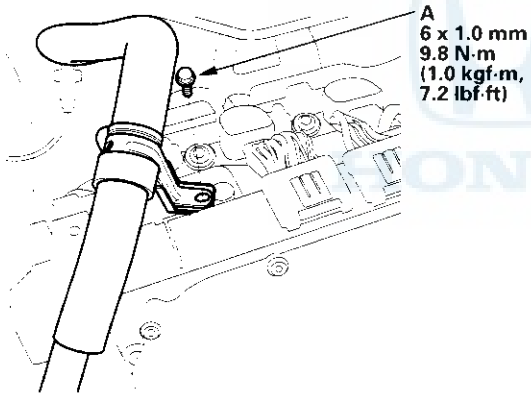
46. A/T: Tighten the flare nut (C) to the specified torque, and tighten the adjustable hose clamp (D) (see page 17-11).

47. M/T: Tighten the flare nuts to the specified torque.

48. Install the P/S heat shield (A) with the flange bolts, and tighten them to the specified torque.



49. With ACM: Install the P/S pump outlet hose bracket bolt (A).



50. Install the strut brace, refer to the 2008-2009 Accord Service Manual (see page 20-289).

51. Install the front grille cover.

    - 2-door, refer to the 2008-2009 Accord Service Manual (see page 20-257).
    - 4-door, refer to the 2008-2009 Accord Service Manual (see page 20-257).

52. Place a floor jack under the lower arm, and raise the suspension to load it with the vehicle's weight. Do not place the jack against the ball joint pin of the knuckle.

53. Tighten the damper fork mounting nut while holding the mounting bolt to the specified torque (see step 34).

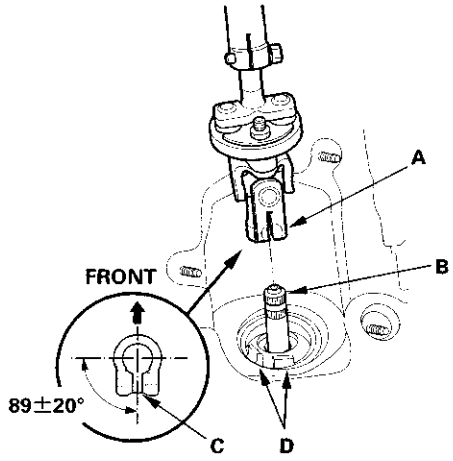
54. Install the front wheels, then set the wheels in the straight ahead position.

    NOTE: Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.

55. Center the steering rack within its stroke.

56. Slip the lower end of the steering joint (A) onto the pinion shaft (B) taking care to align the gap (C) within the angle.

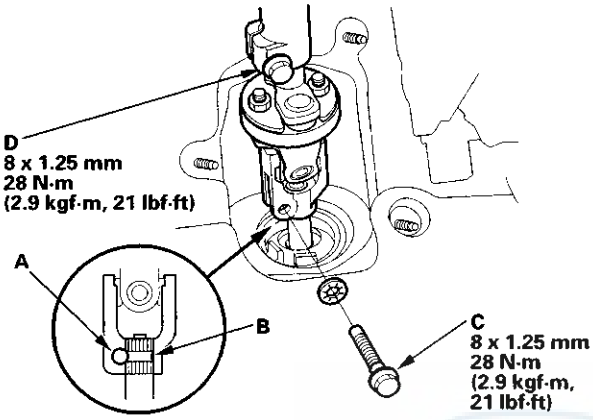
    NOTE: Pick up the tabs (D) of the pinion shaft grommet, and turn up the lip of the pinion shaft grommet securely in place. Make sure that light does not enter from the space between the pinion shaft grommet and the body.



(cont'd)

Steering Gearbox Installation (cont'd)

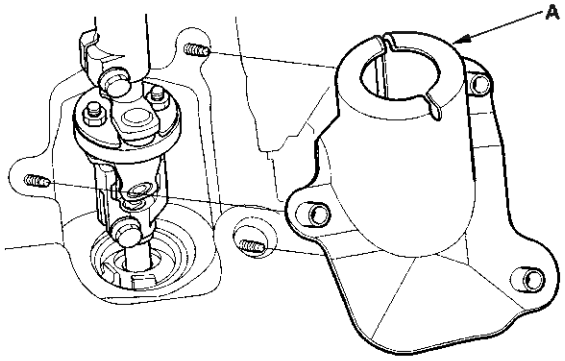
57. Align the bolt hole (A) on the steering joint with the groove (B) around the pinion shaft, then loosely install the lower steering joint bolt (C). Be sure that the joint bolt is securely in the groove in the pinion shaft.



58. Pull on the steering joint to make sure that the steering joint is fully seated, then tighten the lower joint bolt to the specified torque.

59. Tighten the upper steering joint bolt (D) to the specified torque.

60. Install the steering joint cover (A).



61. Install the steering wheel, refer to the 2008-2009 Accord Service Manual (see page 17-27), and driver's airbag, refer to the 2008-2009 Accord Service Manual (see page 24-205).

62. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89), and do these tasks:

- Turn the ignition switch to ON (II) and check that the SRS indicator comes on for about 6 seconds and then goes off.
- Make sure the horn and turn signal switches work properly.
- Make sure the steering wheel switches work properly.

63. Fill the system with power steering fluid, and bleed air from the system (see page 17-10).

64. After installation, do these checks:

- Start the engine, allow it to idle, and turn the steering wheel from lock- to-lock several times to warm up the fluid. Check the gearbox for leaks, refer to the 2008-2009 Accord Service Manual (see page 17-13).
- Check the steering wheel spoke angle.
- If steering spoke angles to the right and left are not equal (steering wheel and rack are not centered), correct the engagement of the joint/ pinion shaft serrations.
- Set the steering column to the center tilt position, and to the center telescopic position, then do the front toe inspection (see page 18-5).

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Suspension

Front and Rear Suspension

Special Tools 18-2
Component Location Index 18-3
Wheel Alignment 18-4

Front Suspension

Stabilizer Bar Replacement 18-7

TPMS (Tire Pressure Monitoring System) 18-15

NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

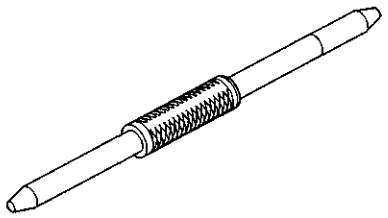
HONDA

Outline of Model Changes

- The wheel alignment has been changed for 18 inch wheels; related information is included.
- The rear engine mount has been changed; related information is included.

Special Tools

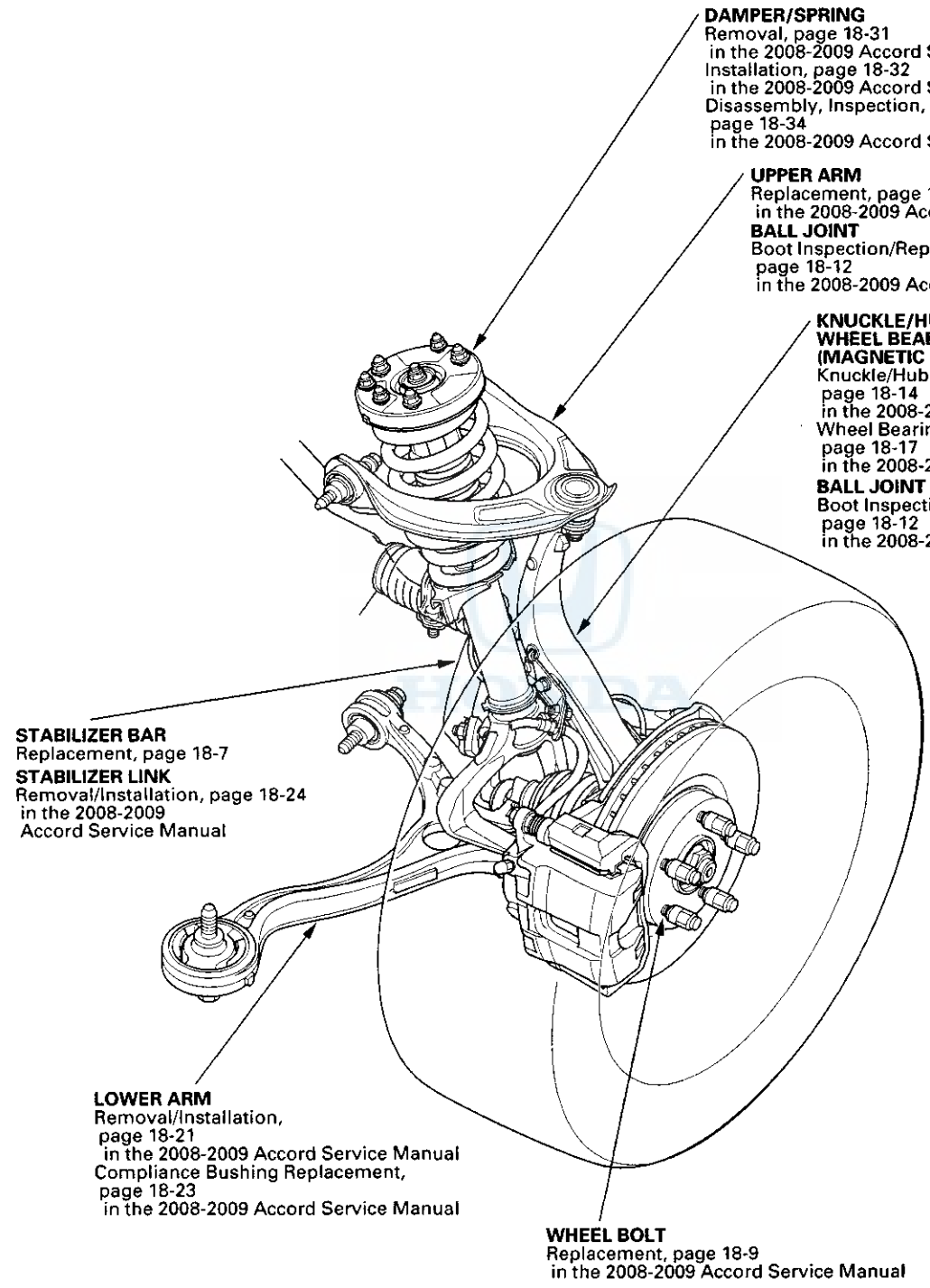
Ref. No.	Tool Number	Description	Qty
①	070AG-SJAA10S	Subframe Alignment Pin	1



①

Component Location Index

Front Suspension



Wheel Alignment

The suspension can be adjusted for front and rear toe.

Pre-Alignment Checks

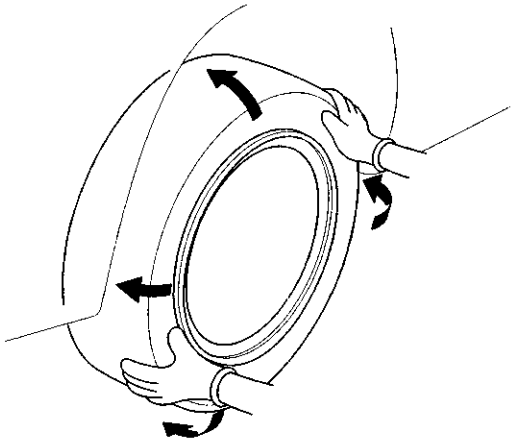
For proper inspection and adjustment of the wheel alignment, do these checks:

1. Release the parking brake to avoid an incorrect measurement.
2. Make sure the suspension is not modified.
3. Make sure the fuel tank is full, and that the spare tire, the jack, and the tools are in place on the vehicle.
4. Check the tire size and tire pressure.

   Tire size (4-door):
   Front/Rear: P225/50R17 93V
   Tire size (2-door):
   Front/Rear: P235/45R18 94V

   Tire pressure (at cold):
   Front/Rear: 220 kPa (2.2 kgf/cm², 32 psi)

5. Check the runout of the wheels and tires, refer to the 2008-2009 Accord Service Manual (see page 18-8).
6. Check the suspension ball joints. (Hold a tire with your hands, and move it up and down and right and left to check for movement.)



7. Before doing alignment inspections, be sure to remove all extra weight from the vehicle, and no one should be inside the vehicle (driver or passengers).
8. Bounce the vehicle up and down several times to stabilize the suspension.
9. Check that the steering column is set at the center tilt and telescopic position.

Caster Inspection

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Check the caster angle.

   Caster angle:
   4-door: 3 ° 48 ′ $^{+0°25′}_{-1°05′}$
   2-door: 3 ° 47 ′ $^{+0°25′}_{-1°05′}$
   (Maximum difference between the right and left side: 0 ° 45 ′)

   - If the measurement is within specifications, measure the camber angle.
   - If the measurement is not within specifications, check for bent or damaged suspension components.

Camber Inspection

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Check the camber angle.

   Camber angle:
   With 17 inch wheels:
   Front: 0 ° 00 ′ $^{+30′}_{-45′}$
   Rear: −1 ° 00 ′ $^{+30′}_{-45′}$
   With 18 inch wheels:
   Front: −0 ° 05 ′ $^{+30′}_{-45′}$
   Rear: −1 ° 19 ′ $^{+30′}_{-45′}$
   (Maximum difference between the right and left side: 0 ° 30 ′)

   - If the measurement is within specifications, measure the toe-in.
   - If the measurement is not within specifications, check for bent or damaged suspension components.

Front Toe Inspection/Adjustment

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

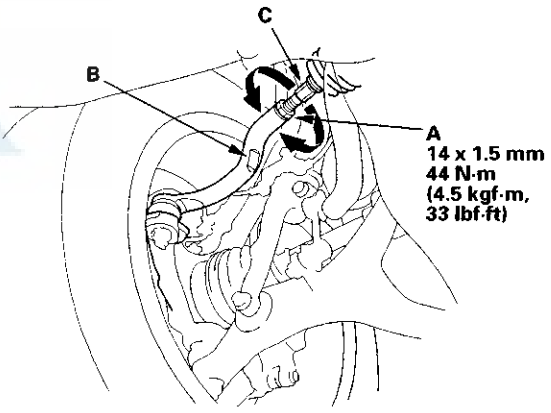
1. Set the steering column to the middle tilt and telescopic positions. Center the steering wheel spokes, and install a steering wheel holder tool.

2. Check the toe with the wheels pointed straight ahead.

   Front toe-in: 0±2 mm (0±0.08 in.)

   - If adjustment is required, go to step 3.
   - If no adjustment is required, go to rear toe inspection/adjustment.

3. Loosen the tie-rod locknuts (A) while holding the flat surface sections (B) of the tie-rod end with a wrench, and turn both tie-rods (C) until the front toe is within specifications.



4. After adjusting, tighten the tie-rod locknuts to the specified torque value. Reposition the rack end boot if it is twisted or displaced.

5. Go to rear toe inspection/adjustment.

(cont'd)

Wheel Alignment (cont'd)

Rear Toe Inspection/Adjustment

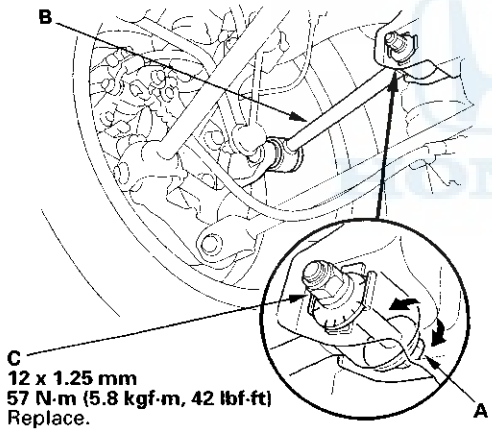
Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Release the parking brake to avoid an incorrect measurement.
2. Check the toe.

   Rear toe-in: 2±2 mm (0.08±0.08 in.)

   - If adjustment is required, go to step 3.
   - If no adjustment is required, go to turning angle inspection.

3. Hold the adjusting bolt (A) on the rear control arm (B), and loosen the self-locking nut (C).



4. Replace the self-locking nut with a new one, and lightly tighten it.

   NOTE: Always use a new self-locking nut whenever it has been tightened to the specified torque.

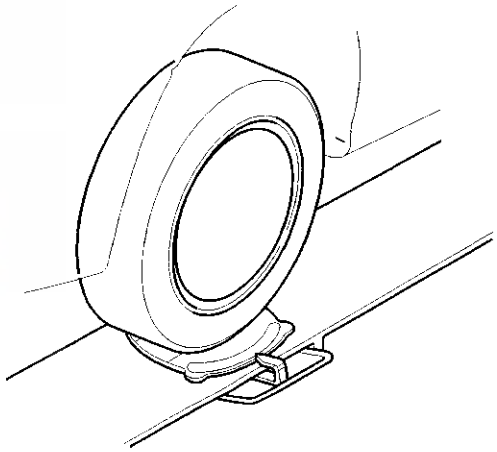
5. Adjust the rear toe by turning the adjusting bolt until the toe is correct.
6. Tighten the self-locking nut while holding the adjusting bolt to the specified torque value.

Turning Angle Inspection

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Turn the wheel right and left while applying the brake, and measure the turning angle of both wheels.

   Turning angle:
   With 17 inch wheels:
   Inward: 39 °00 ′±2 °
   Outward (reference): 31 °50 ′
   With 18 inch wheels:
   Inward: 37 °00 ′±2 °
   Outward (reference): 30 °20 ′



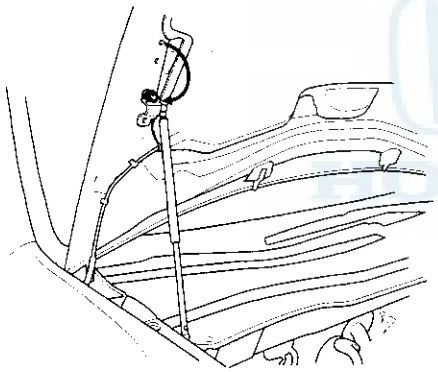
2. If the measurement is not within the specifications, even up both sides of the tie-rod threaded section length while adjusting the front toe. If it is correct, but the turning angle is not within the specifications, check for bent or damaged suspension components.

Stabilizer Bar Replacement

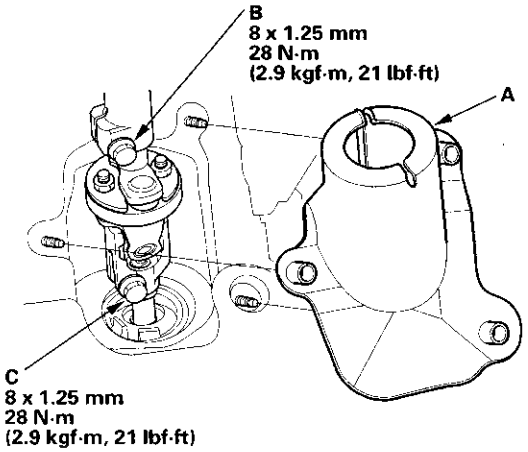
Special Tools Required
- 2008 V6 attachment arm SIL02C000033 *
- Engine hanger balance bar VSB02C000019 *
- Engine support hanger, A and Reds AAR-T1256 *
- Front subframe adapter VSB02C000016 *
- Subframe alignment pin 070AG-SJAA10S

* Available through the Honda Tool and Equipment Program, 888-424-6857.

1. Note these items during replacement:
   - Be sure to remove the steering wheel before disconnecting the steering joint. Damage to the cable reel can occur.
   - Lower the front subframe from the body, and replace the front stabilizer bar through the gap created by lowering the front subframe.
2. Remove the hood support rod, then use it as shown to prop the hood in the wide-open position.

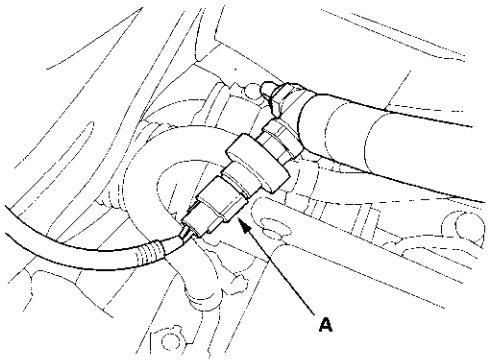


3. Remove the front grille cover:
   - 2-door, refer to the 2008-2009 Accord Service Manual (see page 20-257)
   - 4-door, refer to the 2008-2009 Accord Service Manual (see page 20-257)
4. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
5. Raise the vehicle, and support it with safety stands in the proper locations (see page 1-9).
6. Remove the front wheels.
7. Remove the driver's airbag and the steering wheel, refer to the 2008-2009 Accord Service Manual (see page 17-24).
8. Remove the steering joint cover (A).



9. Loosen the steering joint upper bolt (B), and remove the steering joint lower bolt (C), then disconnect the steering joint from the pinion shaft.

   NOTE:
   - If the center guide is in place and has not moved, leave it in place.
   - If the center guide has come off discard it.
10. Disconnect the power steering pressure (PSP) switch connector (A).



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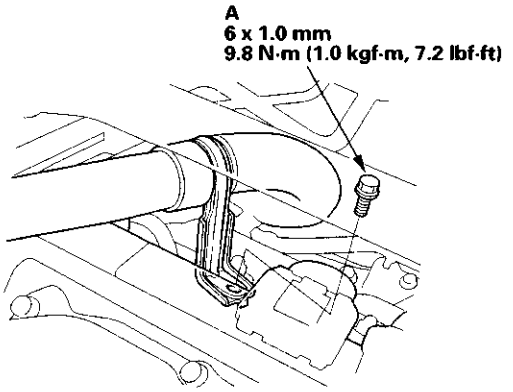
Stabilizer Bar Replacement (cont'd)

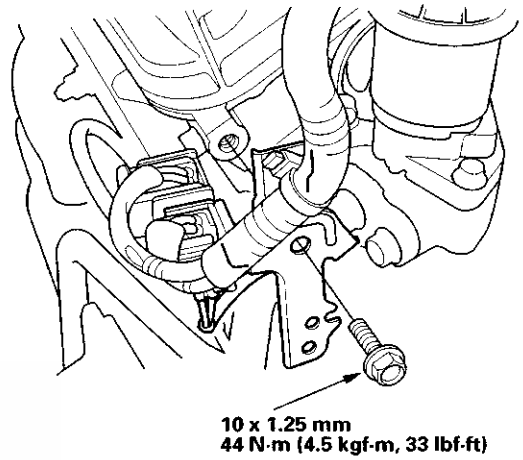
11. Remove the power steering pump outlet hose mounting bolt (A).



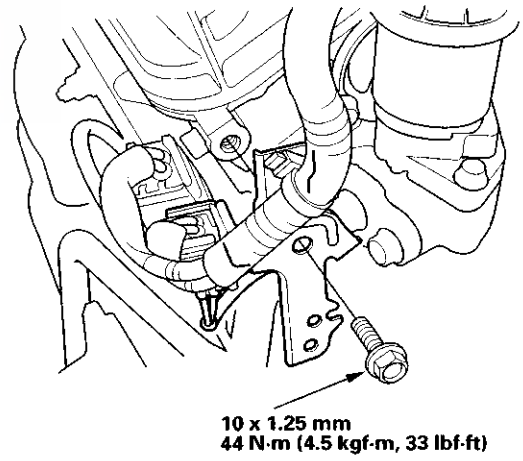
12. Remove the front strut brace, refer to the 2008-2009 Accord Service Manual (see page 20-289).

13. Remove the connector bracket from the front cylinder head; use the bracket bolt hole to attach the engine hanger balance bar front arm.

J35Z2 engine

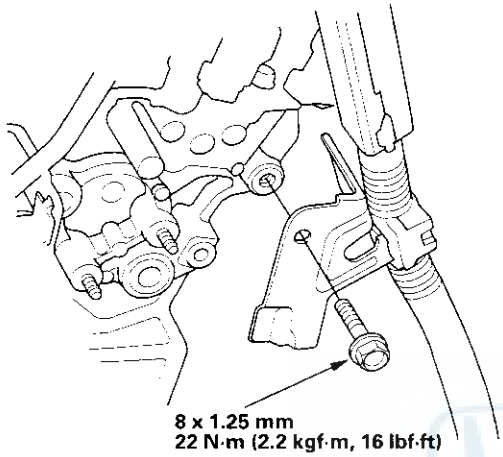


J35Z3 engine

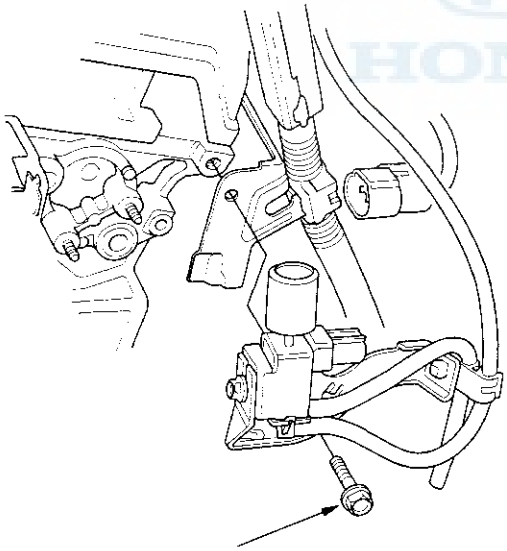


14. Remove the harness clamp bracket from the rear cylinder head; use the bracket bolt hole to attach the 2008 V6 attachment arm (SIL02C000033).

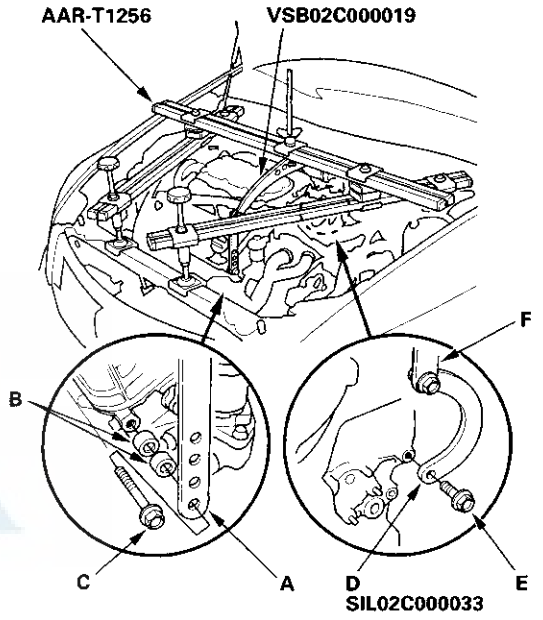
J35Z2 engine



J35Z3 engine



15. Lift and support the engine with engine support hanger (AAR-T1256) and the engine hanger balance bar (VSB02C000019). Attach the front arm (A) to the front cylinder head with several spacers (B) and the bolt (10 x 1.25 mm) (C). Attach the 2008 V6 attachment arm (D) to the rear cylinder head and the bolt (8 x 1.25 mm) (E), then attach the rear arm (F) to the 2008 V6 attachment arm.



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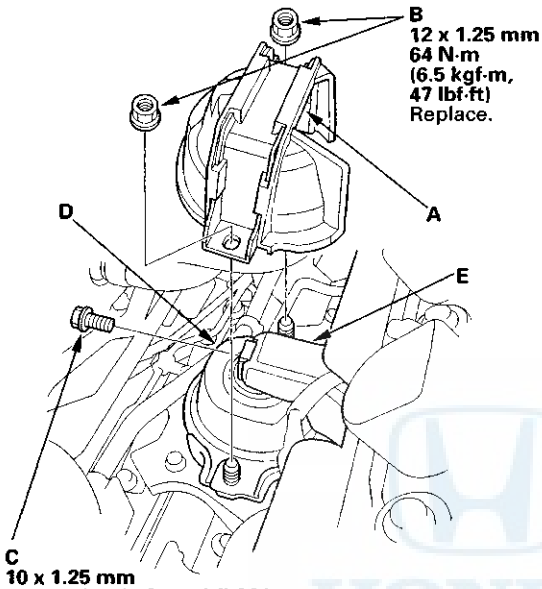
Stabilizer Bar Replacement (cont'd)

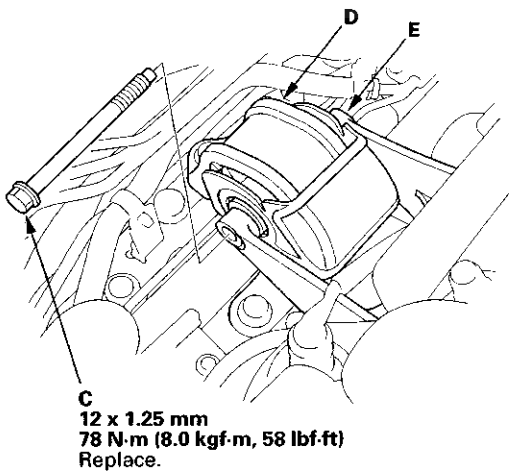
16. A/T: Remove the rear engine mount stop (A).

    NOTE: Use new nuts (B) during reassembly.

    A/T



    M/T



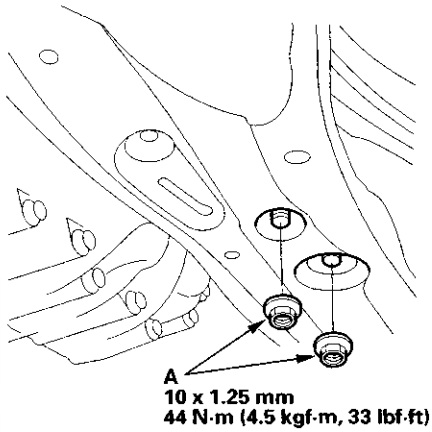
17. Remove the engine mount bolt (C) from the rear engine mount (D) and the rear engine mount bracket (E).

    NOTE: Use a new engine mount bolt during reassembly.

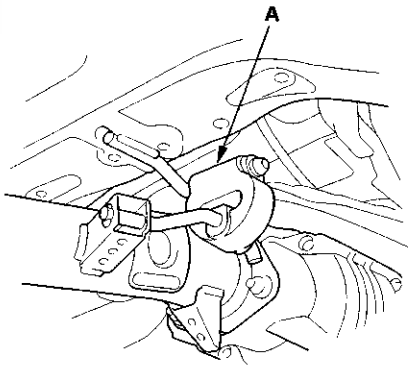
18. Raise the vehicle on the lift to full height.

19. Remove the front splash shield, refer to the 2008-2009 Accord Service Manual (see page 20-274).

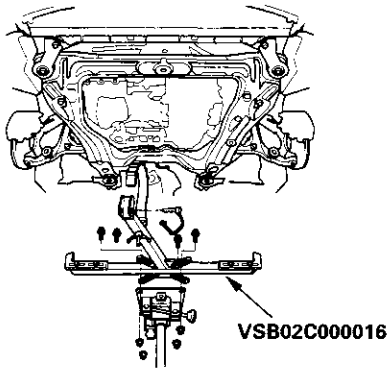
20. Remove the nuts (A) securing the lower transmission mount.



21. Remove the exhaust pipe A hanger (A) from the front subframe.



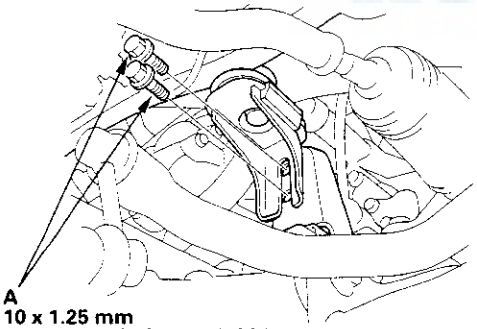
22. Attach the front subframe adapter (VSB02C000016) to the subframe, hang the belt of the subframe adapter over the front of the subframe, then secure the belt with its stop.



23. Raise the jack, line up the slots in the front subframe adapter arms with the bolt holes on the jack base, then securely attach them with four bolts.

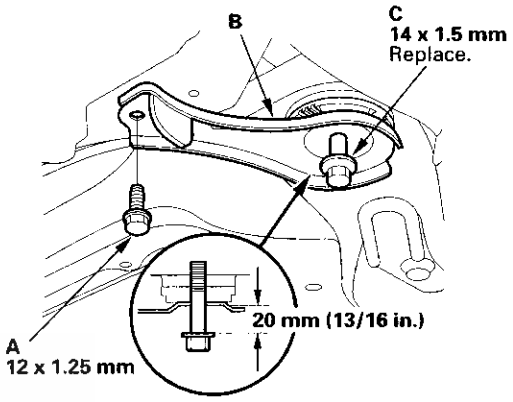
24. Remove the front subframe mounting bolts (A) on both sides of the middle mount.

    NOTE: Use new mounting bolts during reassembly.



25. Disconnect both sides of the stabilizer link from the stabilizer bar, refer to the 2008-2009 Accord Service Manual (see page 18-24).

26. Remove the flange bolts (A) on both sides of the front subframe front bracket (B).



27. Loosen the front side of the front subframe mounting bolts (C) until there is 20 mm (13/16 in.) distance between the bolt seat and the mounting surface. Do not loosen the mounting bolts more than necessary.

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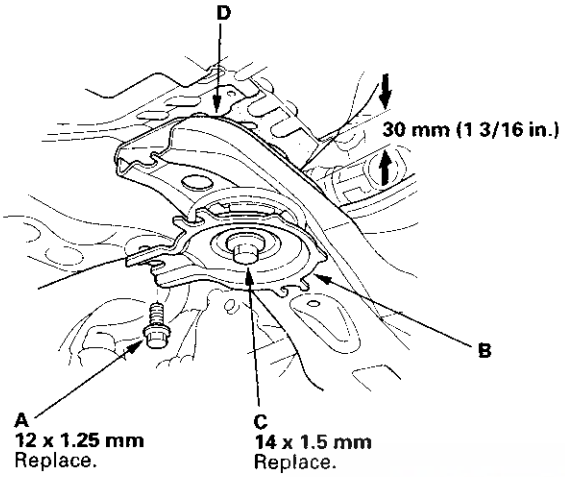
Stabilizer Bar Replacement (cont'd)

28. Remove the flange bolts (A) on both sides of the front subframe rear bracket (B).



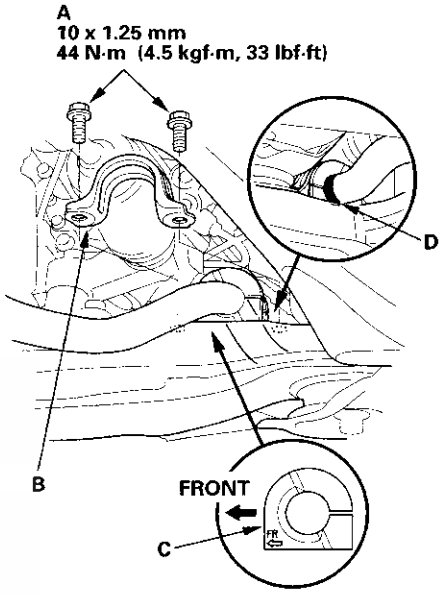
29. Loose the rear side of the front subframe mounting bolts (C) until there is 30 mm (1 3/16 in.) distance between the bolt seat and the mounting surface. Do not loosen the mounting bolts more than necessary.

30. Lower the transmission jack with the front subframe adapter slowly until the front subframe (D) has dropped about 30 mm (1 3/16 in.).

    NOTE: Do not try to lower the front subframe beyond the loosened subframe mounting bolts clearance.

31. Remove the flange bolts (A) and the bushing holders (B), then remove the bushings (C).

    NOTE: During installation, align the paint marks (D) on the stabilizer bar with the side of the bushings.

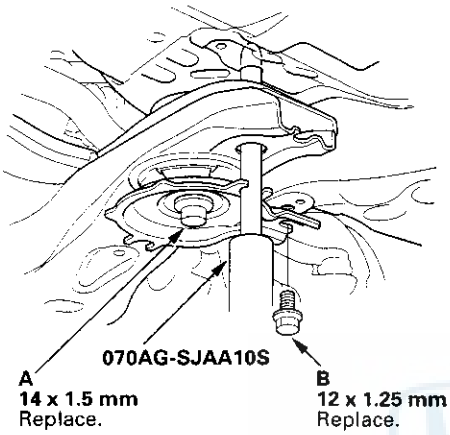


32. Move the stabilizer bar toward the passenger's side, and remove the stabilizer bar.

33. Install the stabilizer bar.

    NOTE:
    - Note the right and left direction of the stabilizer bar.
    - Note the direction of installation for the bushings.

34. Align the front subframe using the subframe alignment pin. Vertically install the subframe alignment pin, and align the right-rear corner of the front subframe and vehicle frame holes, then loosely tighten the new subframe mounting bolt (A) until the front subframe contacts the body frame.

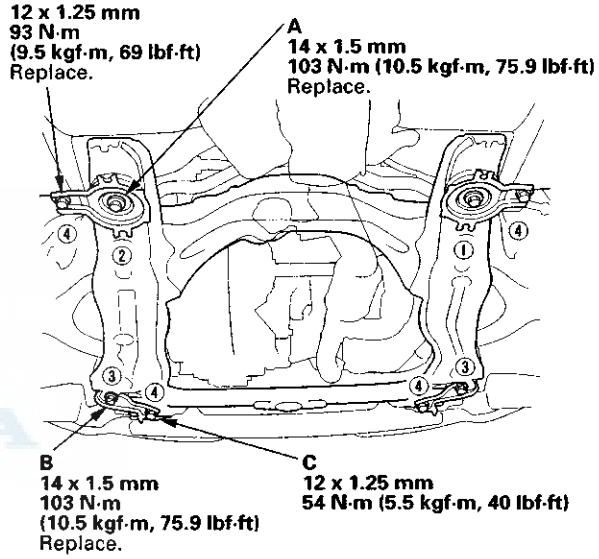


35. Loosely tighten the left-rear subframe mounting bolt using the same procedure as the right-rear with the subframe alignment pin.

36. Loosely install the new 12 mm flange bolts (B) to the subframe rear bracket.

37. Torque the subframe mounting bolts to the specified torque values starting with the right-rear bolt. Use the subframe alignment pin when tightening the rear side bolts (A).

    NOTE:
    - Torque the bolts in the sequence shown.
    - Before tightening the new front side subframe mounting bolts (B), raise the jack and loosely install the 12 mm flange bolts (C) to align the subframe front bracket.



38. Check all of the front subframe mounting bolts, and retighten if necessary.

(cont'd)

Stabilizer Bar Replacement (cont'd)

39. Install all of the removed parts in the reverse order of removal, and note these items:

    - Refer to stabilizer link removal/installation to connect the stabilizer bar to the links, refer to the 2008-2009 Accord Service Manual (see page 18-24).
    - If the center guide is in place, use it to determine the steering installation angle.
    - If the center guide is gone, check the steering joint installation angle, refer to the 2008-2009 Accord Service Manual (see step 3 on page 17-30).
    - Check the steering wheel installation, refer to the 2008-2009 Accord Service Manual (see page 17-27).
    - When connecting the rear engine mount to the rear engine mount bracket, first lightly tighten the mounting bolt, then remove the engine support hanger, and tighten it to the specified torque value.
    - Before installing the wheel, clean the mating surfaces of the brake disc and inside of the wheel.

40. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89), then turn the ignition switch to ON (II) and check that the SRS indicator comes on for about 6 seconds and then goes off.

41. Check the wheel alignment, and adjust it if necessary (see page 18-4).

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Suspension

Front and Rear Suspension 18-2

Front Suspension 18-7

TPMS (Tire Pressure Monitoring System)

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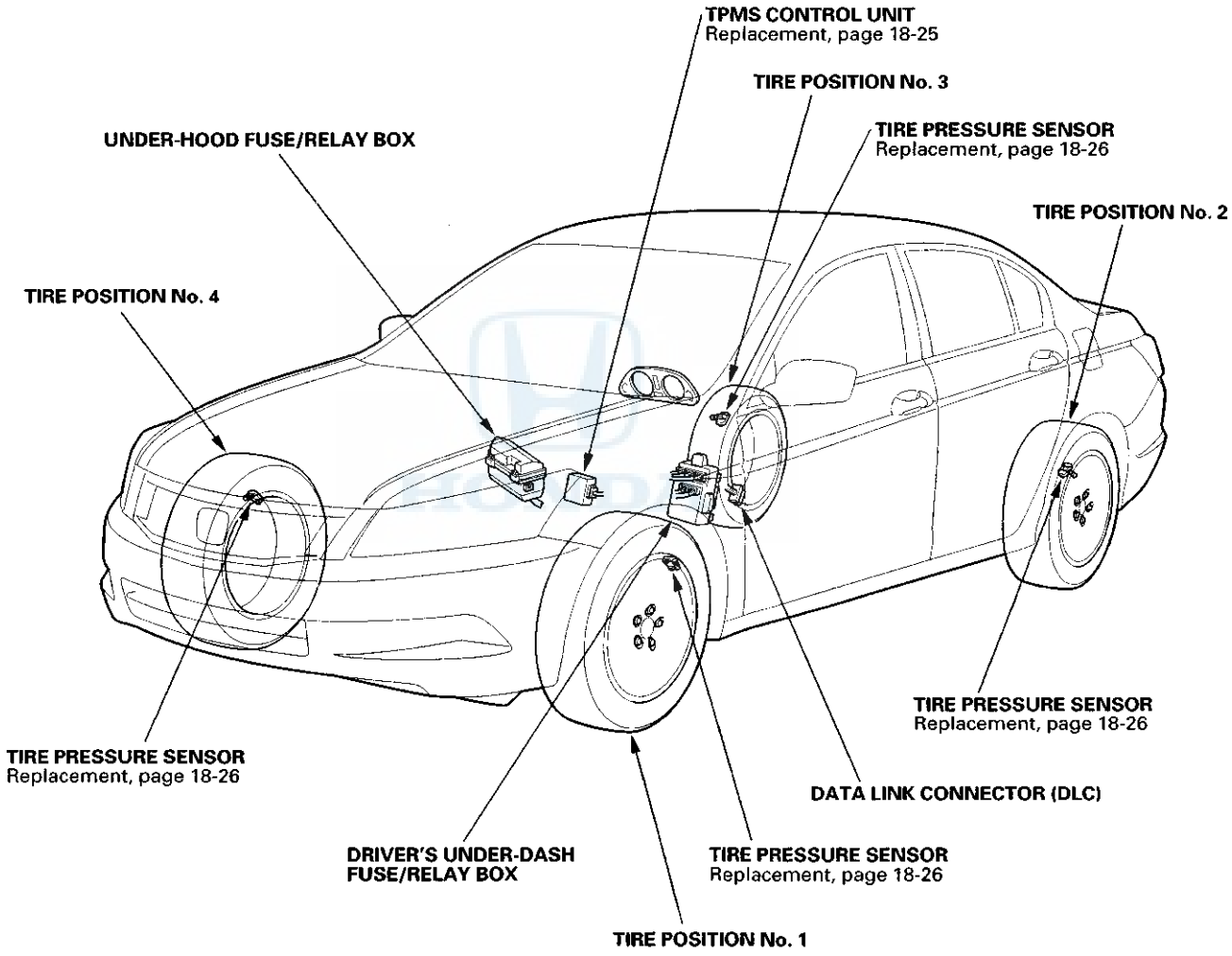
DTC Troubleshooting Index 18-17
System Description 18-18
Circuit Diagram 18-22
DTC Troubleshooting 18-24
TPMS Control Unit Replacement 18-25
Tire Pressure Sensor Replacement 18-26

NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

Outline of Model Changes

- The TPMS circuit diagram has been changed; related information is included.
- The 18 inch wheels have been added.
- The TPMS control unit replacement procedure has been changed.

Component Location Index

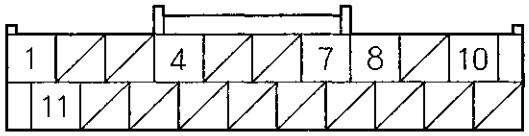


DTC Troubleshooting Index

DTC	Detection Item	Troubleshooting
11	Tire 1 Low Air Pressure	Refer to the 2008-2009 Accord Service Manual (see page 18-71)
13	Tire 2 Low Air Pressure	
15	Tire 3 Low Air Pressure	
17	Tire 4 Low Air Pressure	
21	Tire 1 Pressure Sensor Abnormally High Temperature	Refer to the 2008-2009 Accord Service Manual (see page 18-72)
22	Tire 2 Pressure Sensor Abnormally High Temperature	
23	Tire 3 Pressure Sensor Abnormally High Temperature	
24	Tire 4 Pressure Sensor Abnormally High Temperature	
31	Tire 1 Pressure Sensor Low Battery Voltage	Refer to the 2008-2009 Accord Service Manual (see page 18-73)
32	Tire 1 Pressure Sensor Signal Failure	Refer to the 2008-2009 Accord Service Manual (see page 18-74)
33	Tire 2 Pressure Sensor Low Battery Voltage	Refer to the 2008-2009 Accord Service Manual (see page 18-73)
34	Tire 2 Pressure Sensor Signal Failure	Refer to the 2008-2009 Accord Service Manual (see page 18-74)
35	Tire 3 Pressure Sensor Low Battery Voltage	Refer to the 2008-2009 Accord Service Manual (see page 18-73)
36	Tire 3 Pressure Sensor Signal Failure	Refer to the 2008-2009 Accord Service Manual (see page 18-74)
37	Tire 4 Pressure Sensor Low Battery Voltage	Refer to the 2008-2009 Accord Service Manual (see page 18-73)
38	Tire 4 Pressure Sensor Signal Failure	Refer to the 2008-2009 Accord Service Manual (see page 18-74)
41	Abnormal Signal Reception Error	Refer to the 2008-2009 Accord Service Manual (see page 18-75)
51	Tire 1 Pressure Sensor Registration Error	Refer to the 2008-2009 Accord Service Manual (see page 18-75)
53	Tire 2 Pressure Sensor Registration Error	
55	Tire 3 Pressure Sensor Registration Error	
57	Tire 4 Pressure Sensor Registration Error	
81	TPMS Control Unit Failure	Refer to the 2008-2009 Accord Service Manual (see page 18-76)
83	No VSP Signal	Refer to the 2008-2009 Accord Service Manual (see page 18-77)
85	F-CAN Communication Failure	(see page 18-24)
91	Tire 1 Pressure Sensor Internal Error	Refer to the 2008-2009 Accord Service Manual (see page 18-78)
93	Tire 2 Pressure Sensor Internal Error	
95	Tire 3 Pressure Sensor Internal Error	
97	Tire 4 Pressure Sensor Internal Error	

System Description

TPMS Control Unit Inputs and Outputs for 20P Connector



Wire side of female terminals

Terminal number	Wire color	Terminal sign (Terminal name)	Description	Signal
1	WHT	CAN H (F-CAN communication signal high)	F-CAN communication circuit	Ignition switch ON (II): pulses
4	BLK	GND (Ground)	Ground for the TPMS control unit	Less than 0.1 V at all times
7	LT BLU	K-LINE (Data link connector)	Communications with the HDS	——
8	BRN	IG1 (Ignition switch 1)	Power source for activating the system	Ignition switch ON (II): battery voltage Ignition switch in LOCK (0): less than 0.1 V
10	WHT	+B (Battery positive)	Power source for the TPMS control unit	Battery voltage at all times
11	RED	CAN L (F-CAN communication signal low)	F-CAN communication circuit	Ignition switch ON (II): pulses

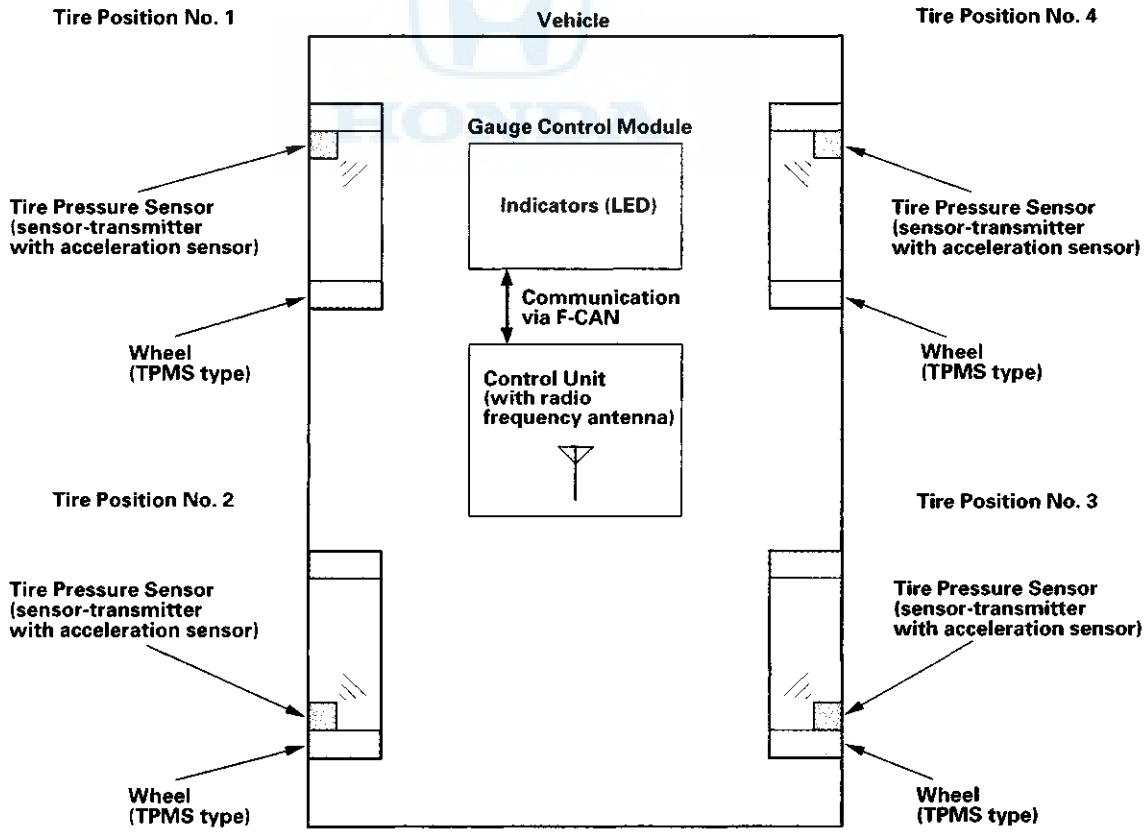
System Structure

Once the vehicle speed exceeds 28 mph (45 km/h), the TPMS control unit monitors all four tire pressure sensors and the system function. If it detects low pressure in a tire, it alerts the driver by turning on the low tire pressure indicator. If it detects a problem in the system, it turns on the TPMS indicator.

Control unit
Mounted over the acceleration pedal module, the TPMS control unit receives wireless pressure sensor ID signals every time the vehicle speeds exceeds 28 mph (45 km/h). It also receives wireless signals from the transmitters for tire pressure and the sensor condition, and it continuously monitors and controls the system. The TPMS control unit cannot directly determine the position (location) of a tire pressure sensor(s) on the vehicle since it is a wireless system. The TPMS control unit assumes a sensor is in the same location on the vehicle as it was when it was last memorized. TPMS sensor locations will change during scheduled vehicle maintenance (tire rotation).

NOTE: To determine the actual location of each TPMS wheel sensor on the vehicle, do the tire pressure sensor location procedure, refer to the 2008-2009 Accord Service Manual (see page 18-61). Once the tire pressure sensor locations are identified, write the sensor ID on the side wall of the tire with a tire crayon to eliminate confusion.

Indicators
Two indicators are in the gauge control module: The low tire pressure indicator comes on when any tire pressure is low, and the TPMS indicator that comes on only if there's a problem with the system.
The low tire pressure indicator alerts the driver that a tire(s) pressure is low, but does not specify the tire(s) location.



(cont'd)

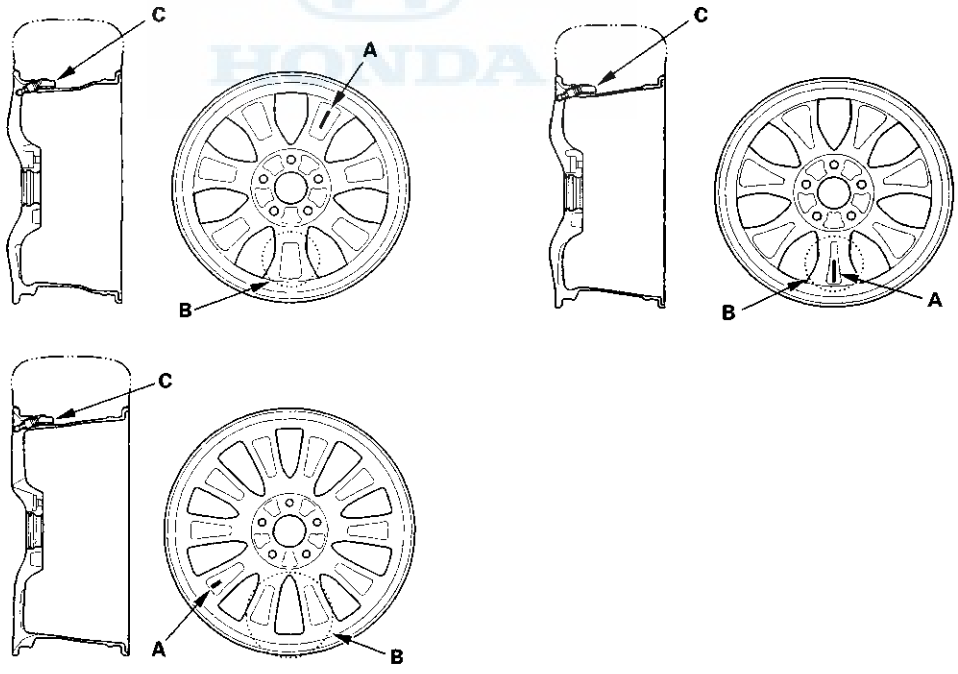
System Description (cont'd)

Tire pressure sensor
Each sensor is an integrated unit made up of the tire valve stem, a pressure sensor, and a transmitter. The unit is attached to the inside of the wheel, around the valve stem. The sensor transmits the internal tire information to the control unit once every 60 seconds when the vehicle speed exceeds 28 mph (45 km/h). When the TPMS control unit receives a tire pressure signal that is less than 175 kPa (1.8 kgf/cm², 25 psi), the TPMS control unit then turns on the low tire pressure indicator. When that tire's pressure is increased to more than 200 kPa (2.0 kgf/cm², 29 psi), and the vehicle is driven above 28 mph (45 km/h) the transmitter sends the tire pressure signal to the control unit, and then the control unit turns the indicator off.

NOTE: Do not mix the TPMS tire pressure sensors or wheels with other TPMS types. Be sure to use the correct type sensors and wheels for this system.
Sensor are active:

- When the wheel rotates over 28 mph (45 km/h), the sensor detects the momentum, and switches the sensor to the normal function mode.
- The LF (low frequency) signal of the TPMS initializer tool makes the sensor active even though the vehicle is stopped. The tire pressure sensor goes into sleep mode when the acceleration sensor detects the wheel is stationary for 5 minutes or more.

Wheels
The TPMS will not work unless TPMS type wheels are installed on the vehicle. There are three different type of wheels used. The original equipment wheels have a "TPMS" or "TE1" mark (A) on them. The wheels also have counterweights (B) incorporated on the opposite side of the tire pressure sensor (C), to counterbalance the weight of the sensor.

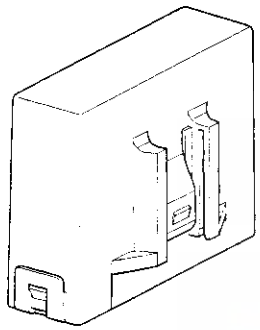


System Communication

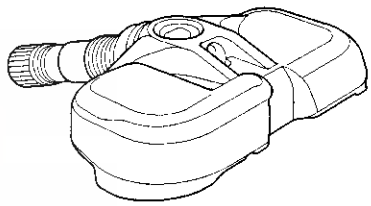
- When the vehicle is traveling more than 28 mph (45 km/h), an RF (radio frequency) band wave signal is transmitted from each tire pressure sensor to the control unit.
- When the wheels rotate, the tire pressure sensors momentum is detected, switching them from sleep mode to normal function (awake) mode. After the vehicle is stationary for 5 minutes, the sensors switch from normal function mode back to sleep mode to extend their battery life.
- Each tire pressure sensor has its own ID to prevent jamming by similar systems on other vehicles. After memorizing all the sensor IDs, the control unit recognizes only those specific signals.
- An ID cannot be memorized automatically. The control unit knows which ID belongs to each tire pressure sensor. This recurring ID confirmation prevents any confusion in the system as a result of normal tire rotation.

NOTE: Be careful not to bend the brackets on the TPMS control unit. Misalignment of the control unit could interfere with sending and receiving signals.

Control Unit
(with an Internal Radio Frequency Antenna)

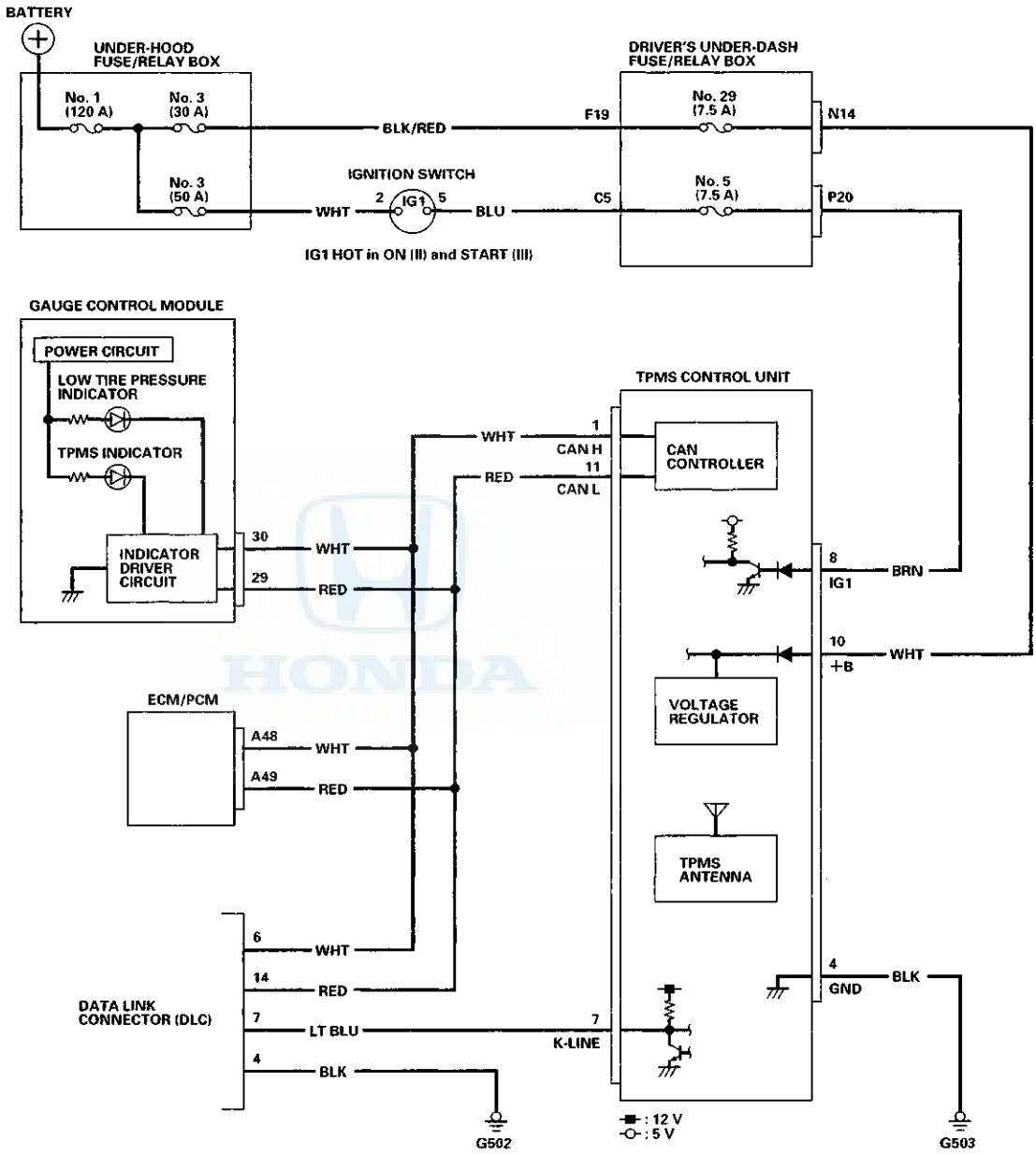


Tire Pressure Sensor
(Sensor-transmitter with acceleration sensor)

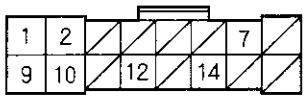


HONDA

Circuit Diagram

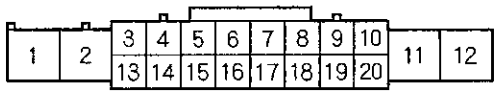


DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR N (16P)



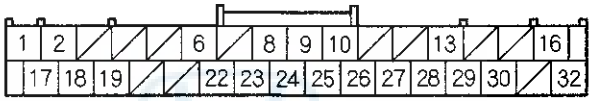
Wire side of female terminals

DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR P (20P)



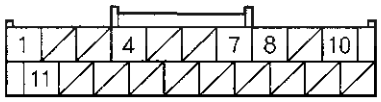
Wire side of female terminals

GAUGE CONTROL MODULE 32P CONNECTOR



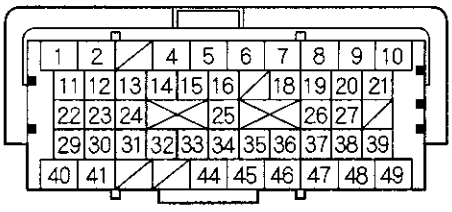
Wire side of female terminals

TPMS CONTROL UNIT 20P CONNECTOR



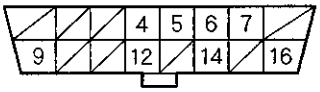
Wire side of female terminals

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

DTC Troubleshooting

DTC 85: F-CAN Communication Failure

NOTE: Check the fuel and emission systems DTCs with the HDS, and troubleshoot the ECM/PCM and F-CAN communication errors first (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0), then turn the ignition switch to ON (II) again.
4. Wait about 5 seconds.
5. Check for DTCs with the HDS.

   Is DTC 85 indicated?

   YES—Go to step 6.

   NO—The system is OK at this time. Check for loose terminals and poor connections at the TPMS control unit. ■
6. Test-drive the vehicle.

   Does the speedometer work?

   YES—Go to step 10.

   NO—Go to step 7.
7. Turn the ignition switch to LOCK (0).
8. Disconnect the TPMS control unit 20P connector.
9. Test-drive the vehicle.

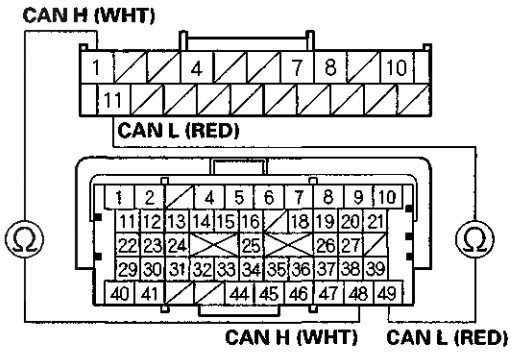
   Does the speedometer work?

   YES—Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-25), and recheck. ■

   NO—Turn the ignition switch to LOCK (0), and reconnect all connectors, then check and troubleshoot the fuel and emissions systems (see page 11-3). ■
10. Turn the ignition switch to LOCK (0).
11. Short the SCS line with the HDS.
12. Disconnect ECM/PCM connector A (49P).
13. Disconnect the TPMS control unit 20P connector.
14. Check for continuity between the TPMS control unit 20P connector terminals and the ECM/PCM connector A (49P) terminals individually (see table).

Terminal Name	TPMS Control Unit 20P Connector Terminal	ECM/PCM Connector A (49P) Terminal
CAN L	No. 11	No. 49
CAN H	No. 1	No. 48

TPMS CONTROL UNIT 20P CONNECTOR
Wire side of female terminals



ECM/PCM CONNECTOR A (49P)
Terminal side of female terminals

Is there continuity?

YES—Check for loose terminals and poor connections at the TPMS control unit and G503. If necessary, substitute a known-good TPMS control unit (see page 18-25), and recheck. ■

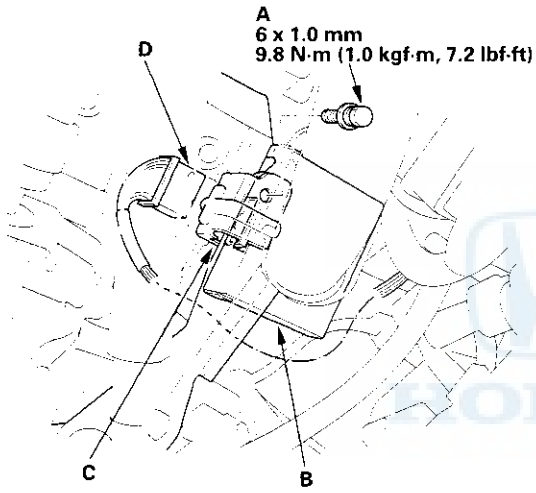
NO—Repair open in the wire between the TPMS control unit and the ECM/PCM. ■

TPMS Control Unit Replacement

NOTE: Make sure the TPMS control unit mounting bracket is not bent or twisted as this may affect its communication with the tire pressure sensors.

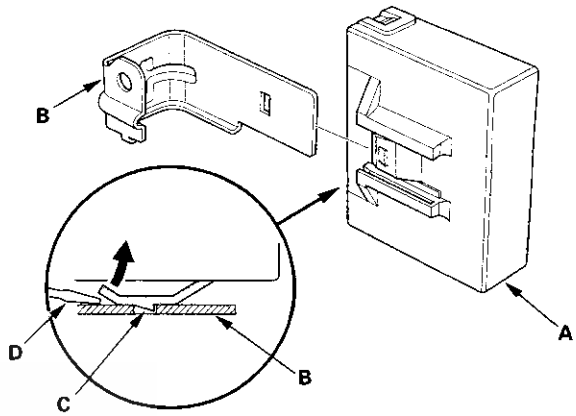
1. Turn the ignition switch to LOCK (0).
2. Remove the driver's dashboard undercover (see page 20-5).
3. Remove the flange bolt (A), then remove the TPMS control unit (B) with the bracket (C).

   NOTE: The TPMS control unit is located over the accelerator pedal module.



4. Disconnect the TPMS control unit connector (D).
5. Remove the TPMS control unit (A) from the bracket (B).

   NOTE: While separating the TPMS control unit from the bracket, release the hook (C) on the TPMS control unit using a flat-tipped screwdriver (D), and push it up to remove the bracket.



6. Install the new TPMS control unit in the reverse order of removal.

   NOTE: Make sure the TPMS control unit is properly installed. You will hear a click when the TPMS control unit is securely mounted on the bracket.

7. Connect the HDS, and memorize the tire pressure sensor IDs using the TPMS initializer tool, refer to the 2008-2009 Accord Service Manual (see page 18-60).

Tire Pressure Sensor Replacement

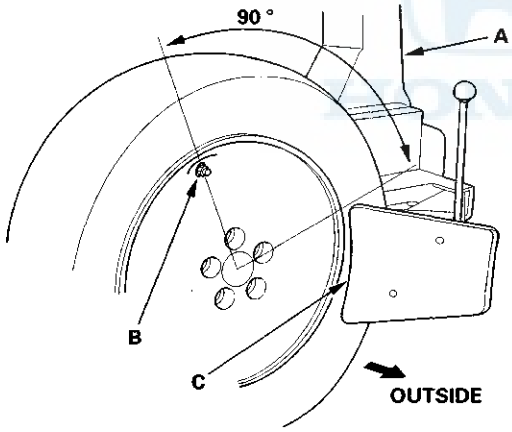
Removal

1. Raise the vehicle, and support it with safety stands in the proper locations (see page 1-9).
2. Remove the wheel with the faulty sensor.
3. Remove the tire valve stem cap and the valve stem core, and let the tire deflate.
4. Remove any balance weights, and then break the bead loose from the wheel with a commercially available tire changer (A).

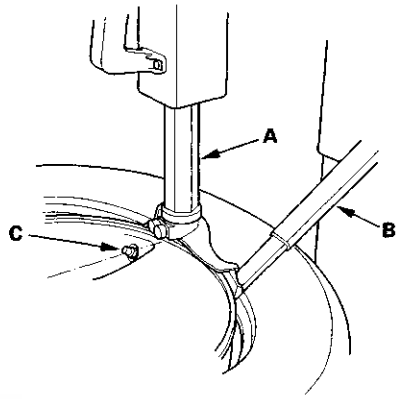
NOTICE

Note these items to avoid damaging the tire pressure sensor:

- Do the outside of the wheel first.
- Position the wheel as shown so the valve stem (B) is 90 degrees from the bead breaker (C) as shown.
- Do not position the bead breaker of the tire changer too close to the rim.

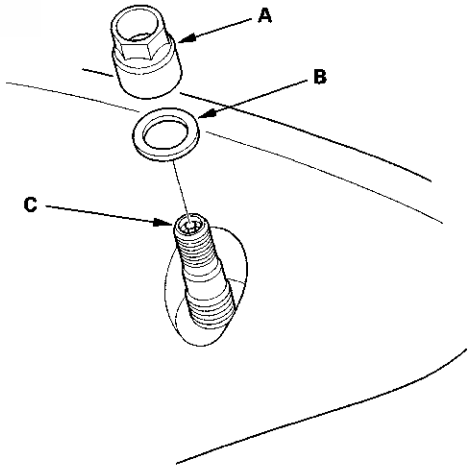


5. Position the wheel so the tire machine (A) and tire iron (B) are next to the valve stem (C) and will move away from it when the machine starts. Then remove the tire from the wheel.



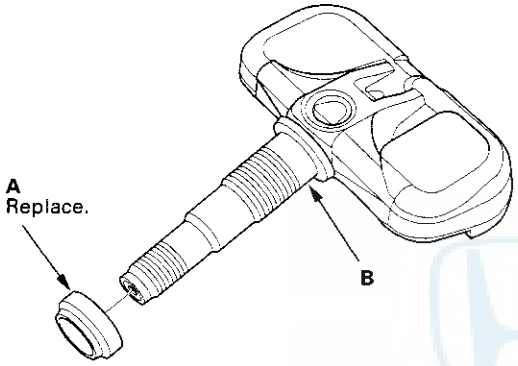
6. Remove the valve stem nut (A) and the washer (B), then remove the tire pressure sensor with the valve stem (C) from the wheel.

NOTE: Check the nut and the washer; if they have deterioration or damage, replace with new ones during reassembly.



7. Remove and discard the valve stem grommet (A) from the tire pressure sensor (B).

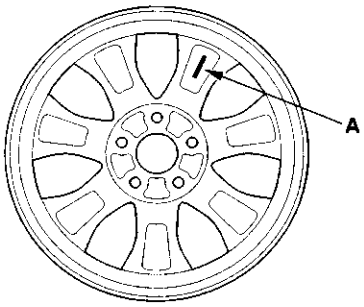
NOTE:
- The valve stem grommet might stick to the wheel; make sure you remove it.
- Always use a new valve stem grommet whenever the tire pressure sensor has been removed from the wheel. When only removing a tire from the wheel, replace the valve stem grommet if it is possible.



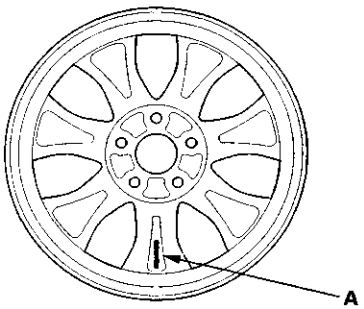
Installation

NOTE:
- Use only wheels that have a "TPMS" or "TE1" stamp (A) on the inside of the wheels.
- The vehicle may be equipped with one of the three types of wheels.

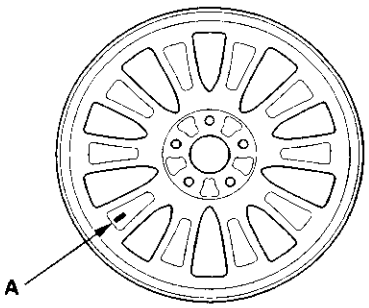
Type 1



Type 2



Type 3



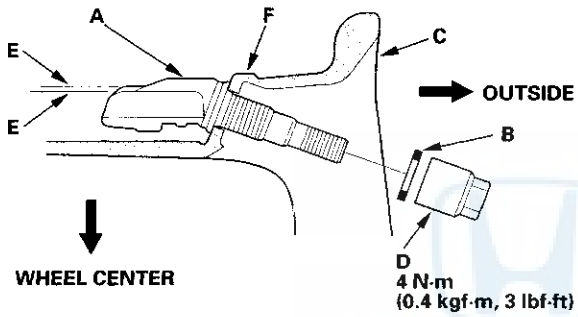
(cont'd)

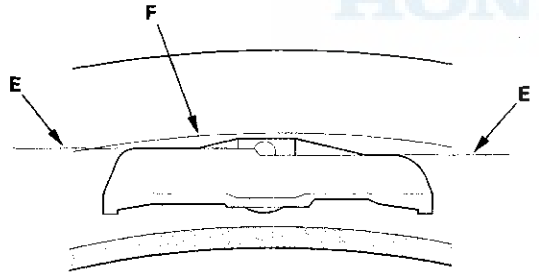
Tire Pressure Sensor Replacement (cont'd)

1. Before installing the tire pressure sensor, clean the mating surfaces on the sensor and the wheel.

2. Install the tire pressure sensor (A) and the washer (B) to the wheel (C), and tighten the valve stem nut (D) finger tight. Make sure the pressure sensor is resting on the wheel.

   NOTE: Install the tire pressure sensor so that the sensor housing surface (E) does not extend beyond the protrusion (F) on the wheel to prevent the sensor housing from being caught on to the bead of the tire when assembling the tire.

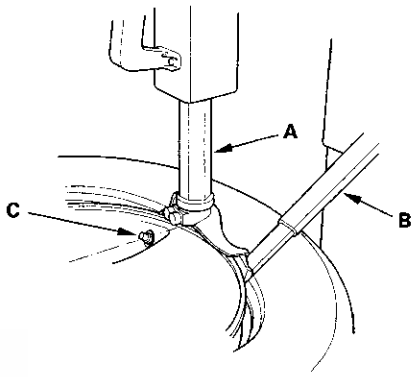




3. Tighten the valve stem nut to the specified torque while holding the tire pressure sensor.

   NOTE:
   - Do not use air or electric impact tools to tighten a valve stem nut.
   - Do not twist the tire pressure sensor to adjust its position with the wheel, as this will damage or deform the valve stem grommet.

4. Lube the tire bead sparingly with a past-type tire mounting lubricant, and position the wheel so the tire machine (A) and tire iron (B) are next to the valve stem (C) and will move away from it when the machine starts. Then install the tire onto the wheel.



5. With a dry air source, inflate the tire to 300 kPa (3.1 kgf/cm^2, 44 psi) to seat the tire bead to the rim, then adjust the tire pressure (see page 18-4), and install the valve stem cap.

   NOTE: Make sure the tire bead is seated on both sides of the rim uniformly.

6. Check and adjust the wheel balance, then install the wheels on the vehicle.

7. Remove the jack stands, and lower the vehicle. Torque the wheel nuts to specifications.

8. Connect the HDS, and memorize the pressure sensor IDs using the TPMS sensor initializer tool, refer to the 2008-2009 Accord Service Manual (see page 18-60).

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

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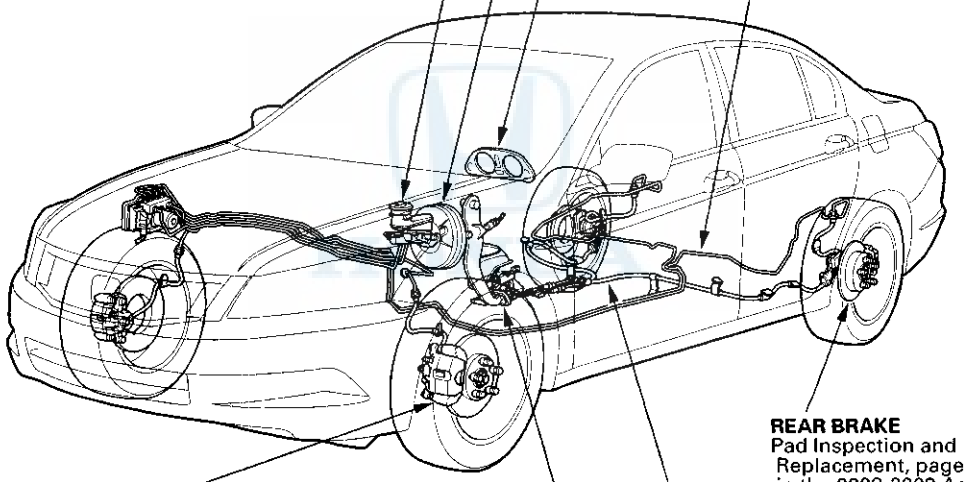
NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002, for the items not shown in this section.

Outline of Model Change

The driver's dashboard undercover has been added; related information is included.

Conventional Brake Components

Component Location Index



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Brake Pedal and Brake Pedal Position Switch Adjustment

Pedal Height

1. Remove the driver's dashboard undercover (see page 20-5).

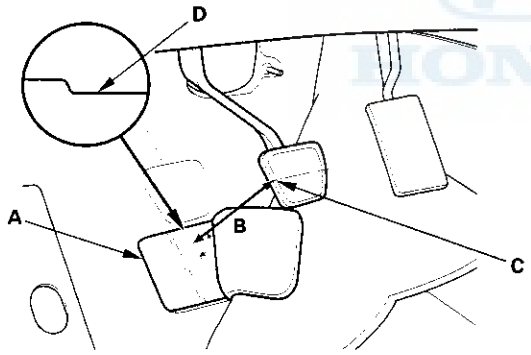
2. Turn the brake pedal position switch counterclockwise, and pull it back until it is no longer touching the brake pedal.

3. Remove the footrest, refer to the 2008-2009 Accord Service Manual (see step 4 on page 20-141), then remove the steering joint cover, refer to the 2008-2009 Accord Service Manual (see page 17-28).

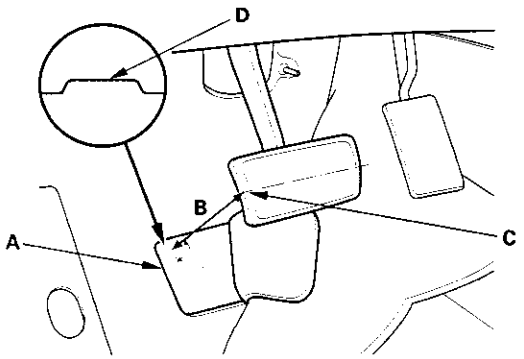
4. Pull back the carpet, and find the cutout (A) in the insulator. Measure the pedal height (B) from left side middle of the pedal pad (C) to the floor (D) without the insulator as shown.

   Standard pedal height (with carpet removed):
   M/T: 156 mm (6 1/8 in.)
   A/T: 155 mm (6 1/8 in.)

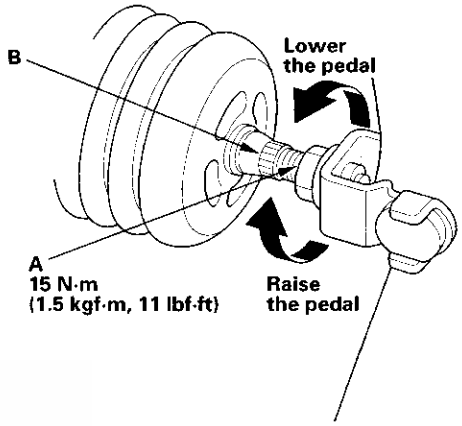
M/T



A/T



5. Loosen the pushrod locknut (A), and screw the pushrod (B) in or out with pliers until the standard pedal height from the floor is reached. After adjustment, tighten the locknut firmly. Do not adjust the pedal height with the pushrod pressed.

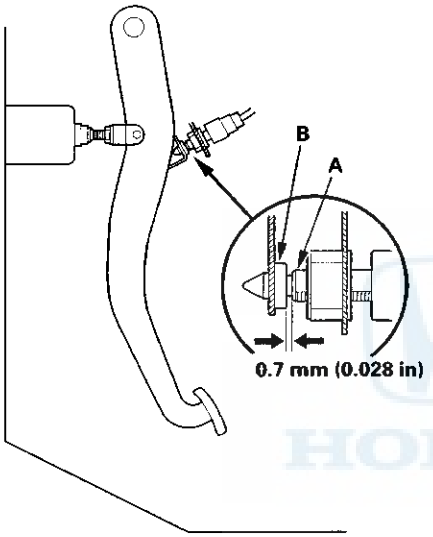


(cont'd)

Brake Pedal and Brake Pedal Position Switch Adjustment (cont'd)

Brake Pedal Position Switch Clearance

6. Lift up on the brake pedal by hand. Push in the brake pedal position switch until its plunger is fully pressed (threaded end (A) touching the pad (B) on the pedal arm). Turn the switch 45 °clockwise to lock it. The gap between the brake pedal position switch and the pad is automatically adjusted to 0.7 mm (0.028 in.) by locking the switch. Make sure the brake lights go off when the pedal is released.



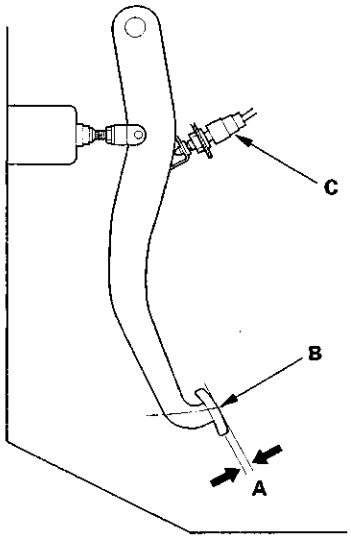
7. Install all removed parts in the reverse order of removal.

8. Check the brake pedal free play.

Pedal Free Play

1. With the ignition switch in LOCK (0), inspect the play (A) at the brake pedal pad (B) by pushing the brake pedal by hand. If the brake pedal free play is out of specification, adjust the brake pedal position switch (C). If the brake pedal free play is insufficient, it may result in brake drag.

Free play: 1—5 mm (1/16—3/16 in.)



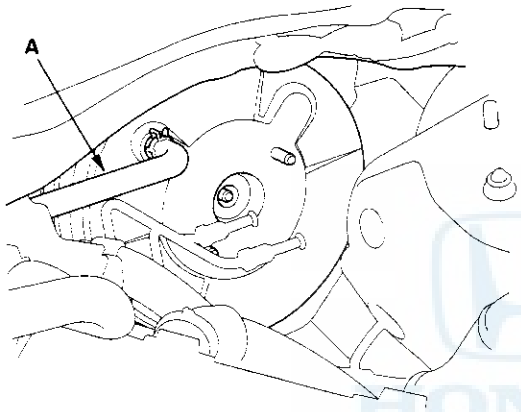
Brake Booster Replacement

1. Remove the cowl cover, refer to the 2008-2009 Accord Service Manual (see page 20-261).

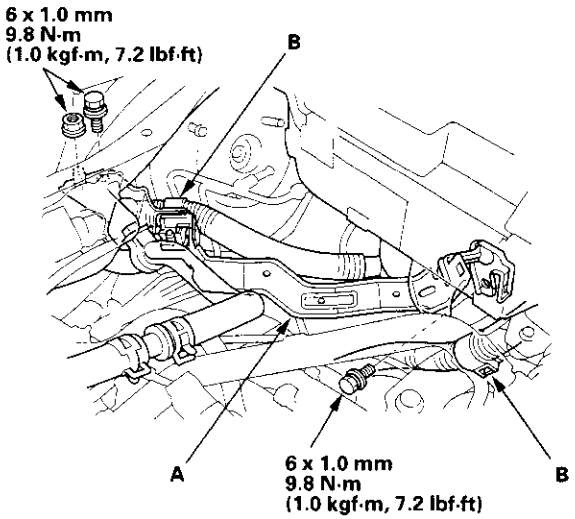
2. Remove the strut brace (if equipped), refer to the 2008-2009 Accord Service Manual (see page 20-289).

3. Remove the master cylinder, refer to the 2008-2009 Accord Service Manual (see page 19-25).

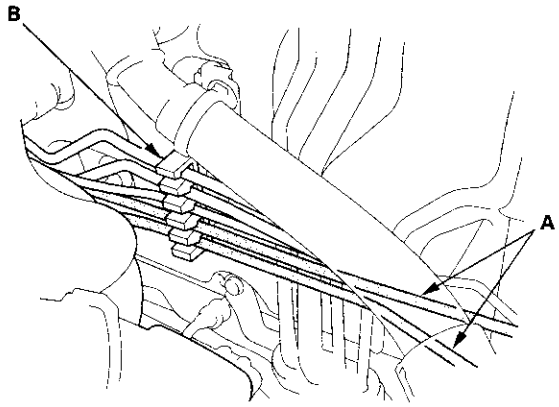
4. Disconnect the brake booster vacuum hose (A) from the brake booster.



5. Remove the under-hood fuse/relay box bracket (A), then remove the engine wire harness clamps (B).

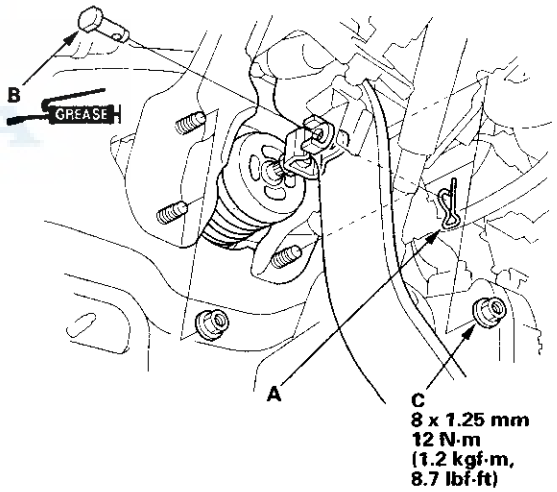


6. Remove the brake lines (A) from the hose clamp (B).



7. Remove the driver's dashboard undercover (see page 20-5).

8. Remove the lock pin (A) and the clevis pin (B), then disconnect the yoke from the brake pedal.



9. Remove the brake booster mounting nuts (C).

(cont'd)

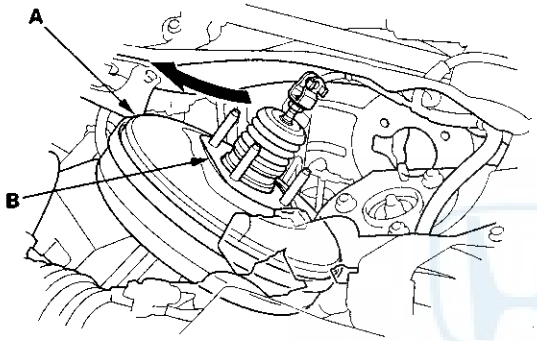
Brake Booster Replacement (cont'd)

10. Remove the brake booster (A) from the engine compartment.

NOTICE

- Be careful not to damage the brake booster mounting surfaces and the threads on the booster studs.
- Be careful not to bend or damage the brake lines.

NOTE: Use the new brake booster gasket (B) during reassembly.



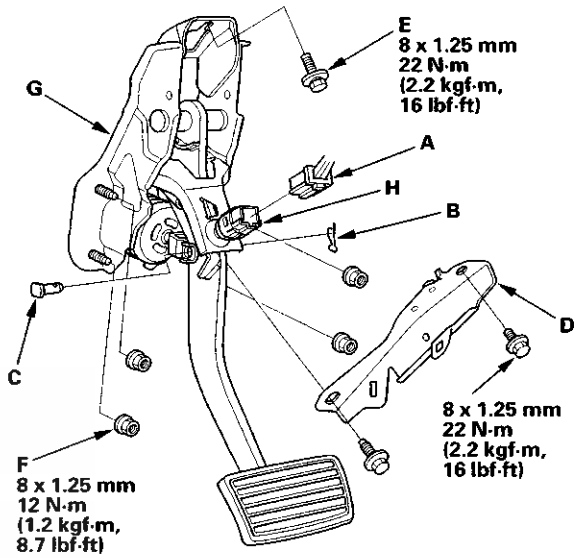
11. Install the brake booster in the reverse order of removal, and note these items:

- Install the master cylinder after installing the brake booster, refer to the 2008-2009 Accord Service Manual (see page 19-25).
- Check the brake pedal height and free play after installing the master cylinder, and adjust it if necessary (see page 19-3).
- Bleed the brake system, refer to the 2008-2009 Accord Service Manual (see page 19-9).

Brake Pedal Replacement

1. Remove the driver's dashboard undercover (see page 20-5).

2. Disconnect the brake pedal position switch connector (A).



3. Remove the lock pin (B) and the clevis pin (C).

4. Remove the brake pedal support member (D).

5. Remove the brake pedal bracket mounting bolt (E) and nuts (F).

6. Remove the brake pedal with bracket (G).

7. Remove the brake pedal position switch (H) by turning it counterclockwise.

8. Install in the reverse order of removal.

9. Adjust the brake pedal and the brake pedal position switch (see page 19-3).

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

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NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002, for the items not shown in this section.

HONDA

Outline of Model Change

The VSA system circuit diagram has been changed; related information is included.

VSA System Components

DTC Troubleshooting Index

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
11	-13	Right-front Wheel Speed Sensor Circuit Malfunction	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-67)
	-14	Right-front Wheel Speed Sensor Power Source Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-71)
12	-11	Right-front Wheel Speed Sensor Electrical Noise or Intermittent Interruption	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-72)
	-12	Right-front Wheel Speed Sensor Short to the Other Sensor Circuit	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-73)
	-21	Right-front Wheel Speed Sensor Installation Error	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-74)
	-22	Right-front Wheel Speed Sensor Installation Error (19 mph (30 km/h) or More)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-75)
	-23	Right-front Wheel Speed Sensor Installation Error (0 to 9 mph (0 to 15 km/h))	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-76)
13	-13	Left-front Wheel Speed Sensor Circuit Malfunction	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-67)
	-14	Left-front Wheel Speed Sensor Power Source Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-71)
14	-11	Left-front Wheel Speed Sensor Electrical Noise or Intermittent Interruption	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-72)
	-12	Left-front Wheel Speed Sensor Short to the Other Sensor Circuit	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-73)
	-21	Left-front Wheel Speed Sensor Installation Error	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-74)
	-22	Left-front Wheel Speed Sensor Installation Error (19 mph (30 km/h) or More)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-75)
	-23	Left-front Wheel Speed Sensor Installation Error (0 to 9 mph (0 to 15 km/h))	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-76)
15	-13	Right-rear Wheel Speed Sensor Circuit Malfunction	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-67)
	-14	Right-rear Wheel Speed Sensor Power Source Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-71)

*: Brake system indicator turns ON when two or more wheels fail.

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
16	-11	Right-rear Wheel Speed Sensor Electrical Noise or Intermittent Interruption	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-72)
	-12	Right-rear Wheel Speed Sensor Short to the Other Sensor Circuit	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-73)
	-21	Right-rear Wheel Speed Sensor Installation Error	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-74)
	-22	Right-rear Wheel Speed Sensor Installation Error (19 mph (30 km/h) or More)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-75)
	-23	Right-rear Wheel Speed Sensor Installation Error (0 to 9 mph (0 to 15 km/h))	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-76)
17	-13	Left-rear Wheel Speed Sensor Circuit Malfunction	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-67)
	-14	Left-rear Wheel Speed Sensor Power Source Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-71)
18	-11	Left-rear Wheel Speed Sensor Electrical Noise or Intermittent Interruption	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-72)
	-12	Left-rear Wheel Speed Sensor Short to the Other Sensor Circuit	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-73)
	-21	Left-rear Wheel Speed Sensor Installation Error	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-74)
	-22	Left-rear Wheel Speed Sensor Installation Error (19 mph (30 km/h) or More)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-75)
	-23	Left-rear Wheel Speed Sensor Installation Error (0 to 9 mph (0 to 15 km/h))	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-76)
21	-11	Right-front Magnetic Encoder Malfunction (Pulse Missing)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-77)
22	-11	Left-front Magnetic Encoder Malfunction (Pulse Missing)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-77)
23	-11	Right-rear Magnetic Encoder Malfunction (Pulse Missing)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-77)
24	-11	Left-rear Magnetic Encoder Malfunction (Pulse Missing)	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-77)

* : Brake system indicator turns ON when two or more wheels fail.

(cont'd)

VSA System Components

DTC Troubleshooting Index (cont'd)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
25	-12	Yaw Rate Sensor Internal Circuit Malfunction (Open, Short)	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-78)
	-13	Yaw Rate Sensor Internal Circuit Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-78)
	-17	Yaw Rate-Lateral Acceleration Sensor Power Source Voltage Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-78)
	-18	Yaw Rate-Lateral Acceleration Sensor Internal Circuit Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-78)
	-21	Yaw Rate Sensor Neutral Position Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-78)
	-22	Yaw Rate Sensor Stuck	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-79)
	-23	Yaw Rate Sensor Circuit Intermittent Interruption	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-79)
	-24	Yaw Rate Sensor Gain Low	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)
	-25	Yaw Rate Sensor Gain High	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)
26	-12	Lateral Acceleration Sensor Internal Circuit Malfunction (Open, Short)	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)
	-13	Lateral Acceleration Sensor Internal Circuit Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)
	-21	Lateral Acceleration Sensor Neutral Position Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)
	-22	Lateral Acceleration Sensor Stuck	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-81)
	-23	Lateral Acceleration Sensor Circuit Intermittent Interruption	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)
	-24	Lateral Acceleration Sensor Gain Low	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)
	-25	Lateral Acceleration Sensor Gain High	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-80)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
27	-11	Steering Angle Sensor DIAG Signal Error (Initial)	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-82)
	-21	Steering Angle Sensor Stuck Neutral Position	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-84)
	-22	Steering Angle Sensor Stuck Offset Position	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-84)
	-23	Steering Angle Sensor Counter Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-85)
	-24	Steering Angle Sensor Exchange Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-86)
	-26	Steering Angle Sensor DIAG Signal Error (Main)	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-82)
31	-01	ABS Right-front Inlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-02	ABS Right-front Inlet Solenoid Valve Malfunction (Initial Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-11	ABS Right-front Inlet Solenoid Valve Malfunction (Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Right-front Inlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Right-front Inlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Right-front Inlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-24	ABS Right-front Inlet Solenoid Valve Malfunction (Feedback Signal/Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
32	-01	ABS Right-front Outlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Right-front Outlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Right-front Outlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Right-front Outlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)

(cont'd)

VSA System Components

DTC Troubleshooting Index (cont'd)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
33	-01	ABS Left-front Inlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-02	ABS Left-front Inlet Solenoid Valve Malfunction (Initial Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-11	ABS Left-front Inlet Solenoid Valve Malfunction (Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Left-front Inlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Left-front Inlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Left-front Inlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-24	ABS Left-front Inlet Solenoid Valve Malfunction (Feedback Signal/Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
34	-01	ABS Left-front Outlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Left-front Outlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Left-front Outlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Left-front Outlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
35	-01	ABS Right-rear Inlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-02	ABS Right-rear Inlet Solenoid Valve Malfunction (Initial Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-11	ABS Right-rear Inlet Solenoid Valve Malfunction (Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Right-rear Inlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Right-rear Inlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Right-rear Inlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-24	ABS Right-rear Inlet Solenoid Valve Malfunction (Feedback Signal/Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
36	-01	ABS Right-rear Outlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Right-rear Outlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Right-rear Outlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Right-rear Outlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
37	-01	ABS Left-rear Inlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-02	ABS Left-rear Inlet Solenoid Valve Malfunction (Initial Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-11	ABS Left-rear Inlet Solenoid Valve Malfunction (Feedback Signal)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Left-rear Inlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Left-rear Inlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Left-rear Inlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-24	ABS Left-rear Inlet Solenoid Valve Malfunction (Feedback Signal/Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
38	-01	ABS Left-rear Outlet Solenoid Valve Malfunction (Solenoid Initial Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-21	ABS Left-rear Outlet Solenoid Valve Malfunction (Solenoid Pulse)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-22	ABS Left-rear Outlet Solenoid Valve Malfunction (Solenoid Speculative)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
	-23	ABS Left-rear Outlet Solenoid Valve Malfunction (Solenoid Stuck ON)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-87)
41	-21	Right-front Wheel Lock	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-88)
42	-21	Left-front Wheel Lock	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-88)
43	-21	Right-rear Wheel Lock	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-88)
44	-21	Left-rear Wheel Lock	ON	ON/OFF*	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-88)

* : Brake system indicator turns ON when two or more wheels fail.

(cont'd)

VSA System Components

DTC Troubleshooting Index (cont'd)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
51	-11	Motor Lock	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-90)
	-12	Motor Drive Circuit Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-91)
	-13	Motor Drive Circuit Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-90)
52	-12	Motor Stuck OFF	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-93)
53	-01	Motor Relay Stuck ON 1	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-94)
	-12	Motor Relay Stuck ON 2	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-94)
54	-03	Fail-safe Relay 1 Stuck ON	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-95)
	-04	Fail-safe Relay 1 Stuck OFF (Initial)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-95)
	-21	Fail-safe Relay 1 Stuck OFF (Main)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-95)
56	-01	Initial VIG FET Stuck OFF (Initial)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-97)
	-02	Initial VIG FET Stuck ON	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-97)
	-11	VIG FET Stuck OFF (Main)	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-97)
61	-01	VSA Modulator-control Unit Initial IG Low Voltage	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-98)
	-21	VSA Modulator-control Unit Power Source Low Voltage 1	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-98)
	-22	VSA Modulator-control Unit Power Source Low Voltage 2	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-98)
	-23	VSA Modulator-control Unit Power Source Low Voltage 3	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-98)
62	-21	VSA Modulator-control Unit IG High Voltage	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-99)
64	-11	Steering Angle Sensor Power Circuit Low Voltage	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-100)
	-12	Steering Angle Sensor Power Circuit High Voltage	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-101)
65	-21	Brake Fluid Level Stuck ON	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-102)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
66	-11	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-104)
	-12	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-105)
	-14	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-104)
	-15	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-108)
	-16	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-104)
	-17	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-104)
	-18	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-104)
	-19	Pressure Sensor (Inside of VSA Modulator-control Unit) Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-104)
68	-21	Brake Pedal Position Switch Stuck OFF	OFF	OFF	ON	ON	(see page 19-23)
	-22	Brake Pedal Position Switch Stuck ON	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-112)
71	-21	Right-front or Left-rear Different Diameter Tire Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-22	Left-front or Right-rear Different Diameter Tire Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-23	Right-front and Right-rear Different Diameter Tire Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-24	Left-front and Left-rear Different Diameter Tire Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-25	Right-front and Left-front Different Diameter Tire Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-26	Right-rear and Left-rear Different Diameter Tire Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-27	Right-front or Left-rear Different Diameter Tire Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-28	Left-front or Right-rear Different Diameter Tire Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-29	Right-front and Right-rear Different Diameter Tire Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-2A	Left-front and Left-rear Different Diameter Tire Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)

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DTC Troubleshooting Index (cont'd)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
71	-2B	Right-front and Left-front Different Diameter Tire Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
	-2C	Right-rear and Left-rear Different Diameter Tire Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-114)
81	-01	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-02	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-03	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-05	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-06	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-07	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-116)
	-09	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-11	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-117)
	-21	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-22	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-23	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-24	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-25	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-31	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-32	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-33	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
81	-35	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-36	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-37	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-38	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-39	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-3A	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-3C	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-3D	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-120)
	-3E	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-120)
	-42	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-51	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-118)
	-52	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-117)
	-53	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-118)
	-54	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-117)
	-55	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-118)
	-56	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-117)
	-57	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-118)
	-58	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-117)
	-59	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-120)

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VSA System Components

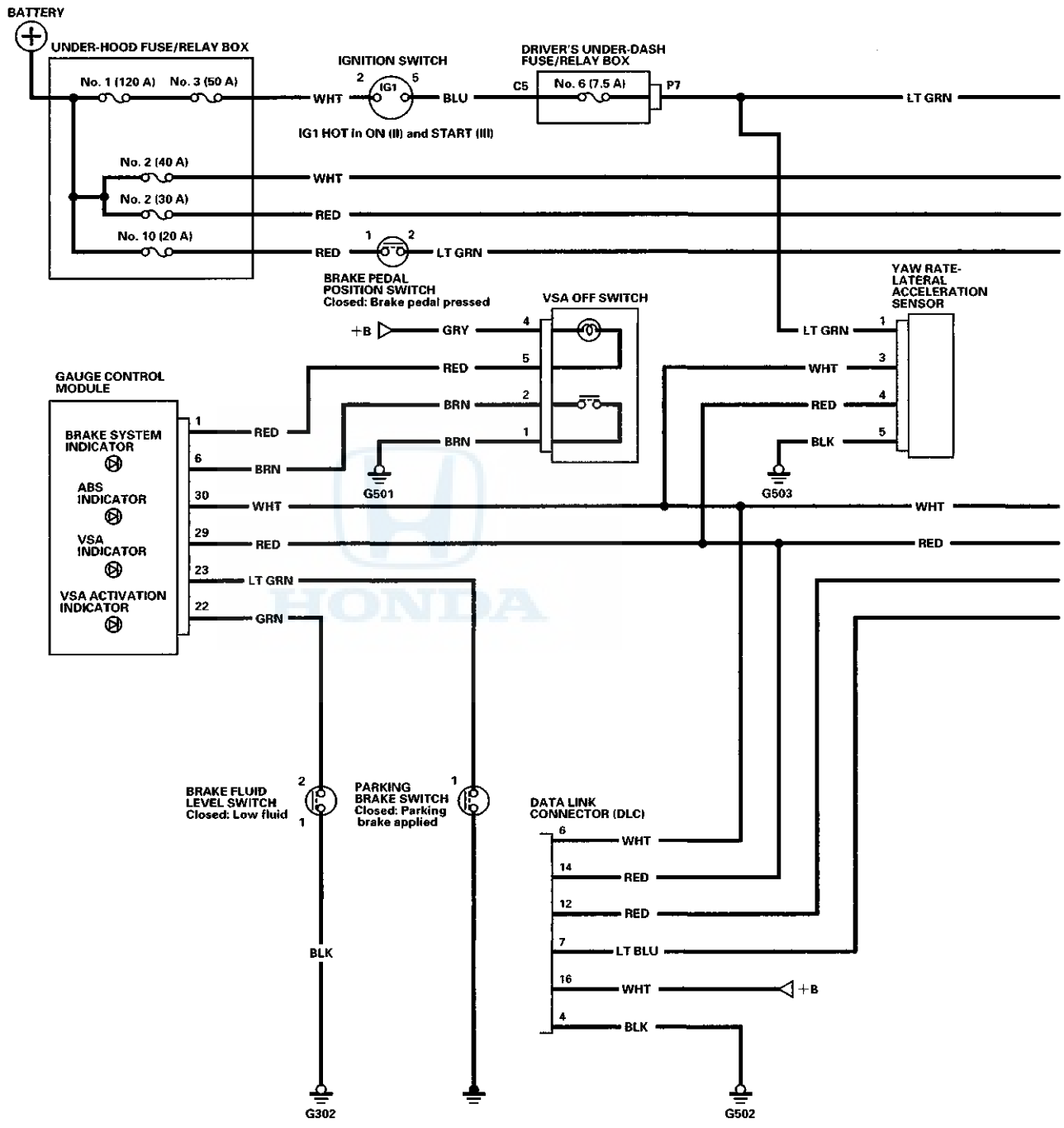
DTC Troubleshooting Index (cont'd)

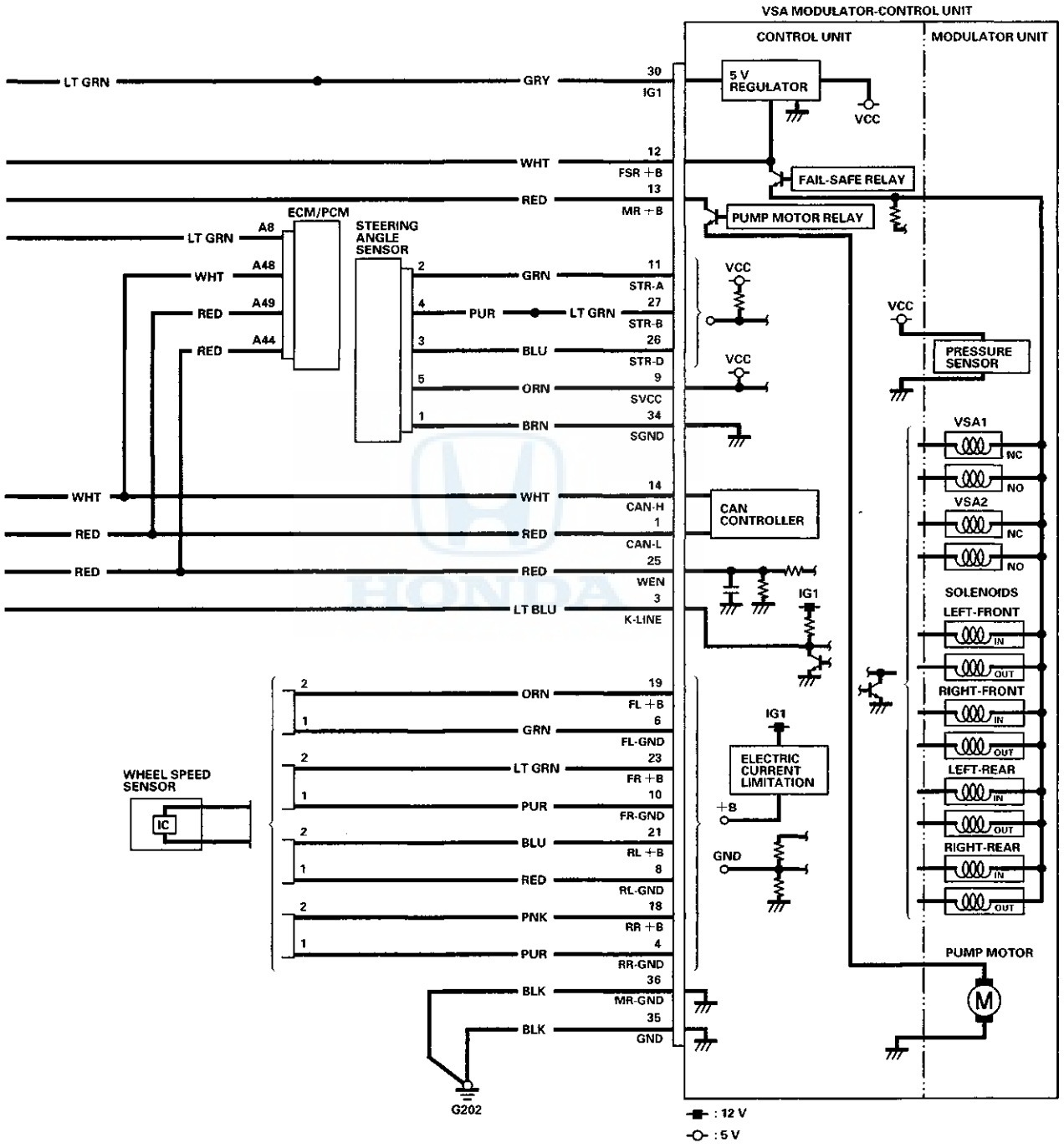
DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
81	-71	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-72	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
	-80	Central Processing Unit (CPU) Internal Circuit Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-115)
83	-13	ECM/PCM Communication Error (Engine Mulfunction)	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-121)
	-14	ECM/PCM Communication Error (A/T Mulfunction)	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-121)
84	-21	VSA Sensor Neutral Position not Writing	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-122)
86	-01	F-CAN Bus-off Malfunction	OFF	OFF	ON	ON	(see page 19-27)
	-11	F-CAN Communication with ECM/PCM Malfunction	OFF	OFF	ON	ON	(see page 19-28)
	-21	F-CAN Communication with Engine Malfunction	OFF	OFF	ON	ON	(see page 19-28)
	-22	F-CAN Communication with Engine Malfunction	OFF	OFF	ON	ON	(see page 19-28)
	-23	F-CAN Communication with Engine Malfunction	OFF	OFF	ON	ON	(see page 19-28)
	-24	F-CAN Communication with Engine Malfunction	OFF	OFF	ON	ON	(see page 19-28)
	-25	F-CAN Communication with Engine Malfunction	OFF	OFF	ON	ON	(see page 19-28)
	-31	F-CAN Communication with Gauge Control Module Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-126)
	-41	F-CAN Communication with EAT Malfunction	OFF	OFF	ON	ON	(see page 19-28)
	-71	F-CAN Communication with Yaw Rate-Lateral Acceleration Sensor Malfunction	OFF	OFF	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-128)
107	-22	Central Processing Unit (CPU) Internal Circuit Malfunction	OFF	OFF	OFF	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-130)
108	-21	Steering Angle Sensor Malfunction	OFF	OFF	OFF	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-131)
121	-01	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-02	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-11	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-21	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-24	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)

DTC		Detection Item	ABS Indicator	Brake System Indicator	VSA Indicator	VSA Activation Indicator	Note
122	-01	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-21	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-22	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-23	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
123	-01	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-02	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-11	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-21	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-24	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
124	-01	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-21	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-22	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)
	-23	VSA Solenoid Valve Malfunction	ON	ON	ON	ON	Refer to the 2008-2009 Accord Service Manual (see page 19-132)

VSA System Components

Circuit Diagram



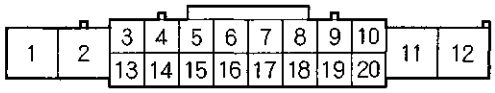

VSA MODULATOR-CONTROL UNIT
CONTROL UNIT
MODULATOR UNIT
LT GRN
GRY
30
IG1
5 V REGULATOR
VCC
WHT
12
FSR +B
FAIL-SAFE RELAY
RED
13
MR +B
PUMP MOTOR RELAY
ECM/PCM
STEERING ANGLE SENSOR
LT GRN
A8
WHT
A48
RED
A49
RED
A44
2
GRN
11
STR-A
4
PUR
LT GRN
27
STR-B
3
BLU
26
STR-D
5
ORN
9
SVCC
1
BRN
34
SGND
VCC
VCC
VCC
PRESSURE SENSOR
WHT
RED
RED
WHT
14
CAN-H
RED
1
CAN-L
RED
25
WEN
LT BLU
3
K-LINE
CAN CONTROLLER
IG1
VSA1
NC
NO
VSA2
NC
NO
SOLENOIDS
LEFT-FRONT
IN
OUT
RIGHT-FRONT
IN
OUT
LEFT-REAR
IN
OUT
RIGHT-REAR
IN
OUT
WHEEL SPEED SENSOR
IC
2
ORN
19
FL +B
1
GRN
6
FL-GND
2
LT GRN
23
FR +B
1
PUR
10
FR-GND
2
BLU
21
RL +B
1
RED
8
RL-GND
2
PNK
18
RR +B
1
PUR
4
RR-GND
BLK
36
MR-GND
BLK
35
GND
G202
IG1
ELECTRIC CURRENT LIMITATION
+B
GND
PUMP MOTOR
M
: 12 V
: 5 V

(cont'd)

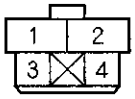
VSA System Components

Circuit Diagram (cont'd)

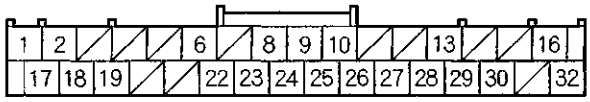
DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR P (20P)



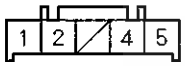
BRAKE PEDAL POSITION SWITCH 4P CONNECTOR



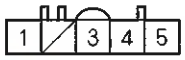
GAUGE CONTROL MODULE 32P CONNECTOR



VSA OFF SWITCH 5P CONNECTOR



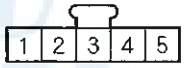
YAW RATE-LATERAL ACCELERATION SENSOR 5P CONNECTOR



BRAKE FLUID LEVEL SWITCH 2P CONNECTOR

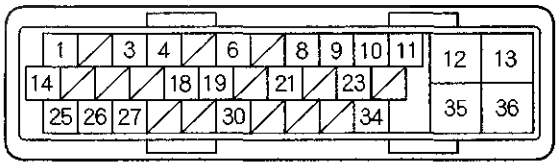
PARKING BRAKE SWITCH 1P CONNECTOR

STEERING ANGLE SENSOR 5P CONNECTOR



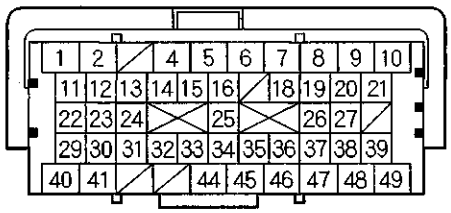
WHEEL SPEED SENSOR 2P CONNECTOR

VSA MODULATOR-CONTROL UNIT 36P CONNECTOR

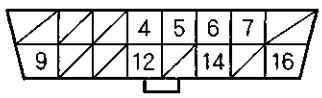


Wire side of female terminals

ECM/PCM CONNECTOR A (49P)



DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

DTC Troubleshooting

DTC 68-21: Brake Pedal Position Switch Stuck OFF

1. Turn the ignition switch to ON (II).
2. Check the BRAKE PRESS in the VSA DATA LIST with the HDS. Do not press the brake pedal.

   Is there 10 MPa or less?

   YES—Go to step 3.

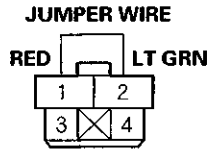
   NO—Check for brake drag or a missadjusted brake pedal position switch. If they are normal, go to step 25.
3. Check the BRAKE SWITCH in the VSA DATA LIST with the HDS while moving the brake pedal.

   Does it indicate ON when the pedal is pressed, and OFF when the pedal is released?

   YES—Intermittent failure, the system is OK at this time. Check for loose terminals between the brake pedal position switch 4P connector, ECM/PCM connector A (49P), and the VSA modulator-control unit 36P connector. Refer to intermittent failures troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 19-47).■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect the brake pedal position switch 4P connector.
6. Connect the brake pedal position switch 4P connector terminals No. 1 and No. 2 with a jumper wire.

BRAKE PEDAL POSITION SWITCH 4P CONNECTOR



Wire side of female terminals

7. Turn the ignition switch to ON (II).
8. Check the BRAKE SWITCH in the VSA DATA LIST with the HDS.

   Does it indicate ON?

   YES—Check the brake pedal position switch adjustment, refer to the 2008-2009 Accord Service Manual (see page 19-6). If it is OK, replace the brake pedal position switch.■

   NO—Go to step 9.
9. Disconnect the jumper wire.
10. Turn the ignition switch to LOCK (0).

(cont'd)

DTC Troubleshooting (cont'd)

11. Check the No. 10 (20 A) fuse in the under-hood fuse/relay box.

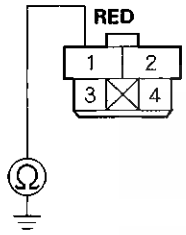
    Is the fuse blown?

    YES—Go to step 12.

    NO—Reinstall the checked fuse, then go to step 21.

12. Check for continuity between brake pedal position switch 4P connector terminal No. 1 and body ground.

    BRAKE PEDAL POSITION SWITCH 4P CONNECTOR



    Wire side of female terminals

    Is there continuity?

    YES—Repair short to body ground in the wire between the No. 10 (20 A) fuse in the under-hood fuse/relay box and the brake pedal position switch.■

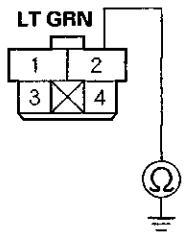
    NO—Go to step 13.

13. Short the SCS line with the HDS.

14. Disconnect ECM/PCM connector A (49P).

15. Check for continuity between brake pedal position switch 4P connector terminal No. 2 and body ground.

    BRAKE PEDAL POSITION SWITCH 4P CONNECTOR



    Wire side of female terminals

    Is there continuity?

    YES—Repair short to body ground in the wire between the brake pedal position switch and the ECM/PCM.■

    NO—Install a new No. 10 (20 A) fuse in the under-hood fuse/relay box, then go to step 16.

16. Reconnect all connectors.

17. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

18. Clear the DTC with the HDS.

19. Test-drive the vehicle. Drive the vehicle at 7 mph (10 km/h) or more.

    NOTE: Drive the vehicle on the road, not on a lift.

20. Check for DTCs with the HDs.

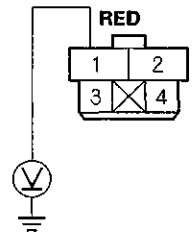
    Is DTC 68-21 indicated?

    YES—Check for loose terminals in the ECM/PCM connector A (49P). If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then retest. If the ECM/PCM was substituted, go to step 1.

    NO—Troubleshooting is complete. ■

21. Measure the voltage between brake pedal position switch 4P connector terminal No. 1 and body ground.

BRAKE PEDAL POSITION SWITCH 4P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 22.

NO—Repair open in the wire between the No. 10 (20 A) fuse in the under-hood fuse/relay box and the brake pedal position switch. ■

22. Short the SCS line with the HDS.

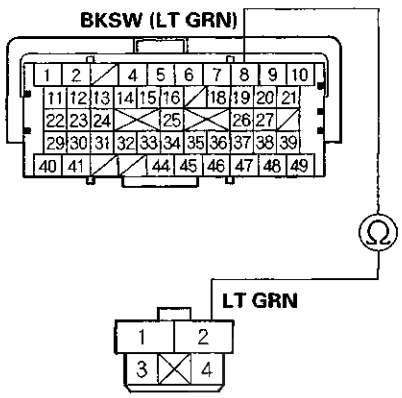
23. Disconnect ECM/PCM connector A (49P).

(cont'd)

DTC Troubleshooting (cont'd)

24. Check for continuity between brake pedal position switch 4P connector terminal No. 2 and ECM/PCM connector A (49P) terminal No. 8.

ECM/PCM CONNECTOR A (49P)
Terminal side of female terminals



BRAKE PEDAL POSITION SWITCH 4P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7), then go to step 1 and recheck. If DTCs are not indicated, ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282).

NO—Repair open in the wire between the ECM/PCM and the brake pedal position switch.■

25. Update the VSA modulator-control unit if it does not have the latest software, refer to the 2008-2009 Accord Service Manual (see page 19-140). If the unit already has the latest software, substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141).

26. Test-drive the vehicle. Drive the vehicle at 7 mph (10 km/h) or more.

    NOTE: Drive the vehicle on the road, not on a lift.

27. Check for DTCs with the HDS.

    Is DTC 68-21 indicated?

    YES—Check for loose terminals in the VSA modulator-control unit 36P connector. If the VSA modulator-control unit was updated, substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141), then retest. If the VSA modulator-control unit was substituted, go to step 1.

    NO—If the VSA modulator-control unit was updated, troubleshooting is complete. If the VSA modulator-control unit was substituted, replace the original VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141). If any other DTCs are indicated, go to the indicated DTCs troubleshooting.■

DTC 86-01: F-CAN Bus-off Malfunction

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0), then turn it to ON (II) again.
4. Check for DTCs with the HDS.

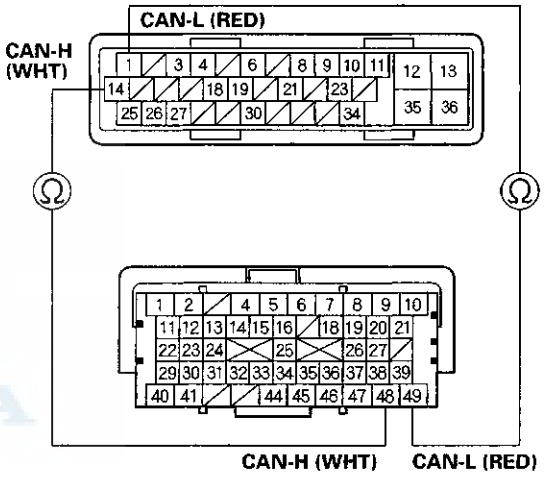
   Is DTC 86-01 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. Check for loose terminals between ECM/PCM connector A (49P) and the VSA modulator-control unit 36P connector. Refer to intermittent failures troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 19-47).■
5. Turn the ignition switch to LOCK (0).
6. Short the SCS line with the HDS.
7. Disconnect ECM/PCM connector A (49P).
8. Disconnect the VSA modulator-control unit 36P connector, refer to the 2008-2009 Accord Service Manual (see step 3 on page 19-142).
9. Check for continuity between the VSA modulator-control unit 36P connector terminal and ECM/PCM connector A (49P) terminal (see table).

Sign	VSA Modulator-control Unit 36P Connector Terminal	ECM/PCM Connector A (49P) Terminal
CAN-L	No. 1	No. 49
CAN-H	No. 14	No. 48

VSA MODULATOR-CONTROL UNIT 36P CONNECTOR
Wire side of female terminals



ECM/PCM CONNECTOR A (49P)
Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between the ECM/PCM and the VSA modulator-control unit.■

(cont'd)

DTC Troubleshooting (cont'd)

10. Reconnect all connectors.

11. Update the VSA modulator-control unit if it does not have the latest software, refer to the 2008-2009 Accord Service Manual (see page 19-140). If the unit already has the latest software, substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141).

12. Turn the ignition switch to LOCK (0), then turn it to ON (II) again.

13. Check for DTCs with the HDS.

    Is DTC 86-01 indicated?

    YES—Check for loose terminals in the VSA modulator-control unit 36P connector. If the VSA modulator-control unit was updated, substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141), then retest. If the VSA modulator-control unit was substituted, go to step 1.

    NO—If the VSA modulator-control unit was updated, troubleshooting is complete. If the VSA modulator-control unit was substituted, replace the original VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141). If any other DTCs are indicated, go to the indicated DTCs troubleshooting.■

DTC 86-11: F-CAN Communication with ECM/PCM Malfunction

DTC 86-21: F-CAN Communication with Engine Malfunction

DTC 86-22: F-CAN Communication with Engine Malfunction

DTC 86-23: F-CAN Communication with Engine Malfunction

DTC 86-24: F-CAN Communication with Engine Malfunction

DTC 86-25: F-CAN Communication with Engine Malfunction

DTC 86-41: F-CAN Communication with EAT Malfunction

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Test-drive the vehicle. Drive the vehicle at 7 mph (10 km/h) or more.

   NOTE: Drive the vehicle on the road, not on a lift.

4. Check for DTCs with the HDS.

   Is DTC 86-11, 86-21, 86-22, 86-23, 86-24, 86-25, and/or 86-41 indicated?

   YES—If DTC 86-01 is indicated at the same time, do the DTC 86-01 troubleshooting first (see page 19-27). If DTC 86-01 is not indicated, go to step 5.

   NO—If any other DTCs are indicated, go to the indicated DTCs troubleshooting. If DTCs are not indicated, intermittent failure, the system is OK at this time. Check for loose terminals between ECM/PCM connector A (49P) and the VSA modulator-control unit 36P connector. Refer to intermittent failures troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 19-47).■

5. Turn the ignition switch to LOCK (0).

6. Short the SCS line with the HDS.

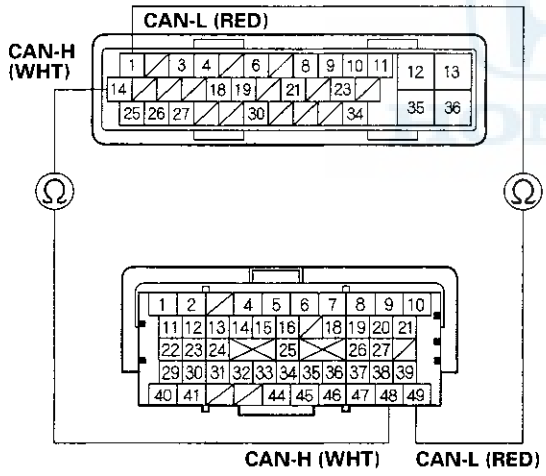
7. Disconnect ECM/PCM connector A (49P).

8. Disconnect the VSA modulator-control unit 36P connector, refer to the 2008-2009 Accord Service Manual (see step 3 on page 19-142).

9. Check for continuity between the VSA modulator-control unit 36P connector terminal and ECM/PCM connector A (49P) terminal (see table).

Sign	VSA Modulator-control Unit 36P Connector Terminal	ECM/PCM Connector A (49P) Terminal
CAN-L	No. 1	No. 49
CAN-H	No. 14	No. 48

VSA MODULATOR-CONTROL UNIT 36P CONNECTOR
Wire side of female terminals



ECM/PCM CONNECTOR A (49P)
Terminal side of female terminals

Is there continuity?

YES—Go to step 10.

NO—Repair open in the wire between the ECM/PCM and the VSA modulator-control unit. ■

10. Reconnect all connectors.

11. Update the ECM/PCM if it does not have the latest software (see page 11-281), or substitute a known-good ECM/PCM (see page 11-7).

12. Clear the DTC with the HDS.

13. Test-drive the vehicle. Drive the vehicle at 7 mph (10 km/h) or more.

    NOTE: Drive the vehicle on the road, not on a lift.

14. Check for DTCs with the HDS.

    Is DTC 86-11, 86-21, 86-22, 86-23, 86-24, 86-25, and/or 86-41 indicated?

    YES—Go to step 15.

    NO—If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-282). ■

(cont'd)

DTC Troubleshooting (cont'd)

15. Update the VSA modulator-control unit if it does not have the latest software, refer to the 2008-2009 Accord Service Manual (see page 19-140). If the unit already has the latest software, substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141).

16. Test-drive the vehicle. Drive the vehicle at 7 mph (10 km/h) or more.

    NOTE: Drive the vehicle on the road, not on a lift.

17. Check for DTCs with the HDS.

    Is DTC 86-11, 86-21, 86-22, 86-23, 86-24, 86-25, and/or 86-41 indicated?

    YES—Check for loose terminals in the VSA modulator-control unit 36P connector. If the VSA modulator-control unit was updated, substitute a known-good VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141), then retest. If the VSA modulator-control unit was substituted, go to step 1.

    NO—If the VSA modulator-control unit was updated, troubleshooting is complete. If the VSA modulator-control unit was substituted, replace the original VSA modulator-control unit, refer to the 2008-2009 Accord Service Manual (see page 19-141). If any other DTCs are indicated, go to the indicated DTCs troubleshooting. ■

HONDA

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If body maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

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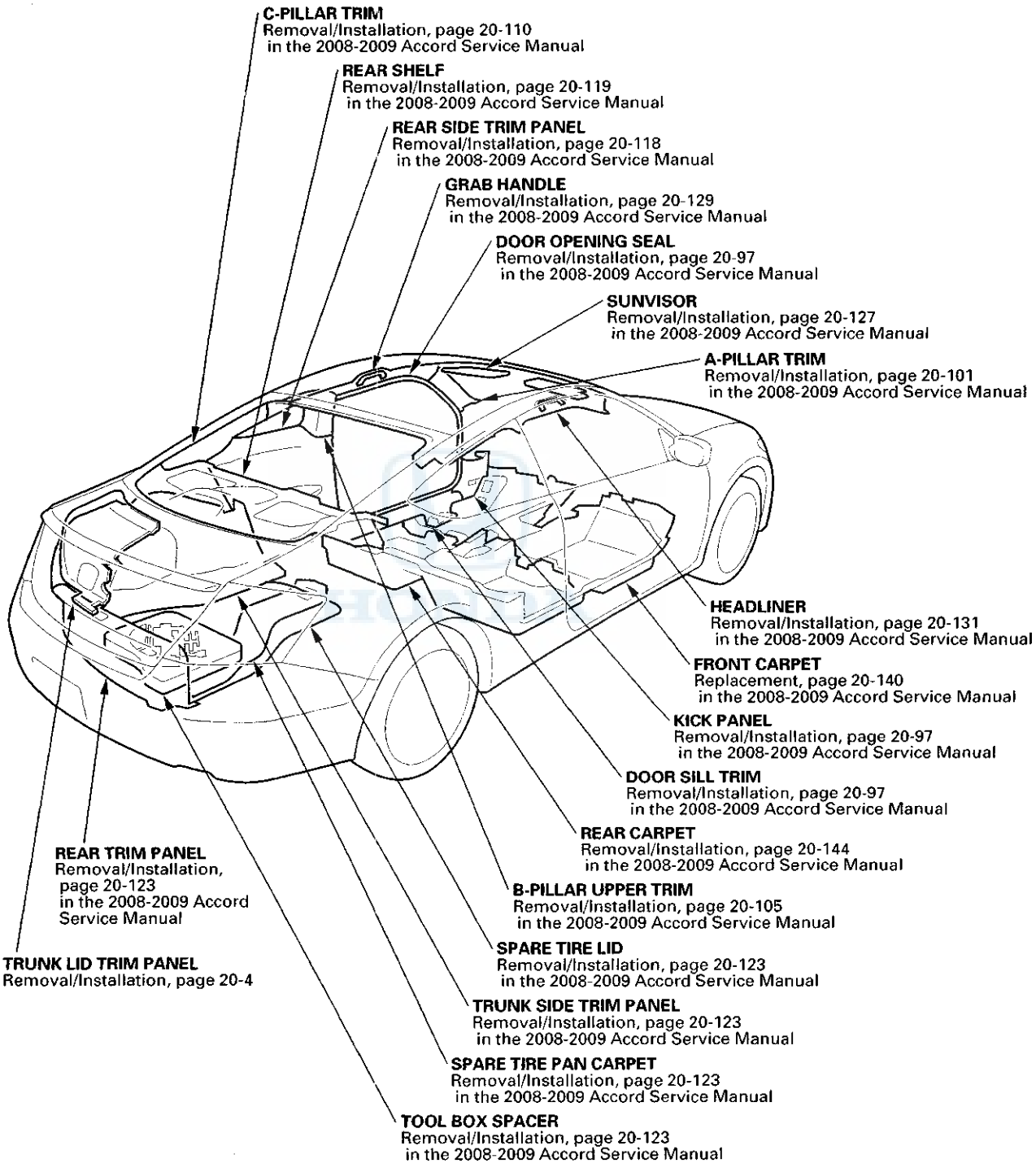
NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

Outline of Model Change

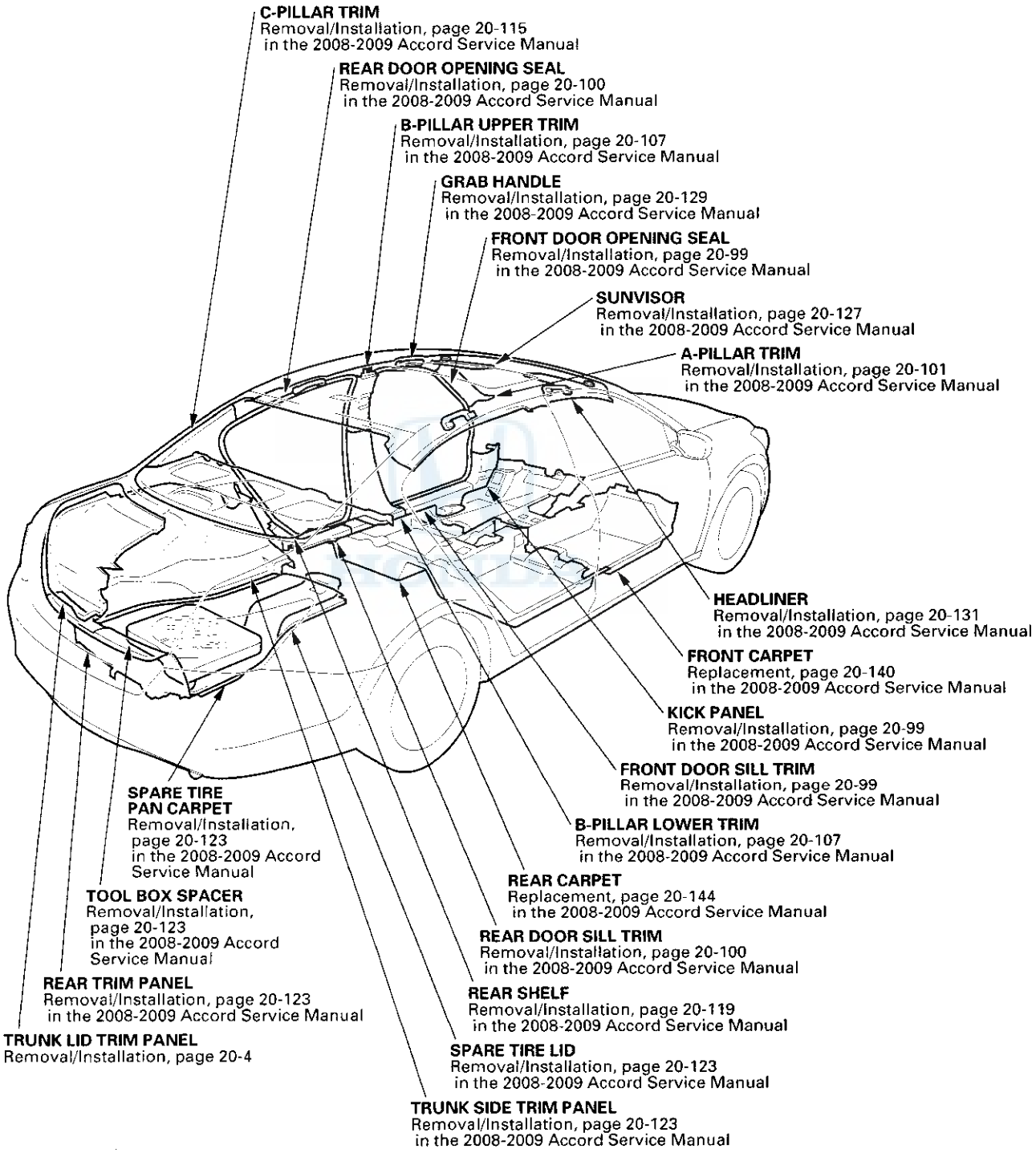
The Accord 2-door and 4-door V6 models have been added.

Component Location Index

2-door



4-door


C-PILLAR TRIM
Removal/Installation, page 20-115
in the 2008-2009 Accord Service Manual
REAR DOOR OPENING SEAL
Removal/Installation, page 20-100
in the 2008-2009 Accord Service Manual
B-PILLAR UPPER TRIM
Removal/Installation, page 20-107
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GRAB HANDLE
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in the 2008-2009 Accord Service Manual
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TOOL BOX SPACER
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REAR TRIM PANEL
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in the 2008-2009 Accord Service Manual
TRUNK LID TRIM PANEL
Removal/Installation, page 20-4

Trim Removal/Installation - Trunk Lid

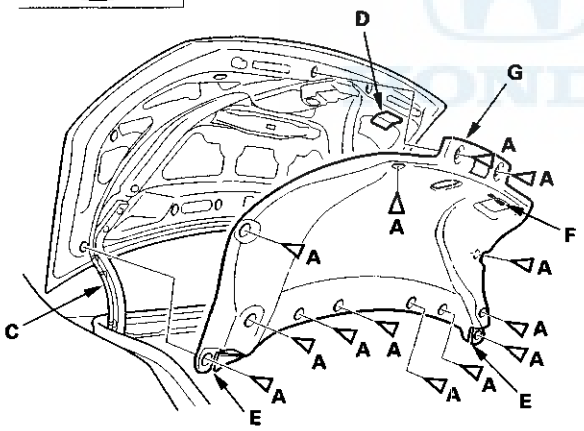
Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

NOTE:
- Put on gloves to protect your hands.
- Take care not to bend or scratch the panel.
- Use the appropriate tool from the KTC trim tool set to avoid damage when removing components.

1. Remove the clips (A, B), and pass the trunk lid hinges (C) of both sides and the trunk lid handle (D) through the slits (E) and the hole (F) in the trunk lid trim panel (G), then remove the panel.

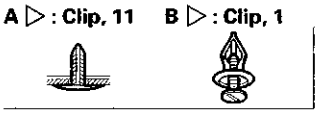
2-door

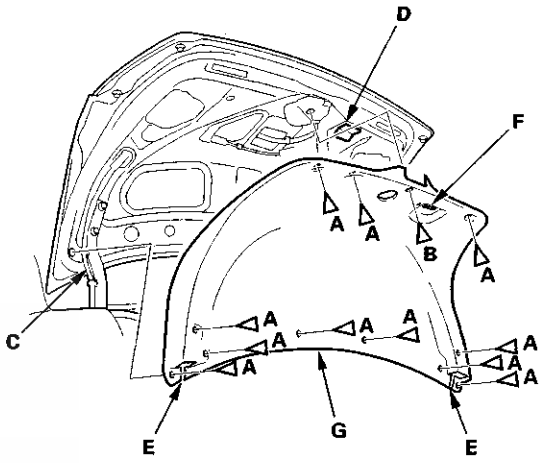
Fastener Locations
A ▷ : Clip, 13



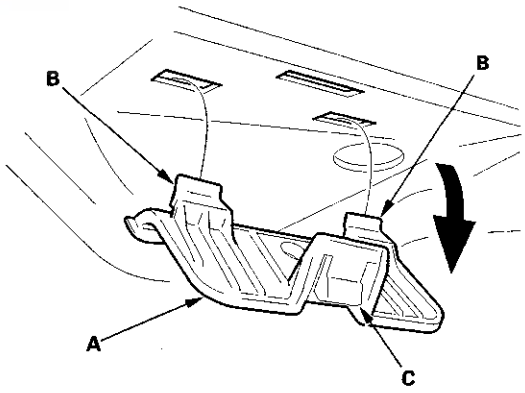
4-door

Fastener Locations
A ▷ : Clip, 11 B ▷ : Clip, 1





2. Pivot the trunk lid handle (A) down on the forward hooks (B) while prying the rear hook (C), then remove the handle.



3. Install the panel in the reverse order of removal, and note these items:

- If the clips are damaged or stress-whitened, replace them with new ones.
- Push the clips and the hook into place securely.

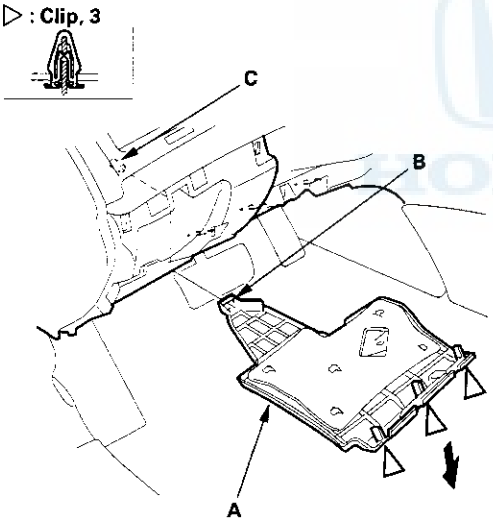
Driver's Dashboard Undercover Removal/Installation

Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

NOTE:
- Take care not to scratch the dashboard and its related parts.
- Use the appropriate tool from the KTC trim tool set to avoid damage when removing components.

1. Remove the driver's dashboard undercover (A).
   1 Gently pull down the rear edge to detach the clips.
   2 Pull the undercover away to release its holder (B) from the pin (C).

Fastener Locations
▷ : Clip, 3



2. Install the undercover in the reverse order of removal, and note these items:
   - If the clips are damaged or stress-whitened, replace them with new ones.
   - Push the clips into place securely.
   - Make sure the holder of the undercover is installed securely to the pin.

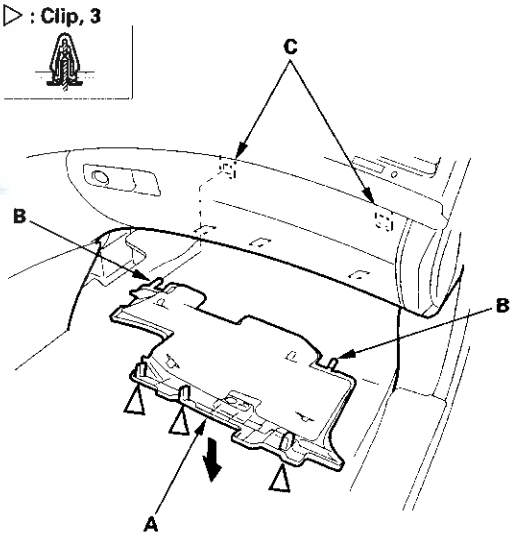
Passenger's Dashboard Undercover Removal/Installation

Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

NOTE:
- Take care not to scratch the dashboard and its related parts.
- Use the appropriate tool from the KTC trim tool set to avoid damage when removing components.

1. Remove the passenger's dashboard undercover (A).
   1 Gently pull down the rear edge to detach the clips.
   2 Pull the undercover away to release the pins (B) from the holders (C).

Fastener Locations
▷ : Clip, 3



2. Install the undercover in the reverse order of removal, and note these items:
   - If the clips are damaged or stress-whitened, replace them with new ones.
   - Push the clips into place securely.
   - Make sure the pins of the undercover are installed securely to the holders.

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Seat Cushion Cover Replacement, page 20-237
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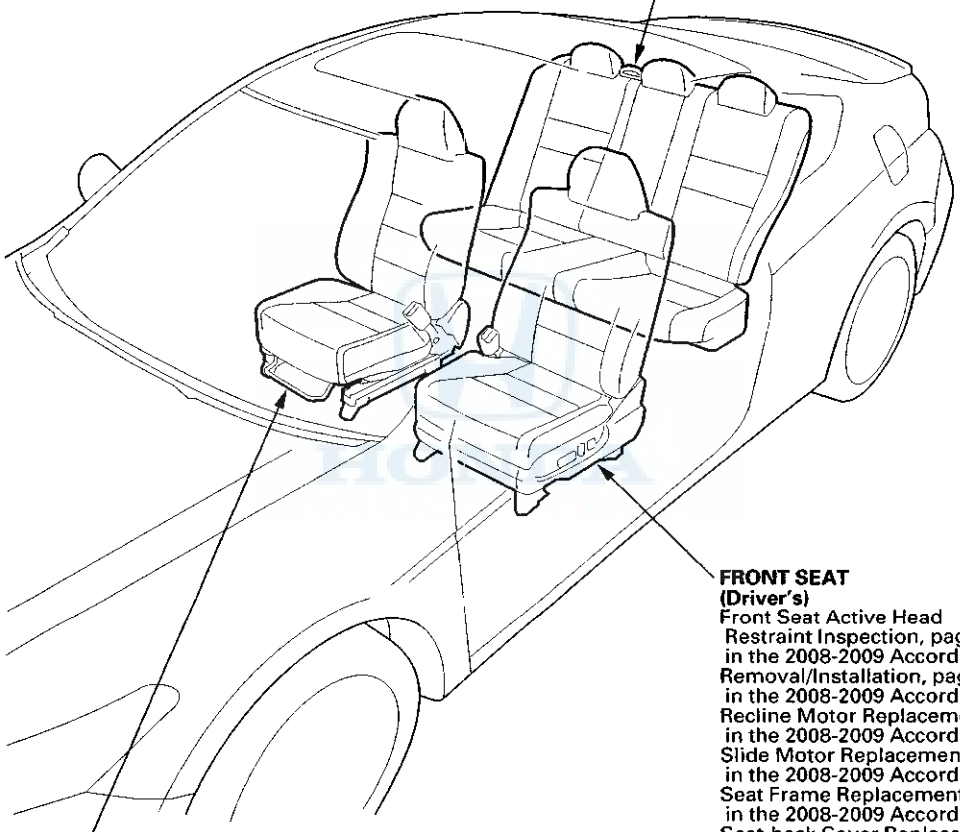

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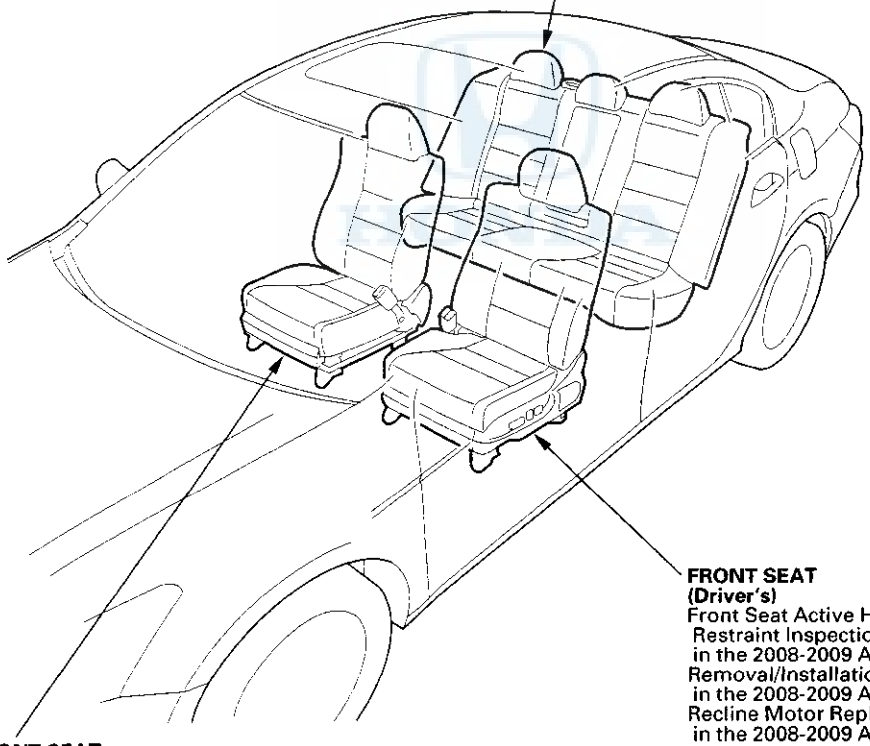

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Front Seat Removal/Installation

Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

4-door Passenger's Seat (4-way Power Seat)

SRS components are located in this area. Review the SRS component locations, refer to the 2008-2009 Accord Service Manual (see page 24-19) and the precautions and procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23) before doing repairs or service.

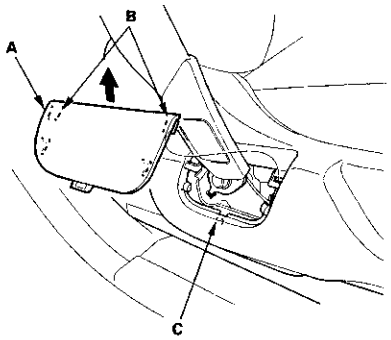
NOTE: Calibrate the ODS unit after any of the these actions, refer to the 2008-2009 Accord Service Manual (see page 24-38):

- Front passenger's seat replacement (including any seat components).
- After a vehicle collision.

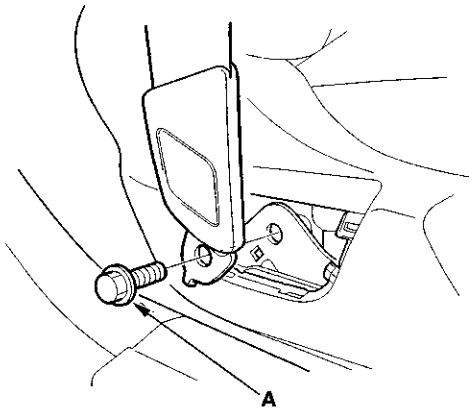
NOTE:
- Put on gloves to protect your hands.
- When prying with a flat-tip screwdriver, wrap it with protective tape to prevent damage.
- Take care not to scratch the body or tear the seat covers.
- Use the appropriate tool from the KTC trim tool set to avoid damage when prying components.

1. Tilt the steering wheel all the way up, and push it all the way in. Adjust the seat-back recline to a middle position.

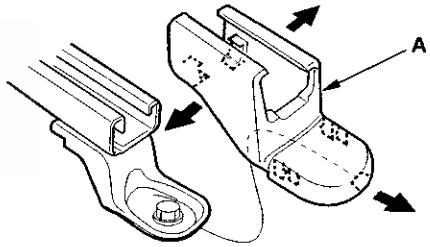
2. Slide the front seat all the way forward. Carefully pry up on the bottom of the anchor cover (A) to release the hooks (B) and the tab (C), then remove the cover by pulling it upward.

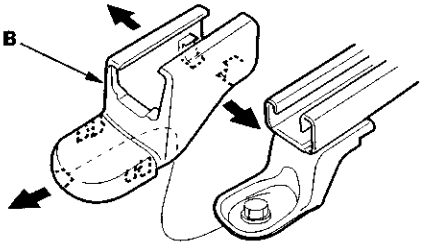


3. Remove the lower anchor bolt (A).



4. Remove the seat track outer end covers (A) and the seat track inner end covers (B) from the back of both seat tracks.

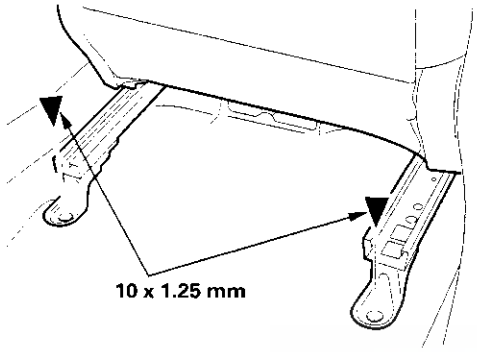




5. Remove the bolts.

Fastener Locations

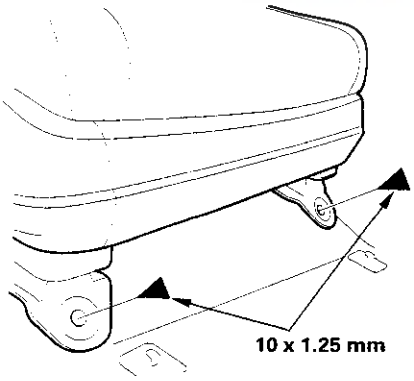
▶ : Bolt, 2



6. Slide the front seat all the way back, and remove the bolts.

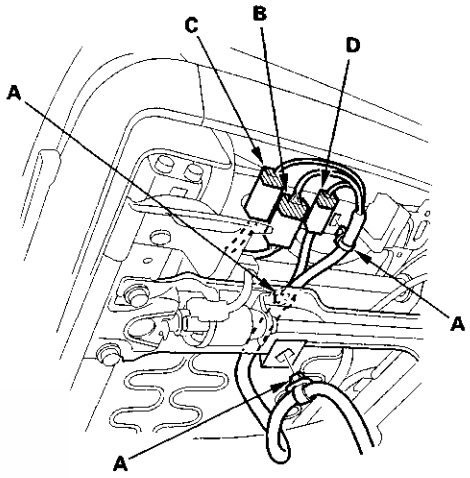
Fastener Locations

▶ : Bolt, 2



7. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89), then wait at least 3 minutes before removing the seat.

8. Lift up the front seat, then detach the harness clips (A), and disconnect the floor wire harness connector (B), the side airbag connector (C), and the seat belt buckle switch connector (D).



9. Remove the head restraint.

10. With the help of an assistant, carefully remove the front seat through the front door opening.

(cont'd)

Front Seat Removal/Installation (cont'd)

11. Install the seat in the reverse order of removal, and note these items:

    - Tighten the seat mounting bolts to the specified torque in the sequence shown. Slide the seat all the way back and tighten ① and ②, then slide it forward and tighten ③ and ④. The driver's seat is shown; the passenger's seat is symmetrical.
    - Tighten the bolts by hand first, then tighten them to the specified torque.
    - Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
    - Check for any DTCs that may have been set during repairs, and clear them.

Seat mounting bolts tightening sequence

Front Seat Recline Motor Replacement

4-door Passenger's Seat (4-way Power Seat)

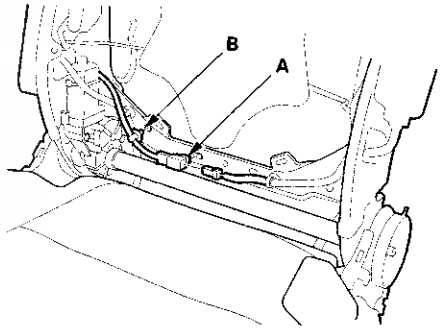
SRS components are located in this area. Review the SRS component locations, refer to the 2008-2009 Accord Service Manual (see page 24-19) and the precautions and procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23) before doing repairs or service.

NOTE: Put on gloves to protect your hands.

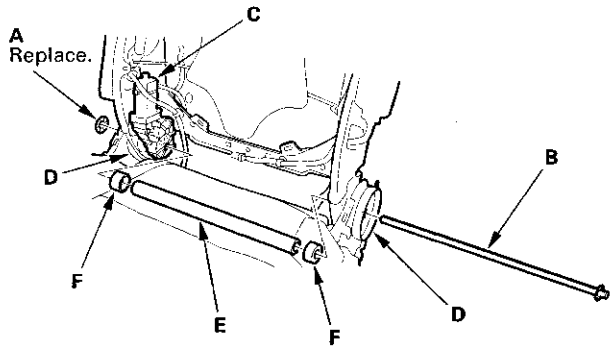
1. Remove the front seat (see page 20-8).

2. Remove the seat-back cover and pad (see page 20-14).

3. Disconnect and detach the lumbar support motor connector (A), and detach the harness clip (B).



4. Release the push nut (A) from the motor side end of the connecting rod (B), gently tap on the motor side of the connecting rod to remove it from the recline motor (C) and both recline adjusters (D).

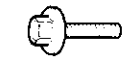


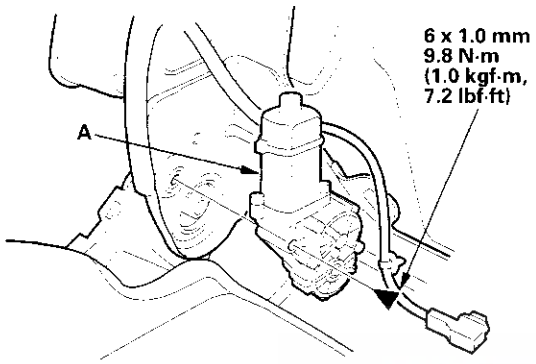
5. Remove the rod cover (E) and the collars (F).

6. Remove the bolt, then remove the recline motor (A).

Fastener Location

▶ : Bolt, 1





7. Install the motor in the reverse order of removal, and note these items:

   - Calibrate the ODS unit, refer to the 2008-2009 Accord Service Manual (see page 24-38).
   - Replace the push nut with a new one. Make sure the push nut is installed correctly.
   - Make sure the lumbar support motor connector is plugged in properly, and push the harness clip into place securely.
   - Apply medium strength liquid thread lock to the mounting bolt before reinstallation.

Front Seat Slide Motor Replacement

4-door Passenger's Seat (4-way Power Seat)

SRS components are located in this area. Review the SRS component locations, refer to the 2008-2009 Accord Service Manual (see page 24-19) and the precautions and procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23) before doing repairs or service.

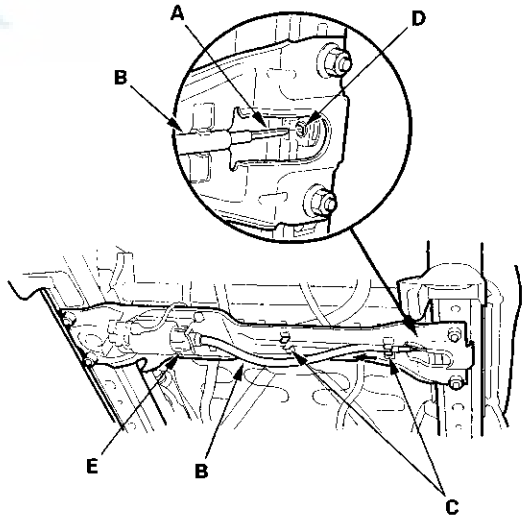
NOTE:
- Put on gloves to protect your hands.
- Take care not to tear the seams or damage the seat covers.

1. Remove the front seat (see page 20-8).

2. Remove the flex cable (A) and the cable housing (B).

   -1 Release the housing from the hooks (C).
   -2 Disconnect the cable from the worm gear (D) in the inner seat track by pulling out the housing.
   -3 Disconnect the cable from the slide motor (E).

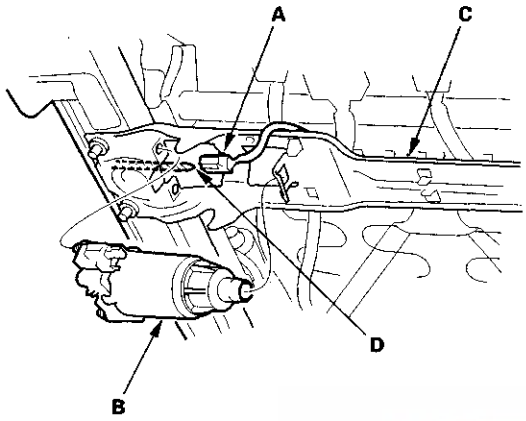
   NOTE: Take care not to kink the cable.



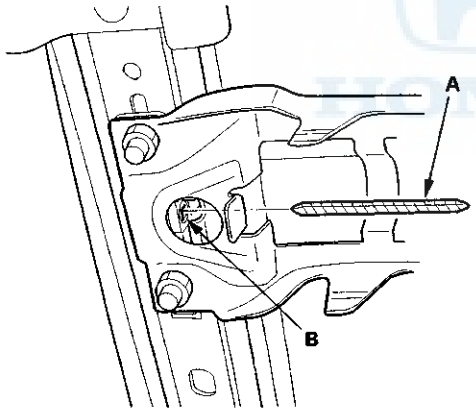
(cont'd)

Front Seat Slide Motor Replacement (cont'd)

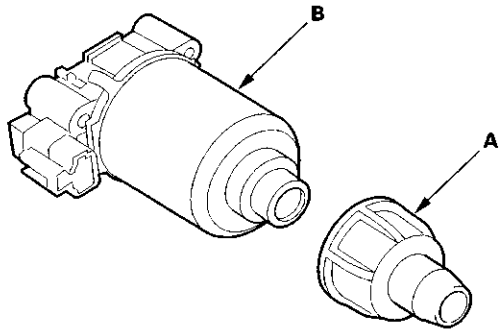
3. Disconnect the slide motor connector (A), then remove the slide motor (B) from the slide motor bracket (C) while disconnecting the motor from the short flex cable (D).



4. Remove the short flex cable (A) from the worm gear (B) in the outer seat track by pulling it out.



5. Remove the motor end mounting (A) from the slide motor (B).



6. Install the motor in the reverse order of removal, and note these items:

- Apply multipurpose grease to the worm gear portions in both seat tracks.
- Before installing the slide motor to the slide motor bracket, install the short flex cable to the slide motor.
- Before installing the slide motor bracket to the seat tracks, make sure both seat tracks are located forward fully.
- Make sure the short flex cable and the flex cable are connected properly.

Front Seat Frame Replacement

Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

4-door Passenger's Seat (4-way Power Seat)

NOTE: Calibrate the ODS unit after any of the these actions, refer to the 2008-2009 Accord Service Manual (see page 24-38):

- Front passenger's seat replacement (including any seat components).
- After a vehicle collision.

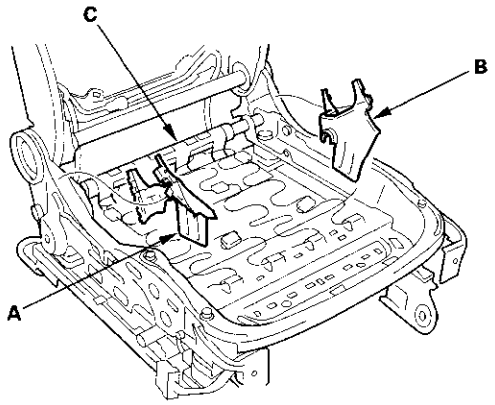
NOTE:
- Put on gloves to protect your hands.
- Use the appropriate tool from the KTC trim tool set to avoid damage when prying components.
- If the side airbag has deployed, replace the seat frame and related parts with new ones, refer to the 2008-2009 Accord Service Manual (see page 24-202).

1. Remove the front seat (see page 20-8).

2. Remove these items:

   - Front seat-back cover/pad (see page 20-14)
   - Front seat cushion cover/pad (see page 20-18)
   - ODS unit, refer to the 2008-2009 Accord Service Manual (see page 24-230)
   - Seat belt buckle (see page 24-4)
   - Side airbag, refer to the 2008-2009 Accord Service Manual (see page 24-208)

3. Remove the recline inner cover (A) and the center inner cover (B) from the seat frame (C).



4. Install the new seat frame in the reverse order of removal.

Front Seat-back Cover Replacement

Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

4-door Passenger's Seat (4-way Power Seat)

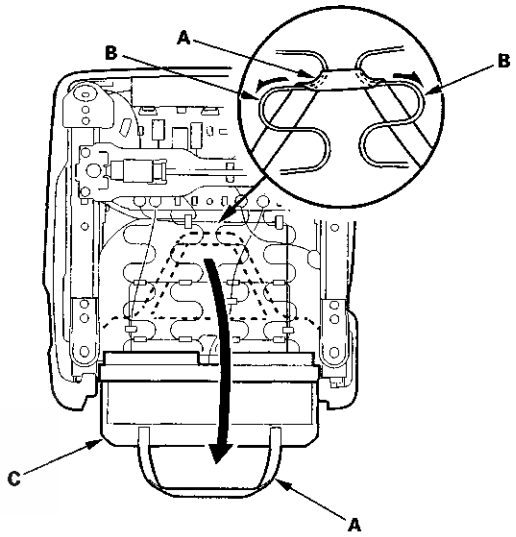
SRS components are located in this area. Review the SRS component locations, refer to the 2008-2009 Accord Service Manual (see page 24-19) and the precautions and procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23) before doing repairs or service.

NOTE: Calibrate the ODS unit after any of the these actions, refer to the 2008-2009 Accord Service Manual (see page 24-38):

- Front passenger's seat replacement (including any seat components).
- Replacement of the seat weight sensors.
- After a vehicle collision.

NOTE:
- Put on gloves to protect your hands.
- Take care not to tear or damage the seat covers.
- Do not touch the OPDS sensor in the seat-back pad, and keep it away from any oil, grease, detergent or water. These can corrode the sensor causing it to fail.
- Use the appropriate tool from the KTC trim tool set to avoid damage when removing components.

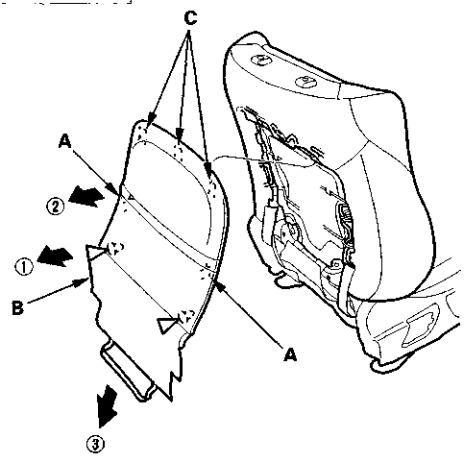
1. Remove the front seat (see page 20-8).
2. From under the seat cushion, release the elastic strap (A) from the seat cushion frame springs (B), then pull the under cover (C) of the back cover back.



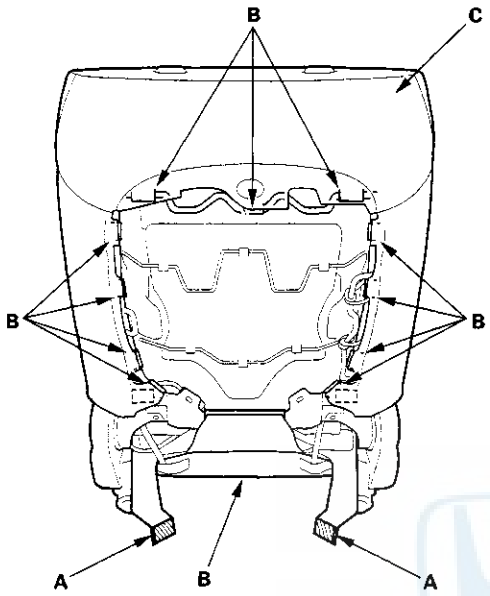
3. Detach the clips, and release the hooks (A) by pulling the bottom of the back cover (B) back, then gently pull down the cover to release the hooks (C) from the seat-back frame, and remove the cover.

NOTE: Detach the clips and the hooks in the numbered sequence as shown.

Fastener Locations
▷: Clip, 2



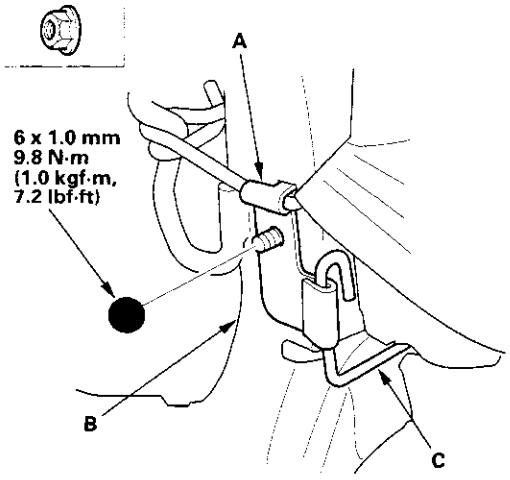
4. Release the Velcro fasteners (A) and the hook strips (B), then loosen the seat-back cover (C).



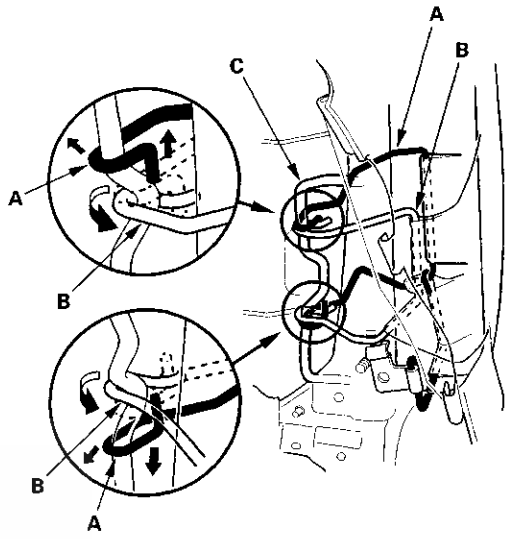
5. Remove the nut, then release the bracket (A) of airbag attachment wire C from the seat-back frame (B).

Fastener Location

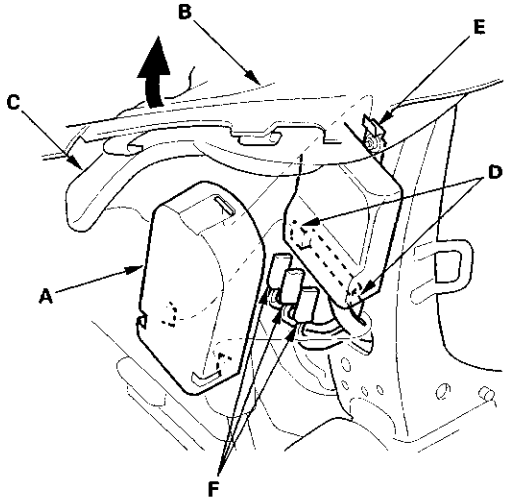
● : Nut, 1



6. Release airbag attachment wire A and airbag attachment wire B from the seat-back frame (C).



7. Remove the ODS unit cover (A).
   1. Turn over the seat-back cover (B) and the pad (C) as needed.
   2. Release the cover from the lower hooks (D).
   3. Pull the cover upward to release it from the upper hook (E).

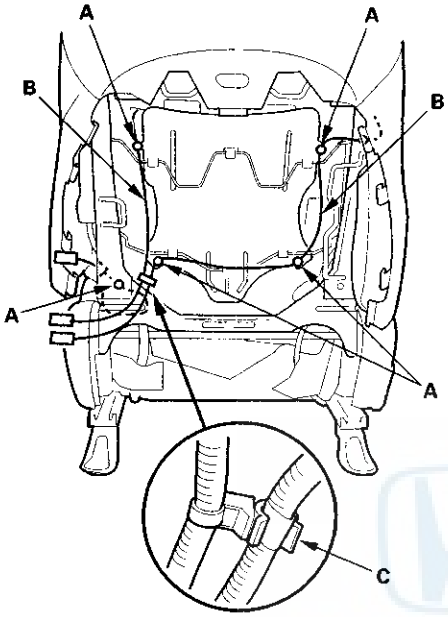


8. Disconnect the ODS sensor connectors (F).

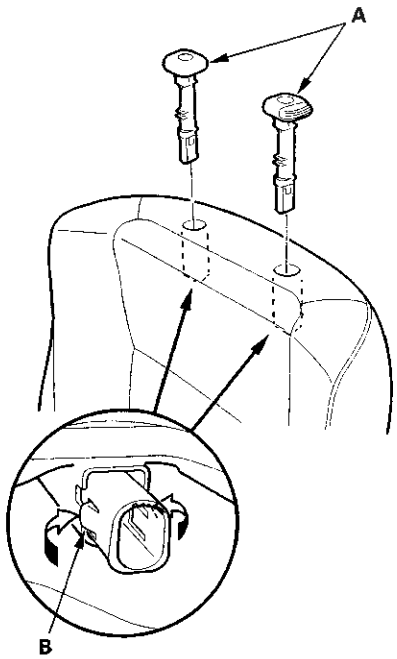
(cont'd)

Front Seat-back Cover Replacement (cont'd)

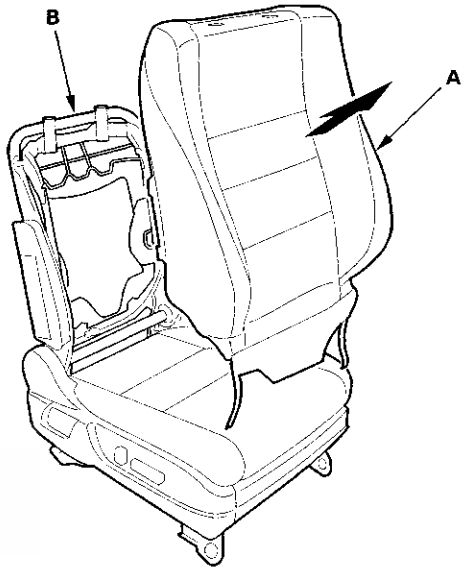
9. Detach the harness clips (A) fastening the OPDS sensor harnesses (B), and release the wire harness from the harness holder (C).



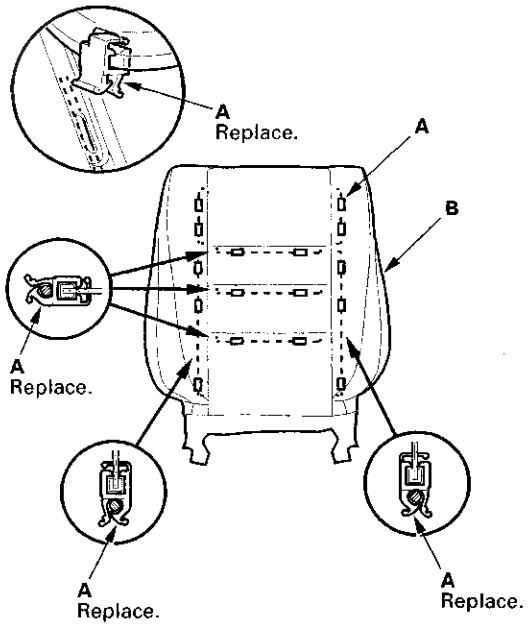
10. Pull out the head restraint guides (A) while pinching the tabs on the end of the guides (B), and remove them.



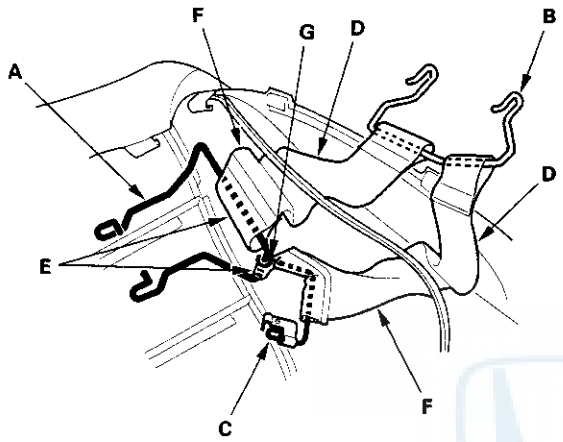
11. Remove the seat-back cover/pad (A) from the seat-back frame (B).



12. Pull back the edge of the seat-back cover all the way around, and release the clips (A), then remove the seat-back cover (B).

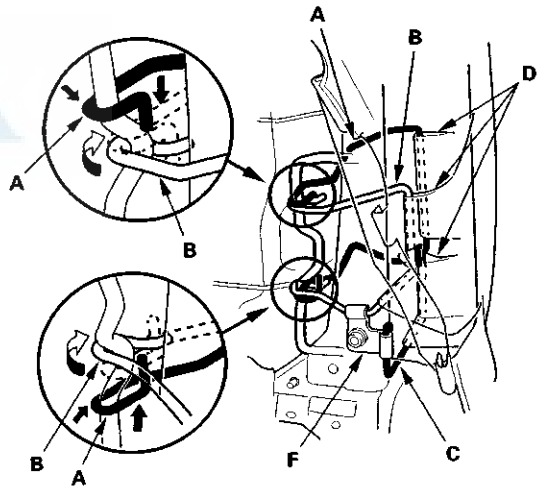


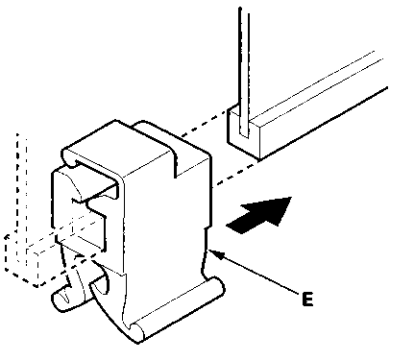
13. Remove airbag attachment wire B from the outside reinforcing cloths (D). Pull the airbag attachment wire A out through loops (E) of the inside reinforcing cloths (F) and through a loop (G) of airbag attachment wire C, then remove the wires.



14. Install the cover in the reverse order of removal, and note these items:

- Reinitialize the ODS unit, refer to the 2008-2009 Accord Service Manual (see page 24-38).
- To prevent wrinkles when installing a seat-back cover, make sure the material is stretched evenly over the pad before securing the clips, the hooks, and the hook strips.
- Before installing the seat-back cover, make sure airbag attachment wires (A, B, C) are installed to the reinforcing cloths (D) correctly, and wire A and wire C are securely assembled.
- Replace any clips (E) you removed with new one(s).
- Reinstall the airbag attachment wires and the bracket (F) securely.
- Use only original Honda replacement seat-back covers.
- Make sure the OPDS sensor harness is routed properly.





Front Seat Cushion Cover Replacement

Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

4-door Passenger's Seat (4-way Power Seat)

SRS components are located in this area. Review the SRS component locations, refer to the 2008-2009 Accord Service Manual (see page 24-19) and the precautions and procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23) before doing repairs or service.

NOTE: Calibrate the ODS unit after any of the these actions, refer to the 2008-2009 Accord Service Manual (see page 24-38):

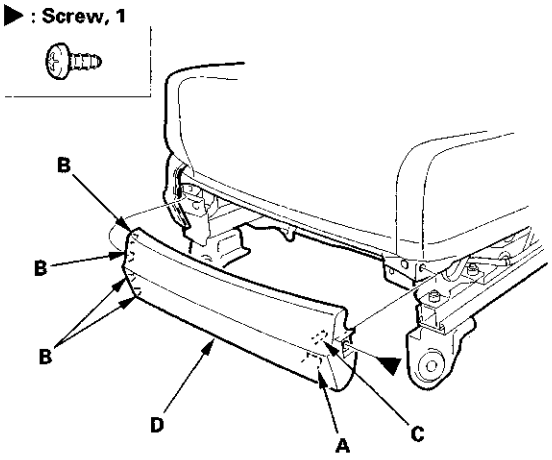
- Front passenger's seat replacement (including any seat components).
- Replacement of the seat weight sensors.
- After a vehicle collision.

NOTE:
- Put on gloves to protect your hands.
- Take care not to tear the seams of damage the seat covers.
- Use the appropriate tool from the KTC trim tool set to avoid damage when removing components.

1. Remove the front seat (see page 20-8).

2. Remove the screw, and release the hook (A), the tabs (B), and the pin (C), then remove the front cover (D).

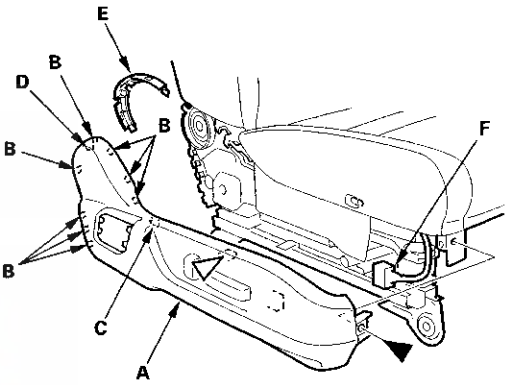
Fastener Location
▶ : Screw, 1



3. Remove the recline cover (A).

-1 Remove the screw, and detach the clip.
-2 Detach the tabs (B).
-3 Pull up the cover, then release the hook (C) and the tab (D).
-4 Remove the recline inner upper cover (E).
-5 Disconnect the power seat adjustment switch connector (F).

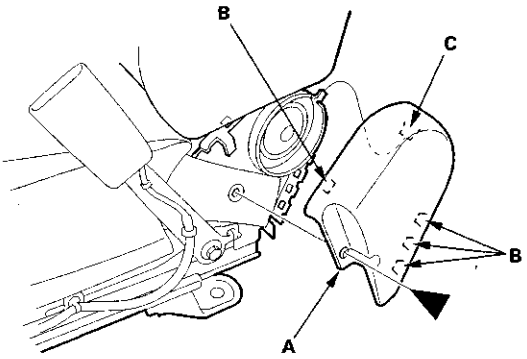
Fastener Locations
▶ : Screw, 1 ▷ : Clip, 1



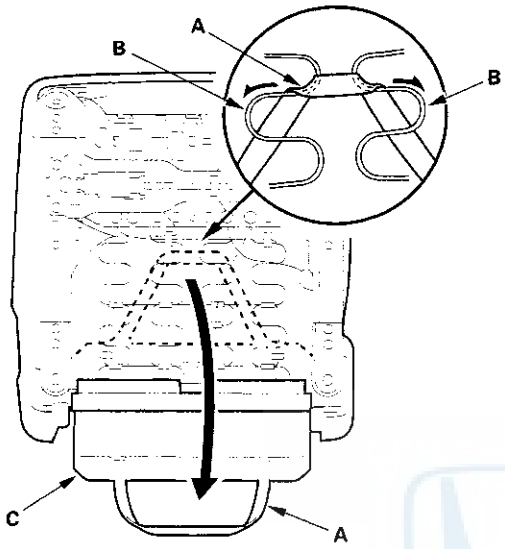
4. Remove the center cover (A).

-1 Remove the screw.
-2 Detach the tabs (B).
-3 Pull up the cover, then release the tab (C).

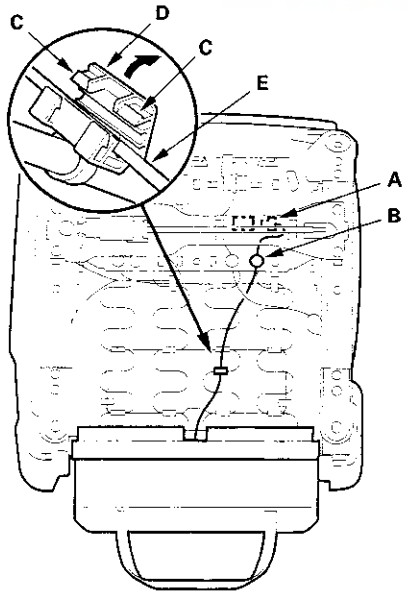
Fastener Location
▶ : Screw, 1



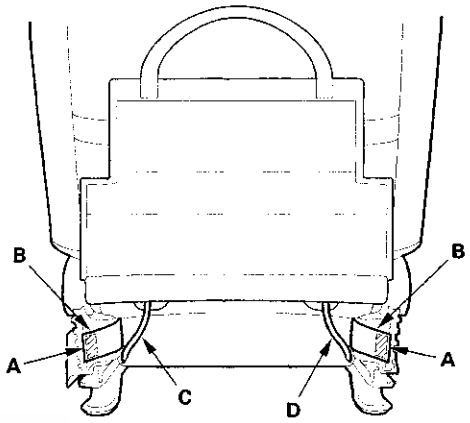
5. From under the seat cushion, release the elastic strap (A) from the seat cushion frame springs (B), then pull the under cover (C) of the back cover back.



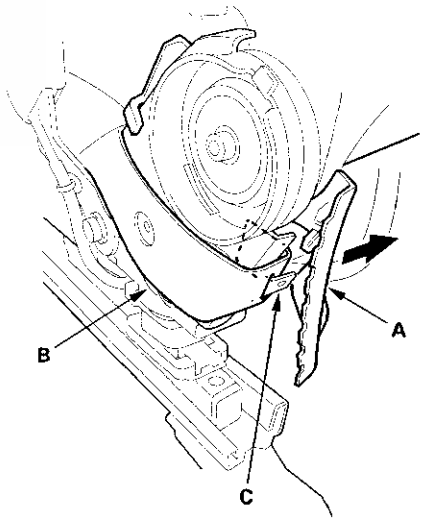
6. Disconnect the seat-back heater connector (A) and detach the harness clip (B). Pry up the hooks (C) of the harness holder (D), then release the holder from the seat cushion frame spring (E).



7. Release the Velcro fasteners (A), then pull back the harness holder covers (B) fastening the side airbag harness (C) and the seat wire harness (D).



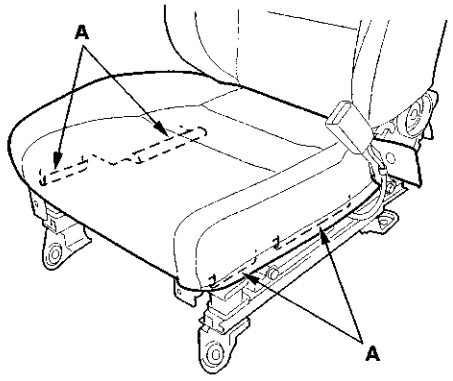
8. Gently pull out the center inner cover (A) as needed, and release the seat cushion cover (B) from the seat cushion frame (C).



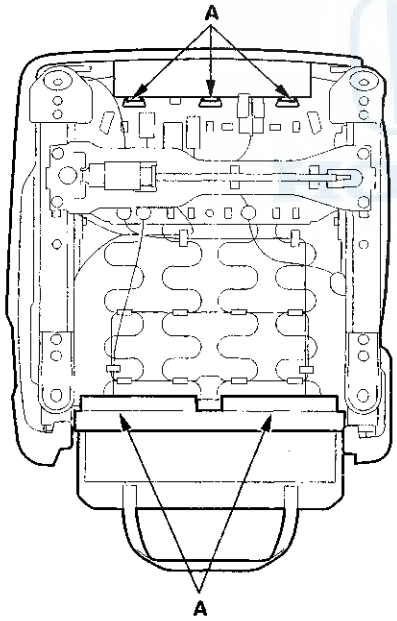
(cont'd)

Front Seat Cushion Cover Replacement (cont'd)

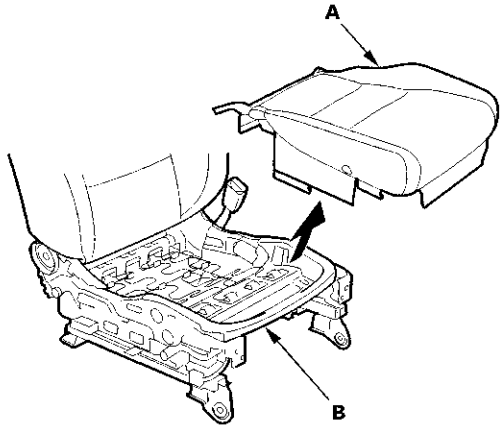
9. Release the hook strips (A) from both sides of the seat cushion frame.



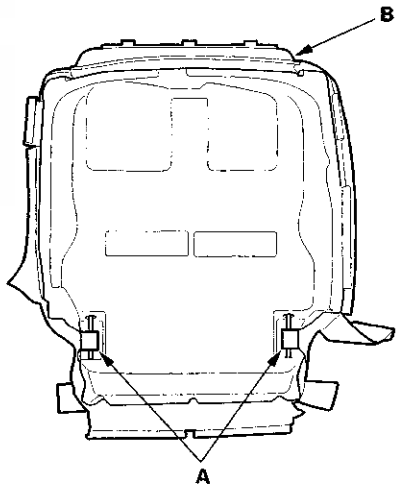
10. Release the hook strips (A) from under the seat cushion.



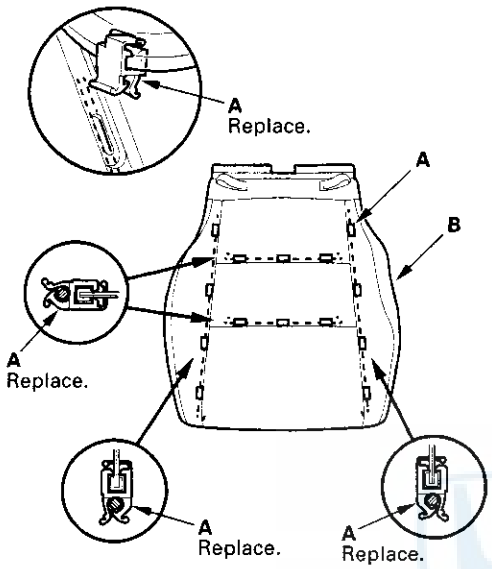
11. Remove the seat cushion cover/pad (A) from the seat frame (B).



12. Release the hooks (A) from under the seat cushion (B).

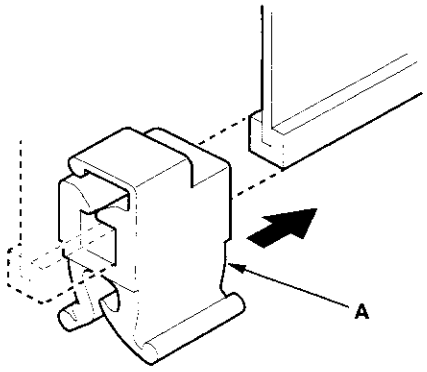


13. Pull back the edge of the seat cushion cover all the way around, and release the clips (A), then remove the seat cushion cover (B).



14. Install the cover in the reverse order of removal, and note these items:

    - To prevent wrinkles when installing a seat-back cover, make sure the material is stretched evenly over the pad before securing the clips, the hooks, and the hook strips.
    - Replace any clips (A) you removed with new ones.



Front Bumper Removal/Installation

NOTE:
- Have an assistant help you when removing and installing the front bumper.
- Take care not to scratch the front bumper and the body.
- Put on gloves to protect your hands.

1. Remove the front grille cover:
   - 2-door, refer to the 2008-2009 Accord Service Manual (see page 20-257)
   - 4-door, refer to the 2008-2009 Accord Service Manual (see page 20-257)

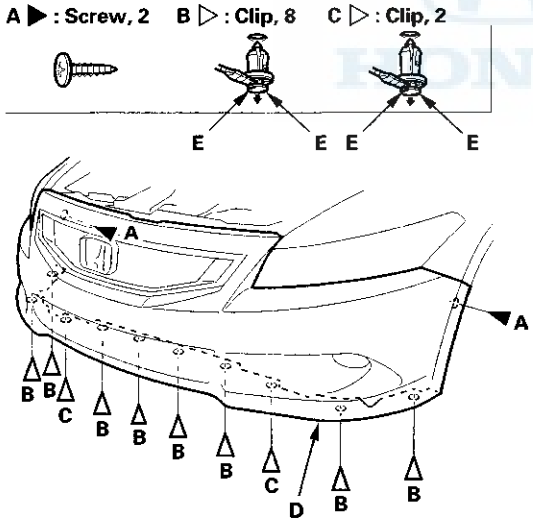
2. Remove the screws (A) and the clips (B, C) securing the front bumper (D).

   NOTE: To remove the clips, pry the inner clip up at the edge near the line (E) on its head.

2-door

Fastener Locations

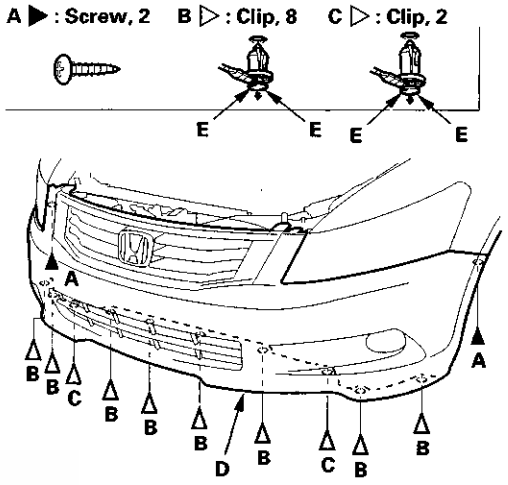
A ▶ : Screw, 2 B ▷ : Clip, 8 C ▷ : Clip, 2



4-door

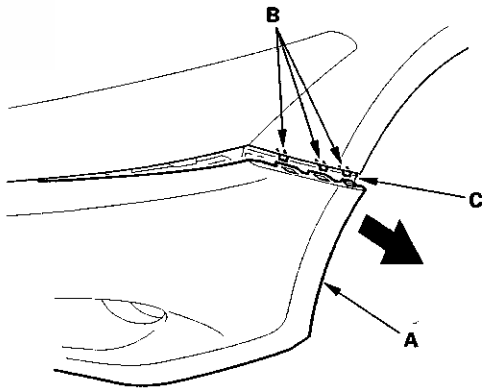
Fastener Locations

A ▶ : Screw, 2 B ▷ : Clip, 8 C ▷ : Clip, 2

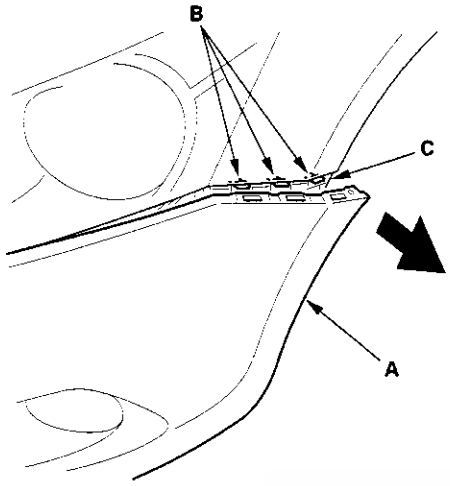


3. Pull on the front bumper (A) at the wheel arch areas to release it from the hooks (three places) (B) on the side spacers (C).

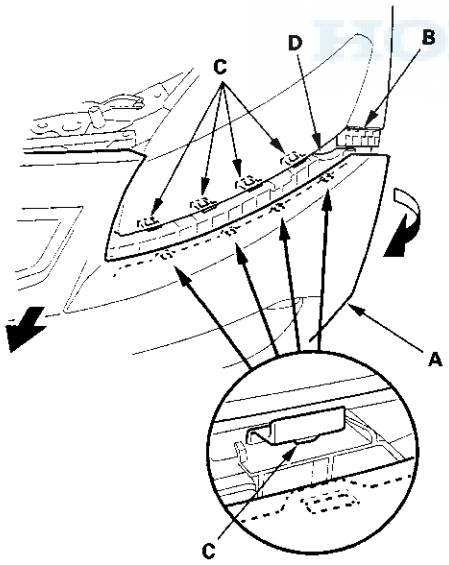
2-door



4-door

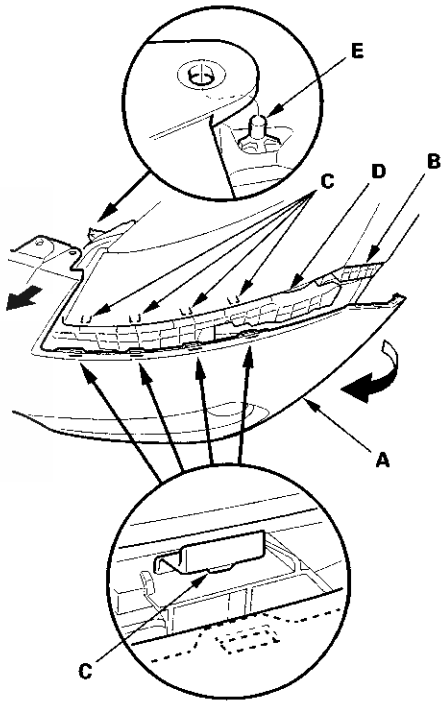


4. 2-door: With the help of an assistant, while pulling both wheel arch portions of the front bumper (A) away from the side spacers (B), release the hooks (C) along the upper beams (D) on both sides by pulling the bumper out.



5. 4-door: With the help of an assistant, while pulling both wheel arch portions of the front bumper (A) away from the side spacers (B), starting at the outside hooks (C) on both upper beams (D), release the hooks along the upper beams by pulling the bumper out, and release the bumper from the pins (E) on both headlights.

   NOTE: When releasing the last hook, release it while holding the front bumper to prevent damaging the pin.

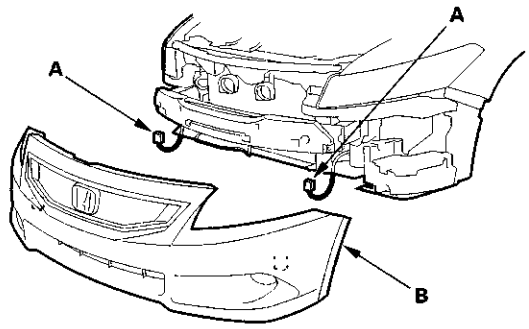


(cont'd)

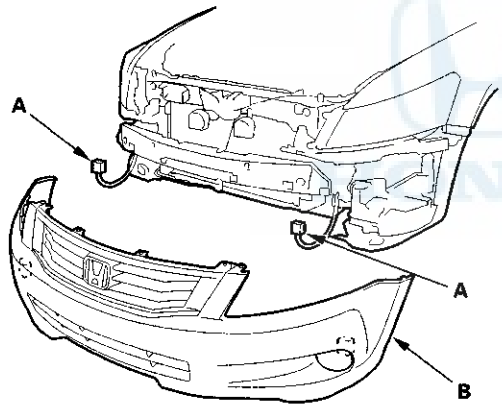
Front Bumper Removal/Installation (cont'd)

6. Disconnect the front fog light connectors (A), then remove the front bumper (B).

2-door



4-door

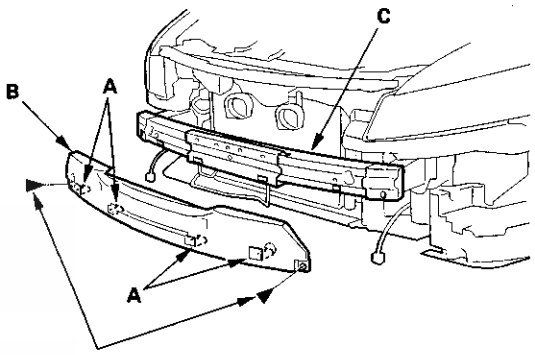


7. Remove the bolts, and release the hooks (A), then remove the front bumper absorber (B) from the front bumper beam (C).

2-door

Fastener Locations

▶ : Bolt, 2

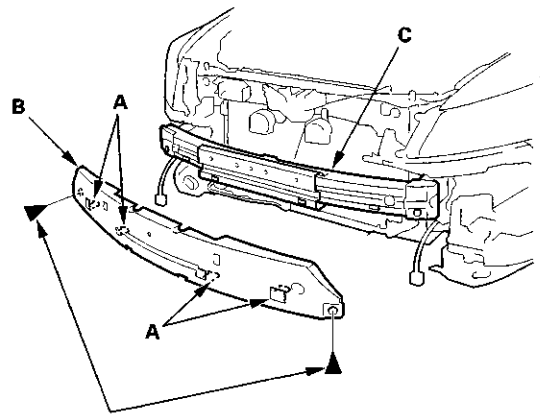


6 x 1.0 mm
9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)

4-door

Fastener Locations

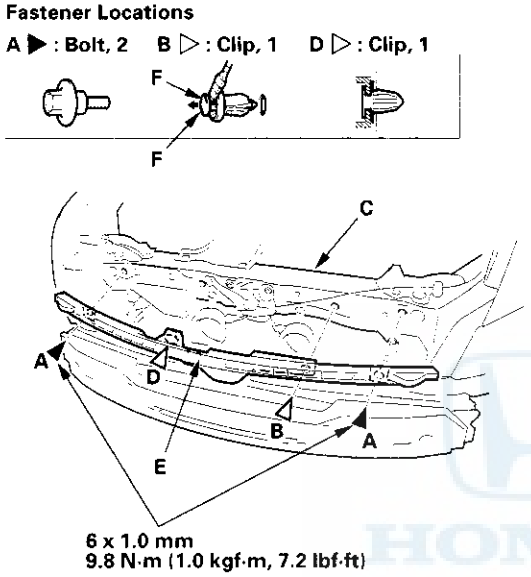
▶ : Bolt, 2



6 x 1.0 mm
9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)

8. 2-door: Remove the bolts (A) and the clip (B) securing the front bumper center upper beam (C). Detach the clip (D), and release the hook (E), then remove the beam from the body.

   NOTE: To remove the clips (B), pry the inner clip up at the edge near the line (F) on its head.

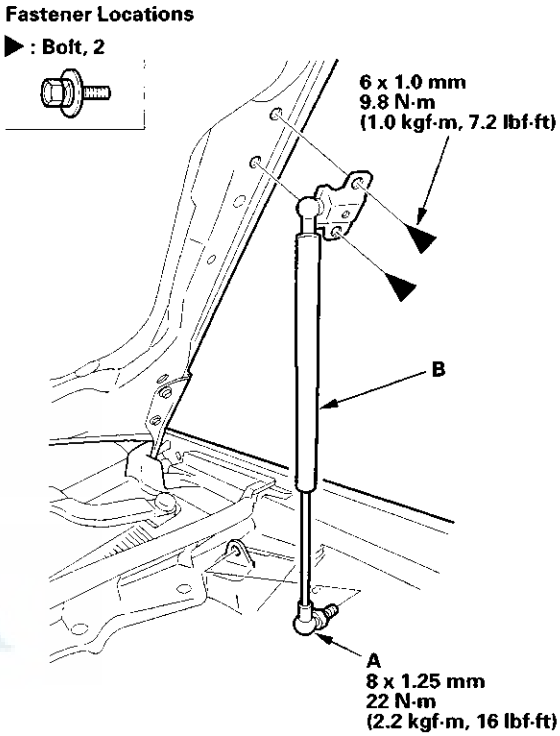


9. Install the bumper in the reverse order of removal, and note these items:

   - Make sure the front fog light connectors are plugged in properly.
   - Make sure the front bumper engages the hooks (of both upper beams and side spacers) and the pins (4-door) (of both headlights) on each side securely.
   - If the clips are damaged or stress-whitened, replace them with new ones.
   - Push the clips and the hooks into place securely.

Hood Support Strut Replacement

1. While an assistant supports the hood, remove the pivot bolt (A) and the hood side bolts, then remove the support strut (B). Take care not to scratch the body or the hood.



2. Install the pivot bolt first, and then install the hood side bolts.

Trunk Lid Spoiler Replacement

Special Tools Required
KTC trim tool set SOJATP2014 *
* Available through the Honda Tool and Equipment Program; call 888-424-6857

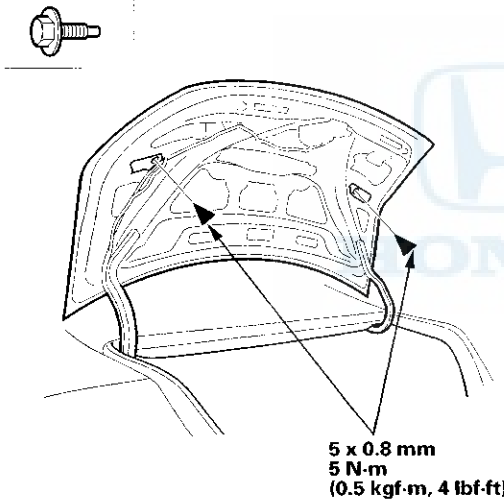
2-door

NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the trunk lid.

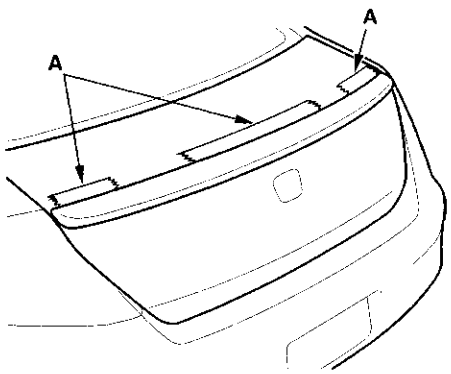
1. Open the trunk lid, and remove the trunk lid trim panel (see page 20-4).

2. Remove the bolts from inside the trunk lid.

Fastener Locations
▶ : Bolt, 2

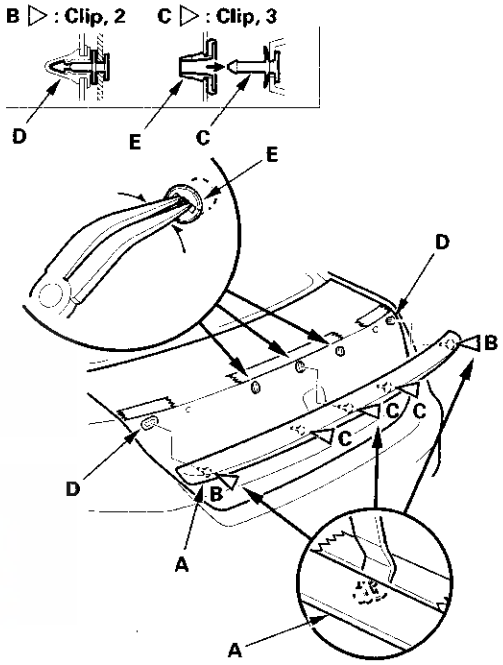


3. Close the trunk lid. Apply electrical tape on the trunk lid (A) as shown.



4. Pull the trunk lid spoiler (A) out and gently pry the spoiler away from the trunk lid using the appropriate trim tool until it releases. Release the side clips (B) first, then the middle clips (C), then remove the spoiler from the trunk lid.

Fastener Locations
B ▷ : Clip, 2 C ▷ : Clip, 3



5. Remove the grommets (D, E) from the trunk lid. If the clips and the grommets are damaged or stress-whitened, replace them with new ones.

NOTE:
- Replace the clip (C) and the grommet (E) as an assembly.
- Make sure the rubber washer is installed to prevent water leaks.

6. Insert the grommets (E) into the clips (C) on the spoiler.

7. Hold the spoiler up, and fit the clips into the grommets and the hole in the trunk lid, then push on the spoiler until the clips snap into place securely.

8. Reinstall the bolts.

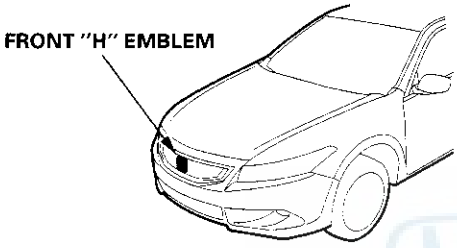
9. Reinstall the trunk lid trim panel (see page 20-4).

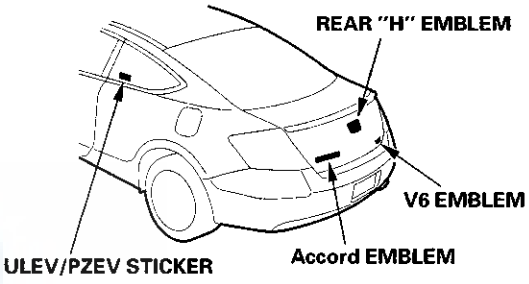
Emblem/Sticker Replacement

2-door

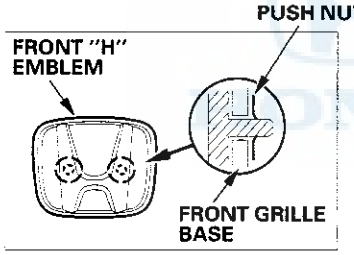
NOTE: When removing the emblems/sticker, take care not to scratch the body.

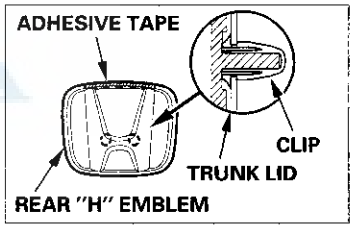
1. To remove the front "H" emblem, remove the front bumper (see page 20-22).
2. Clean the body surface with a shop towel dampened in isopropyl alcohol. After cleaning, keep oil, grease, and water from getting on the surface.
3. Apply the emblems/sticker where shown. When installing the ULEV/PZEV sticker on the inside surface of the left quarter glass, align the sticker with the edge of the black ceramic as shown, then press the sticker into place, and remove the application tape.

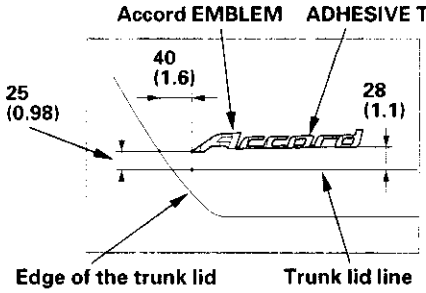


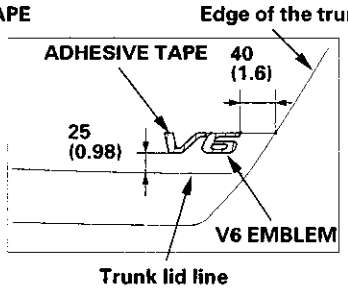


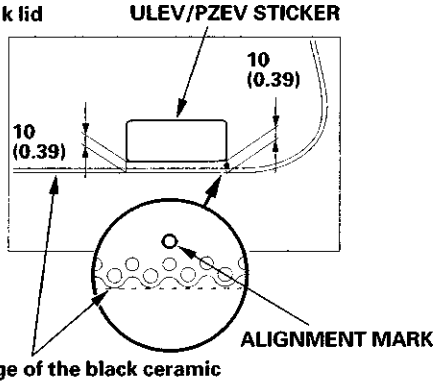
Unit: mm (in.)
Adhesive tape: Thickness 0.8 mm (0.03 in.)











Emblem/Sticker Replacement (cont'd)

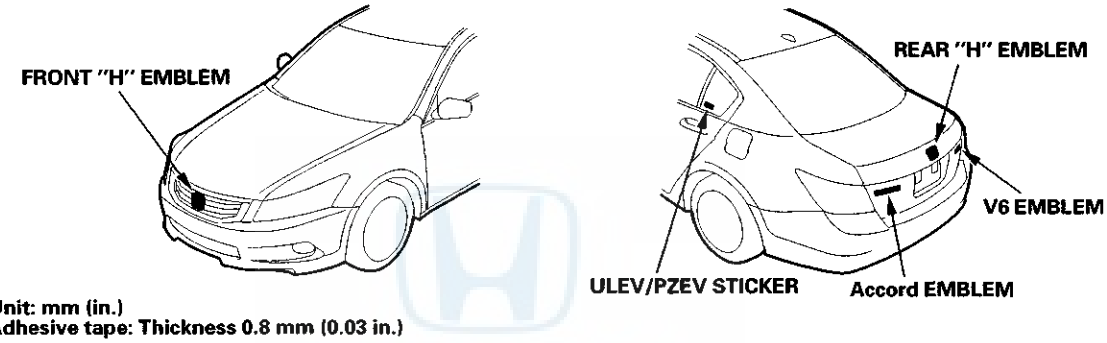
4-door

NOTE: When removing the emblems/sticker, take care not to scratch the body.

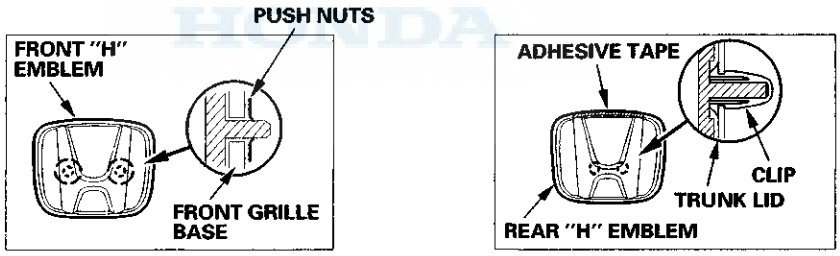
1. To remove the front "H" emblem, remove the front grille, refer to the 2008-2009 Accord Service Manual (see page 20-258).

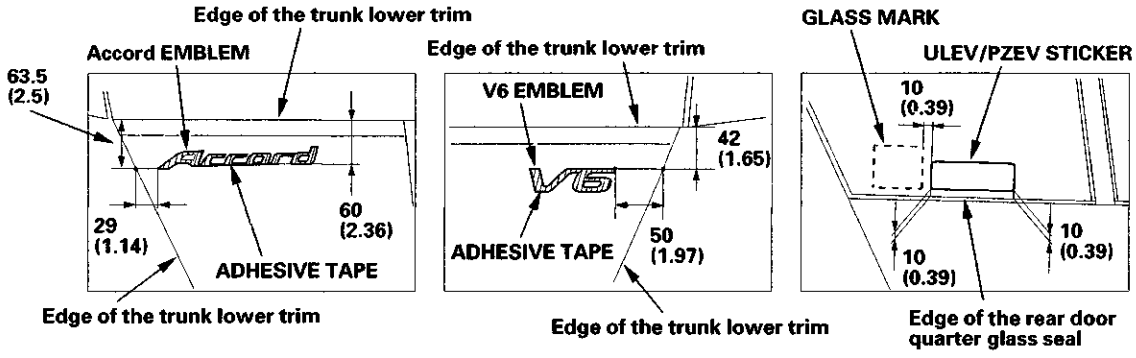
2. Clean the body surface with a shop towel dampened in isopropyl alcohol. After cleaning, keep oil, grease, and water from getting on the surface.

3. Apply the emblems/sticker where shown. When installing the ULEV/PZEV sticker on the inside surface of the left rear door quarter glass, align the sticker with the edge of the glass mark and the rear door quarter glass seal as shown, then press the sticker into place, and remove the application tape.



Unit: mm (in.)
Adhesive tape: Thickness 0.8 mm (0.03 in.)





Front Splash Shield Replacement

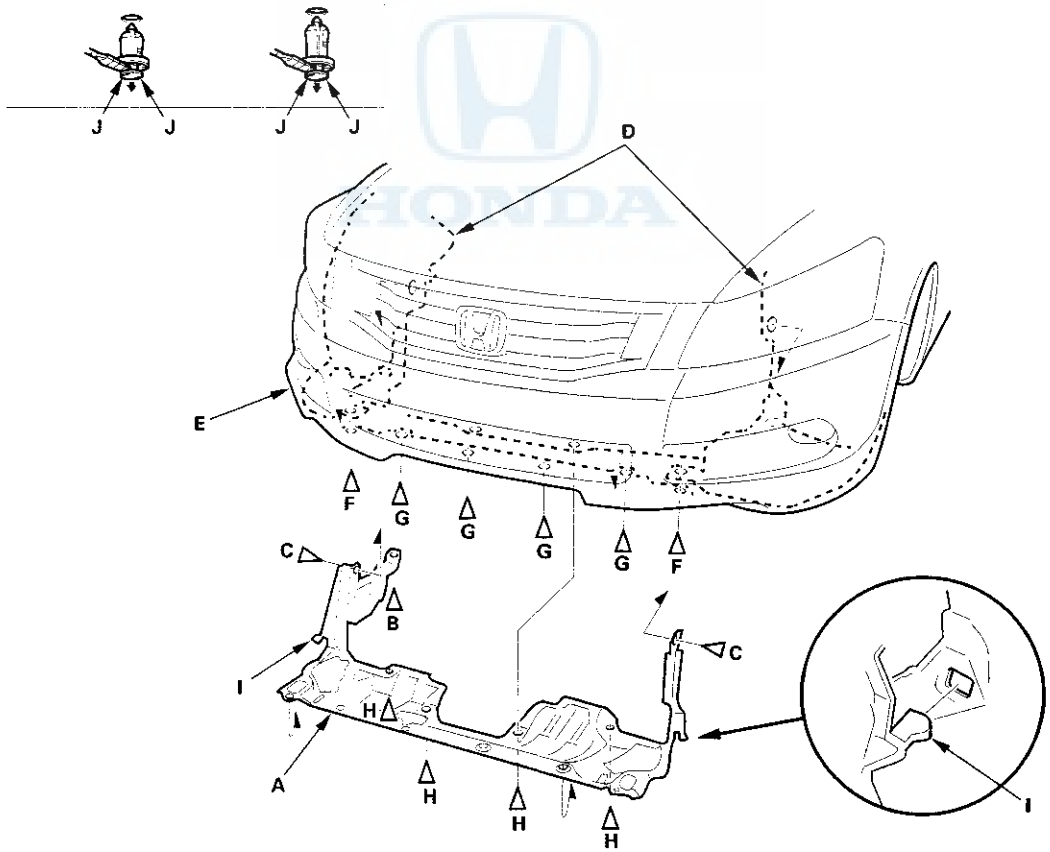
NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the body.
- 4-door is shown; 2-door is similar.

1. Remove the front splash shield (A).

   -1 Remove the clip (B) that secure the front splash shield to the body.
   -2 Remove the clips (C) that secure the front inner fender (D) and the front splash shield to the body.
   -3 From under the front bumper (E), remove the clips (F) that secure the front bumper, the front inner fender, and the front splash shield to the body.
   -4 From under the front bumper, remove the clips (G) that secure the front bumper and the front splash shield to the body.
   -5 From under the body, remove the clips (H) that secure the front splash shield to the front subframe.
   -6 Release the hooks (I) of the front splash shield, then pull the splash shield out.

   NOTE: To remove the clips, pry the inner clip up at the edge near the line (J) on its head.

Fastener Locations
B, C, G, H ▷: Clip, 11 F ▷: Clip, 2



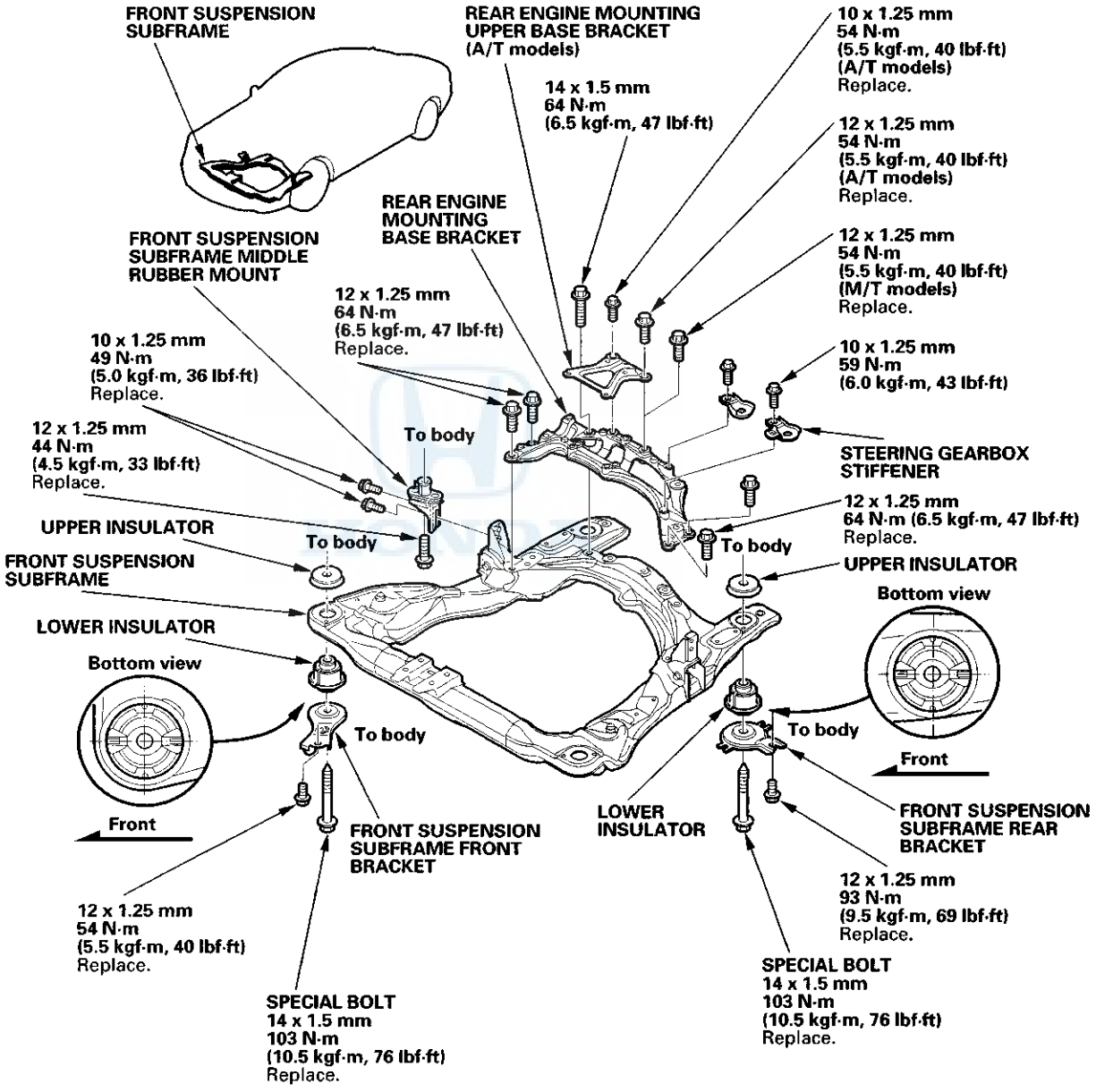
2. Install the splash shield in the reverse order of removal, and note these items:

   - If the clips are damaged or stress-whitened, replace them with new ones.
   - Push the clips and the hooks into place securely.

Subframe Replacement

Front Subframe Torque

After removing the subframe mounting bolts, the front suspension subframe middle rubber mount mounting bolts, the front suspension subframe rear bracket mounting bolts, the rear engine mounting base bracket mounting bolts, and the rear engine mounting upper base bracket mounting bolts (A/T models), be sure to replace them with new ones.



HONDA

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If HVAC maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

HONDA

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

Navigation Tools: Click on the "Table of Contents" below, or use the Bookmarks to the left.

HVAC (Heating, Ventilation, and Air Conditioning)

HVAC (Heating, Ventilation, and Air Conditioning)

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Heating/Air Conditioning

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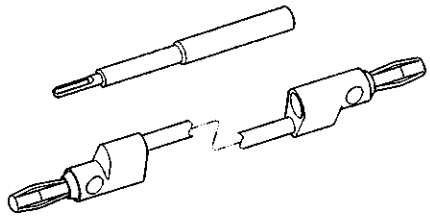
NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

Outline of Model Changes

- The circuit diagram has been changed; related information is included.
- The A/C compressor has been changed; related information is included.

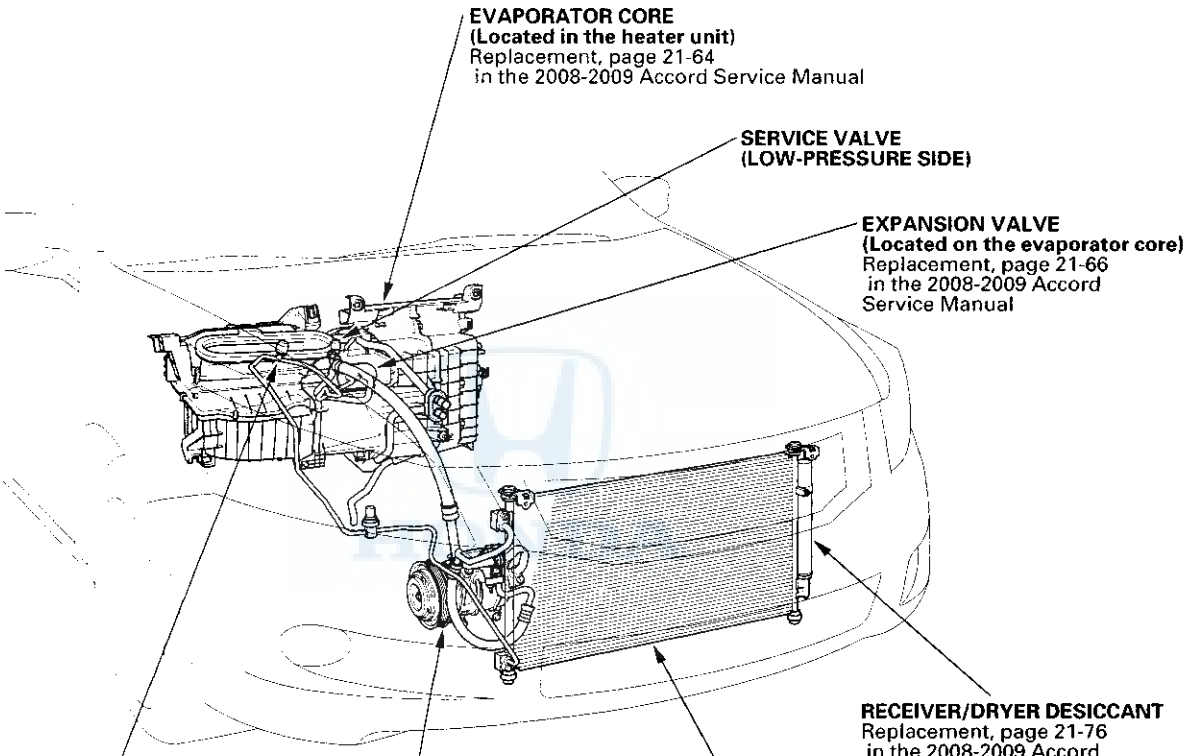
Special Tools

Ref. No.	Tool Number	Description	Qty
①	07SAZ-001000A	Backprobe Set	2



①

Component Location Index



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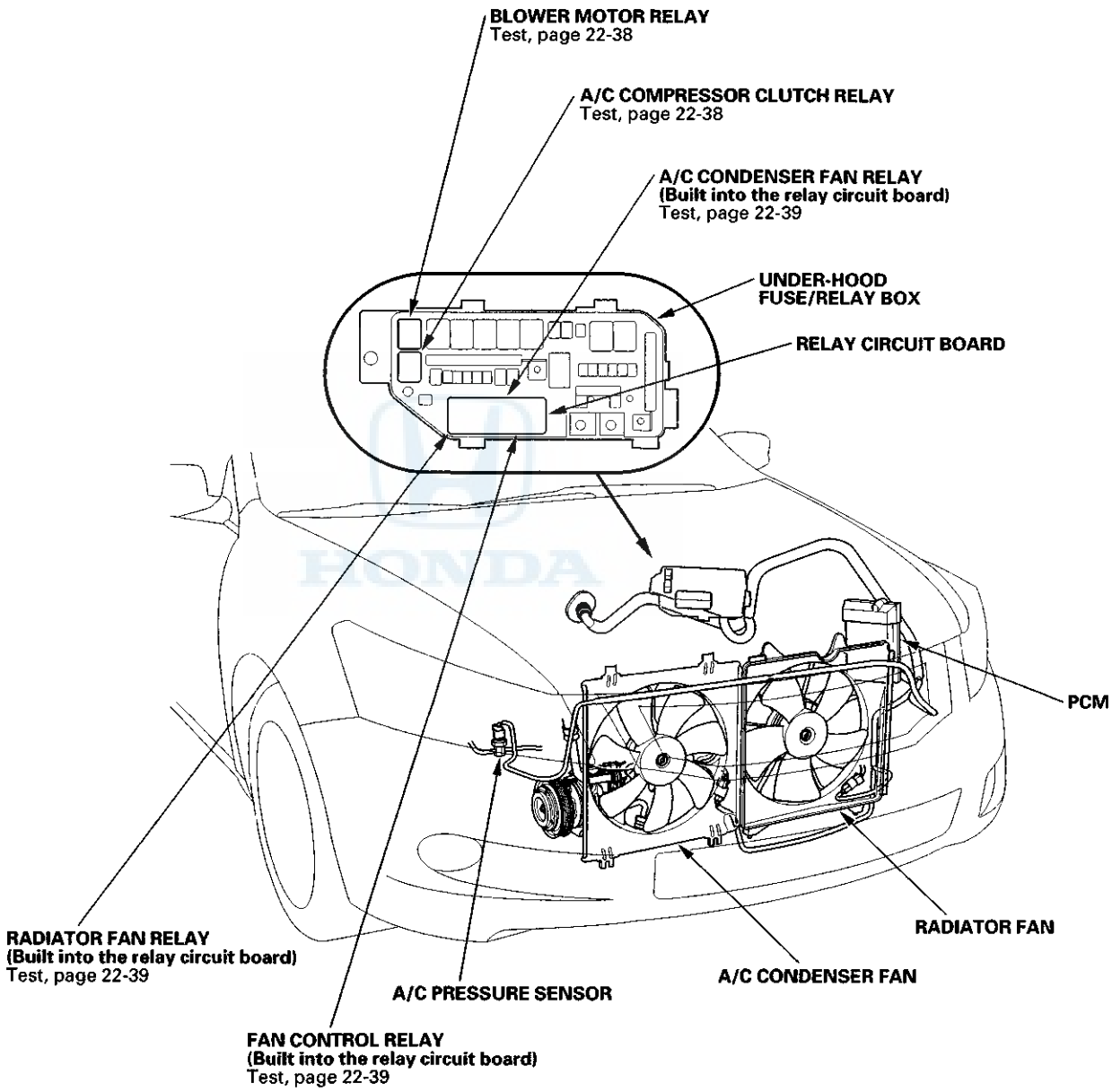
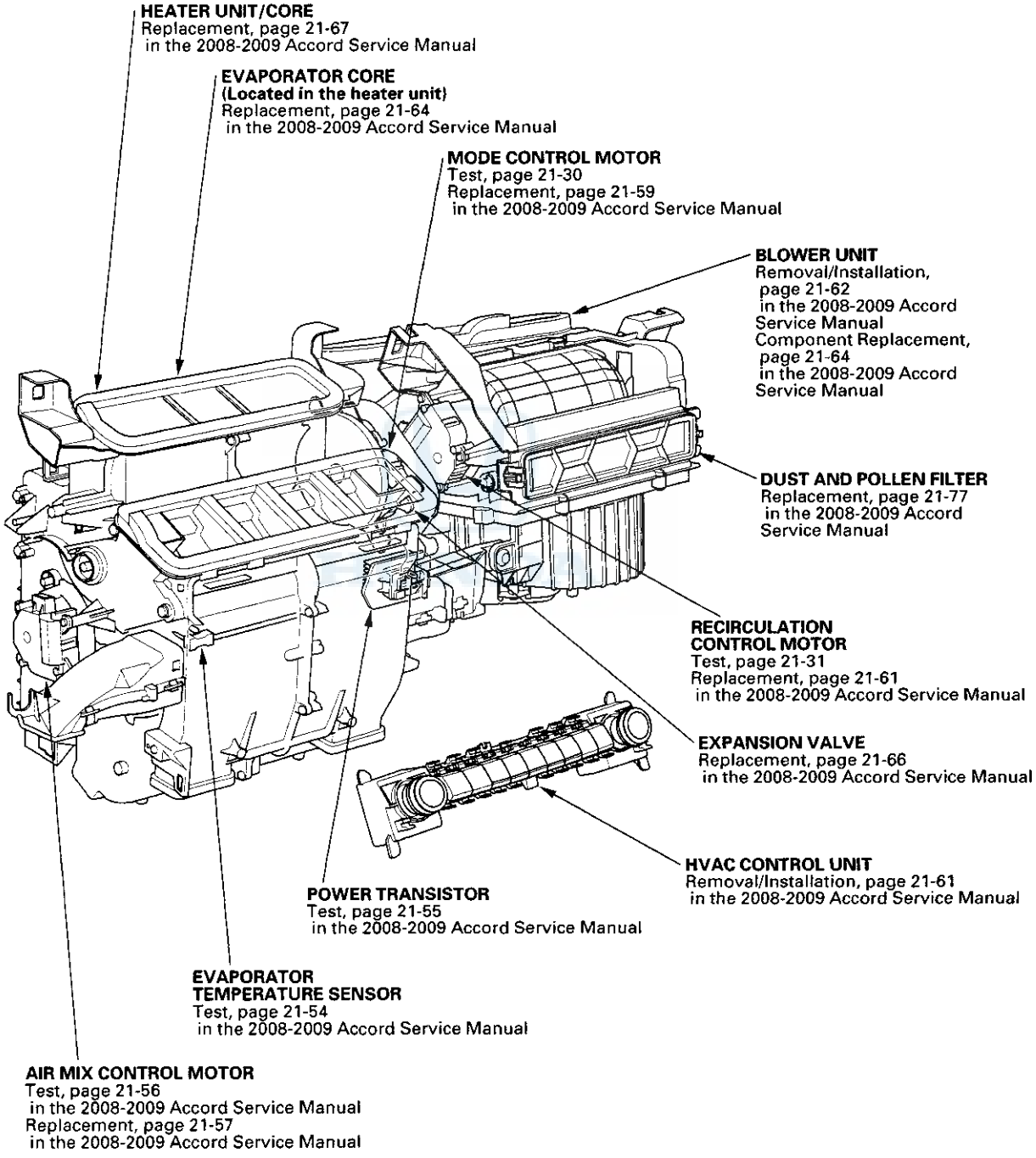
Component Location Index (cont'd)




HEATER UNIT/CORE
Replacement, page 21-67
in the 2008-2009 Accord Service Manual
EVAPORATOR CORE
(Located in the heater unit)
Replacement, page 21-64
in the 2008-2009 Accord Service Manual
MODE CONTROL MOTOR
Test, page 21-30
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in the 2008-2009 Accord Service Manual
BLOWER UNIT
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page 21-62
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Component Replacement,
page 21-64
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DUST AND POLLEN FILTER
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in the 2008-2009 Accord
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RECIRCULATION
CONTROL MOTOR
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EXPANSION VALVE
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in the 2008-2009 Accord Service Manual
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POWER TRANSISTOR
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EVAPORATOR
TEMPERATURE SENSOR
Test, page 21-54
in the 2008-2009 Accord Service Manual
AIR MIX CONTROL MOTOR
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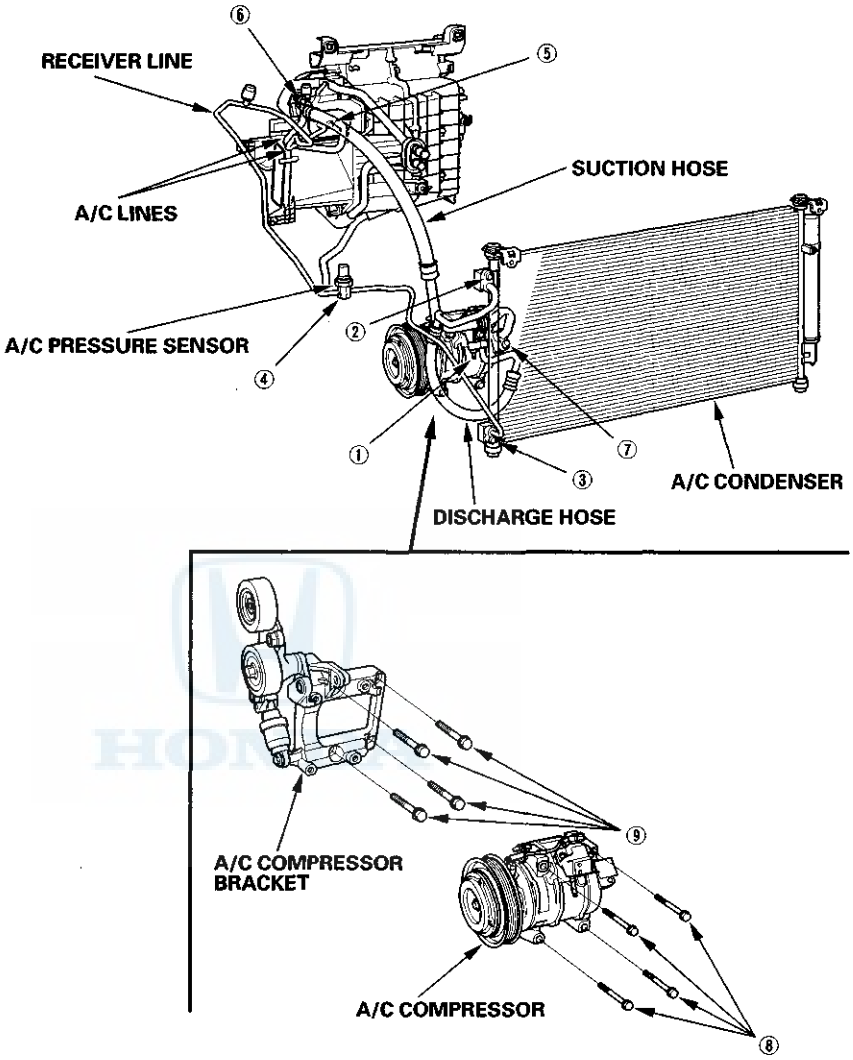
in the 2008-2009 Accord Service Manual
Replacement, page 21-57
in the 2008-2009 Accord Service Manual

A/C Line Replacement



① Discharge hose to the A/C compressor (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
② Discharge hose to the A/C condenser (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
③ Receiver line to the A/C condenser (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
④ A/C pressure sensor to the receiver line (11 x 1.0 mm): 10.8 N·m (1.1 kgf·m, 8.0 lbf·ft)
⑤ A/C lines to the evaporator (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
⑥ A/C line to the suction hose (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
⑦ Suction hose to the A/C compressor (6 x 1.0 mm): 9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)
⑧ A/C compressor to the A/C compressor bracket (8 x 1.25 mm): 22 N·m (2.2 kgf·m, 16.2 lbf·ft)
⑨ A/C compressor bracket to the engine block (10 x 1.25 mm): 44 N·m (4.5 kgf·m, 32.5 lbf·ft)

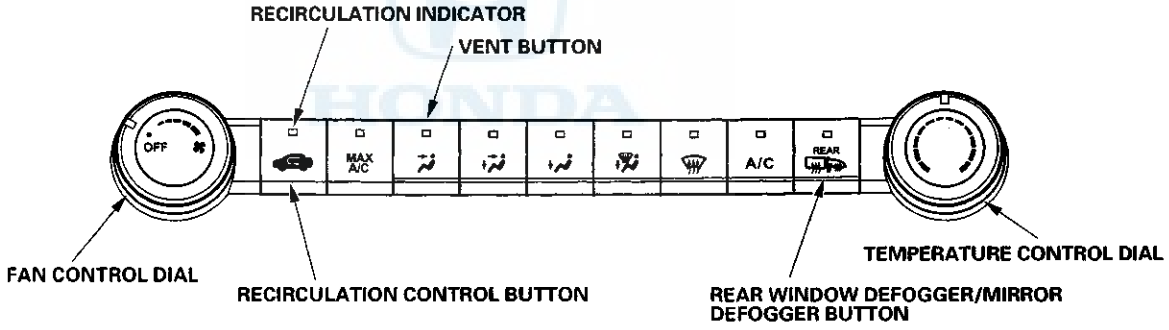
General Troubleshooting Information

How to Use the Self-diagnostic Function

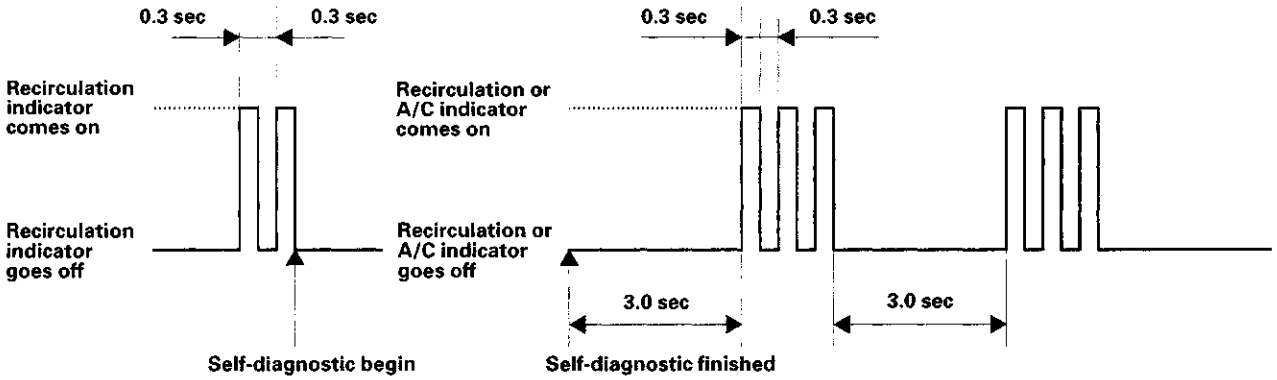
The HVAC control unit has a self-diagnostic function for heating, the ventilation, and air conditioning system. To run the self-diagnostic function, do the following:

1. Turn the ignition switch to LOCK (0) and then to ON (II).
2. Set the FAN CONTROL dial to OFF, the TEMPERATURE CONTROL dial on Max Cool, and select the VENT mode.
3. Turn the ignition switch to LOCK (0) and then to ON (II).
4. Press and hold the RECIRCULATION CONTROL button, then within 10 seconds press and release the REAR WINDOW DEFOGGER/MIRROR DEFOGGER button five times. Release the RECIRCULATION CONTROL button; the recirculation indicator blinks two times, then the self-diagnostic begins.

   NOTE:
   - The blower motor will run at various speeds when in the self-diagnostic mode.
   - Once the self-diagnostic function is finished, the recirculation indicator blinks, and the number of blinks indicates the Diagnostic Trouble Code (DTC) number. If there are multiple DTCs, the indicator blinks each DTC in sequence from the lowest DTC number to the highest.
   - The indicator pauses 3 seconds, then repeats the DTC blink sequence.
   - If no DTCs are found, the indicator does not blink.



Example of DTC Indication Pattern (DTC 3)



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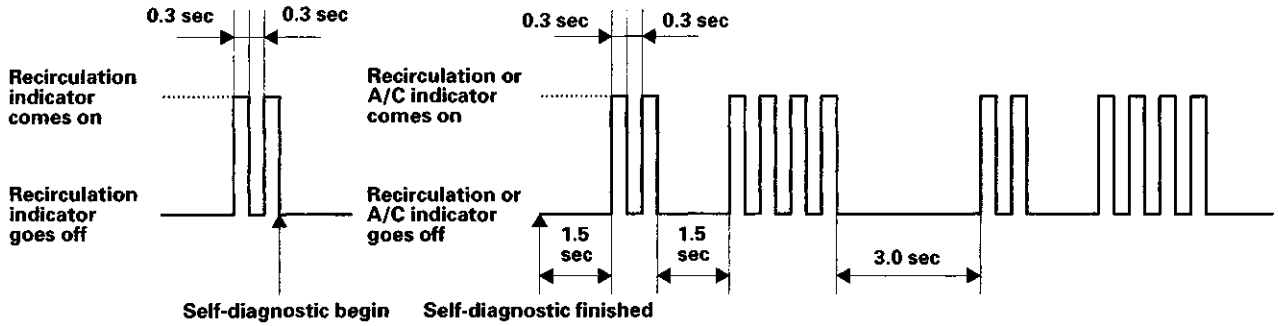
General Troubleshooting Information (cont'd)

Example of DTCs Indication Pattern (DTC 2 and 4)



DTC (Recirculation Indicator Blinks)	Detection Item
1	An open in the air mix control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-22)
2	A short in the air mix control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-23)
3	A problem in the air mix control linkage, door, or motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-24)
10	An open or short in the mode control circuit, refer to the 2008-2009 Accord Service Manual (see page 21-34)
11	A problem in the mode control linkage, doors, or motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-36)
12	A problem in the blower motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-37)
13	HVAC control unit internal error, refer to the 2008-2009 Accord Service Manual (see page 21-41)
14	An open in the evaporator temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-41)
15	A short in the evaporator temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-43)

Clear the DTCs

When the problem is repaired, DTCs will automatically clear.

Max Cool Position Function

When the mode control button is in the MAX A/C position, the HVAC control unit will automatically select the recirculation mode and turn the A/C on. If the recirculation switch is pressed when in MAX A/C mode, MAX A/C turns off. If the A/C switch is pressed when in MAX A/C mode, the A/C turns off.

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
The blower and heater controls and the A/C system do not work	• Probable cause: HVAC control malfunction • Do the HVAC control power and ground circuit troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 21-46)	• HVAC DTCs (see page 21-7) • Blown fuse No. 16 (7.5 A) in the driver's under-dash fuse/relay box • Faulty blower motor relay • Poor ground at G401, refer to the 2008-2009 Accord Service Manual (with navigation and premium audio, see page 22-42, without premium audio, see page 22-4) • Poor or loose connections at the terminals
The A/C compressor clutch and the A/C condenser/radiator fans are inoperative, but the blower and heater controls work	• Probable cause: A/C pressure sensor circuit malfunction • Do the A/C pressure sensor troubleshooting: A/C pressure sensor circuit low voltage (see page 11-374), A/C pressure sensor circuit high voltage (see page 11-376) NOTE: The A/C pressure sensor can malfunction without setting a DTC	• HVAC DTCs (see page 21-7) • Powertrain DTCs (see page 11-3) • A/C signal circuit troubleshooting (see page 21-28) • Poor or loose connections at the terminals
The A/C compressor clutch does not engage, but the A/C condenser/radiator fans operate, and the blower and heater controls work	• Probable cause: No power to the A/C compressor clutch • Do the A/C compressor clutch circuit troubleshooting (see page 21-26)	• HVAC DTCs (see page 21-7) • Blown fuse No. 20 (7.5 A) in the under-hood fuse/relay box • A/C system pressure is normal, refer to the 2008-2009 Accord Service Manual (see page 21-88) • Poor or loose connections at the terminals
The condenser/radiator fans do not run at low speed with the A/C on, but the blower and heater controls work normally	• Probable cause: Condenser/radiator fan low speed circuit malfunction • Do the radiator and A/C condenser fan low speed circuit troubleshooting (see page 21-22)	• HVAC DTCs (see page 21-7) • Powertrain DTCs (see page 11-3) • Blown fuse No. 3-8 (30 A) in the under-hood fuse/relay box • Poor ground at G302, refer to the 2008-2009 Accord Service Manual (see page 22-30) • Poor or loose connections at the terminals
The condenser/radiator fans do not run at high speed, but do run at low speed	• Probable cause: Malfunction in the fan(s) high speed circuit • Do the following troubleshooting as needed: A/C condenser fan high speed circuit troubleshooting (see page 21-25) • Radiator fan high speed circuit troubleshooting (see page 10-20)	• HVAC DTCs (see page 21-7) • Powertrain DTCs (see page 11-3) • Blown fuses No. 3-6 (30 A) and No. 3-8 (30 A) in the under-hood fuse/relay box • Poor ground at G302, refer to the 2008-2009 Accord Service Manual (see page 22-30) • Poor or loose connections at the terminals

(cont'd)

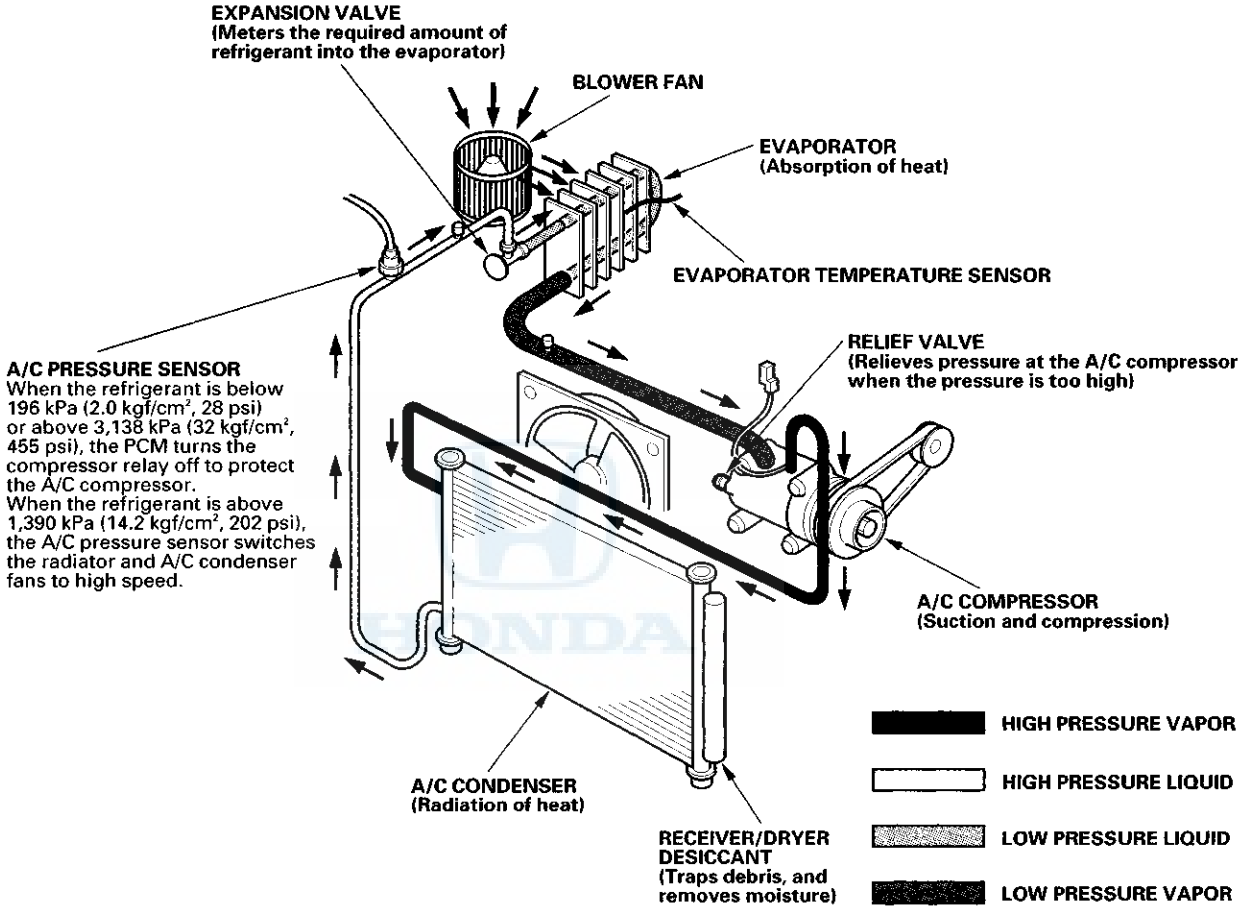
Symptom Troubleshooting Index (cont'd)

Symptom	Diagnostic procedure	Also check for
The A/C compressor clutch cycles rapidly on and off	• Probable cause: A/C system is very low on refrigerant, indicating a possible leak • Do the refrigerant leak check, refer to the 2008-2009 Accord Service Manual (see page 21-81), and repair any leaks. Replace the receiver/dryer, refer to the 2008-2009 Accord Service Manual (see page 21-76), then recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• HVAC DTCs (see page 21-7) • If there is no leak and the refrigerant level is normal, do the A/C compressor clutch circuit troubleshooting (see page 21-26), and look for an intermittent problem
Warm air comes out of the vents, and the high pressure liquid line is very hot	• Probable causes: The A/C system is overcharged (too much refrigerant), or the condenser is malfunctioning • Recover A/C refrigerant, refer to the 2008-2009 Accord Service Manual (see page 21-78), then check the A/C condenser for restrictions or poor airflow. Repair as needed. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• Incorrect tension or abnormal wear on the drive belt. Replace the belt and/or the belt tensioner as needed • Proper operation of the A/C condenser/radiator fans. Repair as needed • Signs of an overheated engine. Repair as needed
Warm air comes out of the vents. The suction line is cool to warm, and the discharge line is warm to hot	• Probable cause: A/C system is low on refrigerant, indicating a possible leak • Do the refrigerant leak check, refer to the 2008-2009 Accord Service Manual (see page 21-81), and repair any leaks. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• HVAC DTCs (see page 21-7) • Add refrigerant oil depending on the part you replaced, refer to the 2008-2009 Accord Service Manual (see page 21-6)
Warm air comes out of the vents. The suction line is cool to warm, the discharge line is warm to hot, and there is no frost on the expansion valve	• Probable cause: Excessive air and/or moisture in the system, indicating a possible leak • Do the refrigerant leak check, refer to the 2008-2009 Accord Service Manual (see page 21-81), and repair any leaks. Replace the receiver/dryer, refer to the 2008-2009 Accord Service Manual (see page 21-76), then recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• HVAC DTCs (see page 21-7) • Check the amount of refrigerant oil in the system
Warm air comes out of the vents. The liquid line or the condenser outlet is abnormally cool, or there is frost or condensation on the receiver/dryer	• Probable cause: A restriction in the high-pressure side of the system • Recover A/C refrigerant, refer to the 2008-2009 Accord Service Manual (see page 21-78), then check the liquid line, the receiver/dryer, and the condenser for restrictions. Repair as needed. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	HVAC DTCs (see page 21-7)
There is heavy frost or condensation on the expansion valve, and frost on the suction line	• Probable cause: A restriction in the low-pressure side of the system • Recover A/C refrigerant, refer to the 2008-2009 Accord Service Manual (see page 21-78), then check the suction line, and the expansion valve for restrictions. Repair as needed. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	HVAC DTCs (see page 21-7)

Symptom	Diagnostic procedure	Also check for
Warm air comes out of the vents, and there is frost on the expansion valve	• Probable cause: The expansion valve is stuck closed • Replace the expansion valve, refer to the 2008-2009 Accord Service Manual (see page 21-66)	• HVAC DTCs (see page 21-7) • Check the old expansion valve for contamination. If contaminants are found, replace the A/C system component that caused the contamination
The temperature of the liquid line is the same on both sides of the expansion valve, and the evaporator coil or suction line has heavy condensation	• Probable cause: The expansion valve is stuck open • Replace the expansion valve, refer to the 2008-2009 Accord Service Manual (see page 21-66)	• HVAC DTCs (see page 21-7) • Check the old expansion valve for contamination. If contaminants are found, replace the A/C system component that caused the contamination
Warm air comes out of the vents, but operation is normal otherwise	• Probable cause: Compressor failure • Do the A/C system test, refer to the 2008-2009 Accord Service Manual (see page 21-88), and correct any problems. If necessary, replace the A/C compressor, refer to the 2008-2009 Accord Service Manual (see page 21-69)	• HVAC DTCs (see page 21-7) • Add refrigerant oil depending on the part you replaced, refer to the 2008-2009 Accord Service Manual (see page 21-6).
Driver's and passenger's side vent temperatures vary by more than 20 °F (11 °C)	• Probable causes: The recirculation control door or the air mix door is malfunctioning • Do the following troubleshooting: – Recirculation control motor circuit troubleshooting (see page 21-20) – Air mix control motor test, refer to the 2008-2009 Accord Service Manual (see page 21-56)	• HVAC DTCs (see page 21-7) • Poor or loose connections at the terminals
Insufficient heating	1. Check the coolant level (see page 10-6) 2. Check the radiator cap (see page 10-3) 3. Check the coolant temperature during normal operation 4. Check the heater core inlet hose temperature: • If it is COLD, check for restrictions in the hose, a damaged or leaking thermostat, or a damaged or leaking water pump • If it is HOT, check for restrictions in the heater core. Back flush or replace the heater core 5. Do the air mix control motor test, refer to the 2008-2009 Accord Service Manual (see page 21-56) 6. Check the blower motor unit for obstructions 7. Check for air leaks around the ducts and vents	• HVAC DTCs (see page 21-7) • Damaged cylinder head gasket

System Description

The air conditioning (A/C) system removes heat from the passenger compartment by transferring heat from the ambient air to the evaporator. The A/C system refrigerant expands in the evaporator, and the evaporator becomes very cold and absorbs the heat from the ambient air. The blower fan pushes air across the evaporator where the heat is absorbed, and then it blows the cool air into the passenger compartment.



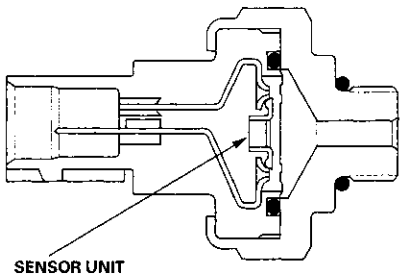
This vehicle uses HFC-134a (R-134a) refrigerant, which does not contain chlorofluorocarbons. Pay attention to the following service items:

- Do not mix refrigerants CFC-12 (R-12) and HFC-134a (R-134a). They are not compatible.
- Use only the recommended polyalkyleneglycol (PAG) refrigerant oil (DENSO ND-OIL 8) designed for the R-134a A/C compressor. Intermixing the recommended (PAG) refrigerant oil with any other refrigerant oil will result in A/C compressor failure.
- All A/C system parts (A/C compressor, discharge line, suction line, evaporator, A/C condenser, receiver/dryer, expansion valve, O-rings for joints) are designed for refrigerant R-134a. Do not exchange with R-12 parts.
- Use a halogen gas leak detector designed for refrigerant R-134a.
- R-12 and R-134a refrigerant servicing equipment are not interchangeable. Use only a recovery/recycling/charging station that is U.L.-listed and is certified to meet the requirements of SAE J2210 to service the R-134a air conditioning systems.
- Always recover refrigerant R-134a with an approved recovery/recycling/charging station before disconnecting any A/C fitting.

A/C Pressure Sensor

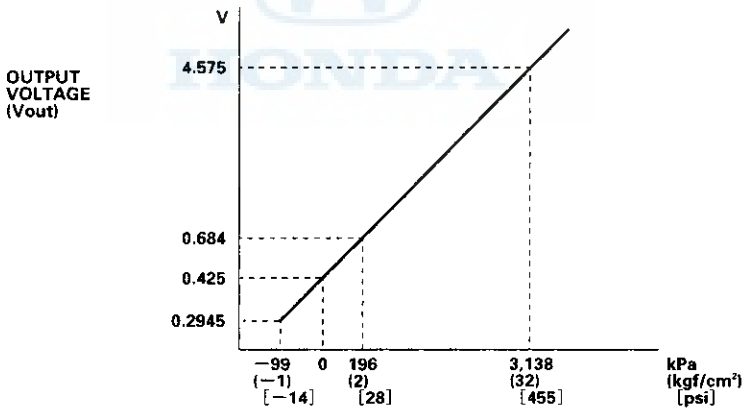
The A/C pressure sensor converts A/C pressure into electrical signals to the ECM/PCM.

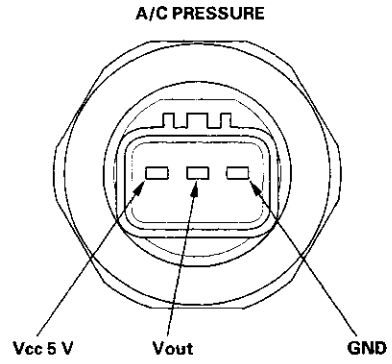
NOTE: The pressure can be monitored using the HDS PGM-FI Data List:
- Select PGM-FI
- Select Data List (A/C Pressure)



The response of the A/C pressure sensor is shown in the graph.

NOTE: When the refrigerant is below 196 kPa (2.0 kgf/cm², 28 psi) or above 3,138 kPa (32 kgf/cm², 455 psi), the PCM turns the compressor relay off to protect the A/C compressor. When the refrigerant pressure is above 1,390 kPa (14.2 kgf/cm², 202 psi), the ECM/PCM switches the radiator and A/C condenser fans to high speed.

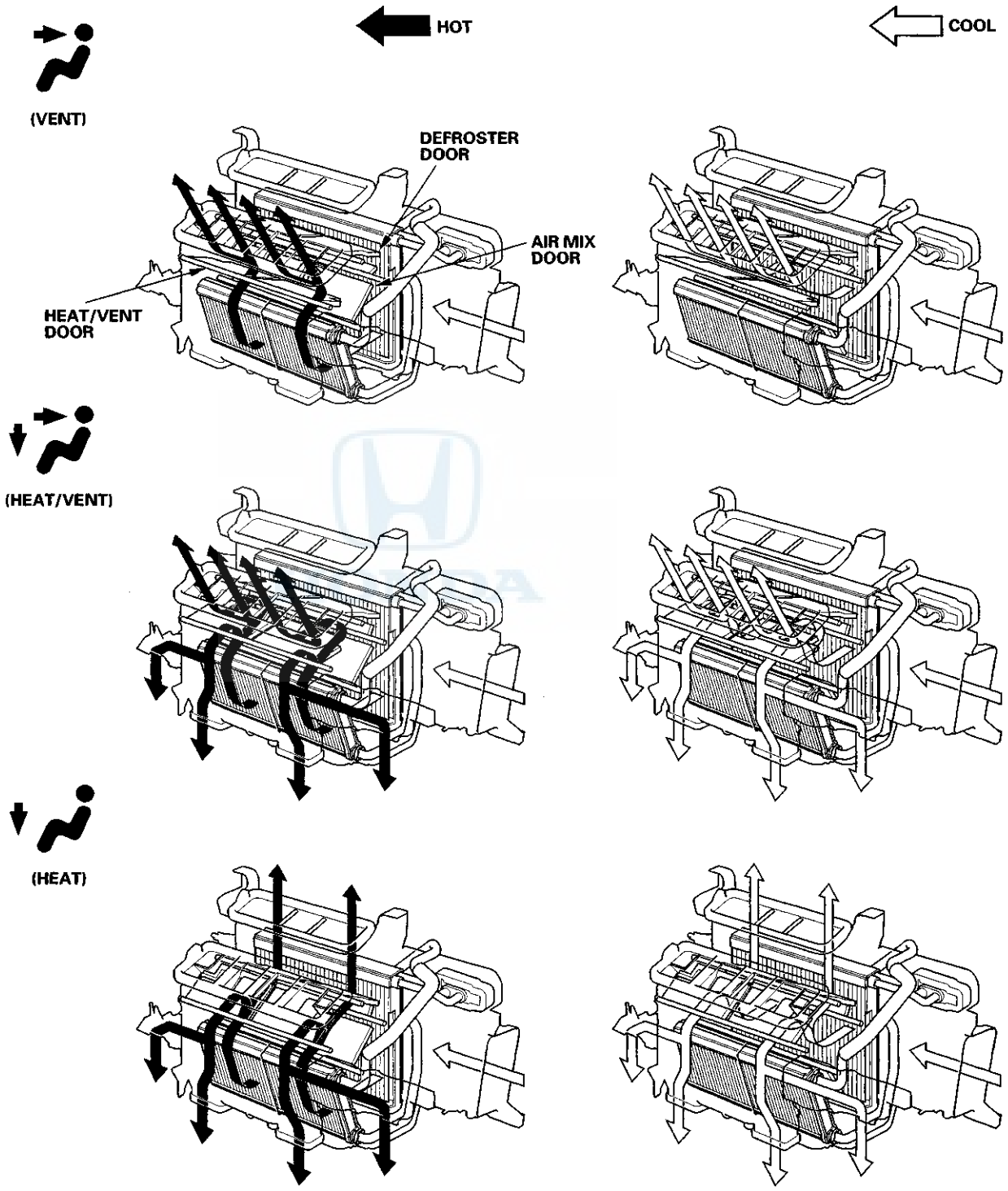


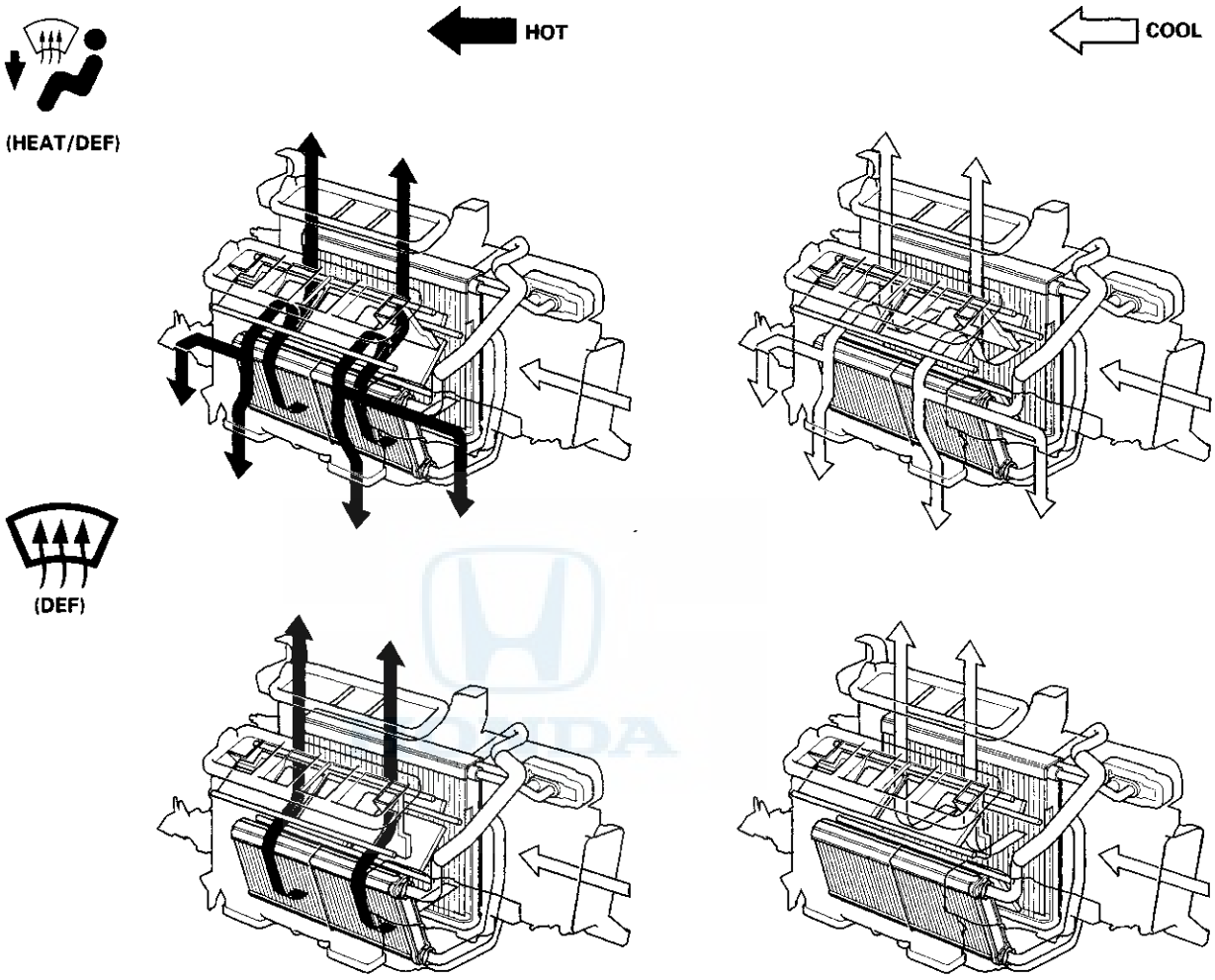


(cont'd)

System Description (cont'd)

Heating/Air Conditioning Door Positions



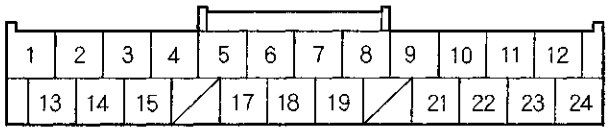


(cont'd)

System Description (cont'd)

Heater Control Panel Inputs and Outputs

HVAC CONTROL UNIT 24P CONNECTOR

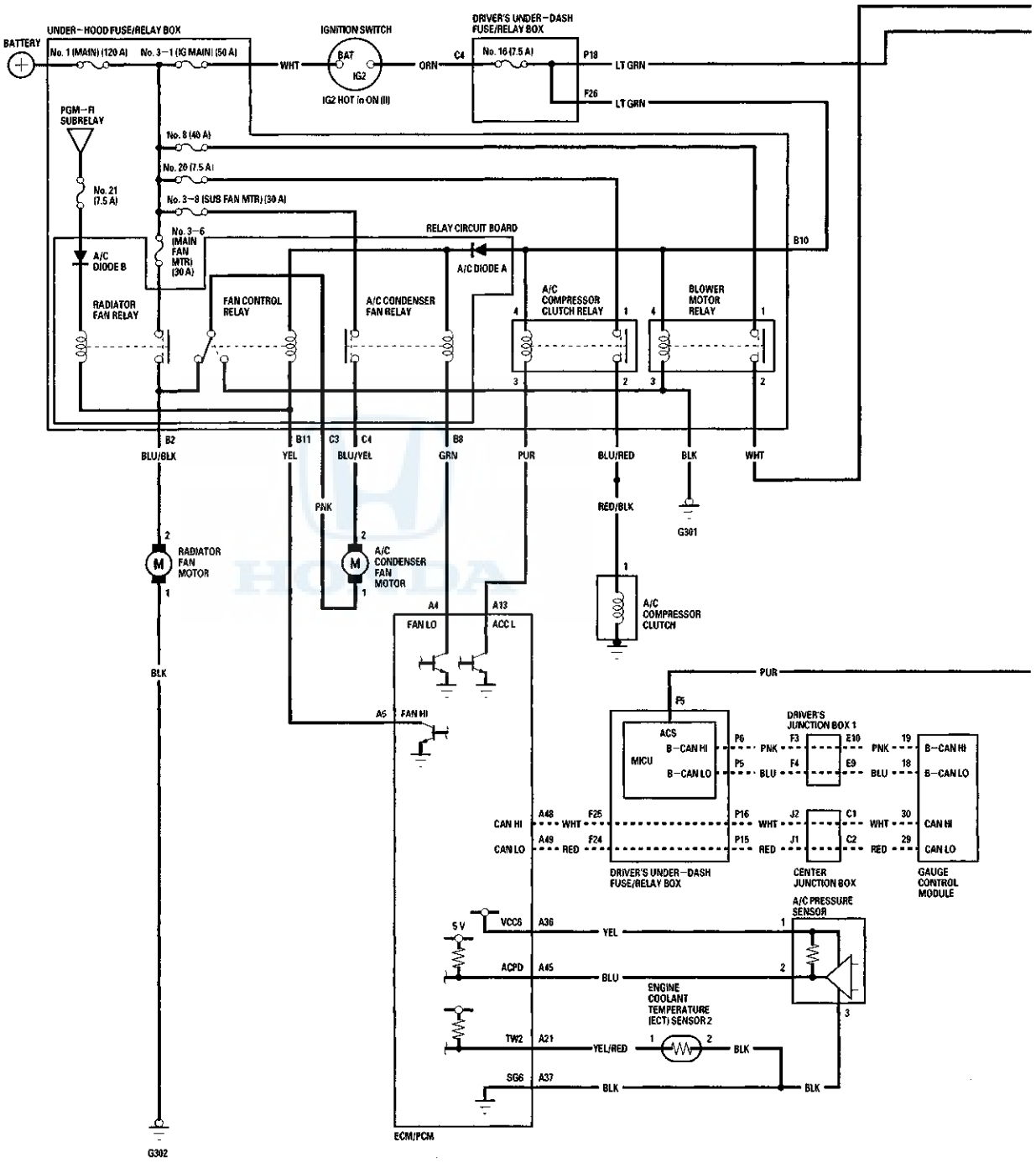


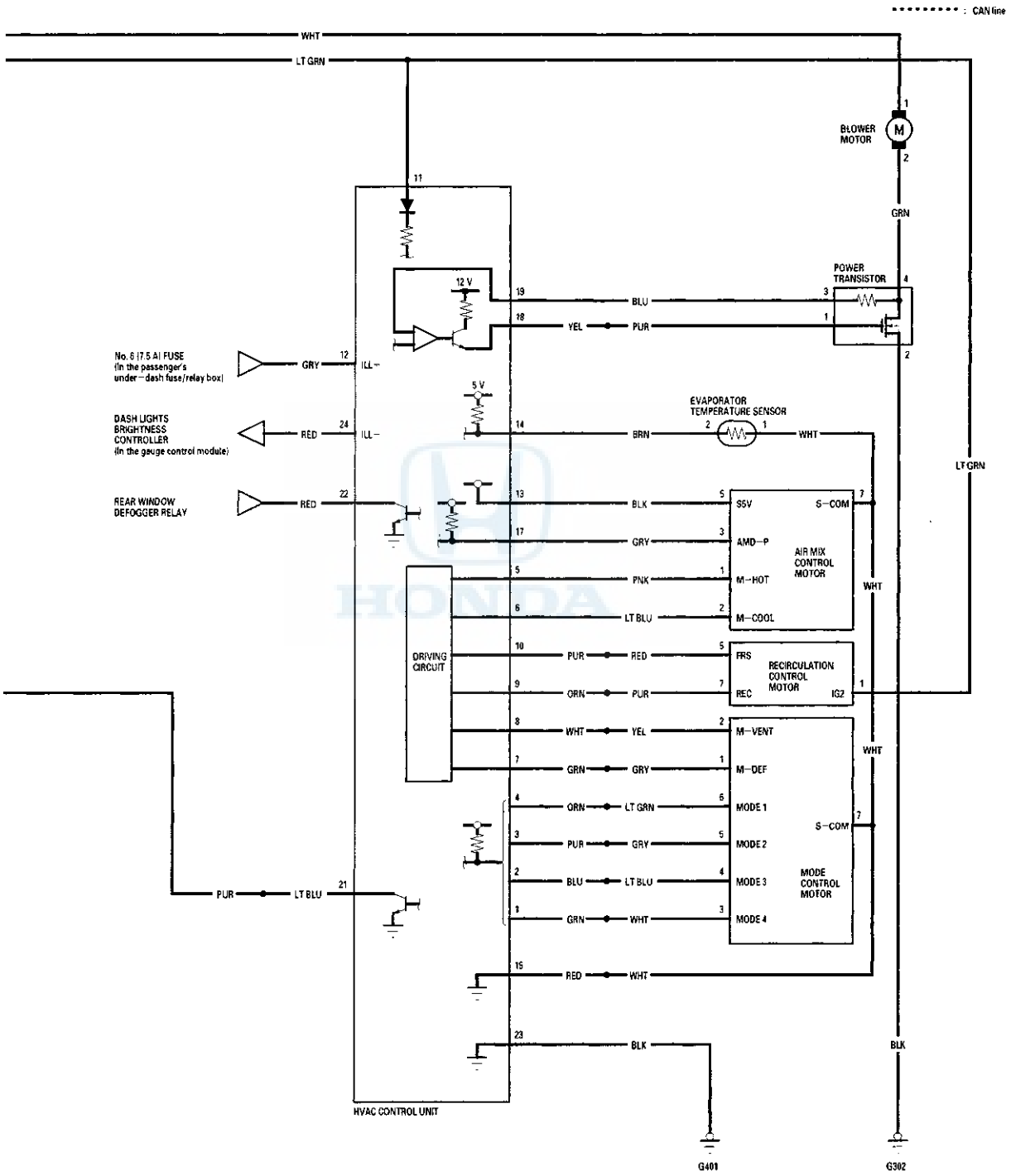
Wire side of female terminals

Cavity	Wire color	Terminal name	Description	Signal
1	GRN	MODE 4	Detects mode control motor position	With ignition switch ON (II): about 0 V or about 5.0 V (depending on mode control motor position)
2	BLU	MODE 3	Detects mode control motor position	With ignition switch ON (II): about 0 V or about 5.0 V (depending on mode control motor position)
3	PUR	MODE 2	Detects mode control motor position	With ignition switch ON (II): about 0 V or about 5.0 V (depending on mode control motor position)
4	ORN	MODE 1	Detects mode control motor position	With ignition switch ON (II): about 0 V or about 5.0 V (depending on mode control motor position)
5	PNK	AIR MIX HOT	Drives air mix control motor to HOT	With ignition switch ON (II) and air mix control motor moving to HOT: battery voltage
6	LT BLU	AIR MIX COOL	Drives air mix control motor to COOL	With ignition switch ON (II) and air mix control motor moving to COOL: battery voltage
7	GRN	M-DEF	Drives mode control motor to DEF	With ignition switch ON (II) and mode control motor moving to DEF: battery voltage
8	WHT	M-VENT	Drives mode control motor to VENT	With ignition switch ON (II) and mode control motor moving to VENT: battery voltage
9	ORN	M-REC	Drives recirculation control motor to RECIRCULATE	With ignition switch ON (II) and recirculation control motor moving to RECIRCULATE: about 0 V

Cavity	Wire color	Terminal name	Description	Signal
10	PUR	M-FRS	Drives recirculation control motor FRESH side	With ignition switch ON (II) and recirculation control motor moving to FRESH: about 0 V
11	LT GRN	IG2	IG2 power source	With ignition switch ON (II): battery voltage
12	GRY	SMALL	Inputs voltage for illumination	With combination light switch ON: battery voltage
13	BLK	S5V	Output sensor 5 V	With ignition switch ON (II): about 5.0 V
14	BRN	Teva	Detects evaporator temperature sensor signal	With ignition switch ON: about 1.0—4.0 V (depending on evaporator temperature). About 2.5 V at 72°F (22°C)
15	RED	SENS-COM	Sensor ground	Less than 0.5 V at all times
17	GRY	AMD-P	Outputs air mix control motor potentiometer signal	With ignition switch ON (II) and air mix door at HOT:about 4.5 V With ignition switch ON (II) and air mix door at COOL: about 0.5 V
18	YEL	BLW-G	Outputs power transistor gate voltage	With ignition switch ON (II) and blower OFF: 0 V. Voltage increases as blower speed increases
19	BLU	BLW-V	Feedback signal of power transistor drain voltage	With ignition switch ON (II) and blower OFF: between 5 V and 12 V. Voltage decreases as blower speed increases
21	LT BLU	ACS	Outputs A/C on/off signal	With ignition switch ON (II) and A/C request OFF: battery voltage. When A/C request switches ON, voltage changes to about 0 V.
22	RED	RrDEF Ry	Drives rear window defogger relay	With ignition switch ON (II) and defogger ON: about 0 V With ignition switch ON (II) and defogger OFF: battery voltage
23	BLK	GND	Ground for HVAC control unit (G401)	Less than 0.5 V at all times
24	RED	ILL —	Detects illumination control signal	With combination light switch ON: voltage decreases as dash lights brightness increases

Circuit Diagram




: CAN line
WHT
LT GRN
BLOWER MOTOR
GRN
POWER TRANSISTOR
12 V
BLU
YEL
PUR
No. 6 (7.5 A) FUSE (in the passenger's under-dash fuse/relay box)
GRY
ILL-
5 V
DASH LIGHTS BRIGHTNESS CONTROLLER (in the gauge control module)
RED
EVAPORATOR TEMPERATURE SENSOR
BRN
WHT
LT GRN
REAR WINDOW DEFOGGER RELAY
BLK
S5V
S-COM
GRY
AMD-P
AIR MIX CONTROL MOTOR
PNK
M-HOT
LT BLU
M-COOL
DRIVING CIRCUIT
PUR
RED
FRS
RECIRCULATION CONTROL MOTOR
ORN
REC
IG2
WHT
YEL
M-VENT
M-DEF
LT GRN
MODE 1
MODE 2
MODE 3
MODE 4
MODE CONTROL MOTOR
PUR
LT BLU
HVAC CONTROL UNIT
G401
G302

Recirculation Control Motor Circuit Troubleshooting

1. Check the No. 16 (7.5 A) fuse in the driver's under-dash fuse/relay box.

   Is the fuse OK?

   YES—Go to step 2.

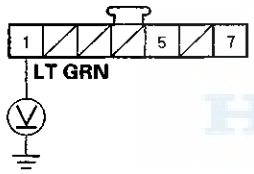
   NO—Replace the fuse, and recheck. If the fuse blows again, check for a short in the No. 16 (7.5 A) fuse circuit. ■

2. Disconnect the recirculation control motor 7P connector.

3. Turn the ignition switch to ON (II).

4. Measure the voltage between the recirculation control motor 7P connector No. 1 terminal and body ground.

RECIRCULATION CONTROL MOTOR 7P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Go to step 5.

NO—Repair open in the wire between the No. 16 (7.5 A) fuse in the driver's under-dash fuse/relay box and the recirculation control motor. ■

5. Turn the ignition switch to LOCK (0).

6. Test the recirculation control motor (see page 21-31).

   Is the recirculation control motor OK?

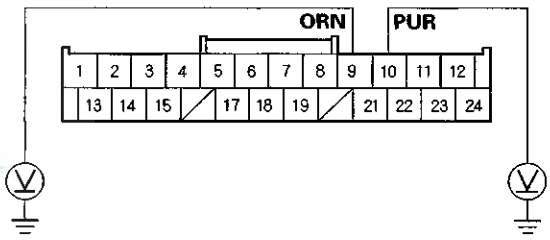
   YES—Go to step 7.

   NO—Replace the recirculation control motor, refer to the 2008-2009 Accord Service Manual (see page 21-61), or repair the recirculation control linkage or door. ■

7. Disconnect the HVAC control unit 24P connector.

8. Check for continuity between body ground and the HVAC control unit 24P connector No. 9 and No. 10 terminals individually.

HVAC CONTROL UNIT 24P CONNECTOR



Wire side of female terminals

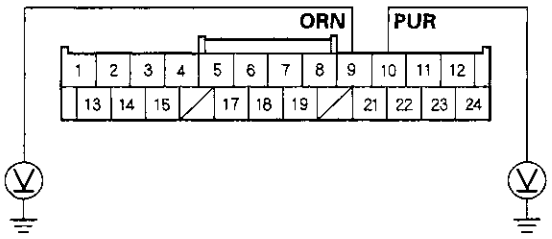
Is there continuity?

YES—Repair short to body ground in the wire(s) between the HVAC control unit and the recirculation control motor. ■

NO—Go to step 9.

9. Turn the ignition switch to ON (II), and check the same terminals for voltage between each terminal and body ground.

HVAC CONTROL UNIT 24P CONNECTOR



Wire side of female terminals

Is there any voltage?

YES—Repair short to power in the wire(s) between the HVAC control unit and the recirculation control motor. This short may also damage the HVAC control unit. Repair short to power before replacing the HVAC control unit. ■

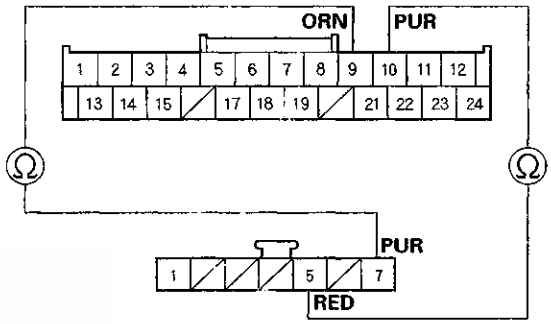
NO—Go to step 10.

10. Turn the ignition switch to LOCK (0).

11. Check for continuity between the following terminals of the HVAC control unit 24P connector and the recirculation control motor 7P connector.

24P:	7P:
No. 9	No. 7
No. 10	No. 5

HVAC CONTROL UNIT 24P CONNECTOR
Wire side of female terminals



RECIRCULATION CONTROL MOTOR 7P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Check for loose wires or poor connections at the HVAC control unit 24P connector, and at the recirculation control motor 7P connector. If the connections are good, substitute a known-good HVAC control unit, and recheck. If the symptom/indication goes away, replace the original HVAC control unit. ■

NO—Repair open in the wire(s) between the HVAC control unit and the recirculation control motor. ■

Radiator and A/C Condenser Fan Low Speed Circuit Troubleshooting

NOTE:
- Do not use this troubleshooting procedure if the A/C compressor is inoperative. Refer to the symptom troubleshooting index.
- Before performing symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Check the No. 3—8 (SUB FAN MTR) (30 A) fuse in the under-hood fuse/relay, and the No. 16 (7.5 A) fuse in the driver's under-dash fuse/relay box.

   Are you fuses OK?

   YES—Go to step 2.

   NO—Replace the fuse(s), and recheck. If the fuse(s) blow again, check for a short in the No. 3—8 (30 A) fuse and the No. 16 (7.5 A) fuse circuits.■

2. Connect the HDS to the DLC.

3. Turn the ignition switch to ON (II).

4. Turn on the A/C.

5. Check the FAN LOW CTRL in the PGM-FI Data List with the HDS.

   Is the FAN LOW CTRL on?

   YES—Go to step 6.

   NO—Substitute a known-good PCM (see page 11-7), and retest. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see page 11-282).■

6. Remove the relay circuit board, refer to the 2008-2009 Accord Service Manual (see page 22-83) from the under-hood fuse/relay box, and test the A/C condenser fan relay (see page 22-39).

   Is the relay OK?

   YES—Go to step 7.

   NO—Replace the relay circuit board.■

7. Turn the ignition switch to LOCK (0).

8. Jump the SCS line with the HDS.

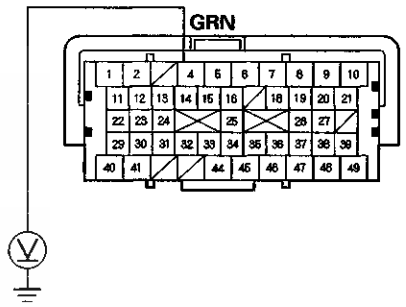
   NOTE: This step must be done to protect the engine/powertrain control module (PCM) from damage.

9. Disconnect PCM connector A (49P).

10. Turn the ignition switch to ON (II).

11. Measure the voltage between PCM connector A No. 4 terminal and body ground.

PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there battery voltage?

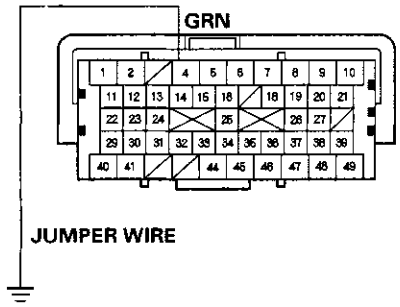
YES—Go to step 12.

NO—Repair open in the wires between the under-hood fuse/relay box and the PCM, or between the No. 16 (7.5 A) fuse in driver's under-dash fuse/relay box and the under-hood fuse/relay box. If wires are OK, replace the under-hood fuse/relay box (see page 22-30).■

12. Turn the ignition switch to LOCK (0).

13. Connect PCM connector A (49P) terminal No. 4 to body ground with a jumper wire.

PCM CONNECTOR A (49P)



Terminal side of female terminals

14. Turn the ignition switch to ON (II).

    Do the A/C condenser and radiator fans run on low?

    YES—Check for loose wires or poor connections at PCM connector A (49P) terminal No. 4. If the connections are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-282). ■

    NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).

16. Disconnect the jumper wire.

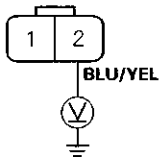
17. Reconnect PCM connector A (49P).

18. Disconnect the A/C condenser fan 2P connector.

19. Turn the ignition switch to ON (II), then set the A/C button and fan control button ON.

20. Measure the voltage between A/C condenser fan 2P connector terminal No. 2 and body ground.

A/C CONDENSER FAN 2P CONNECTOR



Wire side of female terminals

    Is there battery voltage?

    YES—Go to step 21.

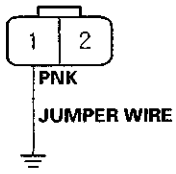
    NO—Repair open in the wire between the under-hood fuse/relay box and the A/C condenser fan. If the wire is OK, replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). ■

21. Set the A/C button and fan control button OFF, then turn the ignition switch to LOCK (0).

22. Reconnect the A/C condenser fan 2P connector.

23. Connect A/C condenser fan 2P connector terminal No. 1 to body ground with a jumper wire.

A/C CONDENSER FAN 2P CONNECTOR



Wire side of female terminals

24. Turn the ignition switch to ON (II), then set the A/C button and fan control button ON.

    Does the A/C condenser fan run?

    YES—Go to step 25.

    NO—Replace the A/C condenser fan motor (see page 10-12). ■

(cont'd)

Radiator and A/C Condenser Fan Low Speed Circuit Troubleshooting (cont'd)

25. Set the A/C button and fan control button OFF, then turn the ignition switch to LOCK (0).

26. Disconnect the jumper wire.

27. Remove the relay circuit board, refer to the 2008-2009 Accord Service Manual (see page 22-83) from the under-hood fuse/relay box, and test the fan control relay (see page 22-39).

    Is the relay OK?

    YES—Go to step 28.

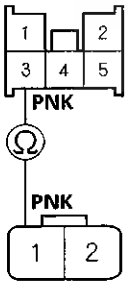
    NO—Replace the relay circuit board. ■

28. Disconnect the under-hood fuse/relay box connector C (5P).

29. Disconnect the A/C condenser fan 2P connector.

30. Check for continuity between under-hood fuse/relay box connector C (5P) No. 3 terminal and the A/C condenser fan 2P connector No. 1 terminal.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR C (5P)
Wire side of female terminals



A/C CONDENSER FAN 2P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to step 31.

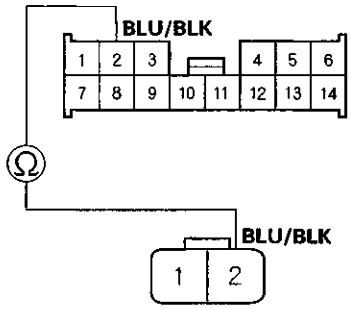
NO—Repair open in the wire between the under-hood fuse/relay box and the A/C condenser fan. ■

31. Disconnect under-hood fuse/relay box connector B (14P).

32. Disconnect the radiator fan 2P connector.

33. Check for continuity between under-hood fuse/relay box connector B (14P) No. 2 terminal and the radiator fan 2P connector No. 2 terminal.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR B (14P)
Wire side of female terminals



RADIATOR FAN 2P CONNECTOR
Wire side of female terminals

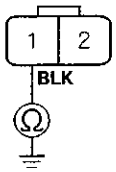
Is there continuity?

YES—Go to step 34.

NO—Repair open in the wire between the under-hood fuse/relay box and the radiator fan. ■

34. Check for continuity between the radiator fan 2P connector No. 1 terminal and body ground.

RADIATOR FAN 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Replace the radiator fan motor (see page 10-12). ■

NO—Check for an open in the wire between the radiator fan and body ground. If the wire is OK, check for poor ground at G302, refer to the 2008-2009 Accord Service Manual (see page 22-30). ■

A/C Condenser Fan High Speed Circuit Troubleshooting

NOTE:
- Do not use this troubleshooting procedure if the A/C compressor is inoperative. Refer to the symptom troubleshooting index.
- Before doing any symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Check the No. 3—8 (SUB FAN MTR) (30 A) and No. 21 (7.5 A) in the under-hood fuse/relay box.

   Are the fuses OK?

   YES—Go to step 2.

   NO—Replace the fuse(s), and recheck. If fuse(s) blow again, check for a short in the No. 3—8 (SUB FAN MTR) (30 A) fuse and No. 21 (7.5 A) fuse circuits. ■

2. Jump the SCS line with the HDS.

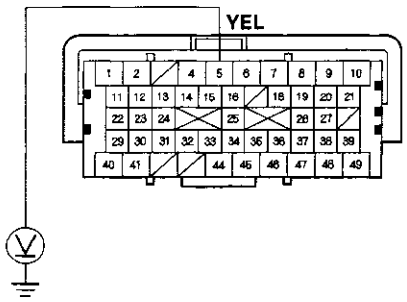
   NOTE: This step must be done to protect the engine/powertrain control module (PCM) from damage.

3. Disconnect PCM connector A (49P).

4. Turn the ignition switch to ON (II).

5. Measure the voltage between PCM connector A terminal No. 5 and body ground.

PCM CONNECTOR A (49P)



Terminal side of female terminals

Is there battery voltage?

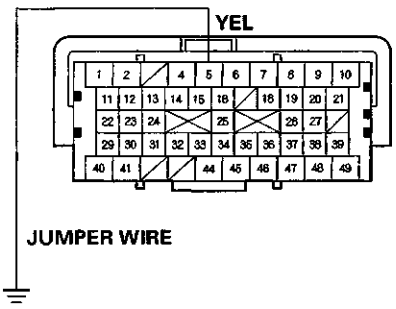
YES—Go to step 6.

NO—Repair open in the wire between the under-hood fuse/relay box and the PCM. If the wire is OK, replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). ■

6. Turn the ignition switch to LOCK (0).

7. Connect PCM connector A (49P) No. 5 terminal to body ground with a jumper wire.

PCM CONNECTOR A (49P)



Terminal side of female terminals

8. Turn the ignition switch to ON (II).

   Does the A/C condenser fan run on high?

   YES—Check for loose wires or poor connections at PCM connector A (49P) terminal No. 5. If the connections are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-282). ■

   NO—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). ■

A/C Compressor Clutch Circuit Troubleshooting

NOTE:
- It is normal for the A/C compressor to turn off under certain conditions, such as low idle, high engine coolant temperature, hard acceleration, or high/low refrigerant pressure.
- Do not use this troubleshooting procedure if the fans are also inoperative with the A/C on. Refer to the symptom troubleshooting index.
- Before doing any symptom troubleshooting, check for powertrain DTCs (see page 11-3).

1. Check the No. 20 (7.5 A) fuse in the under-hood fuse/relay box, and the No. 16 (7.5 A) fuse in the driver's under-dash fuse/relay box.

   Are the fuses OK?

   YES—Go to step 2.

   NO—Replace the fuse(s) and recheck. If the fuse(s) blow again, check for a short in the No. 20 (7.5 A) fuse and the No. 16 (7.5 A) fuse circuits. ■

2. Connect the HDS to the DLC.

3. Start the engine.

4. Turn on the A/C.

5. Check the A/C switch in the PGM-FI data list with the HDS.

   Is the A/C switch ON?

   YES—Go to step 6.

   NO—Go to A/C signal circuit troubleshooting (see page 21-28). ■

6. Using the HDS, confirm the following values in the PGM-FI Data List at idle.

TP SENSOR	About 0.5 V
RPM	700—800
ECT SENSOR 2	176—212 °F (80—100 °C)
A/C SWITCH	ON
A/C CLUTCH	ON
A/C PRESSURE SENSOR	196—3,138 kPa (2—32 kgf/cm²) [28—455 psi]

   Are all the values within specifications?

   YES—Go to step 7.

   NO—Troubleshoot the value that is not within the specifications. ■

7. Remove the A/C compressor clutch relay from the under-hood fuse/relay box, and test it (see page 22-38).

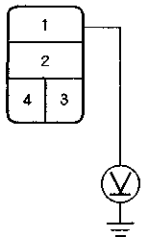
   Is the relay OK?

   YES—Go to step 8.

   NO—Replace the A/C compressor clutch relay. ■

8. Measure the voltage between A/C compressor clutch relay 4P socket terminal No.1 and body ground.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



Terminal side of female terminals

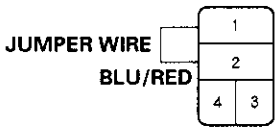
   Is there battery voltage?

   YES—Go to step 9.

   NO—Replace the under-hood fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-83). ■

9. Connect A/C compressor clutch relay 4P socket terminals No. 1 and No. 2 with a jumper wire.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



Terminal side of female terminals

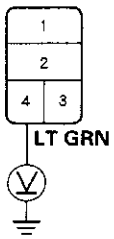
Does the A/C compressor clutch click?

YES—Go to step 10.

NO—Go to step 19.

10. Disconnect the jumper wire.
11. Turn the ignition switch to ON (II).
12. Measure the voltage between the A/C compressor clutch relay 4P socket No. 4 terminal and body ground.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 13.

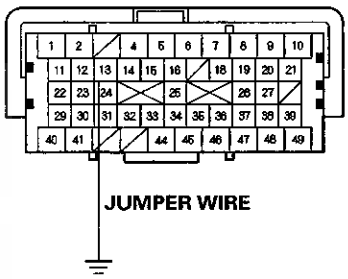
NO—Repair open in the wire between the No. 16 (7.5 A) fuse in the driver's under-dash fuse/relay box and the A/C compressor clutch relay.■

13. Turn the ignition switch to LOCK (0).
14. Reinstall the A/C compressor clutch relay.
15. Jump the SCS line with the HDS.

    NOTE: This step must be done to protect the powertrain control module (PCM) from damage.

16. Disconnect PCM connector A (49P).
17. Connect PCM connector A (49P) terminal No. 13 to body ground with a jumper wire.

PCM CONNECTOR A (49P)



Terminal side of female terminals

18. Turn the ignition switch to ON (II).

Does the A/C compressor click?

YES—Check for loose wires or poor connections at PCM connector A (49P). If the connections are good, check the PCM grounds. If the grounds are good, substitute a known-good PCM, and recheck. If the symptom/indication goes away, replace the original PCM (see page 11-282).■

NO—Repair open in the wire between the A/C compressor clutch relay and the PCM.■

(cont'd)

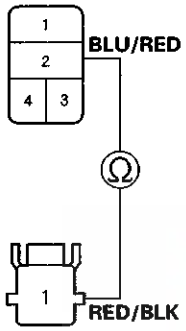
A/C Compressor Clutch Circuit Troubleshooting (cont'd)

19. Disconnect the jumper wire.

20. Disconnect the A/C compressor clutch 1P connector.

21. Check for continuity between A/C compressor clutch relay 4P socket terminal No. 2 and A/C compressor clutch 1P connector terminal No. 1.

A/C COMPRESSOR CLUTCH RELAY 4P SOCKET
Terminal side of female terminals



A/C COMPRESSOR CLUTCH 1P CONNECTOR
Wire side of female terminal

Is there continuity?

YES—Check the A/C compressor clutch clearance, and the A/C compressor clutch field coil (see page 21-33). Repair as needed.■

NO—Repair open in the wire between the A/C compressor clutch relay and the A/C compressor clutch.■

A/C Signal Circuit Troubleshooting

NOTE:
- If the blower motor does not run at all speeds, the A/C compressor will be inoperative. Run the self-diagnostic function, and check for DTC 12. Before performing any other troubleshooting, repair the cause of the inoperative blower motor.
- Do not use this troubleshooting procedure if any of the following items are operative: The condenser fan, the radiator fan, or the A/C compressor, or if the heater is inoperative. Refer to the symptom troubleshooting index.
- Before doing symptom troubleshooting, check for powertrain DTCs (see page 11-3). Also check for B-CAN codes.

1. Turn the ignition switch to ON (II).

2. Check if the blower motor operates at all speeds.

   Does the blower motor operate at all speeds?

   YES—Go to step 3.

   NO—Repair the problem in the blower motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-37).■

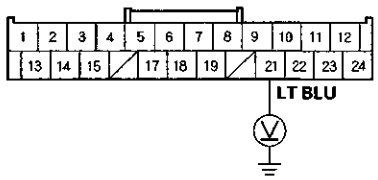
3. Turn the ignition switch to LOCK (0).

4. Disconnect the HVAC control unit 24P connector.

5. Turn the ignition switch to ON (II).

6. Measure the voltage between HVAC control unit 24P connector terminal No. 21 and bodyground.

HVAC CONTROL UNIT 24P CONNECTOR



Wire side of female terminals

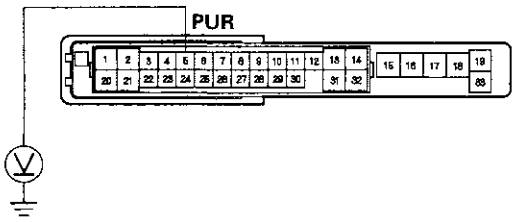
Is there battery voltage?

YES—Go to step 8.

NO—Go to step 7.

7. Measure the voltage between driver's under-dash fuse/relay box connector F (33P) No. 5 terminal and body ground.

DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR F (33P)



Wire side of female terminals

Is there battery voltage?

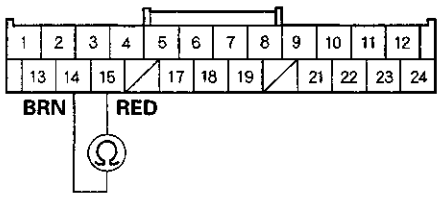
YES—Repair open in the wire between the HVAC control unit and the MICU.

NO—Check for loose wire or poor connections at driver's under-dash fuse/relay box connector F (33P) No. 5 terminal. If the connections are good, substitute a known-good MICU and recheck. If the symptom goes away, replace the original MICU.■

8. Turn the ignition switch to LOCK (0).

9. Measure the evaporator temperature sensor resistance between the HVAC control unit 24P connector No. 14 and No. 15 terminals.

HVAC CONTROL UNIT 24P CONNECTOR



Wire side of female terminals

Is resistance less than 24 kΩ ?

YES—Check for loose wires or poor connections at the HVAC control unit 24P connector. If the connections are good, substitute a known-good HVAC control unit and recheck. If the symptom goes away, replace the original HVAC control unit.■

NO—Test the evaporator temperature sensor, refer to the 2008-2009 Accord Service Manual (see page 21-54).■

Mode Control Motor Test

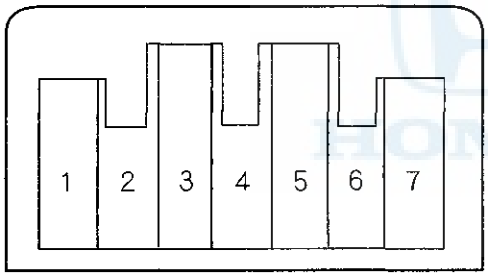
NOTE: Before testing, check for HVAC DTCs (see page 21-7).

1. Disconnect the 7P connector from the mode control motor.

   NOTICE
   Incorrectly applying power and ground to the mode control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the mode control motor, and ground the No. 2 terminal; the mode control motor should run smoothly, and stop at Defrost. If it doesn't, reverse the connections; the mode control motor should run smoothly, and stop at Vent. When the mode control motor stops running, disconnect battery power immediately.

MODE CONTROL MOTOR



3. If the mode control motor did not run in step 2, remove it, then check the mode control linkage and doors for smooth movement.

   - If the linkage and doors move smoothly, replace the mode control motor, refer to the 2008-2009 Accord Service Manual (see page 21-59).
   - If the linkage or doors stick or bind, repair them as needed.
   - If the mode control motor runs smoothly, go to step 4.

4. Use a digital multimeter with an output of 1 mA or less at the 20 kΩ range. With the mode control motor running as in step 2, check for continuity the No. 3, 4, 5, and No. 6 terminals between the No. 7 terminal and individually. There should be continuity for a moment at each terminal as the motor moves through its travel.

5. If there is no continuity for a moment at each terminal, replace the mode control motor, refer to the 2008-2009 Accord Service Manual (see page 21-59).

Recirculation Control Motor Test

NOTE: Before testing, check for HVAC DTCs (see page 21-7).

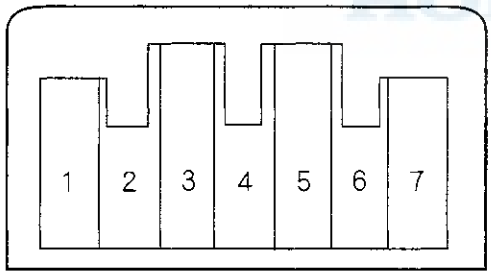
1. Disconnect the 7P connector from the recirculation control motor.

   NOTICE
   Incorrectly applying power and ground to the recirculation control motor will damage it. Follow the instructions carefully.

2. Connect battery power to terminal No. 1 of the recirculation control motor, and ground either terminal No. 5 or terminal No. 7. The motor should run smoothly to the Fresh position (terminal No. 5 connected to ground), or the Recirculate position (terminal No. 7 connected to ground). Disconnect battery power immediately when the motor stops running.

   NOTE: Do not reverse the power and ground connections, or leave the recirculation control motor connected to power and ground after it has stopped running. Theses actions will damage the motor.

RECIRCULATION CONTROL MOTOR



3. If the recirculation control motor did not run in step 2, remove it, then check the recirculation control linkage and doors for smooth movement.

   - If the linkage and doors move smoothly, replace the recirculation control motor, refer to the 2008-2009 Accord Service Manual (see page 21-61).
   - If the linkage or doors stick or bind, repair them as needed.

A/C Compressor Replacement

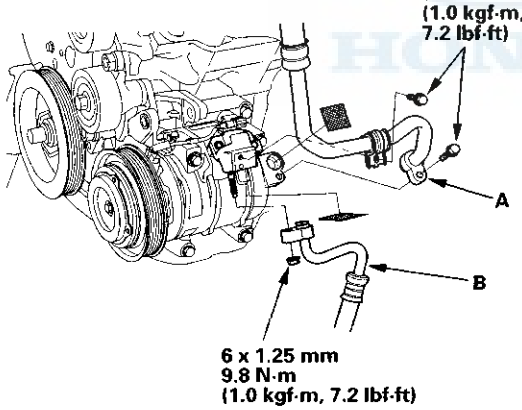
NOTE: Do not install the A/C compressor into a system unless you are completely sure that the system is free of contamination. Installing the A/C compressor into a contaminated system can result in premature A/C compressor failure.

1. If the A/C compressor is marginally operable, run the engine at idle speed, and let the air conditioning work for a few minutes, then shut the engine off.

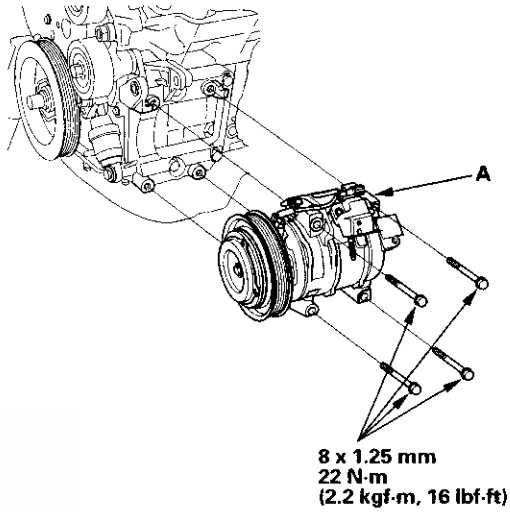
2. Recover the refrigerant with a recovery/recycling/charging station, refer to the 2008-2009 Accord Service Manual (see page 21-78).

3. Remove the condenser fan shroud (see page 10-12), and the alternator (see page 4-45).

4. Remove the bolts and the nut, then disconnect the suction hose (A) and the discharge hose (B) from the A/C compressor. Plug or cap the lines immediately after disconnecting them to avoid moisture and dust contamination.



5. Remove the mounting bolts and the A/C compressor (A). Be careful not to damage the radiator fins when removing the compressor.



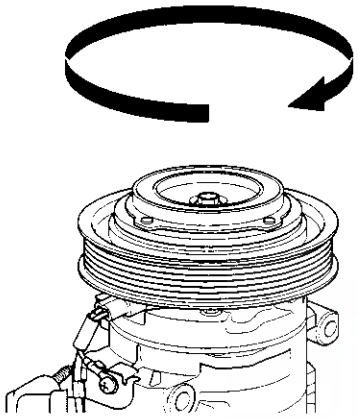
6. Install the A/C compressor in the reverse order of removal, and note these items:

- Inspect the A/C lines for any signs of contamination.
- If you're installing a new A/C compressor, you must calculate the amount of refrigerant oil to be removed from it, refer to the 2008-2009 Accord Service Manual (see page 21-6). A new A/C compressor comes with a full charge of oil.
- Replace the O-rings with new ones at each fitting, and apply a thin coat of refrigerant oil before installing them. Be sure to use the correct O-rings for HFC-134a (R-134a) to avoid leakage.
- Use only PAG refrigerant oil (DENSO ND-OIL 8) for HFC-134a DENSO A/C systems.
- To avoid contamination, do not return the oil to the container once dispensed, and never mix it with other refrigerant oils.
- Immediately after using the oil, reinstall the cap on the container, and seal it to avoid moisture absorption.
- Do not spill the refrigerant oil on the vehicle; it may damage the paint; if the refrigerant oil contacts the paint, wash it off immediately.
- Be careful not to damage the radiator fins when installing the compressor and the A/C condenser fan shroud.
- Charge the system, refer to the 2008-2009 Accord Service Manual (see page 21-80).

A/C Compressor Clutch Check

1. Check the pressure plate for discoloration, peeling, or other damage. If there is damage, replace the clutch set (see page 21-34).

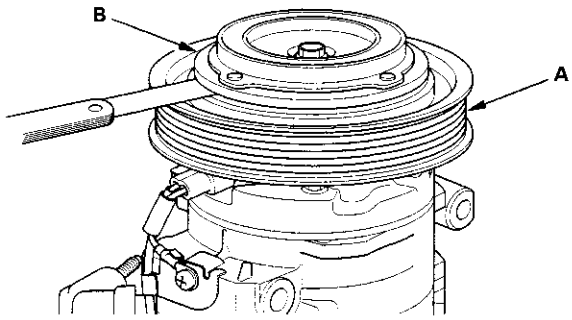
2. Check the pulley bearing play and drag by rotating the pulley by hand. Replace the clutch set with a new one if it is noisy or has excessive play/drag (see page 21-34).



3. Measure the clearance between the pulley (A) and the pressure plate (B) all the way around. If the clearance is not within specified limits, remove the pressure plate (see page 21-34) and add or remove shims as needed to increase or decrease clearance.

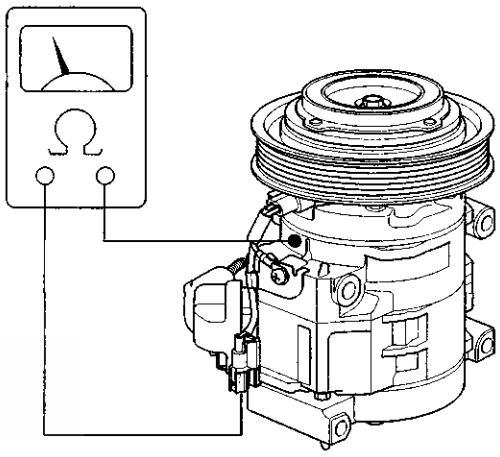
   Clearance: 0.35—0.60 mm (0.014—0.024 in.)

   NOTE: The shims are available in three thicknesses: 0.1 mm, 0.3 mm, and 0.5 mm.



4. Measure the resistance of the field coil. If the resistance is not within specifications, replace the field coil (see page 21-34).

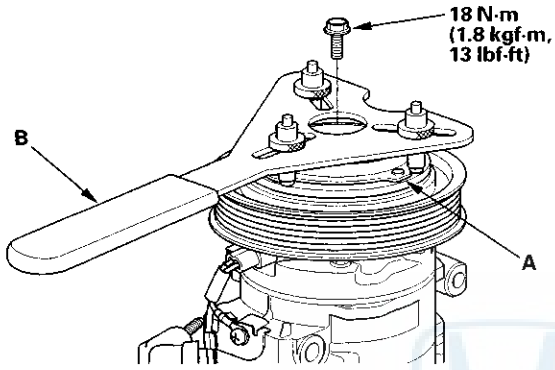
   Field Coil Resistance: 3.9—4.3 Ω at 68 °F (20 °C)



A/C Compressor Clutch Overhaul

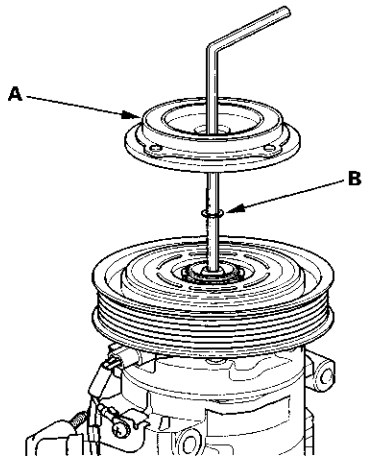
Special Tools Required
A/C clutch holder: Robinair 10290, Kent-Moore J37872, Honda Tool and Equipment ACT499A, or a commercially available equivalent

1. Remove the center bolt while holding the pressure plate (A) with a commercially available A/C clutch holder (B).

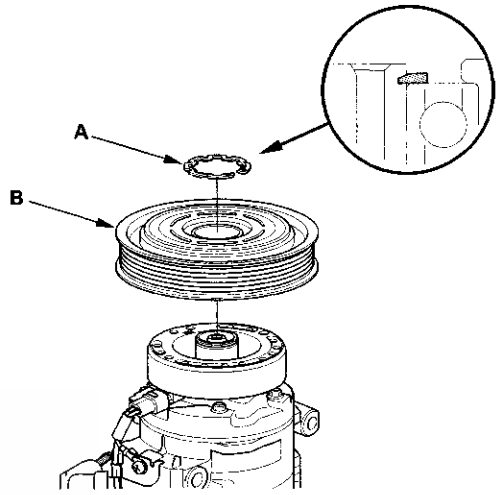


2. Remove the pressure plate (A) and shim(s) (B), taking care not to lose the shim(s). If the clutch needs adjustment, increase or decrease the number and thickness of shims as necessary, then reinstall the pressure plate, and recheck its clearance (see page 21-33).

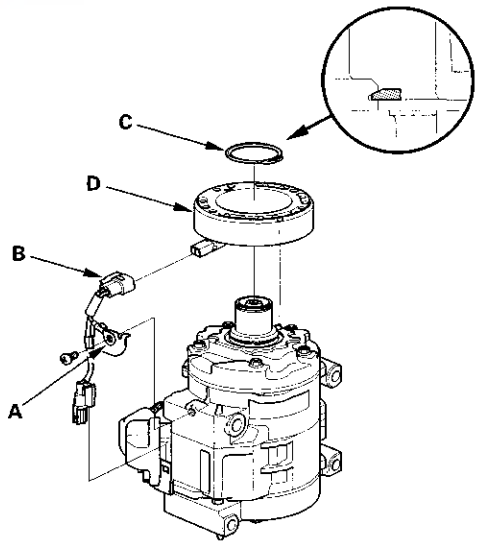
   NOTE: The shims are available in three thicknesses: 0.1 mm, 0.3 mm, and 0.5 mm.



3. If you are replacing the field coil, remove the snap ring (A) with snap ring pliers, then remove the pulley (B). Be careful not to damage the pulley or the A/C compressor.



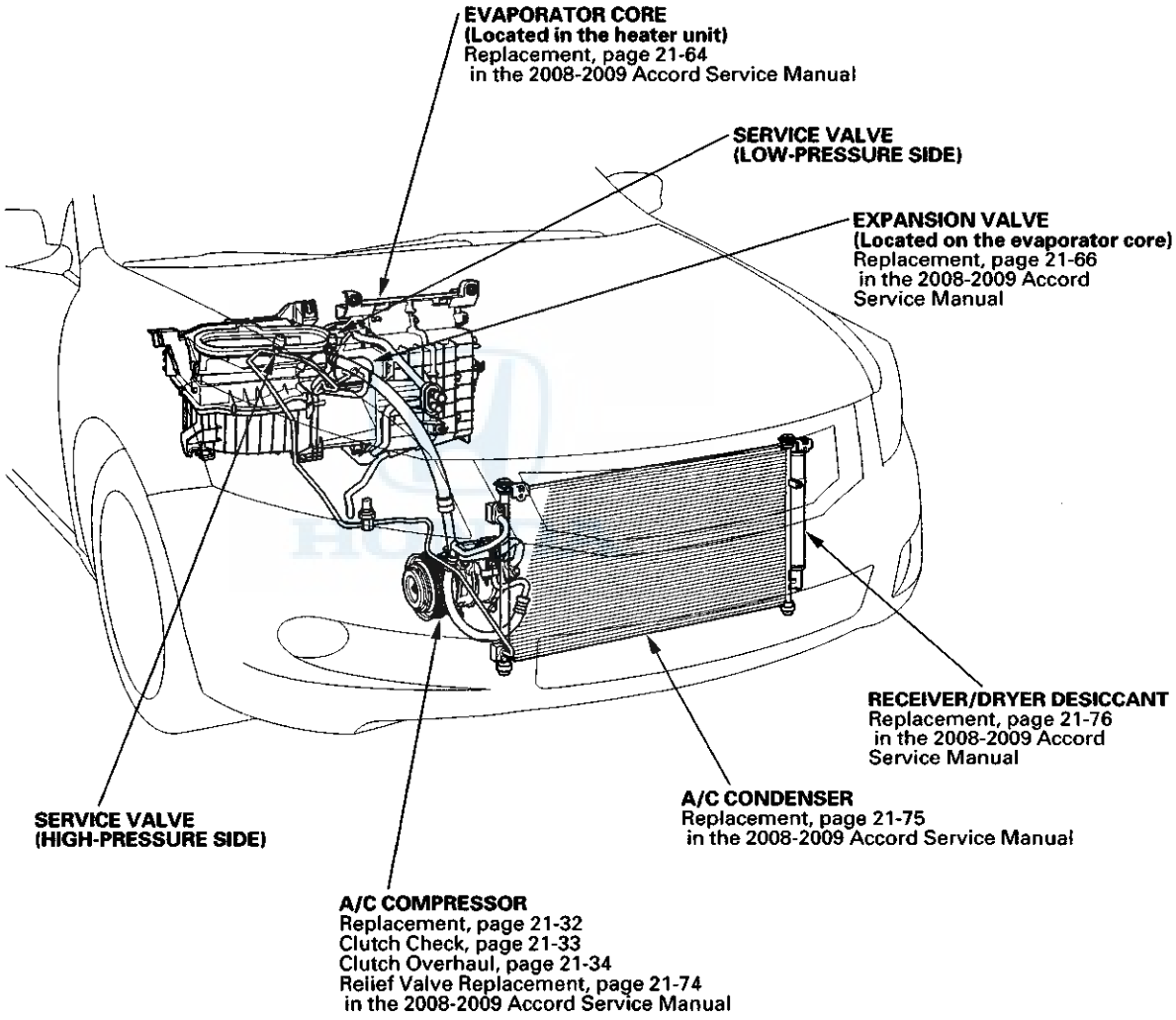
4. Remove the screw from the field coil ground terminal (A). Disconnect the connector (B) from the field coil, then remove the snap ring (C) with snap ring pliers, then remove the field coil (D). Be careful not to damage the field coil or the A/C compressor.

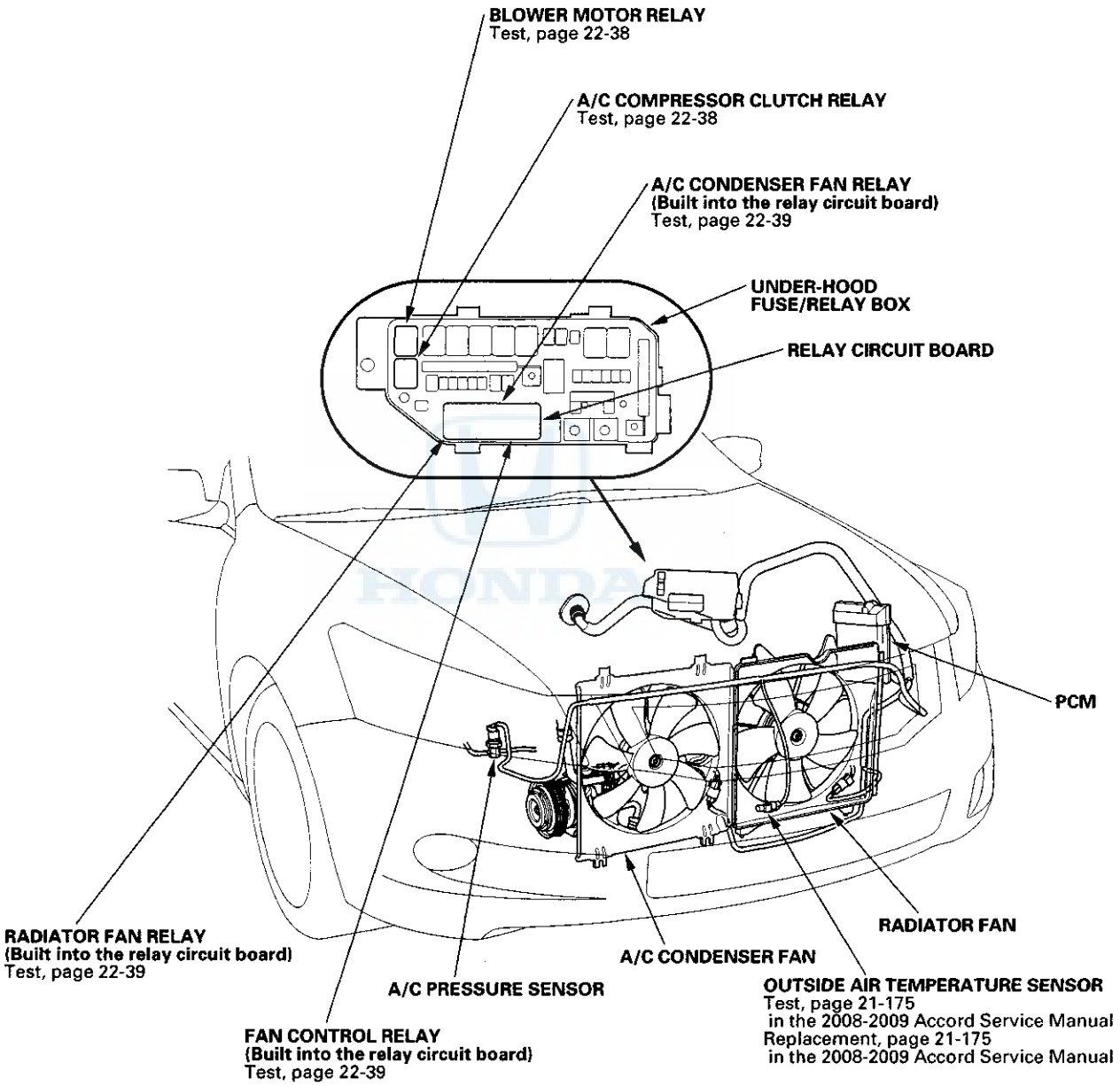


5. Reassemble the clutch in the reverse order of disassembly, and note these items:

   - Install the field coil with the wire side facing down, and align the boss on the field coil with the hole in the A/C compressor.
   - Clean the pulley and A/C compressor sliding surfaces with contact cleaner or other non-petroleum solvent.
   - Install new snap rings, note the installation direction, and make sure they are fully seated in the grooves.
   - Make sure that the pulley turns smoothly after it's reassembled.
   - Route and clamp the wires properly, or they can be damaged by the pulley.

Component Location Index




BLOWER MOTOR RELAY
Test, page 22-38
A/C COMPRESSOR CLUTCH RELAY
Test, page 22-38
A/C CONDENSER FAN RELAY
(Built into the relay circuit board)
Test, page 22-39
UNDER-HOOD
FUSE/RELAY BOX
RELAY CIRCUIT BOARD
PCM
RADIATOR FAN RELAY
(Built into the relay circuit board)
Test, page 22-39
A/C PRESSURE SENSOR
FAN CONTROL RELAY
(Built into the relay circuit board)
Test, page 22-39
A/C CONDENSER FAN
RADIATOR FAN
OUTSIDE AIR TEMPERATURE SENSOR
Test, page 21-175
in the 2008-2009 Accord Service Manual
Replacement, page 21-175
in the 2008-2009 Accord Service Manual

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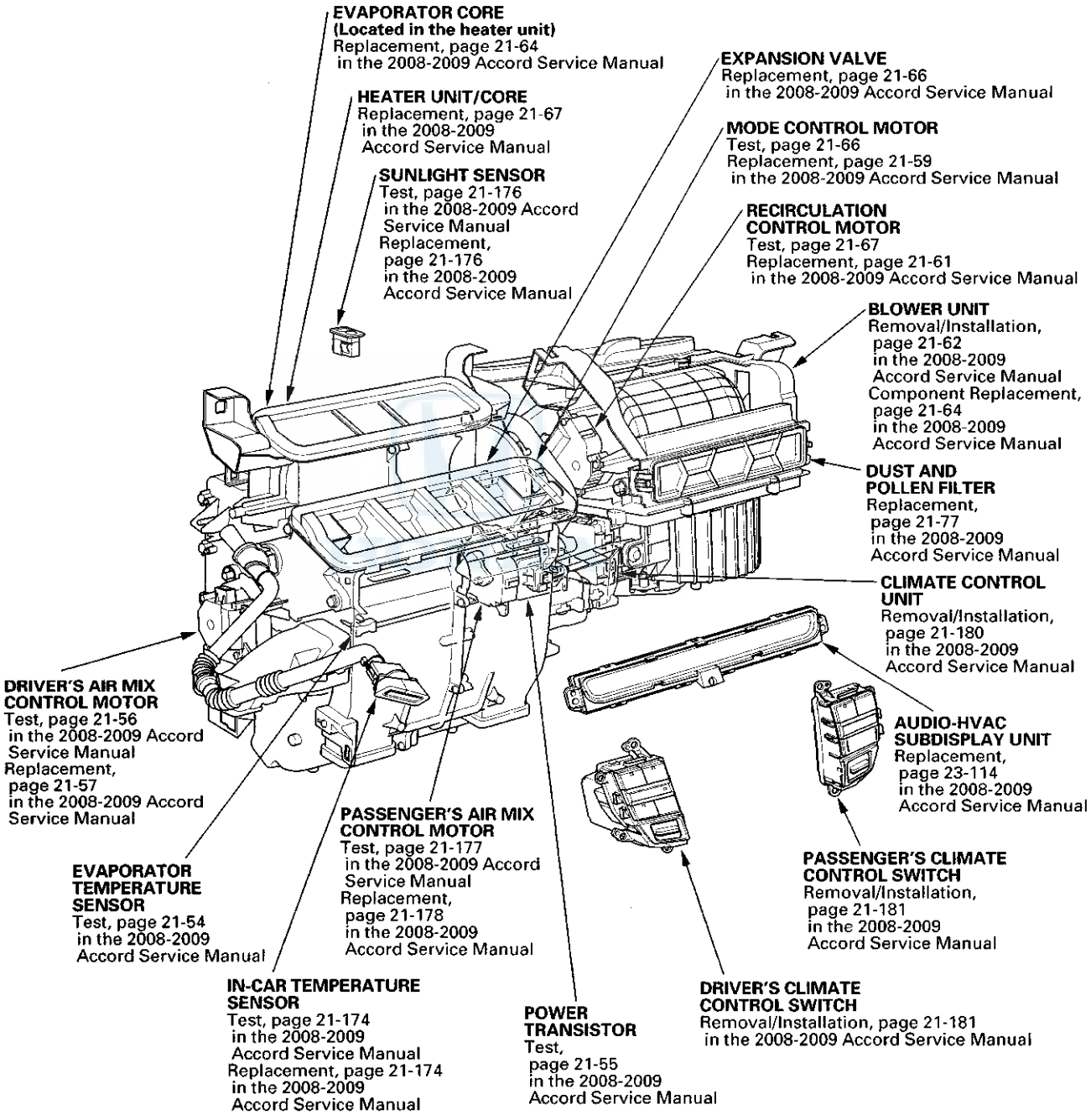
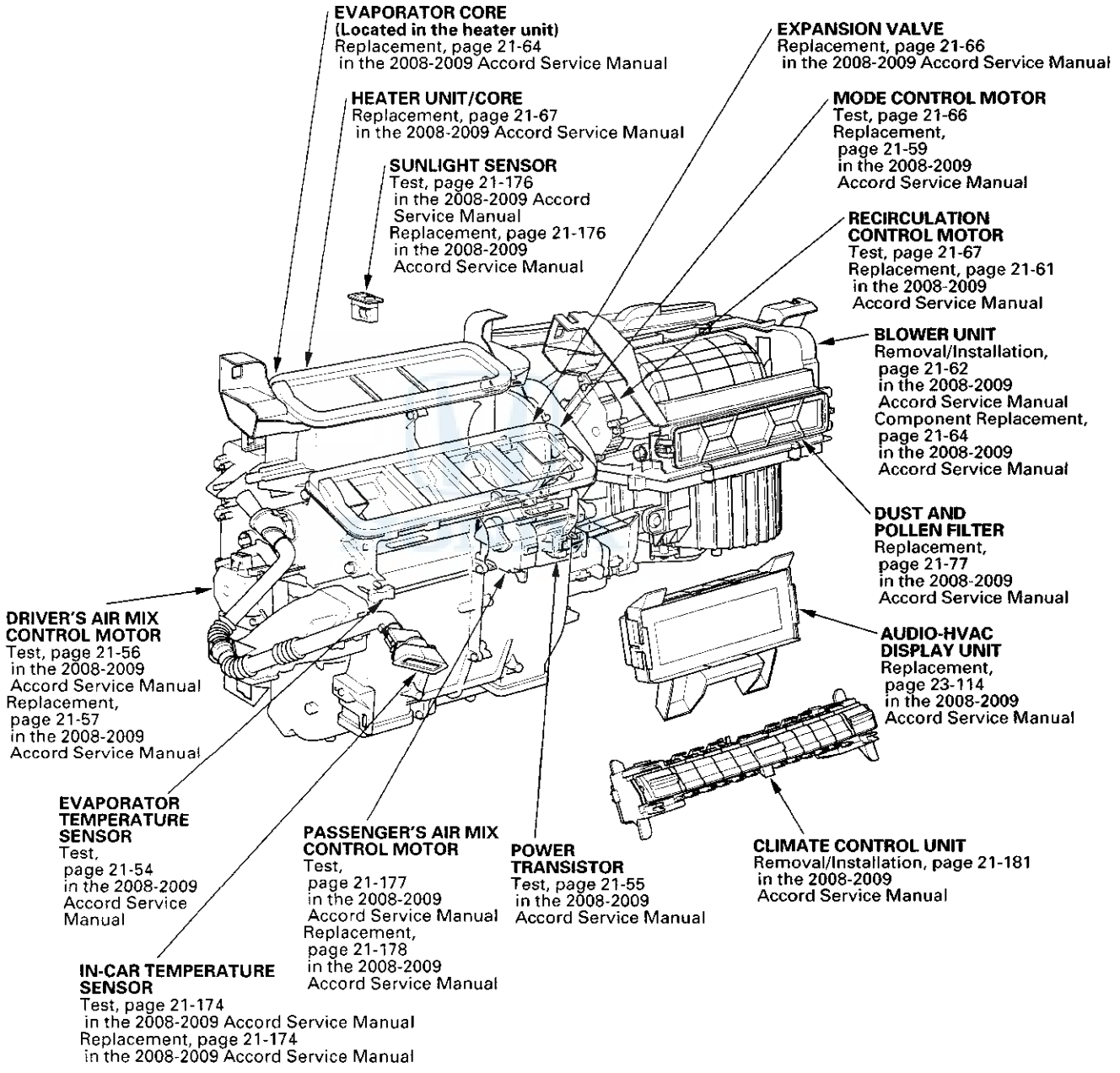
Component Location Index (cont'd)

With navigation



Without navigation



General Troubleshooting Information

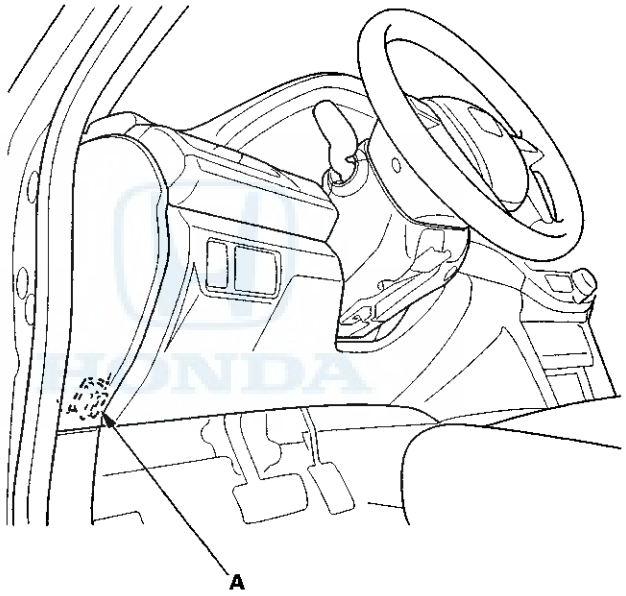
How to Check for DTCs with the HDS

There are three methods used to check for DTCs. The recommended method is to use the Honda Diagnostic System (HDS) with the appropriate software, plugged into the data link connector (DLC).

The second method is to run the self-diagnostic function built into the climate control unit.

The third method is to use the B-CAN system diagnostic test mode A, refer to the 2008-2009 Accord Service Manual (see page 22-120).

1. Make sure the ignition switch is LOCK (0).
2. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



3. Turn the ignition switch to ON (II).
4. Make sure the HDS communicates with the vehicle and the climate control unit. If it doesn't, troubleshoot the DLC circuit (see page 11-259).
5. Select HVAC/CLIMATE CONTROL in the BODY ELECTRICAL menu.
6. Select DTCs in the HVAC/CLIMATE CONTROL menu.
7. Check for DTCs. If any DTCs are indicated, write down the DTCs, then go to the indicated DTC troubleshooting. If no DTCs are indicated, refer to symptom troubleshooting.

   NOTE:
   - After troubleshooting, clear the DTCs with the HDS.
   - For specific operations, refer to the user's manual that came with the HDS.

How to Use the Self-diagnostic Function with the HDS

1. Make sure the ignition switch is LOCK (0).
2. Connect the HDS to the data link connector (DLC).
3. Turn the ignition switch to ON (II).
4. Make sure the HDS communicates with the vehicle and the climate control unit. If it doesn't, troubleshoot the DLC circuit (see page 11-259).
5. Select HVAC/CLIMATE CONTROL in the BODY ELECTRICAL menu.
6. Select INSPECTION in the HVAC/CLIMATE CONTROL menu.
7. Select CLIMATE CONTROL SELF TEST in the INSPECTION menu.
8. Check for DTCs. If any DTCs are indicated, write down the DTCs, then go to the indicated DTC troubleshooting.

   NOTE:
   - After troubleshooting, clear the DTCs with the HDS.
   - For specific operations, refer to the user's manual that came with the HDS.

HONDA

(cont'd)

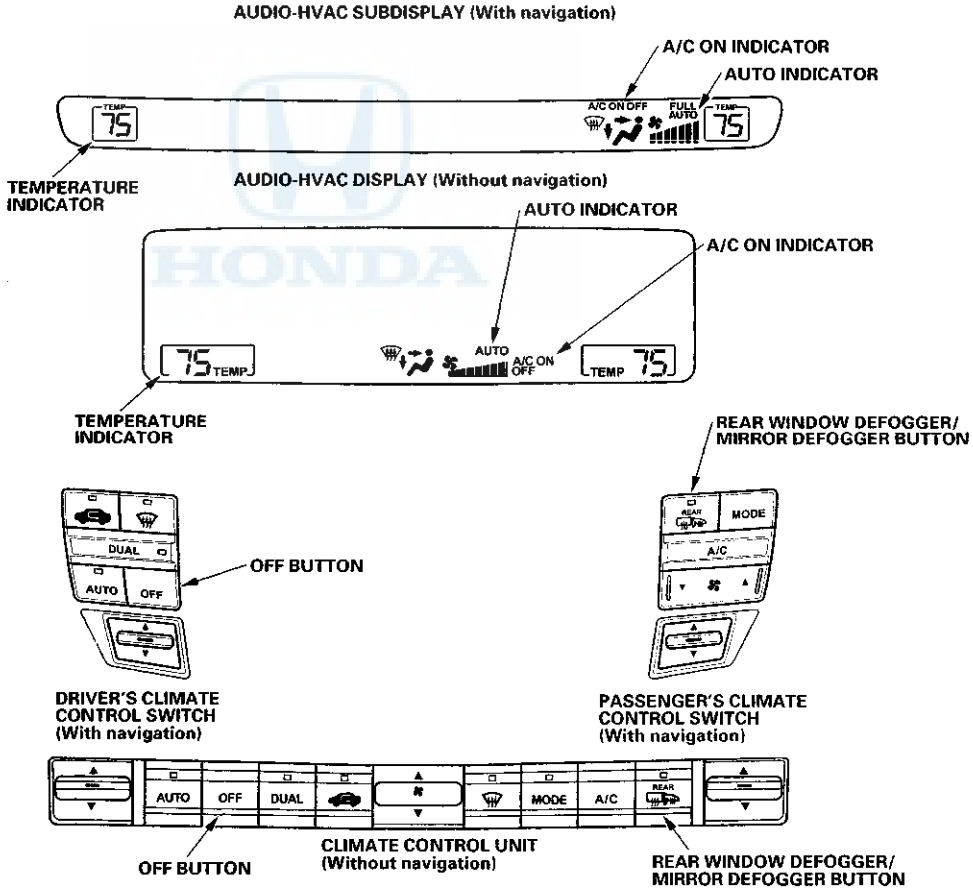
General Troubleshooting Information (cont'd)

How to Use the Self-diagnostic Function without the HDS

The climate control unit has a self-diagnostic function. To run the self-diagnostic function, do the following:

1. Turn the ignition switch to LOCK (0) and then to ON (II).
2. Press and hold the OFF button, then within 10 seconds press and release the REAR WINDOW DEFOGGER/ MIRROR DEFOGGER button five times. Release the OFF button; then the self-diagnostic begins.

   NOTE:
   - The blower motor will run at various speeds regardless of what the panel is displaying.
   - If there is a problem with the system, the temperature indicator flashes 88, and the A/C ON indicator or the AUTO indicator (or both) also flashes. Segments in the temperature indicator then indicate which DTCs are present.
   - If there is more than one DTC, they are displayed on at a time in sequence followed by a pause (all the display indicator segments illuminate) between the DTCs.
   - If there are no problems detected, the segments will not illuminate, and the system will appear to be turned off.



Canceling the Self-diagnostic Function

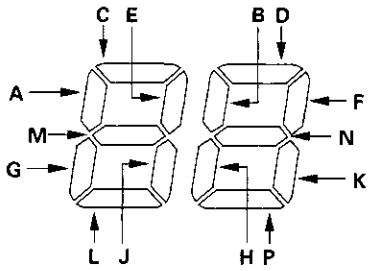
3. Turn the ignition switch to LOCK (0) to cancel the self-diagnostic function. After completing repair work, run the self-diagnostic function again to make sure that there are no other DTCs.

Checking for DTCs

The temperature display indicates single or multiple DTCs. If no DTCs are present, the indicator remains blank.

NOTE: If indicator segments A, C, D, E, G, and the AUTO indicator or the A/C ON indicator are on at the same time, there may be an open in the climate control unit ground circuit.

DRIVER'S TEMPERATURE INDICATOR **AUTO INDICATOR** **A/C ON INDICATOR**



AUTO A/C ON

DTC (Driver's Temperature Indicator Segment, AUTO, and A/C Indicator)	Detection Item
A and AUTO	An open in the in-car temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-134)
B and AUTO	A short in the in-car temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-135)
C and AUTO	An open in the outside air temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-137)
D and AUTO	A short in the outside air temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-138)
E and AUTO	An open in the sunlight sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-139)
F and AUTO	A short in the sunlight sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-141)
G and AUTO	An open in the evaporator temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-142)
H and AUTO	A short in the evaporator temperature sensor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-144)
A and A/C ON	An open in the driver's air mix control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-145)
B and A/C ON	A short in the driver's air mix control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-146)
C and A/C ON	A problem in the driver's air mix control linkage, door, or motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-149)
D and A/C ON	An open in the passenger's air mix control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-150)
E and A/C ON	A short in the passenger's air mix control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-152)
F and A/C ON	A problem in the passenger's air mix control linkage, door, or motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-155)
G and A/C ON	An open in the mode control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-125)
H and A/C ON	A short in the mode control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-127)
J and A/C ON	A problem in the mode control linkage, doors, or motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-122)
K and A/C ON	An open in the recirculation control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-162)
L and A/C ON	A short in the recirculation control motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-130)
M and A/C ON	A problem in the recirculation control linkage, door, or motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-161)
N and A/C ON	A problem in the blower motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-157)

(cont'd)

General Troubleshooting Information (cont'd)

DTC (Driver's Temperature Indicator Segment)	Detection Item
A	Climate control unit internal error, refer to the 2008-2009 Accord Service Manual (see page 21-122)
B	Output shaft (countershaft) speed sensor signal error. Check for DTCs in the A/T system and go to the indicated DTC's troubleshooting. If no DTCs are found, replace the climate control unit, refer to the 2008-2009 Accord Service Manual (see page 21-180)
C	Engine coolant temperature (ECT) sensor signal error. Check for DTCs in the PGM-FI system and go to the indicated DTC's troubleshooting. If no DTCs are found, replace the climate control unit, refer to the 2008-2009 Accord Service Manual (see page 21-180)
D	Communication bus line error (bus-off), refer to the 2008-2009 Accord Service Manual (see page 22-135).

Displaying Sensor Inputs at the Climate Control Unit

The climate control unit has a mode that displays sensor inputs it receives. This mode shows you what the climate control unit is receiving from each of the sensors, one at a time, and it can help you determine if a sensor is faulty.

Check these items before using the sensor input display mode

1. Turn the ignition switch to ON (II), and check the recirculation door function; press the recirculation button to switch from FRESH to RECIRC. The air volume and sound should change slightly.

2. Set the temperature using the driver's climate control switch to the desired test temperature:

   - Press AUTO button on, the LED turns on.
   - Press DUAL button off, the LED turns off.

   When selecting the test temperature, note these items:

   - "Lo" temperature setting will default to MAX COOL, VENT, and RECIRC.
   - "Hi" temperature setting will default to MAX HOT, FLOOR, and FRESH.
   - 58 through 86 °F settings will use the automatic climate control logic.

3. Turn the ignition switch to LOCK (0).

To run the sensor input display mode, follow these steps

1. Turn the ignition switch to LOCK (0).
2. Press and hold both the AUTO and RECIRCULATION CONTROL buttons, then start the engine.
3. After the engine starts, release both buttons. The display panel control unit will flash the sensor number and then the value for that sensor. Record the value displayed.
4. To advance to the next sensor, press the REAR WINDOW DEFOGGER button.

Sensor	Item	Displayed Value
1	Mode Positioning	%
2	In-car Temperature	℃
3	Outside Air Temperature	℃
4	Solar Radiation Sensor Value: Dark = 00, Flashlight = 04, Cloudy = 10, Sunny = 65	10 kcal/m²·h
5	Evaporator Outlet Air Temperature	℃
6	Driver's Air Mix Opening (Low value indicates cooler air distribution, higher value indicates warmer air distribution)	% of opening
7	Passenger's Air Mix Opening (Low value indicates cooler air distribution, higher value indicates warmer air distribution)	% of opening
8	Recirculation Control Opening	% of opening
9	Vehicle Speed (Vehicle must be driven to display speed) km/h	10 km/h
A	Engine Coolant Temperature	℃
b	Vent Temperature Air Out (TAO)	℃

NOTE:
- The sensor values will be displayed in degrees Celsius (℃) or an alphanumeric code. Use the chart to convert the value to degrees Fahrenheit (℉).
- If the sensor value displays "Er" this indicates there is an open or short in the circuit or sensor. Check for DTCs using the HDS, or use the climate control self-diagnostic function.
- If necessary, compare the sensor input display to a known-good vehicle under the same test conditions.
- If the sensor is out of the normal range, refer to the sensor test or substitute a known-good sensor, and recheck.

5. To cancel the sensor input display mode, press the AUTO button or turn the ignition switch to LOCK (0).

(cont'd)

General Troubleshooting Information (cont'd)

Celsius to Fahrenheit Conversion Table

℃	℉	℃	℉	℃	℉	℃	℉	℃	℉
0	32	10	50	20	68	30	86	40	104
1	34	11	52	21	70	31	88	41	106
2	36	12	54	22	72	32	90	42	108
3	37	13	55	23	73	33	91	43	109
4	39	14	57	24	75	34	93	44	111
5	41	15	59	25	77	35	95	45	113
6	43	16	61	26	79	36	97	46	115
7	45	17	63	27	81	37	99	47	117
8	46	18	64	28	82	38	100	48	118
9	48	19	66	29	84	39	102	49	120

℃	℉	℃	℉	℃	℉	℃	℉	℃	℉
50	122	60	140	70	158	80	176	90	194
51	124	61	142	71	160	81	178	91	196
52	126	62	144	72	162	82	180	92	198
53	127	63	145	73	163	83	181	93	199
54	128	64	147	74	165	84	183	94	201
55	131	65	149	75	167	85	185	95	203
56	133	66	151	76	169	86	187	96	205
57	135	67	152	77	170	87	188	97	207
58	136	68	154	78	172	88	190	98	208
59	139	69	158	79	174	89	192	99	210

Alphanumeric Conversion Table

Display Reading (Alphanumeric)	℃	℉	%
A1 thru A9	−1 thru −9	30 thru 16	−1 thru −9
B0 thru B9	−10 thru −19	14 thru −2	−10 thru −19
C0 thru C9	−20 thru −29	−4 thru −20	−20 thru −29
D0 thru D9	−30 thru −39	−22 thru −38	−30 thru −39
E0 thru E9	−40 thru −49	−40 thru −58	−40 thru −49
F0 thru F9	−50 thru −59	−58 thru −74	+100 thru +109

Alphanumeric Conversion Table (Mode Positioning)

Display Reading (Alphanumeric)	Mode Position
0	VENT
20	HEAT/VENT-1
40	HEAT/VENT-2
60	HEAT
80	HEAT/DEF
F0	DEF

DTC Troubleshooting Index

Checking the DTCs by HDS

DTC	Detection Item or Symptom	ECU	DTC type	Page
U1280	Communication bus line error (bus-off)	Climate control unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)
U0155	Climate control unit lost communication with gauge control module	Climate control unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 21-124)
B121A	An open in the mode control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-125)
B121B	A short in the mode control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-127)
B1220	A short in the recirculation control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-130)
B1225	An open in the in-car temperature sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-134)
B1226	A short in the in-car temperature sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-135)
B1227	An open in the outside air temperature sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-137)
B1228	A short in the outside air temperature sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-138)
B1229	An open in the sunlight sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-139)
B1230	A short in the sunlight sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-141)
B1231	An open in the evaporator temperature sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-142)
B1232	A short in the evaporator temperature sensor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-144)
B1233	An open in the driver's air mix control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-145)
B1234	A short in the driver's air mix control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-146)
B1235	A problem in the driver's air mix control linkage, door, or motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-149)
B1236	An open in the passenger's air mix control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-150)
B1237	A short in the passenger's air mix control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-152)
B1238	A problem in the passenger's air mix control linkage, door, or motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-155)
B1241	A problem in the blower motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-157)
B2983	A problem in the recirculation control linkage, door, or motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-161)
B2986	An open in the recirculation control motor circuit	Climate control unit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-162)

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
The blower and heater controls and the A/C system do not work	• Probable cause: Climate control unit malfunction • Do the climate control power and ground circuit troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 21-164)	• HVAC DTCs (see page 21-40) • Blown fuse No. 16 (7.5 A) in the driver's under-dash fuse/relay box • Poor ground at G401, refer to the 2008-2009 Accord Service Manual (with navigation and premium audio: see page 22-40, with premium audio, see page 22-42, without premium audio, see page 22-44) • Poor or loose connections at the terminals
The A/C compressor clutch and the A/C condenser/ radiator fans are inoperative, but the blower and heater controls work	• Probable cause: A/C pressure switch circuit malfunction • Do the pressure sensor troubleshooting: A/C pressure sensor circuit low voltage (see page 11-374), A/C pressure sensor circuit high voltage (see page 11-376) NOTE: The A/C pressure sensor can malfunction without setting a DTC	• HVAC DTCs (see page 21-40) • Powertrain DTCs (see page 11-3) • Poor or loose connections at the terminals
The A/C compressor clutch does not engage, but the A/C condenser/ radiator fans operate, and the blower and heater controls work	• Probable cause: No power to the A/C compressor clutch • Do the A/C compressor clutch circuit troubleshooting (see page 21-26)	• HVAC DTCs (see page 21-40) • Blown fuses No. 20 (7.5 A) • A/C system pressure is normal, refer to the 2008-2009 Accord Service Manual (see page 21-88) • Poor or loose connections at the terminals
The A/C condenser fan and/or the radiator fan do not run with the A/C on	• Probable cause: Condenser/radiator fan low speed circuit malfunction • Do the radiator and A/C condenser fan low speed circuit troubleshooting (see page 21-22)	• HVAC DTCs (see page 21-40) • Powertrain DTCs (see page 11-3) • Blown fuse No. 3-8 (30 A) in the under-hoodfuse/relay box • Poor ground at G302, refer to the 2008-2009 Accord Service Manual (see page 22-30) • Poor or loose connections at the terminals
The condenser/ radiator fans do not run at high speed, but do run at low speed	• Probable cause: Malfunction in the fan(s) high speed circuit • Do the following troubleshooting as needed: – A/C condenser fan high speed circuit troubleshooting (see page 21-25) – Radiator fan high speed circuit troubleshooting (see page 10-20)	• HVAC DTCs (see page 21-40) • Powertrain DTCs (see page 11-3) • Blown fuses No. 3-6 (30 A) in the under-hood fuse/relay box • Poor ground at G302, refer to the 2008-2009 Accord Service Manual (see page 22-30) • Poor or loose connections at the terminals
Voice commands do not work	• Probable cause: Communication problem between the climate control unit and the navigation system • Do the navigation communication line circuit troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 21-165)	• HVAC DTCs (see page 21-40) • Navi system link, refer to the 2008-2009 Accord Service Manual (see page 23-170) • Poor or loose connections at the terminals
Blower fan runs slower than expected in cold weather (when in AUTO mode)	• Probable cause: Engine coolant temperature (ECT) circuit malfunction • Troubleshoot the ECT sensor circuit: – ECT sensor 2 circuit low voltage (see page 11-198) – ECT sensor 2 circuit high voltage (see page 11-199)	• HVAC DTCs (see page 21-40) • Powertrain DTCs (see page 11-3) • Blower motor operation

Symptom	Diagnostic procedure	Also check for
The A/C compressor clutch cycles rapidly on and off	• Probable cause: The A/C system is very low on refrigerant, indicating a possible leak • Do the refrigerant leak check, refer to the 2008-2009 Accord Service Manual (see page 21-81) and repair any leaks. Replace the receiver/dryer, refer to the 2008-2009 Accord Service Manual (see page 21-76), then recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• HVAC DTCs (see page 21-40) • If there is no leak and the refrigerant level is normal, do the A/C compressor clutch circuit troubleshooting (see page 21-26), and look for an intermittent problem.
Warm air comes out of the vents, and the high pressure liquid line is very hot	• Probable cause: The A/C system is overcharged (too much refrigerant), or the A/C condenser is malfunctioning • Recover A/C refrigerant, refer to the 2008-2009 Accord Service Manual (see page 21-78), then check the condenser for restrictions or poor airflow. Repair as needed. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• Incorrect tension or abnormal wear on the drive belt. Replace the belt and/or the belt tensioner as needed. • Proper operation of the A/C condenser/radiator fans. Repair as needed. • Signs of an overheated engine. Repair as needed.
Warm air comes out of the vents. The suction line is cool to warm, and the discharge line is warm to hot	• Probable cause: The A/C system is low on refrigerant, indicating a possible leak • Do the refrigerant leak check, refer to the 2008-2009 Accord Service Manual (see page 21-81) and repair any leaks. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• HVAC DTCs (see page 21-40) • Add refrigerant oil depending on the part you replaced, refer to the 2008-2009 Accord Service Manual (see page 21-6)
Warm air comes out of the vents. The suction line is cool to warm, the discharge line is warm to hot, and there is no frost on the expansion valve	• Probable cause: Excessive air and/or moisture in the system, indicating a possible leak • Do the refrigerant leak check, refer to the 2008-2009 Accord Service Manual (see page 21-81) and repair any leaks. Replace the receiver/dryer, refer to the 2008-2009 Accord Service Manual (see page 21-76), then recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	• HVAC DTCs (see page 21-40) • Check the amount of refrigerant oil in the system. Adjust the oil level as needed.
Warm air comes out of the vents. The liquid line or the condenser outlet is abnormally cool, or there is frost or condensation on the receiver/dryer	• Probable cause: A restriction in the high-pressure side of the system • Recover A/C refrigerant, refer to the 2008-2009 Accord Service Manual (see page 21-78), then check the liquid line, the receiver/dryer, and the A/C condenser for restrictions. Repair as needed. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	HVAC DTCs (see page 21-40)
There is heavy frost or condensation on the expansion valve, and frost on the suction line	• Probable cause: A restriction in the low-pressure side of the system • Recover A/C refrigerant, refer to the 2008-2009 Accord Service Manual (see page 21-78), then check the suction line and the expansion valve for restrictions. Repair as needed. Recharge the system to specifications, refer to the 2008-2009 Accord Service Manual (see page 21-80)	HVAC DTCs (see page 21-40)

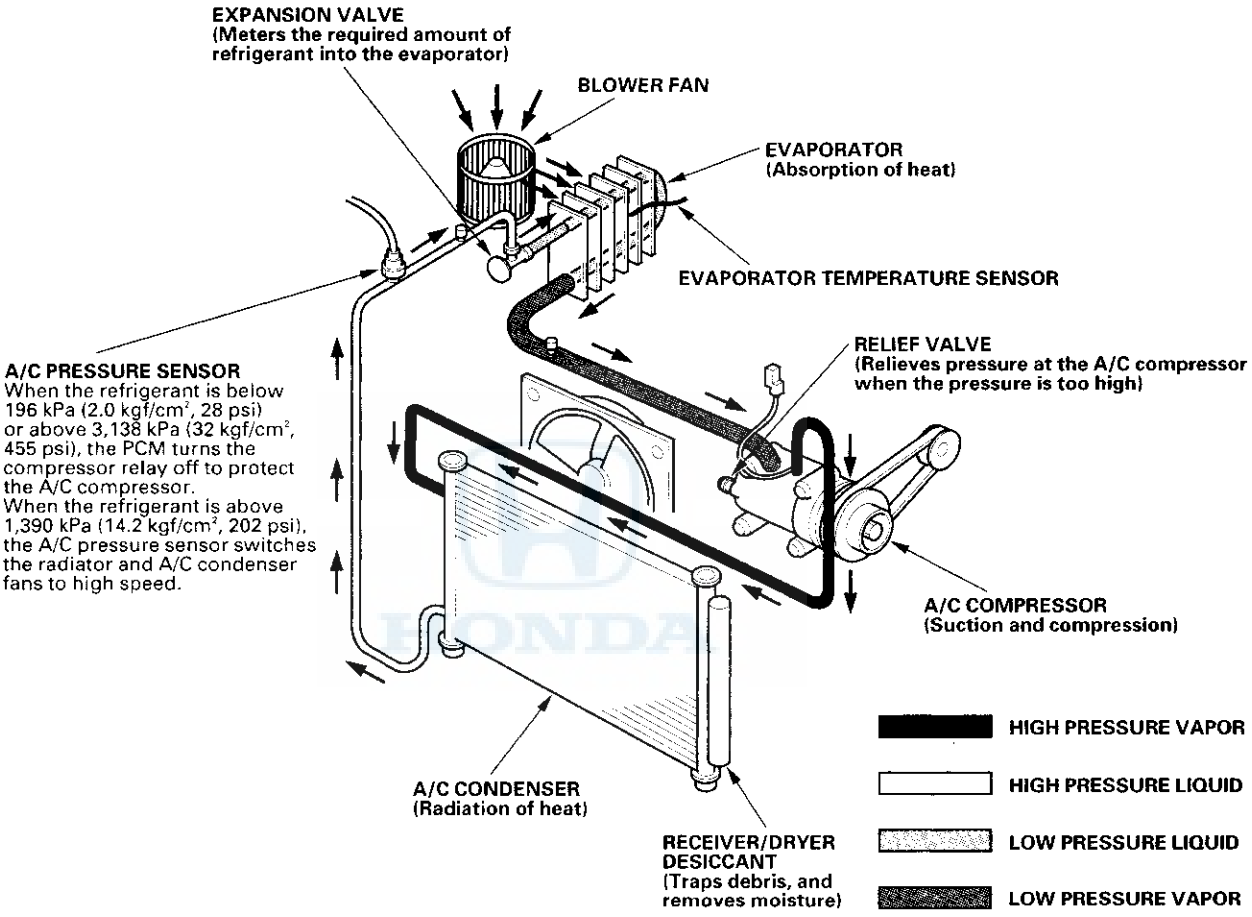
(cont'd)

Symptom Troubleshooting Index (cont'd)

Symptom	Diagnostic procedure	Also check for
Warm air comes out of the vents, and there is frost on the expansion valve	• Probable cause: The expansion valve is stuck closed • Replace the expansion valve, refer to the 2008-2009 Accord Service Manual (see page 21-66)	• HVAC DTCs (see page 21-40) • Check the old expansion valve for contamination. If contaminants are found, replace the A/C system component that caused the contamination.
The temperature of the liquid line is the same on both sides of the expansion valve, and the evaporator coil or suction line has heavy condensation	• Probable cause: The expansion valve is stuck open • Replace the expansion valve, refer to the 2008-2009 Accord Service Manual (see page 21-66)	• HVAC DTCs (see page 21-40) • Check the old expansion valve for contamination. If contaminants are found, replace the A/C system component that caused the contamination.
Warm air comes out of the vents, but operation is normal otherwise	• Probable cause: A/C compressor failure • Do the A/C system test, refer to the 2008-2009 Accord Service Manual (see page 21-88), and correct any problems. If necessary, replace the A/C compressor (see page 21-32)	• HVAC DTCs (see page 21-40) • Add refrigerant oil depending on the part you replaced, refer to the 2008-2009 Accord Service Manual (see page 21-6)
Driver's and passenger's side vent temperatures vary by more than 20 ℉ (11 ℃)	• Probable causes: The recirculation control door or the air mix door is malfunctioning • Do the following troubleshooting: – Recirculation control motor test (see page 21-67) – Driver's air mix control motor test, refer to the 2008-2009 Accord Service Manual (see page 21-56) – Passenger's air mix control motor test, refer to the 2008-2009 Accord Service Manual (see page 21-177)	• HVAC DTCs (see page 21-40) • Poor or loose connections at the terminals
HDS does not communicate with the climate control unit or the vehicle	Troubleshoot the DLC circuit (see page 11-259)	
Insufficient heating	1. Check the coolant level (see page 10-6) 2. Check the radiator cap (see page 10-3) 3. Check the coolant temperature during normal operation 4. Check the heater core inlet hose temperature: • If it is COLD, check for restrictions in the hose, a damaged or leaking thermostat, or a damaged or leaking water pump • If it is HOT, check for restrictions in the heater core. Back flush or replace the heater core 5. Do the driver's air mix control motor test, refer to the 2008-2009 Accord Service Manual (see page 21-56) and passenger's air mix control motor test, refer to the 2008-2009 Accord Service Manual (see page 21-177) 6. Check the blower motor unit for obstructions 7. Check for air leaks around the ducts and vents	• HVAC DTCs (see page 21-40) • Damaged cylinder head gasket

System Description

The air conditioning (A/C) system removes heat from the passenger compartment by transferring heat from the ambient air to the evaporator. The A/C system refrigerant expands in the evaporator, and the evaporator becomes very cold and absorbs the heat from the ambient air. The blower fan pushes air across the evaporator where the heat is absorbed, and then it blows the cool air into the passenger compartment.



This vehicle uses HFC-134a (R-134a) refrigerant, which does not contain chlorofluorocarbons. Pay attention to the following service items:

- Do not mix refrigerants CFC-12 (R-12) and HFC-134a (R-134a). They are not compatible.
- Use only the recommended polyalkyleneglycol (PAG) refrigerant oil (DENSO ND-OIL 8) designed for the R-134a A/C compressor. Intermixing the recommended (PAG) refrigerant oil with any other refrigerant oil will result in A/C compressor failure.
- All A/C system parts (A/C compressor, discharge line, suction line, evaporator, A/C condenser, receiver/dryer, expansion valve, O-rings for joints) are designed for refrigerant R-134a. Do not exchange with R-12 parts.
- Use a halogen gas leak detector designed for refrigerant R-134a.
- R-12 and R-134a refrigerant servicing equipment are not interchangeable. Use only a recovery/recycling/charging station that is U.L.-listed and is certified to meet the requirements of SAE J2210 to service the R-134a air conditioning systems.
- Always recover refrigerant R-134a with an approved recovery/recycling/charging station before disconnecting any A/C fitting.

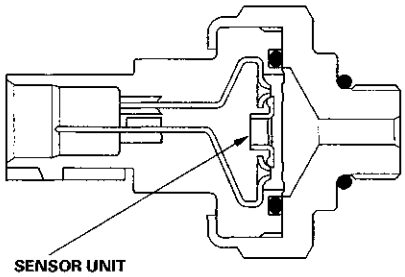
(cont'd)

System Description (cont'd)

A/C Pressure Sensor

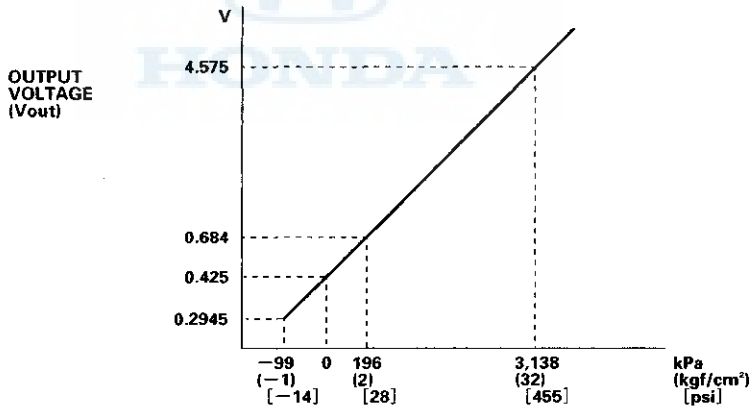
The A/C pressure sensor converts A/C pressure into electrical signals to the ECM/PCM.

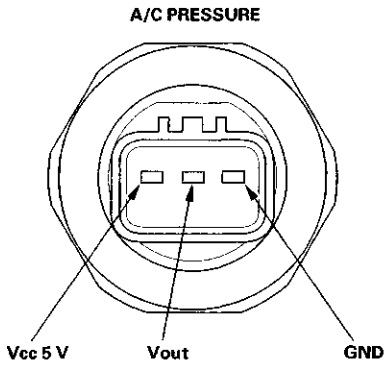
NOTE: The pressure can be monitored using the HDS PGM-FI Data List:
- Select PGM-FI
- Select Data List (A/C Pressure)



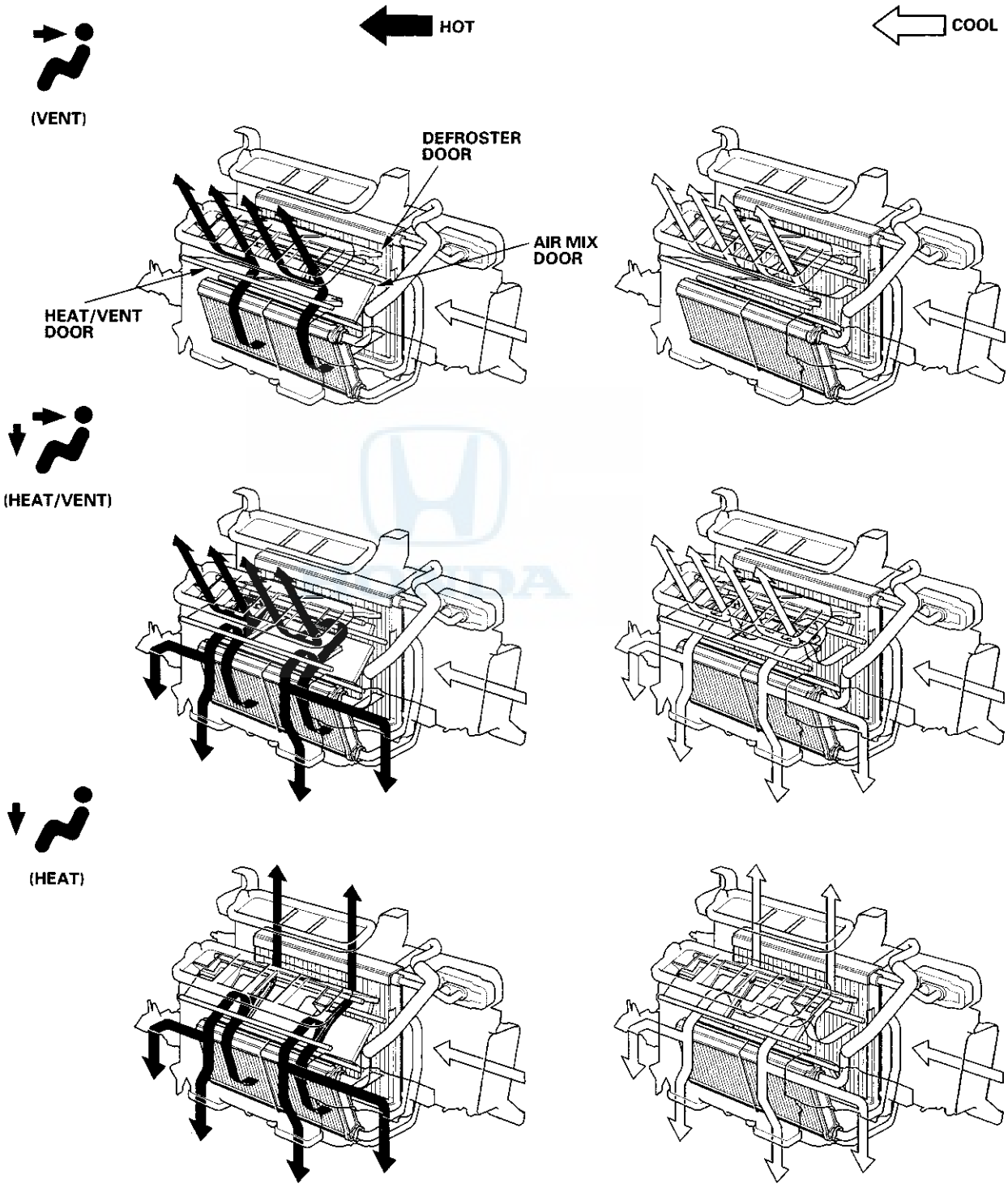
The response of the A/C pressure sensor is shown in the graph.

NOTE: When the refrigerant is below 196 kPa (2.0 kgf/cm², 28 psi) or above 3,138 kPa (32 kgf/cm², 455 psi), the PCM turns the compressor relay off to protect the A/C compressor. When the refrigerant pressure is above 1,390 kPa (14.2 kgf/cm², 202 psi), the ECM/PCM switches the radiator and A/C condenser fans to high speed.





Climate Control Door Positions



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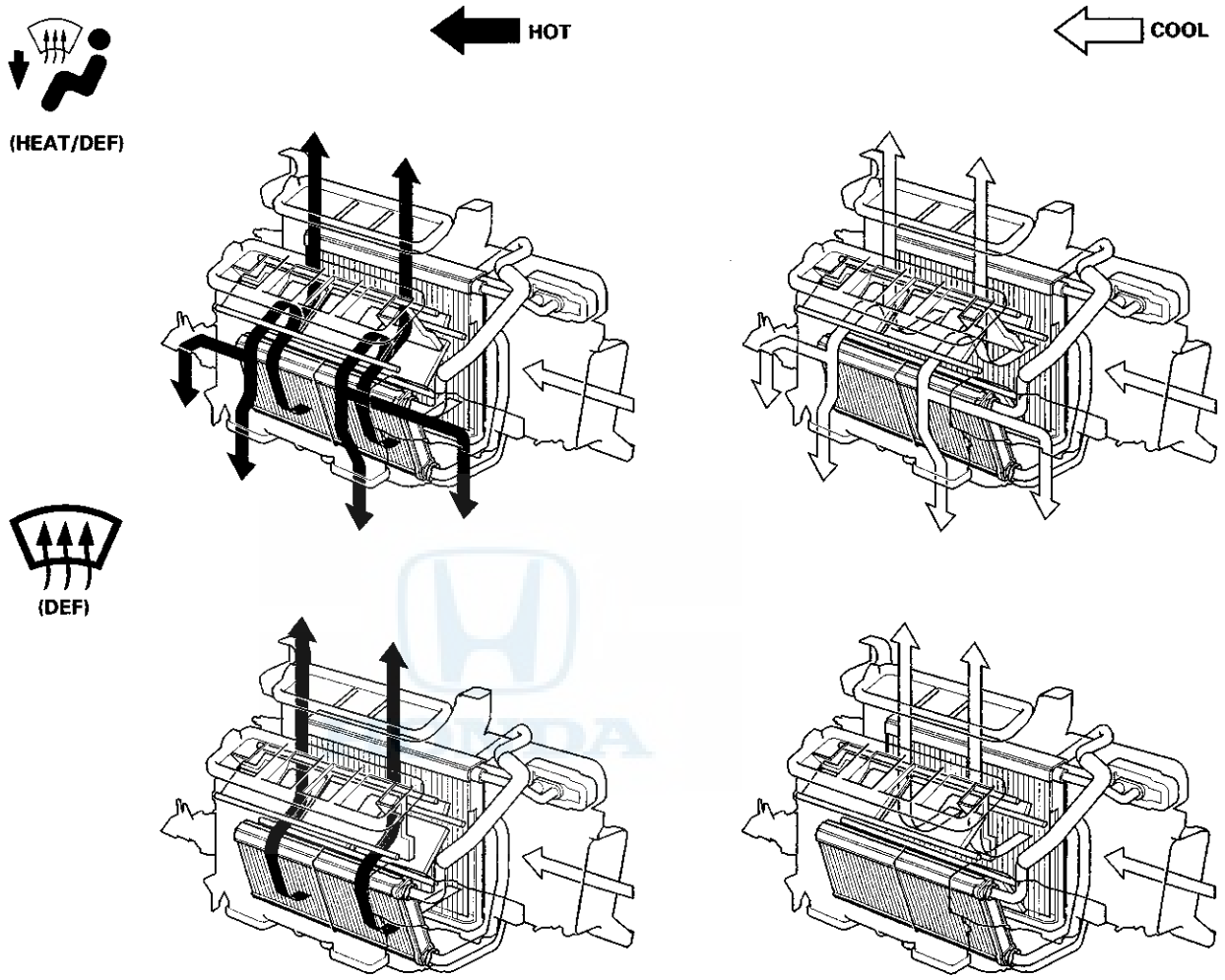
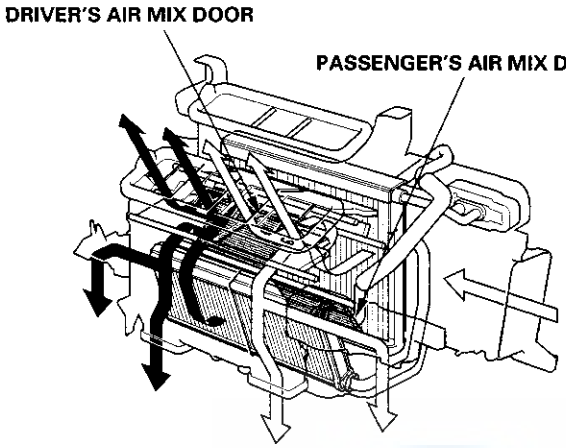
System Description (cont'd)

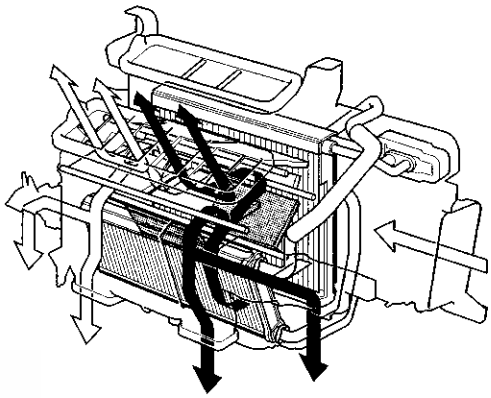


Dual Air Mix Control System

Driver's side: HOT
Passenger's side: COOL



Driver's side: COOL
Passenger's side: HOT



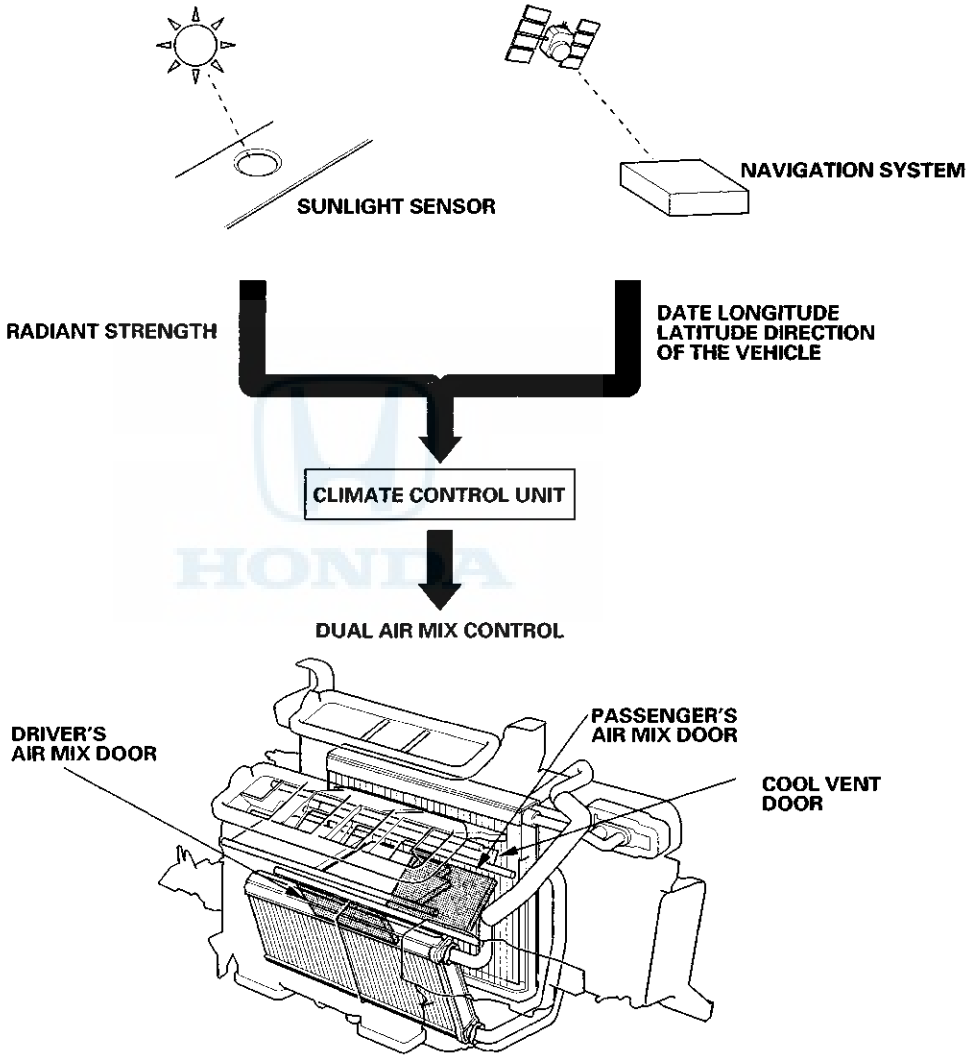
HONDA

(cont'd)

System Description (cont'd)

i-Dual Zone Climate Control System

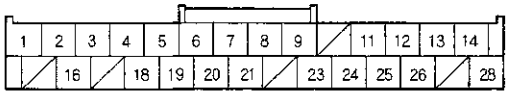
This system automatically controls the temperature and the vent mode of the air direction to the driver and passenger's side depending on the angle of the sun and the direction of the vehicle. It calculates information such as date, time, longitude, and latitude from the navigation system, as well as the radiant strength of the sun from the sunlight sensor, to determine the appropriate mode position and temperature to be directed to each side.



In the event that the navigation system malfunctions, or when driving in areas where the navigation cannot determine the vehicle position (non-coverage areas, tunnels, etc.), the climate control system will operate the same as a vehicle without navigation.

Climate Control Unit Inputs and Outputs

CLIMATE CONTROL UNIT CONNECTOR A (28P)



Wire side of female terminals

Cavity	Wire color	Terminal name	Description	Signal
1	LT GRN	M-HOT AS	Drives passenger's air mix control motor to HOT	With ignition switch ON (II) and passenger's air mix control motor moving to HOT: battery voltage
2	BRN*1 WHT*2	M-COOL AS	Drives passenger's air mix control motor to COOL	With ignition switch ON (II) and passenger's air mix control motor moving to COOL: battery voltage
3	RED*1 PUR*2	M-FRS	Drives recirculation control motor to FRESH	With ignition switch ON (II) and recirculation control motor moving to FRESH: battery voltage
4	LT BLU	M-COOL DR	Drives driver's air mix control motor to COOL	With ignition switch ON (II) and driver's air mix control motor moving to COOL: battery voltage
5	PUR*1 ORN*2	M-REC	Drives recirculation control motor to RECIRCULATE	With ignition switch ON (II) and recirculation control motor moving to RECIRCULATE: battery voltage
6	PNK	M-HOT DR	Drives driver's air mix control motor to HOT	With ignition switch ON (II) and driver's air mix control motor moving to COOL: battery voltage
7	YEL*1 WHT*2	M-VENT	Outputs mode control motor to VENT	With ignition switch ON (II) and mode control motor moving to VENT: battery voltage
8	GRY*1 GRN*2	M-DEF	Outputs mode control motor to DEF	With ignition switch ON (II) and mode control motor moving to DEF: battery voltage
9	RED*1 LT GRN*2	IG2	IG2 power source	With ignition switch ON (II): battery voltage
11	RED*1 LT GRN*2	MDD-P	Detects mode control motor position	With ignition switch ON: about 0.5-4.5 V (depending on mode control motor position)
12	BLU*1 PNK*2	RFD-P	Detects recirculation control motor position	With ignition switch ON: about 0.5 4.5 V (depending on mode control motor position)

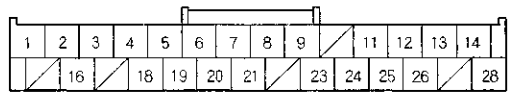
*1: With navigation
*2: Without navigation

(cont'd)

System Description (cont'd)

Climate Control Unit Inputs and Outputs (cont'd)

CLIMATE CONTROL UNIT CONNECTOR A (28P)



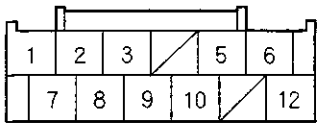
Wire side of female terminals

Cavity	Wire color	Terminal name	Description	Signal
13	LT BLU*1 YEL*2	AMD-P AS	Detects passenger's air mix control motor position	With ignition switch ON (II) and passenger's air mix door at HOT: about 4.5 V With ignition switch ON (II) and passenger's air mix door at COOL: about 0.5 V
14	GRY	AMD-P DR	Detects driver's air mix control motor potentiometer signal	With ignition switch ON (II) and driver's air mix door at HOT: about 4.5 V With ignition switch ON (II) and driver's air mix door at COOL: about 0.5 V
16	RED	ILL — BULB	Detects illumination control signal	With combination light switch ON: varies as dash lights brightness varies
18	GRY	SMALL	Inputs voltage for illumination	With combination light switch ON: battery voltage
19	LT BLU*1 RED*2	DISP CLK	Communication signal from subdisplay	With ignition switch ON (II): pulses (about 2.5 V)
20	BLU*1 PUR*2	DISP SI	Communication signal to subdisplay potentiometer signal	With ignition switch ON (II): pulses (about 2.5 V)
21	PUR*1 LT BLU*2	ACS	Outputs A/C on/off signal	With ignition switch ON (II) and A/C request OFF: battery voltage. When A/C request switches ON, voltage changes to about 0 V
23	BRN	Teva	Detects evaporator temperature sensor signal	With ignition switch ON: about 1.0 - 4.0 V (depending on evaporator temperature). About 2.5 V at 72°F (22°C)
24	LT GRN*1 BLU*2	TAM	Detects outside air temperature sensor signal	With ignition switch ON (II): about 1.0—4.0 V (depending on outside air temperature)
25	YEL*1 PUR*2	TSUN	Detects sunlight sensor signal	With ignition switch ON (II) and sensor out of direct sunlight: 3.6—3.7 V or more With ignition switch ON (II) and sensor in direct sunlight: 3.3—3.5 V or less
26	BLK*1 WHT*2	TR	Detects in-car temperature sensor signal	With ignition switch ON (II): about 1.0—4.0 V (depending on in-car temperature)
28	GRN	BUS DATA	Communication signal to driver's climate control switch	With ignition switch ON (II): pulses (about 2.5 V)

* 1: With navigation
* 2: Without navigation

Climate Control Unit Inputs and Outputs

CLIMATE CONTROL UNIT CONNECTOR B (12P)



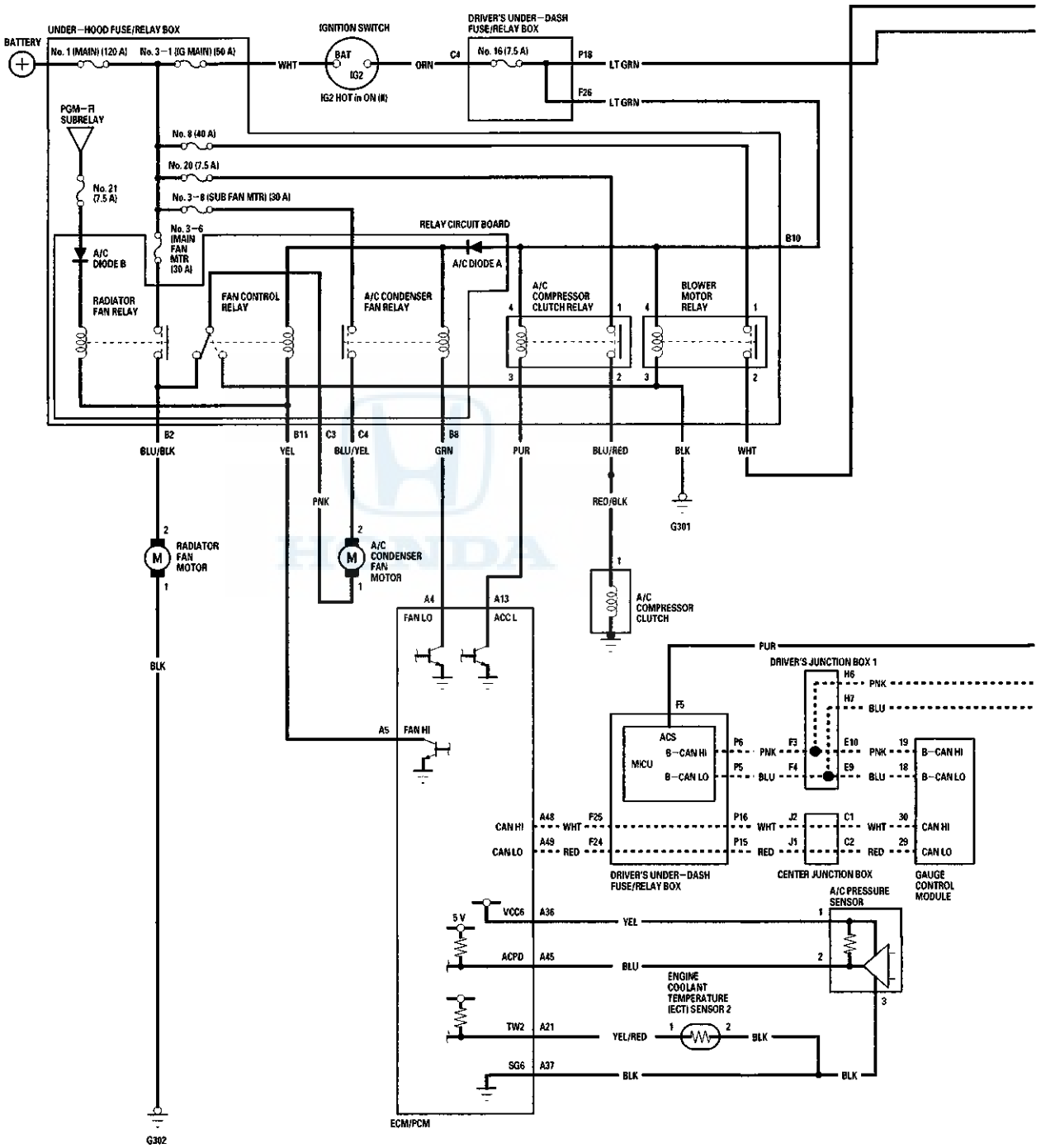
Wire side of female terminals

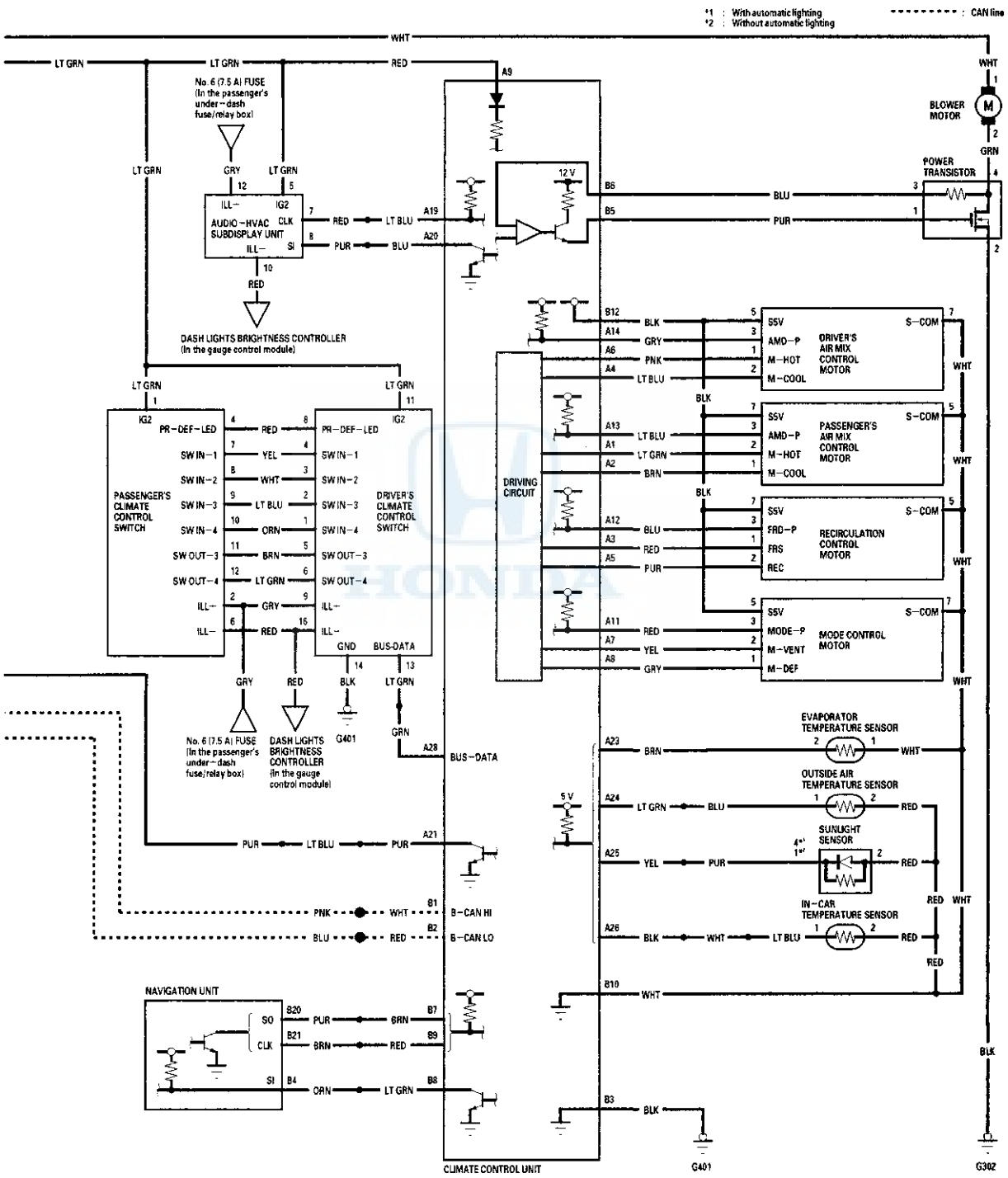
Cavity	Wire color	Terminal name	Description	Signal
1	WHT*1 PNK*2	B-CAN HI	B-CAN communication signal	With ignition switch ON (II): pulses (about 2.5 V)
2	RED*1 BLU*2	B-CAN LO	B-CAN communication signal	With ignition switch ON (II): pulses (about 2.5 V)
3	BLK	GND	Ground for climate control unit (G401)	Less than 0.5 V at all times
5	PUR*1 YEL*2	BLW-G	Outputs power transistor gate voltage	With ignition switch ON (II) and blower OFF: 0 V. Voltage increases as blower speed increases
6	BLU	BLW-V	Feedback signal of power transistor drain voltage	With ignition switch ON (II) and blower OFF: between 5 V and 12 V. Voltage decreases as blower speed increases
7	BRN	NAVI SO	Communication signal from navigation	With ignition switch ON (II): pulses (about 2.5 V)
8	LT GRN	NAVI SI	Communication signal to navigation	With ignition switch ON (II): pulses (about 2.5 V)
9	RED	NAVI CLK	Communication signal from navigation	With ignition switch ON (II): pulses (about 2.5 V)
10	WHT*1 RED*2	SENS-COM	Sensor ground	Less than 0.5 V at all times
12	BLK	S5V	Outputs sensor 5 V	With ignition switch ON (II): about 5.0 V

*1: With navigation
*2: Without navigation

Circuit Diagram

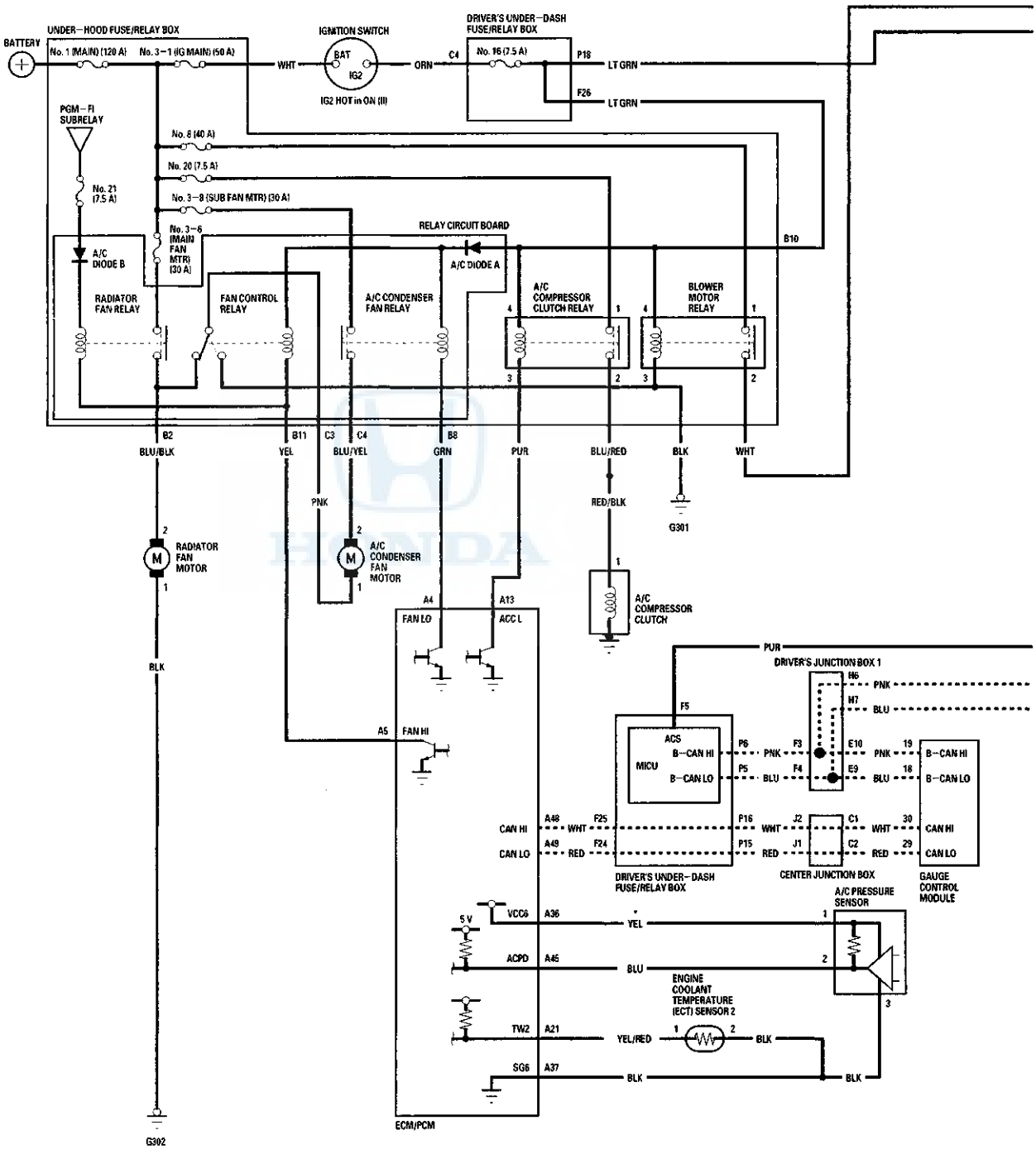
With navigation

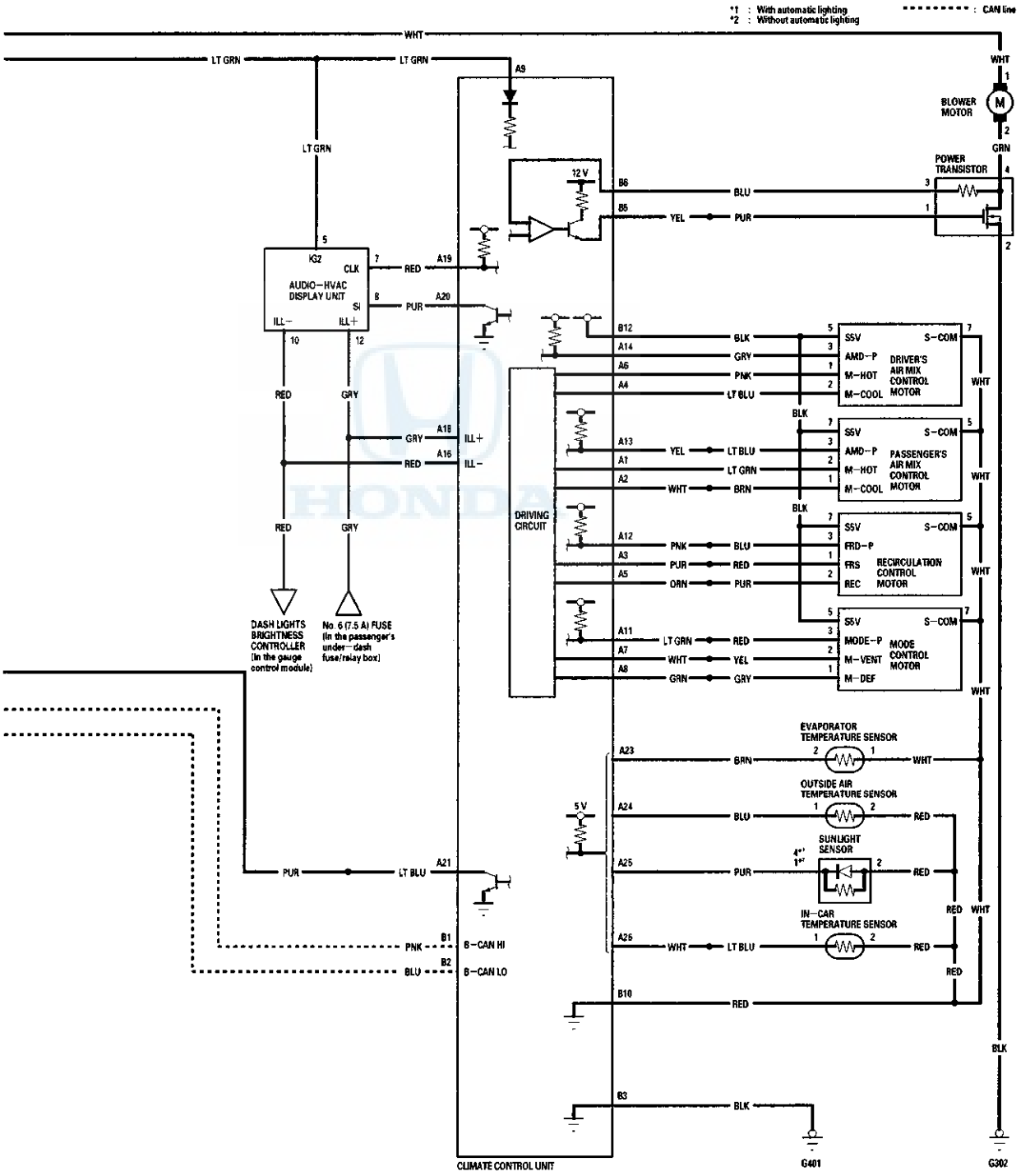



*1 : With automatic lighting
*2 : Without automatic lighting
: CAN line
WHT
LT GRN
LT GRN
RED
No. 6 (7.5 A) FUSE (In the passenger's under-dash fuse/relay box)
LT GRN
GRY
LT GRN
12
5
ILL-
IG2
AUDIO-HVAC SUBDISPLAY UNIT
CLK
SI
ILL-
7
8
10
RED
LT BLU
PUR
BLU
A19
A20
DASH LIGHTS BRIGHTNESS CONTROLLER (In the gauge control module)
A9
12 V
B6
B5
BLU
PUR
WHT
1
BLOWER MOTOR
M
2
GRN
POWER TRANSISTOR
3
4
1
2
LT GRN
LT GRN
1
11
IG2
PR-DEF-LED
SW IN-1
SW IN-2
SW IN-3
SW IN-4
SW OUT-3
SW OUT-4
ILL-
ILL-
PASSENGER'S CLIMATE CONTROL SWITCH
DRIVER'S CLIMATE CONTROL SWITCH
GND
BUS-DATA
14
13
GRY
RED
BLK
LT GRN
GRN
No. 6 (7.5 A) FUSE (In the passenger's under-dash fuse/relay box)
DASH LIGHTS BRIGHTNESS CONTROLLER (In the gauge control module)
G401
A28
BUS-DATA
DRIVING CIRCUIT
B12
A14
A6
A4
BLK
GRY
PNK
LT BLU
S5V
AMD-P
M-HOT
M-COOL
S-COM
DRIVER'S AIR MIX CONTROL MOTOR
A13
A1
A2
LT BLU
LT GRN
BRN
PASSENGER'S AIR MIX CONTROL MOTOR
A12
A3
A5
BLU
RED
PUR
FRD-P
FRS
REC
RECIRCULATION CONTROL MOTOR
A11
A7
A8
RED
YEL
GRY
MODE-P
M-VENT
M-DEF
MODE CONTROL MOTOR
WHT
BLK
EVAPORATOR TEMPERATURE SENSOR
A23
BRN
WHT
OUTSIDE AIR TEMPERATURE SENSOR
5 V
A24
LT GRN
BLU
RED
SUNLIGHT SENSOR
*1
*2
A25
YEL
PUR
RED
IN-CAR TEMPERATURE SENSOR
A26
BLK
WHT
LT BLU
RED
PUR
LT BLU
PUR
A21
PNK
WHT
B1
B-CAN HI
BLU
RED
B2
B-CAN LO
NAVIGATION UNIT
SO
CLK
SI
B20
B21
B4
PUR
BRN
ORN
GRN
RED
LT GRN
B7
B9
B8
B10
WHT
B3
BLK
CLIMATE CONTROL UNIT
G401
G302

Circuit Diagram (cont'd)

Without navigation




*1 : With automatic lighting
*2 : Without automatic lighting
: CAN line
WHT
LT GRN
LT GRN
A9
WHT
1
BLOWER MOTOR
M
2
GRN
LT GRN
POWER TRANSISTOR
12 V
B6
BLU
3
4
B5
YEL
PUR
1
2
5
IG2
CLK
7
RED
A19
AUDIO—HVAC DISPLAY UNIT
SI
8
PUR
A20
ILL—
ILL+
10
12
B12
BLK
5
S5V
S—COM
7
A14
GRY
3
AMD—P
DRIVER'S AIR MIX CONTROL MOTOR
A6
PNK
1
M—HOT
A4
LT BLU
2
M—COOL
WHT
BLK
RED
GRY
A18
GRY
ILL+
A16
RED
ILL—
7
S5V
S—COM
5
A13
YEL
LT BLU
3
AMD—P
PASSENGER'S AIR MIX CONTROL MOTOR
A1
LT GRN
2
M—HOT
A2
WHT
BRN
1
M—COOL
WHT
BLK
DRIVING CIRCUIT
RED
GRY
7
S5V
S—COM
5
A12
PNK
BLU
3
FRD—P
A3
PUR
RED
1
FRS
RECIRCULATION CONTROL MOTOR
A5
ORN
PUR
2
REC
WHT
DASH LIGHTS BRIGHTNESS CONTROLLER (In the gauge control module)
No. 6 (7.5 A) FUSE (In the passenger's under—dash fuse/relay box)
5
S5V
S—COM
7
A11
LT GRN
RED
3
MODE—P
MODE CONTROL MOTOR
A7
WHT
YEL
2
M—VENT
A8
GRN
GRY
1
M—DEF
WHT
EVAPORATOR TEMPERATURE SENSOR
A23
BRN
2
1
WHT
OUTSIDE AIR TEMPERATURE SENSOR
5 V
A24
BLU
1
2
RED
SUNLIGHT SENSOR
*1
*2
A25
PUR
1
2
RED
RED
WHT
IN—CAR TEMPERATURE SENSOR
A26
WHT
LT BLU
1
2
RED
RED
PUR
LT BLU
A21
B10
RED
BLK
B1
PNK
B—CAN HI
B2
BLU
B—CAN LO
B3
BLK
CLIMATE CONTROL UNIT
G401
G302

A/C Signal Circuit Troubleshooting

NOTE:
- If the blower motor does not run at all speeds, the A/C compressor will be inoperative. Run the self-diagnostic function, and check for DTC B1241. Before performing any other troubleshooting, repair the cause of the inoperative blower motor.
- Do not use this troubleshooting procedure if any of the following items are operative: The condenser fan, the radiatior fan, or the A/C compressor, or if the heater is inoperative. Refer to the symptom troubleshooting index.
- Before doing symptom troubleshooting, check for powertrain DTCs (see page 11-3).

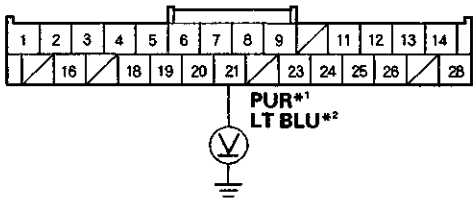
1. Turn the ignition switch to ON (II).
2. Check if the blower motor operates at all speeds.

   Does the blower motor operate at all speeds?

   YES—Go to step 3.

   NO—Repair the problem in the blower motor circuit, refer to the 2008-2009 Accord Service Manual (see page 21-157).■
3. Turn the ignition switch to LOCK (0).
4. Disconnect climate control unit connector A (28P).
5. Turn the ignition switch to ON (II).
6. Measure the voltage between the climate control unit connector A (28P) No. 21 terminal and body ground.

CLIMATE CONTROL UNIT CONNECTOR A (28P)



Wire side of female terminals

***1: With navigation**
***2: Without navigation**

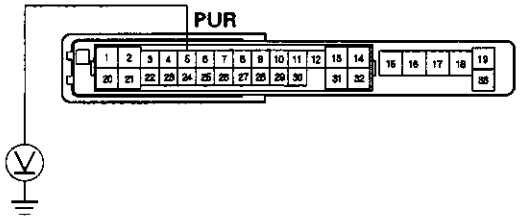
Is there battery voltage?

YES—Go to step 8.

NO—Go to step 7.

7. Measure the voltage between the driver's under-dash fuse/relay box connector F (33P) No. 5 terminal and body ground.

DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR F (33P)



Wire side of female terminals

Is there battery voltage?

YES—Repair open in the wire between the climate control unit and the MICU.■

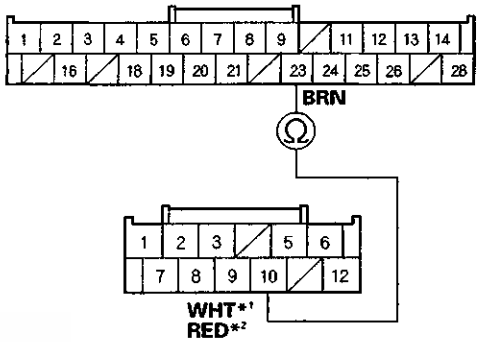
NO—Check for loose wire or poor connections at driver's under-dash fuse/relay box connector F (33P) No. 5 terminal. If the connections are good, substitute a known-good MICU and recheck. If the symptom goes away, replace the original MICU.■

8. Turn the ignition switch to LOCK (0).

9. Disconnect climate control unit connector B (12P).

10. Measure the evaporator temperature sensor resistance between the climate control unit connector A (28P) No. 23 terminal and connector B (12P) No. 10 terminal.

CLIMATE CONTROL UNIT CONNECTOR A (28P)
Wire side of female terminals



CLIMATE CONTROL UNIT CONNECTOR B (12P)
Wire side of female terminals

***1: With navigation**
***2: Without navigation**

Is the resistance less than 24 kΩ ?

YES—Check for loose wires or poor connections at the climate control unit connectors. If the connections are good, substitute a known-good climate control unit and recheck. If the symptom goes away, replace the original climate control unit.■

NO—Test the evaporator temperature sensor, refer to the 2008-2009 Accord Service Manual (see page 21-54).■

Mode Control Motor Test

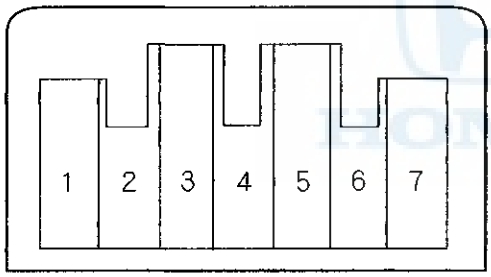
NOTE: Before testing, check for HVAC DTCs (see page 21-40).

1. Disconnect the 7P connector from the mode control motor.

   NOTICE
   Incorrectly applying power and ground to the mode control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the mode control motor, and ground the No. 2 terminal; the mode control motor should run, and stop at Defrost. If it doesn't, reverse the connections; the mode control motor should run, and stop at Vent. When the mode control motor stops running, disconnect battery power immediately.

MODE CONTROL MOTOR



3. If the mode control motor did not run in step 2, remove it, then check the mode control linkage and door for smooth movement.

   - If the linkage and door move smoothly, replace the mode control motor, refer to the 2008-2009 Accord Service Manual (see page 21-59).
   - If the linkage or door sticks or binds, repair them as needed.
   - If the mode control motor runs smoothly, go to step 4.

4. Measure the resistance between the No. 5 and No. 7 terminals of the mode control motor. It should be between 4.2 and 7.8 kΩ.

5. Reconnect the mode control motor 7P connector, then turn the ignition switch to ON (II).

6. Using the backprobe set, measure the voltage between the No. 3 and No. 7 terminals of the 7P connector.

   Vent: **About 0.5 V**
   Defrost: **About 4.5 V**

7. If either the resistance or the voltage readings are not as specified, replace the mode control motor, refer to the 2008-2009 Accord Service Manual (see page 21-59).

Recirculation Control Motor Test

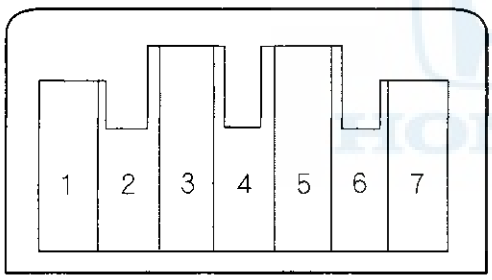
NOTE: Before testing, check for HVAC DTCs (see page 21-40).

1. Disconnect the 7P connector from the recirculation control motor.

   NOTICE
   Incorrectly applying power and ground to the recirculation control motor will damage it. Follow the instructions carefully.

2. Connect battery power to the No. 1 terminal of the recirculation control motor, and ground the No. 2 terminal; the recirculation control motor should run, and stop at Fresh. If it doesn't, reverse the connections; the recirculation control motor should run, and stop at Recirculate. When the recirculation control motor stops running, disconnect battery power immediately.

RECIRCULATION CONTROL MOTOR



3. If the recirculation control motor did not run in step 2, remove it, then check the recirculation control linkage and door for smooth movement.

   - If the linkage and door move smoothly, replace the recirculation control motor, refer to the 2008-2009 Accord Service Manual (see page 21-61).
   - If the linkage or door sticks or binds, repair them as needed.
   - If the recirculation control motor runs smoothly, go to step 4.

4. Measure the resistance between the No. 5 and No. 7 terminals of the recirculation control motor. It should be between 4.2 and 7.8 kΩ.

5. Reconnect the recirculation control motor 7P connector, then turn the ignition switch to ON (II).

6. Using the backprobe set, measure the voltage between the No. 3 and No. 7 terminals of the 7P connector.

   Fresh: About 1.0 V
   Recirculate: About 4.0 V

7. If either the resistance or the voltage readings are not as specified, replace the recirculation control motor, refer to the 2008-2009 Accord Service Manual (see page 21-61).

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If electrical maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

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Circuit Diagram 22-87

NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

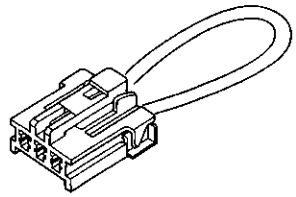
BODY

Outline of Model Change

Accord V6 model has been added, the related information is included.

Special Tools

Ref. No.	Tool Number	Description	Qty
①	07WAZ-001010A	MPCS (MCIC) Service Connector	1
②	07TAZ-001020A	Back Probe Adaptor	2
③	07AAC-000A1A0	Relay Puller	1



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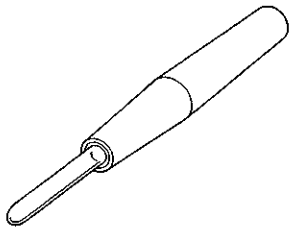

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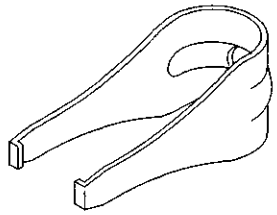
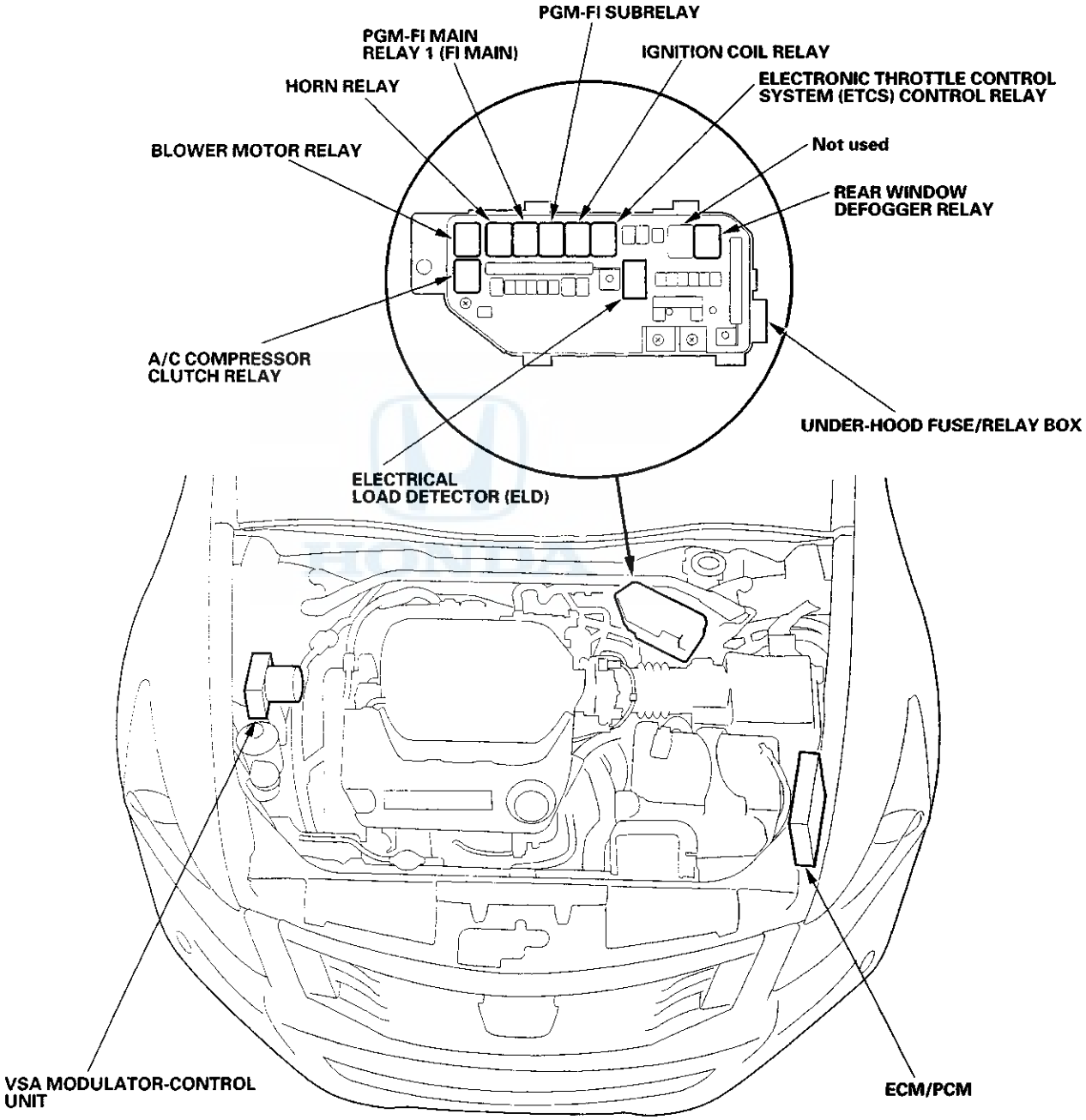


③

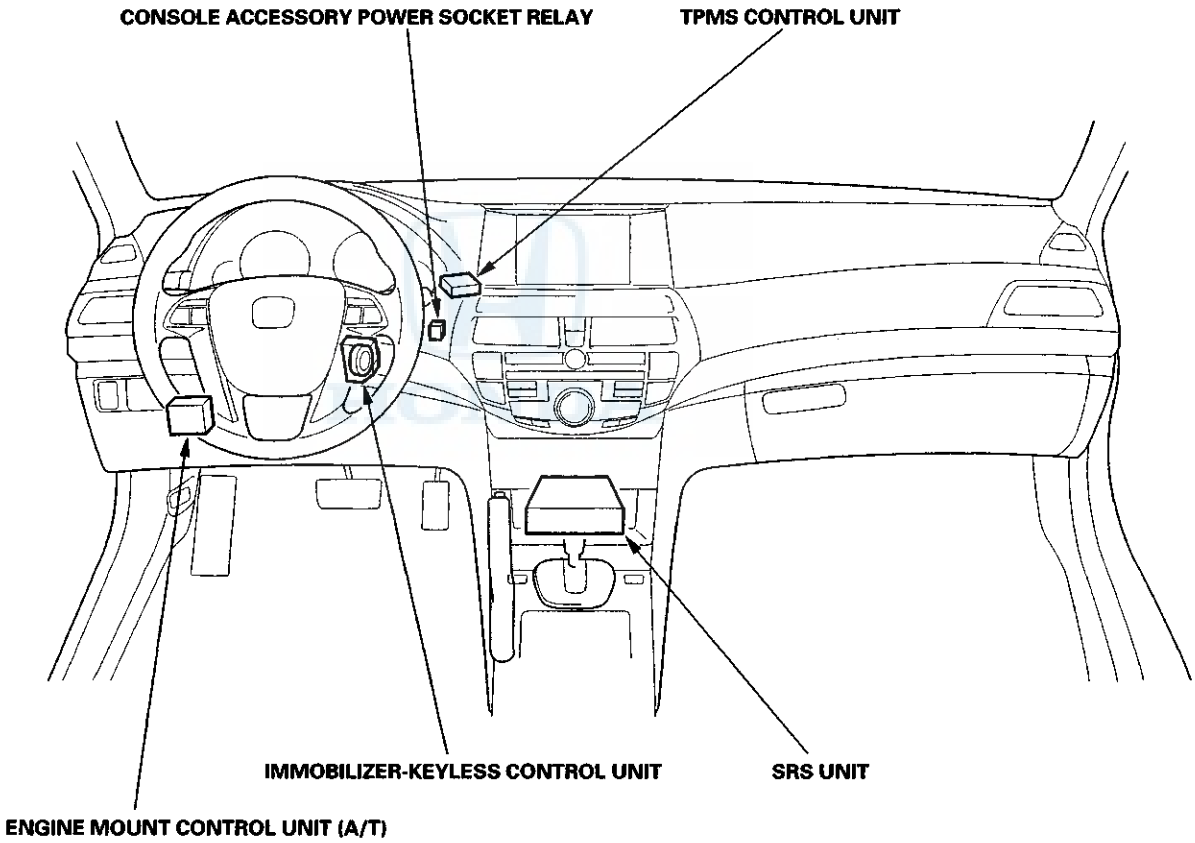
Relay and Control Unit Locations

Engine Compartment



Relay and Control Unit Locations

Dashboard



Connector Index

Identification numbers have been assigned to in-line connectors, junction connectors, and terminals. The number is preceded by the letter "C" for connectors, "G" for ground terminals, or "T" for non-ground terminals.

Harness	Location			
	Engine Compartment	Dashboard	Others (Floor, Door, Trunk, and Roof)	Notes
ANC rear microphone subharness			C653	• 4-door: Refer to the 2008-2009 Accord Service Manual (see page 22-46) • 2-door: Refer to the 2008-2009 Accord Service Manual (see page 22-48)
A/C wire harness (climate control system with navigation system)		C351, C409		Refer to the 2008-2009 Accord Service Manual (see page 22-70)
A/C wire harness (climate control system without navigation system)		C351, C409		Refer to the 2008-2009 Accord Service Manual (see page 22-71)
A/C wire harness (HVAC control system)		C351, C409		Refer to the 2008-2009 Accord Service Manual (see page 22-72)
Audio wire harness (with premium audio and navigation system)		C401, C402, C403, C404, C405, C406, C407, C408, C409, C410, C411 G401, G402		Refer to the 2008-2009 Accord Service Manual (see page 22-40)
Audio wire harness (with premium audio without navigation system)		C401, C402, C403, C405, C406, C407, C408, C409, C410 G401, G402		Refer to the 2008-2009 Accord Service Manual (see page 22-42)
Audio wire harness (without premium audio and navigation system)		C401, C403, C409, C410 G401, G402		Refer to the 2008-2009 Accord Service Manual (see page 22-44)
Battery ground cable	(−), G1			(see page 22-7)
Cable reel subharness				Refer to the 2008-2009 Accord Service Manual (see page 22-73)
Dashboard wire harness (view of driver's side)		C301, C302, C303, C501, C502, C601, C751 G501, G502		Refer to the 2008-2009 Accord Service Manual (see page 22-32)
Dashboard wire harness (view of middle to passenger's side)		C401, C402, C403, C503 G503	C701 G504	Refer to the 2008-2009 Accord Service Manual (see page 22-36)
Driver's door wire harness			C751	• 4-door: Refer to the 2008-2009 Accord Service Manual (see page 22-60) • 2-door: Refer to the 2008-2009 Accord Service Manual (see page 22-61)
Driver's seat position sensor harness (without power seat)			C702	Refer to the 2008-2009 Accord Service Manual (see page 22-67)
Driver's seat wire harness (with power seat)			C702	Refer to the 2008-2009 Accord Service Manual (see page 22-66)
Engine ground cable	T2, G2			(see page 22-7)
Engine wire harness	C101, C102, C103, C104, C105, C106, C107, G108 T101, T102 G101			• M/T: (see page 22-9) • A/T: (see page 22-13)
Front ACM subharness	C305			(see page 22-19)
Front passenger's door wire harness (4-door)			C761	Refer to the 2008-2009 Accord Service Manual (see page 22-62)
Front passenger's seat wire harness (with power seat)			C703	(see page 22-29)
Front passenger's seat wire harness (without power seat)			C703	• 4-door: Refer to the 2008-2009 Accord Service Manual (see page 22-68) • 2-door: Refer to the 2008-2009 Accord Service Manual (see page 22-69)
Knock sensor subharness	C104			• M/T: (see page 22-11) • A/T: (see page 22-13)

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Connector Index (cont'd)

Harness	Location			
	Engine Compartment	Dashboard	Others (Floor, Door, Trunk, and Roof)	Notes
Left engine compartment wire harness	C101, C102, C201 C305, C306, C307 G301	C301, C302, C303, C304, C351 G302		(see page 22-19)
Left fog light subharness	C307			(see page 22-19)
Left rear door wire harness (4-door)			C771	Refer to the 2008-2009 Accord Service Manual (see page 22-64)
Left side wire harness		C304, C601	C771 G601, G602, G603	• 4-door: (see page 22-23) • 2-door: (see page 22-25)
Moonroof subharness			C551	(see page 22-27)
Passenger's door wire harness (2-door)			C761	Refer to the 2008-2009 Accord Service Manual (see page 22-63)
Rear ACM subharness	C306			(see page 22-19)
Rear window defogger ground wire			G801	• 4-door: (see page 22-23) • 2-door: (see page 22-25)
Right engine compartment wire harness	C201, C204 G202, G203	C202, C203 G201		(see page 22-17)
Right fog light subharness	C204			(see page 22-17)
Right rear door wire harness (4-door)			C781	Refer to the 2008-2009 Accord Service Manual (see page 22-65)
Right side wire harness		C410, C411, C651	C652, C653, C781 G651	• 4-door: Refer to the 2008-2009 Accord Service Manual (see page 22-46) • 2-door: Refer to the 2008-2009 Accord Service Manual (see page 22-48)
Roof wire harness		C501, C502	C551	With moonroof: (see page 22-27) Without moonroof: Refer to the 2008-2009 Accord Service Manual (see page 22-59)
Shift solenoid wire harness (A/T)	C103			(see page 22-15)
SRS floor wire harness			C701, C702, C703 G701, G702	• 4-door: Refer to the 2008-2009 Accord Service Manual (see page 22-54) • 2-door: Refer to the 2008-2009 Accord Service Manual (see page 22-56)
Starter cable	(+), T1, T4			(see page 22-7)
Transmission ground cable	T3, G3			(see page 22-7)

Connector to Harness Index

Starter Cable

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
T1	4		Left side of engine compartment	Under-hood fuse/relay box	
T4	2		Left side of engine compartment	Starter motor	
(+)	3		Battery	Battery positive terminal	

Battery Ground Cable

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
(−)	6		Left side of engine compartment	Battery negative terminal	
G1	7		Left side of engine compartment	Body ground, via battery ground cable	

Engine Ground Cable

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
T2	9		Right side of engine compartment	Engine	
G2	1		Right side of engine compartment	Body ground, via engine ground cable	

Transmission Ground Cable

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
T3	5		Left side of engine compartment	Transmission housing	
G3	8		Left side of engine compartment	Body ground, via transmission ground cable	

HONDA

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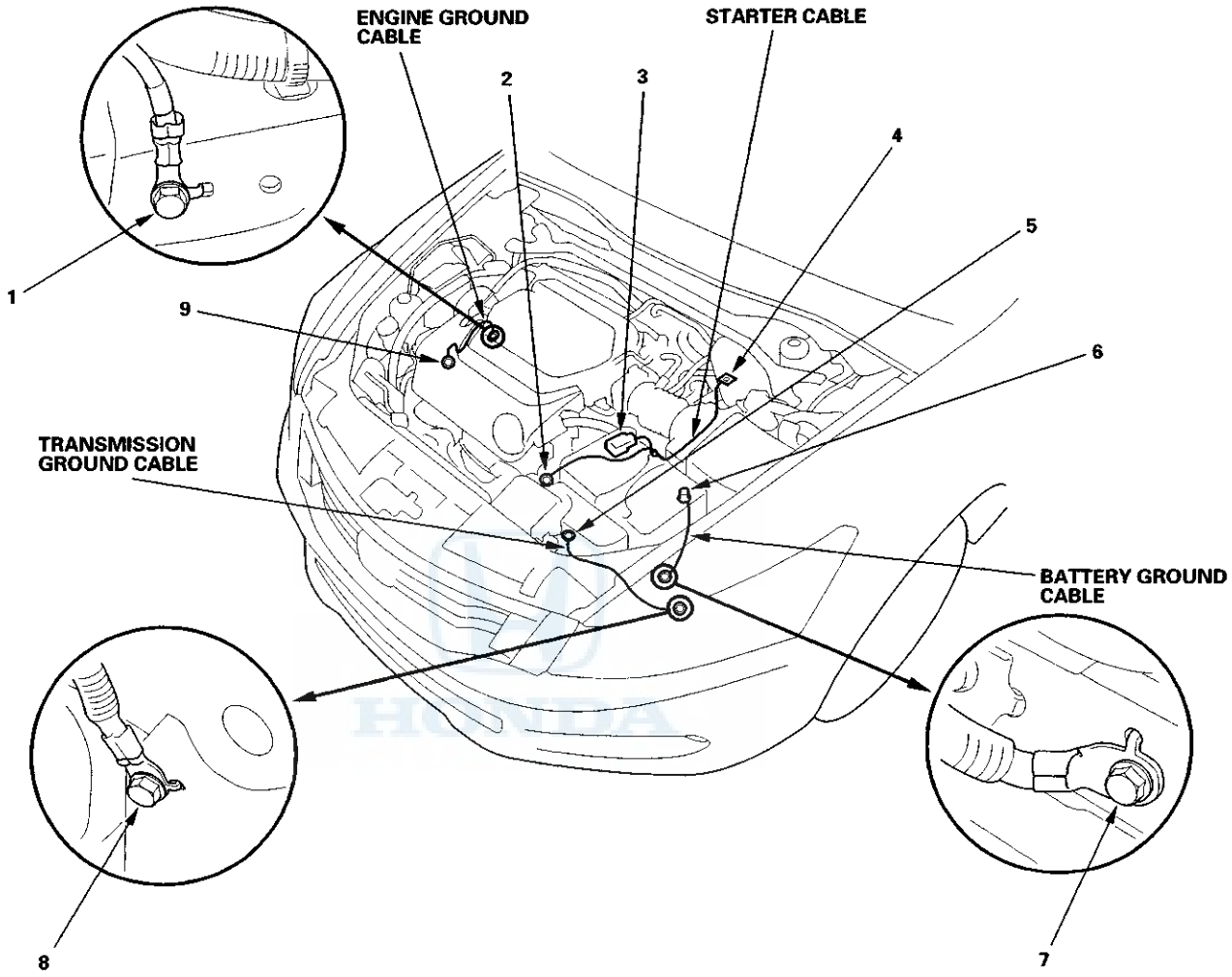
Connector to Harness Index (cont'd)



Engine Wire Harness (M/T)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/C compressor clutch	40	1	Front of engine compartment		
Alternator	41	4	Front of engine compartment		
Back-up light switch	21	2	On transmission housing		
Camshaft position (CMP) sensor	46	3	Middle of engine compartment		
Crankshaft position (CKP) sensor	33	3	Middle of engine compartment		
ECM connector B	22	49	Left side of engine compartment		
ECM connector C	23	49	Left side of engine compartment		
EGR valve and position sensor	29	5	Middle of engine compartment		
Engine coolant temperature (ECT) sensor 1	30	2	Middle of engine compartment		
Engine mount control solenoid valve	14	2	Middle of engine compartment		VTEC
EVAP canister purge valve	12	2	Middle of engine compartment		
Front A/F sensor (Bank 2, Sensor 1)	31	6	Front of engine compartment		ULEV
Front secondary HO2S (Bank 2, Sensor 2)	32	4	Front of engine compartment		
Ignition coil No. 1	5	3	Middle of engine compartment		
Ignition coil No. 2	7	3	Middle of engine compartment		
Ignition coil No. 3	9	3	Middle of engine compartment		
Ignition coil No. 4	43	3	Middle of engine compartment		
Ignition coil No. 5	37	3	Middle of engine compartment		
Ignition coil No. 6	35	3	Middle of engine compartment		
Injector No. 1	47	2	Middle of engine compartment		
Injector No. 2	39	2	Middle of engine compartment		
Injector No. 3	36	2	Middle of engine compartment		
Injector No. 4	44	2	Middle of engine compartment		
Injector No. 5	38	2	Middle of engine compartment		
Injector No. 6	34	2	Middle of engine compartment		
Intake manifold tuning (IMT) actuator	48	5	Middle of engine compartment		VTEC
Input shaft (mainshaft) speed sensor	26	3	Front of transmission		
Manifold absolute pressure (MAP) sensor	13	3	Middle of engine compartment		
Mass air flow (MAF) sensor/Intake air temperature (IAT) sensor	16	5	Middle of engine compartment		
Oil pressure switch	3	1	Lower side of engine		VTEC
Output shaft (countershaft) speed sensor	25	3	Front of transmission		
Rear A/F sensor (Bank 1, Sensor 1)	10	6	Rear of engine compartment		ULEV
Rear secondary HO2S (Bank 1, Sensor 2)	11	4	Rear of engine compartment		

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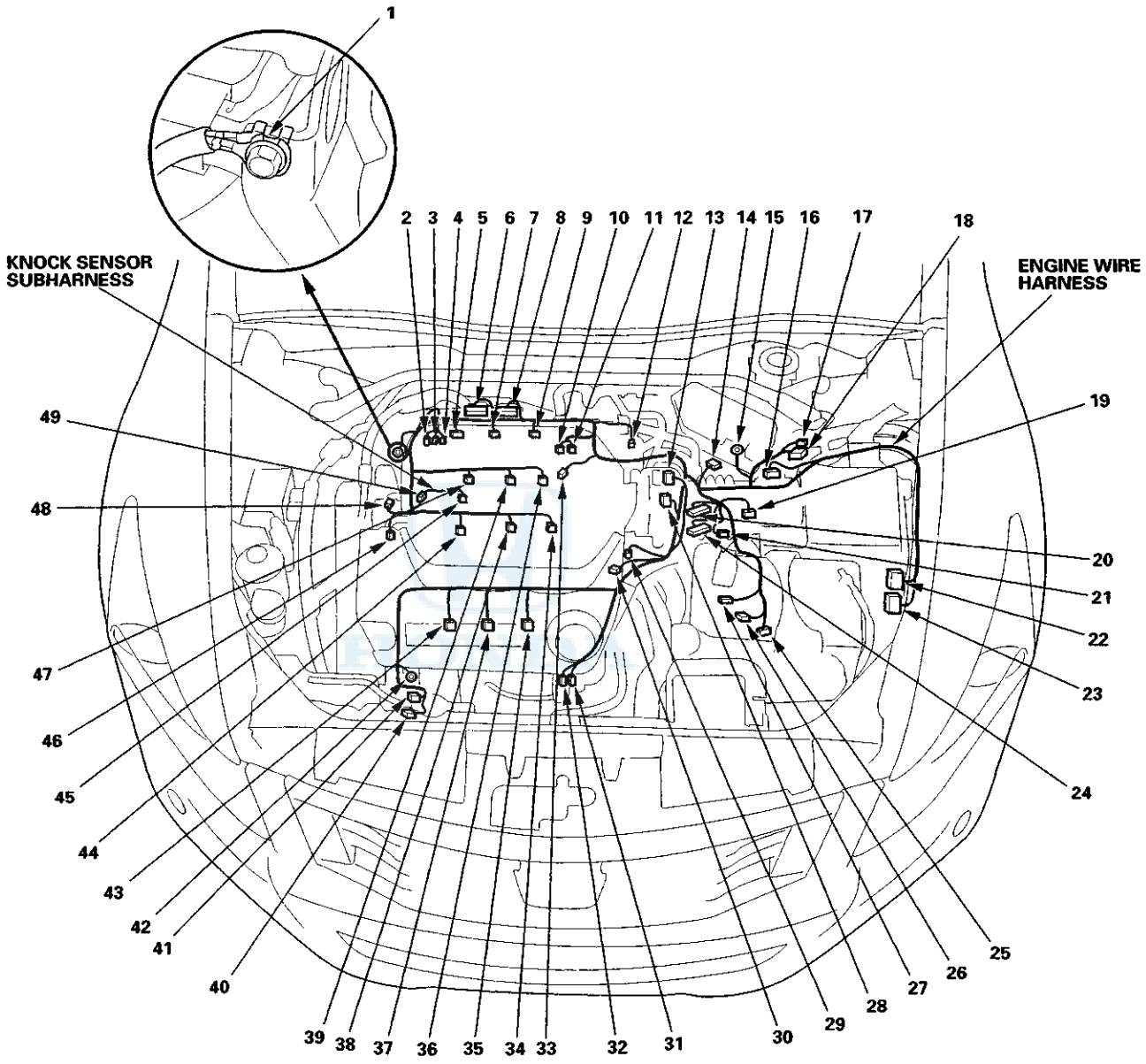
Connector to Harness Index (cont'd)



Engine Wire Harness (M/T)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Reverse lockout solenoid	19	2	On transmission housing		
Rocker arm oil control solenoid	2	1	Lower side of engine		VTEC
Rocker arm oil pressure switch	4	2	Lower side of engine		VTEC
Starter solenoid	27	1	Middle of engine compartment		
Throttle position sensor/Throttle actuator	28	6	Middle of engine compartment		
C101	18	13	Left side of engine compartment	Left engine compartment wire harness (see page 22-19)	
C102	17	1	Left side of engine compartment	Left engine compartment wire harness (see page 22-19)	VTEC
C104	49	1	Middle of engine compartment	Knock sensor subharness	
C105 (Junction connector)	8	24	Middle of engine compartment		
C106 (Junction connector)	6	12	Middle of engine compartment		
C107 (Junction connector)	20	24	Middle of engine compartment		
C108 (Junction connector)	24	24	Middle of engine compartment		
T1	42		Front of engine compartment	Alternator B terminal	
T102 (Alternator)	15		Left side of engine compartment	Under-hood fuse/relay box (see page 22-30)	
G101	1		Middle of engine compartment	Body ground, via engine wire harness	

Knock Sensor Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Knock sensor	45	1	Middle of engine		
C104	49	1	Middle of engine compartment	Engine wire harness	

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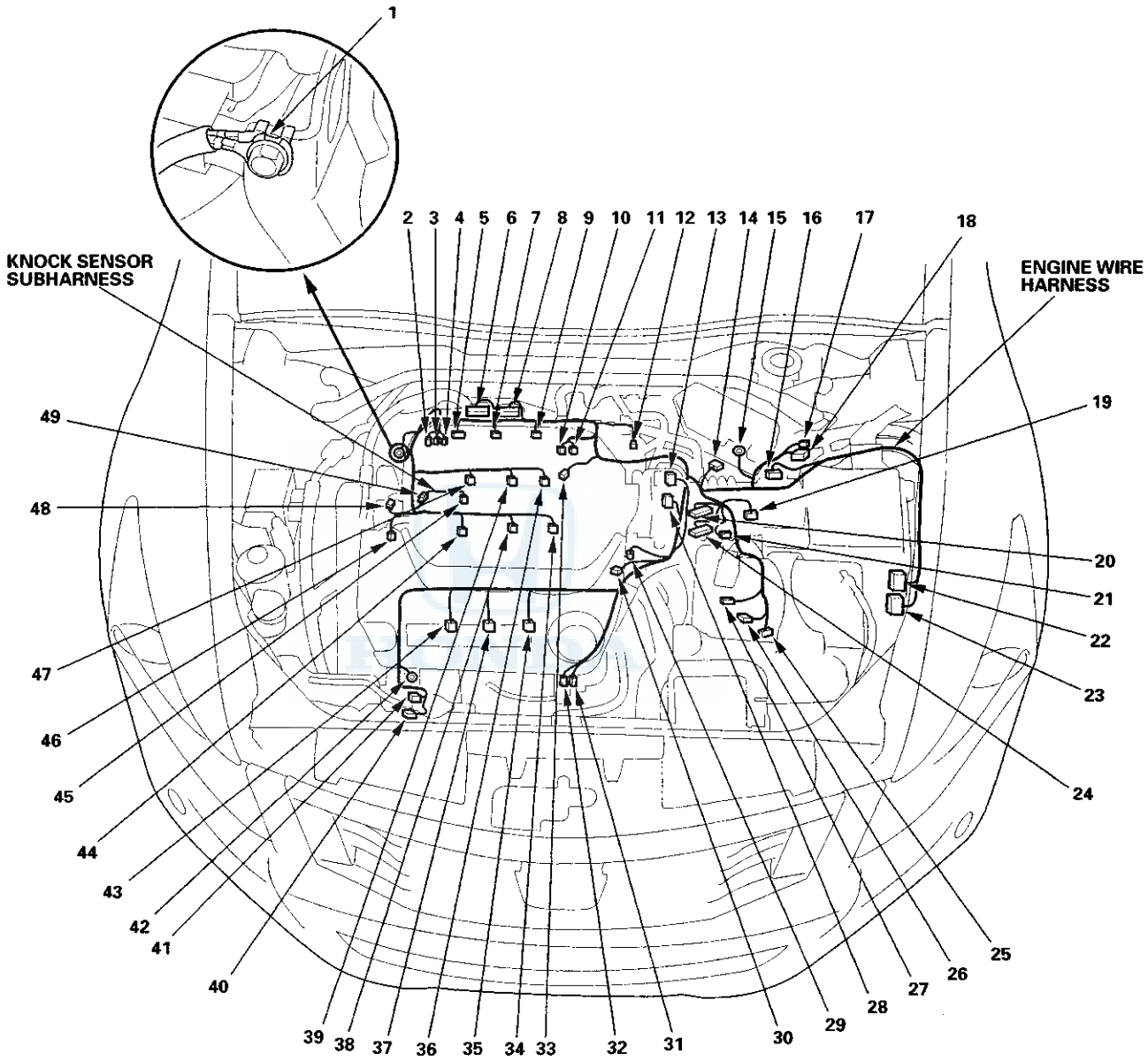
Connector to Harness Index (cont'd)



Engine Wire Harness (A/T)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/C compressor clutch	34	1	Front of engine compartment		
Alternator	35	4	Front of engine compartment		
Camshaft position (CMP) sensor	42	3	Middle of engine compartment		
Crankshaft position (CKP) sensor	24	3	Middle of engine compartment		
EGR valve and position sensor	21	5	Middle of engine compartment		
Engine coolant temperature (ECT) sensor 1	22	2	Middle of engine compartment		
EVAP canister purge valve	13	2	Middle of engine compartment		
Front A/F sensor (Bank 2, Sensor 1)	25	8	Front of engine compartment		SULEV
Front A/F sensor (Bank 2, Sensor 1)	25	6	Front of engine compartment		ULEV
Front secondary HO2S (Bank 2, Sensor 2)	26	4	Front of engine compartment		
Ignition coil No. 1	3	3	Middle of engine compartment		
Ignition coil No. 2	5	3	Middle of engine compartment		
Ignition coil No. 3	7	3	Middle of engine compartment		
Ignition coil No. 4	33	3	Middle of engine compartment		
Ignition coil No. 5	31	3	Middle of engine compartment		
Ignition coil No. 6	28	3	Middle of engine compartment		
Injector No. 1	41	2	Middle of engine compartment		
Injector No. 2	32	2	Middle of engine compartment		
Injector No. 3	29	2	Middle of engine compartment		
Injector No. 4	38	2	Middle of engine compartment		
Injector No. 5	30	2	Middle of engine compartment		
Injector No. 6	27	2	Middle of engine compartment		
Manifold absolute pressure (MAP) sensor	14	3	Middle of engine compartment		
Mass air flow (MAF) sensor/Intake air temperature (IAT) sensor	16	5	Middle of engine compartment		
PCM connector B	18	49	Left side of engine compartment		
PCM connector C	19	49	Left side of engine compartment		
Rear A/F sensor (Bank 1, Sensor 1)	8	8	Rear of engine compartment		SULEV
Rear A/F sensor (Bank 1, Sensor 1)	8	6	Rear of engine compartment		ULEV
Rear secondary HO2S (Bank 1, Sensor 2)	9	4	Rear of engine compartment		
Rocker arm oil control solenoid A	11	2	Middle of engine compartment		VCM2
Rocker arm oil control solenoid B	10	2	Middle of engine compartment		VCM2
Rocker arm oil control solenoid C	39	2	Middle of engine compartment		VCM2
Rocker arm oil pressure sensor	2	3	Middle of engine compartment		VCM2
Rocker arm oil pressure switch B	12	1	Middle of engine compartment		VCM2
Rocker arm oil pressure switch C	37	1	Middle of engine compartment		VCM2
Throttle position sensor/Throttle actuator	20	6	Middle of engine compartment		
2nd clutch pressure switch	23	1	Transmission housing		
C101	17	13	Left side of engine compartment	Left engine compartment wire harness (see page 22-19)	
C104	43	1	Front of engine	Knock sensor subharness	
C105 (Junction connector)	6	24	Middle of engine compartment		
C106 (Junction connector)	4	12	Middle of engine compartment		
T1	36		Front of engine compartment	Alternator B terminal	
T102 (Alternator)	15		Left side of engine compartment	Under-hood fuse/relay box (see page 22-30)	
G101	1		Middle of engine compartment	Body ground, via engine wire harness	

Knock Sensor Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Knock sensor	40	1	Middle of engine		
C104	43	1	Middle of engine compartment	Engine wire harness	

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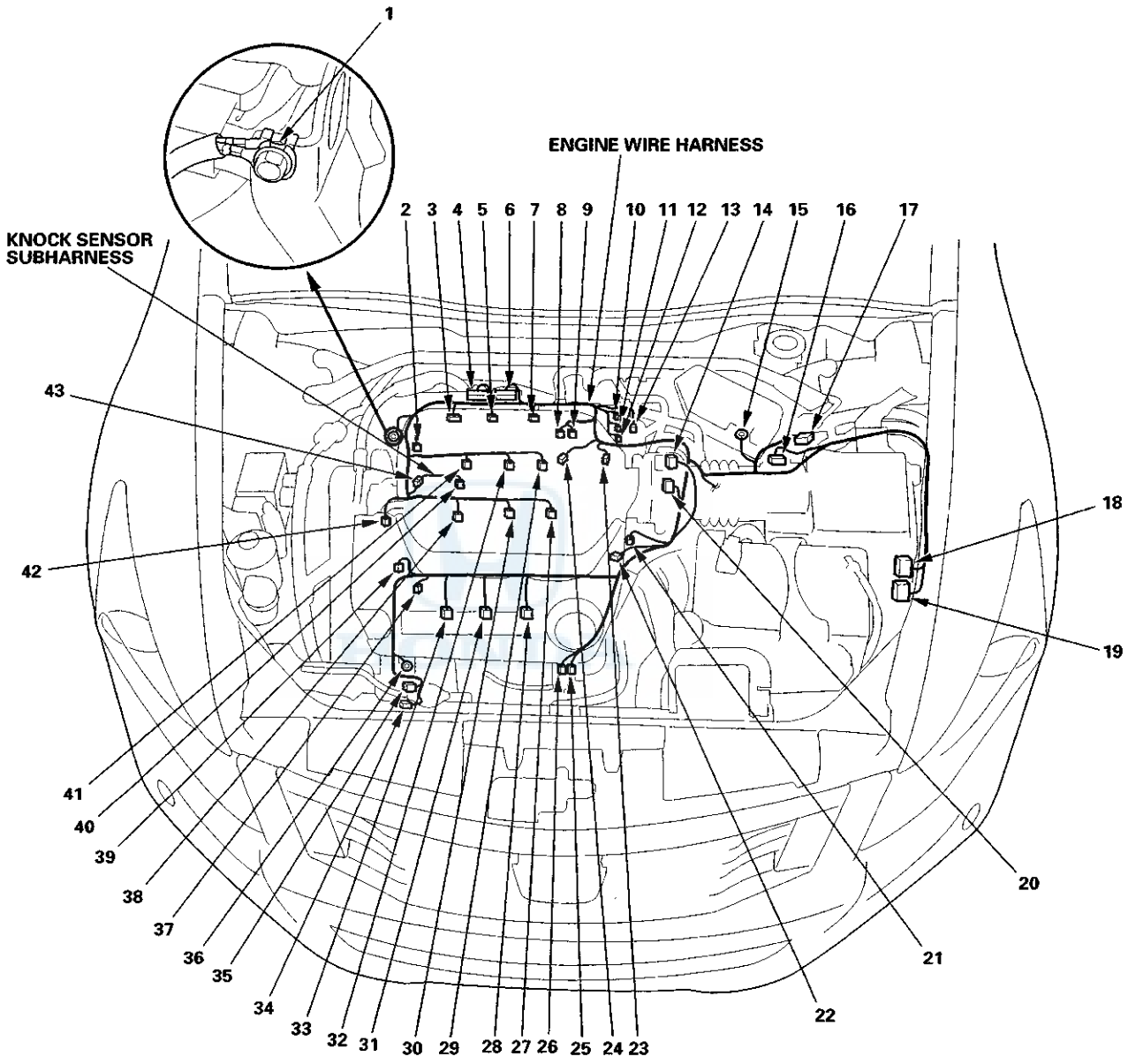
Connector to Harness Index (cont'd)



Engine Wire Harness (A/T) (Transmission section)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/T clutch pressure control solenoid valve A	11	2	Transmission housing		
A/T clutch pressure control solenoid valve B	12	2	Transmission housing		
A/T clutch pressure control solenoid valve C	7	2	Transmission housing		
ATF temperature sensor	14	2	Transmission housing		
Input shaft (mainshaft) speed sensor	17	3	Transmission housing		
Output shaft (countershaft) speed sensor	15	3	Transmission housing		
Starter solenoid	1	1	Front of transmission		
Transmission range switch	13	10	Transmission housing		
3rd clutch pressure switch	16	1	Transmission housing		
4th clutch pressure switch	8	1	Transmission housing		
C103	2	5	Front of transmission	Shift solenoid wire harness	
C107 (Junction connector)	5	24	Middle of engine compartment		
C108 (Junction connector)	6	24	Middle of engine compartment		

Shift Solenoid Wire Harness (A/T)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Shift solenoid valve A	9	1	In transmission		
Shift solenoid valve B	3	1	In transmission		
Shift solenoid valve C	4	1	In transmission		
Shift solenoid valve D	10	1	In transmission		
C103	2	5	Front of transmission	Engine wire harness	

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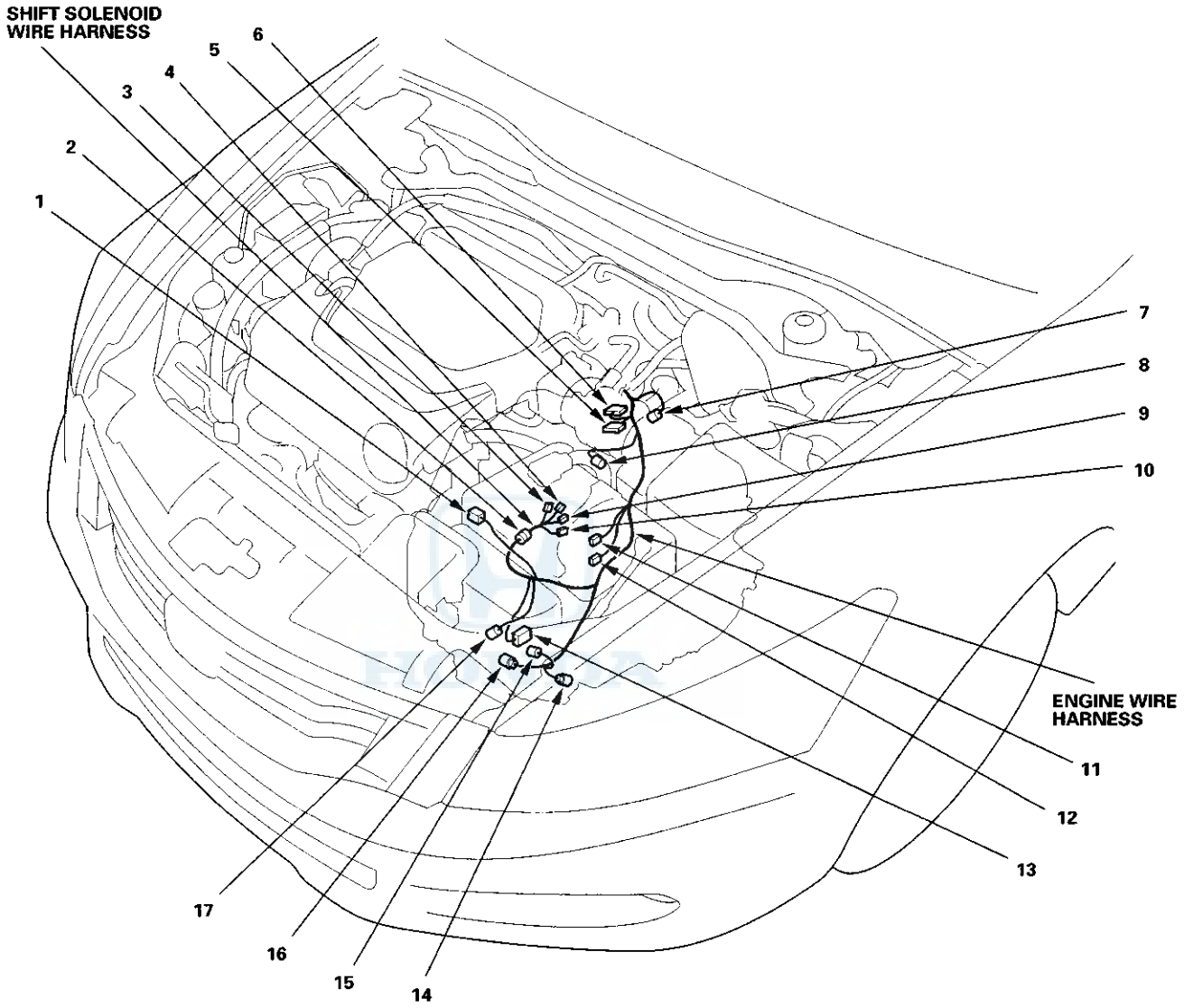
Connector to Harness Index (cont'd)



Right Engine Compartment Wire Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Optional connector (for fog light)	13	1	Right front of engine compartment		
Passenger's under-dash fuse/relay box connector E (see page 22-32)	19	18	Under right side of dash		
Power steering pressure (PSP) switch	2	2	Right side of engine compartment		
Right fog light	9	2	Behind right side of front bumper		* 1
Right front impact sensor	5	2	Behind right side of front bumper		
Right front wheel speed sensor	17	2	Right side of engine compartment		
Right front parking/turn signal light	4	3	Behind right headlight		
Right front side marker light	15	2	Behind right headlight		
Right headlight (low)	14	2	Behind right headlight		
Right headlight (high)	12	2	Behind right headlight		
VSA modulator-control unit	16	22	Right side of engine compartment		
Washer fluid level switch	11	2	Behind right side of front bumper		* 2
Washer motor	10	2	Behind right side of front bumper		
C201	3	2	Right front of engine compartment	Left engine compartment wire harness (see page 22-19)	
C202	20	20	Under right side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-36)	
C203	18	4	Under right side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-36)	
C204	6	2	Behind right side front bumper	Right fog light subharness	* 2
G201	1		Under right side of dash	Body ground, via right engine compartment wire harness	
G202	8		Behind right side of front bumper	Body ground, via right engine compartment wire harness	
G203	7		Behind right side of front bumper	Body ground, via right engine compartment wire harness	* 3

* 1: USA models
* 2: Canada models
* 3: EX-L, EX-L PZEV

Right Fog Light Subharness (Canada models)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Right fog light	9	2	Behind right side of front bumper		
C204	6	2	Behind right side of front bumper	Right engine compartment wire harness	

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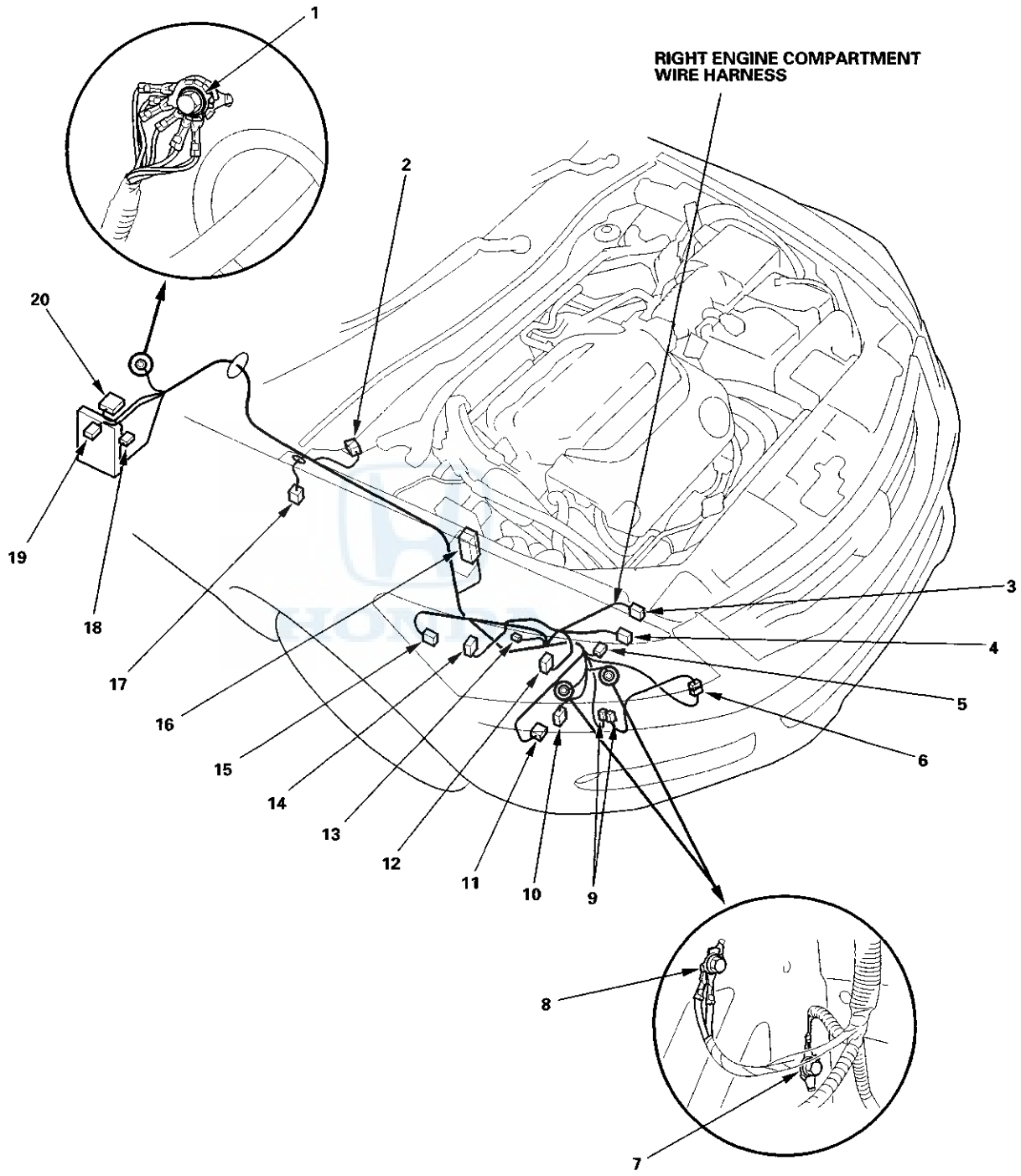

Left Engine Compartment Wire Harness (Engine compartment branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/C condenser fan motor	30	2	Front of engine compartment		
A/C pressure sensor	2	3	Right front of engine compartment		
Brake fluid level switch	11	2	Left side of engine compartment		
ECM connector A	18	49	Left side of engine compartment		M/T
Engine coolant temperature (ECT) sensor 2	27	2	Front of engine compartment		
Hood switch	4	2	Front of engine compartment		Security
Horn (high)	3	1	Front of engine compartment		
Horn (low)	5	1	Front of engine compartment		
Left front impact sensor	24	2	Behind left side of front bumper		
Left fog light	22	2	Behind left side of front bumper		* 1
Left front parking/turn signal light	26	3	Behind left headlight		
Left front side marker light	17	2	Behind left headlight		
Left front wheel speed sensor	16	2	Left side of engine compartment		
Left headlight (low)	19	2	Behind left headlight		
Left headlight (high)	25	2	Behind left headlight		
Optional connector (for fog light)	20	1	Left front of engine compartment		
Outside air temperature sensor	31	2	Front of engine compartment		
PCM connector A	18	49	Left side of engine compartment		A/T
Radiator fan motor	28	2	Front of engine compartment		
Under-hood fuse/relay box connector A (electrical load detector (ELD)) (see page 22-30)	12	3	Left side of engine compartment		
Under-hood fuse/relay box connector B (see page 22-30)	10	3	Left side of engine compartment		
Under-hood fuse/relay box connector C (see page 22-30)	9	5	Left side of engine compartment		
Wiper motor	13	5	Left side of engine compartment		
C101	14	23	Left side of engine compartment	Engine wire harness M/T: (see page 22-9) A/T: (see page 22-13)	
C102	15	1	Left side of engine compartment	Engine wire harness (see page 22-13)	A/T
C201	1	2	Right front of engine compartment	Right engine compartment wire harness (see page 22-17)	
C305	29	2	Front of engine compartment	Front ACM subharness	ACM
C306	8	2	Rear of engine compartment	Rear ACM subharness	ACM
C307	23	2	Behind left side of front bumper	Left fog light subharness	* 2
G301	21		Behind left side of front bumper	Body ground, via left engine compartment wire harness	

* 1: USA models
* 2: Canada models

Front ACM Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Front engine mount control solenoid	6	2	Front of engine compartment		
C305	29	2	Front of engine compartment	Left engine compartment wire harness	

Rear ACM Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Rear engine mount control solenoid	7	2	Rear of engine compartment		
C306	8	2	Rear of engine compartment	Left engine compartment wire harness	

Left Fog Light Subharness (Canada models)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Left fog light	22	2	Behind left side of front bumper		
C307	23	2	Behind left side of front bumper	Left engine compartment wire harness	

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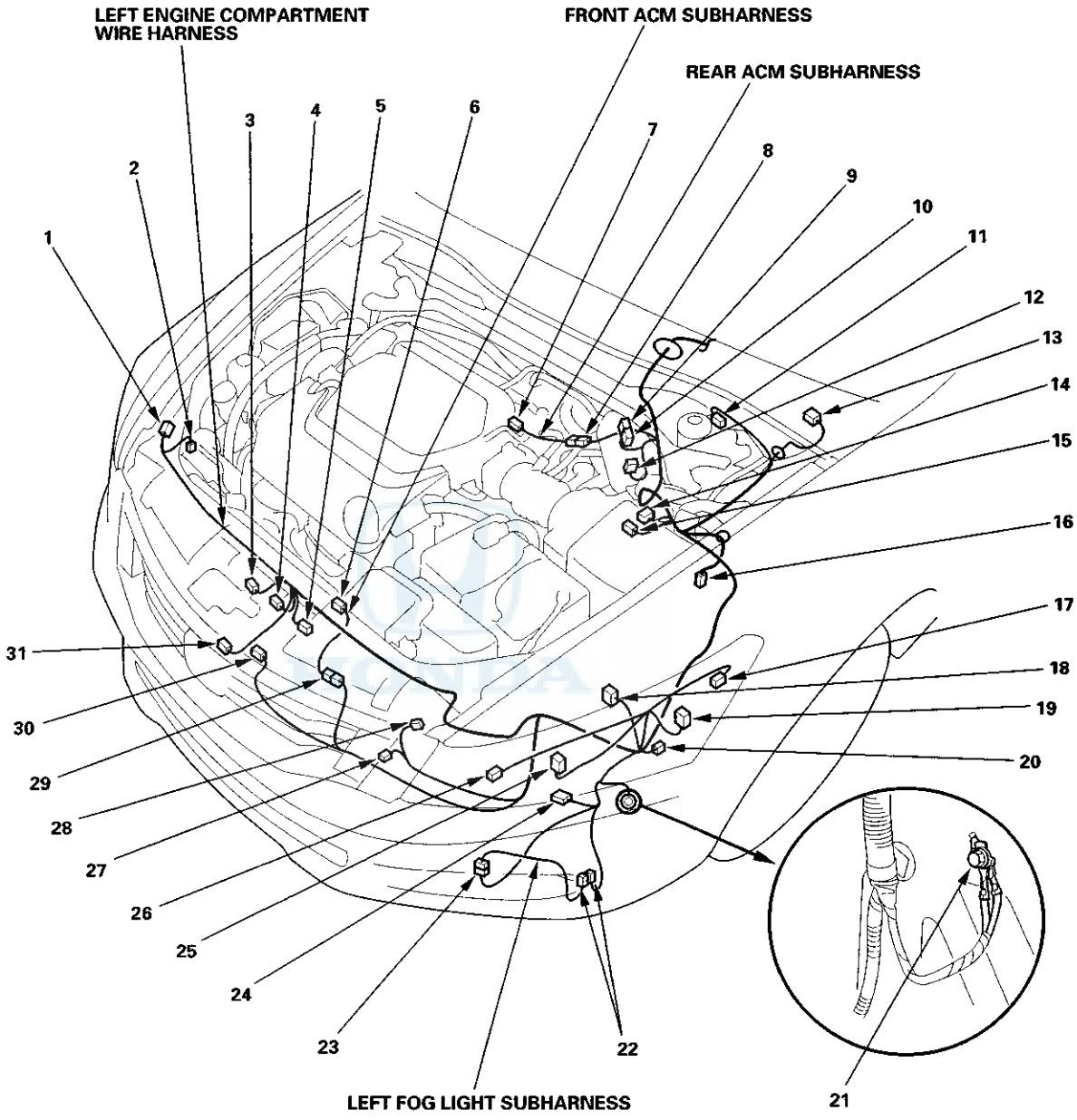
Connector to Harness Index (cont'd)



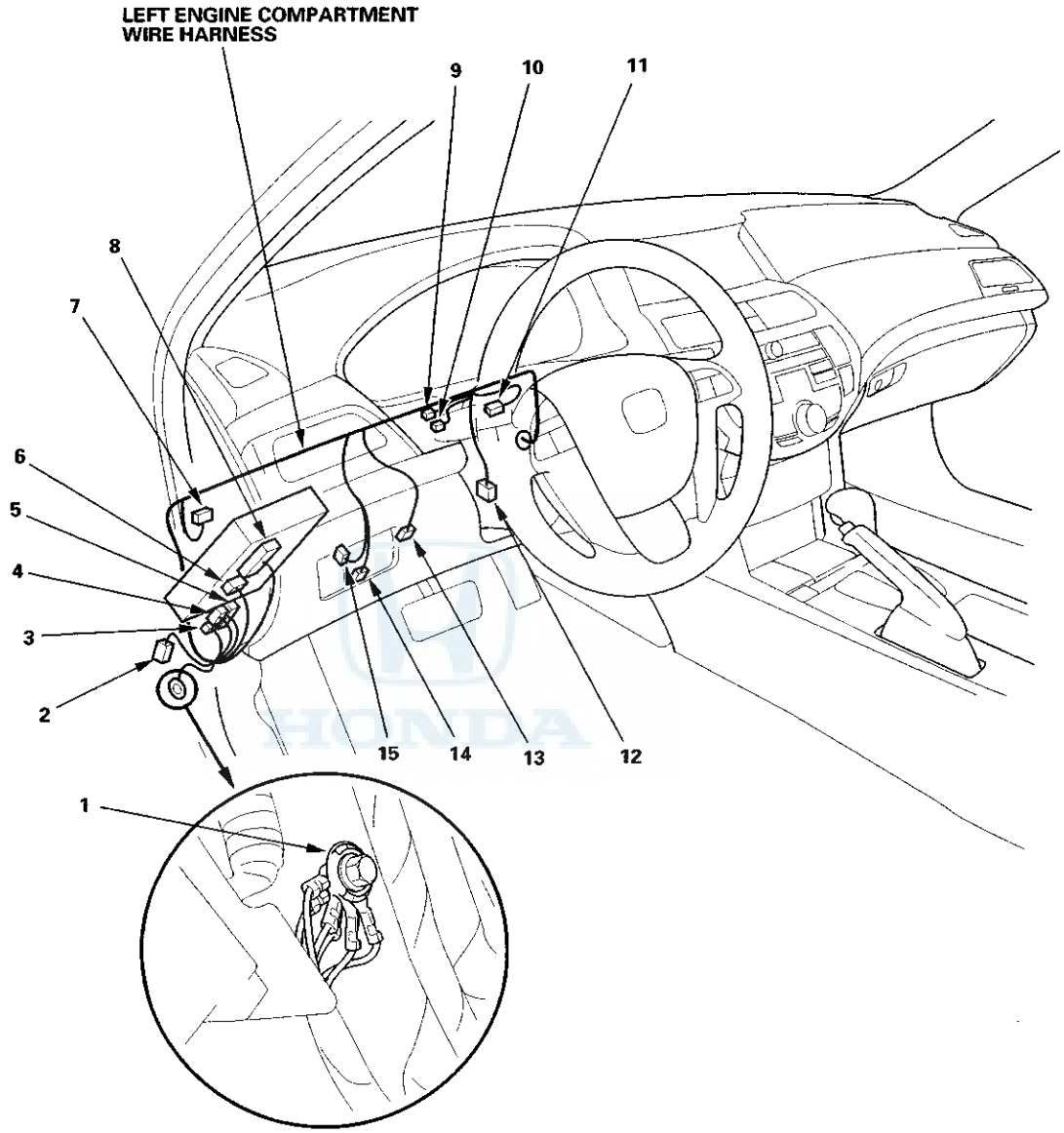
Left Engine Compartment Wire Harness (Dash branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Accelerator pedal position sensor	12	6	Under left side of dash		
Brake pedal position switch	13	4	Under left side of dash		
Clutch pedal position switch (for cruise control)	15	3	Under left side of dash		M/T
Clutch interlock switch (for starter cut)	14	2	Under left side of dash		M/T
Diode	9	2	Under left side of dash		A/T
Diode	10	2	Under left side of dash		A/T
Driver's under-dash fuse/relay box connector F (see page 22-31)	8	33	Under left side of dash		
Driver's under-dash fuse/relay box connector G (see page 22-31)	6	14	Under left side of dash		
Engine mount control unit	7	16	Under left side of dash		A/T
C301	5	20	Under left side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
C302	3	2	Under left side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
C303	4	4	Under left side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
C304	2	8	Under left side of dash	Left side wire harness 4-door: (see page 22-23) 2-door: (see page 22-25)	
C351	11	2	Under left side of dash	A/C wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-70)	* 1
				A/C wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-71)	* 2
				A/C wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-72)	* 3
G302	1		Under left side of dash	Body ground, via left engine compartment wire harness	

* 1: With climate control and navigation system
* 2: With climate control without navigation system
* 3: With HVAC

(cont'd)

Connector to Harness Index (cont'd)



Left Side Wire Harness (4-door)

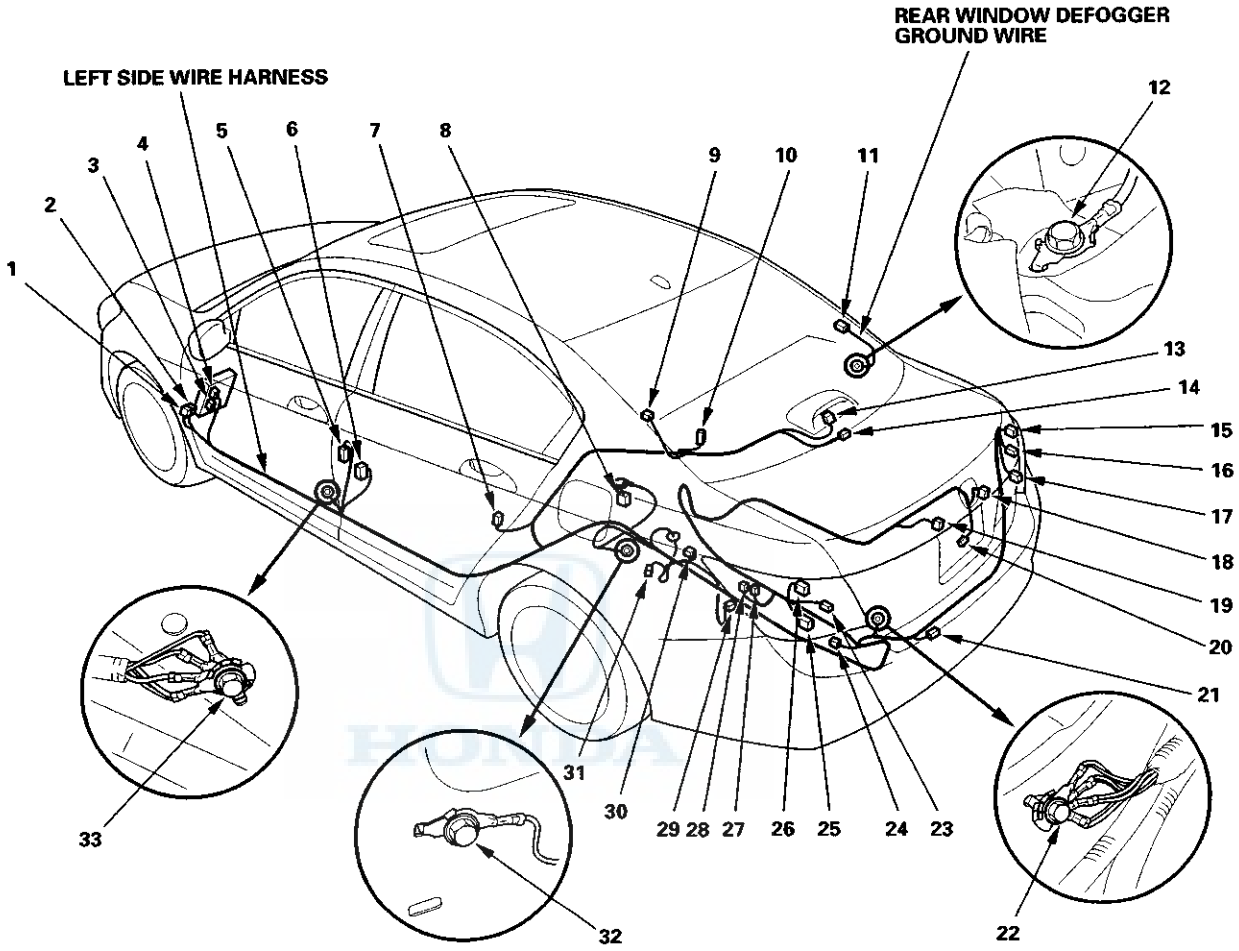
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Driver's door switch	5	1	Left B-pillar		
Driver's under-dash fuse/relay box connector D (see page 22-31)	4	16	Under left side of dash		
Driver's under-dash fuse/relay box connector E (see page 22-31)	3	20	Under left side of dash		
EVAP canister vent shut valve	29	2	Under floor (Fuel tank)		
Fuel tank pressure (FTP) sensor	30	3	Under floor (Fuel tank)		
Fuel tank unit	8	4	Under rear seat cushion		
Glass antenna coil connector A	27	1	Left side of trunk		
Glass antenna coil connector B	28	1	Left side of trunk		
High mount brake light	13	2	Middle of rear shelf		
Left back-up light	26	2	Left side of trunk		
Left license plate light	19	2	Trunk lid		
Left rear door switch	7	1	Left C-pillar		
Left rear speaker	10	2	Left side of rear shelf		
Left rear turn signal light	23	3	Left side of trunk		
Left rear wheel speed sensor	31	2	Under floor		
Left taillight/brake light	25	4	Left side of trunk		
Noise condenser	24	2	Left side of trunk		
Optional connector (for trailer)	21	2	Left rear side of trunk		
Rear window defogger connector A (+)	9	1	Middle of rear shelf		
Right back-up light	15	2	Right side of trunk		
Right license plate light	18	2	Trunk lid		
Right rear turn signal light	16	3	Right side of trunk		
Right taillight/brake light	17	4	Right side of trunk		
Trunk lid release actuator/trunk lid latch switch	20	3	Trunk lid		
Trunk light	14	2	Middle of rear shelf		
C304	1	8	Under left side of dash	Left engine compartment wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-30)	
C601	2	28	Under left side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
C771	6	13	Left B-pillar	Left rear door wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-64)	
G601	33		Left side of floor	Body ground, via left side wire harness	
G602	22		Left rear side of trunk	Body ground, via left side wire harness	
G603	32		Rear of floor	Body ground, via left side wire harness	

Rear Window Defogger Ground Wire (4-door)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Rear window defogger connector B (−)	11	1	Right C-pillar		
G801	12		Right C-pillar	Body ground, via rear window defogger ground wire	

(cont'd)

Connector to Harness Index (cont'd)



Left Side Wire Harness (2-door)

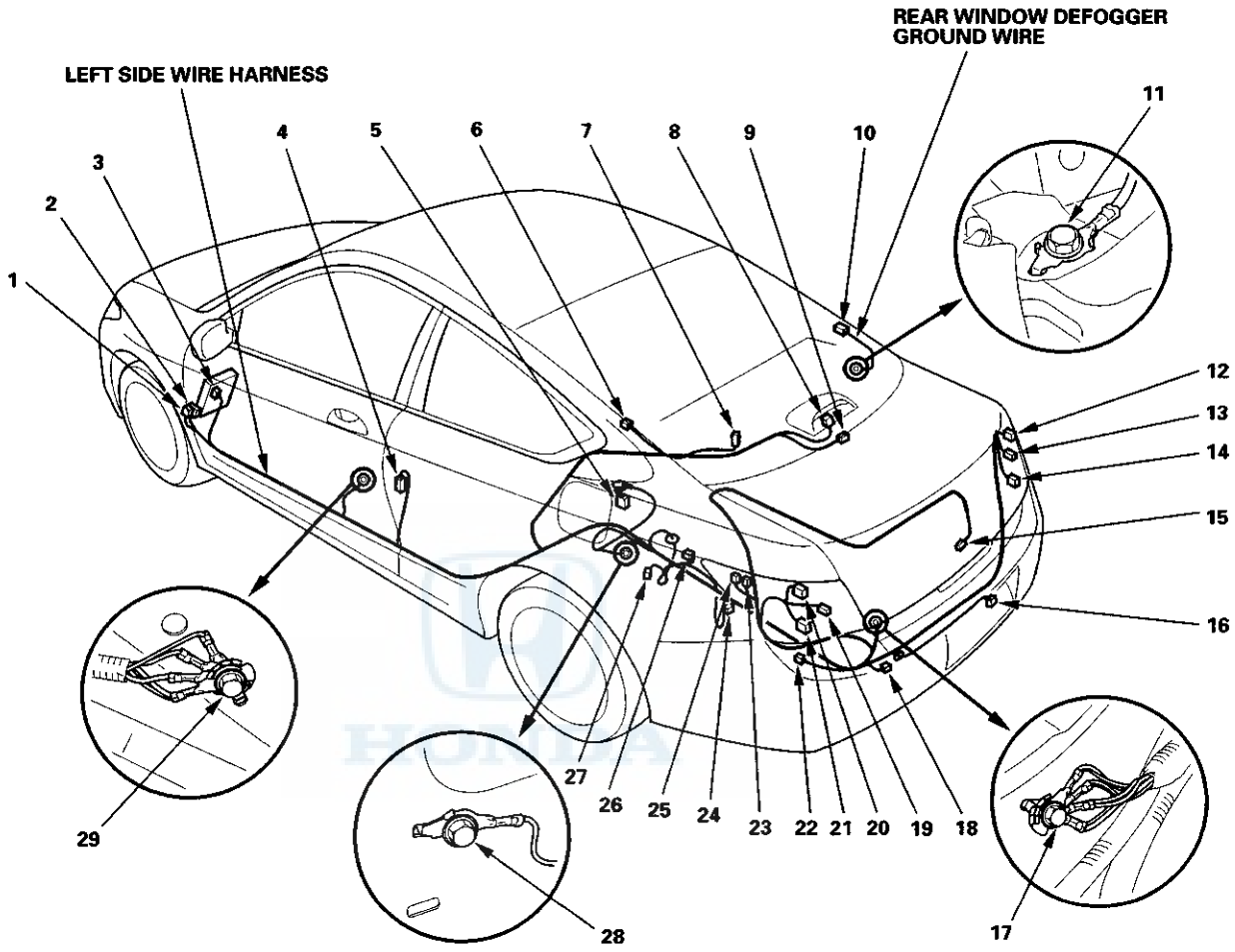
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Driver's door switch	4	1	Left B-pillar		
Driver's under-dash fuse/relay box connector D (see page 22-31)	3	16	Under left side of dash		
EVAP canister vent shut valve	24	2	Under floor (fuel tank)		
Fuel tank pressure (FTP) sensor	26	3	Under floor (fuel tank)		
Fuel tank unit	5	4	Under rear seat cushion		
Glass antenna coil connector A	23	1	Left side of trunk		
Glass antenna coil connector B	25	1	Left side of trunk		
High mount brake light	8	2	Middle of rear shelf		
Left back-up light	20	2	Left side of trunk		
Left rear speaker	7	2	Left side of rear shelf		
Left rear turn signal light	19	3	Left side of trunk		
Left rear wheel speed sensor	27	2	Under floor		
Left taillight/brake light	21	4	Left side of trunk		
License plate light	16	2	Middle of rear bumper		
Noise condenser	22	2	Left side of trunk		
Optional connector (for trailer)	18	2	Left side of trunk		
Rear window defogger connector A (+)	6	1	Middle of rear shelf		
Right back-up light	12	2	Right side of trunk		
Right rear turn signal light	13	3	Right side of trunk		
Right taillight/brake light	14	4	Right side of trunk		
Trunk lid release actuator/trunk lid latch switch	15	3	Trunk lid		
Trunk light	9	2	Middle of rear shelf		
C304	1	8	Under left side of dash	Left engine compartment wire harness (see page 22-21)	
C601	2	28	Under left side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
G601	29		Left side of floor	Body ground, via left side wire harness	
G602	17		Left side of trunk	Body ground, via left side wire harness	
G603	28		Rear of floor	Body ground, via left side wire harness	

Rear Window Defogger Ground Wire (2-door)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Rear window defogger connector B (−)	10	1	Right C-pillar		
G801	11		Right C-pillar	Body ground, via rear window defogger ground wire	

(cont'd)

Connector to Harness Index (cont'd)



Roof Wire Harness (With moonroof)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
ANC front microphone	3	3	Middle of roof		* 1
Automatic dimming inside mirror	2	7	Middle of roof		
Front individual map light	5	3	Middle of roof		
Left vanity mirror light	8	2	Left front of roof		
HFL/navigation microphone	3	7	Middle of roof		* 2
HomeLink unit	4	5	Middle of roof		
Moonroof switch	6	12	Middle of roof		
Optional connector (for automatic dimming inside mirror)	11	4	Middle of roof		
Right vanity mirror light	1	2	Right front of roof		
C501	12	20	Under left side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
C502	13	4	Under left side of dash	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
C551	7	13	Middle of roof	Moonroof subharness	

* 1: Without navigation system
* 2: With navigation system or HandsFreeLink

Moonroof Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Ceiling light	9	3	Roof		
Moonroof control unit/motor	10	14	Roof		
C551	7	13	Middle of roof	Roof wire harness	

HONDA

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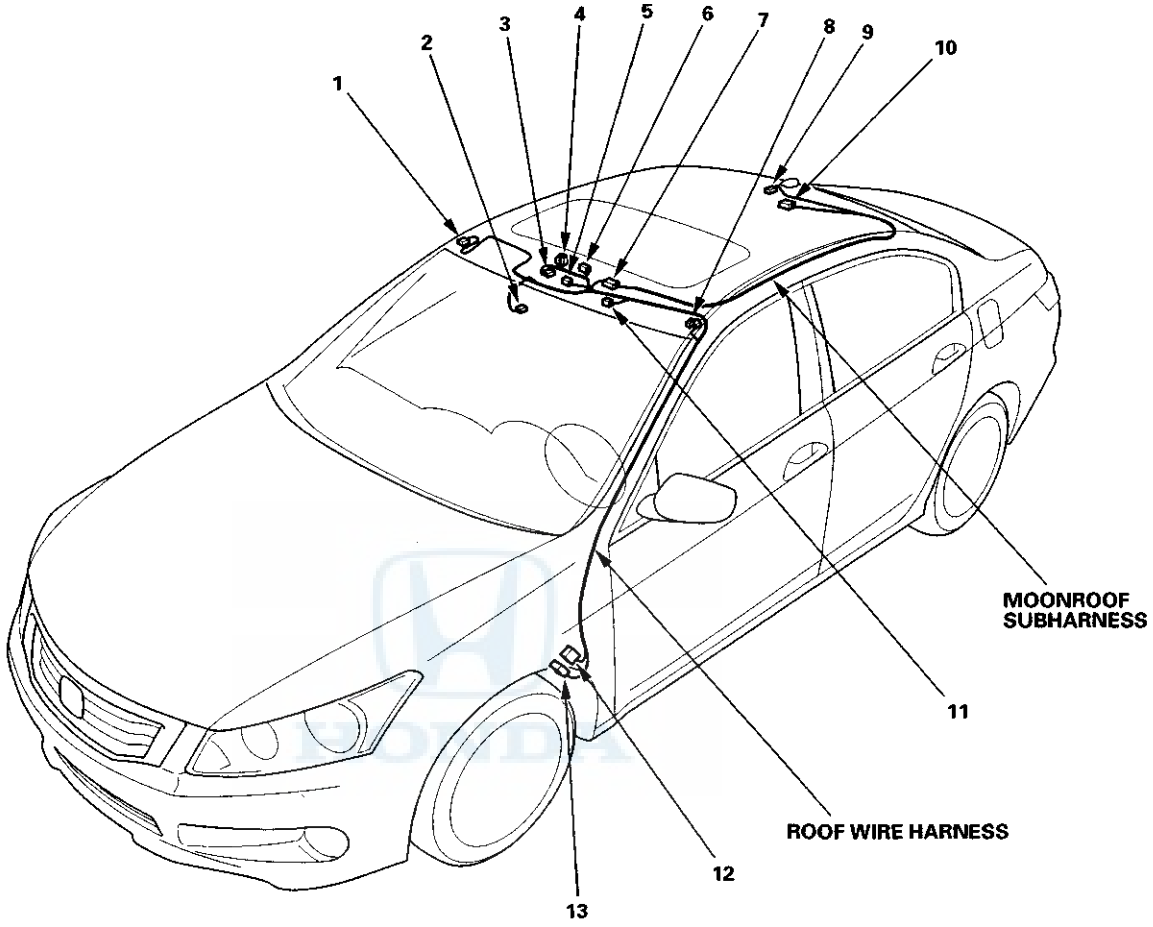
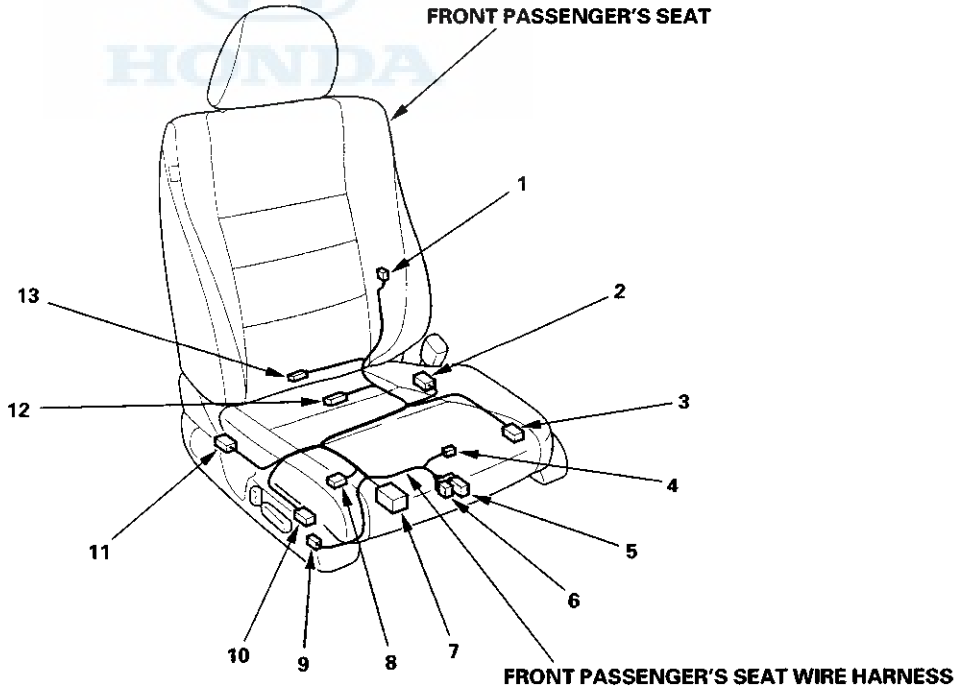
Connector to Harness Index (cont'd)



Front Passenger's Seat Wire Harness (With power seat)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Front passenger's power seat adjustment switch	9	12	Right side of front passenger's seat		
Front passenger's power seat recline motor	13	2	Front passenger's seat		
Front passenger's power seat slide motor	8	2	Front passenger's seat		
Front passenger's seat cushion heater	4	3	Front passenger's seat		*
Front passenger's seat heater relay (high)	6	4	Front passenger's seat		*
Front passenger's seat heater relay (low)	5	5	Front passenger's seat		*
Front passenger's weight sensor (front inner side)	3	3	Front passenger's seat		
Front passenger's weight sensor (front outer side)	10	3	Front passenger's seat		
Front passenger's weight sensor (rear inner side)	2	3	Front passenger's seat		
Front passenger's weight sensor (rear outer side)	11	3	Front passenger's seat		
ODS unit	1	18	Front passenger's seat		
C703	7	18	Under front passenger's seat	SRS floor wire harness 4-door: refer to the 2008-2009 Accord Service Manual (see page 22-54) 2-door: refer to the 2008-2009 Accord Service Manual (see page 22-56)	

*: With seat heater

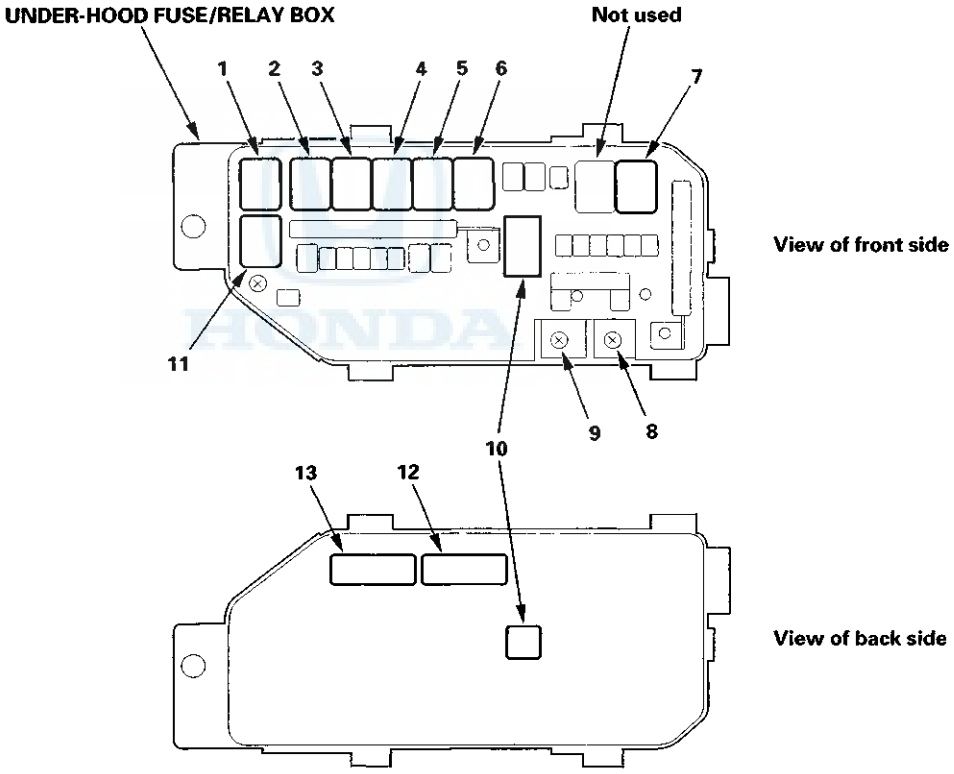


Fuse/Relay Boxes

Connector to Fuse/Relay Box Index

Under-hood Fuse/Relay Box

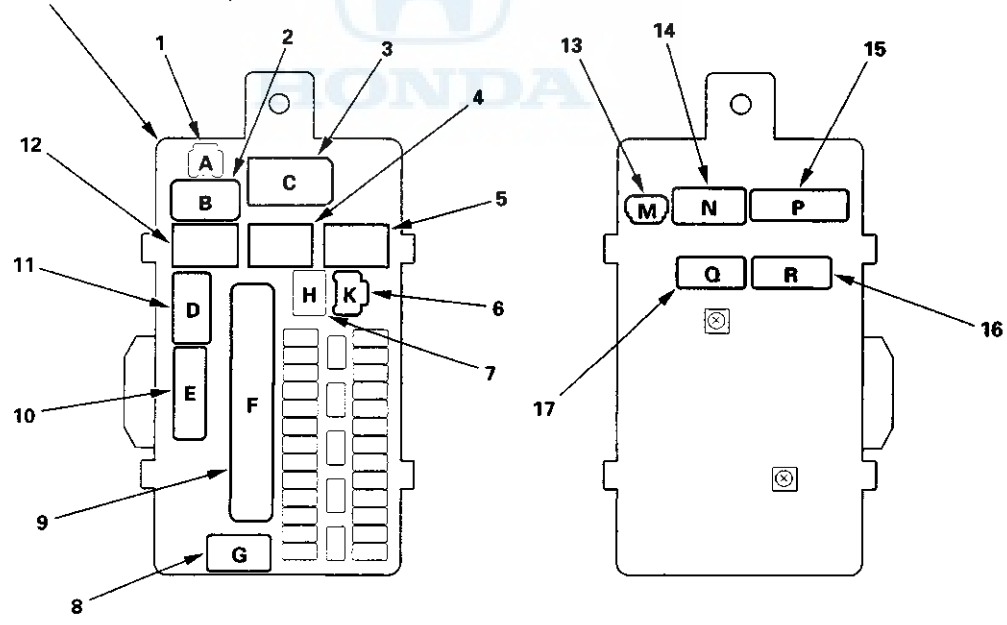
Socket	Ref	Terminals	Connects to	Notes
A (electrical load detector (ELD))	10	3	Left engine compartment wire harness (see page 22-19)	
A/C compressor clutch relay	11	4		
B	13	14	Left engine compartment wire harness (see page 22-19)	
Blower motor relay	1	4		
C	12	5	Left engine compartment wire harness (see page 22-19)	
Electronic throttle control system (ETCS) control relay	6	4		
Horn relay	2	4		
Ignition coil relay	5	4		
PGM-FI main relay 1 (FI MAIN)	3	4		
PGM-FI subrelay	4	4		
Rear window defogger relay	7	4		
T1	8	——	Starter cable (see page 22-7)	
T102	9	——	Engine wire harness M/T: (see page 22-9) A/T: (see page 22-13)	



Driver's Under-dash Fuse/Relay Box

Socket	Ref	Terminals	Connects to	Notes
A	1	———	Not used	
Accessory power socket relay	4	4		
B	2	2	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
C	3	5	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
D	11	16	Left side wire harness • 4-door: (see page 22-23) • 2-door: (see page 22-25)	
E	10	20	Not used	
F	9	33	Left engine compartment wire harness (see page 22-19)	
G	8	14	Left engine compartment wire harness (see page 22-19)	
H (optional connector)	7	12	Not used	
K (MICU service check connector)	6	3		
M	13	2	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
N	14	16	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
P	15	20	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
PGM-FI main relay 2 (FUEL PUMP)	12	4		
Q	17	20	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
R	16	24	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-32)	
Starter cut relay	5	4		

DRIVER'S UNDER-DASH FUSE/RELAY BOX



View of front side

View of back side

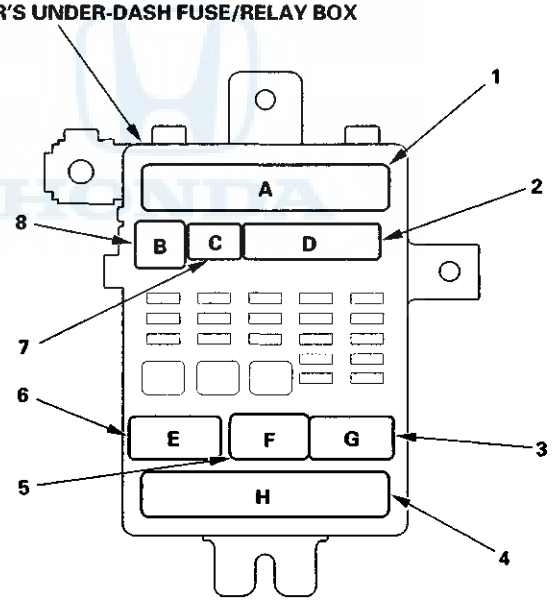
Connector to Fuse/Relay Box Index (cont'd)

Passenger's Under-dash Fuse/Relay Box

Socket	Ref	Terminals	Connects to	Notes
A	1	38	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-36)	
B	8	1	Dashboard wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-36)	
C	7	12	Not used	
D	2	28	Audio wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-40)	* 1
			Audio wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-42)	* 2
			Audio wire harness, refer to the 2008-2009 Accord Service Manual (see page 22-44)	* 3
E	6	18	Right engine compartment wire harness (see page 22-17)	
F	5	2	Not used	
G	3	16	Not used	
H	4	38	Right side wire harness • 4-door: refer to the 2008-2009 Accord Service Manual (see page 22-46) • 2-door: refer to the 2008-2009 Accord Service Manual (see page 22-48)	

* 1: With premium audio system and navigation system
* 2: With premium audio system without navigation system
* 3: Without premium audio system

PASSENGER'S UNDER-DASH FUSE/RELAY BOX



Power Distribution

Fuse to Components Index

Under-hood Fuse/Relay Box

Fuse Number			Amps	Component(s) or Circuit(s) Protected
1		MAIN	120 A	Battery, Power supply
		AS F/B	40 A	Passenger's under-dash fuse/relay box
2	2-1	———	———	Not used
	2-2	ABS/VSA	40 A	VSA modulator-control unit (FSR)
	2-3	VSA MTR	30 A	VSA modulator-control unit (MTR)
	2-4	AS F/B OP	40 A	Passenger's under-dash fuse/relay box
	2-5	———	———	Not used
	2-6	———	———	Not used
3	3-1	IG MAIN	50 A	Driver's under-dash fuse/relay box
	3-2	DR F/B	40 A	Not used
	3-3	AS LT MAIN	30 A	Passenger's under-dash fuse/relay box
	3-4	DR F/B	60 A	Driver's under-dash fuse/relay box
	3-5	DR LT MAIN	30 A	Driver's under-dash fuse/relay box
	3-6	MAIN FAN MTR	30 A	Radiator fan motor
	3-7	WIP MTR	30 A	Wiper motor, Wiper high/low relay circuit*, Wiper intermittent relay circuit*
	3-8	SUB FAN MTR	30 A	A/C condenser fan relay circuit*
4			40 A	Rear window defogger relay, Rear window defogger, Condenser
5			———	Not used
6			———	Not used
7			———	Not used
8			40 A	Blower motor relay, Blower motor
9			15 A	Driver's MICU (HAZARD)
10			20 A	Brake pedal position switch, Horn relay
11			———	Not used
12			———	Not used
13			15 A	Ignition coil relay, Ignition coils
14			15 A	A/F sensor, ECM/PCM (SUBRLY), PGM-FI subrelay
15			10 A	Driver's MICU (VBU), Gauge control module, HandsFreeLink control unit, Immobilizer-keyless control unit, Passenger's MICU, Power window master switch
16			7.5 A	Ceiling light, Ignition key light, Map lights, Trunk light
17			15 A	CKP sensor, CMP sensor, ECM/PCM (ETCSRLY), ECM/PCM (IGP), ECM/PCM (IMOFPR), ECM/PCM (MRLY), ETCS control relay, Injectors, MAF sensor, PGM-FI main relay 1(FI MAIN), PGM-FI main relay 2 (FUEL PUMP)
18			15 A	ECM/PCM (VBETCS), ETCS control relay
19			7.5 A	ECM/PCM (BACKUP)
20			7.5 A	A/C compressor clutch relay, A/C compressor clutch
21			7.5 A	Radiator fan relay circuit*

*: Built into the relay circuit board

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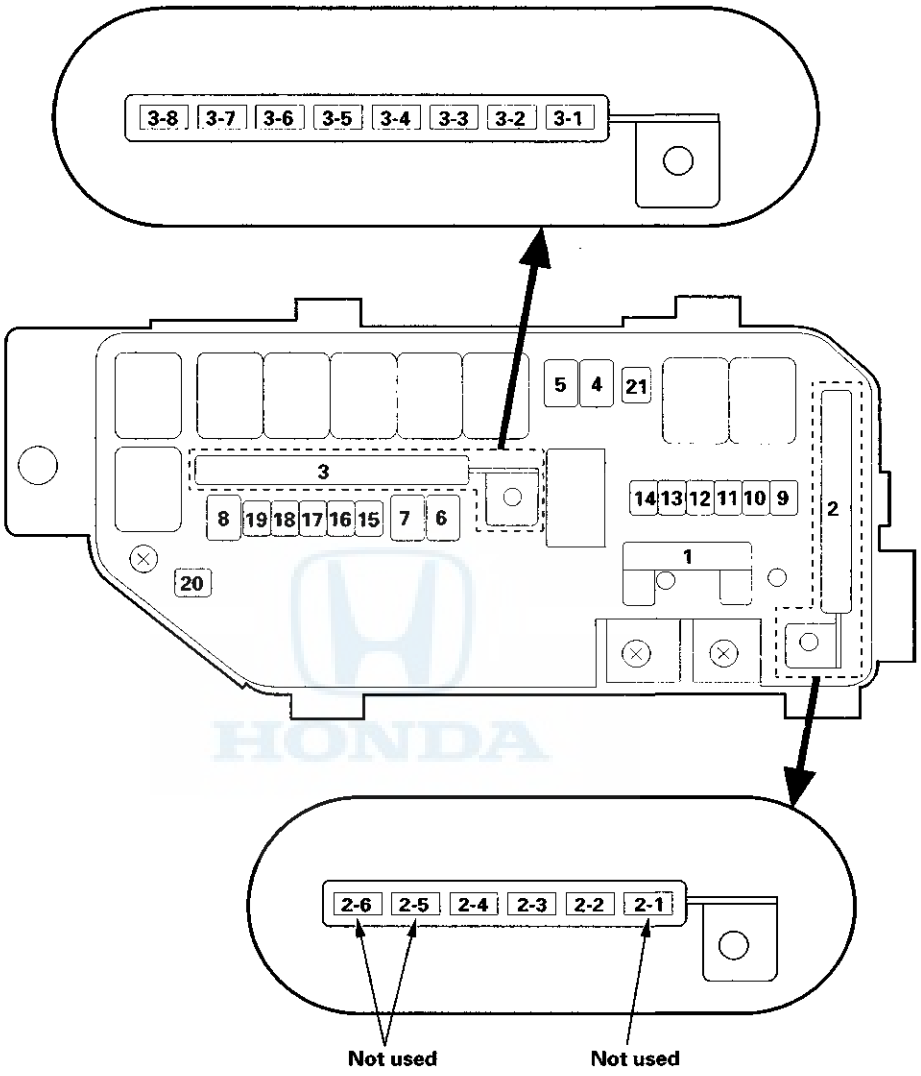
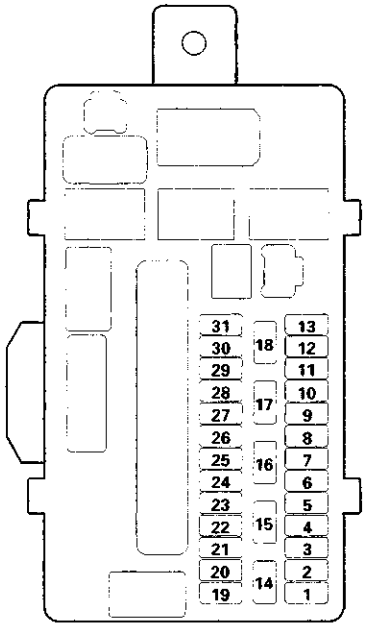
Fuse to Components Index (cont'd)



Driver's Under-dash Fuse/Relay Box

Fuse Number	Amps	Component(s) or Circuit(s) Protected
1	———	Not used
2	———	Not used
3	15 A	Washer motor relay circuit (in the passenger's under-dash fuse/relay box)
4	7.5 A	Wiper intermittent relay circuit, Wiper motor high/low relay circuit, Wiper motor relay circuit (in the under-hood fuse/relay box)
5	7.5 A	Automatic dimming inside mirror, Back-up lights, Driver's MICU, Electrical compass unit, Gauge control module, Navigation unit, Passenger's MICU, Reverse relay circuit (in the driver's under-dash fuse/relay box), Shift lock solenoid (A/T), TPMS control unit
6	7.5 A	VSA modulator-control unit, Yaw rate-lateral acceleration sensor
7	15 A	Electrical load detector (ELD), Engine mount control unit (A/T), EVAP canister purge valve, Secondary HO2S
8	7.5 A	ECM/PCM (STS)
9	20 A	ECM/PCM (FUEL PUMP), Immobilizer-keyless control unit, PGM-FI main relay 2 (FUEL PUMP)
10	10 A	ECM/PCM (VBSOL)
11	10 A	SRS unit
12	7.5 A	Front passenger's airbag cutoff indicator, ODS unit, SRS unit
13	———	Not used
14	10 A	Engine mount control unit (A/T)
15	7.5 A	Driver's MICU (DAY LT)
16	7.5 A	Audio-HVAC subdisplay unit, Climate control unit, Center information display, Driver's seat heater, Front passenger's seat heater, HVAC control unit, Rear window defogger relay, Recirculation control motor
17	7.5 A	Driver's MICU (ACC KEY LOCK)
18	7.5 A	Audio unit, Center information display, Front accessory power socket relay, HandsFreeLink control unit, HFL/Navigation microphone, Ignition key switch (A/T), Interface dial, Navigation display unit, Navigation unit
19	20 A	Driver's power seat slide motor, Driver's power seat front up-down motor
20	20 A	Moonroof control unit/motor
21	20 A	Driver's power seat recline motor, Driver's power seat rear up-down motor
22	20 A	Driver's MICU, Left rear power window switch (4-door)
23	15 A	Front accessory power socket relay, Front accessory power socket
24	20 A	Power window master switch
25	10 A	Driver's door lock actuator, Left rear door lock actuator (4-door), Trunk lid release actuator
26	10 A	Left fog light
27	10 A	Driver's MICU, Left front parking light, Left front side marker light, License plate light(s), Taillights
28	10 A	Driver's MICU (LEFT H/L HI)
29	7.5 A	TPMS control unit
30	10 A	Driver's MICU (LEFT H/L LO)
31	———	Not used



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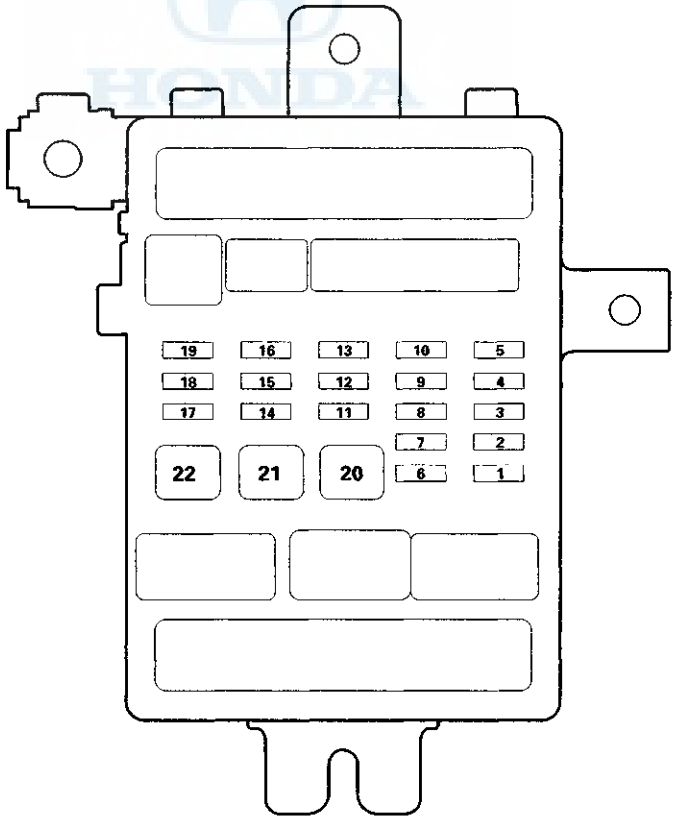
Fuse to Components Index (cont'd)

Passenger's Under-dash Fuse/Relay Box

Fuse Number	Amps	Component(s) or Circuit(s) Protected
1	10 A	Passenger's MICU (RIGHT H/L HI)
2	10 A	Passenger's MICU, Right front parking light, Right front side marker light
3	10 A	Right fog light
4	10 A	Passenger's MICU (RIGHT H/L LO)
5	———	Not used
6	7.5 A	Ambient light, A/T gear position indicator panel light, Climate control unit light, Driver's seat heater switch light, Front passenger's seat heater switch light, Glove box light, Hazard warning switch light, HomeLink unit, HVAC control unit light, Moonroof switch light, Navigation display unit, Navigation unit, Steering wheel switches lights, VSA OFF switch light
7	———	Not used
8	20 A	Front passenger's power seat recline motor
9	20 A	Front passenger's power seat slide motor
10	10 A	Front passenger's door lock actuator, Passenger's MICU, Right rear door lock actuator (4-door)
11	20 A	Right rear power window switch (4-door)
12	15 A	Console accessory power socket relay, Console accessory power socket
13	20 A	Front passenger's power window switch
14	———	Not used
15*1	20 A	Stereo amplifier*1
16	———	Not used
17	———	Not used
18	10 A	Driver's lumbar support motor
19	15 A	Driver's seat heater, Front passenger's seat heater
20	———	Not used
21	———	Not used
22	———	Not used

* 1: With premium audio system



Ground Distribution

Ground to Components Index

Ground	Component or circuit grounded
G1	Battery
G2	Engine
G3	Transmission housing
G101	A/T clutch pressure control solenoid valves A, B, and C, CKP sensor, CMP sensor A, CMP sensor B, Data link connector, ECM/PCM, EGR valve and position sensor, Ignition coils, Immobilizer-keyless control unit, Rocker arm oil control solenoid (M/T), Rocker arm oil control solenoids A, B, C (A/T), Rocker arm oil pressure switch (M/T), Rocker arm oil pressure switch B (A/T), Rocker arm oil pressure switch C (A/T), Transmission range switch (A/T), VTC oil control solenoid valve Shielding between the ECM/PCM and the front and rear A/F sensors Shielding between the front and rear ECM/PCM and the front and rear secondary HO2S (Sensor 2) Shielding between the ECM/PCM and the knock sensor
G201	Passenger's MICU (PG) (2 wires), Power steering pressure (PSP) switch, Right fog light, Right front parking light, Right front side marker light, Right front turn signal light, Right headlight (high)*2, Right headlight (low), Washer fluid level switch, Washer motor
G202	VSA modulator-control unit
G203*1	Right headlight (high)
G301	Blower motor relay, ELD unit, Wiper motor, Under-hood fuse/relay box (Fan control relay circuit, wiper relay circuit)
G302	A/C pressure switch, Brake fluid level switch, Clutch switch (M/T), Engine mount control unit (A/T), Hood switch (with security), Left fog light, Left front parking light, Left front side marker light, Left front turn signal light, Left headlight (high), Left headlight (low), Power transistor, Radiator fan motor
G401	Audio unit*3, Audio-HVAC display unit, Climate control unit, Glove box light, HVAC control unit, Interface dial, Navigation display unit, Navigation unit, Stereo amplifier*3
G402	Audio unit, Stereo amplifier*3
G501	Automatic dimming inside mirror, Cable reel (steering wheel switches ground), Driver's door lock knob switch/key cylinder switch, Driver's MICU (2 wires), Driver's power window motor, Gauge control module, HandsFreeLink control unit, HFL/Navigation microphone, Left power mirror defogger, Map lights, Power mirror switch, Door multiplex control unit, Moonroof switch, Vanity mirror lights, VSA OFF switch
G502	Data link connector, Driver's MICU (2 wires), Gauge control module, MICU service check connector, Door multiplex control unit, Moonroof control unit/motor
G503	A/T gear position indicator panel light, Console accessory power socket, Console accessory power socket relay, Driver's seat heater switch, Front passenger's seat heater switch, Front accessory power socket, Ignition key switch, TPMS control unit, Yaw rate-lateral acceleration sensor
G504	SRS unit (2 wires)
G505	Front passenger's door lock knob switch, Front passenger's power window switch, Passenger's MICU (2 wires), Right power mirror defogger
G601	Driver's under-dash fuse/relay box (door lock relay circuit), Front accessory power socket relay, High mount brake light, Left rear door lock knob switch (4-door), Left rear power window switch (4-door)
G602	Left back-up light, Left brake light/taillight, Left rear turn signal light, License plate light(s), Right back-up light, Right brake light/taillight, Right rear turn signal light, Trunk lid latch switch
G603	Fuel pump
G651	Electrical compass unit, Navigation display unit, Navigation unit, Passenger's under-dash fuse/relay box (door lock relay circuit, washer motor relay circuit), Right rear door lock knob switch (4-door), Right rear power window switch (4-door)
G701	Driver's lumbar support switch, Driver's power seat switch, Driver's seat-back heater, Driver's seat belt buckle switch, Driver's seat heater relays, Driver's seat position sensor
G702	Front passenger's power seat switch, Front passenger's seat belt buckle switch, ODS unit
G801	Rear window defogger

* 1: EX-L V6, EX-L V6 PZEV
* 2: Except EX-L V6, EX-L V6 PZEV
* 3: With premium audio system

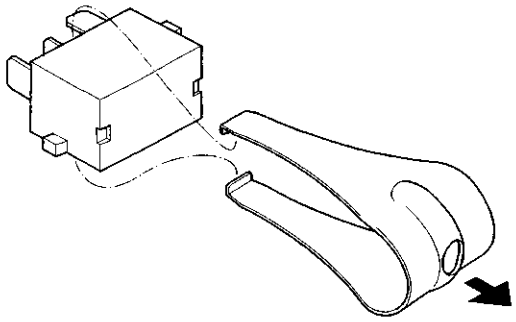
Power Relay Test

Special Tools Required
Relay Puller 07AAC-000A1A0

Use this chart to identify the type of relay, then do the test listed for it.

Relay	Test
A/C compressor clutch relay	Normally-open type
Blower motor relay	
Console accessory power socket relay	
ETCS control relay	
Front accessory power socket relay*	
Horn relay	
Ignition coil relay	
PGM-FI main relay 1	
PGM-FI main relay 2 (FUEL PUMP)*	
PGM-FI subrelay	
Rear window defogger relay	
Seat heater relays (high)	
Starter cut relay*	
Seat heater relays (low)	Five-terminal type

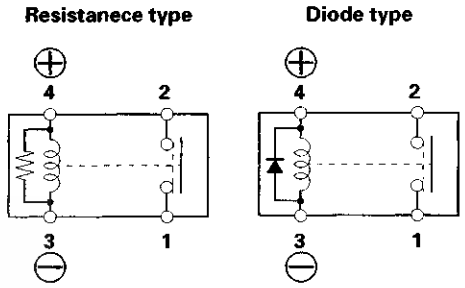
*: Carefully remove the relay from the driver's under-dash fuse/relay box using the relay puller. Do not use pliers. Pliers will damage the relay.

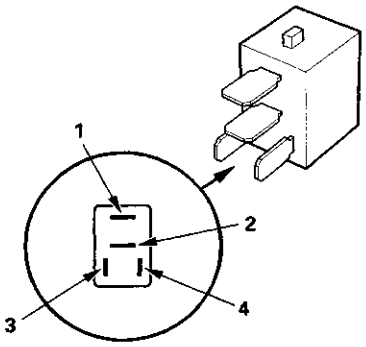


Normally-open type

Check for continuity between the terminals:

- There should be continuity between the terminals No. 1 and No. 2 when battery power is connected to the terminal No. 4, and battery ground is connected to the terminal No. 3.
- There should be no continuity between the terminals No. 1 and No. 2 when power is disconnected.



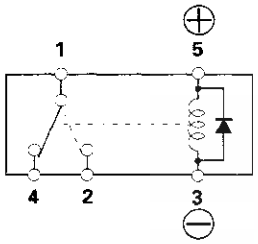


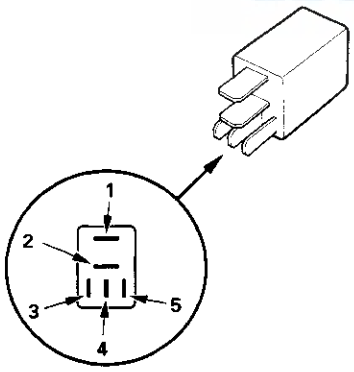
Five-terminal type

Check for continuity between the terminals:

- There should be continuity between the terminals No. 1 and No. 2 when battery power is connected to the terminal No. 5, and battery ground is connected to the terminal No. 3.
- There should be continuity between the terminals No. 1 and No. 4 when power is disconnected.

Diode type

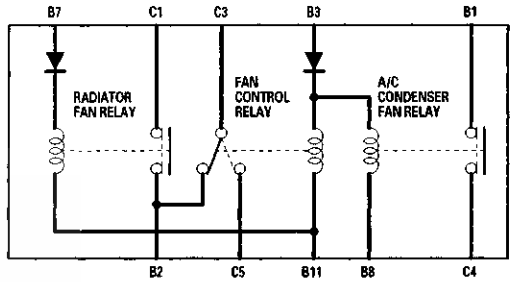


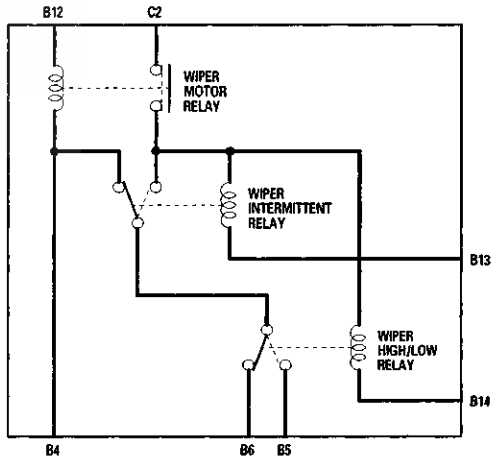


Relay Circuit Board Test

The relay circuit board is part of the under-hood fuse/relay box, and it contains these relays:

- A/C condenser fan relay
- Radiator fan relay
- Fan control relay
- Wiper motor relay
- Wiper intermittent relay
- Wiper high/low relay





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Power Relay Test (cont'd)

1. Disconnect the negative battery cable, then disconnect under-hood fuse/relay box connectors B (14P) and C (5P).

   A/C condenser fan relay circuit test
   There should be continuity between the terminals B1 and C4 when battery power is connected to the terminal B3, and battery ground is connected to the terminal B8.
   There should be no continuity between the terminals B1 and C4 when power is disconnected.

   Radiator fan relay circuit test
   There should be continuity between the terminals C1 and B2 when battery power is connected to the terminal B7, and battery ground is connected to the terminal B11.
   There should be no continuity between the terminals C1 and B2 when power is disconnected.

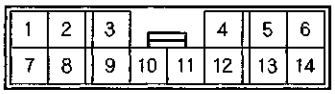
   Fan control relay circuit test
   There should be continuity between the terminals C3 and C5 when battery power is connected to the terminal B3, and battery ground is connected to the terminal B11.
   There should be continuity between the terminals C3 and B2 when power is disconnected.

   Wiper motor relay circuit test
   There should be continuity between the terminals C2 and B6, when battery power is connected to the terminals B12 and C2, and battery ground is connected to the terminals B4 and B13.
   There should be no continuity between the terminals C2 and B6, when the ground is disconnected from the terminal B4.

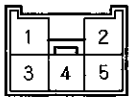
   Wiper intermittent relay circuit test
   There should be battery voltage between the terminal B6 and body ground when battery power is connected to the terminals B12 and C2, and battery ground is connected to the terminals B4 and B13.
   There should be no voltage between the terminal B6 and body ground when the terminal B13 is disconnected.

   Wiper high/low relay circuit test
   There should be continuity between the terminals B4 and B5 when battery power is connected to the terminals B12 and C2, and battery ground is connected to the terminals B4 and B14.
   There should be no continuity between the terminals B4 and B5, and there should be continuity between the terminals B4 and B6 when power is disconnected.

CONNECTOR B (14P)



CONNECTOR C (5P)



2. If the relay circuit test is not as specified, replace the relay circuit board.

DTC Troubleshooting Index

NOTE: Record all DTCs, and sort them by DTC type using the DTC troubleshooting index, then troubleshoot the DTC(s) in this order:

- Battery voltage DTCs
- Internal error DTCs
- Loss of communication DTCs
- Signal error DTCs

Driver's MICU

DTC	Description	DTC Type	Page
B10A2	Driver's MICU (EEPROM) error	Internal error	Refer to the 2008-2009 Accord Service Manual (see page 22-130)
B10CF	Left daytime running lights circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-194)
B1036	Driver's MICU IG1 line input error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-131)
B1077	Wiper (As) signal error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-282)
B1275	Combination light switch OFF position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-198)
B1276	Combination light switch parking (SMALL) position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-198)
B1277	Combination light switch AUTO position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-198)
B1278	Combination light switch ON position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-198)
B1279	Headlight switch DIMMER position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-200)
B1280	Turn signal switch circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-220)
B1281	Wiper switch MIST position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-284)
B1282	Wiper switch INT (AUTO) position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-284)
B1283	Wiper switch LOW position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-284)
B1284	Wiper switch HIGH position circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-284)
U0155	Driver's MICU lost communication with gauge control module	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-133)
U0199	Driver's MICU lost communication with door multiplex control unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-134)
U1280	Communication bus line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)
U1283	Driver's MICU lost communication with passenger's MICU	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-137)

(cont'd)

DTC Troubleshooting Index (cont'd)

Passenger's MICU

DTC	Description	DTC Type	Page
B11A2	Passenger's MICU (EEPROM) error	Internal error	Refer to the 2008-2009 Accord Service Manual (see page 22-130)
B11C7	Passenger's MICU IG1 line input error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-132)
B11CF	Right daytime running lights circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-196)
B1575	Automatic lighting sensor circuit malfunction	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-202)
U0155	Passenger's MICU lost communication with gauge control module	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-133)
U1280	Communication bus line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)
U1282	Passenger's MICU lost communication with driver's MICU	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-137)

Immobilizer-Keyless Control Unit

DTC	Description	DTC Type	Page
U0155	Immobilizer-keyless control unit lost communication with gauge control module	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-390)
U0199	Immobilizer-keyless control unit lost communication with door multiplex control unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-390)
U1280	Communication bus line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)
U1282	Immobilizer-keyless control unit lost communication with driver's MICU	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-391)

Door Multiplex Control Unit

DTC	Description	DTC Type	Page
B1125	Driver's power window motor pulse A error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-255)
B1126	Driver's power window motor pulse B error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-255)
B1127	Driver's door key cylinder switch signal error (LOCK/UNLOCK)	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-154)
B1128	Driver's door lock switch signal error (LOCK/UNLOCK)	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-155)
B1129	Driver's door lock knob switch signal error (LOCK/UNLOCK)	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-156)
B1130	Front passenger's power window motor pulse A error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-256)
B1131	Front passenger's power window motor pulse B error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-256)
B1140	Driver's power window position information error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-258)
B1142	Communication line (UART line) communication error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-258)
B1145	Front passenger's power window position information error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-259)
U0155	Door multiplex control unit lost communication with gauge control module	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-260)
U0164	Door multiplex control unit lost communication with climate control unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-260)
U1280	Communication bus line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)
U1282	Door multiplex control unit lost communication with driver's MICU	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-261)
U1283	Door multiplex control unit lost communication with passenger's MICU	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-261)

(cont'd)

DTC Troubleshooting Index (cont'd)

Gauge Control Module

DTC	Description	DTC Type	Page
B1152	Gauge control module (EEPROM) error	Internal error	Refer to the 2008-2009 Accord Service Manual (see page 22-312)
B1175	Fuel level sensor (Fuel gauge sending unit) circuit open	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-312)
B1176	Fuel level sensor (Fuel gauge sending unit) circuit short	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 22-313)
U0029	F-CAN communication line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-314)
U0100	Gauge control module lost communication with ECM/PCM	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-315)
U0122	Gauge control module lost communication with VSA modulator-control unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-316)
U0127	Gauge control module lost communication with TPMS control unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-317)
U0151	Gauge control module lost communication with SRS unit	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-318)
U1280	Communication bus line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)
U1282	Gauge control module lost communication with driver's MICU	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-319)
U1283	Gauge control module lost communication with passenger's MICU	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-319)

HandsFreeLink Control Unit

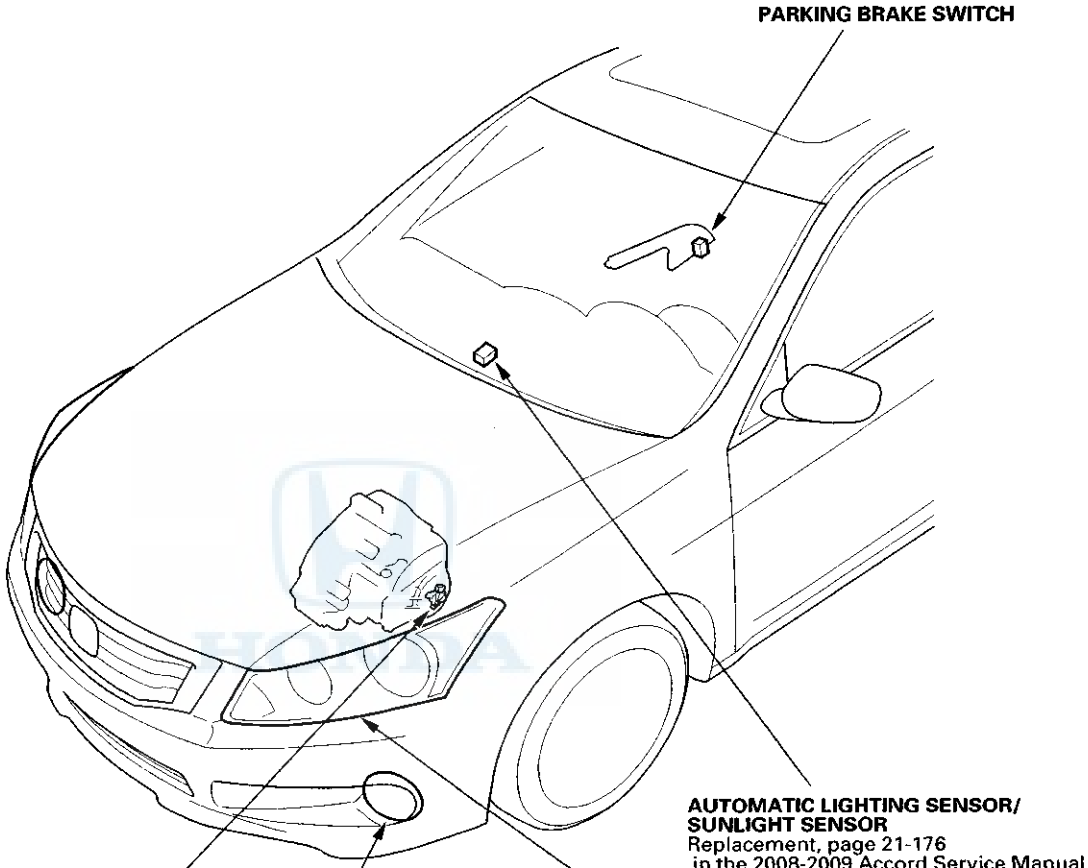
DTC	Description	DTC Type	Page
B1775	Microphone input/output short to power/ open	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 23-270)
B1776	Microphone input/output short to ground/ open	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 23-271)
B1779	HFL-voice control switch (HFL TALK/HFL BACK buttons) circuit open/short	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 23-273)
B1780	HFL-voice control switch (HFL TALK/HFL BACK buttons) circuit short	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 23-275)
B1792	HandsFreeLink control unit internal error	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 23-276)
U1280	Communication bus line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)

Climate Control Unit

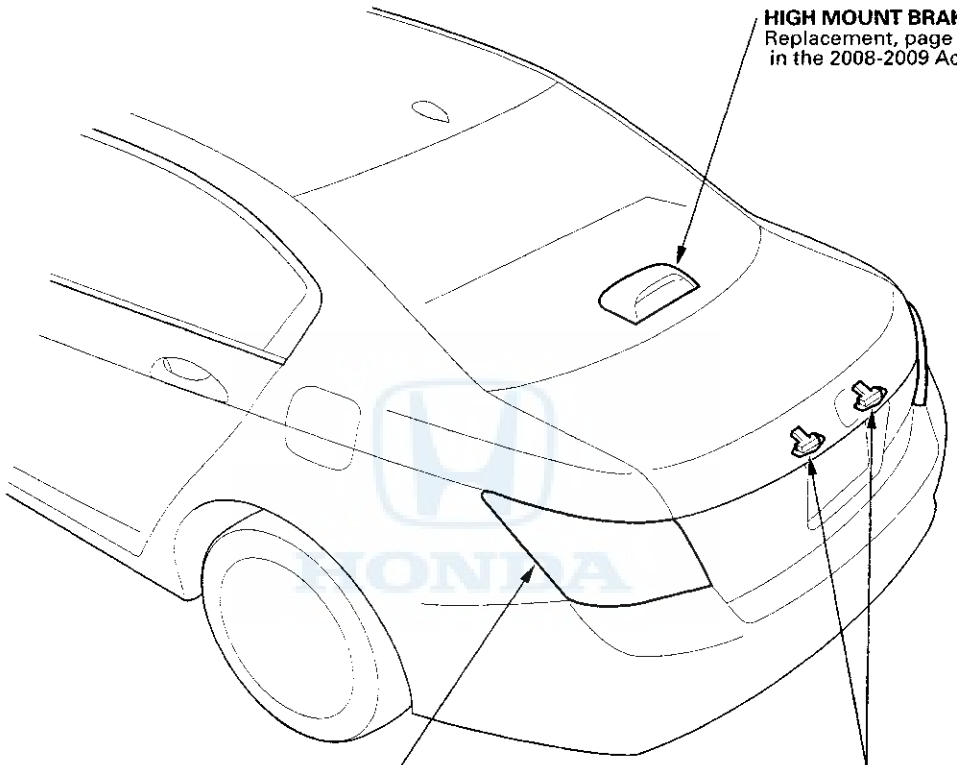
DTC	Description	DTC Type	Page
B121A	An open in the mode control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-125)
B121B	A short in the mode control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-127)
B1220	A short in the recirculation control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-130)
B1225	An open in the in-car temperature sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-134)
B1226	A short in the in-car temperature sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-135)
B1227	An open in the outside air temperature sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-137)
B1228	A short in the outside air temperature sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-138)
B1229	An open in the sunlight sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-139)
B1230	A short in the sunlight sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-141)
B1231	An open in the evaporator temperature sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-142)
B1232	A short in the evaporator temperature sensor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-144)
B1233	An open in the driver©sair mix control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-145)
B1234	A short in the driver©sair mix control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-146)
B1235	A problem in the driver©s aimix control linkage, door, or motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-149)
B1236	An open in the passenger©s aimix control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-150)
B1237	A short in the passenger©s aimix control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-152)
B1238	A problem in the passenger©s aimix control linkage, door, or motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-155)
B1241	A problem in the blower motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-157)
B2983	A problem in the recirculation control linkage, door, or motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-161)
B2986	An open in the recirculation control motor circuit	Signal error	Refer to the 2008-2009 Accord Service Manual (see page 21-162)
U0155	Climate control unit lost communication with gauge control module	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 21-124)
U1280	Communication bus line error (BUS OFF)	Loss of communication	Refer to the 2008-2009 Accord Service Manual (see page 22-135)

Component Location Index

4-door



4-door



HIGH MOUNT BRAKE LIGHT
Replacement, page 22-216
in the 2008-2009 Accord Service Manual

LICENSE PLATE LIGHTS
Replacement, page 22-215
in the 2008-2009 Accord Service Manual

TAILLIGHT and BRAKE LIGHT
Replacement, page 22-214
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual

BACK-UP LIGHT
Replacement, page 22-214
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual

REAR TURN SIGNAL LIGHT
Replacement, page 22-214
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual

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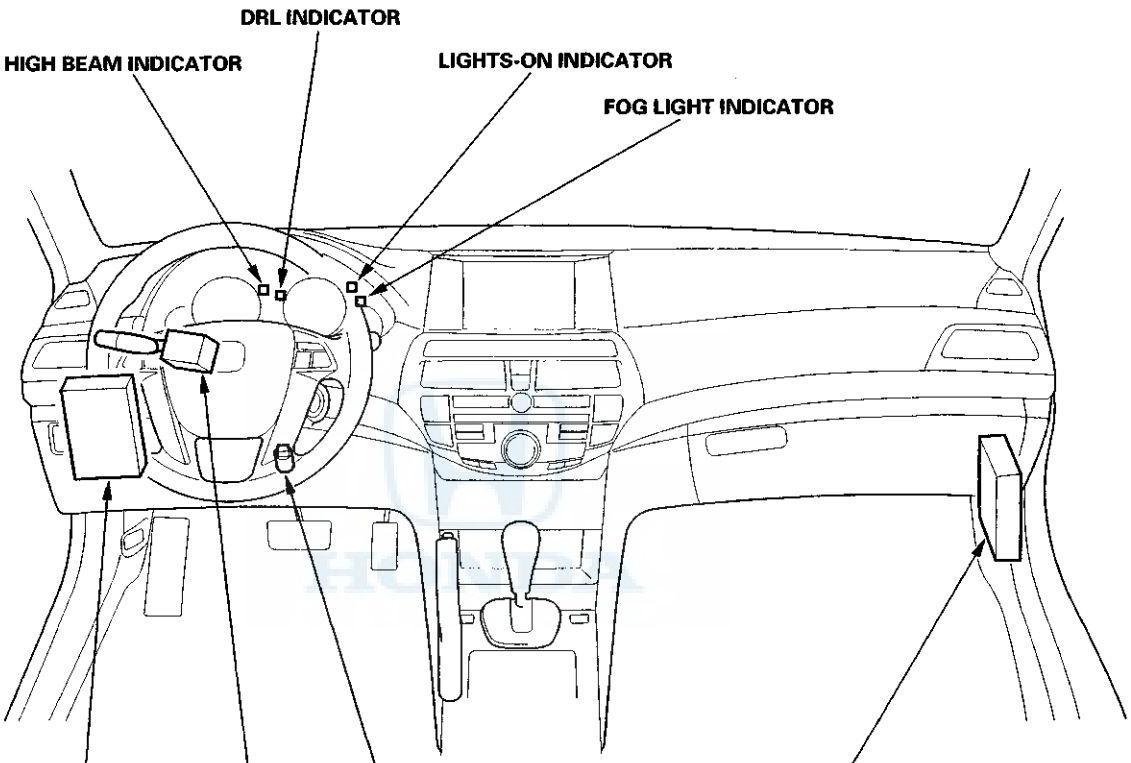
Component Location Index (cont'd)



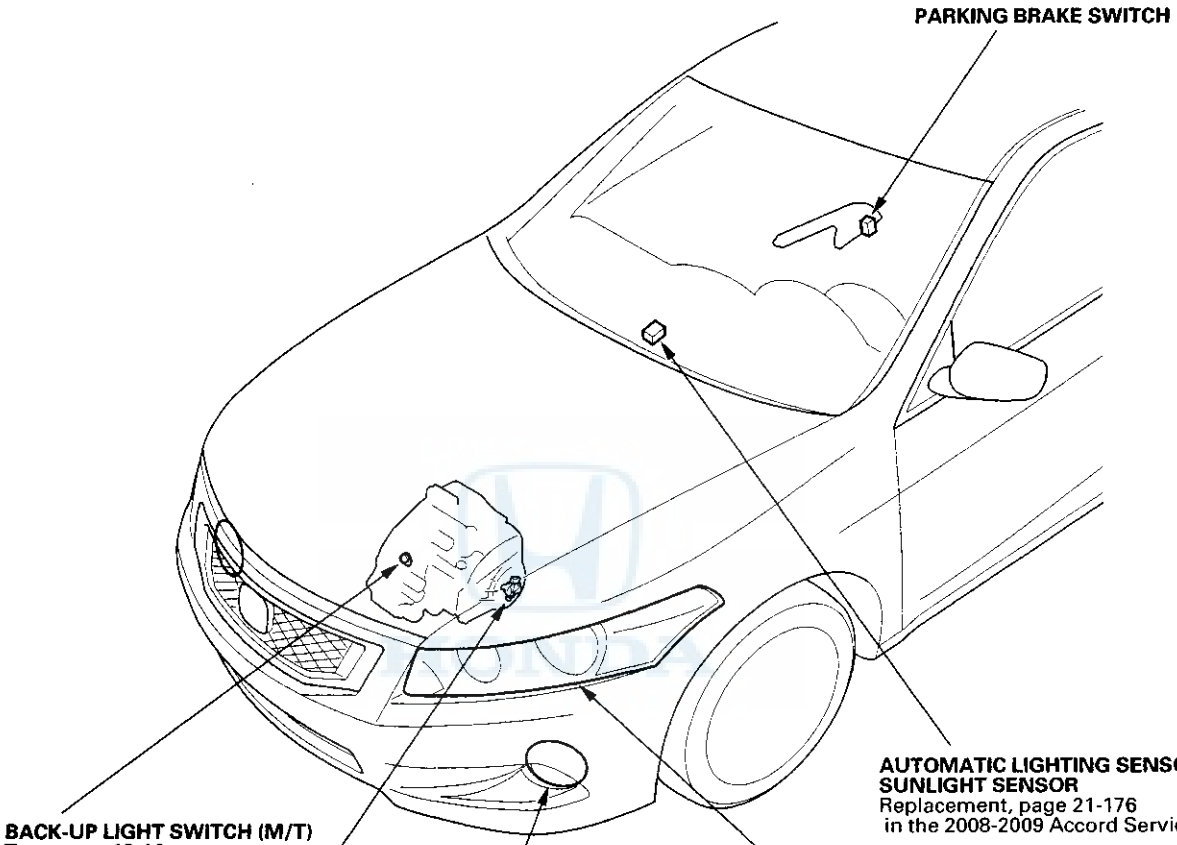
BRAKE PEDAL POSITION SWITCH
Test, page 22-216
in the 2008-2009 Accord Service Manual
Adjustment, page 19-6
in the 2008-2009 Accord Service Manual

COMBINATION LIGHT SWITCH
Test/Replacement, page 22-208
in the 2008-2009 Accord Service Manual
FOG LIGHT SWITCH
(Has built in the combination light switch)
Test/Replacement, page 22-58

PASSENGER'S MICU
(Built into the passenger's under-dash fuse/relay box)
Input Test, page 22-57
Replacement, page 22-87
in the 2008-2009 Accord Service Manual

DRIVER'S MICU
(Built into the driver's under-dash fuse/relay box)
Input Test, page 22-54
Replacement, page 22-84
in the 2008-2009 Accord Service Manual

2-door


PARKING BRAKE SWITCH
AUTOMATIC LIGHTING SENSOR/
SUNLIGHT SENSOR
Replacement, page 21-176
in the 2008-2009 Accord Service Manual
BACK-UP LIGHT SWITCH (M/T)
Test, page 13-16
TRANSMISSION RANGE SWITCH
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in the 2008-2009Accord Service Manual
Bulb Replacement, page 22-211
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Adjustment, page 22-209
in the 2008-2009 Accord Service Manual
FRONT PARKING LIGHT
Replacement, page 22-210
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual
FRONT SIDE MARKER LIGHT
Replacement, page 22-210
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual
FRONT TURN SIGNAL LIGHT
Replacement, page 22-210
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual

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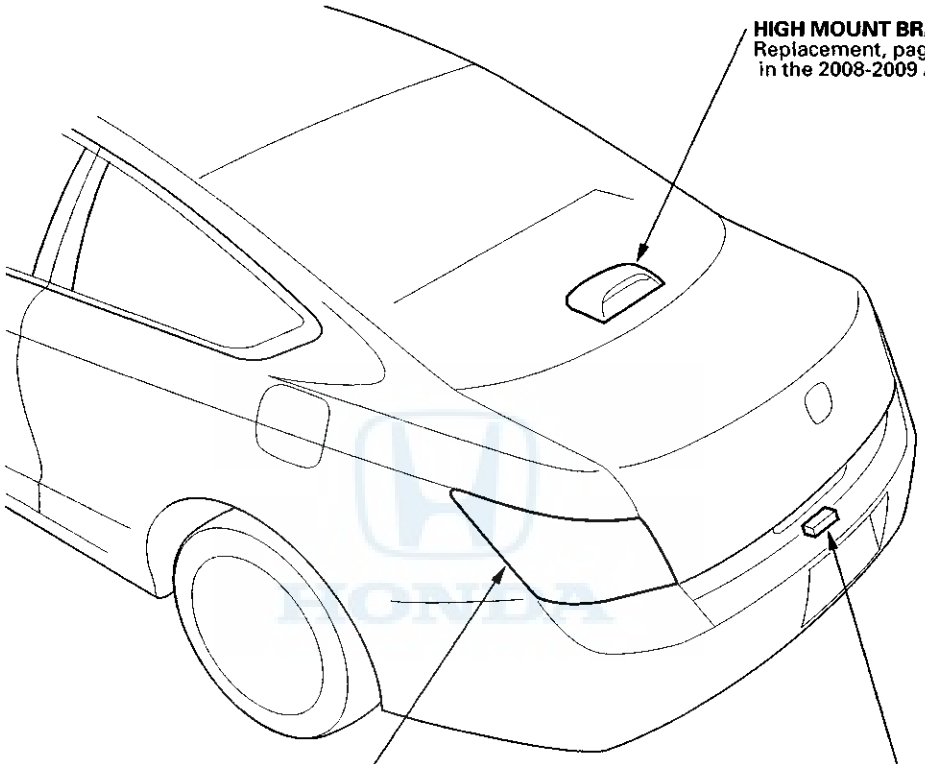
Component Location Index (cont'd)



HIGH MOUNT BRAKE LIGHT
Replacement, page 22-216
in the 2008-2009 Accord Service Manual

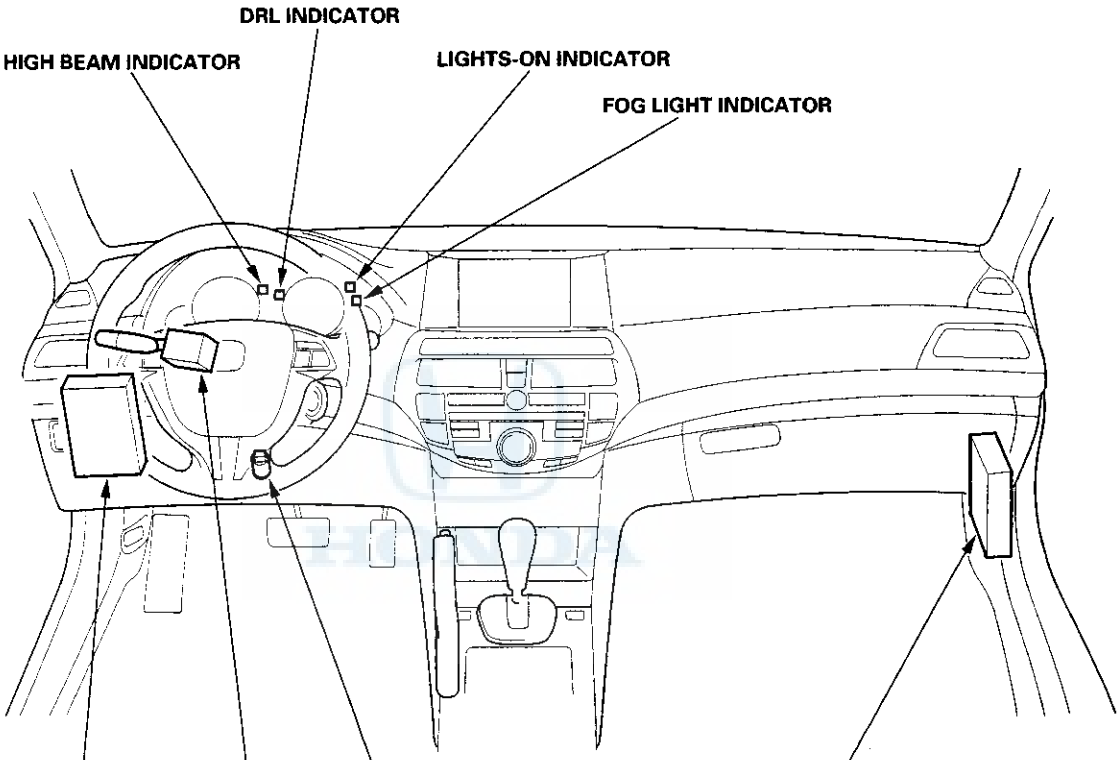
LICENSE PLATE LIGHT
Replacement, page 22-215
in the 2008-2009 Accord Service Manual

TAILLIGHT and BRAKE LIGHT
Replacement, page 22-214
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual

BACK-UP LIGHT
Replacement, page 22-214
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual

REAR TURN SIGNAL LIGHT
Replacement, page 22-214
in the 2008-2009 Accord Service Manual
Bulb Replacement, page 22-211
in the 2008-2009 Accord Service Manual

2-door



BRAKE PEDAL POSITION SWITCH
Test, page 22-216
in the 2008-2009 Accord Service Manual
Adjustment, page 19-6
in the 2008-2009 Accord Service Manual

COMBINATION LIGHT SWITCH
Test/Replacement, page 22-208
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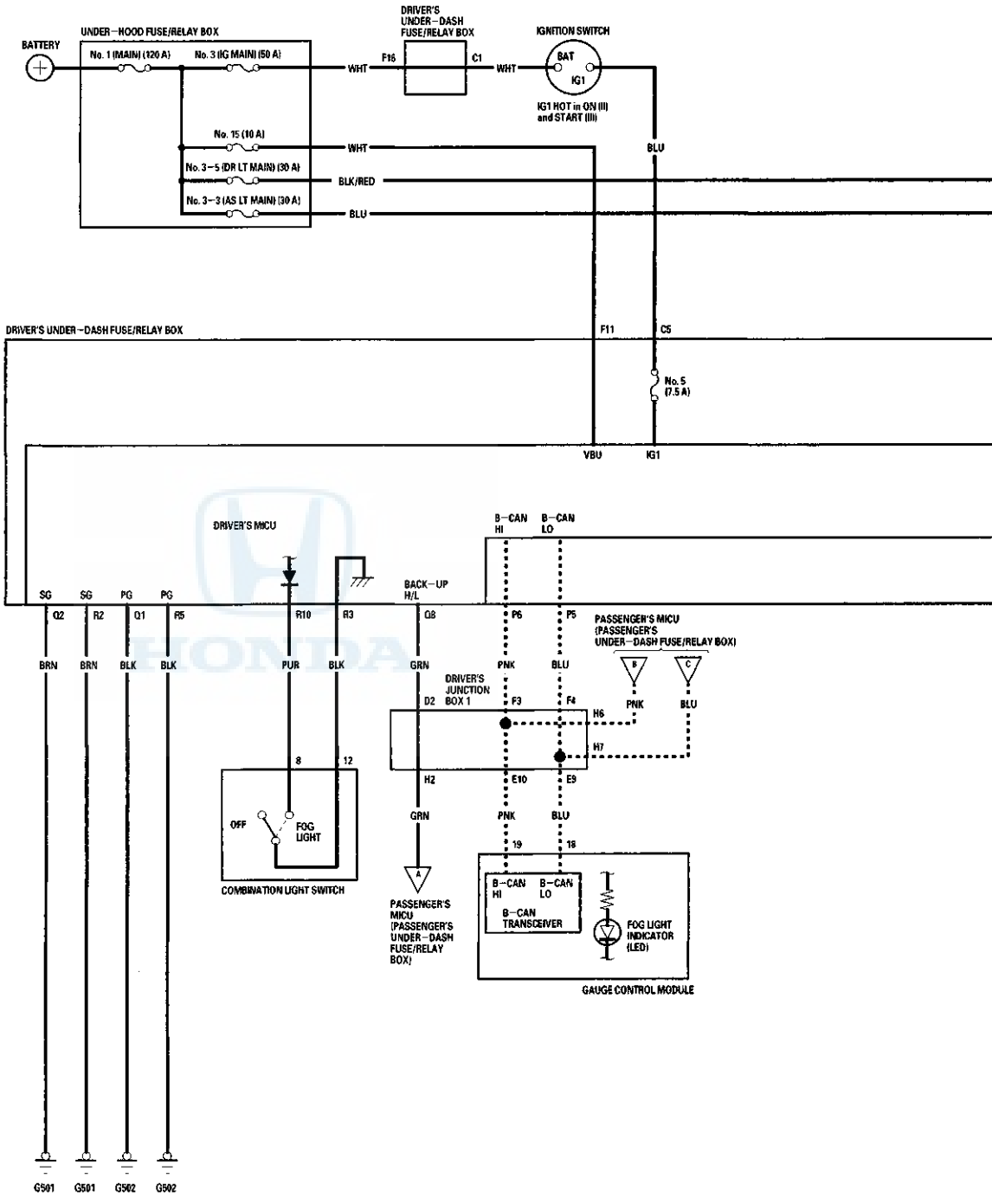
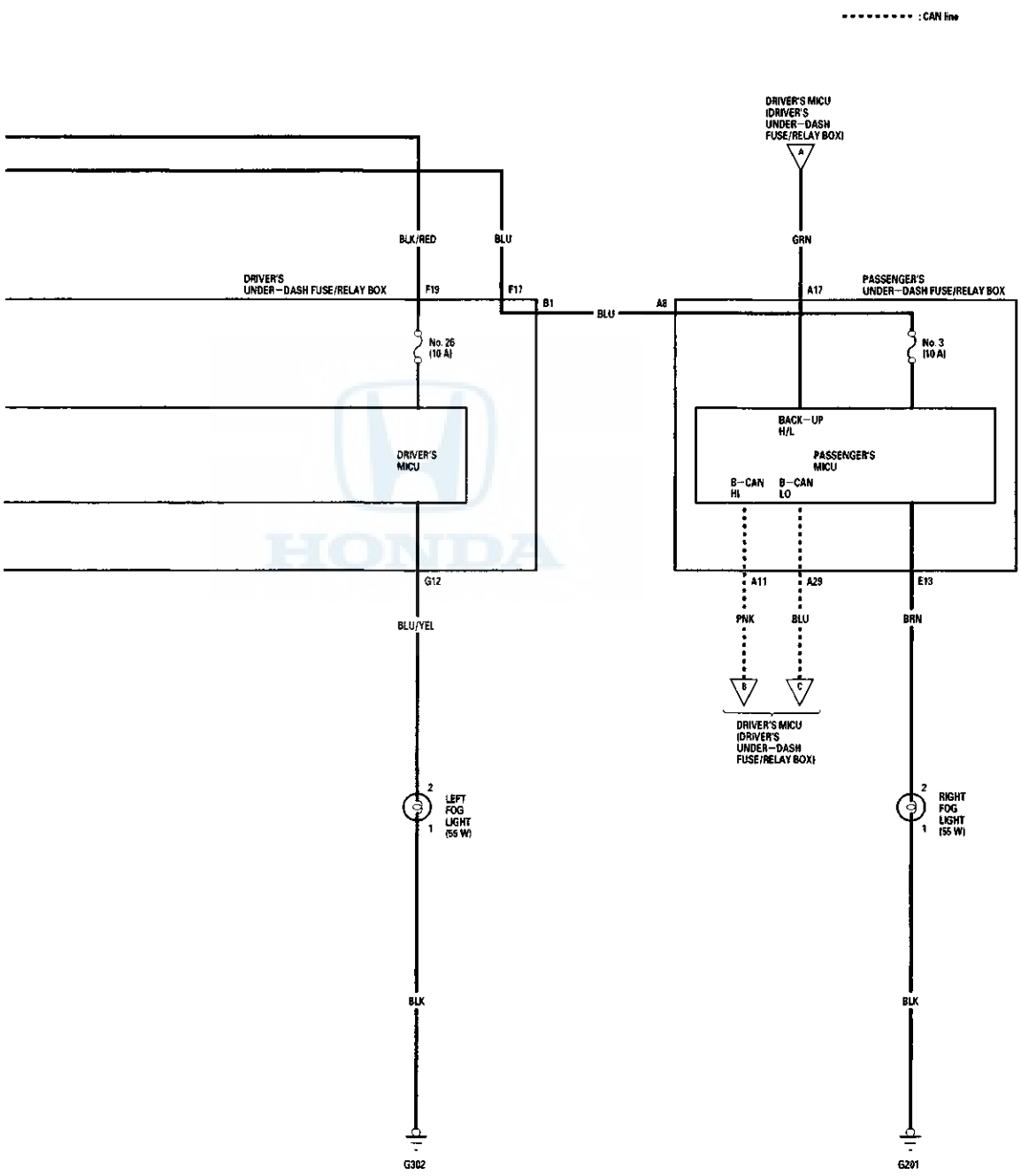
FOG LIGHT SWITCH
(Built into the combination light switch)
Test/Replacement, page 22-58

PASSENGER'S MICU
(Built into the passenger's under-dash fuse/relay box)
Input Test, page 22-57
Replacement, page 22-87
in the 2008-2009 Accord Service Manual

DRIVER'S MICU
(Built into the driver's under-dash fuse/relay box)
Input Test, page 22-54
Replacement, page 22-84
in the 2008-2009 Accord Service Manual

Circuit Diagram - Fog Lights




: CAN line
DRIVER'S MICU (DRIVER'S UNDER-DASH FUSE/RELAY BOX)
A
GRN
BLK/RED
BLU
DRIVER'S UNDER-DASH FUSE/RELAY BOX
F19
F17
B1
BLU
A8
A17
PASSENGER'S UNDER-DASH FUSE/RELAY BOX
No. 26 (10 A)
No. 3 (10 A)
DRIVER'S MICU
BACK-UP H/L
PASSENGER'S MICU
B-CAN HI
B-CAN LO
G12
A11
A29
E13
BLU/YEL
PNK
BLU
BRN
B
C
DRIVER'S MICU (DRIVER'S UNDER-DASH FUSE/RELAY BOX)
2
1
LEFT FOG LIGHT (55 W)
RIGHT FOG LIGHT (55 W)
BLK
BLK
G302
G201

MICU Input Test

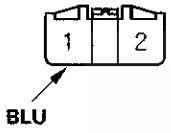
NOTE:
- Before testing, troubleshoot the multiplex integrated control unit first, using B-CAN System Diagnosis Test Mode A, refer to the 2008-2009 Accord Service Manual (see page 22-120).
- Before testing, check the No. 15 (7.5 A) and No. 26 (10 A) fuses in the driver's under-dash fuse/relay box and No. 3 (10 A) fuse in the passenger's under-dash fuse/relay box.

Driver's MICU

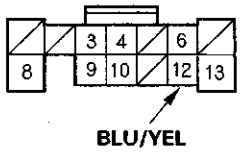
1. Turn the ignition switch to LOCK (0), and remove the driver's dashboard lower cover.
2. Disconnect driver's under-dash fuse/relay box connectors B, D, F, G, Q, and R.

   NOTE: All connector views are shown from wire side of female terminals.

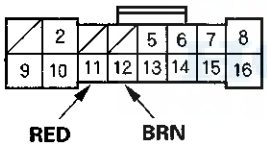
CONNECTOR B (2P)



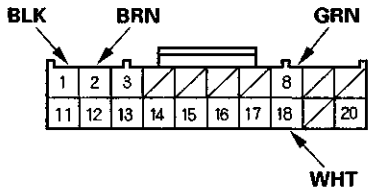
CONNECTOR G (13P)



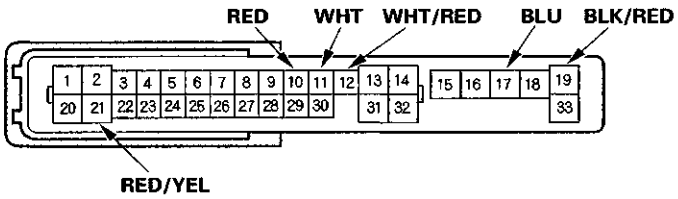
CONNECTOR D (16P)



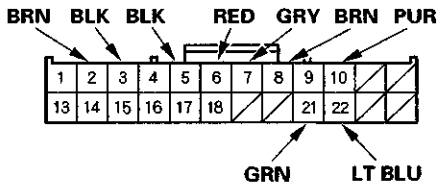
CONNECTOR Q (20P)



CONNECTOR F (33P)



CONNECTOR R (24P)



3. Inspect the connector and socket terminals to be sure they are all making good contact.
   - If the terminals are bent, loose or corroded, repair them as necessary and recheck the system.
   - If the terminals look OK, go to step 4.

4. With the connectors still disconnected, make these input tests at the connectors.

   • If any test indicates a problem, find and correct the cause, then recheck the system.
   • If all the input tests prove OK, go to step 5.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
D11	RED	Under all conditions	Connect the terminals F19 and D11 with a jumper wire: The taillights and the license plate lights should come on.	• Blown bulb • Poor ground (G602) • An open in the wire
F10	RED	Under all conditions	Connect the terminals F19 and F10 with a jumper wire: The left front parking light and the left front side marker light should come on.	• Blown bulb • Poor ground (G302) • An open in the wire
F13	WHT/ RED	Under all conditions	Connect the terminals F19 and F13 with a jumper wire: The left headlight (high beam) should come on.	• Blown bulb • Poor ground (G302) • An open in the wire
F21	RED/ YEL	Under all conditions	Connect the terminals F19 and F21 with a jumper wire: The left headlight (low beam) should come on.	• Blown bulb • Poor ground (G302) • An open in the wire
G12	BLU/ YEL	Under all conditions	Connect the terminals F19 and G12 with a jumper wire: The left fog light should come on.	• Blown bulb • Poor ground (G302) • An open in the wire
Q8	GRN	Under all conditions	Check for continuity between the terminal Q8 and passenger's under-dash fuse/relay box connector A (38P) terminal No. 17: There should be continuity.	An open in the wire

5. Reconnect the connectors to the driver's under-dash fuse/relay box, and make these input tests at the connector.

   • If any test indicates a problem, find and correct the cause, then recheck the system.
   • If all the input tests prove OK, go to step 6.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
Q1	BLK	Under all conditions	Measure the voltage to ground: There should be less than 0.5 V.	• Poor ground (G502) • An open in the wire
Q2	BRN	Under all conditions	Measure the voltage to ground: There should be less than 0.5 V.	• Poor ground (G501) • An open in the wire
R2	BRN	Under all conditions	Measure the voltage to ground: There should be less than 0.5 V.	• Poor ground (G501) • An open in the wire
R5	BLK	Under all conditions	Measure the voltage to ground: There should be less than 0.5 V.	• Poor ground (G502) • An open in the wire
B1	BLU	Under all conditions	Measure the voltage to ground: There should be battery voltage.	• Blown No. 3 (AS LT MAIN) (30 A) fuse in the under-hood fuse/relay box • Faulty driver's under-dash fuse/relay box • An open in the wire

(cont'd)

MICU Input Test (cont'd)

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
D12	BRN	Driver's door open	Measure the voltage to ground: There should be less than 1 V.	• Faulty driver's door switch • An open in the wire
		Driver's door closed	Measure the voltage to ground: There should be more than 5 V.	• Faulty driver's door switch • A short to ground in the wire
F11	WHT	Under all conditions	Measure the voltage to ground: There should be battery voltage.	• Blown No. 15 (10 A) fuse in the under-hood fuse/relay box • An open in the wire
F17	BLU	Under all conditions	Measure the voltage to ground: There should be battery voltage.	• Blown No. 3 (AS LT MAIN) (30 A) fuse in the under-hood fuse/relay box • An open in the wire
F19	BLK/RED	Under all conditions	Measure the voltage to ground: There should be battery voltage.	• Blown No. 3 (DR LT MAIN) (30 A) fuse in the under-hood fuse/relay box • An open in the wire
Q18	WHT	Ignition key inserted into the ignition switch	Measure the voltage to ground: There should be less than 1 V.	• Faulty ignition key switch • An open in the wire
		Ignition switch LOCK (0), and the ignition key removed from the ignition switch	Measure the voltage to ground: There should be more than 5 V.	• Faulty ignition key switch • A short to ground in the wire
R6 · R3	RED · BLK	Combination light switch OFF	Measure the voltage between terminals R6 and R3: There should be less than 1 V.	• Faulty combination light switch • An open in the wire
		Combination light switch in any other position than OFF	Measure the voltage between terminals R6 and R3: There should be 5 V or more.	• Faulty combination light switch • A short to ground in the wire
R7 · R3	GRY · BLK	Combination light switch (SMALL position) ON	Measure the voltage between terminals R7 and R3: There should be less than 1 V.	• Faulty combination light switch • An open in the wire
		Combination light switch OFF	Measure the voltage between terminals R7 and R3: There should be 5 V or more.	• Faulty combination light switch • A short to ground in the wire
R8 · R3	BRN · BLK	Combination light switch (headlight) ON	Measure the voltage between terminals R8 and R3: There should be less than 1 V.	• Faulty combination light switch • An open in the wire
		Combination light switch OFF	Measure the voltage between terminals R8 and R3: There should be 5 V or more.	• Faulty combination light switch • A short to ground in the wire
R21 · R3	GRN · BLK	Combination light switch lever pulled (Passing)	Measure the voltage between terminals R21 and R3: There should be less than 1 V.	• Faulty combination light switch • An open in the wire
		Combination light switch OFF	Measure the voltage between terminals R21 and R3: There should be 5 V or more.	• Faulty combination light switch • A short to ground in the wire
R22 · R3	LT BLU · BLK	Combination light switch (Dimmer) in high beam position	Measure the voltage between terminals R22 and R3: There should be less than 1 V.	• Faulty combination light switch • An open in the wire
		Combination light switch (Dimmer) in low beam position	Measure the voltage between terminals R22 and R3: There should be 5 V or more.	• Faulty combination light switch • A short to ground in the wire
R10 · R3	PUR · BLK	Fog light switch ON	Measure the voltage between terminals R10 and R3: There should be less than 1 V.	• Faulty combination light switch • An open in the wire
		Fog light switch OFF	Measure the voltage between terminals R10 and R3: There should be 5 V or more.	• Faulty combination light switch • A short to ground in the wire

Passenger's MICU

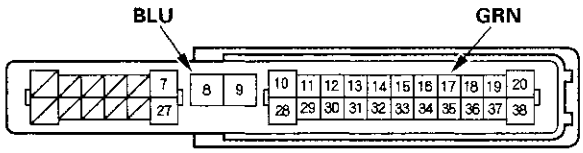
6. Turn the ignition switch to LOCK (0), and remove the right kick panel:

   - 2-door, refer to the 2008-2009 Accord Service Manual (see page 20-97).
   - 4-door, refer to the 2008-2009 Accord Service Manual (see page 20-99).

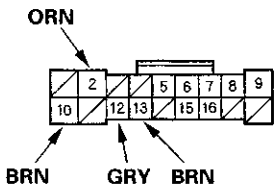
7. Disconnect passenger's under-dash fuse/relay box connectors A and E.

   NOTE: All connector views are shown from wire side of female terminals.

CONNECTOR A (38P)



CONNECTOR E (18P)



8. With the connectors still disconnected, make these input tests at the connectors.

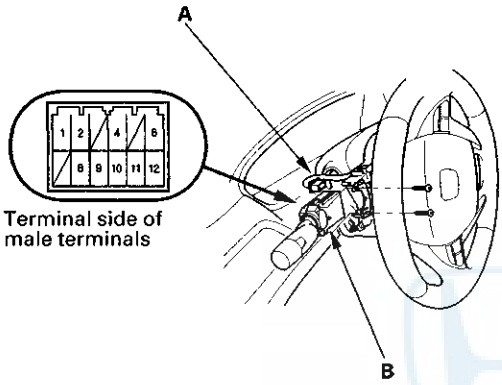
   - If any test indicates a problem, find and correct the cause, then recheck the system.
   - If all the input tests prove OK, go to step 9.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
A8	BLU	Under all conditions	Measure the voltage to ground: There should be battery voltage.	• Blown No. 3 (AS LT MAIN) (30 A) fuse in the under-hood fuse/relay box • Faulty driver's under-dash fuse/relay box • An open in the wire
A17	GRN	Under all conditions	Check for continuity between the terminal A17 and driver's under-dash fuse/relay box connector Q (20P) terminal No. 8: There should be continuity.	An open in the wire
E2	ORN	Under all conditions	Connect the terminals A8 and E2 with a jumper wire: The right headlight (high beam) should come on.	• Blown bulb • Poor ground (G203) • An open in the wire
E10	BRN	Under all conditions	Connect the terminals A8 and E10 with a jumper wire: The right headlight (low beam) should come on.	• Blown bulb • Poor ground (G203) • An open in the wire
E12	GRY	Under all conditions	Connect the terminals A8 and E12 with a jumper wire: The right front parking light and the right front side marker light should come on.	• Blown bulb • Poor ground (G201) • An open in the wire
E13	BRN	Under all conditions	Connect the terminals A8 and E13 with a jumper wire: The right fog light should come on.	• Blown bulb • Poor ground (G201) • An open in the wire

9. If multiple failures are found on more than one control unit, replace the driver's under-dash fuse/relay box (includes the driver's MICU), refer to the 2008-2009 Accord Service Manual (see page 22-84). If input failures are related to a particular control unit, replace the passenger's under-dash fuse/relay box (includes the passenger's MICU), refer to the 2008-2009 Accord Service Manual (see page 22-87).

Fog Light Switch Test/Replacement

1. Remove the driver's dashboard lower cover, refer to the 2008-2009 Accord Service Manual (see page 20-153).
2. Remove the steering column covers, refer to the 2008-2009 Accord Service Manual (see page 20-168).
3. Disconnect the 12P connector (A) from the combination light switch (fog light switch) (B).



4. Remove the two screws, then slide out the combination light switch.
5. Inspect the connector terminals to be sure they are all making good contact.
   - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
   - If the terminals look OK, check for continuity between the terminals in each switch position according to the table.

Fog light switch:

Terminal / Position	8	12
OFF		
ON	○	○

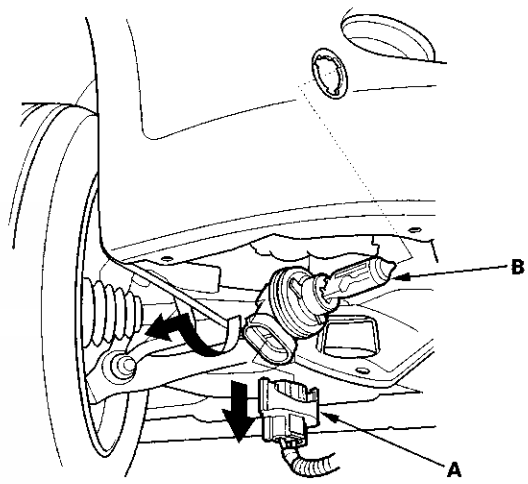
6. If the continuity check is not as specified, replace the switch.

Fog Light Bulb Replacement

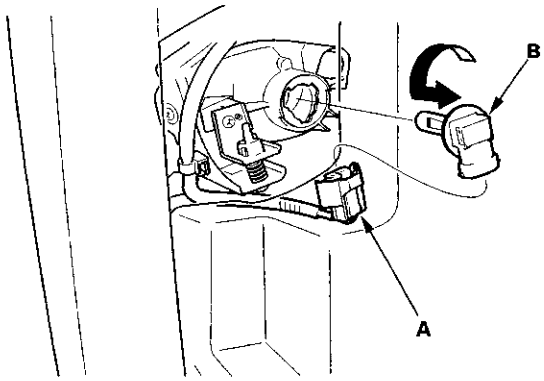
1. For right side, remove the splash shield (see page 20-29). For left side, remove the inner fender, refer to the 2008-2009 Accord Service Manual (see page 20-273).
2. Disconnect the 2P connector (A) from the fog light (B).

Fog Light: 55 W

Right side



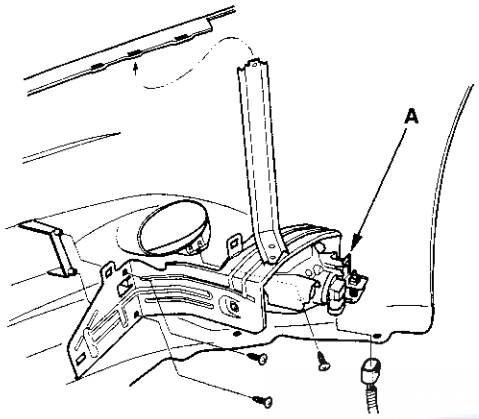
Left side



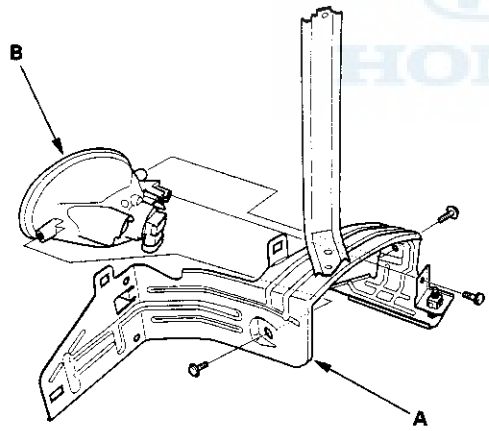
3. Turn the bulb socket 45 ° counterclockwise to remove it from the housing.
4. Install a new bulb in the reverse order of removal.

Fog Light Replacement

1. Remove the front bumper (see page 20-22), and disconnect the connectors from the fog lights.
2. Remove the three screws, then remove the fog light (A) from the front bumper.



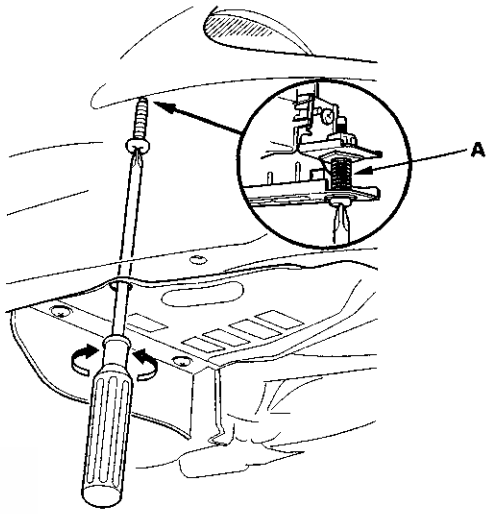
3. Remove the two screws, and separate the bracket (A) and fog light (B).



4. Install the light in the reverse order of removal.
5. After replacement, adjust the fog lights at local requirements.

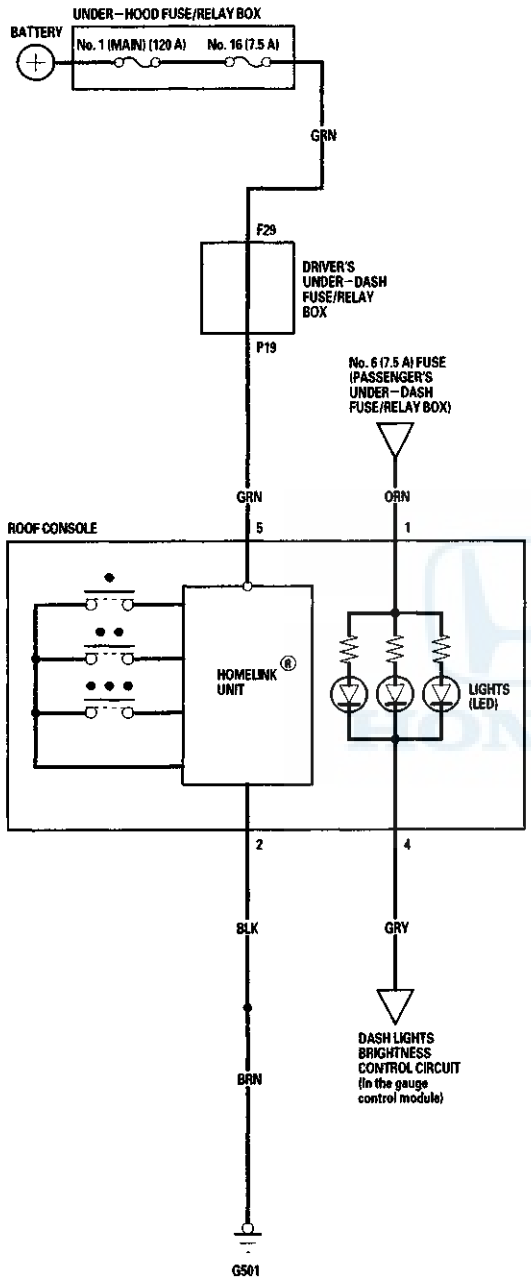
Fog Light Adjustment

1. Adjust the fog lights at the adjuster (A) to local requirements.



HomeLink Remote Control System

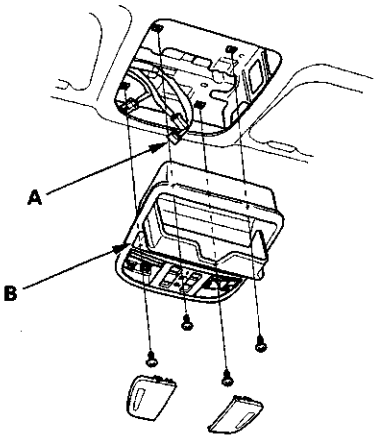
Circuit Diagram



Test

NOTE: If the HomeLink will not open the customer's garage, do the following procedures.

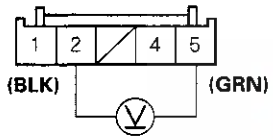
1. Press any of the buttons on the HomeLink unit.
   - If the red indicator comes on, go to step 4.
   - If the red indicator does not come on, go to step 2.
2. Remove the roof console, refer to the 2008-2009 Accord Service Manual (see step 4 on page 20-131), and disconnect the 5P connector (A) from the HomeLink unit (B).



3. Measure the voltage between the terminals No. 5 (+) and No. 2 (−) of the HomeLink unit 5P connector (A). There should be battery voltage.

   - If the voltage is not as specified, check for these problems:
     - A blown No. 16 (7.5 A) fuse in the under-dash fuse/relay box
     - A faulty driver's under-dash fuse/relay box
     - An open in the wire
     - Poor ground (G 501)
   - If there is battery voltage, go to step 4.

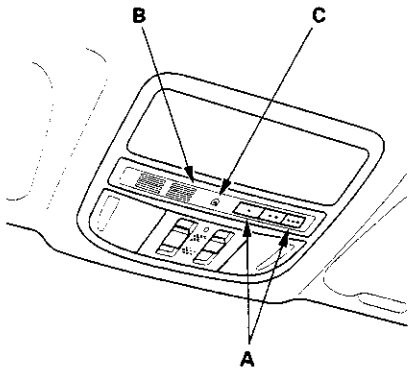
HOMELINK UNIT 5P CONNECTOR



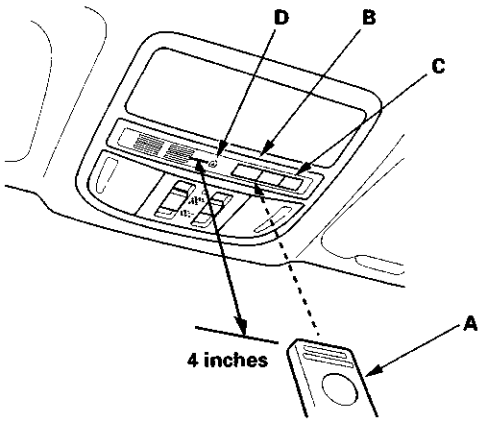
Wire side of female terminals

4. Make sure the HomeLink compatible remote transmitter (test remote) has fresh batteries.

5. Clear any previously learned codes by pressing and holding the two outside buttons (A) on the HomeLink unit (B) for about 20 seconds. When the red indicator (C) on the unit starts blinking, release the buttons.



6. Point the test remote transmitter (A) straight up exactly 4.0 in. (101.6 mm) away from the HomeLink unit (B).



7. Press and hold the test transmitter button and one of the HomeLink unit buttons (C) at the same time.

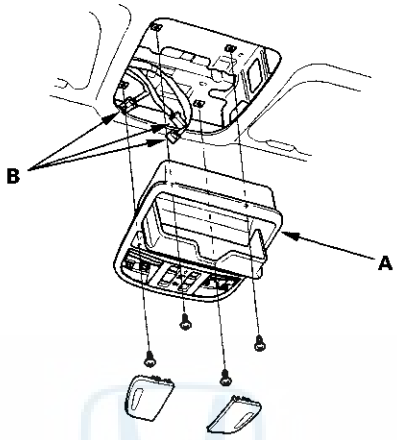
8. Wait for about 20 seconds while watching the red indicator (D) on the HomeLink unit.

   - If the red indicator starts out blinking slowly and then blinks faster, the unit is OK. Release the buttons, then clear the learned code (see step 1). Explain to the customer that garage door remote transmitters come in two types: fixed code and rolling code. Each type has its own programming method, and each method is covered in the owner's manual. If the customer has concerns about the HomeLink unit, have the customer contact the HomeLink the assistance desk at 800-355-3515. On the internet, go to www.homelink.com.
   - If the red indicator does not blink, replace the HomeLink unit (see page 22-62).

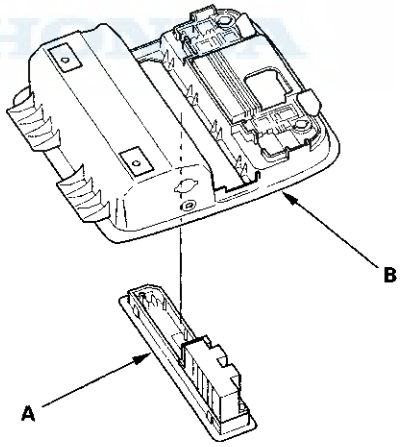
HomeLink Unit Replacement

1. Turn the map light switch OFF, and remove the map light, refer to the 2008-2009 Accord Service Manual (see page 22-232).

2. Remove the screws and roof console (A), then disconnect the connectors (B).



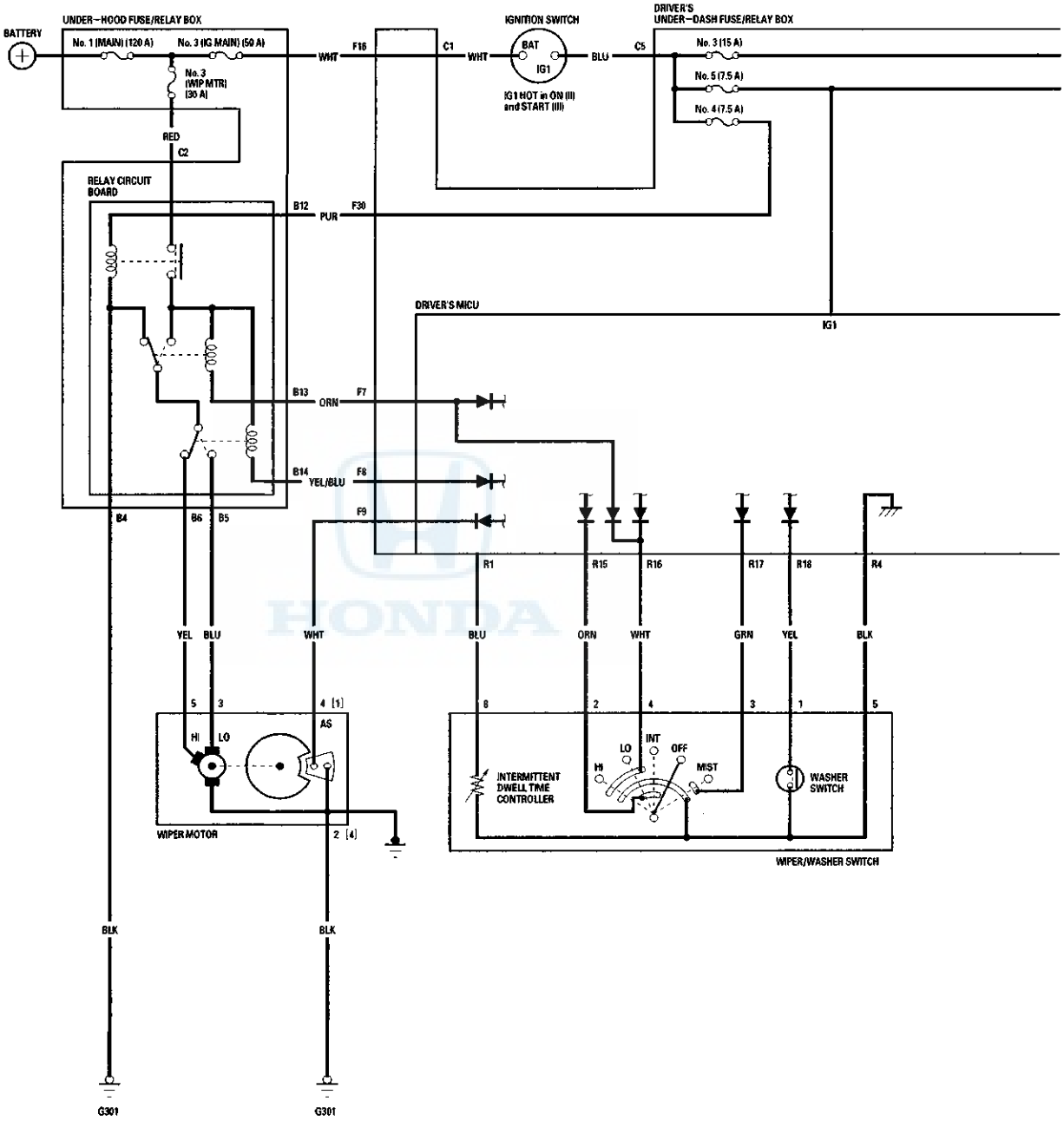
3. Remove the HomeLink unit (A) from the roof console (B).

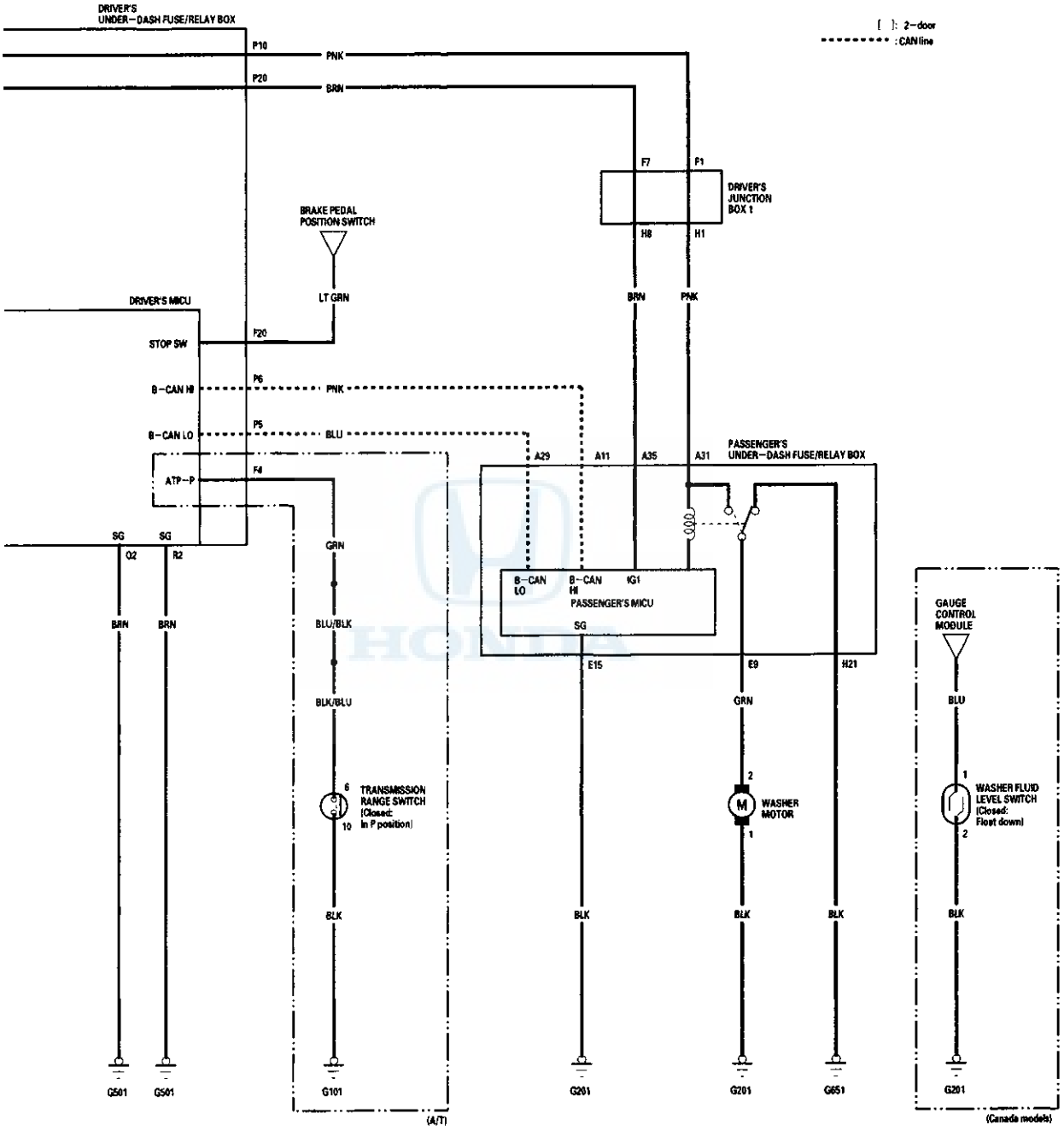


4. Install the parts in the reverse order of removal.

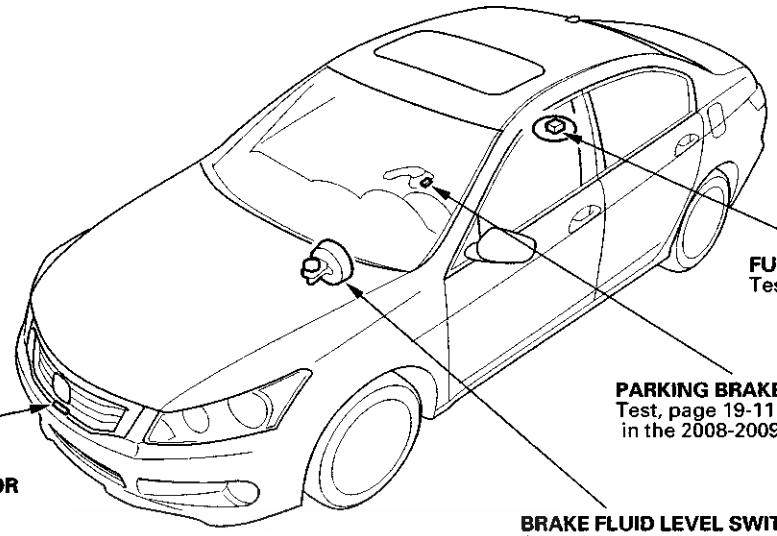
HONDA

Circuit Diagram




DRIVER'S UNDER-DASH FUSE/RELAY BOX
[ ]: 2-door
: CAN line
P10
PNK
P20
BRN
F7
F1
DRIVER'S JUNCTION BOX 1
H8
H1
BRAKE PEDAL POSITION SWITCH
LT GRN
BRN
PNK
DRIVER'S MICU
STOP SW
F20
B-CAN HI
P6
PNK
B-CAN LO
P5
BLU
A29
A11
A35
A31
PASSENGER'S UNDER-DASH FUSE/RELAY BOX
ATP-P
F4
SG
SG
Q2
R2
GRN
B-CAN LO
B-CAN HI
IG1
PASSENGER'S MICU
SG
BRN
BRN
BLU/BLK
BLK/BLU
E15
E9
H21
GRN
6
10
TRANSMISSION RANGE SWITCH (Closed: In P position)
2
1
WASHER MOTOR
BLK
BLK
BLK
BLK
G501
G501
G101
(A/T)
G201
G201
G651
GAUGE CONTROL MODULE
BLU
1
2
WASHER FLUID LEVEL SWITCH (Closed: Float down)
BLK
G201
(Canada models)

Component Location Index

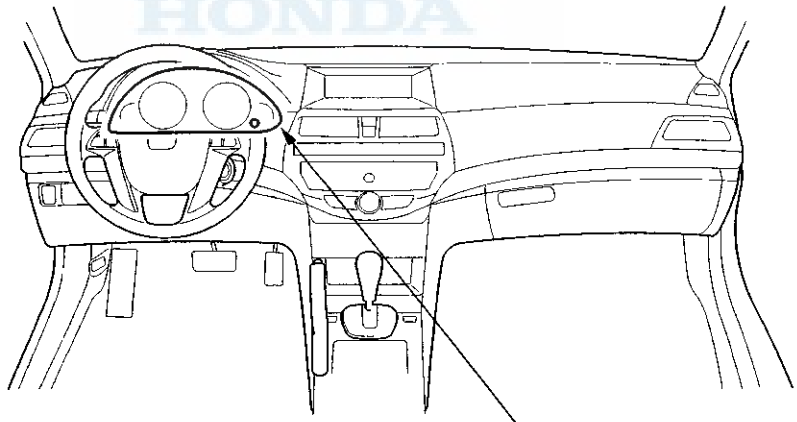


FUEL GAUGE SENDING UNIT
Test, page 11-422

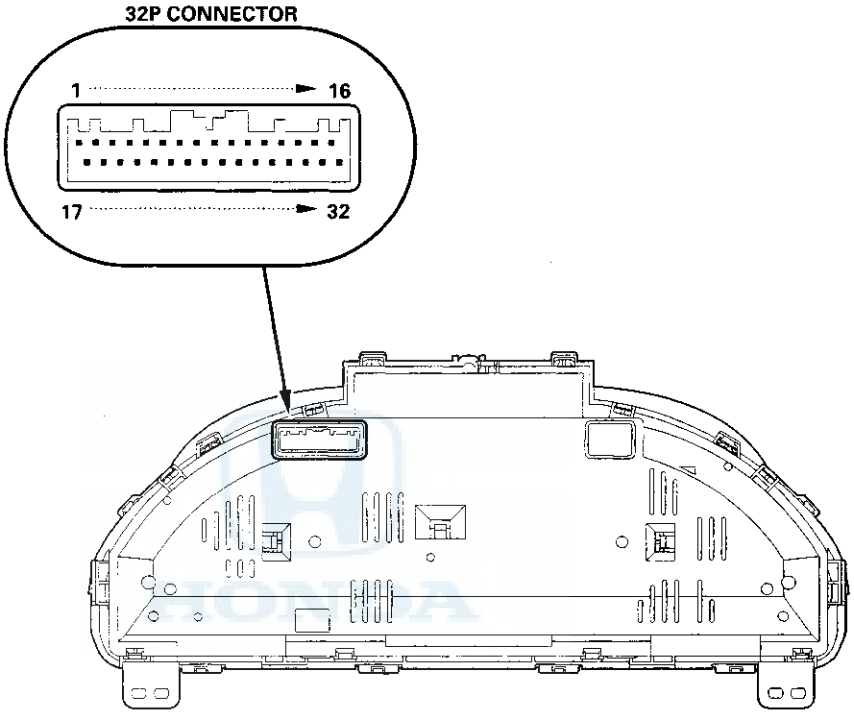
PARKING BRAKE SWITCH
Test, page 19-11
in the 2008-2009 Accord Service Manual

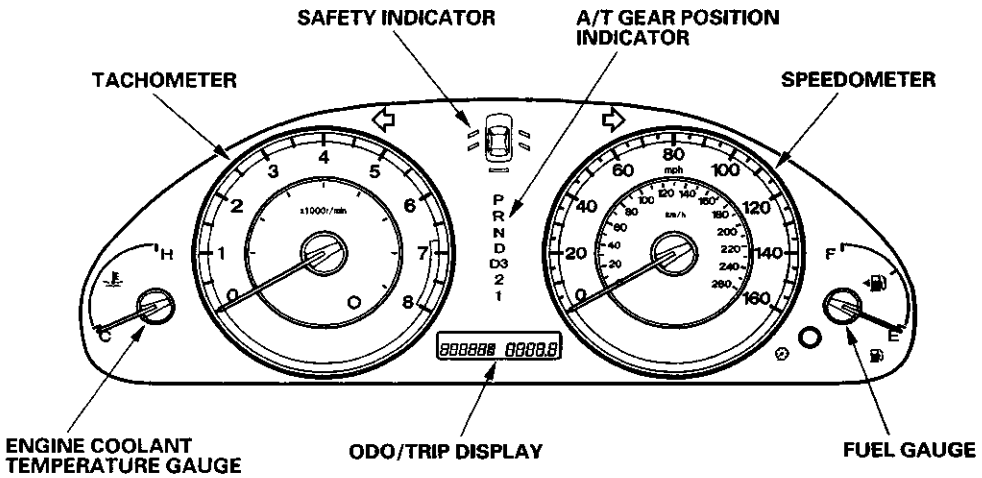
BRAKE FLUID LEVEL SWITCH
Test, page 19-11
in the 2008-2009 Accord Service Manual

OUTSIDE AIR TEMPERATURE SENSOR
With climate control:
Test, page 21-175
in the 2008-2009 Accord Service Manual
Replacement, page 21-175
in the 2008-2009 Accord Service Manual
With HVAC control:
Test, page 22-326
in the 2008-2009 Accord Service Manual
Replacement, page 22-326
in the 2008-2009 Accord Service Manual



GAUGE CONTROL MODULE
Self-diagnostic Function, page 22-304
in the 2008-2009 Accord Service Manual
Input Test, page 22-320
in the 2008-2009 Accord Service Manual
Rewriting the ODO Data and Transferring Maintenance Minder Data to a New Gauge Control Module, page 22-323
in the 2008-2009 Accord Service Manual
Replacement, page 22-324
in the 2008-2009 Accord Service Manual
Outside Air Temperature Indicator Calibration, page 22-325
in the 2008-2009 Accord Service Manual


32P CONNECTOR
1
16
17
32


SAFETY INDICATOR
A/T GEAR POSITION INDICATOR
TACHOMETER
SPEEDOMETER
P
R
N
D
D3
2
1
ENGINE COOLANT TEMPERATURE GAUGE
ODO/TRIP DISPLAY
FUEL GAUGE

Self-diagnostic Function

The gauge control module has a self-diagnostic function which consists of the following checks:

- The beeper drive circuit check.
- The indicator drive circuit check.
- The switch input test.
- The LCD segments check.
- The gauges drive circuit check (Tachometer, Fuel gauge, Speedometer, Engine coolant temperature gauge.
- The communication line check (of the body-controller area network (B-CAN) communication line and the fast-controller area network (F-CAN) communication line between the gauges).

NOTE:
Indicators are also controlled via the communication line.

Entering the self-diagnostic function with the HDS

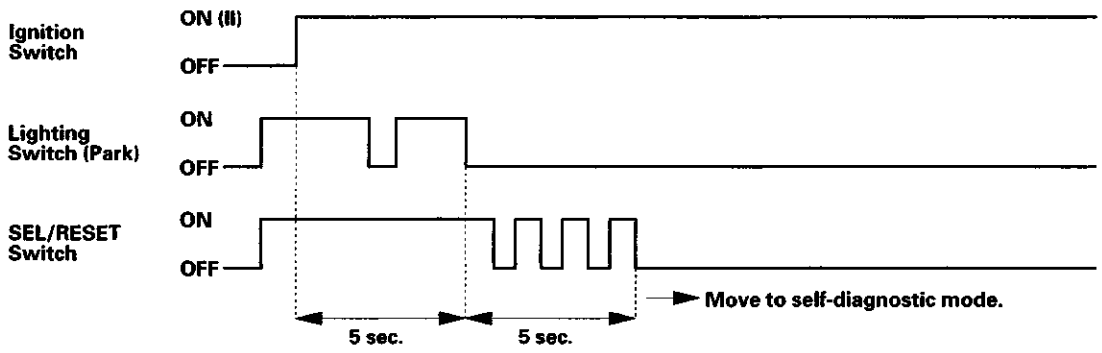
Using the HDS, select Body Electrical, Gauges, then Function Test and do the self-diagnostic Function.

Entering the self-diagnostic function (manual method)

Before doing the self-diagnostic function, check the No. 5 (7.5 A) fuse in the driver's under-dash fuse/relay box and the No. 15 (10 A) fuse in the under-hood fuse/relay box.

1. Push and hold the SEL/RESET switch button.
2. Turn the combination light switch (≡DO≡) ON.
3. Turn the ignition switch ON (II).
4. Within 5 sec., turn the combination light switch (≡DO≡) OFF, then ON and OFF again.
5. Within 5 sec., release the SEL/RESET switch button, and then push and release the button three times repeatedly.

NOTE:
- While in the self-diagnostic mode, the dash lights brightness controller operates normally.
- While in the self-diagnostic mode, the SEL/RESET button is used to start the Beeper Drive Circuit Test and the Gauge Drive Circuit Check.
- If the vehicle speed exceeds 1.2 mph (2 km/h) or the ignition switch is turned to LOCK (0), the self-diagnostic mode ends.



The Indicator Drive Circuit Check

When entering the self-diagnostic mode, the following indicators blink:
A/T gear position indicator, ABS indicator, brake system indicator, charging system indicator, cruise control indicator, cruise main indicator, door indicator, DRL indicator, ECO indicator, fog light indicator, high beam indicator, immobilizer indicator, lights-on indicator, low oil pressure indicator, low fuel indicator, low tire pressure indicator, malfunction indicator lamp (MIL), maintenance required indicator, seat belt indicator, security indicator, side airbag cutoff indicator, SRS indicator, TPMS indicator, trunk indicator, VSA activation indicator, VSA indicator and washer fluid level indicator (Canada models).

Switch Input Check

At the initial stage of the self-diagnostic function, the beeper sounds intermittently. The beeper sounds continuously when any of the following switch inputs are switched from OFF to ON:
Cruise control master, SET, RESUME, CANCEL switches, SEL/RESET switch, parking brake switch, and VSA OFF switch.

The Beeper Drive Circuit Check

When entering the self-diagnostic mode, the beeper sounds five times.

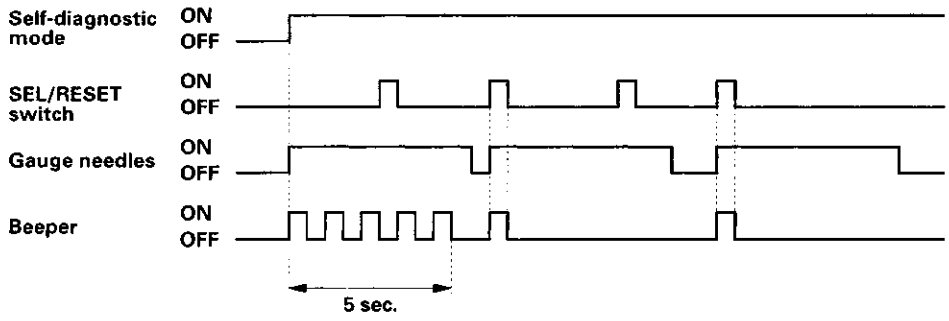
The LCD Segment Check

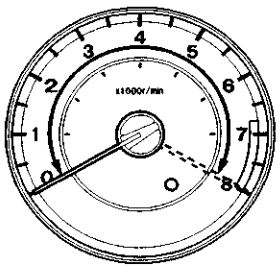
When entering the self-diagnostic mode, all the segments blink five times.

The Gauge Drive Circuit Check

When entering the self-diagnostic mode, the speedometer, the tachometer, the fuel gauge and the engine coolant temperature gauge needles sweep from the minimum position to maximum position, then return to the minimum position.

NOTE:
After the beeper stops sounding and the gauge needles return to the minimum position, pushing the SEL/RESET switch starts the Beeper Drive Circuit Check (one beep) and the Gauge Drive Circuit Check again.
The check cannot be started again until the gauge needles return to the minimum position.





The needles sweep from the minimum position to the maximum position, then return to the minimum position.

If the needles fail to sweep, or the beeper does not sound, replace the gauge control module.

(cont'd)

Self-diagnostic Function (cont'd)

The Communication Line Check

While in the self-diagnostic mode, the Communication Line Check starts after the LCD Segments Check.
If all segments come on, the communication line is OK. If faulty, the word Error will be indicated on the odometer display followed by a number(s).

Error Code List

Error code	Type of communication line(s) error
Error 1	F-CAN communication
Error 2	B-CAN communication
Error 12	F-CAN and B-CAN communication

Example Indication

Normal (all segments come on.):

Faulty (Error 1):

- If the Error 1 is indicated, there is a malfunction in the communication line between the F-CAN and the gauge control module. The B-CAN is OK at this time. Check for DTCs in the ECM/PCM and troubleshoot any DTCs found. If no DTCs are found, go to B-CAN System Diagnosis Test Mode A, refer to the 2008-2009 Accord Service Manual (see page 22-120).
- If the Error 2 is indicated, there is a malfunction in the communication line between the B-CAN and the gauge control module. The F-CAN line is OK at this time. Go to B-CAN System Diagnosis Test Mode A, refer to the 2008-2009 Accord Service Manual (see page 22-120).
- If the Error 12 is indicated, there is a malfunction in the communication line between the gauge control module, the F-CAN, and the B-CAN. Check the DTCs in the ECM/PCM and troubleshoot any DTCs found. If no DTCs are found, go to B-CAN System Diagnosis Test Mode A, refer to the 2008-2009 Accord Service Manual (see page 22-120).

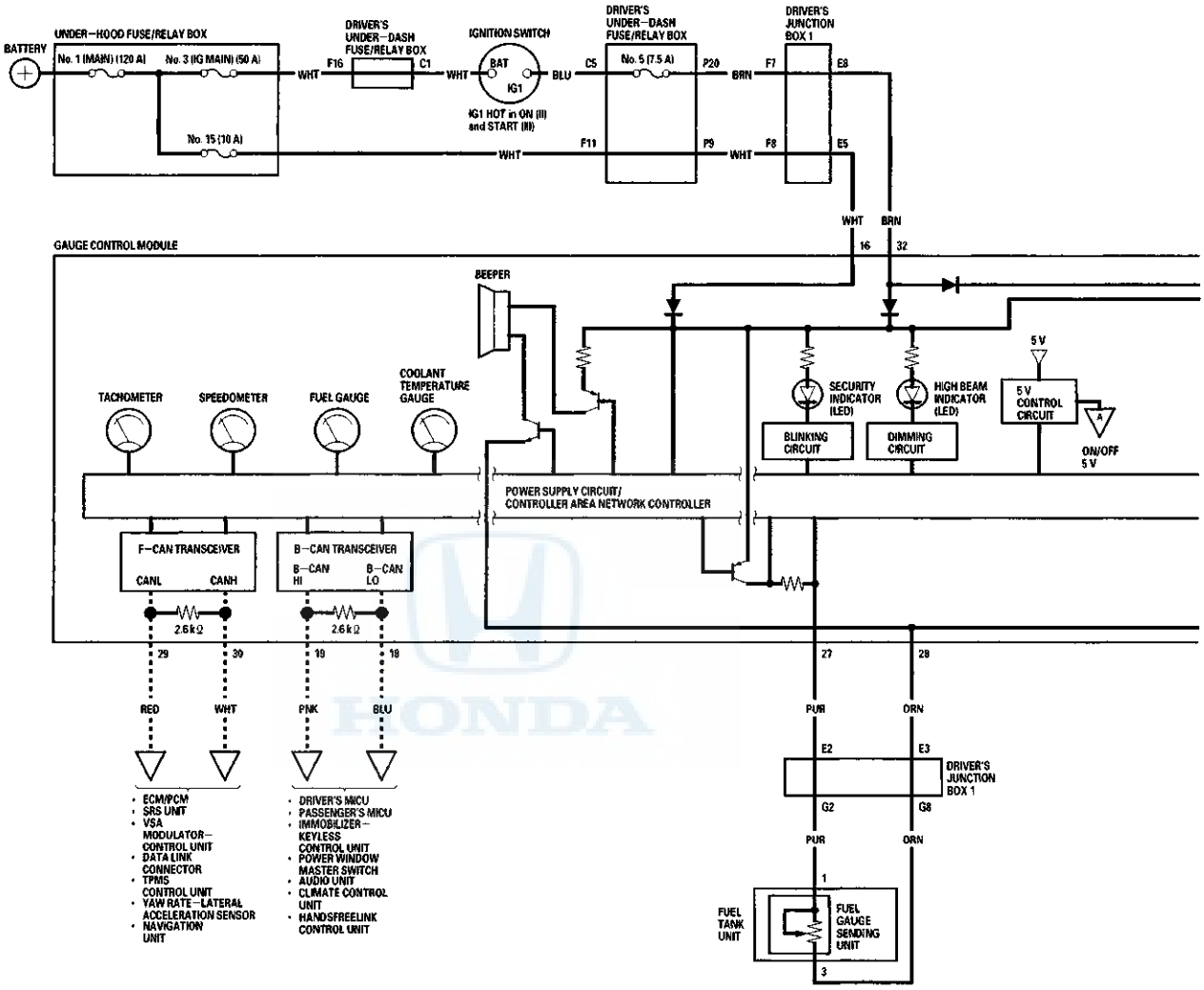
Ending the self-diagnostic function

Turn the ignition switch to LOCK (0).

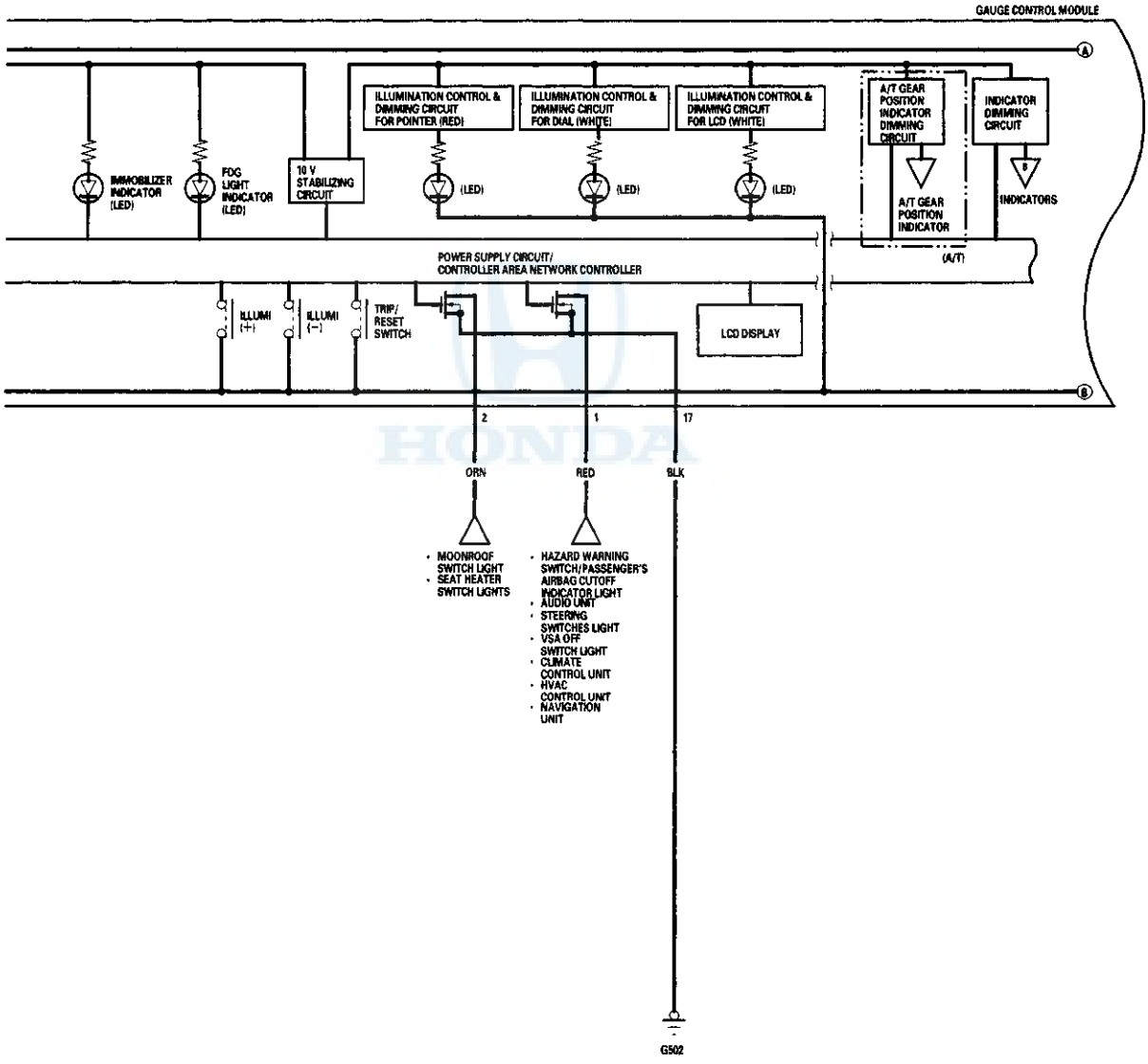
NOTE: If the vehicle speed exceeds 1.2 mph (2 km/h), the self-diagnostic function ends.

HONDA

Circuit Diagram

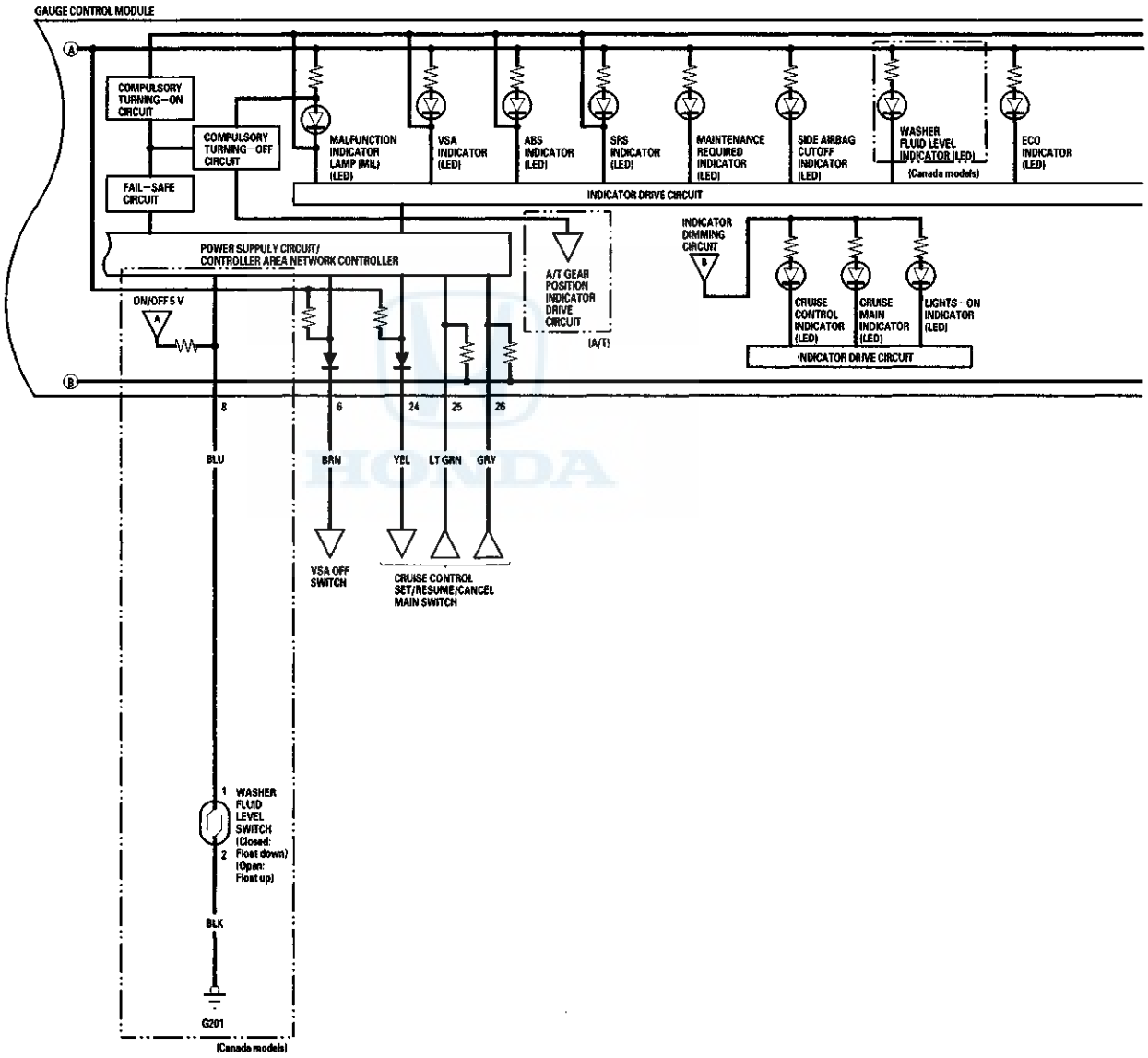


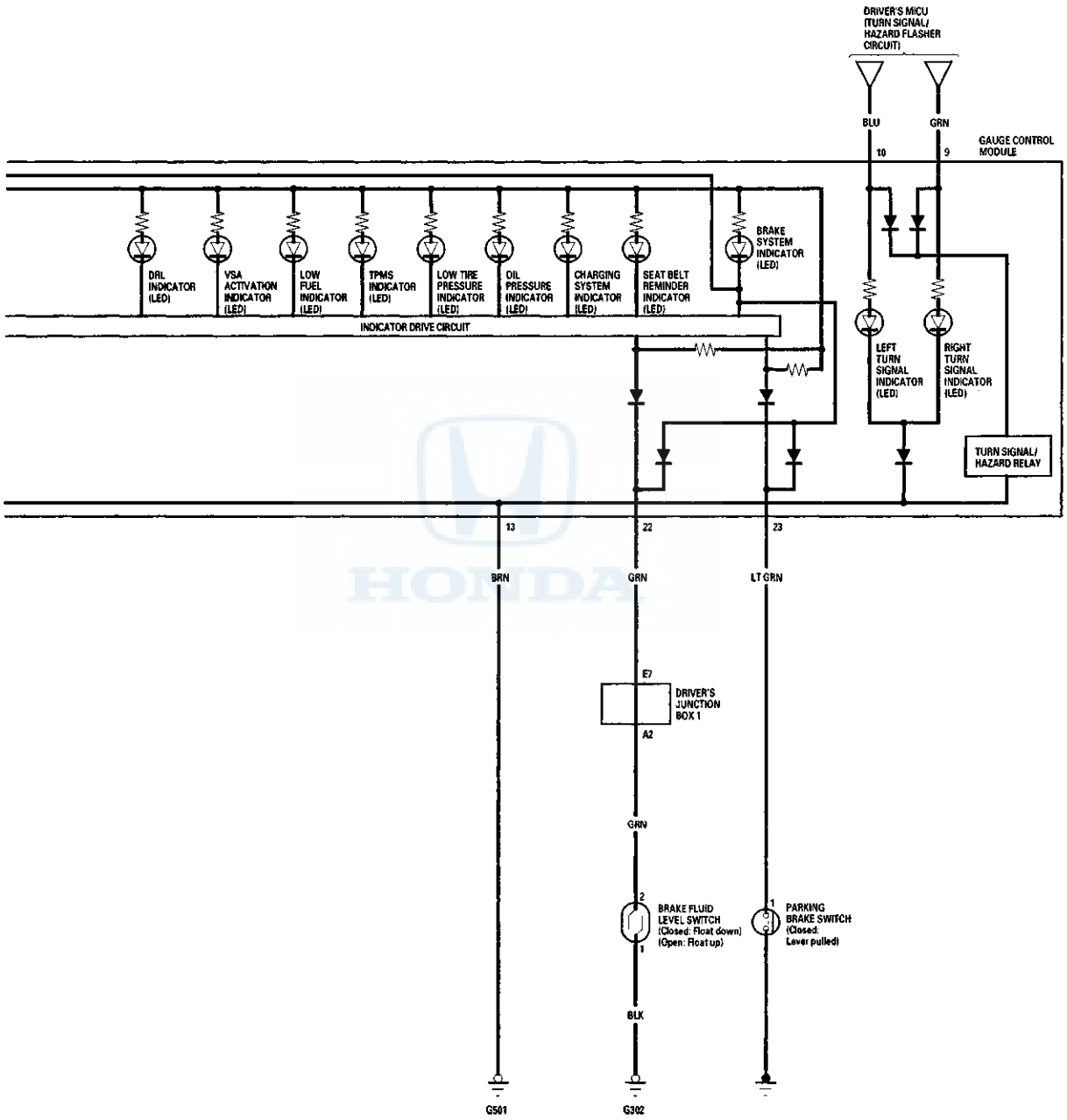
: CAN line



(cont'd)

Circuit Diagram (cont'd)

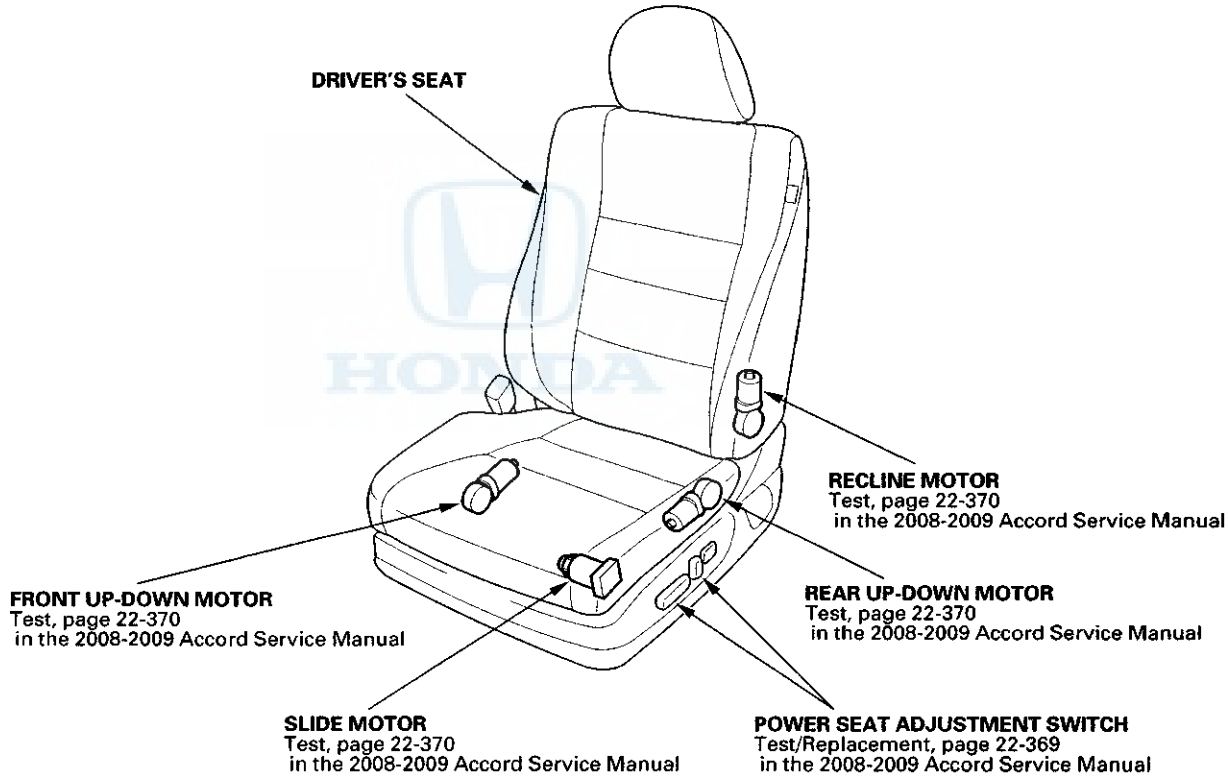



DRIVER'S MICU (TURN SIGNAL/ HAZARD FLASHER CIRCUIT)
BLU
GRN
10
9
GAUGE CONTROL MODULE
DRL INDICATOR (LED)
VSA ACTIVATION INDICATOR (LED)
LOW FUEL INDICATOR (LED)
TPMS INDICATOR (LED)
LOW TIRE PRESSURE INDICATOR (LED)
OIL PRESSURE INDICATOR (LED)
CHARGING SYSTEM INDICATOR (LED)
SEAT BELT REMINDER INDICATOR (LED)
BRAKE SYSTEM INDICATOR (LED)
INDICATOR DRIVE CIRCUIT
LEFT TURN SIGNAL INDICATOR (LED)
RIGHT TURN SIGNAL INDICATOR (LED)
TURN SIGNAL/ HAZARD RELAY
13
22
23
BRN
GRN
LT GRN
E7
DRIVER'S JUNCTION BOX 1
A2
GRN
2
1
BRAKE FLUID LEVEL SWITCH (Closed: Float down) (Open: Float up)
2
1
PARKING BRAKE SWITCH (Closed: Lever pulled)
BLK
G501
G302

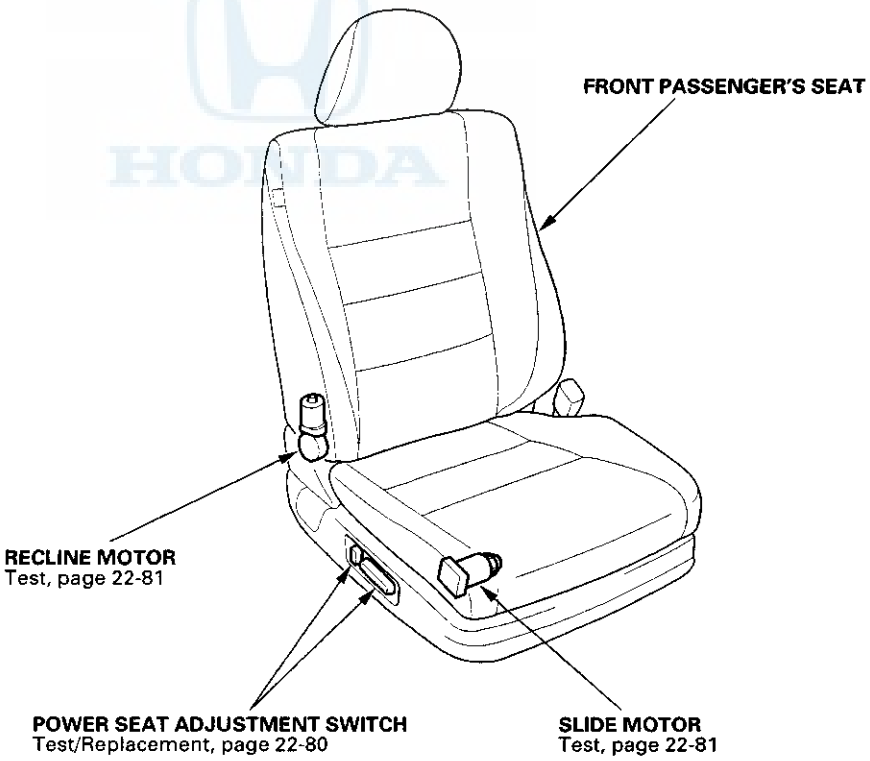
Power Seats

Component Location Index

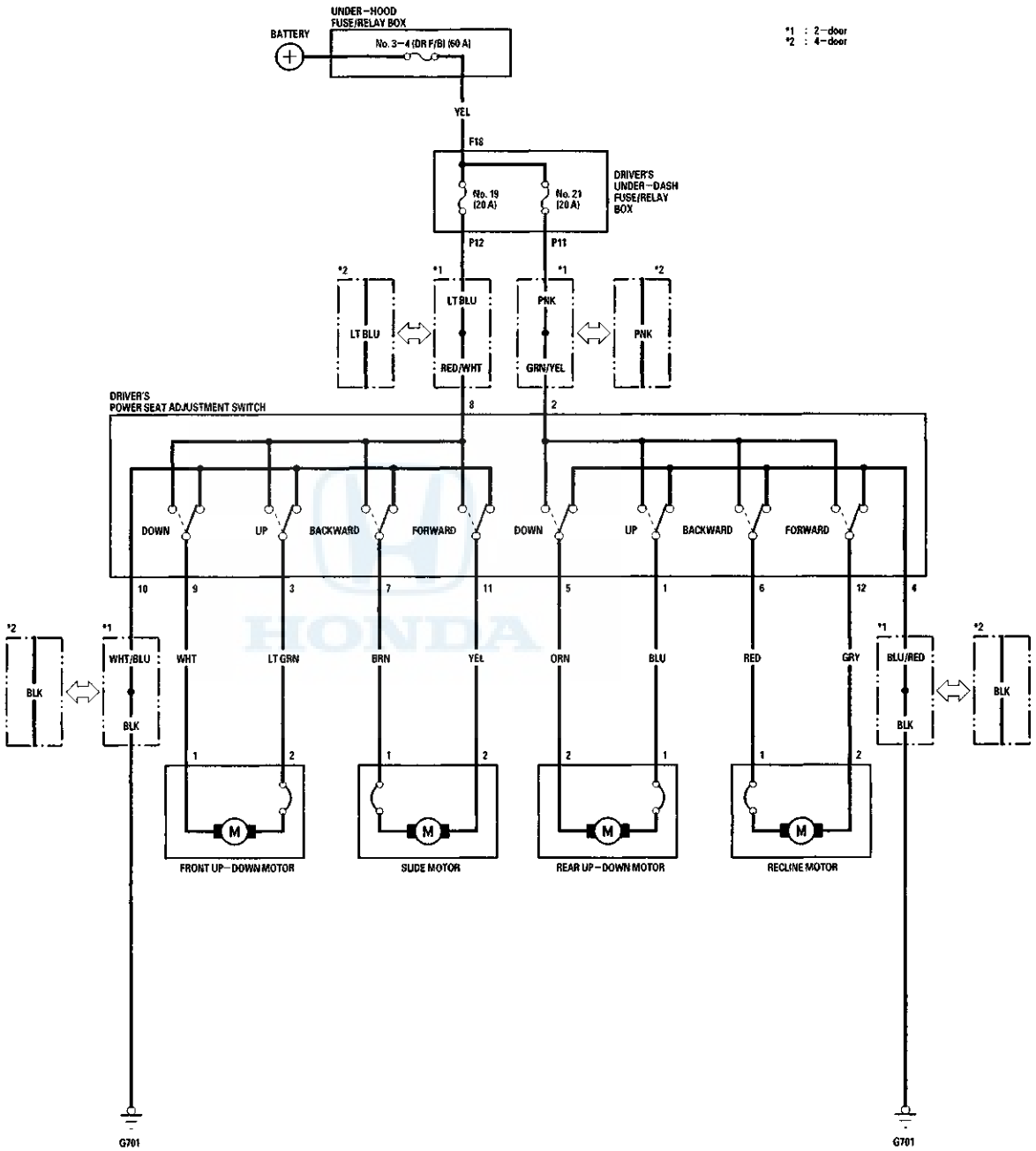
Driver's Seat



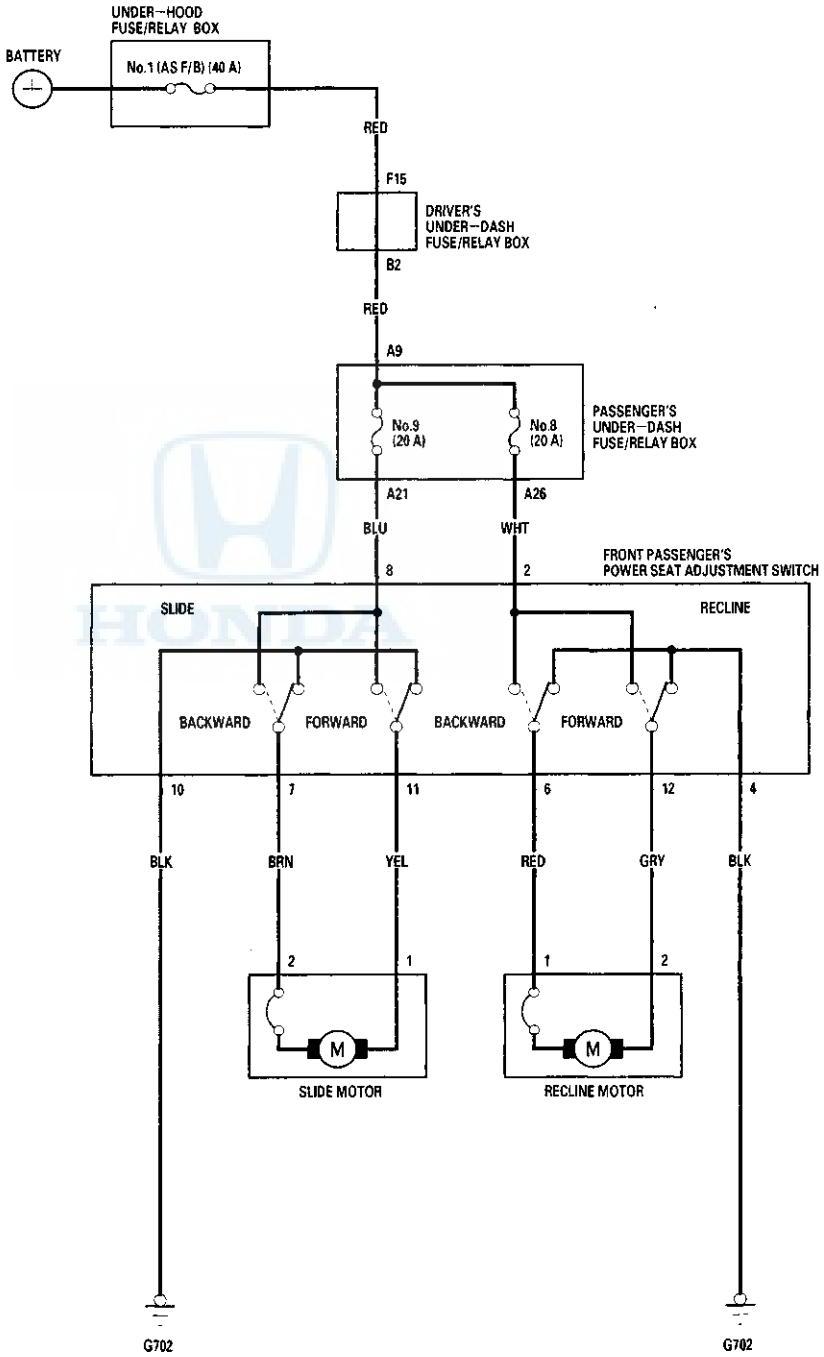
Front Passenger's Seat



Circuit Diagram - Driver's Power Seat



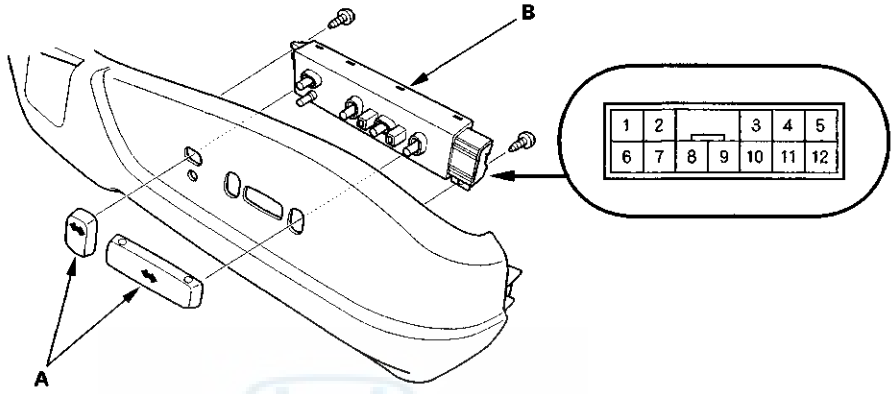
Circuit Diagram - Front Passenger's Power Seat



Power Seat Adjustment Switch Test/Replacement

Front Passenger's Seat:

1. Remove the front passenger's seat (see page 20-8).
2. Remove the power seat adjustment switch knobs (A) and the recline cover from the front passenger's seat (see page 20-18), then remove the two screws and the power seat adjustment switch (B).



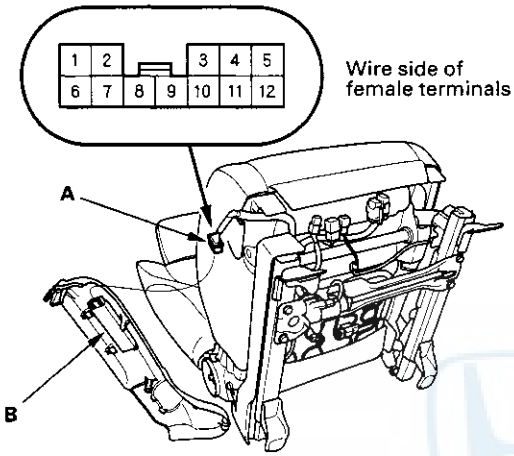
3. Disconnect the 12P connector from the power seat adjustment switch.
4. Reinstall the adjustment switch knobs to the switch.
5. Check for continuity between the terminals in each switch position according to the table.

Position \ Terminal		2	4	6	7	8	10	11	12
SLIDE SWITCH	Forward				○	○	○	○	
	Backward				○	○	○	○	
RECLINE SWITCH	Forward	○	○	○					○
	Backward	○	○	○					○

6. If the continuity is not as specified, replace the switch.

Front Passenger's Power Seat Motor Test

1. Remove the front passenger's seat (see page 20-8).
2. Remove the power seat adjustment switch knobs and the recline cover from the seat (see page 20-18).
3. Disconnect the 12P connector (A) from the power seat adjustment switch (B).



4. At the 12P connector of the front passenger's seat wire harness side, test the motor by applying battery power and ground to the terminals according to the table.

Slide motor

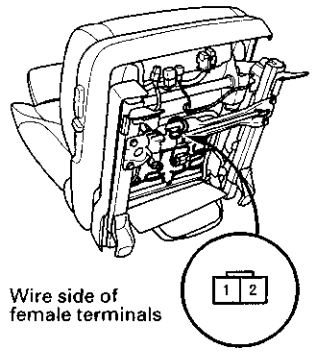
Terminal / Position	7	11
Forward	⊖	⊕
Backward	⊕	⊖

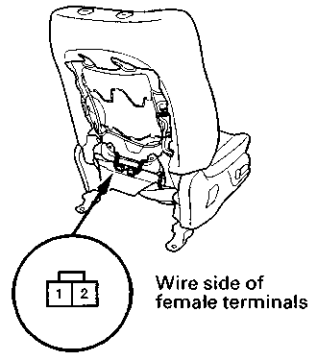
Recline motor

Terminal / Position	6	12
Forward	⊖	⊕
Backward	⊕	⊖

5. If the motor does not run or fails to run smoothly, go to step 6.
6. Disconnect the 2P connector from each motor.

NOTE: For recline motor, remove the seat-back cover (see page 20-14).





7. Check for continuity between the each motor 2P connector and the driver's seat wire harness 12P connector. If there is continuity, replace the appropriate motor:

- Slide motor (see page 20-11).
- Recline motor (see page 20-10).

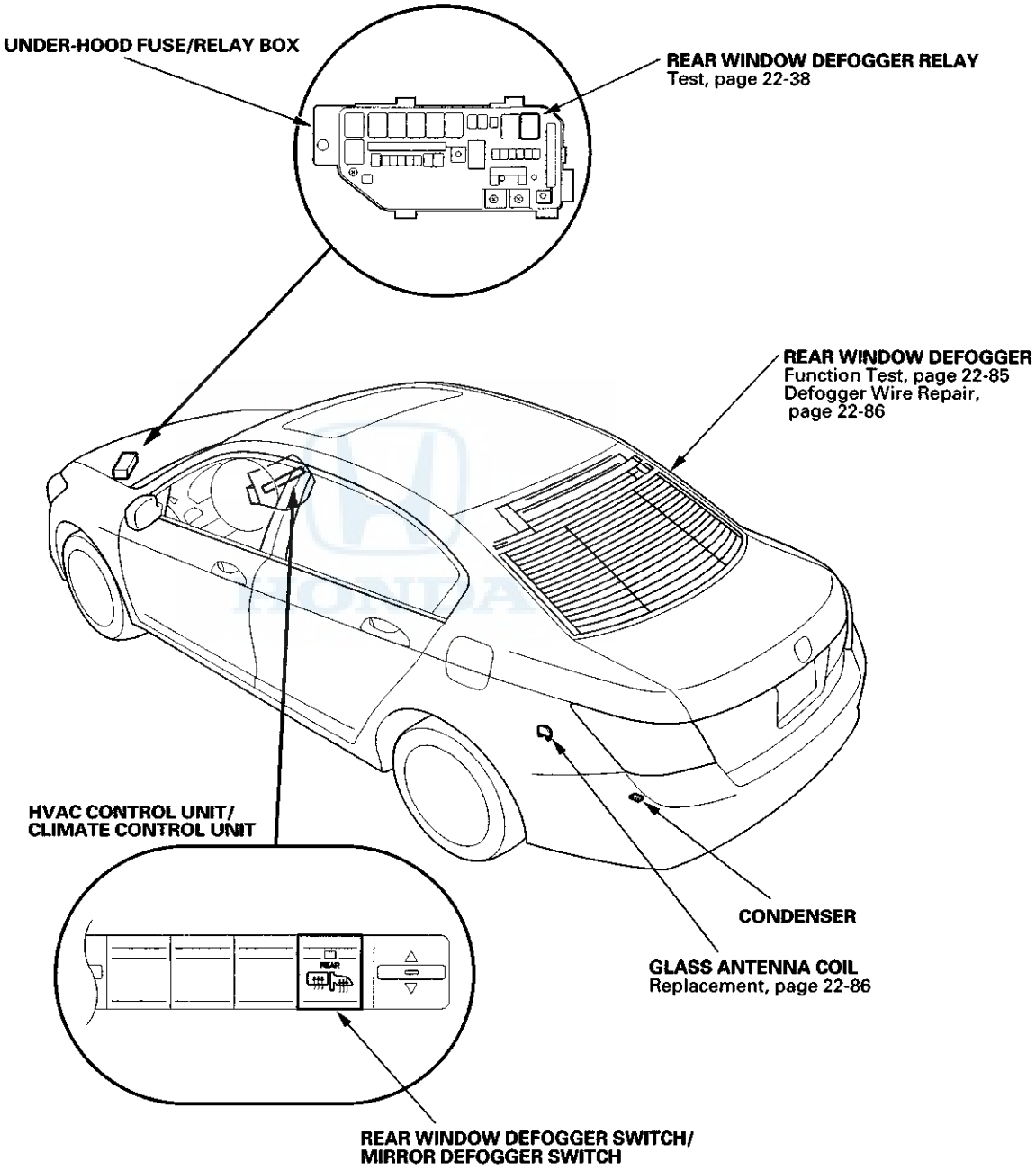
NOTE: The front and rear up-down motors are part of the up-down adjuster.

Slide motor 2P connector terminal	Driver's seat wire harness 12P connector terminal
No. 1	No. 11
No. 2	No. 7

Recline motor 2P connector terminal	Driver's seat wire harness 12P connector terminal
No. 1	No. 6
No. 2	No. 12

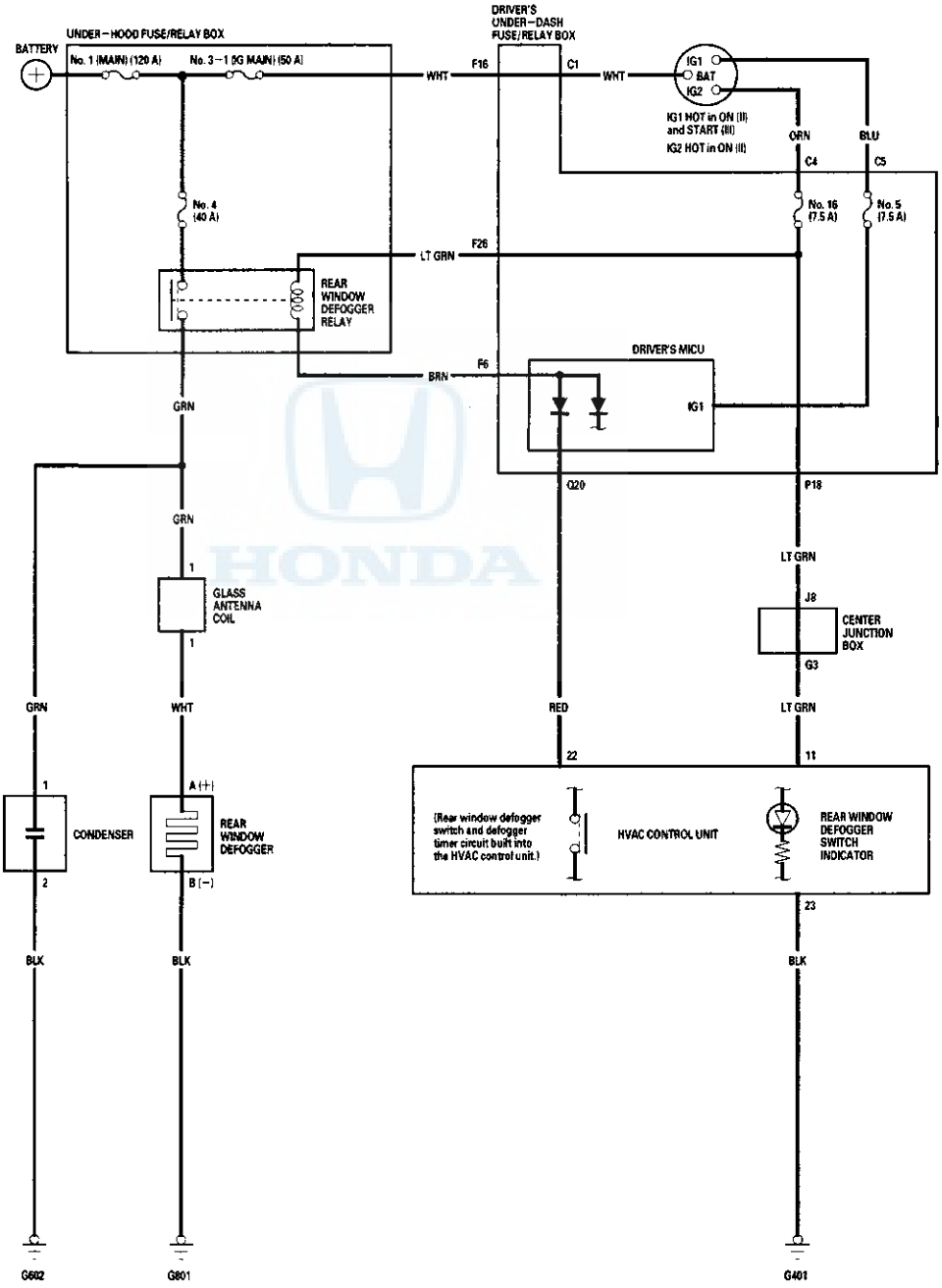
Rear Window Defogger

Component Location Index



Circuit Diagram

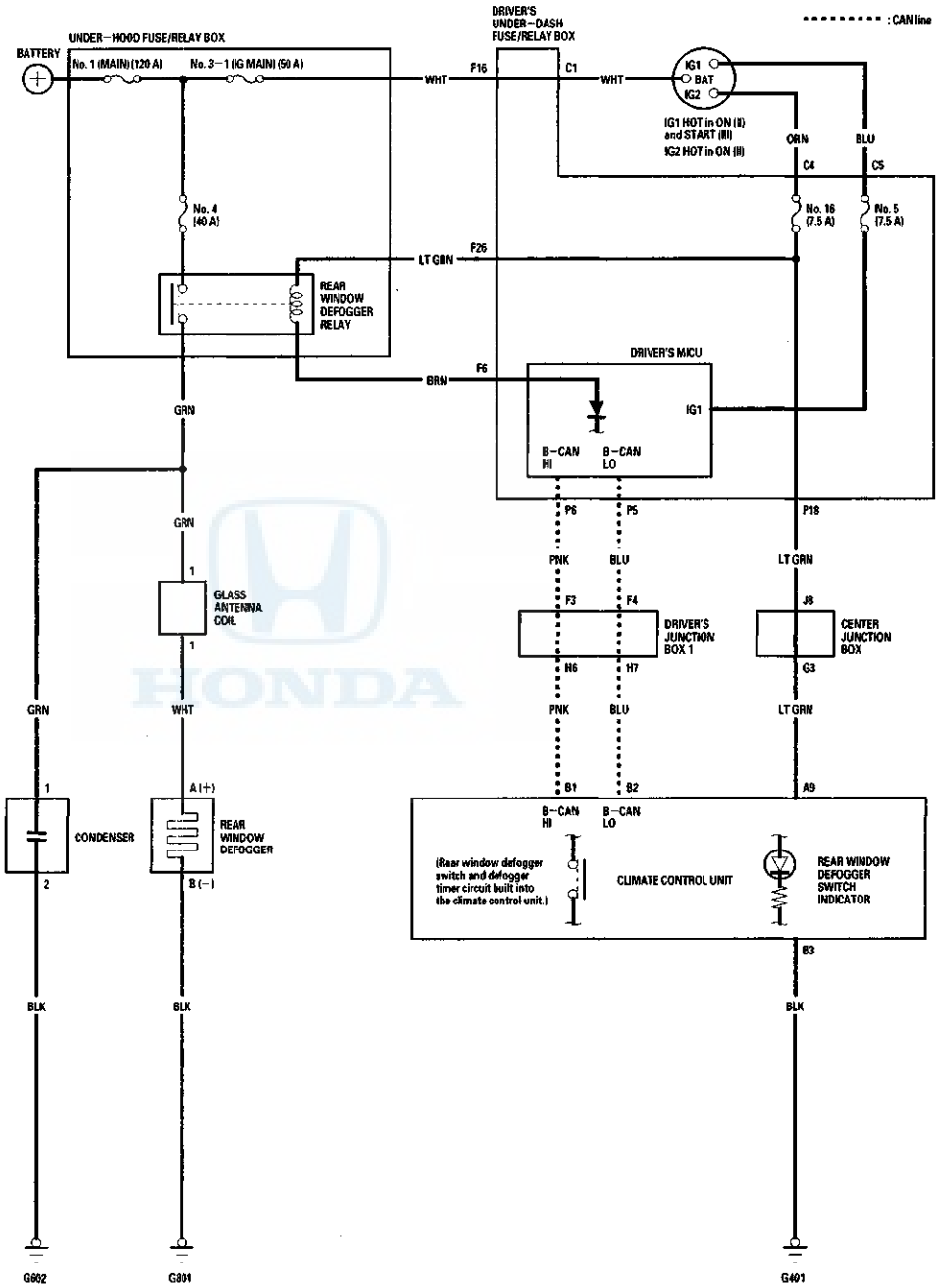
With HVAC control unit



Rear Window Defogger

Circuit Diagram (cont'd)

With climate control unit



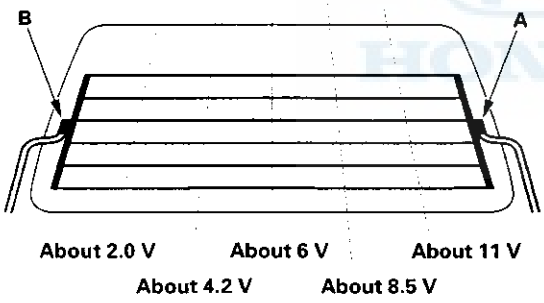
Function Test

NOTE:
- With climate control: Before testing, troubleshoot the B-CAN System Diagnosis Test Mode A, refer to the 2008-2009 Accord Service Manual (see page 22-120).
- Before testing, check the No. 4 (40 A) fuse in the under-hood fuse/relay box and the No. 16 (7.5 A) fuse in the driver's under-dash fuse/relay box.
- Be careful not to scratch or damage the defogger wires with the tester probe.

1. Turn the ignition switch to ON (II), then turn the rear window defogger switch ON.

2. Measure the voltage between the positive terminal (A) and body ground. There should be battery voltage.

   - If there is no voltage, check for:
     - Faulty rear window defogger relay.
     - Faulty climate control unit or HVAC control unit.
     - Faulty glass antenna coil
     - An open in the GRN wire to the positive terminal.
   - If there is voltage, go to step 3.



3. Turn the ignition switch to LOCK (0).

4. Disconnect the negative terminal (B) from the rear window defogger.

5. Check for continuity between the negative terminal (B) and body ground. There should be continuity.

   If there is no continuity, check for an open in the BLK wire or poor ground (G801). If there is continuity, go to step 6.

6. Reconnect the negative terminal to the rear window defogger.

7. Turn the ignition switch to ON (II), then turn the rear window defogger switch ON.

8. Touch the voltmeter positive probe to each point on each defogger wire, and the negative probe to the negative terminal.

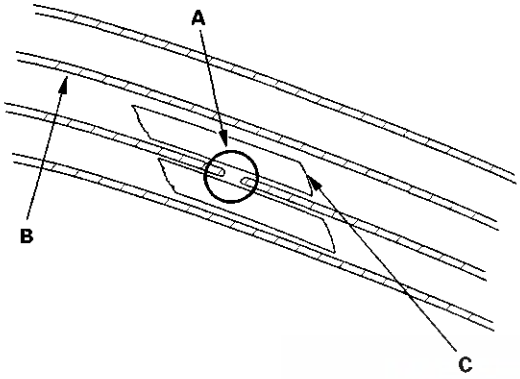
   - If the voltage is as specified, the defogger wire up to that point is OK.
   - If the voltage is not as specified, repair the defogger wire.
     - If it is more than specified at one of the points, there is a break in the negative half of the wire.
     - If it is less than specified at one of the points, there is a break in the positive half of the wire.

Rear Window Defogger

Defogger Wire Repair

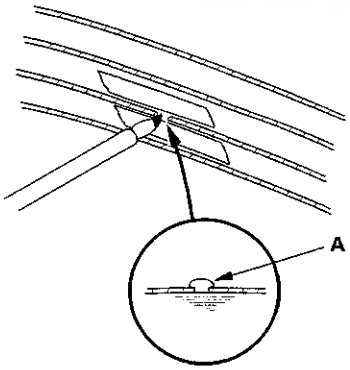
NOTE: To make an effective repair, the broken section must be no longer than 1 in. (25 mm).

1. Lightly rub the area around the broken section (A) with fine steel wool, then clean it with isopropyl alcohol.



2. Carefully mask above and below the broken portion of the defogger wire (B) with cellophane tape (C).

3. Using a small brush, apply a heavy coat of silver conductive paint (commercially available) (A) extending about 1/8" on both sides of the break. Allow 25 minutes to dry.



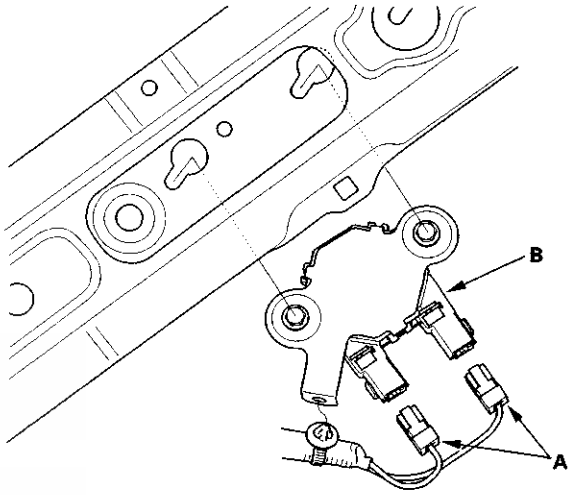
4. Do the function test to confirm that the wire is repaired.

5. Apply a second coat of paint in the same way. Let it dry 3 hours before removing the tape.

Glass Antenna Coil Replacement

1. Remove the left trunk side trim panel, refer to the 2008-2009 Accord Service Manual (see page 20-123).

2. Disconnect the 1P connectors (A) from the glass antenna coil (B).

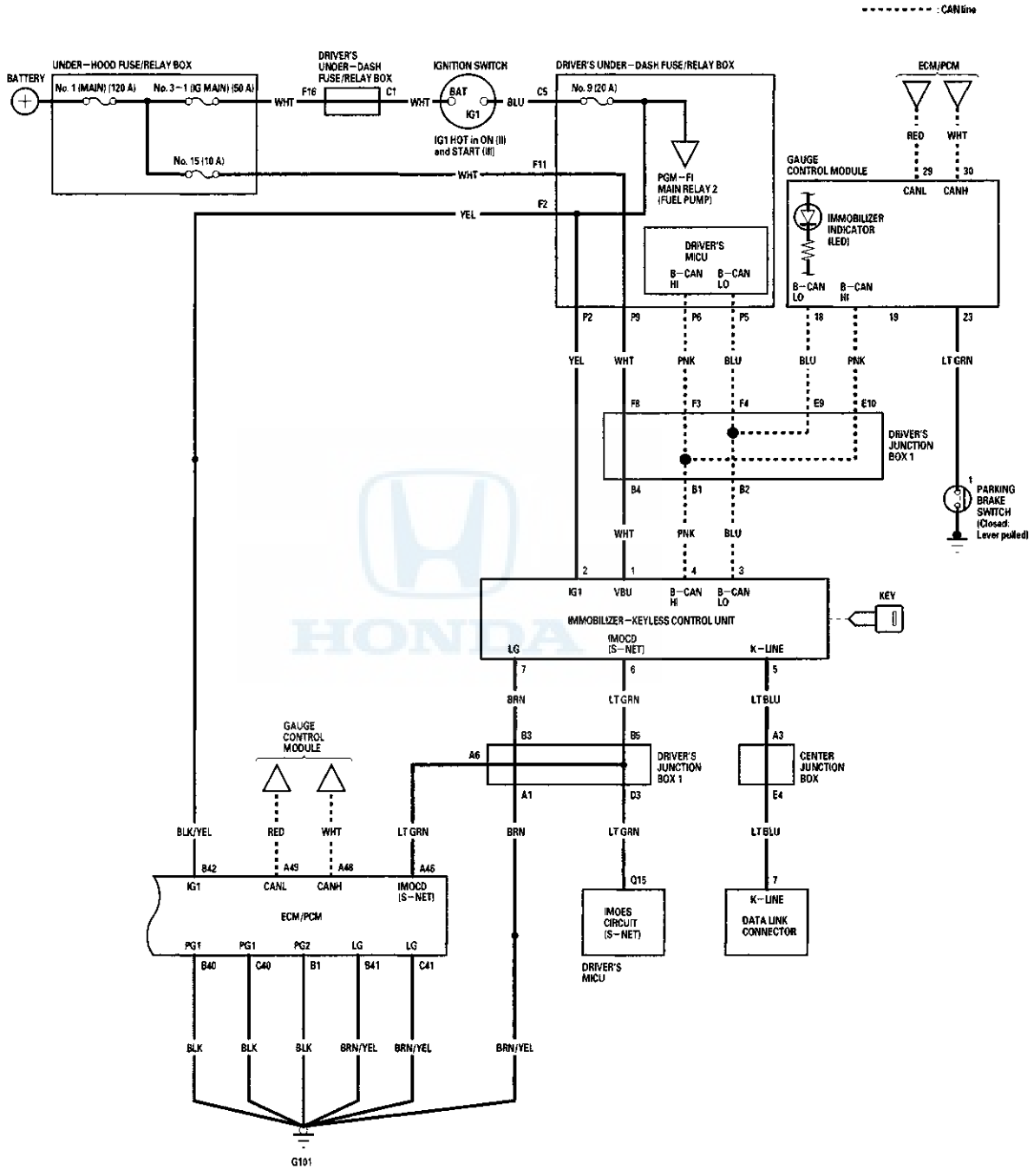


3. Loosen the two nuts and remove the glass antenna coil.

4. Install the glass antenna coil in the reverse order of removal.

Immobilizer System

Circuit Diagram



SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If Audio, Navigation, and Telematics maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual and the 2008-2009 Accord Service Manual, P/N 61TA002. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Audio, Navigation, and Telematics

Audio System

General Troubleshooting Information 23-2
Symptom Troubleshooting Index 23-3
System Description 23-5
Circuit Diagram 23-34
Self-diagnostic Function 23-44
Symptom Troubleshooting 23-55

NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for items not shown in this section.

Outline of Model Change

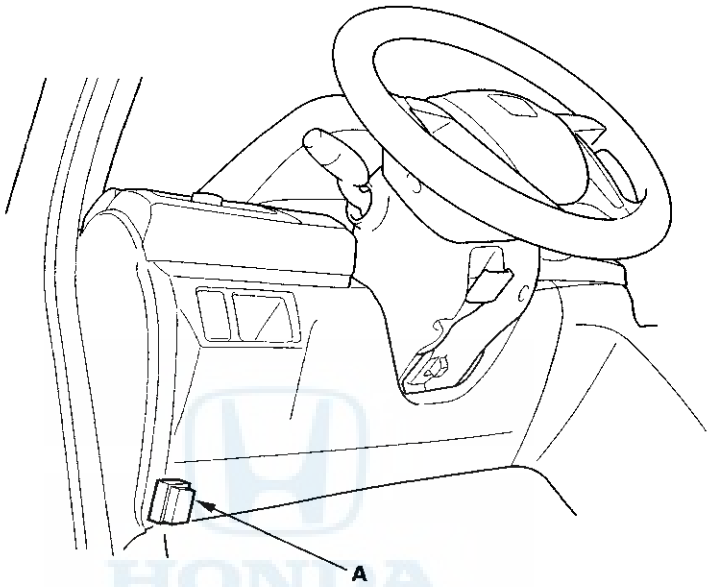
Audio unit circuit has been changed.

General Troubleshooting Information

How to Use the HDS (Honda Diagnostic System)

NOTE: Check the vehicle battery condition first.

1. Make sure the ignition switch is in LOCK (0).
2. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



3. Turn the ignition switch to ON (II).
4. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it doesn't, troubleshoot the DLC circuit (see page 11-259).
5. Check the diagnostic trouble code (DTC) and note it. Also check the freeze data and/or on-board snapshot data, and download any data found. Then refer to the indicated DTC's troubleshooting, and do the appropriate troubleshooting procedure.

   NOTE:
   - After troubleshooting, clear the DTCs with the HDS.
   - For specific operations, refer to the user's manual that came with the HDS.

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Poor AM or FM radio reception or interference	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-58)	• Antenna lead short or open in the wire • Aftermarket metallic window tinting
Audio unit power switch will not turn on (No information display and no sound)	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-61)	
Audio unit power switch will not turn off	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-62)	
No sound is heard from the speaker(s) (display is normal) (with premium audio)	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-63)	
No sound is heard from the speaker(s) (display is normal) (without premium audio)	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-68)	
Auxiliary input sound is low or cannot be heard	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-70)	
Audio system sound is weak or distorted (display is normal)	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-72)	
Radio preset memory is lost	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-72)	• Battery condition • Battery cable condition
Volume does not change	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-73)	
Volume does not increase with speed	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-73)	
Volume is too high or too low when driving at freeway speeds	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-74)	
Radio tuner does not change stations	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-75)	
Audio system information does not display on the audio-HVAC (sub) display unit	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-75)	Check for and resolve all B-CAN related DTCs before troubleshooting the audio-HVAC (sub) display
Security indicator does not work properly	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-78)	
Audio unit button illumination does not work (1 CD type)	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-78)	
Audio unit button illumination does not work (Except 1 CD type)	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-79)	
Audio remote switch does not work properly	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-80)	
Audio disc does not load	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-81)	
Audio disc does not eject	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-81)	
Audio disc changer does not load all six discs	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-82)	Tire pressure (over-inflated), disc smudged, dirty, or scratched

(cont'd)

Symptom Troubleshooting Index (cont'd)

Symptom	Diagnostic procedure	Also check for
Audio disc changer does not move between discs	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-82)	
Audio disc does not play	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-83)	Foreign objects such coins or paper inserted in the CD changer/ player
Audio disc skips	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-83)	Tire pressure (over-inflated), disc smudged, dirty, or scratched
Audio unit button does not work	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-84)	
Audio unit disc indicator does not work	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-85)	
Booming sound while driving with audio unit on or off (A/T)	Symptom Troubleshooting (see page 23-55)	
Error code: XM NO SIGNAL is displayed	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-97)	
Error code: XM ANTENNA is displayed	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-98)	
XM radio display is blank and no station information is displayed	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-99)	Also refer to Audio system information does not display on the audio-HVAC (sub) display unit
XM radio preset memory is lost	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-102)	
Poor or no sound with XM radio (Audio unit does display XM channels)	Symptom Troubleshooting, refer to the 2008-2009 Accord Service Manual (see page 23-103)	

System Description

Overview

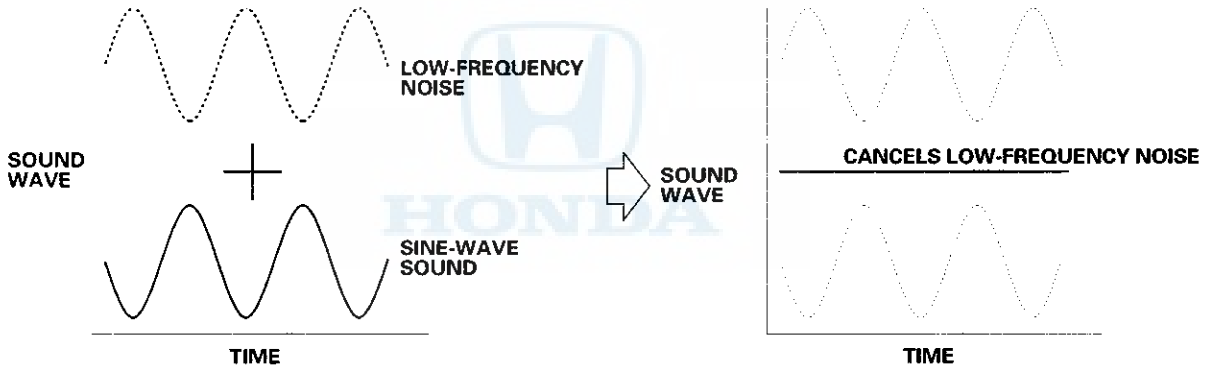
The audio unit acts as the processor for all audio functions. You can select the audio functions from the front panel, the audio remote (on the steering wheel), or by using the navigation voice control system. The audio display provides the current front and rear audio status. For vehicles with the navigation option, additional audio information is available by touching the audio button. (See the owner's manual for more details.)

The XM receiver and audio disc changer pass their signals to the audio unit. In addition, they communicate with the audio unit via the GA-Net bus. Any open connection or short in the wiring in the GA-Net bus circuit will cause audio, including audio accessories, and navigation functions to appear inoperative.

With the premium sound system, an audio amplifier unit powers the speakers, otherwise the speakers are powered directly by the audio unit.

The audio unit has a built-in EEPROM (electrically erasable programmable read-only memory). This memory holds the audio preset data (AM/FM radio frequency, sound settings) even when the battery power is removed.

A/T with premium sound system includes an active noise cancellation (ANC) system to cancel some of the vehicle noise. It uses a sine-wave-sound output to cancel low frequency noise. Two microphones detect the low frequency sound, and the system outputs a canceling sound through the audio speakers.



Speed-sensitive Volume Compensation (SVC)
The audio system is equipped with speed-sensitive volume compensation (SVC). The audio unit receives the vehicle speed pulse (VSP) from the ECM/PCM. The system processes the speed input and increases the audio system volume level as the vehicle speed increases to compensate for the various interior noises that occur at higher speeds. When the vehicle slows down, the volume returns to its normal level. The SVC has four settings: SVC OFF, LOW, MID and HIGH that can be adjusted using the audio unit. The SVC comes from the factory with MID set as the default (see the owner's manual for more information).

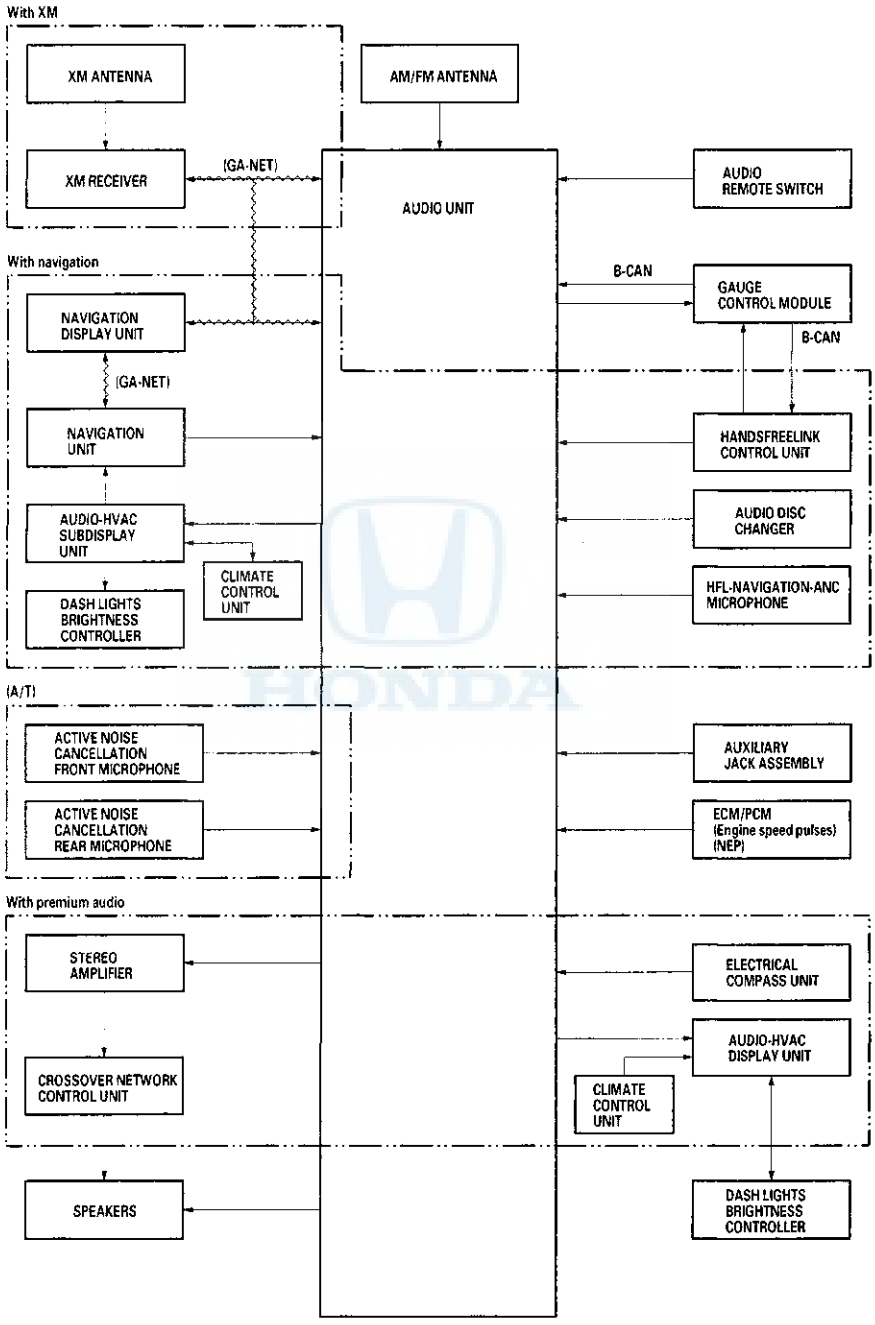
(cont'd)

System Description (cont'd)

The navigation system allows voice control for the audio, XM, PC card, and CD player. The GA-Net (audio unit) communicates the voice control commands from the navigation unit. When using the navigation TALK/BACK button, the audio is muted on all speakers and you hear the navigation sound on the front channels. When using the navigation or route guidance (RG), the front speakers provides the navigation sound and the rear speakers continue to play the audio. For more information, see the navigation section. The outline of the muting logic is shown in this table.

Contents	Audio output				
	Left front CH	Right front CH	Right rear CH	Left rear CH	Subwoofer CH
Navigation TALK/BACK Buttons	Navigation voice output	Navigation voice output	Muted	Muted	Muted
Route Guidance	Navigation voice output	Navigation voice output	Audio	Audio	Audio
HFL	Telephone sound	Telephone sound	MUTE	MUTE	MUTE
HFL and Route Guidance or talk back	Navigation sound	Telephone sound	MUTE	MUTE	MUTE

System Diagram



(cont'd)

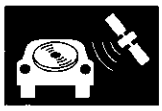
Audio System

System Description (cont'd)

NOTE: All items may not apply to this vehicle. See the owner's manual for more information.

Audio Glossary

Item	Definition
Active noise cancellation	The active noise cancellation system cancels some of the vehicle noise. This occurs in the 1,500—2,400 rpm range. Microphones detect the low frequency sound, and the system outputs a canceling sound from the audio speaker.
AM (Amplitude Modulation)	The type of transmission used in the standard radio broadcast band from 530 to 1710 kHz.
Amplifier	A device that increases the level of a signal by increasing the current or voltage.
Antenna	A device used to send or receive electromagnetic waves through the air.
ATA (PC Card)	A type of card that has been tested for use in playing WMA, and MP3 music files in the PC Card slot. Sizes of up to 1 GB have been tested.
Audio remote switch	The switches on the steering wheel that control the audio system.
Auxiliary jack	Allows the customer to use a portable audio device to input audio recordings.
Balance	A control that changes the relative volume of the left and right channels.
Band	A range of frequencies between two definite limits. Bands are assigned by the Federal Communications Commission for specific uses.
Bass	An adjustment for the low frequency sounds of around 160 Hz and below.
Byte	A unit of storage for computer files and memory. A CD holds approximately 700 million bytes.
Cassette	Audio or video magnetic tape container having two reels. Customers can insert it for play back.
Compact flash	A standard for small-size (3 x 4 cm), memory cards used in mobile computers, PDAs, digital cameras. Compact flash memory cards are available in size of 32 MB up to 4 GB or more and can be played in the audio PC slot. Sizes above 1 GB have not been tested.
CD (Compact Disc)	A 4.5-inch plastic disc containing digital audio recording that is played optically on a laser equipped player. Never use discs with a paper label. In a hot vehicle, labels can curl up and jam the unit.
CD (audio disc) changer	CD player that can store and play more than one CD. Two types are available. Some units accept CDs fed into the changer one at a time, and others accept a magazine (with CDs stacked in a container).
CD player	A component designed to play compact disc recordings using a laser optical pickup. The signal from a CD player usually requires amplification.
Decibels (db)	A method of measuring sound or radio signal strength received by the audio unit antenna.
Distortion	Inexact reproduction of an audio signal caused by playing music at levels the audio system cannot handle.
Dolby (noise reduction)	A processing system developed by Dolby Laboratories that reduces the background noise on recording media. The result is a cleaner playback from the audio system.
DUET	A serial data communication line used for sub display.
DVD (Digital Versatile Disc)	A 4.5-inch CD-like format used for storing movies with digital audio and video features. The DVD-A format is a DVD format designed for DVD audio systems. Some vehicles can play DVD and DVD-A formats.
Equalizer	A device that changes the relative volume of individual frequency bands to suit personal tastes of the listener.
Fader	The control that adjusts the relative volume levels of front and rear speakers in a four-speaker system.
Format	To prepare a PC Card to receive files this function is done on a PC. Always choose either FAT or FAT32, as the NTFS format is not accepted by the system. Pick the default sectors for the format method selected.
FM (Frequency Modulation)	The form of modulation used for radio and television sound transmission in most of the world. Less prone to interference than AM. The FM broadcast band in North America covers roughly 87.7 to 107.9 MHz.



Audio Glossary

Item	Definition
GA-Net	The GA-Net allows the audio unit to communicate with all the audio and navigation components in a vehicle. If there is an open in the GA-Net or components, the entire audio and navigation system may appear inoperative.
GB (Gigabyte)	A unit of memory or disk storage equal to billion bytes (1000 million bytes).
HDD	Abbreviation for hard disc drive. They are sensitive to heat and it is not recommended that they be used in the PC card slot for playing audio files.
Hertz (HZ)	The unit of frequency equal to one cycle per second (cps). One kilohertz (kHz) equals 1,000 cps; one megahertz (MHz) equals 1 million cps.
Integrated amplifier	A component that combines a pre amp and a power amp into a single unit. A receiver combines an integrated amp and a tuner into a single unit.
Jewel case	The hard plastic case that contains a compact disc or DVD. Always use a jewel case to prevent scratches on the underside of a CD or DVD.
LCD (Liquid Crystal Display)	A type of digital display that changes reflectance or transmittance when an electrical field is applied to it.
Memory	Circuitry or devices that hold information in electrical or magnetic form, such as the AM/FM radio presets.
MB (Megabyte)	One million bytes. Written as 1 MB. Megabytes are used as a measure of digital storage space. For example, a CD can hold 650 MB.
Mic	An abbreviation for microphone. For vehicles with navigation, the microphone accepts navigation voice commands to control audio and navigation functions.
MP3 music files	MP3 is an audio coding format. MP3 is a popular audio compression format on the Internet and computers. CDs and PC Cards with these files can be played on some vehicle's audio system.
Mute	When the navigation gives guidance, the front speakers are muted (no music). When you use the voice control system, all of the speakers are muted.
Noise	Unwanted random sounds like buzzing, hiss, pops, static, whine, etc.
PC card	The slot used for playing MP3 and WMA music files. The PC Card is usually a combination of a small flash card in a PCMCIA adaptor that slides into the slot. The ATA, SD, and compact flash types of cards have been tested up to 1 GB.
PCMCIA	A computer standard for the slot that the PC card slides into. Another term for the PC card slot.
Processor	The part of an audio device that performs tasks/calculations. In the audio unit the processor handles muting to allow the navi to speak its voice commands, and the decoding/playback of the sound files etc.
Radio	A head unit that combines a tuner, a preamplifier, and often a power-amplifier.
Route guidance (RG)	Spoken voice used for turn-by-turn navigation from the audio speakers.
SCF (Cold Start Fix) screens	These screens are displayed if the system requires a GPS initialization. The vehicle should be moved outside into an open area away from buildings/power lines.
Stereo	A recording of at least two channels where you can hear sound or music from the left or right side.
SD (Secure Digital) card	This compact type of memory card allows for fast data transfer and has built-in security functions. SD cards have a small write-protection switch on the side.
Shield	A metallic foil or braided wire layer surrounding conductors which are designed to prevent electrostatic or electromagnetic interference (noise) from external sources such as buzzing, or popping sounds heard on the speakers.
Speaker (Loudspeaker)	A device that converts electrical energy into acoustical energy (sound).
Speed-sensitive volume compensation (SVC)	The SVC increases the audio volume to compensate for increased interior noise when the vehicle drivers at freeway speeds.
Subwoofer	A loudspeaker made to reproduce the lowest audio frequencies, about 25 Hz to 125 Hz.

(cont'd)

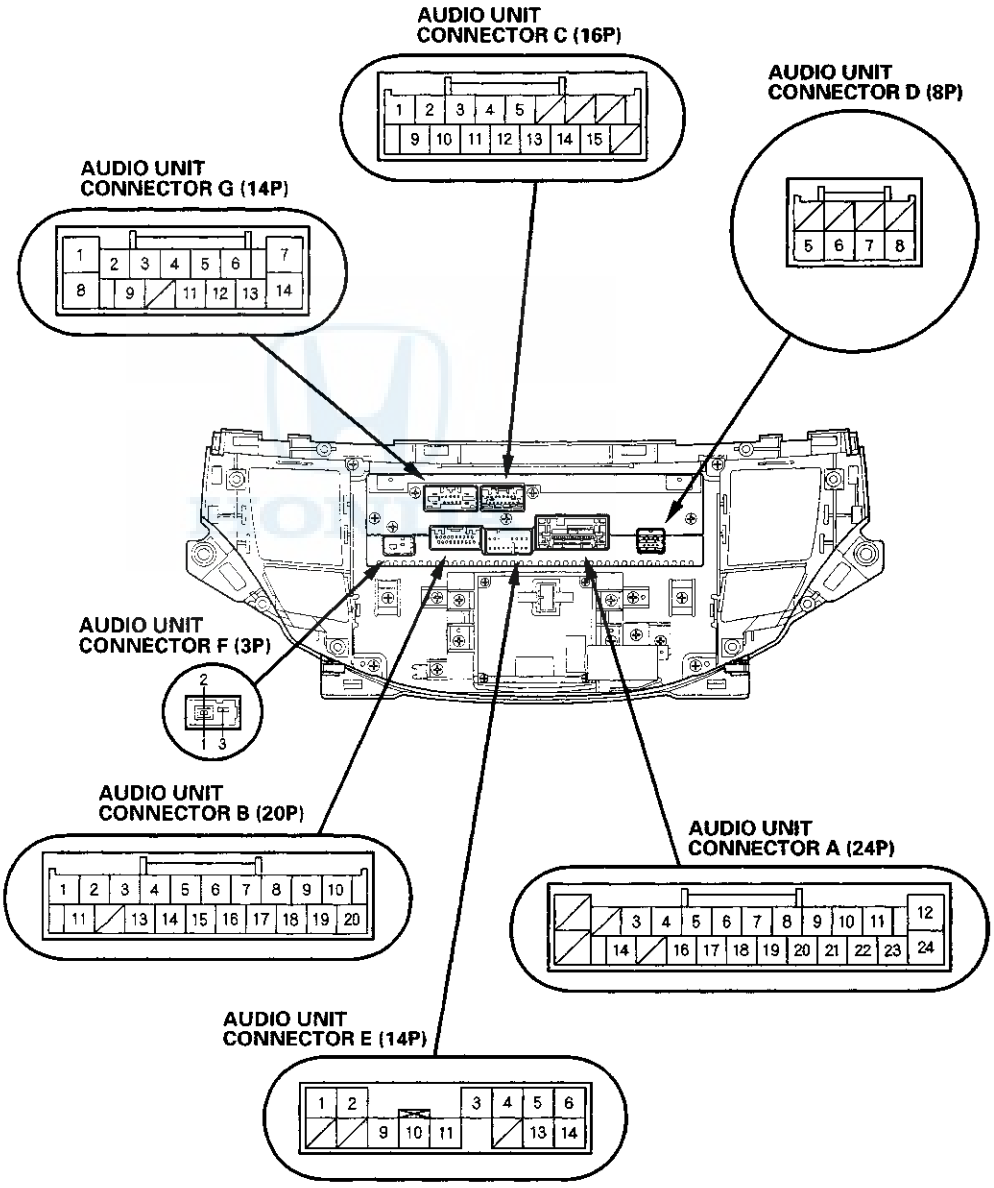
System Description (cont'd)

Audio Glossary

Item	Definition
Track	A sound recording on a CD, tape, or PC Card.
Treble	An adjustment to control the volume of the high frequency sounds.
Tuner	A component (or part of a component) that receives radio signals and selects one broadcast from many.
Tweeter	A speaker designed to reproduce the higher frequencies (treble) only.
Voice coil	A coil of wire wrapped around a tube and then attached to the speaker cone or diaphragm. When an audio signal is applied, the coil becomes an electromagnet and interacts with the permanent magnet causing the come or diaphragm to vibrate. We interpret this vibrations as sound.
Volume control	Allows you to control the loudness of the music.
WMA music file	Windows Media Audio File. This is an accepted format for music files to be played on either a CD-R, a CD-RW, or a PC Card.
Woofer	A speaker that is designed to reproduce low (bass) frequencies only.
XM radio	Satellite based radio transmission, which also uses a ground based repeater network to ensure seamless reception. The channels originate from XM's broadcast center, in Washington DC, and uplink to two satellites. These satellites transmit the signal across the entire continental United States.
XM receiver	The external component that receives and processes the XM signals from the XM satellites, and terrestrial (land) stations. The audio unit communicates to the XM receiver over the GA-Net bus.

Audio Unit Connector for Inputs and Outputs

With Premium Audio System (With Navigation System)



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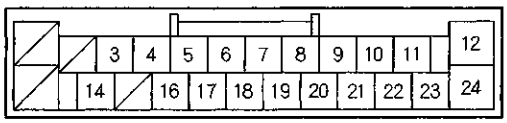
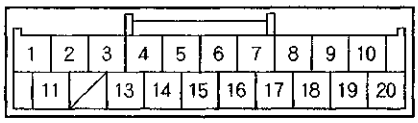
System Description (cont'd)

AUDIO UNIT CONNECTOR A (24P)



Terminal side of male terminals

AUDIO UNIT CONNECTOR B (20P)



Terminal side of male terminals

Audio Unit Connector A (24P)

Cavity	Wire	Connects to
A3	LT BLU	Data link connector (DLC) (K-line)
A4	YEL	Navigation display unit (SCTY −)
A5	BRN	Audio remote switch ground
A6	RED	Stereo amplifier (RR PRE−)
A7	GRN	Stereo amplifier (RR PRE+)
A8	GRY*	Stereo amplifier (SH RR GND)
A9	GRY*	Stereo amplifier (SH RL GND)
A10	RED	Stereo amplifier (RL PRE−)
A11	GRN	Stereo amplifier (RL PRE+)
A12	BRN	Ground (G402) (MAIN GND)
A14	PUR	ACC (audio power supply)
A16	PNK	Audio remote switch
A17	WHT	Stereo amplifier (SWD +B)
A18	RED	Stereo amplifier (FR PRE−)
A19	GRN	Stereo amplifier (FR PRE+)
A20	GRY*	Stereo amplifier (SH FR GND)
A21	GRY*	Stereo amplifier (SH FL GND)
A22	RED	Stereo amplifier (FL PRE−)
A23	GRN	Stereo amplifier (FL PRE+)
A24	WHT	Constant power (+B)

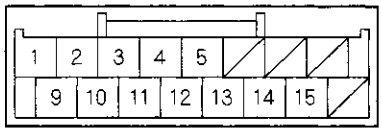
*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

Audio Unit Connector B (20P)

Cavity	Wire	Connects to
B1	GRN	Navigation unit (NAVI GND)
B2	GRY*	Navigation unit (NAVI SH GND)
B3	BLK	Auxiliary jack assembly (AUX SIG GND)
B4	GRY*	Auxiliary jack assembly (AUX SH GND)
B5	YEL	Auxiliary jack assembly (AUX GND)
B6	RED	Audio-HVAC subdisplay unit (DUET TX)
B7	GRN	Audio-HVAC subdisplay unit (DUET RX)
B8	BLU	B-CAN bus communication (B-CAN L)
B9	RED	HandsFreeLink control unit (TELM SIG−)
B10	GRY*	HandsFreeLink control unit (TELM SIG SH)
B11	RED	Navigation unit (NAVI L CH)
B13	RED*	Auxiliary jack assembly (AUX LCH)
B14	WHT*	Auxiliary jack assembly (AUX RCH)
B15	GRY	Auxiliary jack assembly (AUX DET)
B16	BLK*	Audio-HVAC subdisplay unit (SH DUET GND)
B17	BLU	Audio-HVAC subdisplay unit (DUET CONT)
B18	PNK	B-CAN bus communication (B-CAN H)
B19	GRN	HandsFreeLink control unit (TELM SIG+)
B20	LT GRN	HandsFreeLink control unit (HFL MUTE)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

AUDIO UNIT CONNECTOR C (16P)



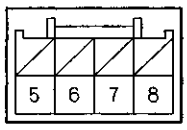
Terminal side of male terminals

Audio Unit Connector C (16P)

Cavity	Wire	Connects to
C1	GRN	Stereo amplifier (ANC R−)
C2	BLK	Stereo amplifier (ANC R+)
C3	GRY*	Stereo amplifier (SH ANC GND)
C4	WHT	Active noise cancellation front microphone (ANC F MIC 8 V)
C5	BLU	Active noise cancellation front microphone (ANC R MIC 8 V)
C9	WHT	Stereo amplifier (ANC F−)
C10	RED	Stereo amplifier (ANC F+)
C11	BLK*	Active noise cancellation front microphone (SH ANCM F GND)
C12	BLK*	Active noise cancellation rear microphone (SH ANCM R GND)
C13	BRN	ECM/PCM (3 cylinder by ENGINE SPEED PULSE) (CSSAMA)
C14	LT BLU	ECM/PCM (4 cylinder by ENGINE SPEED PULSE) (CSSAMC)
C15	YEL	ECM/PCM (ENGINE SPEED PULSE) (NEP)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

AUDIO UNIT CONNECTOR D (8P)



Terminal side of male terminals

Audio Unit Connector D (8P)

Cavity	Wire	Connects to
D5	LT GRN	Stereo amplifier (AMP MUTE)
D6	RED	Stereo amplifier (SUBW PRE−)
D7	BLK*	Stereo amplifier (SH SUBW GND)
D8	GRN	Stereo amplifier (SUBW PRE+)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

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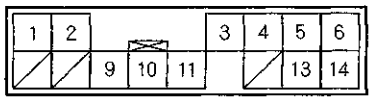
System Description (cont'd)

AUDIO UNIT CONNECTOR E (14P)



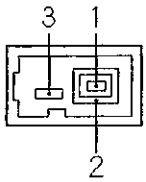
Terminal side of male terminals

Audio Unit Connector E (14P)

Cavity	Wire	Connects to
E1	WHT	XM receiver (GA +B)
E2	LT BLU	XM receiver (GA SYS ON)
E3	GRY*	XM receiver (GA BUS SH)
E4	GRY	XM receiver (GA AUDIO SH)
E5	GRN	XM receiver (GA AUDIO R+)
E6	BLK	XM receiver (GA AUDIO L+)
E9	RED	XM receiver (GA BUS+)
E10	GRN	XM receiver (GA BUS−)
E11	BLK	XM receiver (GA GND)
E13	WHT	XM receiver (GA AUDIO R−)
E14	RED	XM receiver (GA AUDIO L−)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

AUDIO UNIT CONNECTOR F (3P)

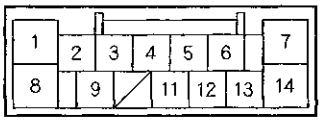


Terminal side of male terminals

Audio Unit Connector F (3P)

Cavity	Wire	Connects to
F1	———	AM/FM antenna amplifier (RF IN)
F2	———	AM/FM antenna amplifier (RF SH)
F3	———	AM/FM antenna amplifier (ANT +B)

AUDIO UNIT CONNECTOR G (14P)



Terminal side of male terminals

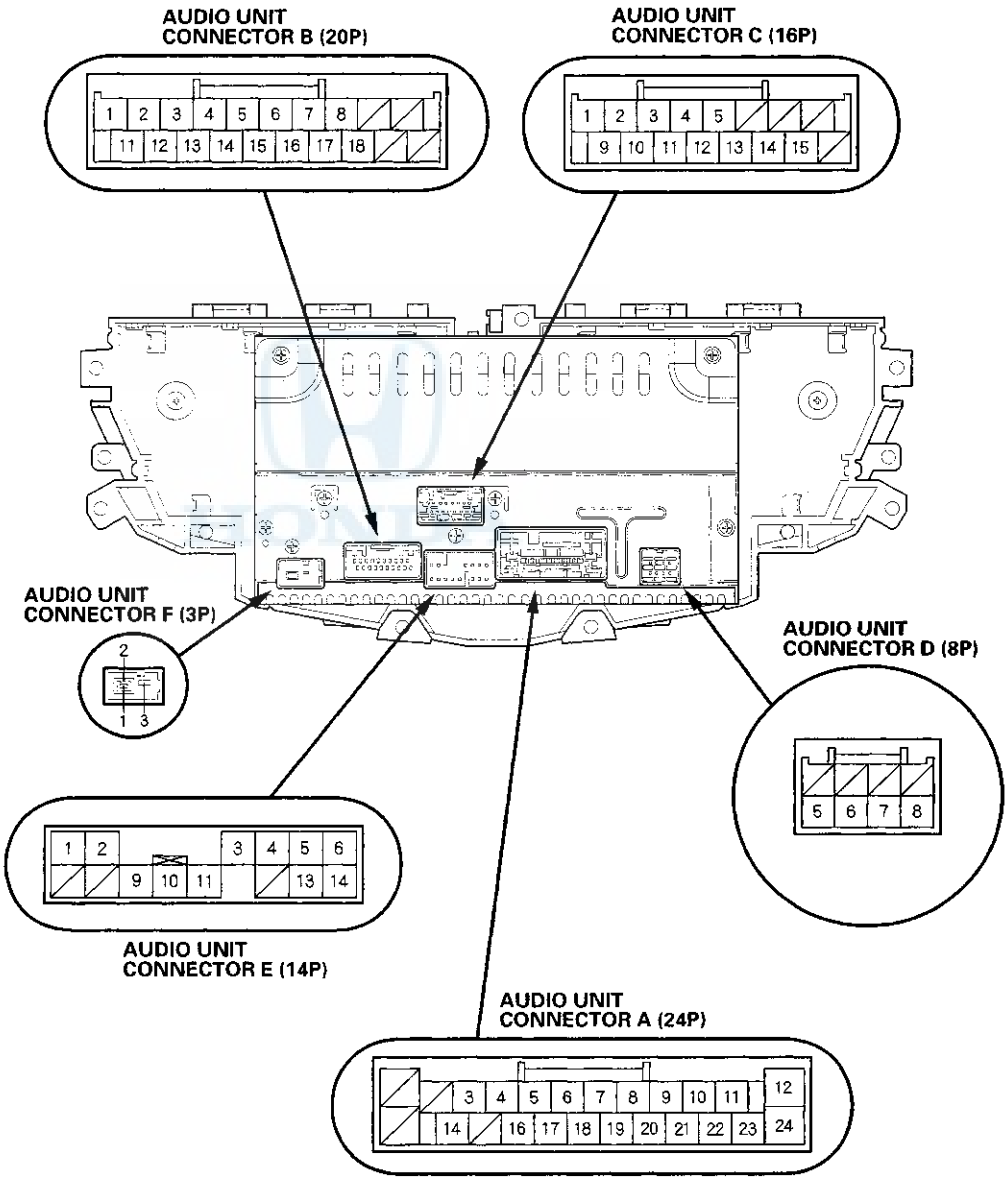
Audio Unit Connector G (14P)

Cavity	Wire	Connects to
G1	WHT	6 CD player (Light-on signal−)
G2	RED	6 CD player (6 CD BUS−)
G3	GRY*	6 CD player (6 CD BUS SH)
G4	WHT	6 CD player (6 CD AUDIO L−)
G5	GRN	6 CD player (6 CD AUDIO R−)
G6	GRY*	6 CD player (6 CD AUDIO SH)
G7	BLK	6 CD player (6 CD GND)
G8	BLU	6 CD player (Light-on signal+)
G9	GRN	6 CD player (6 CD BUS+)
G11	RED	6 CD player (6 CD AUDIO L+)
G12	BLK	6 CD player (6 CD AUDIO R+)
G13	LT BLU	6 CD player (6 CD SYS ON)
G14	ORN	6 CD player (6 CD +B)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

Audio Unit Connector for Inputs and Outputs

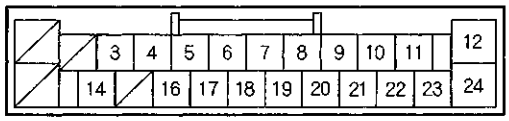
With Premium Audio System (Without Navigation System)



(cont'd)

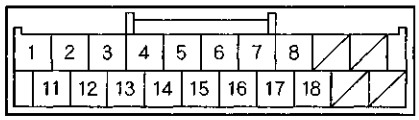
System Description (cont'd)

AUDIO UNIT CONNECTOR A (24P)



Terminal side of male terminals

AUDIO UNIT CONNECTOR B (20P)



Terminal side of male terminals

Audio Unit Connector A (24P)

Cavity	Wire	Connects to
A3	LT BLU	Data link connector (DLC) (K-line)
A4	GRN	Passenger's MICU (SCTY—)
A5	BRN	Audio remote switch ground
A6	RED	Stereo amplifier (RR PRE—)
A7	GRN	Stereo amplifier (RR PRE+)
A8	GRY*	Stereo amplifier (SH RR GND)
A9	GRY*	Stereo amplifier (SH RL GND)
A10	RED	Stereo amplifier (RL PRE—)
A11	GRN	Stereo amplifier (RL PRE+)
A12	BRN	Ground (G402) (MAIN GND)
A14	PUR	ACC (audio power supply)
A16	PNK	Audio remote switch
A17	WHT	Stereo amplifier (SWD +B)
A18	RED	Stereo amplifier (FR PRE—)
A19	GRN	Stereo amplifier (FR PRE+)
A20	GRY*	Stereo amplifier (SH FR GND)
A21	GRY*	Stereo amplifier (SH FL GND)
A22	RED	Stereo amplifier (FR PRE—)
A23	GRN	Stereo amplifier (FR PRE+)
A24	WHT	Constant power (+B)

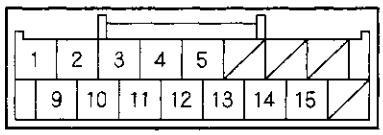
*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

Audio Unit Connector B (20P)

Cavity	Wire	Connects to
B1	RED	Electrical compass unit (DISP TX—)
B2	ORN	Electrical compass unit (DISP TX+)
B3	BLK	Auxiliary jack assembly (AUX SIG GND)
B4	GRY*	Auxiliary jack assembly (AUX SH GND)
B5	YEL	Auxiliary jack assembly (AUX GND)
B6	RED	Audio-HVAC subdisplay unit (DUET TX)
B7	GRN	Audio-HVAC subdisplay unit (DUET RX)
B8	BLU	B-CAN bus communication (B-CAN L)
B11	PNK	Electrical compass unit (DISP RX—)
B12	LT BLU	Electrical compass unit (DISP RX+)
B13	RED	Auxiliary jack assembly (AUX L CH)
B14	WHT*	Auxiliary jack assembly (AUX R SH)
B15	GRY	Auxiliary jack assembly (AUX DET)
B16	BLK*	Audio-HVAC subdisplay unit (SH DUET GND)
B17	BLU	Audio-HVAC subdisplay unit (DUET CONT)
B18	PNK	B-CAN bus communication (B-CAN H)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

AUDIO UNIT CONNECTOR C (16P) (A/T)



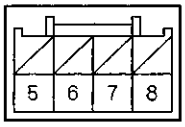
Terminal side of male terminals

Audio Unit Connector C (16P)

Cavity	Wire	Connects to
C1	GRN	Stereo amplifier (ANC R−)
C2	BLK	Stereo amplifier (ANC R+)
C3	GRY*	Stereo amplifier (SH ANC GND)
C4	WHT	Active noise cancellation front microphone (ANC F MIC 8 V)
C5	BLU	Active noise cancellation rear microphone (ANC R MIC 8 V)
C9	WHT	Stereo amplifier (ANC F−)
C10	RED	Stereo amplifier (ANC F+)
C11	BLK*	Active noise cancellation front microphone (SH ANCM F GND)
C12	BLK*	Active noise cancellation rear microphone (SH ANCM R GND)
C13	BRN	ECM/PCM (3 cylinder by ENGINE SPEED PULSE) (CSSAMA)
C14	LT BLU	ECM/PCM (4 cylinder by ENGINE SPEED PULSE) (CSSAMC)
C15	YEL	ECM/PCM (ENGINE SPEED PULSE) (NEP)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

AUDIO UNIT CONNECTOR D (8P)



Terminal side of male terminals

Audio Unit Connector D (8P)

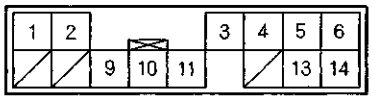
Cavity	Wire	Connects to
D5	LT GRN	Stereo amplifier (AMP MUTE)
D6	RED	Stereo amplifier (SUBW PRE−)
D7	BLK*	Stereo amplifier (SH SUBW GND)
D8	GRN	Stereo amplifier (SUBW PRE+)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

(cont'd)

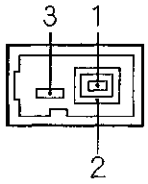
System Description (cont'd)

AUDIO UNIT CONNECTOR E (14P)



Terminal side of male terminals

AUDIO UNIT CONNECTOR F (3P)



Terminal side of male terminals

Audio Unit Connector E (14P)

Cavity	Wire	Connects to
E1	WHT	XM receiver (GA +B)
E2	LT BLU	XM receiver (GA SYS ON)
E3	GRY	XM receiver (GA BUS SH)
E4	GRY*	XM receiver (GA AUDIO SH)
E5	GRN	XM receiver (GA AUDIO R+)
E6	BLK	XM receiver (GA AUDIO L+)
E9	RED	XM receiver (GA BUS+)
E10	GRN	XM receiver (GA BUS−)
E11	BLK	XM receiver (GA GND)
E13	WHT	XM receiver (GA AUDIO R−)
E14	RED	XM receiver (GA AUDIO L−)

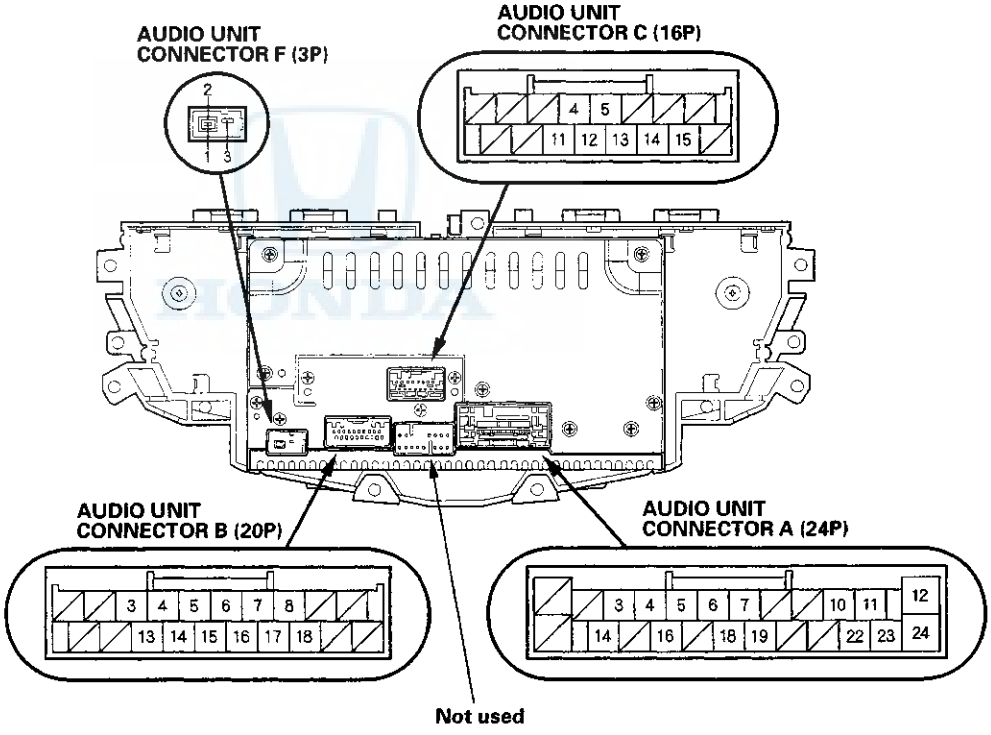
*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

Audio Unit Connector F (3P)

Cavity	Wire	Connects to
F1	———	AM/FM antenna amplifier (RF IN)
F2	———	AM/FM antenna amplifier (RF SH)
F3	———	AM/FM antenna amplifier (ANT +B)

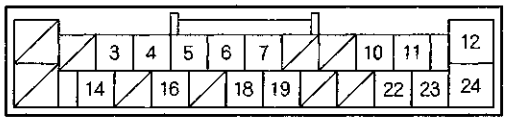
Audio Unit Connector for Inputs and Outputs

Without Premium Audio System



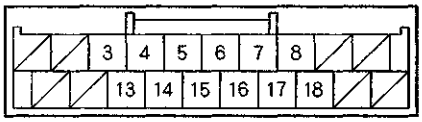
System Description (cont'd)

AUDIO UNIT CONNECTOR A (24P)



Terminal side of male terminals

AUDIO UNIT CONNECTOR B (20P)



Terminal side of male terminals

Audio Unit Connector A (24P)

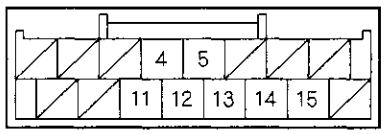
Cavity	Wire	Connects to
A3	LT BLU	Data link connector (DLC) (K-line)
A4	GRN	Passenger's MICU (SCTY)
A5	BRN	Audio remote switch ground
A6	ORN	Right rear speaker (RR SP−)
A7	BLU	Right rear speaker (RR SP+)
A10	BRN	Left rear speaker (RL SP−)
A11	YEL	Left rear speaker (RL SP+)
A12	BRN	Ground (G402) (MAIN GND)
A14	PUR	ACC (audio power supply)
A16	PNK	Audio remote switch
A18	RED	Front passenger's door speaker (FR SP−), Front passenger's door tweeter (FR SP−)
A19	GRY	Front passenger's door speaker (FR SP+), Front passenger's door tweeter (FR SP+)
A22	PNK	Driver's door speaker (FL SP−), Driver's door tweeter (FL SP−)
A23	LT GRN	Driver's door speaker (FL SP+), Driver's door tweeter (FL SP+)
A24	WHT	Constant power (+B)

Audio Unit Connector B (20P)

Cavity	Wire	Connects to
B3	BLK*	Auxiliary jack assembly (AUX SIG GND)
B4	GRY*	Auxiliary jack assembly (AUX SH GND)
B5	YEL	Auxiliary jack assembly (AUX GND)
B6	RED	Audio-HVAC display unit (DUET TX)
B7	GRN	Audio-HVAC display unit (DUET RX)
B8	BLU	B-CAN bus communication (B-CAN L)
B13	RED	Auxiliary jack assembly (AUX L CH)
B14	WHT	Auxiliary jack assembly (AUX R CH)
B15	GRY	Auxiliary jack assembly (AUX DET)
B16	BLK*	Audio-HVAC display unit (SH DUET GND)
B17	BLU	Audio-HVAC display unit (DUET CONT)
B18	PNK	B-CAN bus communication (B-CAN H)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

AUDIO UNIT CONNECTOR C (16P) (A/T)



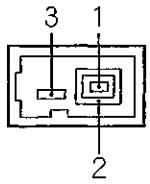
Terminal side of male terminals

Audio Unit Connector C (16P)

Cavity	Wire	Connects to
C4	WHT	Active noise cancellation front microphone (ANC F MIC 8 V)
C5	BLU	Active noise cancellation rear microphone (ANC R MIC 8 V)
C11	BLK*	Active noise cancellation front microphone (SH ANCM F GND)
C12	BLK*	Active noise cancellation rear microphone (SH ANCM R GND)
C13	BRN	ECM/PCM (3 cylinder by ENGINE SPEED PULSE) (CSSAMA)
C14	LT BLU	ECM/PCM (4 cylinder by ENGINE SPEED PULSE) (CSSAMC)
C15	YEL	ECM/PCM (ENGINE SPEED PULSE) (NEP)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

AUDIO UNIT CONNECTOR F (3P)



Terminal side of male terminals

Audio Unit Connector F (3P)

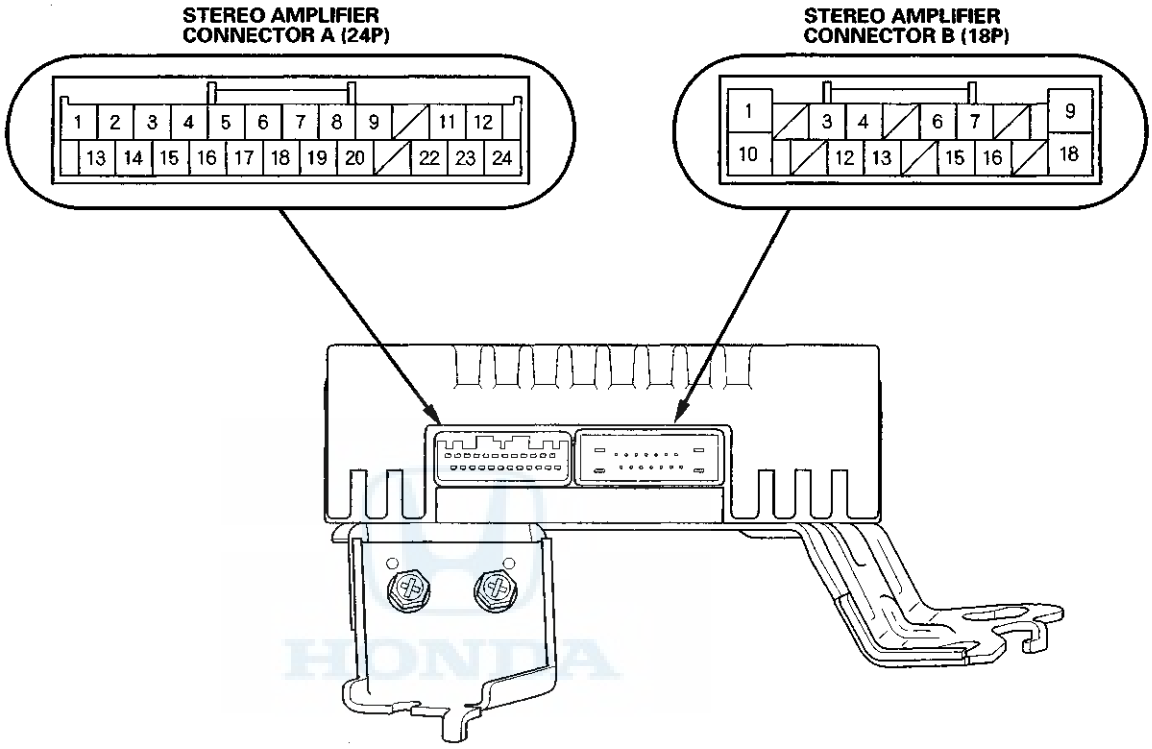
Cavity	Wire	Connects to
F1	———	AM/FM antenna amplifier (RF IN)
F2	———	AM/FM antenna amplifier (RF SH)
F3	———	AM/FM antenna amplifier (ANT +B)

(cont'd)

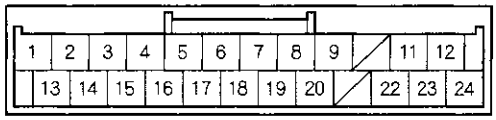
System Description (cont'd)

Stereo Amplifier Connector for Inputs and Outputs

Premium Audio System

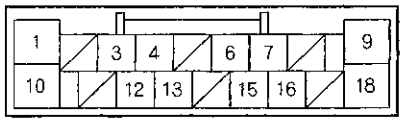


STEREO AMPLIFIER CONNECTOR A (24P)



Terminal side of male terminals

STEREO AMPLIFIER CONNECTOR B (18P)



Terminal side of male terminals

Stereo Amplifier Connector A (24P)

Cavity	Wire	Connects to
A1	BRN	Ground (G402) (GND)
A2	RED	Audio unit (FL PRE−)
A3	GRY*1	Audio unit (SH FL GND)
A4	RED	Audio unit (RL PRE−)
A5	RED	Audio unit (FR PRE−)
A6	GRY	Audio unit (SH FR GND)
A7	RED	Audio unit (RR PRE−)
A8	RED	Audio unit (SUBW PRE−)
A9	BLK*1	Audio unit (SH SUBW GND)
A11*2	WHT	Audio unit (ANC F−)
A12*2	GRN	Audio unit (ANC R−)
A13	LT GRN	Audio unit (AMP MUTE)
A14	GRN	Audio unit (FL PRE+)
A15	GRY*1	Audio unit (SH RL GND)
A16	GRN	Audio unit (RL PRE+)
A17	GRN	Audio unit (FR PRE+)
A18	GRY*1	Audio unit (SH RR GND)
A19	GRN	Audio unit (RR PRE+)
A20	GRN	Audio unit (SUBW PRE+)
A22*2	RED	Audio unit (ANC F+)
A23*2	BLK	Audio unit (ANC R+)
A24	WHT	Audio unit (SWD+B)

* 1: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

* 2: A/T

Stereo Amplifier Connector B (18P)

Cavity	Wire	Connects to
B1	LT BLU	Subwoofer (SUBW SP−)
B3	ORN	Right rear speaker (RR SP−)
B4	BRN	Left rear speaker (RL SP−)
B6	WHT	Front passenger's door speaker crossover network control unit (AMP−)
B7	PUR	Driver's door speaker crossover network control unit (AMP−)
B9	BLK	Ground (G401) (GND)
B10	GRY	Subwoofer (SUBW SP+)
B12	BLU	Right rear speaker (RR SP+)
B13	YEL	Left rear speaker (RL SP+)
B15	PNK	Front passenger's door speaker crossover network control unit (FR SP+)
B16	GRN	Driver's door speaker crossover network control unit (FL SP+)
B18	WHT	Constant power (+B)

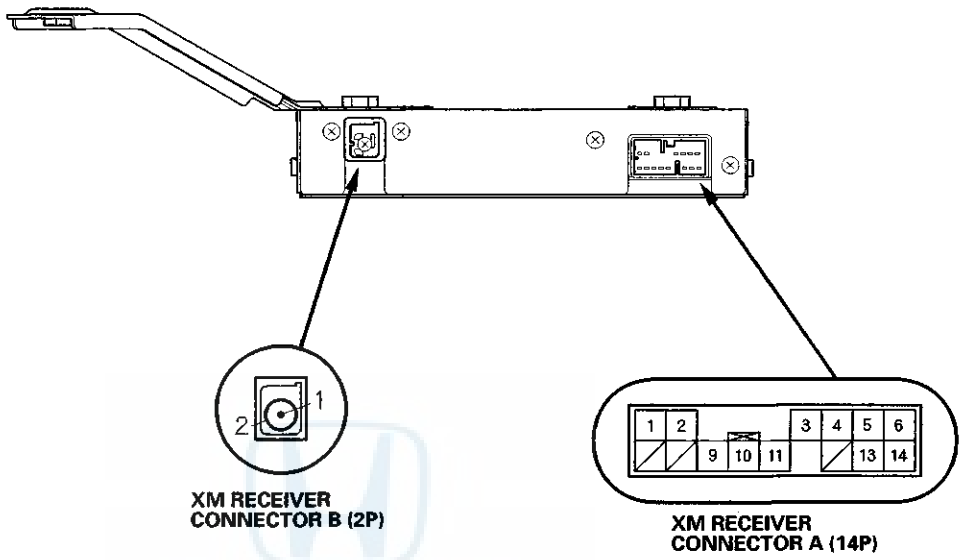
(cont'd)

System Description (cont'd)

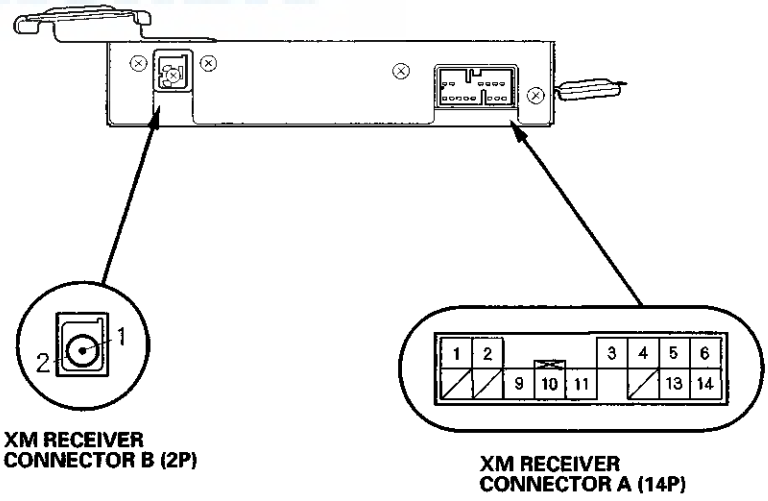
XM Receiver Connector for Inputs and Outputs

Premium Audio System

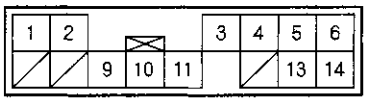
4-Door



2-Door

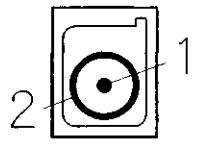


XM RECEIVER CONNECTOR A (14P)



Terminal side of male terminals

XM RECEIVER CONNECTOR B (2P)



Wire side of female terminals

XM Receiver Connector A (14P)

Cavity	Wire	Connects to
A1	WHT	XM receiver (GA +B)
A2	LT BLU	XM receiver (GA SYS ON)
A3	BRN*2	Audio unit, Navigation unit*1, Navigation display unit*1 (GA BUS SH)
A4	GRY*2	Audio unit (GA AUDIO SH)
A5	GRN	Audio unit (GANET AUDIO R+)
A6	BLK	Audio unit (GANET AUDIO L+)
A9	RED	Audio unit, Navigation unit*1, Navigation display unit*1 (GA BUS+)
A10	GRN	Audio unit, Navigation unit*1, Navigation display unit*1 (GA BUS−)
A11	BLK	Audio unit (GA GND)
A13	WHT	Audio unit (GANET AUDIO R−)
A14	RED	Audio unit (GANET AUDIO L−)

* 1: With navigation
* 2: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

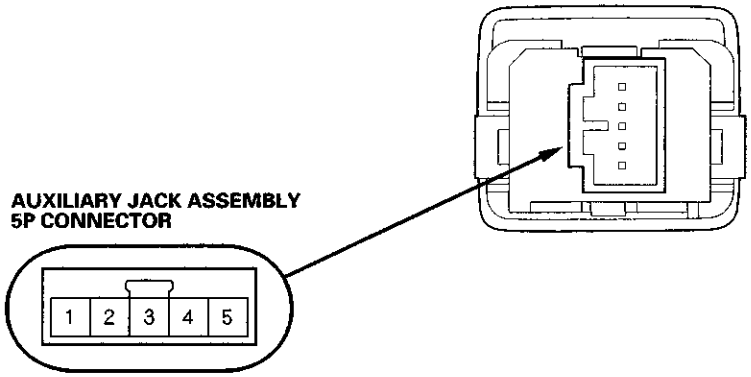
XM Receiver Connector B (2P)

Cavity	Wire	Connects to
B1	———	XM antenna (TER-SAT)
B2	———	XM antenna (SH-GND)

(cont'd)

System Description (cont'd)

Auxiliary Jack Assembly Connector for Inputs and Outputs

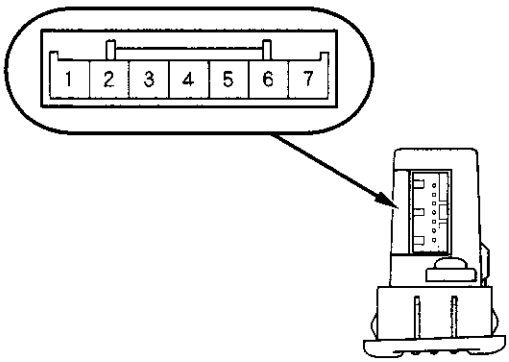


Auxiliary Jack Assembly 5P connector

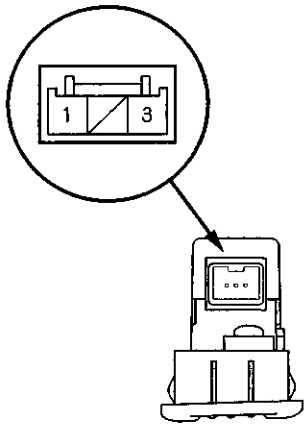
Cavity	Wire	Connects to
1	GRY	Audio unit (AUX DET)
2	YEL	Audio unit (AUX GND)
3	BLK	Audio unit (AUX SIG GND)
4	RED	Audio unit (AUX LCH)
5	WHT	Audio unit (AUX RCH)

Active Noise Cancellation Microphone Connector for Inputs and Outputs (A/T)

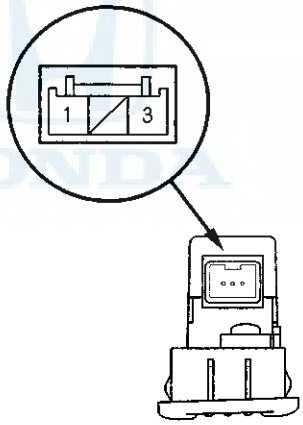
Front (With Navigation)



Front (Without Navigation)



Rear



(cont'd)

System Description (cont'd)

Active Noise Cancellation Front Microphone 7P Connector (A/T with navigation)

Cavity	Wire	Connects to
1	BLK	Ground (G501)
2	GRY	HandsFreeLink control unit (MIC−)
3	BRN	HandsFreeLink control unit (MIC+)
4	WHT	Audio unit (ANC F MIC 8 V)
5	LT GRN	HandsFreeLink control unit (MIC+), audio unit (HFL MUTE)
6	PUR	ACC (HFL-navigation-ANC microphone power supply)
7	WHT	Constant power (HFL-navigation-ANC microphone)

Active Noise Cancellation Front Microphone 3P Connector (A/T without navigation)

Cavity	Wire	Connects to
1	BLK*	Audio unit (SH ANCM F GND)
3	WHT	Audio unit (ANC F MIC 8 V)

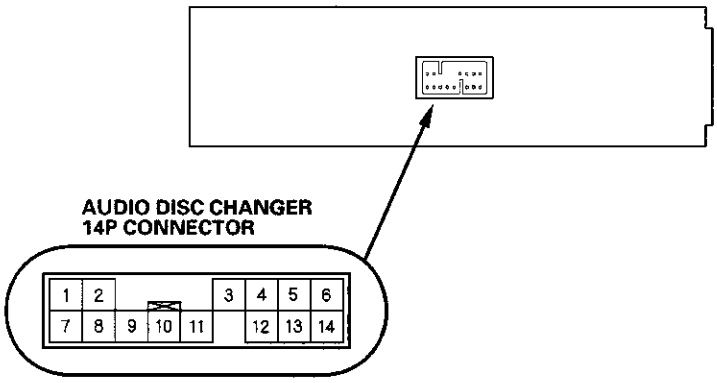
*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

Active Noise Cancellation Rear Microphone 3P Connector (A/T)

Cavity	Wire	Connects to
1	GRY*	Audio unit (SH ANCM R GND)
3	WHT	Audio unit (ANC R MIC 8 V)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

Audio Disc Changer Connector for Inputs and Outputs (With Navigation)



Audio Disc Changer 14P Connector

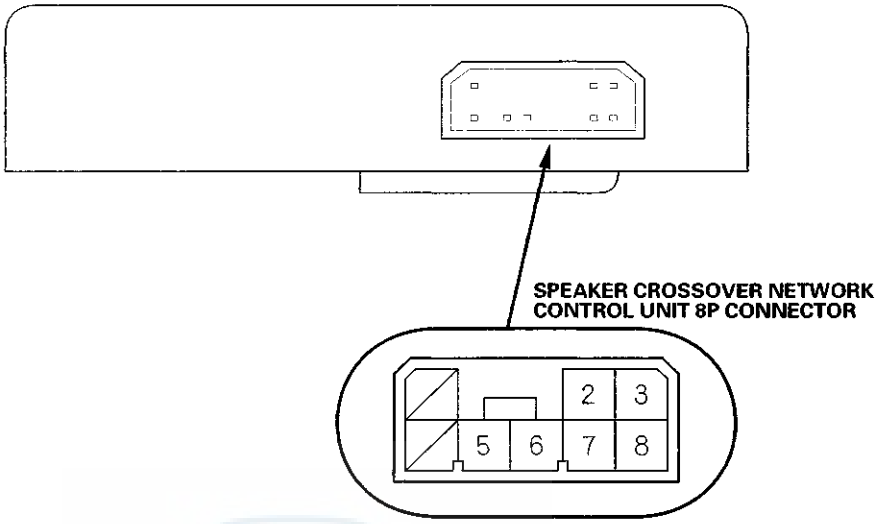
Cavity	Wire	Connects to
1	ORN	Audio unit (6 CD +B)
2	LT BLU	Audio unit (6 CD SYS ON)
3	GRY*	Audio unit (6 CD GA-NET BUS SH)
4	GRY*	Audio unit (6 CD AUDIO SH)
5	BLK	Audio unit (6 CD AUDIO R+)
6	RED	Audio unit (6 CD AUDIO L+)
8	BLU	Audio unit (6 CD ILL+)
9	GRN	Audio unit (6 CD GA-NET BUS+)
10	RED	Audio unit (6 CD GA-NET BUS−)
11	BLK	Audio unit (6 CD GND)
12	WHT	Audio unit (6 CD ILL−)
13	GRN	Audio unit (6 CD AUDIO R−)
14	WHT	Audio unit (6 CD AUDIO L−)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

(cont'd)

System Description (cont'd)

Speaker Crossover Network Control Unit Connector for Inputs and Outputs



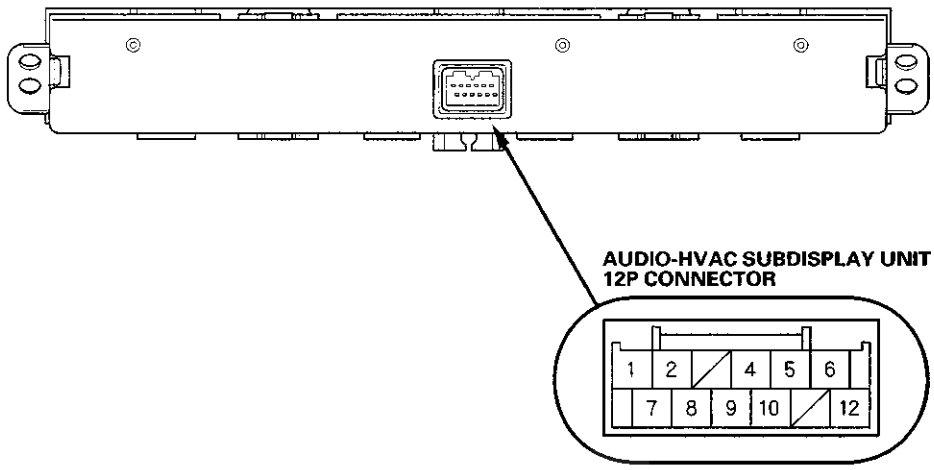
Driver's Door Speaker Crossover Network Control Unit 8P Connector

Cavity	Wire	Connects to
2	GRN	Stereo amplifier (FL SP+)
3	PUR	Stereo amplifier (FL SP−)
5	RED	Driver's door tweeter (TWEETER+)
6	GRN	Driver's door tweeter (TWEETER−)
7	LT GRN	Driver's door speaker (SPKR+)
8	PNK	Driver's door speaker (SPKR−)

Front Passenger's Door Speaker Crossover Network Control Unit 8P Connector

Cavity	Wire	Connects to
2	PNK	Stereo amplifier (FR SP+)
3	WHT	Stereo amplifier (FR SP−)
5	BRN	Front passenger's door tweeter (TWEETER+)
6	WHT	Front passenger's door tweeter (TWEETER−)
7	GRY	Front passenger's door speaker (SPKR+)
8	RED	Front passenger's door speaker (SPKR−)

Audio-HVAC Subdisplay Unit Connector for Inputs and Outputs (With Navigation)



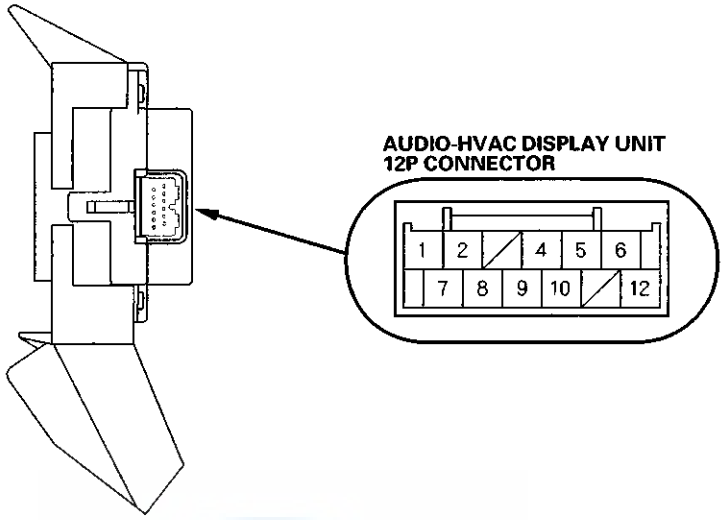
Audio-HVAC Subdisplay Unit 12P Connector

Cavity	Wire	Connects to
1	GRN	Audio unit (DUET RX)
2	RED	Audio unit (DUET TX)
4	BLU	Audio unit (DUET CONT)
5	LT GRN	Audio-HVAC subdisplay unit power supply (IG2)
6	WHT	Constant power
7	RED	Climate control unit (AC-CLK)
8	PUR	Climate control unit (AC-SO)
9	BLK	Ground (G401)
10	RED	Dash lights brightness controller (ILL−)
12	GRY	Lights-on signal (ILL+)

(cont'd)

System Description (cont'd)

Audio-HVAC Display Unit Connector for Inputs and Outputs (Without Navigation)



Audio-HVAC Display Unit 12P Connector

Cavity	Wire	Connects to
1	GRN	Audio unit (DUET RX)
2	RED	Audio unit (DUET TX)
4	BLU	Audio unit (DUET CONT)
5	LT GRN	Audio-HVAC display unit power supply (IG2)
6	WHT	Constant power (+B)
7	RED	Climate control unit (AC-CLK)*
8	PUR	Climate control unit (AC-SO)*
9	BLK	Ground (G401)
10	RED	Dash lights brightness controller
12	GRY	Lights-on signal

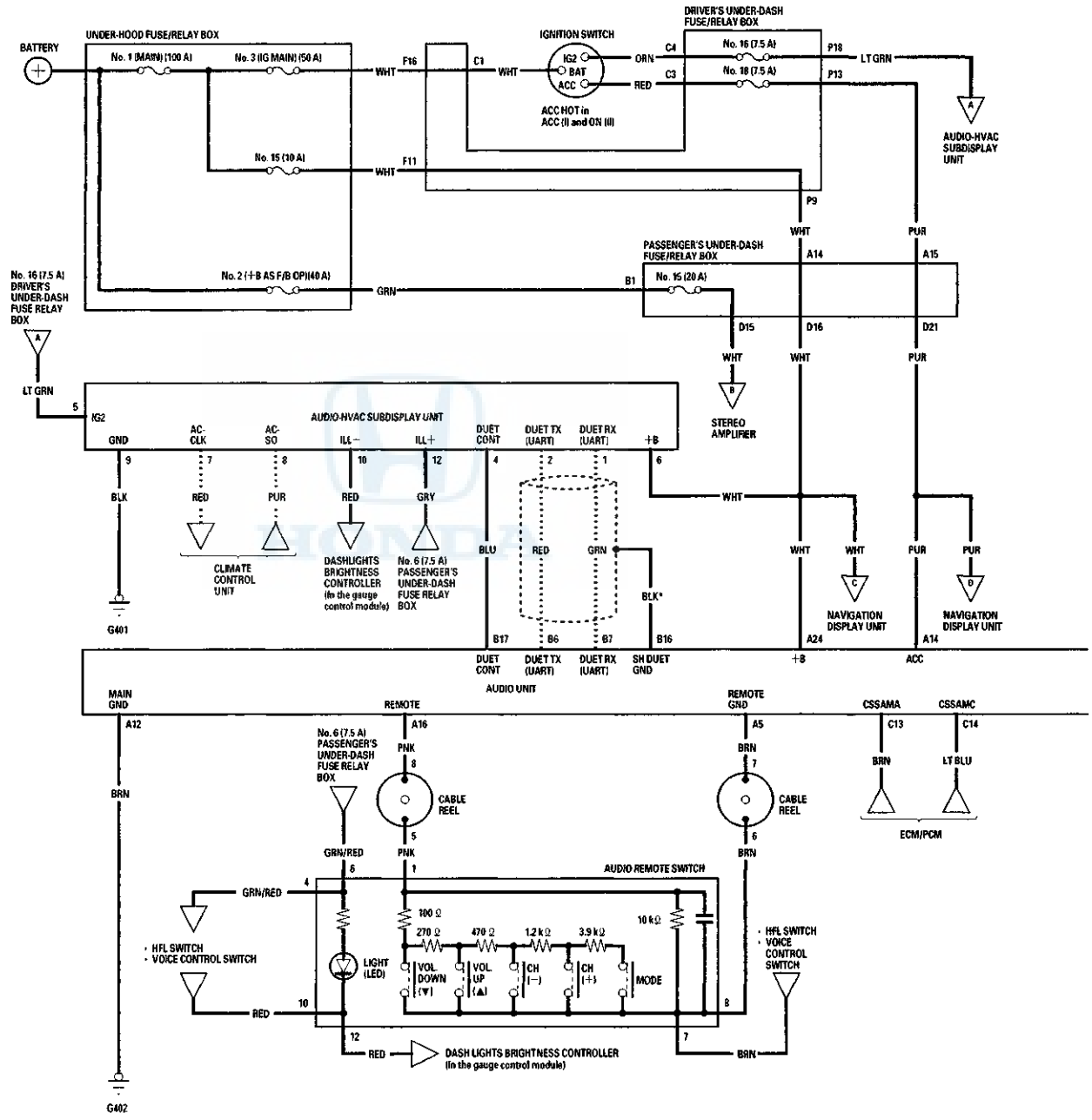
*: With climate control

HONDA

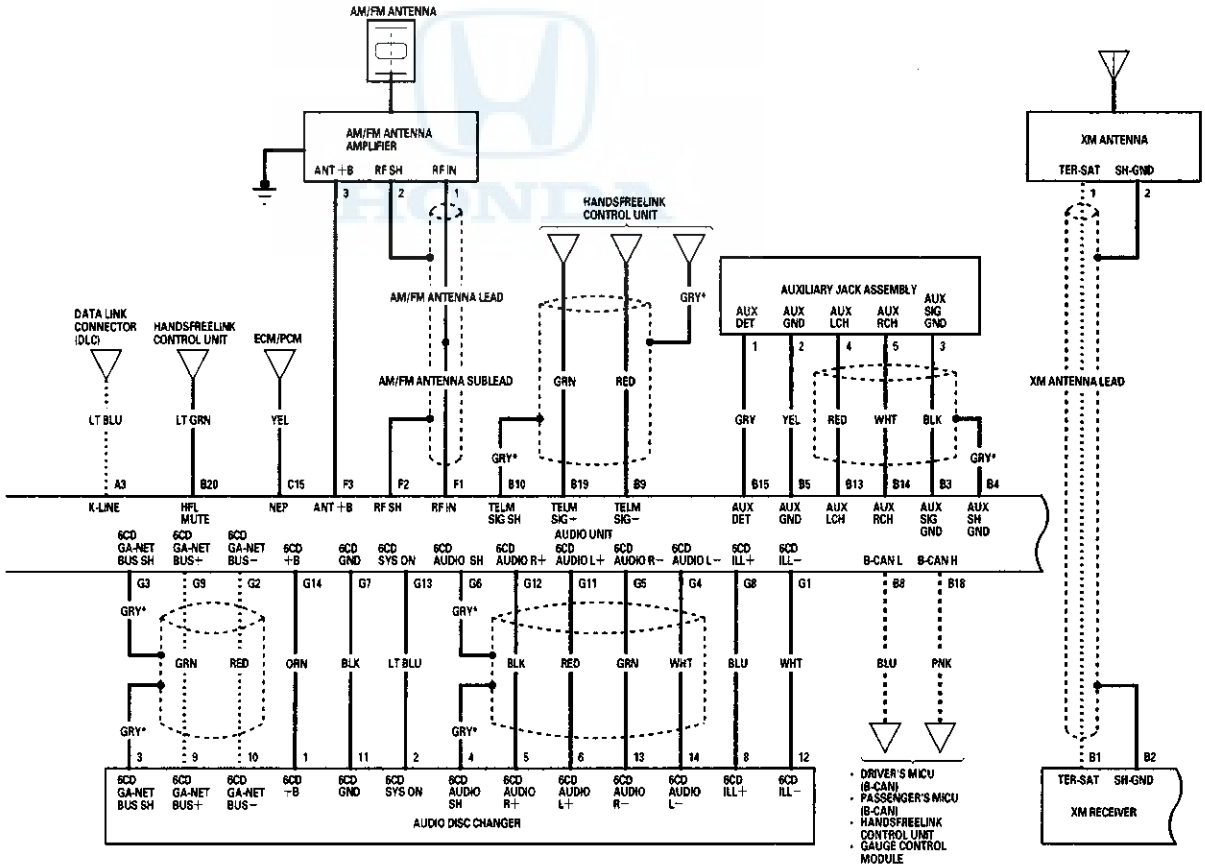
Audio System

Circuit Diagram

Premium Audio System with navigation



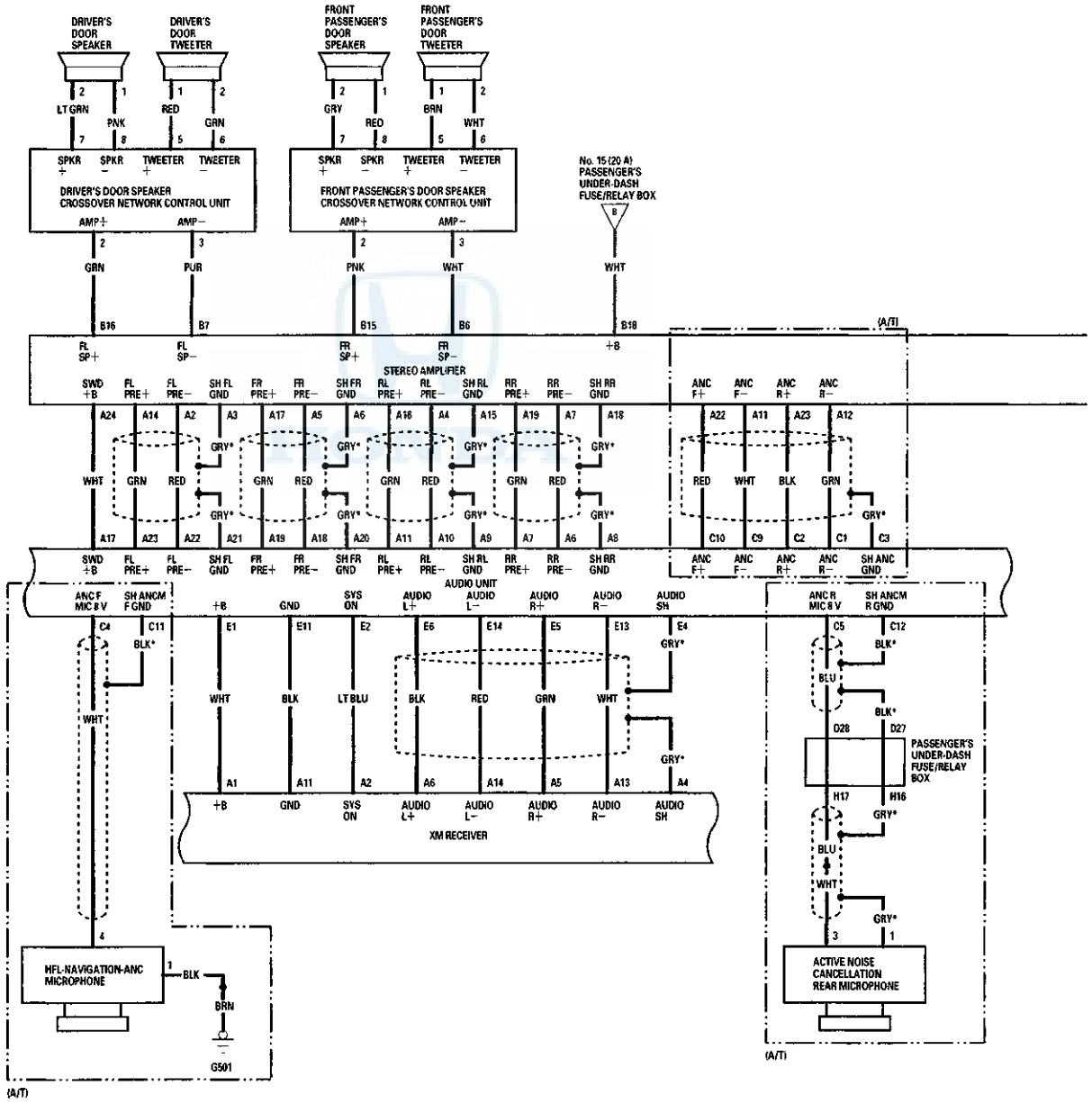
*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.
: CAN line
: Other communication line
: Shielding



(cont'd)

Circuit Diagram (cont'd)

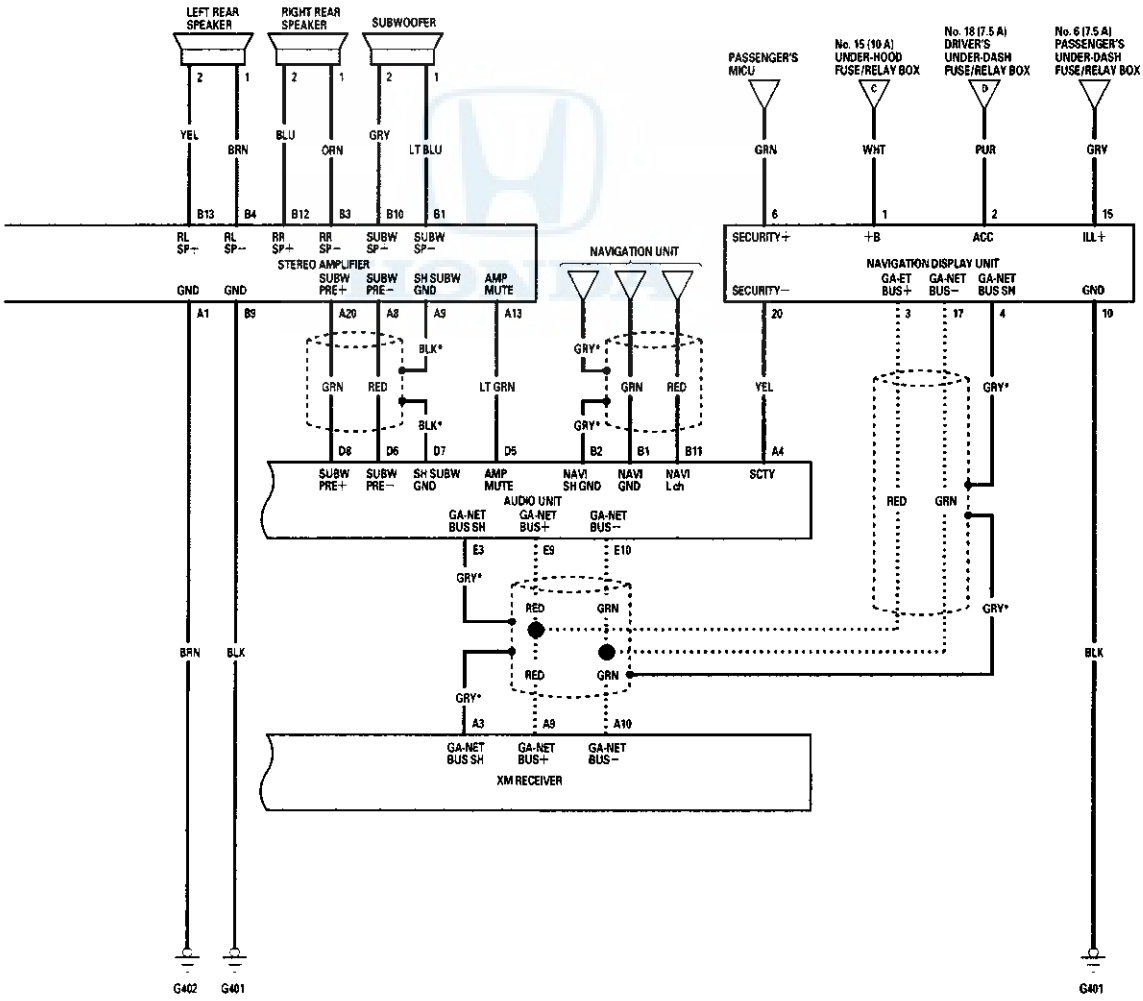
Premium Audio System with navigation



*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

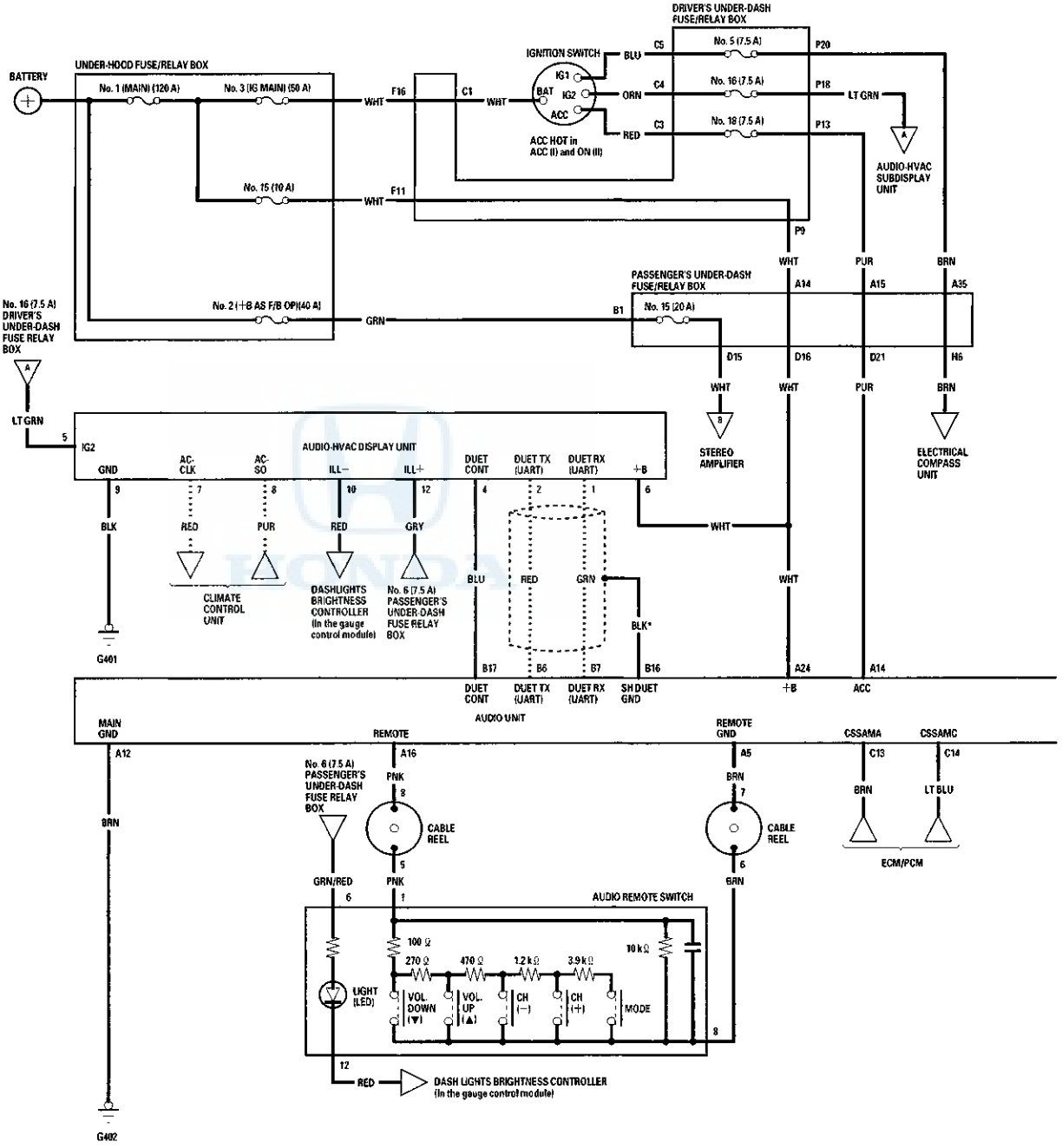
: Other communication line

: Shielding



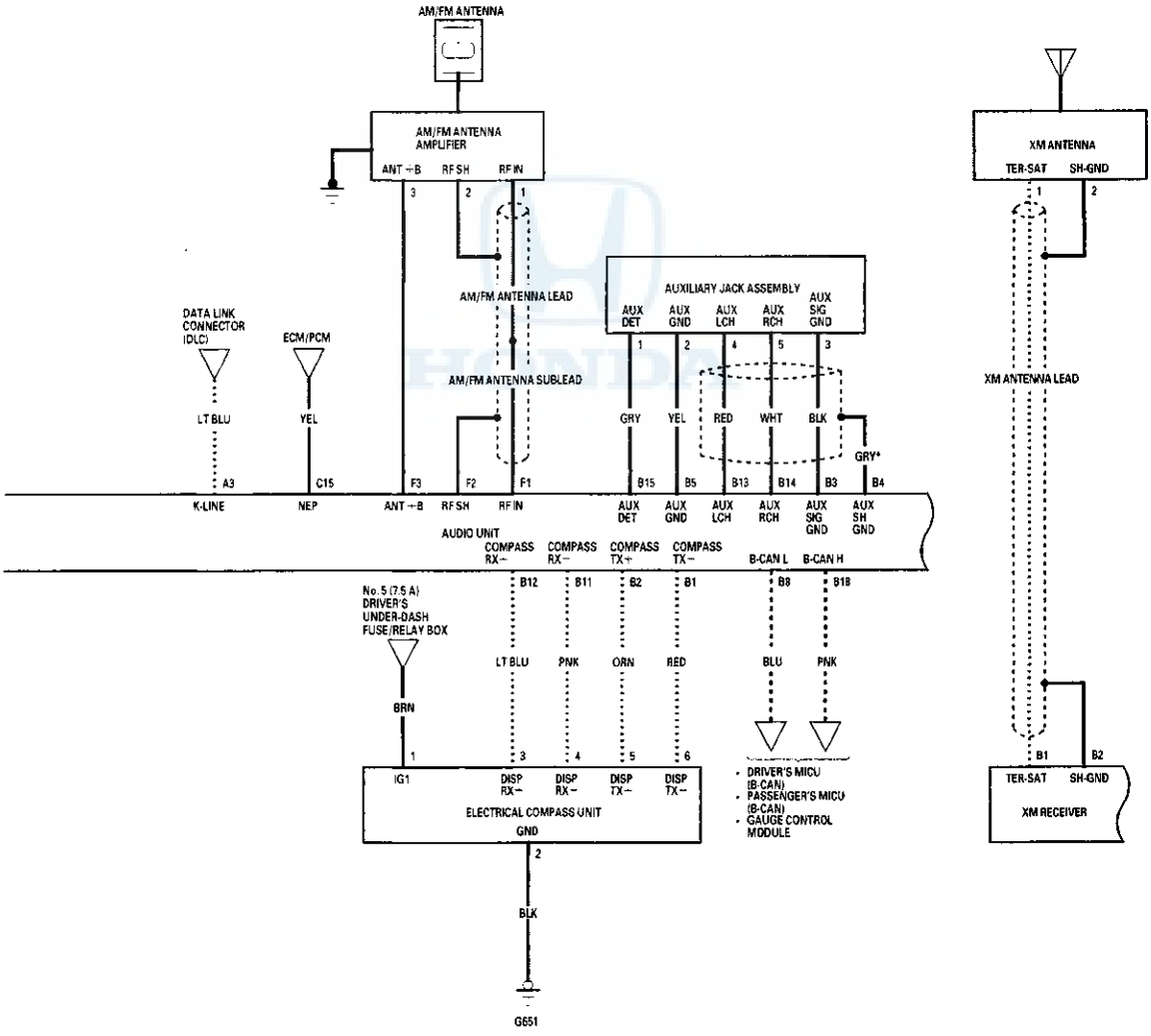
Circuit Diagram (cont'd)

Premium Audio System without navigation



*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

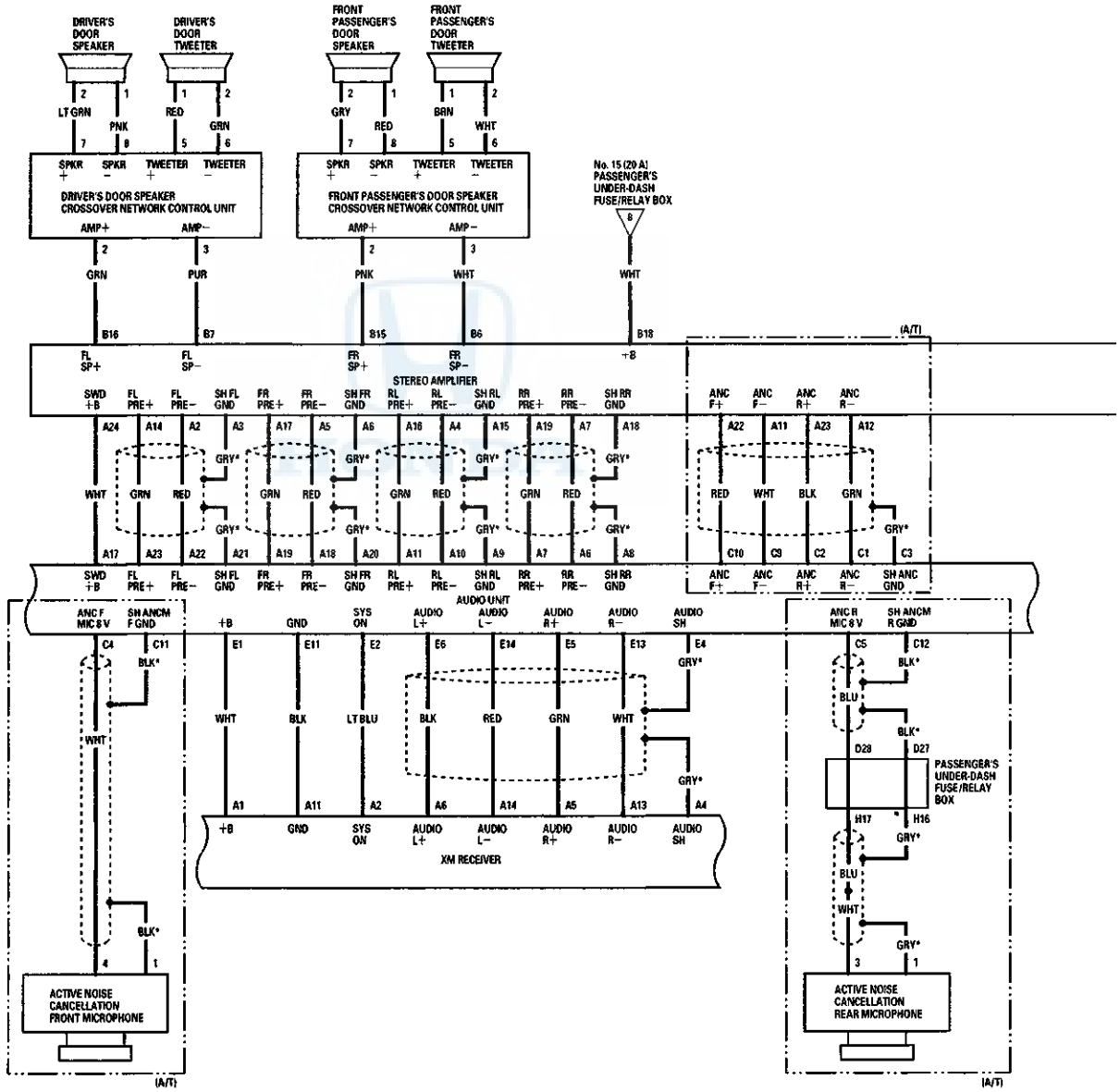
: CAN line
: Other communication line
: Shielding



(cont'd)

Circuit Diagram (cont'd)

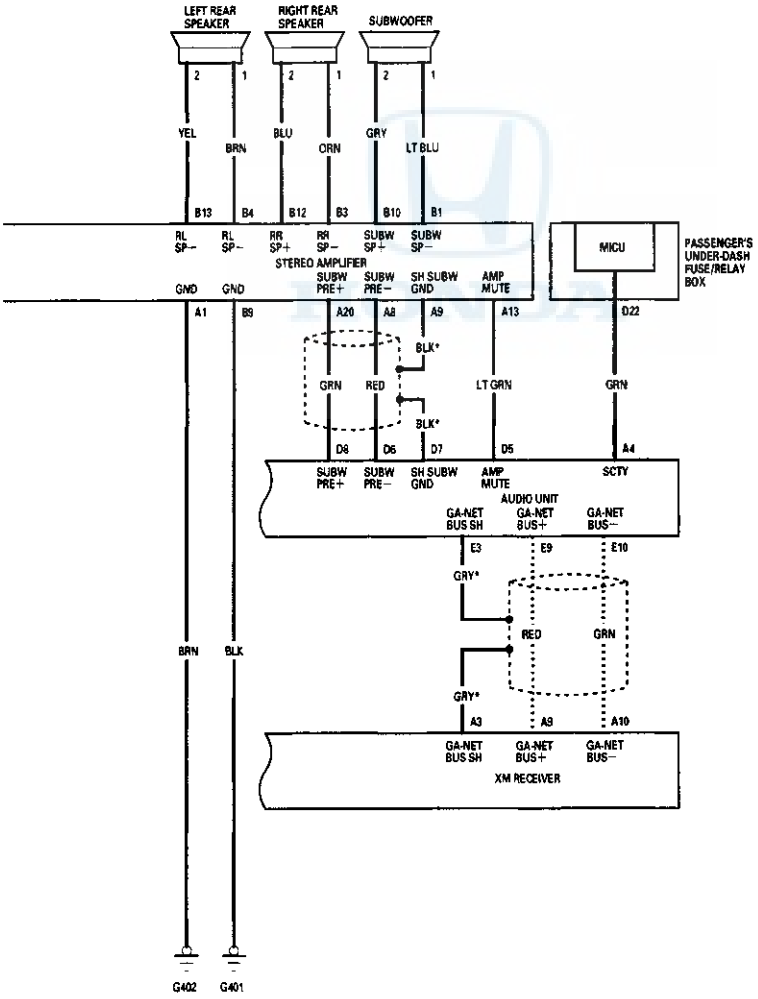
Premium Audio System without navigation



*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.

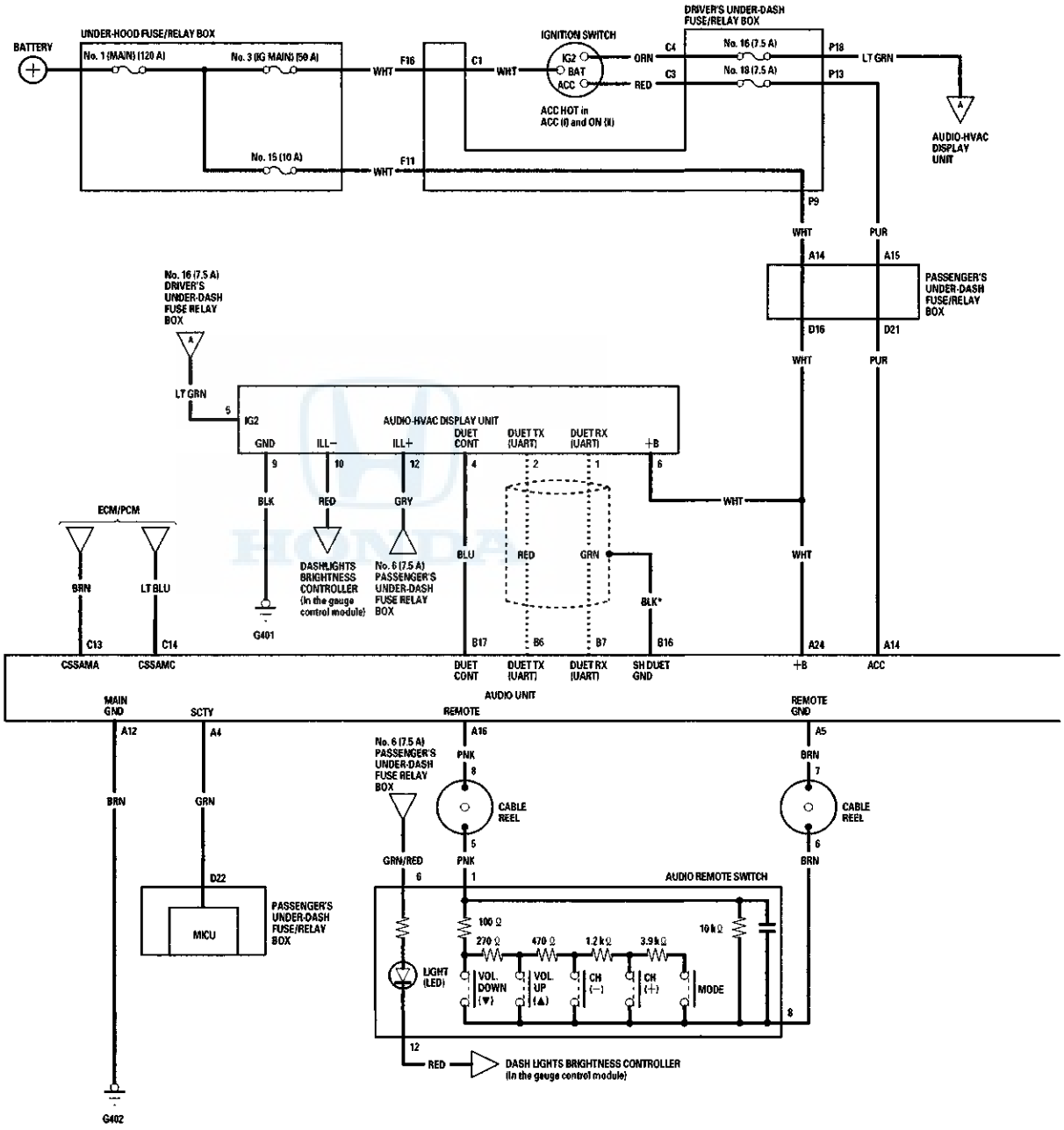
**********: Other communication line

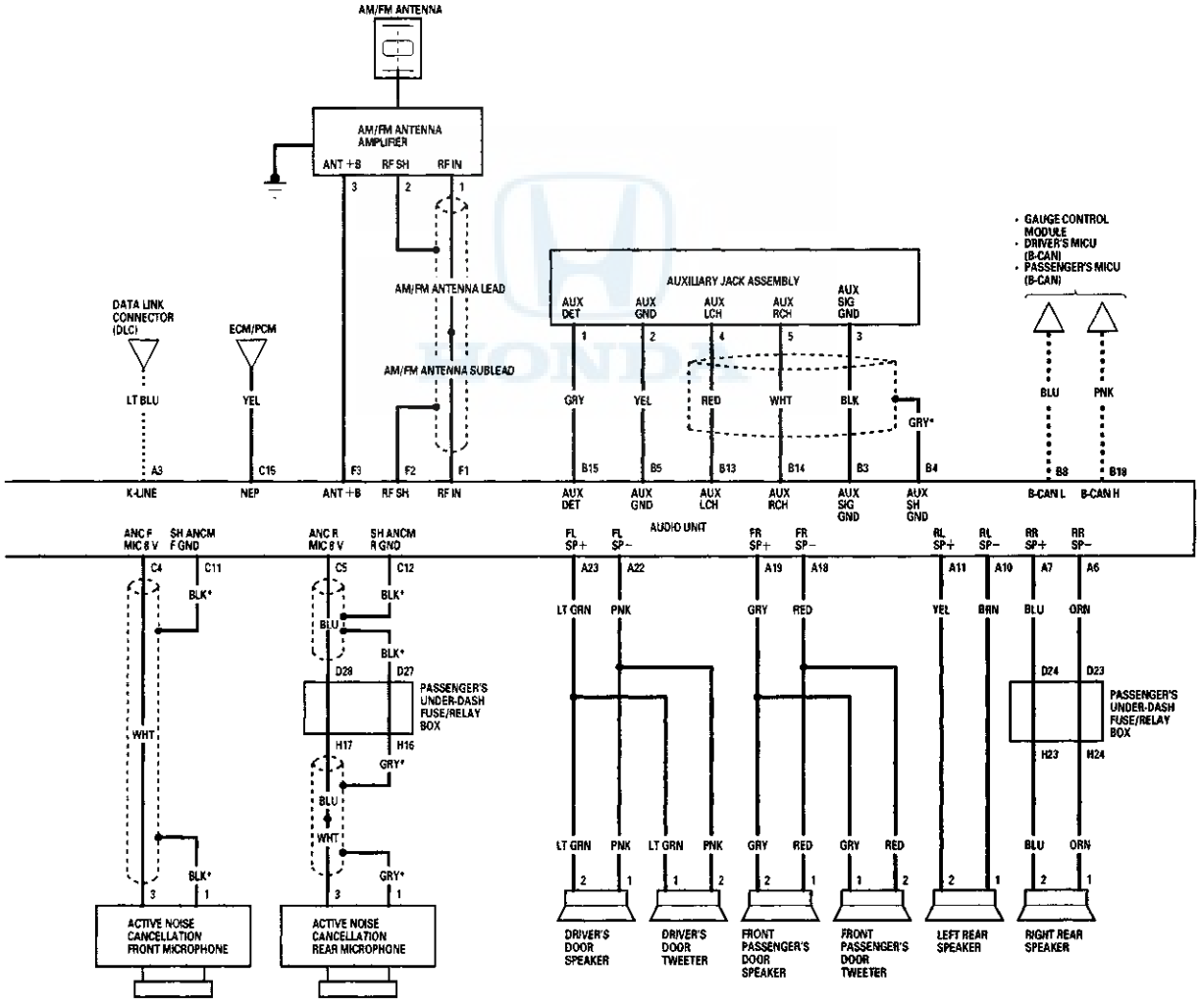
– – – – – – – – – : Shielding



Circuit Diagram (cont'd)

Without Premium Audio System




*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire shown on the circuit diagram.
: CAN line
: Other communication line
: Shielding
AM/FM ANTENNA
AM/FM ANTENNA AMPLIFIER
ANT +B
RF SH
RF IN
AM/FM ANTENNA LEAD
AM/FM ANTENNA SUBLEAD
AUXILIARY JACK ASSEMBLY
AUX DET
AUX GND
AUX LCH
AUX RCH
AUX SIG GND
GAUGE CONTROL MODULE
DRIVER'S MICU (B-CAN)
PASSENGER'S MICU (B-CAN)
DATA LINK CONNECTOR (DLC)
ECM/PCM
LT BLU
YEL
GRY
RED
WHT
BLK
GRY*
BLU
PNK
K-LINE
NEP
B-CAN L
B-CAN H
AUX SH GND
AUDIO UNIT
ANC F MIC 8 V
SH ANCM F GND
ANC R MIC 8 V
SH ANCM R GND
FL SP+
FL SP−
FR SP+
FR SP−
RL SP+
RL SP−
RR SP+
RR SP−
BLK*
PASSENGER'S UNDER-DASH FUSE/RELAY BOX
LT GRN
ACTIVE NOISE CANCELLATION FRONT MICROPHONE
ACTIVE NOISE CANCELLATION REAR MICROPHONE
DRIVER'S DOOR SPEAKER
DRIVER'S DOOR TWEETER
FRONT PASSENGER'S DOOR SPEAKER
FRONT PASSENGER'S DOOR TWEETER
LEFT REAR SPEAKER
RIGHT REAR SPEAKER

Self-diagnostic Function

The audio system has a self-diagnostic function.

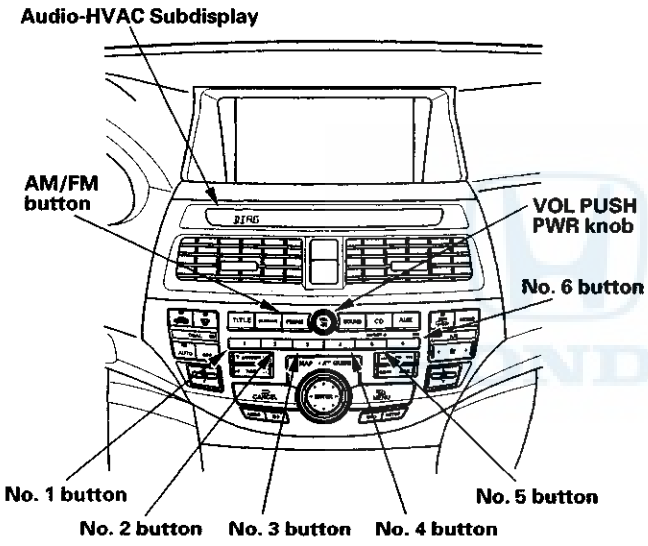
How to Use the Audio System Self-diagnostic Function

NOTE:
- Not all self-diagnostic functions appear on all models.
- There may be other self-diagnostic functions that are for factory use only.

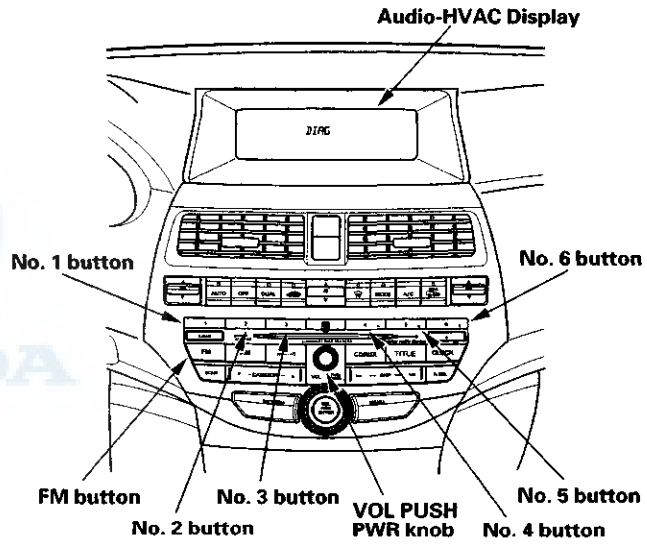
1. Turn the ignition switch to ON (II). Turn the audio unit off.

2. Push and hold the No. 1 and No. 6 buttons. While holding the buttons, push the VOL PUSH PWR knob to on. Release the buttons and the self-diagnostic function begins.

With navigation system



With premium, 6 CD type audio system



3. By pressing a preset button, the input starts the diagnostic mode that is assigned to that preset switch.

No. 2 button
Audio button, knob, and remote switch detection: Allows individual manual selection of all audio panel knobs, buttons, and remote switches to verify if they are functional. When properly detected, the selected knob, button, or remote switch name and/or value is displayed. To exit this mode, go to step 4.

No. 3 button
Entire LCD lighting/light-out mode: Turns on/off the entire LCD to show the presence or absence of an LCD failure.

No. 4 button
Illumination level indication mode: Indicates the duty cycle for the illumination dimmer control of the gauge assembly.

Gauge dimmer control values:
Headlights off: OFF
Headlights on: 01 (max low) through 22 (max high)

No. 5 button
Vehicle speed pulse indication mode: Indicates the vehicle speed pulse.

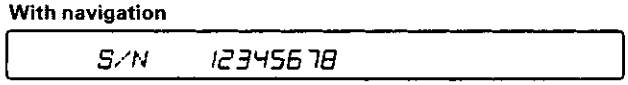
AM/FM or FM button (Push and hold 5 sec.)
Reception level check mode: Indicates the reception level. When entering the reception level check mode, the AM/FM button or FM button is used to change the main/sub antenna.

How to Obtain the Audio Unit Serial Number

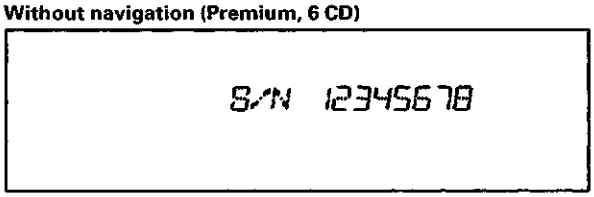
NOTE: This procedure can only be done after the power has been disconnected once and reconnected to the audio unit, and the audio-HVAC display displays CODE. With the audio unit switched off, push and hold the preset buttons No. 1, No. 6, and the VOL PUSH PWR knob, then release. The audio unit displays the eight digits serial number (example 12345678). Use the eight digits of the serial number when using the interactive network (iN) to get the 5 digit anti-theft codes.

Serial Number

With navigation



Without navigation (Premium, 6 CD)



(cont'd)

Self-diagnostic Function (cont'd)

4. The self-diagnostic function ends when you turn the audio unit off or turn the ignition switch to LOCK (0).

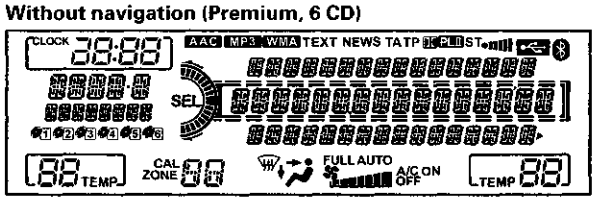
   NOTE: Any other diagnostic screens shown are for factory use only.

Display Specifications

Entry LCD lighting mode (press No. 3 button)
This diagnostic screen checks for segments that may be dead (off). The entire display must appear.
If there are dead segments, replace the applicable display unit.

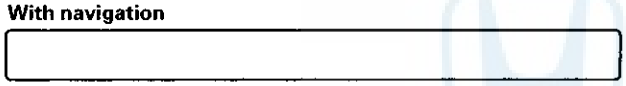
With navigation

Without navigation (Premium, 6 CD)

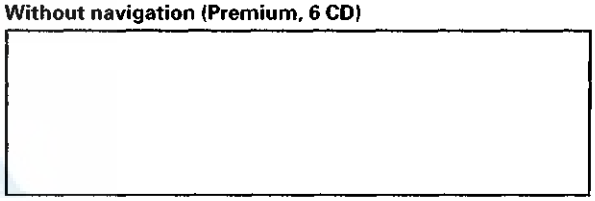


Entry LCD lights-outs mode (press No. 3 button)
This diagnostic screen checks for segments that may be stuck on. The entire display must be black.
If segments are stuck on, replace the applicable display unit.

With navigation



Without navigation (Premium, 6 CD)



Illumination level (for the gauge illumination) indication (press No. 4 button)
This diagnostic screen checks the gauge illumination. If the headlights are off,the display reads OFF.
If the headlights are on, you should see a value between 01 (max low) and 22 (max high).
When you dim and brighten the gauge, you should see this value change accordingly.
If it doesn't, check for B-CAN DTCs.

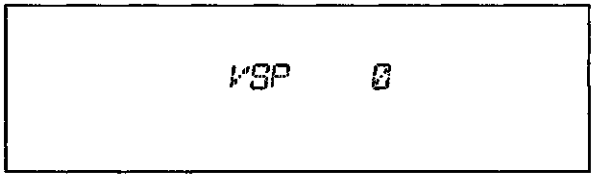
With navigation

Without navigation (Premium, 6 CD)

Vehicle speed pulse indication (press No. 5 button)
This diagnostic screen checks that the audio unit is receiving the VSP indication .
When you drive the vehicle, the VSP indicates the vehicle speed in km/h.

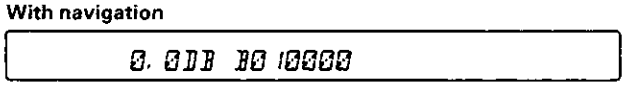
With navigation

Without navigation (Premium, 6 CD)

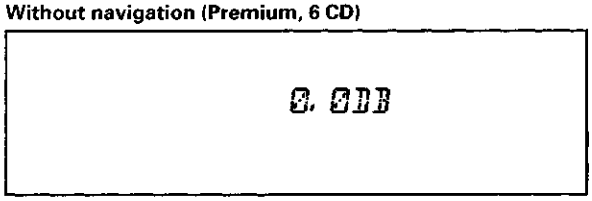


Reception level indication (Push and hold 5 sec AM/FM or FM button.)
This diagnostic screen checks the audio units reception level that can be used in diagnosis to check the audio unit reception quality.

With navigation



Without navigation (Premium, 6 CD)



Without Navigation

To check the AM or FM reception, press and hold the applicable band button for 5 seconds, then release. The reception level is displayed in decibels (db). You can check the reception with or without the amplifier. Press the A. SEL button to toggle between turning the amplifier on and off. The amplifier is on when the letter A appears next to the db indication. You can change the station with the tuner button to check the reception level of any specific radio station. Compare this value with a known-good vehicle to check the audio unit reception.

With Navigation

To check the FM reception, press and hold the AM/FM button for 5 seconds, then release. To check the AM band, press and hold the AM/FM button for another 5 seconds, then release. The reception level is displayed in decibels (db). You can check the reception with or without the amplifier. Press the A. SEL button to toggle between turning the amplifier on and off. The amplifier is on when the letter A appears next to the db indication. You can change the station with the tuner button to check the reception level of any specific radio station. Compare this value with a known-good vehicle to check the audio unit reception.

(cont'd)

Self-diagnostic Function (cont'd)

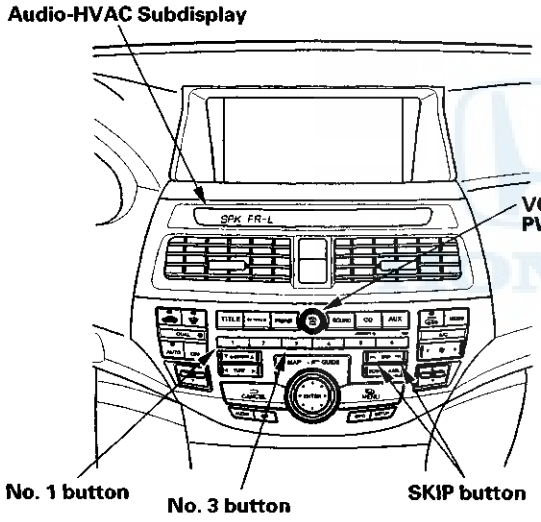
Speaker Check Mode

NOTE:
- Not all self-diagnostic functions appear on all models.
- There may be other self-diagnostic functions that are for factory use only.

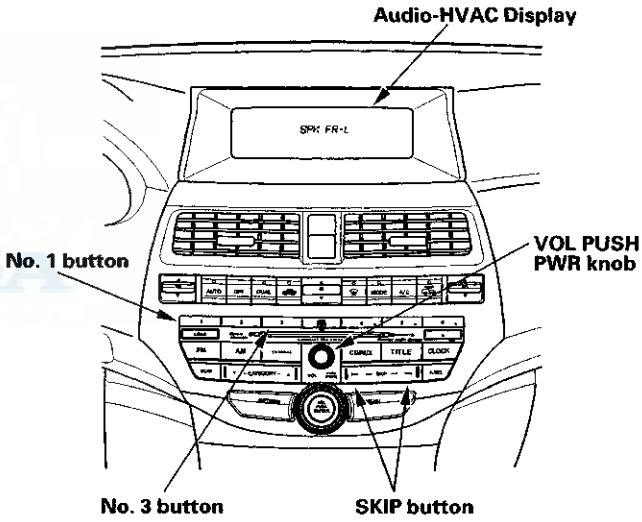
1. Turn the ignition switch to ON (II). Turn the audio unit off.
2. Push and hold the No. 1 and No. 3 buttons. While holding the buttons, push the VOL PUSH PWR knob to on. Release the buttons and the speaker check mode begins. A test tone should sound from one speaker.

   NOTE: Make sure the volume is set to a normal or slightly higher than normal volume and set the balance and fader to the center position.
3. Each time you press the SKIP button, the test moves to the next speaker in the order listed.

With navigation system



With premium, 6 CD type audio system



Display Specifications
With Premium Audio System
(▶▶|) is pressed: ①→②→③→④→⑤→⑥
(|◀◀) is pressed: ①→⑥→⑤→④→③→②
Without Premium Audio System
(▶▶|) is pressed: ①→②→③→⑤→⑥
(|◀◀) is pressed: ①→⑥→⑤→③→②

	Speaker	Displayed Segments	Remarks
①	Driver's door speaker and tweeter	SPK FR-L	You should hear a high frequency tone
②	Front passenger's door speaker and tweeter	SPK FR-R	You should hear a high frequency tone
③	Right rear speaker	SPK RR-R	You should hear a high frequency tone
④	Subwoofer*	SPK SUBW	You should hear a low frequency tone
⑤	Left rear speaker	SPK RR-L	You should hear a high frequency tone
⑥	All speakers	SPK ALL	You should hear a high frequency tone The subwoofer does not sound a tone

* : With Premium Audio System

4. The speaker check mode ends when you turn the audio unit off or turn the ignition switch to LOCK (0).

NOTE: Any other diagnostic screens are shown for factory use only.

HONDA

(cont'd)

Self-diagnostic Function (cont'd)

Active Noise Cancellation (ANC) System Check Mode (A/T)

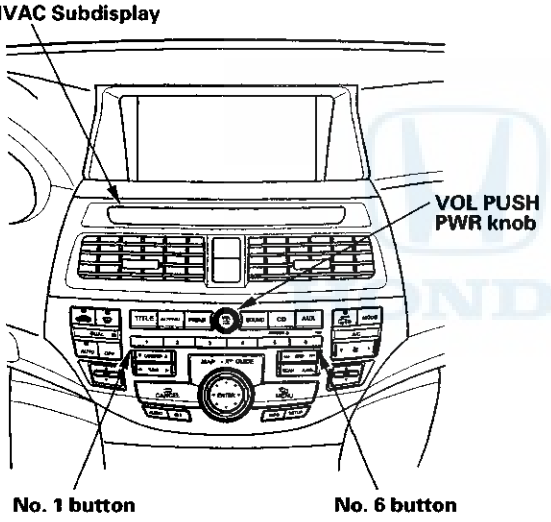
NOTE:
- Not all self-diagnostic functions appear on all models.
- There may be other self-diagnostic functions that are for factory use only.
- Only perform this test when you are guided from a troubleshooting procedure.
- The ANC function is not supported for 2-door M/T models.
- To restart the check mode, turn the ignition switch to LOCK (0), then enter the check mode.

1. Turn the ignition switch to ON (II).

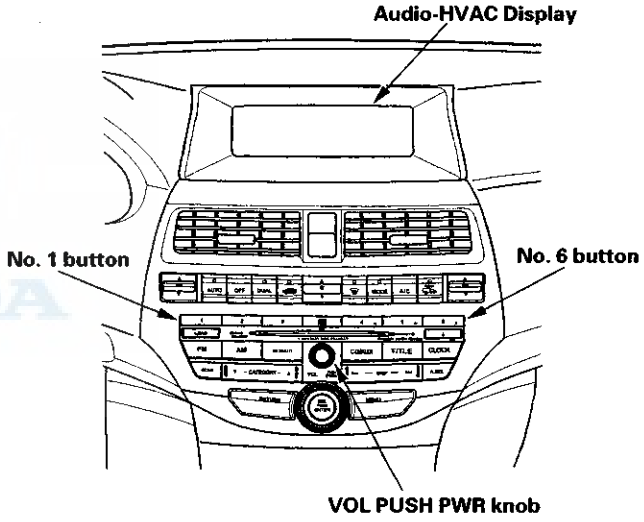
   NOTE: Make sure the audio system is turned off.

2. Push and hold the No. 1 and No. 6 buttons. While holding the buttons, push the VOL PUSH PWR knob to ON.

With navigation system



With premium, 6 CD type audio system



3. Press the No. 1 button, the active noise cancellation (ANC) system check mode begins.

How to check the active noise cancellation system in this check mode

- While in this system check mode, press the No. 1 button to move to the next test item.
- You most remember how many times you pressed the No. 1 button. The system will not show which test item you are doing.
- For test items 1st to 10th, the speaker will make a low-frequency hum (50 Hz) when the system is normal for more than 5 seconds up to 1 minute.
- When there is a failure in the system, the speaker will not make a low-frequency hum (50 Hz) or the hum will stop within 5 seconds for test items 1st to 10th.
- The check mode will be automatically cancelled when the time reaches 1 minute after the starting each test items.
- When you once reach to test item 11th, the test will loop ON and OFF in test item 11th.
- This check mode ends when you start the engine (ignition switch in START (III) or turn the ignition switch to LOCK (0)), because the power to the audio system will be cut off.
- This test is not available to do all items at once. If you need to check test item 2nd, 7th and/or 11th, start the check mode with the engine idling. If you need to check test item 9th and/or 10th, start the check mode with the engine stopped. Other test items are available in both conditions.

Test Item No.	Test Item	Button Operation	Number of Times Button No. 1 pressed	Display ON/OFF	Sound from Speakers when System is Normal	Test Available Condition
———	Self-Diagnostic mode enter	Turn the audio unit off, press and hold preset buttons No. 1 and No. 6, then turn the audio unit on.		———	None	
1st	Microphone input, speaker output	No. 1	1	ON	None	Any conditions
		No. 1	2	OFF	50 Hz hum for 1 minute	
2nd	NEP input, door/ trunk switch input	No. 1	3	ON	None	• Engine idling • All doors/trunk closed
		No. 1	4	OFF	50 Hz hum for 1 minute	
3rd	Front speaker output	No. 1	5	ON	None	Any conditions
		No. 1	6	OFF	50 Hz hum for 1 minute	
4th	Rear speaker output	No. 1	7	ON	None	Any conditions
		No. 1	8	OFF	50 Hz hum for 1 minute	
5th	ANC front microphone input	No. 1	9	ON	None	Any conditions
		No. 1	10	OFF	50 Hz hum for 1 minute	
6th	ANC rear microphone input	No. 1	11	ON	None	Any conditions
		No. 1	12	OFF	50 Hz hum for 1 minute	
7th	NEP (engine speed signal) input	No. 1	13	ON	None	Engine idling
		No. 1	14	OFF	50 Hz hum for 1 minute	
8th	Door/trunk switch input	No. 1	15	ON	None	All doors/trunk closed
		No. 1	16	OFF	50 Hz hum for 1 minute	
9th	CSSAMA signal (VCM 3 cylinder mode) input	No. 1	17	ON	None	Ignition switch in ON (II) + HDS operation*1
		No. 1	18	OFF	50 Hz hum for 1 minute	
10th	CSSAMC signal (VCM 4 cylinder mode) input	No. 1	19	ON	None	Ignition switch in ON (II) + HDS operation*2
		No. 1	20	OFF	50 Hz hum for 1 minute	
11th	ANC operation ON/ OFF	No. 1	21	ON	None	Engine speed about 2,500 rpm (in P or N)
		No. 1	22	OFF	Engine noise reduced	

* 1: On test item 8th, select PGM-FI, INSPECTION, SOLENOID VALVE ACTIVATION, ROCKER ARM OIL CONTROL SOLENOID A ON, then press No. 1 button and check test item 9th.
* 2: On test item 9th, select PGM-FI, INSPECTION, SOLENOID VALVE ACTIVATION, ROCKER ARM OIL CONTROL SOLENOID C ON, then press No. 1 button and check test item 10th.

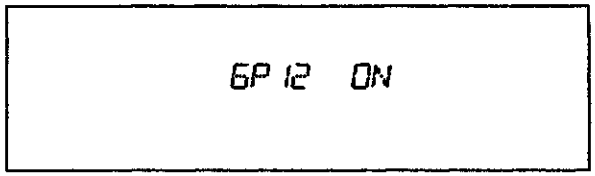
(cont'd)

Self-diagnostic Function (cont'd)

Screen indication ON

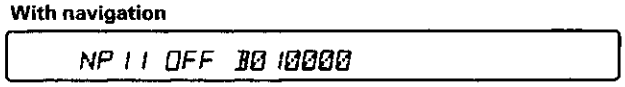
With navigation

Without navigation (Premium, 6 CD, 1 CD)

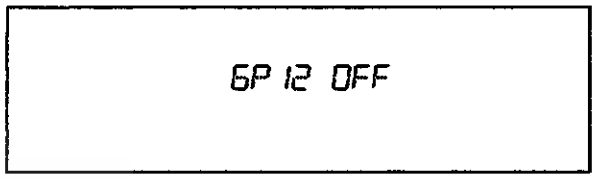


Screen indication OFF

With navigation



Without navigation (Premium, 6 CD, 1CD)



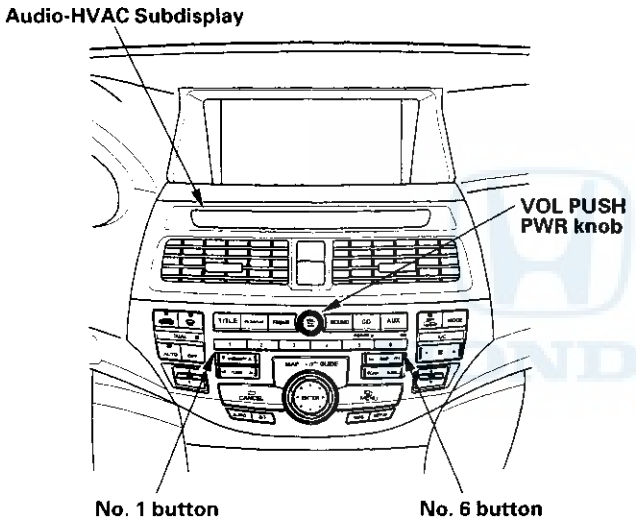
4. The self-diagnostic function ends when the audio system is turned off, or the ignition switch is turned to LOCK (0).

Communication Connection Check Mode

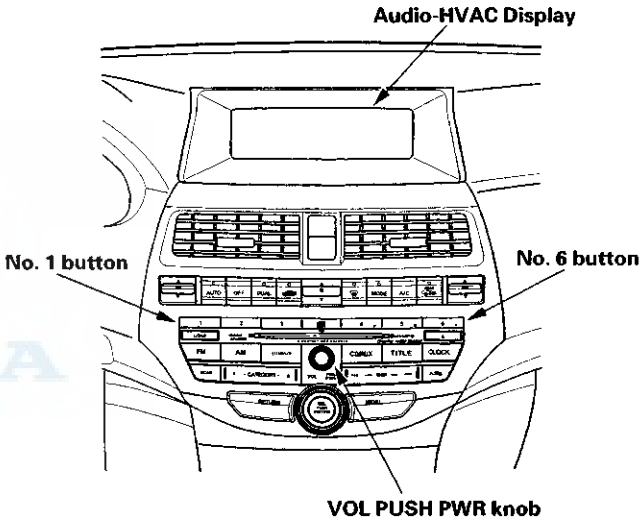
NOTE:
- Not all self-diagnostic functions appear on all models.
- There may be other self-diagnostic functions that are for factory use only.

1. Turn the ignition switch to ON (II). Turn the audio unit off.
2. Push and hold the No. 1 and No. 6 buttons. While holding the buttons, push the VOL PUSH PWR knob to on. Release the buttons.
3. Press the No. 6 button, and the Communication connection check mode begins.

With navigation



Without navigation 6 CD type



(cont'd)

Self-diagnostic Function (cont'd)

4. Each time you press the No. 6 button, the communication connection state is displayed in the following order.

   NOTE: If the audio-HVAC subdisplay or the audio-HVAC display is blank in all headlight positions, or blank only when the headlights are turned on, check for B-CAN DTCs.

Display Specifications (With navigation)

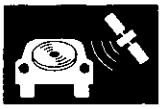
Displayed Segments	State	Remarks
DSP OK	The audio-HVAC subdisplay unit or the audio-HVAC display unit is connected.	
DSP NG	The audio-HVAC subdisplay unit or the audio-HVAC display unit is not connected.	
AC OK	The climate control unit is connected.	
AC NG	The climate control unit is not connected.	
AMP OK 00	The stereo amplifier is connected.	Applicable to the premium audio system.
AMP OK 04	The stereo amplifier is connected (Error has occurred four times in the past).	Applicable to the premium audio system.
AMP NG	The stereo amplifier is not connected.	Applicable to the premium audio system.

Display Specifications (Without navigation, 6 CD type)

Displayed Segments	State	Remarks
01 119	The XM receiver unit is not connected.	Applicable to the premium audio system.
02 183	The navigation unit is not connected.	
ANT ———	The antenna amplifier is connected.	
ANT CHK	The antenna amplifier is not connected.	
AMP ———	The stereo amplifier is connected.	Applicable to the premium audio system.
AMP CHK	The stereo amplifier is not connected.	Applicable to the premium audio system.
AMP 0100	The stereo amplifier is connected.	Applicable to the premium audio system.
AMP NG 04	The stereo amplifier is not connected (error has occurred four times in the past).	Applicable to the premium audio system.
AC OK	The climate control unit is connected.	
AC NG	The climate control unit is not connected.	
CMP OK	The electrical compass unit is connected.	Applicable to the premium audio system.
CMP NG	The electrical compass unit is not connected.	Applicable to the premium audio system.
LCD 0100	The audio-HVAC display unit is connected.	
LCD NG	The audio-HVAC display unit is not connected.	

NOTE: Any other diagnostic screens are shown for the manufacturer's purpose only.

5. The self-diagnostic function ends when you turn the audio unit off or turn the ignition switch to LOCK (0).



Symptom Troubleshooting

Booming sound while driving with audio unit on or off (Part 1) (A/T)

NOTE:
- Check for all system's DTCs first with the HDS. If there are any DTCs stored, go to the indicated DTC's troubleshooting.
- Check the vehicle battery first, refer to the 2008-2009 Accord Service Manual (see page 22-88).
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Operate the audio unit, and check the function of the speakers.

   Is a booming sound or a low-frequency hum heard from the speakers?

   YES—Go to step 3.

   NO—Go to symptom troubleshooting No sound is heard from speaker(s).

   - With premium audio, refer to the 2008-2009 Accord Service Manual (see page 23-63)
   - Without premium audio, refer to the 2008-2009 Accord Service Manual (see page 23-68)

3. Turn the audio system off.
4. Make sure all doors, hood, and the trunk are closed.
5. Start the engine, and let it idle.
6. Do the active noise cancellation (ANC) self-diagnostic function (see page 23-50).
7. Check the test items on tests 1 through 8.

   NOTE: Move on to the next test item within 50 seconds, or the self-diagnostic test ends.

   Do you hear a low-frequency hum sound from the speakers for more than 5 second for all test items?

   YES—Go to step 8.

   NO—Go to the appropriate step listed.

   - If all the tests failed:
     - With premium audio, go to step 25.
     - Without premium audio, replace the audio unit, refer to the 2008-2009 Accord Service Manual (see page 23-111).
   - If the 3rd test failed:
     - With premium audio, go to step 39.
     - Without premium audio, replace the audio unit, refer to the 2008-2009 Accord Service Manual (see page 23-111).
   - If the 4th test failed:
     - With premium audio, go to step 44.
     - Without premium audio, replace the audio unit, refer to the 2008-2009 Accord Service Manual (see page 23-111).
   - If the 5th test failed:
     - With navigation: go to step 49.
     - Without navigation: go to step 58.
   - If the 6th test failed, go to step 69.
   - If the 7th test failed, go to step 80.
   - If the 8th test failed, go to step 90.

8. Turn the ignition switch to LOCK (0).
9. Connect the HDS to the DLC (see page 23-2).
10. Turn the ignition switch to ON (II).
11. Select PGM-FI SYSTEM with the HDS.
12. Select VTEC TEST in the INSPECTION MENU with the HDS.
13. Select SOLENOID VALVE ACTIVATION, then select SOLENOID A (B1) ON/OFF and prepare to do the function test.

(cont'd)

Symptom Troubleshooting (cont'd)

14. Do the active noise cancellation (ANC) self-diagnostic function (see page 23-50).

15. Do the 8th test by pressing the No. 1 button.

16. Select ROCKER ARM OIL CONTROL SOLENOID A ON with the HDS, and move on to the 9th test by pressing the No. 1 button.

    Do you hear a low-frequency hum sound from the speakers for more than 5 seconds?

    YES—Go to step 17.

    NO—Go to step 1 on Booming sound while driving with audio unit on or off (Part 2).

17. Select ROCKER ARM OIL CONTROL SOLENOID A (B2) COMMAND and RETURN signal ON with the HDS, by pressing the ENTER button, and go to the 10th test by pressing the No. 1 button.

    Do you hear a low-frequency hum sound from the speakers for more than 5 seconds?

    YES—Go to step 18.

    NO—Go to step 15 on Booming sound while driving with audio unit on or off (Part 2).

18. Turn the ignition switch to LOCK (0).

19. Disconnect the HDS from the DLC.

20. Start the engine, and let it idle.

21. Do the active noise cancellation (ANC) self-diagnostic function (see page 23-50).

22. Do the 10th test by pressing the No. 1 button.

23. Set the parking brake, and hold the engine speed at 2,500 rpm (in P or N), and move on to the 11th test by pressing the No. 1 button.

24. Press the No. 1 button several times to turn the ANC on and off.

    Do you hear a change in the engine pitch?

    YES—Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals between the audio unit, the ECM/PCM, and the under dash fuse box. Then go to step 1, and recheck.

    NO—Replace the audio unit. ■

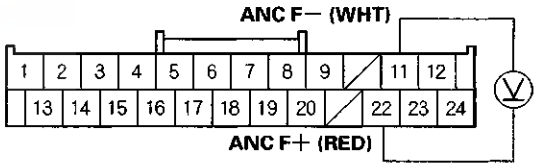
    - With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
    - Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

25. Turn the ignition switch to LOCK (0).

26. Connect a voltmeter between stereo amplifier connector A (24P) terminals No. 11 and No. 22.

    NOTE: Use the voltmeter in AC range.

STEREO AMPLIFIER CONNECTOR A (24P)



Wire side of female terminals

27. Turn the ignition switch to ON (II).

28. Prepare to do the active noise cancellation (ANC) self-diagnostic function (see page 23-50).

29. Measure voltage during the 1st test with the display indicating OFF (press the No. 1 button to switch from ON to OFF).

    NOTE: Measure voltage within 50 seconds after you started the 1st test OFF.

    Is there about 0.5 V?

    YES—Replace the stereo amplifier, refer to the 2008-2009 Accord Service Manual (see page 23-115).■

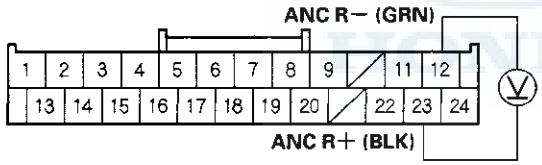
    NO—Go to step 30.

30. Turn the ignition switch to LOCK (0).

31. Connect a voltmeter between stereo amplifier connector A (24P) terminals No. 12 and No. 23.

    NOTE: Use the voltmeter in AC range.

STEREO AMPLIFIER CONNECTOR A (24P)



Wire side of female terminals

32. Turn the ignition switch to ON (II).

33. Prepare to do the active noise cancellation (ANC) self-diagnostic function (see page 23-50).

34. Measure voltage during the 1st test with the display indicating OFF (press the No. 1 button to switch from ON to OFF).

    NOTE: Measure voltage within 50 seconds after you started the 1st test OFF.

    Is there about 0.2 V?

    YES—Replace the stereo amplifier, refer to the 2008-2009 Accord Service Manual (see page 23-115).■

    NO—Go to step 35.

35. Turn the ignition switch to LOCK (0).

36. Disconnect audio unit connector C (16P) and stereo amplifier connector A (24P).

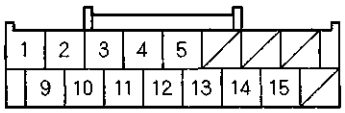
(cont'd)

Symptom Troubleshooting (cont'd)

37. Check for continuity between audio unit connector C (16P) and stereo amplifier connector A (24P) according to the table.

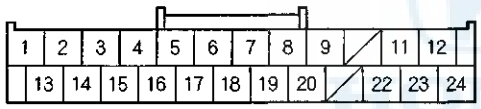
Audio unit connector	Stereo amplifier connector	Wire color
C1	A12	GRN
C2	A23	BLK
C9	A11	WHT
C10	A22	RED

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

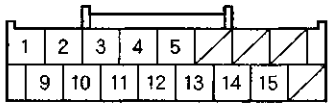
YES—Go to step 38.

NO—Repair open in the wire between audio unit connector C (16P) and stereo amplifier connector A (24P).■

38. Check for continuity between body ground and audio unit connector C (16P) according to the table.

Audio unit connector	Wire color
C1	GRN
C2	BLK
C9	WHT
C10	RED

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between audio unit connector C (16P) and stereo amplifier connector A (24P).■

NO—Replace the audio unit.■

- With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
- Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

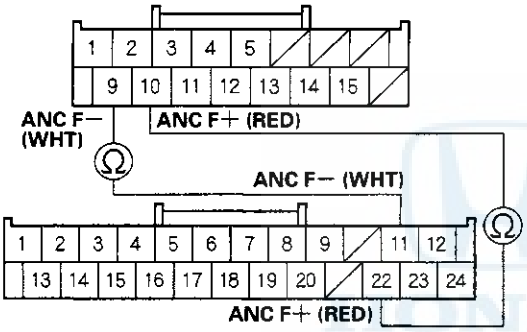
39. Turn the ignition switch to LOCK (0).

40. Disconnect audio unit connector C (16P) and stereo amplifier connector A (24P).

41. Check for continuity between audio unit connector C (16P) and stereo amplifier connector A (24P) according to the table.

Audio unit connector	Stereo amplifier connector	Wire color
C9	A11	WHT
C10	A22	RED

AUDIO UNIT CONNECTOR C (16P)
Wire side of female terminals



STEREO AMPLIFIER CONNECTOR A (24P)
Wire side of female terminals

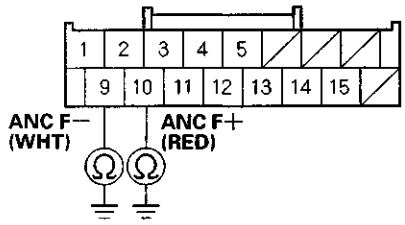
Is there continuity?

YES—Go to step 42.

NO—Repair open in the wire between audio unit connector C (16P) and stereo amplifier connector A (24P).■

42. Check for continuity between body ground and audio unit connector C (16P) terminals No. 9 and No. 10 individually.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

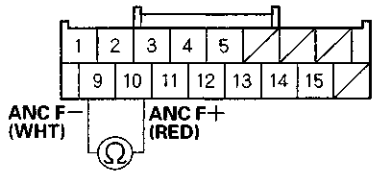
Is there continuity?

YES—Repair short to body ground in the wire between audio unit connector C (16P) and stereo amplifier connector A (24P).■

NO—Go to step 43.

43. Check for continuity between audio unit connector C (16P) terminals No. 9 and No. 10.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between audio unit connector C (16P) and stereo amplifier connector A (24P).■

NO—Replace the audio unit.■

- With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
- Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

(cont'd)

Symptom Troubleshooting (cont'd)

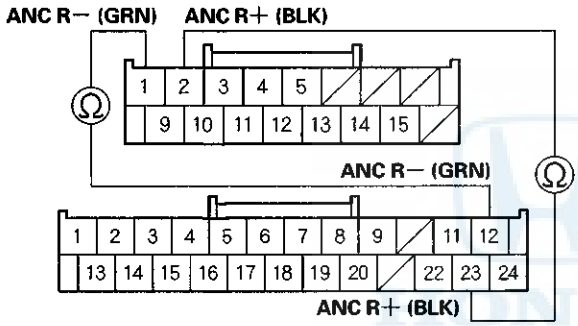
44. Turn the ignition switch to LOCK (0).

45. Disconnect audio unit connector C (16P) and stereo amplifier connector A (24P).

46. Check for continuity between audio unit connector C (16P) and stereo amplifier connector A (24P) according to the table.

Audio unit connector	Stereo amplifier connector	Wire color
C1	A12	GRN
C2	A23	BLK

AUDIO UNIT CONNECTOR C (16P)
Wire side of female terminals



STEREO AMPLIFIER CONNECTOR A (24P)
Wire side of female terminals

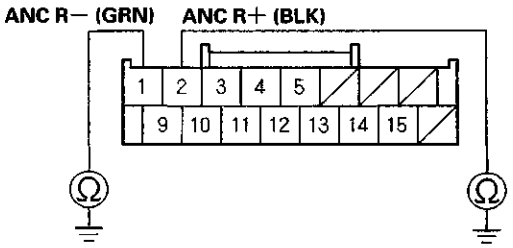
Is there continuity?

YES—Go to step 47.

NO—Repair open in the wire between audio unit connector C (16P) and stereo amplifier connector A (24P). ■

47. Check for continuity between body ground and audio unit connector C (16P) terminals No. 1 and No. 2 individually.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

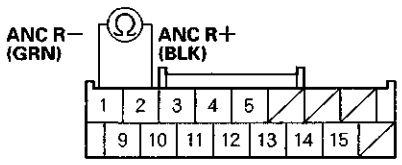
Is there continuity?

YES—Repair short to body ground in the wire between audio unit connector C (16P) and the stereo amplifier connector A (24P). ■

NO—Go to step 48.

48. Check for continuity between audio unit connector C (16P) terminals No. 1 and No. 2.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between audio unit connector C (16P) and stereo amplifier connector A (24P). ■

NO—Replace the audio unit. ■

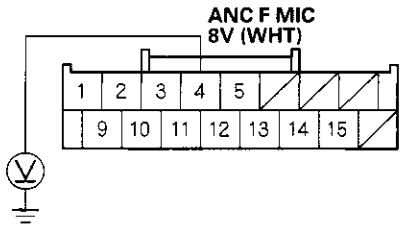
- With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
- Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

49. Turn the ignition switch to LOCK (0).

50. Connect a voltmeter between audio unit connector C (16P) terminal No. 4 and body ground.

    NOTE: Use the voltmeter in AC range.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

51. Turn the ignition switch to ACCESSORY (I).

52. Make a loud noise in front of the HFL-navigation-ANC microphone (see page 23-50).

    Does the voltage change when making a loud noise in front of the microphone?

    YES—Replace the audio unit, refer to the 2008-2009 Accord Service Manual (see page 23-110).■

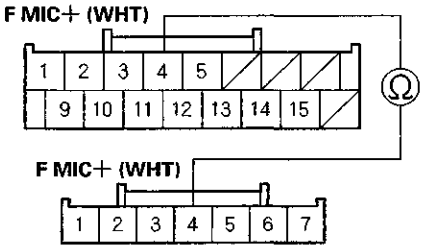
    NO—Go to step 53.

53. Turn the ignition switch to LOCK (0).

54. Disconnect audio unit connector C (16P) and the HFL-navigation-ANC microphone 7P connector.

55. Check for continuity between audio unit connector C (16P) terminals No. 4 and the HFL-navigation-ANC microphone 7P connector No. 4 terminal.

AUDIO UNIT CONNECTOR C (16P)
Wire side of female terminals



HFL-NAVIGATION-ANC MICROPHONE 7P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to step 56.

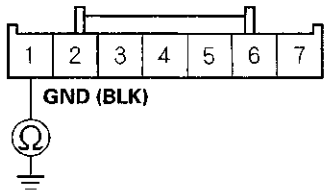
NO—Open in the wire between audio unit connector C (16P) and the HFL-navigation-ANC microphone 7P connector. Replace the wire harness.■

(cont'd)

Symptom Troubleshooting (cont'd)

56. Check for continuity between HFL-navigation-ANC microphone 7P connector terminal No. 1 and body ground.

HFL-NAVIGATION-ANC MICROPHONE 7P CONNECTOR



Wire side of female terminals

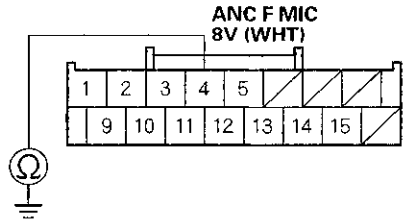
Is there continuity?

YES—Go to step 57.

NO—Repair open in the wire between HFL-navigation-ANC microphone and body ground (G501).

57. Check for continuity between audio unit connector C (16P) terminal No. 4 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire between audio unit connector C (16P) and the HFL-navigation-ANC microphone 7P connector. Replace the wire harness.■

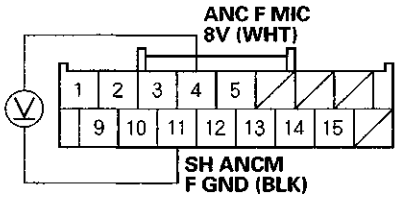
NO—Replace the HFL-navigation-ANC microphone, refer to the 2008-2009 Accord Service Manual (see page 23-242).■

58. Turn the ignition switch to LOCK (0).

59. Connect a voltmeter between audio unit connector C (16P) terminal No. 4 and No. 11.

NOTE: Use the voltmeter in AC range.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

60. Turn the ignition switch to ACCESSORY (I).

61. Make a loud noise in front of the active noise cancellation front microphone (see page 23-50).

Does the voltage change when making a loud noise in front of the microphone?

YES—Replace the audio unit, refer to the 2008-2009 Accord Service Manual (see page 23-111).■

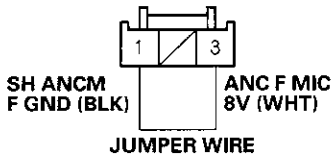
NO—Go to step 62.

62. Turn the ignition switch to LOCK (0).

63. Disconnect audio unit connector C (16P) and the active noise cancellation front microphone 3P connector.

64. Connect active noise cancellation front microphone 3P connector terminals No. 1 and No. 3 with a jumper wire.

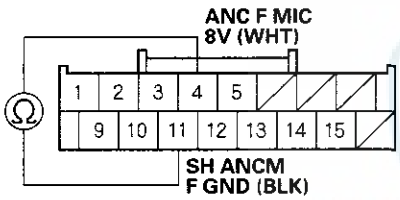
ACTIVE NOISE CANCELLATION FRONT MICROPHONE 3P CONNECTOR



Wire side of female terminals

65. Check for continuity between audio unit connector C (16P) terminals No. 4 and No. 11.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

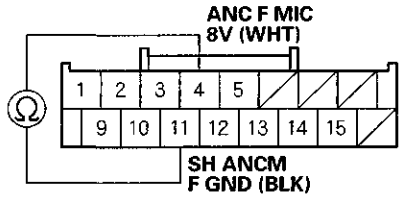
YES—Go to step 66.

NO—Open in the wire between audio unit connector C (16P) and the active noise cancellation front microphone 3P connector. Replace the wire harness.■

66. Remove the jumper wire.

67. Check for continuity between audio unit connector C (16P) terminals No. 4 and No. 11.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Short in the wire between audio unit connector C (16P) and the active noise cancellation front microphone 3P connector. Replace the wire harness.■

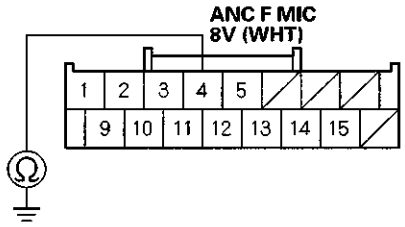
NO—Go to step 68.

(cont'd)

Symptom Troubleshooting (cont'd)

68. Check for continuity between audio unit connector C (16P) terminal No. 4 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire between audio unit connector C (16P) and the active noise cancellation front microphone 3P connector. Replace the wire harness. ■

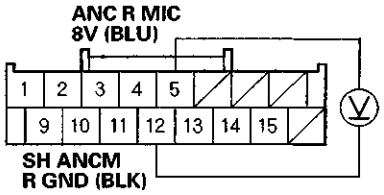
NO—Replace the active noise cancellation front microphone, refer to the 2008-2009 Accord Service Manual (see page 23-242). ■

69. Turn the ignition switch to LOCK (0).

70. Connect a voltmeter between audio unit connector C (16P) terminal No. 5 and No. 12.

NOTE: Use the voltmeter in AC range.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

71. Turn the ignition switch to ACCESSORY (I).

72. Make a loud noise in front of the active noise cancellation rear microphone (see page 23-50).

Does the voltage change when making a loud noise in front of the microphone?

YES—Replace the audio unit. ■

- With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
- Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

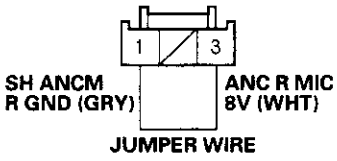
NO—Go to step 73.

73. Turn the ignition switch to LOCK (0).

74. Disconnect audio unit connector C (16P) and the active noise cancellation rear microphone 3P connector.

75. Connect active noise cancellation rear microphone 3P connector terminals No. 1 and No. 3 with a jumper wire.

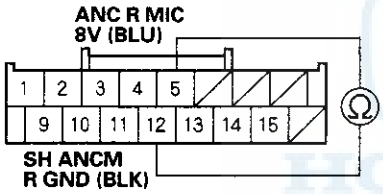
ACTIVE NOISE CANCELLATION REAR MICROPHONE 3P CONNECTOR



Wire side of female terminals

76. Check for continuity between audio unit connector C (16P) terminals No. 5 and No. 12.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

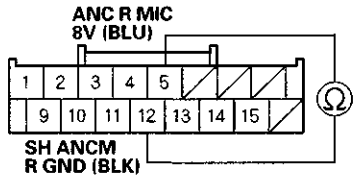
YES—Go to step 77.

NO—Open in the wire between audio unit connector C (24P) and the active noise cancellation rear microphone 3P connector. Replace the wire harness or the passenger's under-dash fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-84).■

77. Remove the jumper wire.

78. Check for continuity between audio unit connector C (16P) terminals No. 5 and No. 12.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

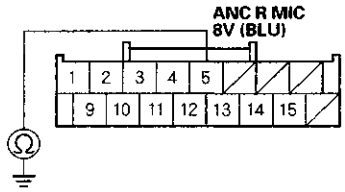
Is there continuity?

YES—Short in the wire between audio unit connector C (16P) and the active noise cancellation rear microphone 3P connector. Replace the wire harness or the passenger's under-dash fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-87).■

NO—Go to step 79.

79. Check for continuity between audio unit connector C (16P) terminal No. 5 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire between audio unit connector C (16P) and the active noise cancellation rear microphone 3P connector. Replace the wire harness or the passenger's under-dash fuse/relay box, refer to the 2008-2009 Accord Service Manual (see page 22-87).■

NO—Replace the active noise cancellation rear microphone, refer to the 2008-2009 Accord Service Manual (see page 23-116).■

(cont'd)

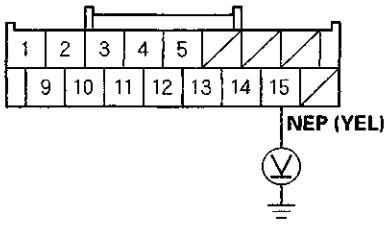
Symptom Troubleshooting (cont'd)

80. Turn the ignition switch to LOCK (0).

81. Start the engine, and let it idle.

82. Measure voltage between audio unit connector C (16P) terminal No. 15 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there about 5 V (pulses)?

YES—Replace the audio unit.■

- With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
- Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

NO—Go to step 83.

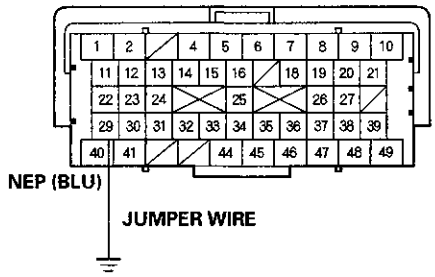
83. Turn the ignition switch to LOCK (0).

84. Jump the SCS line with the HDS.

85. Disconnect audio unit connector C (16P) and ECM/PCM connector A (49P).

86. Connect ECM/PCM connector A (49P) terminal No. 29 to body ground with a jumper wire.

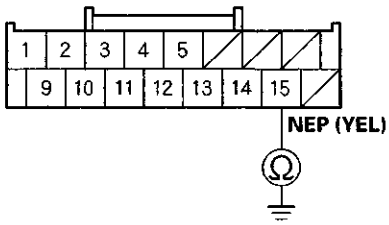
ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

87. Check for continuity between audio unit connector C (16P) terminal No. 15 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

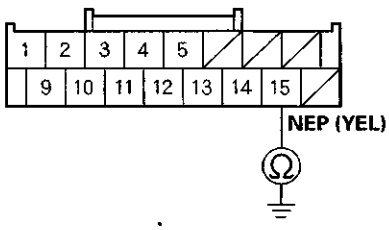
YES—Go to step 88.

NO—Repair open in the wire between audio unit connector C (16P) and ECM/PCM connector A (49P).■

88. Remove the jumper wire.

89. Check for continuity between audio unit connector C (16P) terminal No. 15 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between audio unit connector C (16P) and ECM/PCM connector A (49P).■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281) or substitute a known-good ECM/PCM (see page 11-282).■

90. Turn the ignition switch to LOCK (0).

91. Do the MICU input test to check the B-CAN line between the audio unit and MICU, refer to the 2008-2009 Accord Service Manual (see page 22-138).

Is the B-CAN line between the audio unit and the MICU OK?

YES—Replace the audio unit.■

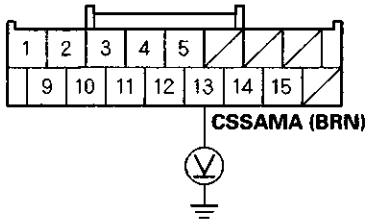
- With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
- Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

NO—Repair open in the wire between audio unit connector B (20P) and MICU connector P (20P).■

Booming sound while driving with audio unit on or off (Part 2)

1. Turn the ignition switch to LOCK (0).
2. Connect a voltmeter between audio unit connector C (16P) terminal No. 13 to body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

3. Connect the HDS to the DLC (see page 23-2).
4. Turn the ignition switch to ON (II).
5. Select PGM-FI SYSTEM with the HDS.
6. Select VTEC TEST in the INSPECTION MENU with the HDS.

(cont'd)

Symptom Troubleshooting (cont'd)

7. Select ROCKER ARM OIL CONTROL SOLENOID A ON in the SOLENOID VALVE ACTIVATION with the HDS, and measure the voltage.

   Is there about 10 V or more?

   YES—Replace the audio unit.■

   - With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
   - Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

   NO—Go to step 8.

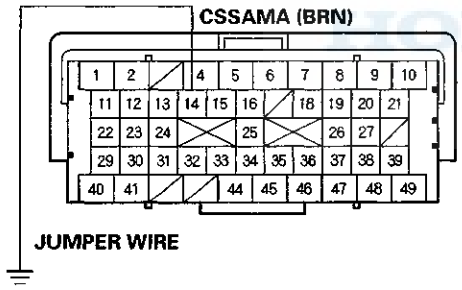
8. Turn the ignition switch to LOCK (0).

9. Jump the SCS line with the HDS.

10. Disconnect audio unit connector C (16P) and ECM/PCM connector A (49P).

11. Connect ECM/PCM connector A (49P) terminal No. 14 to body ground with a jumper wire.

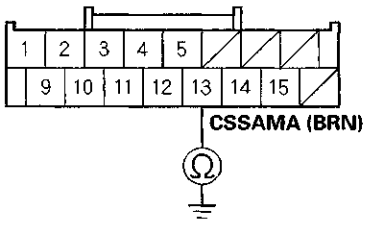
ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

12. Check for continuity between audio unit connector C (16P) terminal No. 13 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

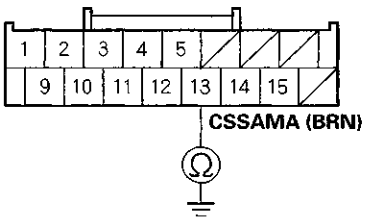
YES—Go to step 13.

NO—Repair open in the wire between audio unit connector C (16P) and ECM/PCM connector A (49P).■

13. Remove the jumper wire.

14. Check for continuity between audio unit connector C (16P) terminal No. 13 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

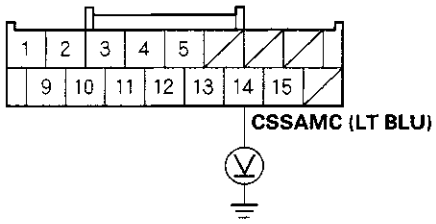
YES—Repair short to body ground in the wire between audio unit connector C (16P) and ECM/PCM connector A (49P).■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281) or substitute a known-good ECM/PCM (see page 11-282).■

15. Turn the ignition switch to LOCK (0).

16. Connect a voltmeter between audio unit connector C (16P) terminal No. 14 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

17. Connect the HDS to the DLC (see page 23-2).

18. Turn the ignition switch to ON (II).

19. Select PGM-FI SYSTEM with the HDS.

20. Select VTEC TEST in the INSPECTION MENU with the HDS.

21. Select ROCKER ARM OIL CONTROL SOLENOID A (B2) COMMAND and RETURN signal ON with the HDS, by pressing the ENTER button, and measure the voltage.

Is there about 10 V or more?

YES—Replace the audio unit. ■

- With navigation, refer to the 2008-2009 Accord Service Manual (see page 23-110)
- Without navigation, refer to the 2008-2009 Accord Service Manual (see page 23-111)

NO—Go to step 22.

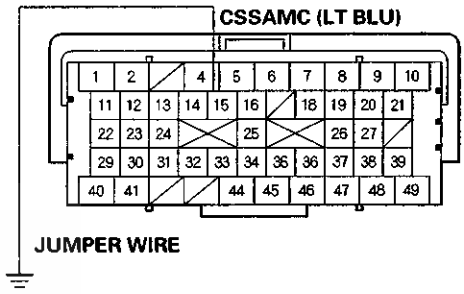
22. Turn the ignition switch to LOCK (0).

23. Jump the SCS line with the HDS.

24. Disconnect audio unit connector C (16P) and ECM/PCM connector A (49P).

25. Connect ECM/PCM connector A (49P) terminal No. 15 to body ground with a jumper wire.

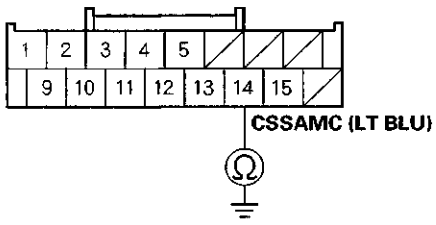
ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

26. Check for continuity between audio unit connector C (16P) terminal No. 14 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Go to step 27.

NO—Repair open in the wire between audio unit connector C (16P) and ECM/PCM connector A (49P). ■

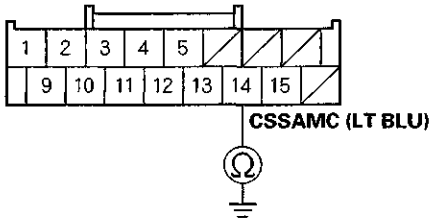
(cont'd)

Symptom Troubleshooting (cont'd)

27. Remove the jumper wire.

28. Check for continuity between audio unit connector C (16P) terminal No. 14 and body ground.

AUDIO UNIT CONNECTOR C (16P)



Wire side of female terminals

Is there continuity?

YES—Repair short to ground in the wire between audio unit connector C (16P) and ECM/PCM connector A (49P).■

NO—Update the ECM/PCM if it does not have the latest software (see page 11-281) or substitute a known-good ECM/PCM (see page 11-282).■

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Restraints

Seat Belts

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Front Seat Belt Replacement 24-4

SRS (Supplemental Restraint System)

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DTC Troubleshooting Index 24-10
Circuit Diagram 24-16
DTC Troubleshooting 24-22
Front Passenger's Weight Sensor Replacement 24-24

NOTE: Refer to the 2008-2009 Accord Service Manual, P/N 61TA002 for the items not shown in this section.

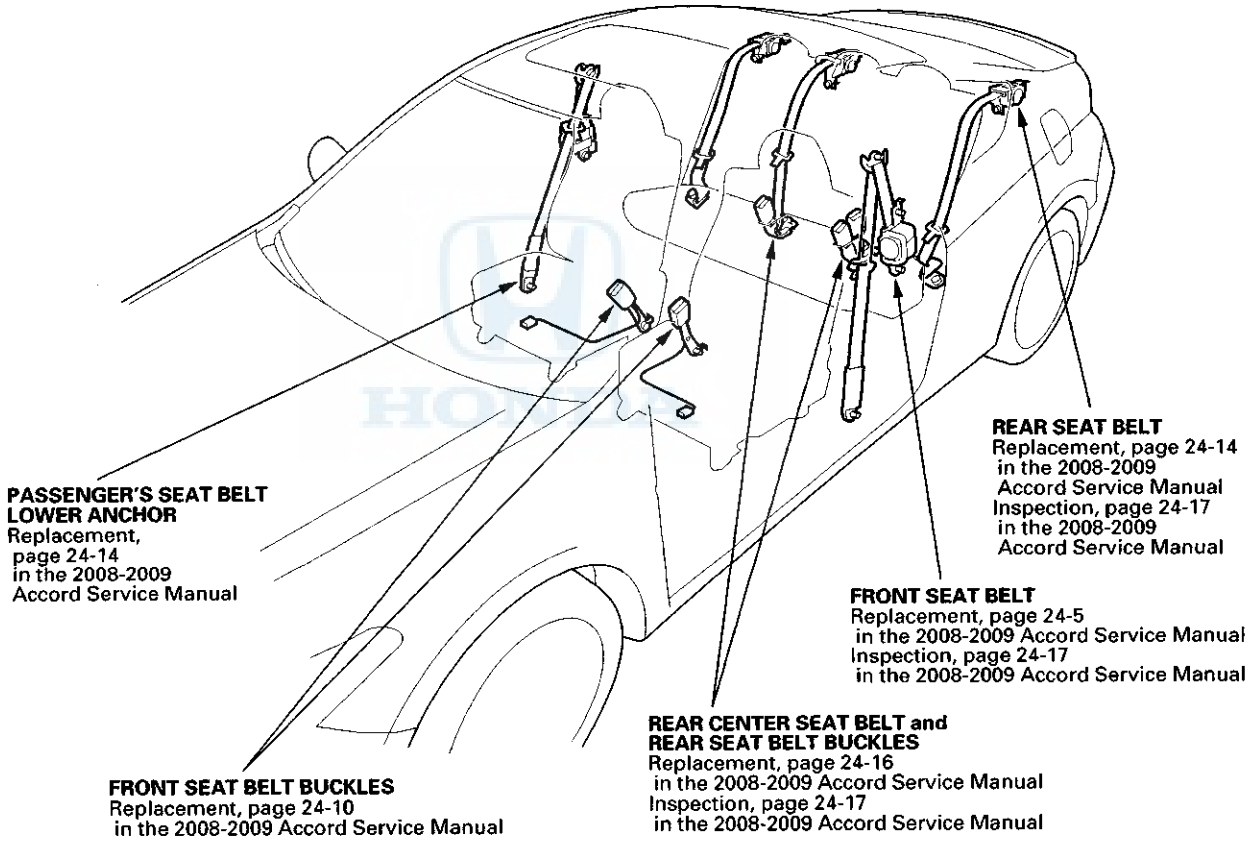
HONDA

Outline of Model Changes

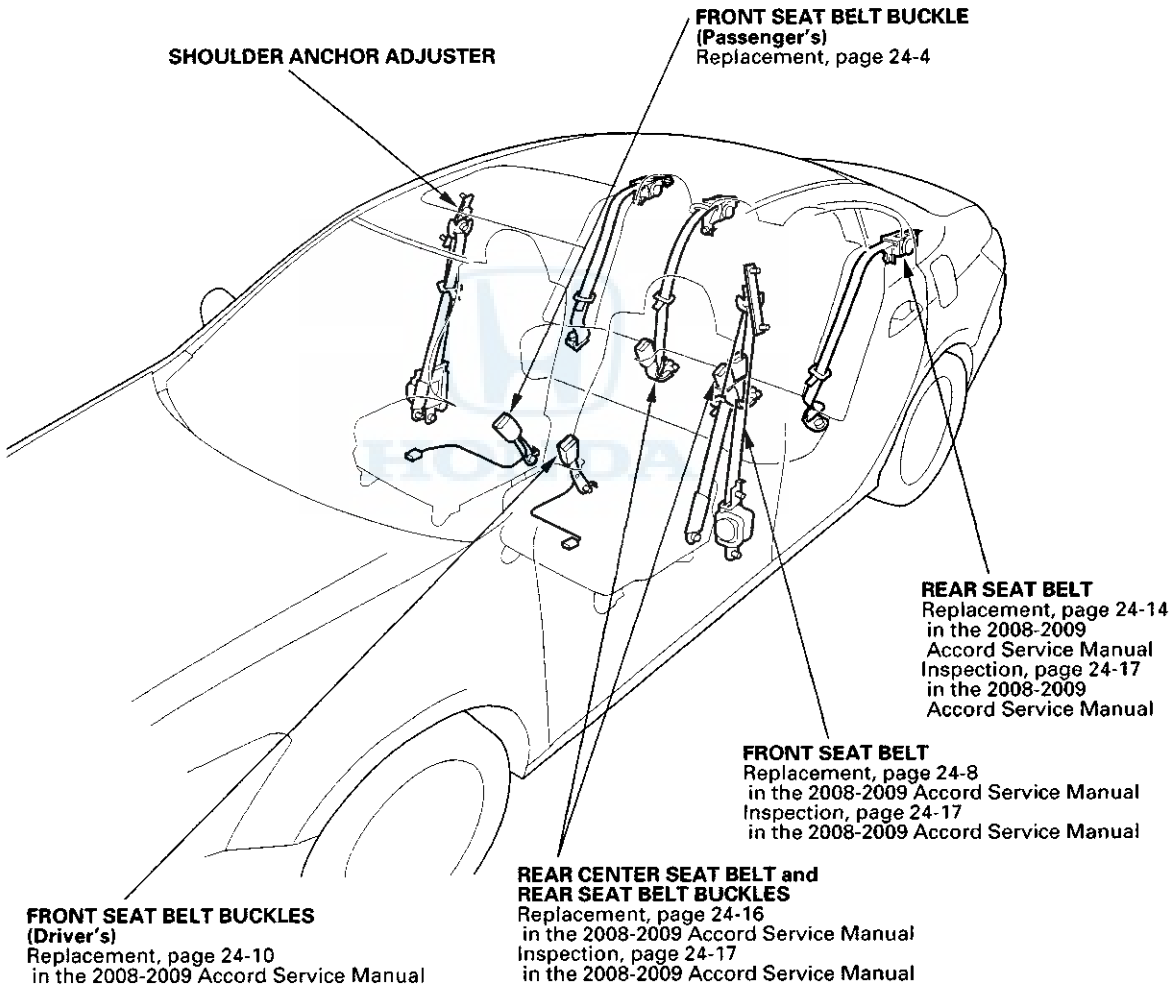
- The ECM/PCM has been changed.
- The front passenger's power seat has been added.

Component Location Index

2-door



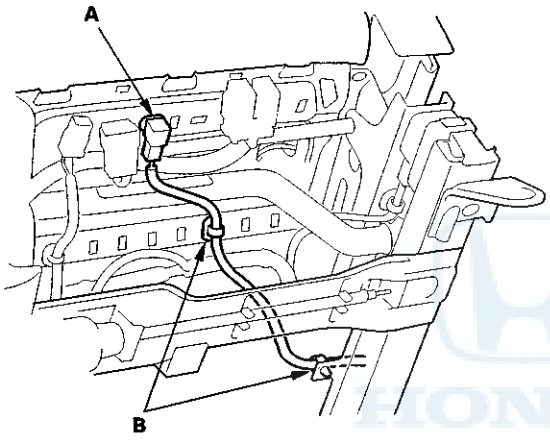
4-door


SHOULDER ANCHOR ADJUSTER
FRONT SEAT BELT BUCKLE (Passenger's)
Replacement, page 24-4
REAR SEAT BELT
Replacement, page 24-14 in the 2008-2009 Accord Service Manual
Inspection, page 24-17 in the 2008-2009 Accord Service Manual
FRONT SEAT BELT
Replacement, page 24-8 in the 2008-2009 Accord Service Manual
Inspection, page 24-17 in the 2008-2009 Accord Service Manual
REAR CENTER SEAT BELT and REAR SEAT BELT BUCKLES
Replacement, page 24-16 in the 2008-2009 Accord Service Manual
Inspection, page 24-17 in the 2008-2009 Accord Service Manual
FRONT SEAT BELT BUCKLES (Driver's)
Replacement, page 24-10 in the 2008-2009 Accord Service Manual

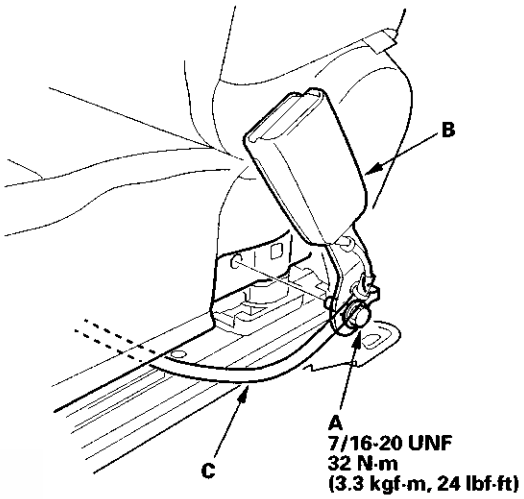
Front Seat Belt Replacement

Front Seat Belt Buckle - 4-door Passenger's Seat (4-way Power Seat)

1. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89), then wait at least 3 minutes before beginning work.
2. Remove the front seat (see page 20-8).
3. Lift up the front seat, then detach the seat switch connector (A), and detach the harness clips (B).



4. Remove the center anchor bolt (A), then remove the seat belt buckle (B).

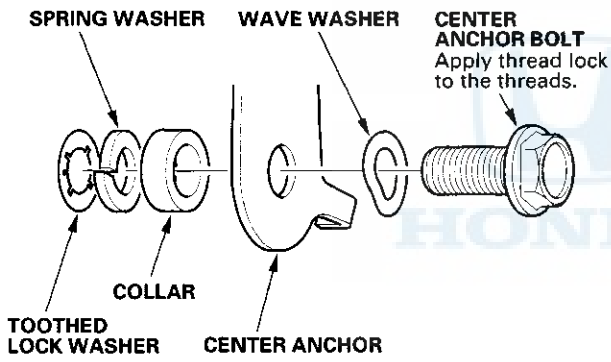


5. Pull the seat belt switch harness (C) out through the space between the seat cushion and the seat track.

6. Install the buckle in the reverse order of removal, and note these items:

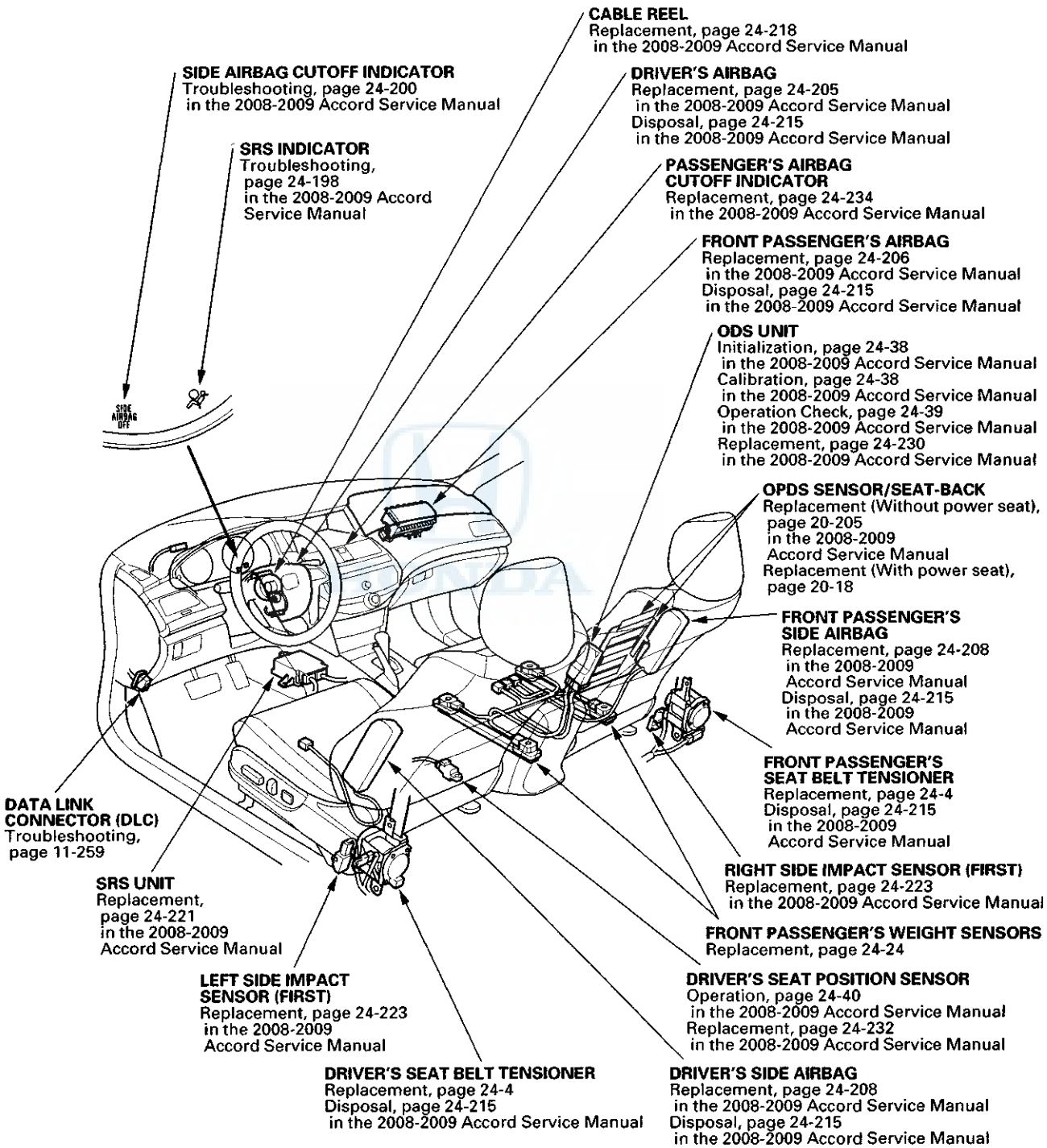
   - Assemble the washers and the collar on the center anchor bolt as shown.
   - Apply medium strength liquid thread lock to the center anchor bolt before reinstallation.
   - Tighten the bolts by hand first, then tighten to the specified torque.
   - Make sure the seat belt switch connector is plugged in properly.
   - Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).
   - Check for any DTCs that may have been set during repairs, and clear them.

Center anchor bolt installation (4-door passenger's seat)

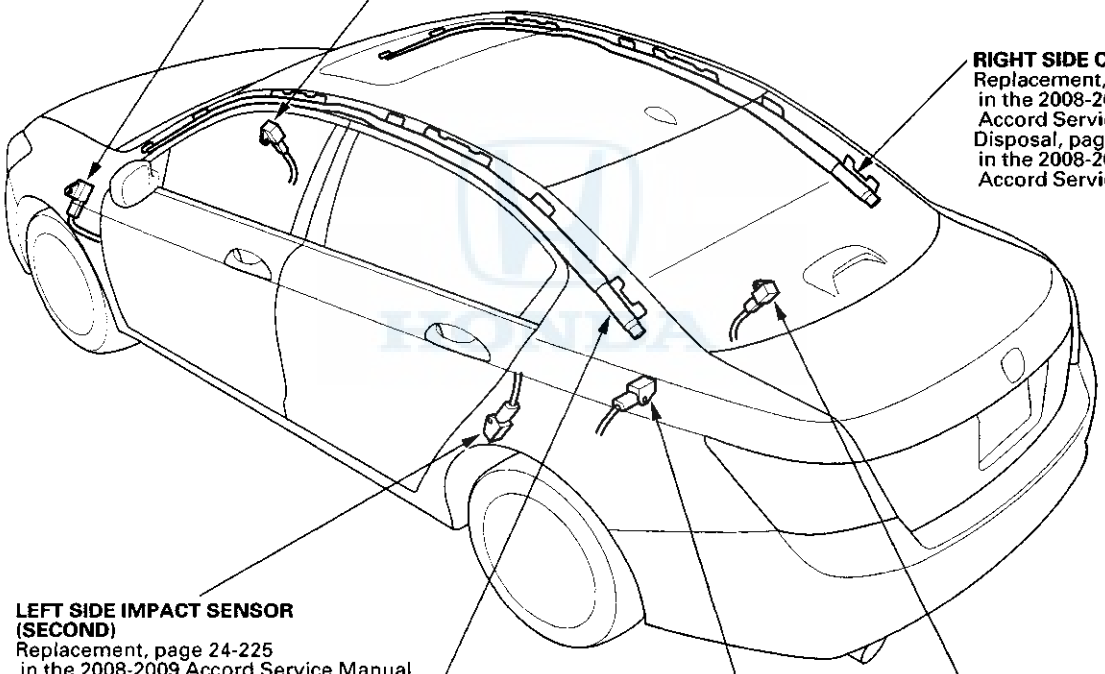


Component Location Index

4-Door



4-Door



LEFT FRONT IMPACT SENSOR
Replacement, page 24-231
in the 2008-2009 Accord Service Manual

RIGHT FRONT IMPACT SENSOR
Replacement, page 24-231
in the 2008-2009 Accord Service Manual

RIGHT SIDE CURTAIN AIRBAG
Replacement, page 24-209
in the 2008-2009
Accord Service Manual
Disposal, page 24-215
in the 2008-2009
Accord Service Manual

LEFT SIDE IMPACT SENSOR (SECOND)
Replacement, page 24-225
in the 2008-2009 Accord Service Manual

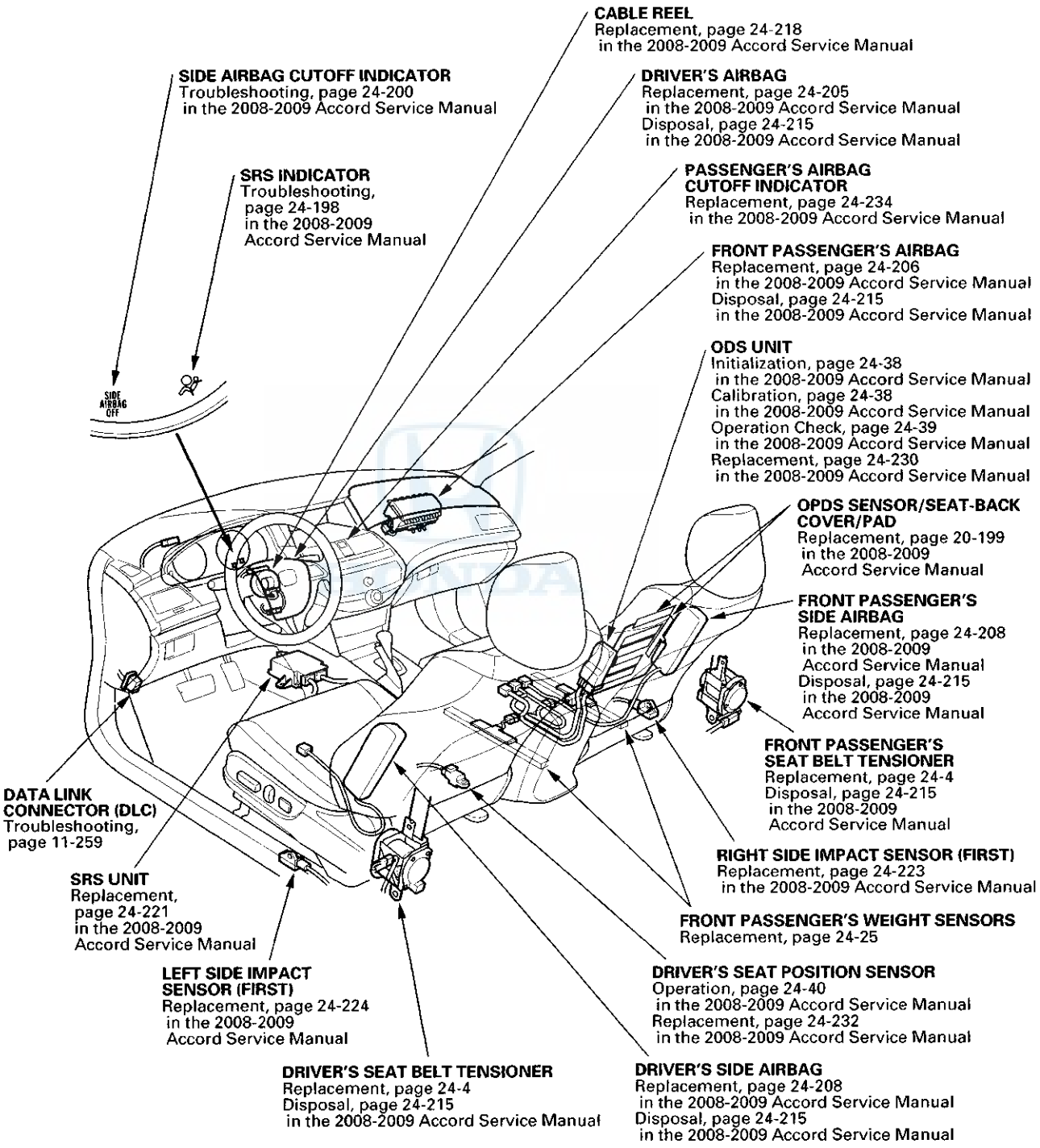
LEFT SIDE CURTAIN AIRBAG
Replacement, page 24-209
in the 2008-2009 Accord Service Manual
Disposal, page 24-215
in the 2008-2009 Accord Service Manual

RIGHT SIDE IMPACT SENSOR (SECOND)
Replacement, page 24-226
in the 2008-2009 Accord Service Manual

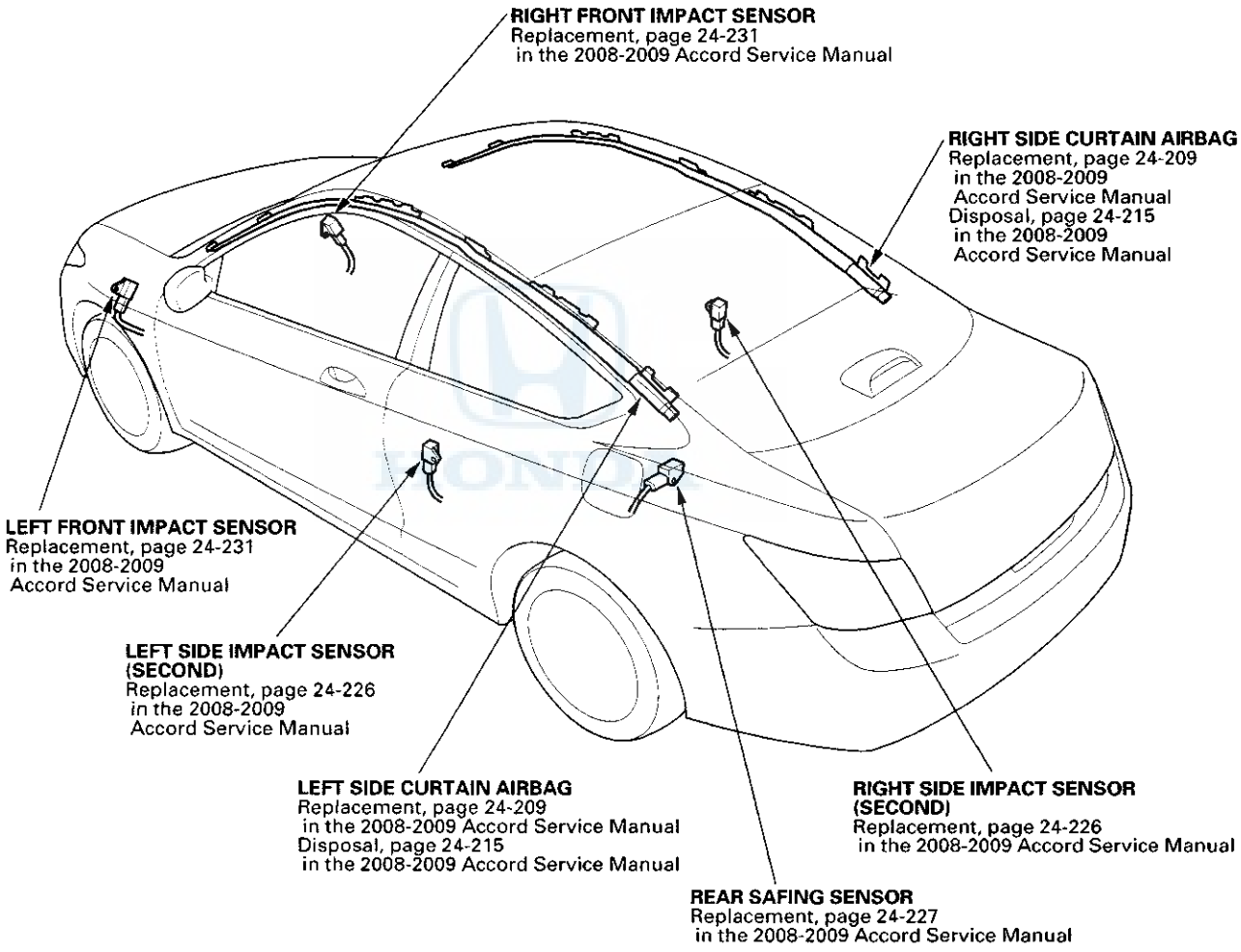
REAR SAFING SENSOR
Replacement, page 24-227
in the 2008-2009 Accord Service Manual

Component Location Index (cont'd)

2-Door



2-Door


RIGHT FRONT IMPACT SENSOR
Replacement, page 24-231
in the 2008-2009 Accord Service Manual
RIGHT SIDE CURTAIN AIRBAG
Replacement, page 24-209
in the 2008-2009
Accord Service Manual
Disposal, page 24-215
in the 2008-2009
Accord Service Manual
LEFT FRONT IMPACT SENSOR
Replacement, page 24-231
in the 2008-2009
Accord Service Manual
LEFT SIDE IMPACT SENSOR
(SECOND)
Replacement, page 24-226
in the 2008-2009
Accord Service Manual
LEFT SIDE CURTAIN AIRBAG
Replacement, page 24-209
in the 2008-2009 Accord Service Manual
Disposal, page 24-215
in the 2008-2009 Accord Service Manual
RIGHT SIDE IMPACT SENSOR
(SECOND)
Replacement, page 24-226
in the 2008-2009 Accord Service Manual
REAR SAFING SENSOR
Replacement, page 24-227
in the 2008-2009 Accord Service Manual

DTC Troubleshooting Index

DTC	Detection Item	Notes
11-1x*1	Open in the driver's airbag first inflator	(see page 24-61)*2
11-11	Short to another airbag inflator in the driver's airbag first inflator	(see page 24-63)*2
11-3x	Short to another wire or decreased resistance in the driver's airbag first inflator	(see page 24-66)*2
11-8x	Short to power in the driver's airbag first inflator	(see page 24-68)*2
11-9x	Short to ground in the driver's airbag first inflator	(see page 24-70)*2
11-4x*1	Open in the driver's airbag second inflator	(see page 24-61)*2
11-41	Short to another airbag inflator in the driver's airbag second inflator	(see page 24-65)*2
11-6x	Short to another wire or decreased resistance in the driver's airbag second inflator	(see page 24-66)*2
11-Ax	Short to power in the driver's airbag second inflator	(see page 24-68)*2
11-Bx	Short to ground in the driver's airbag second inflator	(see page 24-70)*2
12-1x*1	Open in the front passenger's airbag first inflator	(see page 24-72)*2
12-11	Short to another airbag inflator in the front passenger's airbag first inflator	(see page 24-73)*2
12-3x	Short to another wire or decreased resistance in the front passenger's airbag first inflator	(see page 24-76)*2
12-8x	Short to power in the front passenger's airbag first inflator	(see page 24-78)*2
12-9x	Short to ground in the front passenger's airbag first inflator	(see page 24-79)*2
12-4x*1	Open in the front passenger's airbag second inflator	(see page 24-72)*2
12-41	Short to another airbag inflator in the front passenger's airbag second inflator	(see page 24-74)*2
12-6x	Short to another wire or decreased resistance in the front passenger's airbag second inflator	(see page 24-76)*2
12-Ax	Short to power in the front passenger's airbag second inflator	(see page 24-78)*2
12-Bx	Short to ground in the front passenger's airbag second inflator	(see page 24-79)*2
21-1x*1	Open in the driver's seat belt tensioner	(see page 24-81)*2
21-11	Short to another wire in the driver's seat belt tensioner	(see page 24-82)*2
21-3x	Short to another wire or decreased resistance in the driver's seat belt tensioner	(see page 24-83)*2
21-8x	Short to power in the driver's seat belt tensioner	(see page 24-85)*2
21-9x	Short to ground in the driver's seat belt tensioner	(see page 24-86)*2
22-1x*1	Open in the front passenger's seat belt tensioner	(see page 24-88)*2
22-11	Short to another wire in the front passenger's seat belt tensioner	(see page 24-89)*2
22-3x	Short to another wire or decreased resistance in the front passenger's seat belt tensioner	(see page 24-90)*2
22-8x	Short to power in the front passenger's seat belt tensioner	(see page 24-92)*2
22-9x	Short to ground in the front passenger's seat belt tensioner	(see page 24-93)*2

DTC	Detection Item	Notes
31-1x*1	Open in the driver's side airbag inflator	(see page 24-95)*2
31-11	Short to another wire in the driver's side airbag inflator	(see page 24-96)*2
31-3x	Short to another wire or decreased resistance in the driver's side airbag inflator	(see page 24-97)*2
31-8x	Short to power in the driver's side airbag inflator	(see page 24-99)*2
31-9x	Short to ground in the driver's side airbag inflator	(see page 24-100)*2
32-1x*1	Open in the front passenger's side airbag inflator	(see page 24-102)*2
32-11	Short to another wire in the front passenger's side airbag inflator	(see page 24-103)*2
32-3x	Short to another wire or decreased resistance in the front passenger's side airbag inflator	(see page 24-104)*2
32-8x	Short to power in the front passenger's side airbag inflator	(see page 24-106)*2
32-9x	Short to ground in the front passenger's side airbag inflator	(see page 24-107)*2
33-1x*1	Open in the left side curtain airbag inflator	(see page 24-109)*2
33-11	Short to another wire in the left side curtain airbag inflator	(see page 24-110)*2
33-3x	Short to another wire or decreased resistance in the left side curtain airbag inflator	(see page 24-111)*2
33-8x	Short to power in the left side curtain airbag inflator	(see page 24-113)*2
33-9x	Short to ground in the left side curtain airbag inflator	(see page 24-114)*2
34-1x*1	Open in the right side curtain airbag inflator	(see page 24-116)*2
34-11	Short to another wire in the right side curtain airbag inflator	(see page 24-117)*2
34-3x	Short to another wire or decreased resistance in the right side curtain airbag inflator	(see page 24-118)*2
34-8x	Short to power in the right side curtain airbag inflator	(see page 24-120)*2
34-9x	Short to ground in the right side curtain airbag inflator	(see page 24-121)*2
41-1x	No signal from the left front impact sensor	(see page 24-123)*2
41-2x	Internal failure of the left front impact sensor	(see page 24-127)*2
41-3x		
41-8x		
41-9x		
41-Ax		
41-Bx		
42-1x	No signal from the right front impact sensor	(see page 24-125)*2
42-2x	Internal failure of the right front impact sensor	(see page 24-127)*2
42-3x		
42-8x		
42-9x		
42-Ax		
42-Bx		

NOTE: The "x" at the end of each DTC denotes a numeric character (0 thru 9), or items with an asterisk (* 1) (0, 2 thru 9), or an alpha character (A thru F) that you will see on the HDS display. The character is unrelated to your troubleshooting; it designates the SRS unit manufacturer and other detail used for product analysis.

* 2: Refer to the 2008-2009 Accord Service Manual.

(cont'd)

DTC Troubleshooting Index (cont'd)

DTC	Detection Item	Notes
43-1x	No signal from the left side impact sensor (first) (4-door)	(see page 24-128)*
43-1x	No signal from the left side impact sensor (first) (2-door)	(see page 24-132)*
43-2x	Internal failure of the left side impact sensor (first)	(see page 24-136)*
43-3x		
43-8x		
43-9x		
43-Ax		
43-Bx		
44-1x	No signal from the right side impact sensor (first) (4-door)	(see page 24-130)*
44-1x	No signal from the right side impact sensor (first) (2-door)	(see page 24-134)*
44-2x	Internal failure of the right side impact sensor (first)	(see page 24-136)*
44-3x		
44-8x		
44-9x		
44-Ax		
44-Bx		
45-1x	No signal from the left side impact sensor (second) (4-door)	(see page 24-137)*
45-1x	No signal from the left side impact sensor (second) (2-door)	(see page 24-141)*
45-2x	Internal failure of the left side impact sensor (second)	(see page 24-145)*
45-3x		
45-8x		
45-9x		
45-Ax		
45-Bx		
46-1x	No signal from the right side impact sensor (second) (4-door)	(see page 24-139)*
46-1x	No signal from the right side impact sensor (second) (2-door)	(see page 24-143)*
46-2x	Internal failure of the right side impact sensor (second)	(see page 24-145)*
46-3x		
46-8x		
46-9x		
46-Ax		
46-Bx		

DTC	Detection Item	Notes
B2-1x	No signal from the rear safing sensor (4-door)	(see page 24-146)*
B2-1x	No signal from the rear safing sensor (2-door)	(see page 24-148)*
B2-2x	Internal failure of the rear safing sensor	(see page 24-150)*
B2-3x		
B2-8x		
B2-9x		
B2-Ax		
B2-Bx		
51-xx	Internal failure of the SRS unit	(see page 24-151)*
52-xx		
53-xx		
54-xx		
55-xx		
57-xx		
58-xx		
53-FF	SRS unit programming error	(see page 24-152)*
Ex-11	Control operation recorded	(see page 24-150)*
Fx-11	Airbag and/or tensioners deployment recorded	(see page 24-151)*
56-25	Lost communication with the gauge control module	(see page 24-154)*
56-31	Lost communication with the ECM/PCM (PGM-FI system)	(see page 24-22)
56-32	Undefined data received from the ECM/PCM (PGM-FI system)	(see page 24-23)
56-33		
61-1x	Open in the driver's seat belt buckle switch	(see page 24-155)*
61-2x	Short in the driver's seat belt buckle switch	(see page 24-156)*
62-1x	Open in the front passenger's seat belt buckle switch	(see page 24-157)*
62-2x	Short in the front passenger's seat belt buckle switch	(see page 24-159)*
71-1x	Open in the driver's seat position sensor	(see page 24-160)*
71-2x	Short in the driver's seat position sensor	(see page 24-161)*
81-4x	Internal the failure of the ODS unit	(see page 24-163)*
81-5x		
81-63		
81-64		
81-61	No signal from the ODS unit	
81-62	Non-stipulated data from the ODS unit	
81-71	ODS unit not calibrated	(see page 24-166)*
81-78		
81-79	Front passenger's weight sensors initial check failure	(see page 24-167)*

NOTE: The "x" at the end of each DTC denotes a numeric character (0 thru 9) or an alpha character (A thru F) that you will see on the HDS display. The character is unrelated to your troubleshooting; it designates the SRS unit manufacturer and other detail used for product analysis.

*: Refer to the 2008-2009 Accord Service Manual.

(cont'd)

DTC Troubleshooting Index (cont'd)

DTC	Detection Item	Notes
82-1x	No signal from the inner side front passenger's weight sensor (2-door)	(see page 24-168)*
83-2x	No signal from the outer side front passenger's weight sensor (2-door)	
82-14	No signal from the front passenger's weight sensor (front inner side) (4-door)	(see page 24-169)*
82-16	No signal from the front passenger's weight sensor (rear inner side) (4-door)	(see page 24-172)*
83-24	No signal from the front passenger's weight sensor (front outer side) (4-door)	(see page 24-176)*
83-26	No signal from the front passenger's weight sensor (rear outer side) (4-door)	(see page 24-179)*
82-15	Internal failure of the front passenger's weight sensor (front inner side) (4-door)	(see page 24-183)*
82-17	Internal failure of the front passenger's weight sensor (rear inner side) (4-door)	
82-25	Internal failure of the front passenger's weight sensor (front outer side) (4-door)	
82-27	Internal failure of the front passenger's weight sensor (rear outer side) (4-door)	
85-4x	Internal failure of the ODS unit	
85-5x		
85-63		
85-64		
85-61	No signal from the ODS unit	(see page 24-184)*
85-62	Non-stipulated data from the ODS unit	
85-71	ODS unit not initialized	(see page 24-166)*
85-78		
85-79	ODS initial check failure	(see page 24-187)*
86-1x	Faulty OPDS seat-back sensor	(see page 24-188)*
86-2x	Faulty OPDS seat support sensor	
92-1x	Short to power in the passenger's airbag cutoff indicator	(see page 24-189)*
92-2x	Open or short to ground in the passenger's airbag cutoff indicator	(see page 24-190)*
A1-1x	Faulty power supply (VA line)	(see page 24-191)*
A2-1x	Faulty power supply (VB line)	(see page 24-192)*
A3-1x	SRS connector A not properly installed	(see page 24-193)*
A4-1x	SRS connector B not properly installed	(see page 24-194)*

NOTE: The "x" at the end of each DTC denotes a numeric character (0 thru 9) or an alpha character (A thru F) that you will see on the HDS display. The character is unrelated to your troubleshooting; it designates the SRS unit manufacturer and other detail used for product analysis.

*: Refer to the 2008-2009 Accord Service Manual.

Only read DTCs from the SRS menu, not from ODS or SWS menus unless instructed to check SWS DTCs. SWS (ODS unit) DTCs are subcodes of SRS unit DTCs. Only troubleshoot the corresponding SRS DTCs.

SWS DTC Index

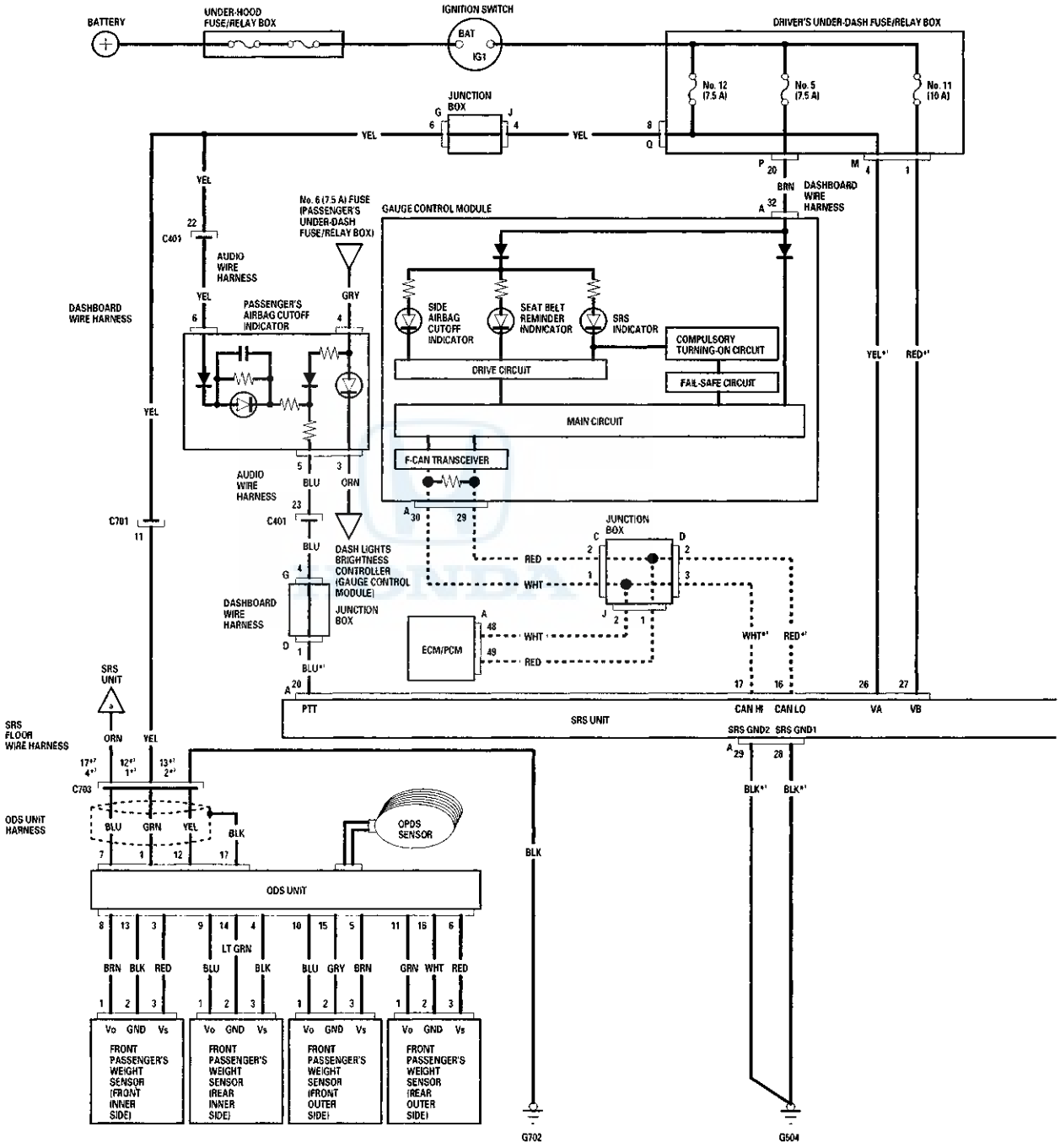
SRS Unit DTC	SWS DTC	Detection Item	Notes
81-4x	41-xx	Internal failure of the ODS unit	(see page 24-195)*
	42-xx		
	43-xx		
82-14	14-11	Short to power in the front passenger's weight sensor (front inner side) power circuit	(see page 24-196)*
	14-12	Short to ground in the front passenger's weight sensor (front inner side) power circuit	
	14-13	Open in the front passenger's weight sensor (front inner side) output circuit	
	14-14	Short to ground in the front passenger's weight sensor (front inner side) output circuit	
82-15	15-3x	Internal failure of the front passenger's weight sensor (front inner side)	(see page 24-198)*
82-16	16-11	Short to power in the front passenger's weight sensor (rear inner side) power circuit	(see page 24-196)*
	16-12	Short to ground in the front passenger's weight sensor (rear inner side) power circuit	
	16-13	Open in the front passenger's weight sensor (rear inner side) output circuit	
	16-14	Short to the ground in the front passenger's weight sensor (rear inner side) output circuit	
82-17	17-3x	Internal failure of the front passenger's weight sensor (rear inner side)	(see page 24-198)*
83-24	24-11	Short to power in the front passenger's weight sensor (front outer side) power circuit	(see page 24-197)*
	24-12	Short to ground in the front passenger's weight sensor (front outer side) power circuit	
	24-13	Open in the front passenger's weight sensor (front outer side) output circuit	
	24-14	Short to ground in the front passenger's weight sensor (front outer side) output circuit	
83-25	25-3x	Internal failure of the front passenger's weight sensor (front outer side)	(see page 24-198)*
83-26	26-11	Short to power in the front passenger's weight sensor (rear outer side) power circuit	(see page 24-197)*
	26-12	Short to ground in the front passenger's weight sensor (rear outer side) power circuit	(see page 24-197)*
	26-13	Open in the front passenger's weight sensor (rear outer side) output circuit	
	26-14	Short to ground in the front passenger's weight sensor (rear outer side) output circuit	
83-27	27-3x	Internal failure of the front passenger's weight sensor (rear outer side)	(see page 24-198)*
81-71	71-xx	ODS unit not calibrated	(see page 24-195)*

NOTE: The "x" at the end of each DTC denotes a numeric character (0 thru 9) or an alpha character (A thru F) that you will see on the HDS display. The character is unrelated to your troubleshooting; it designates the SRS unit manufacturer and other detail used for product analysis.

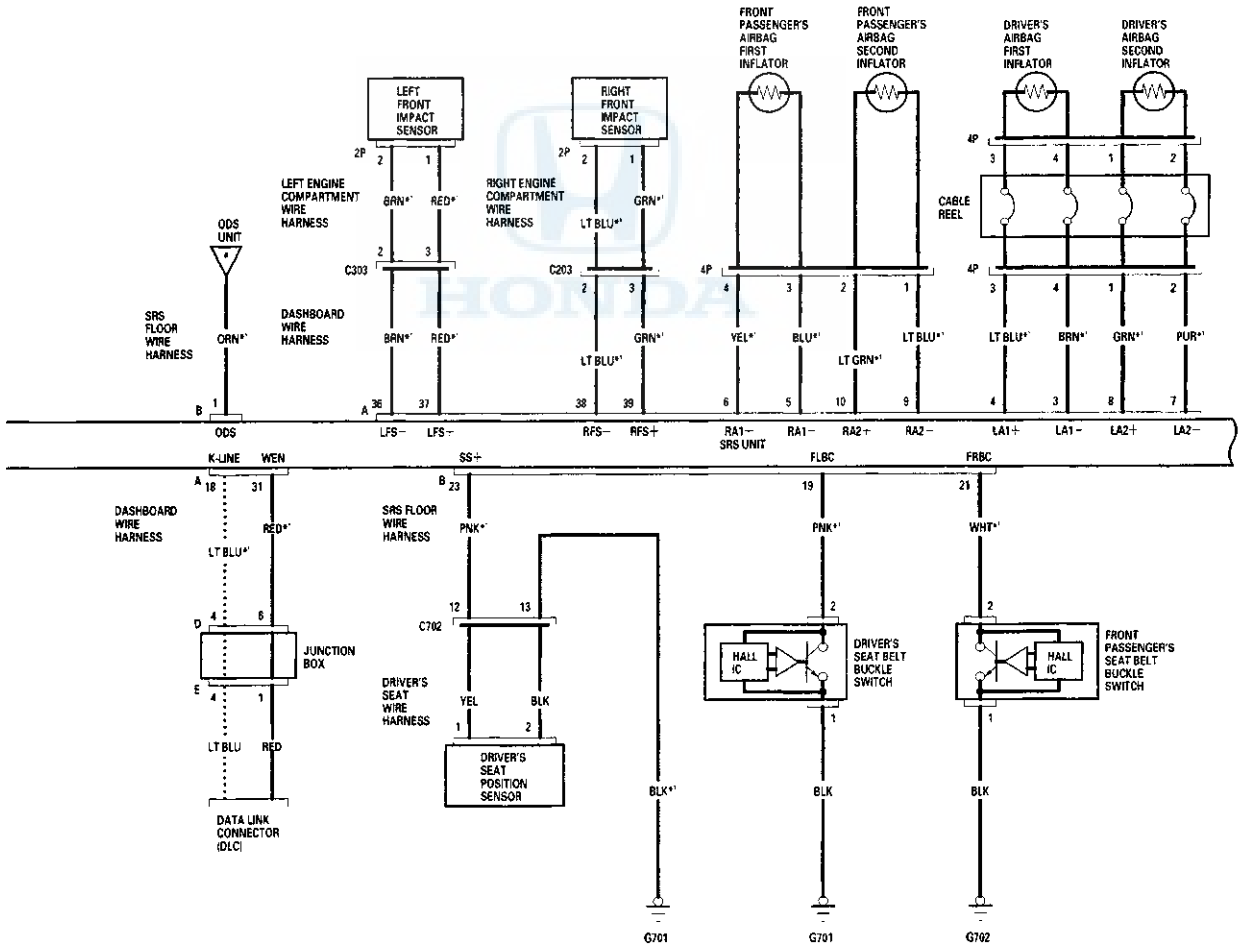
*: Refer to the 2008-2009 Accord Service Manual.

Circuit Diagram

4-Door



*1 : Wire colors may be substituted for SRS circuits
*2 : With seat heaters
*3 : Without seat heaters
- - - - - - - - - - : CAN line
. . . . : Other communication line
- - - - - - - - - - : Shielding

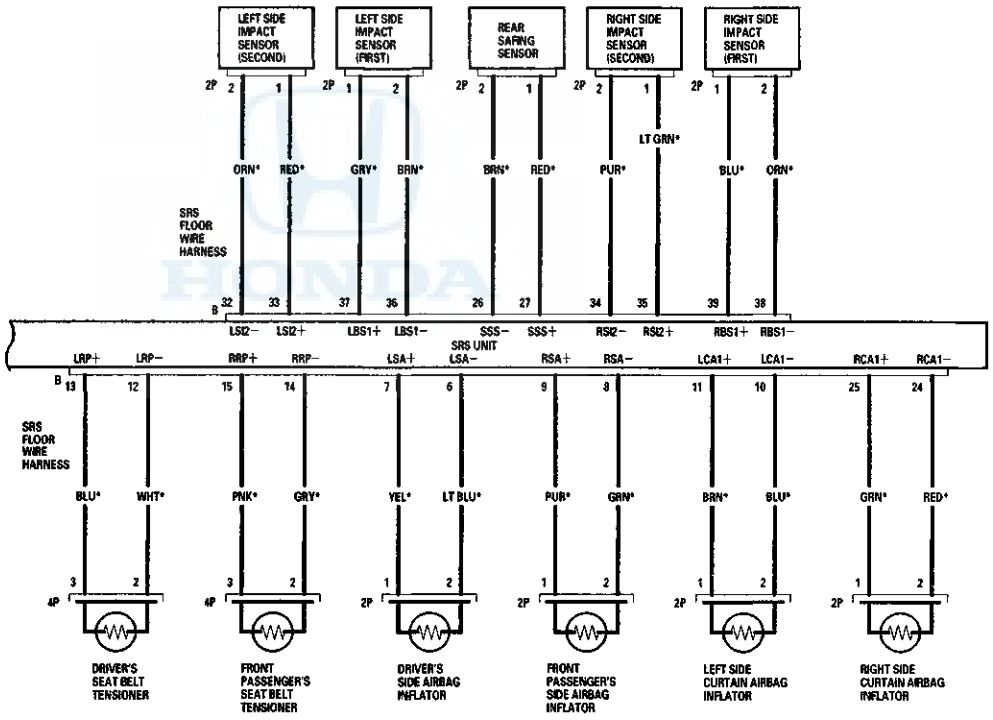


(cont'd)

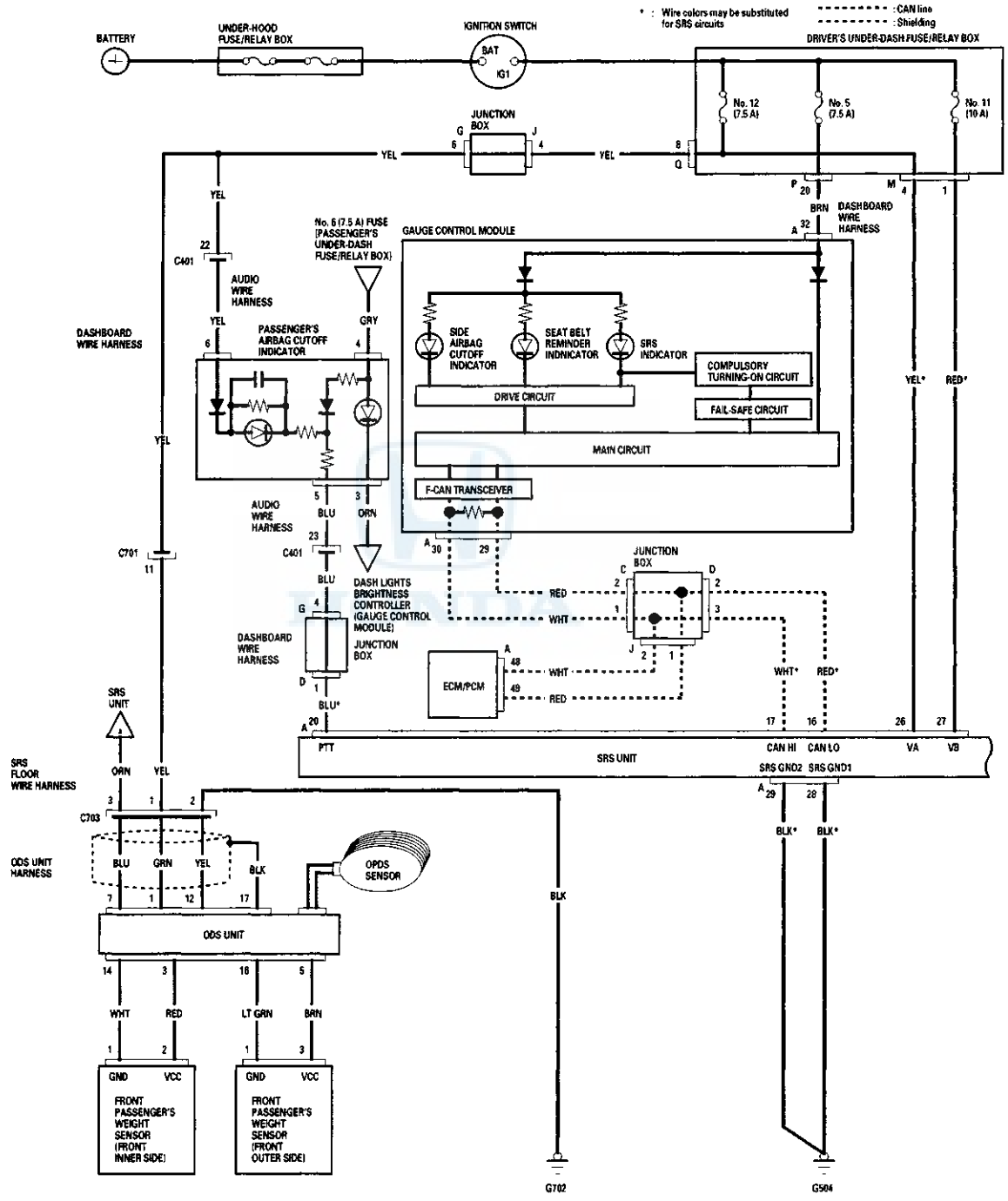
Circuit Diagram (cont'd)

4-Door

* : Wire colors may be substituted for SRS circuits



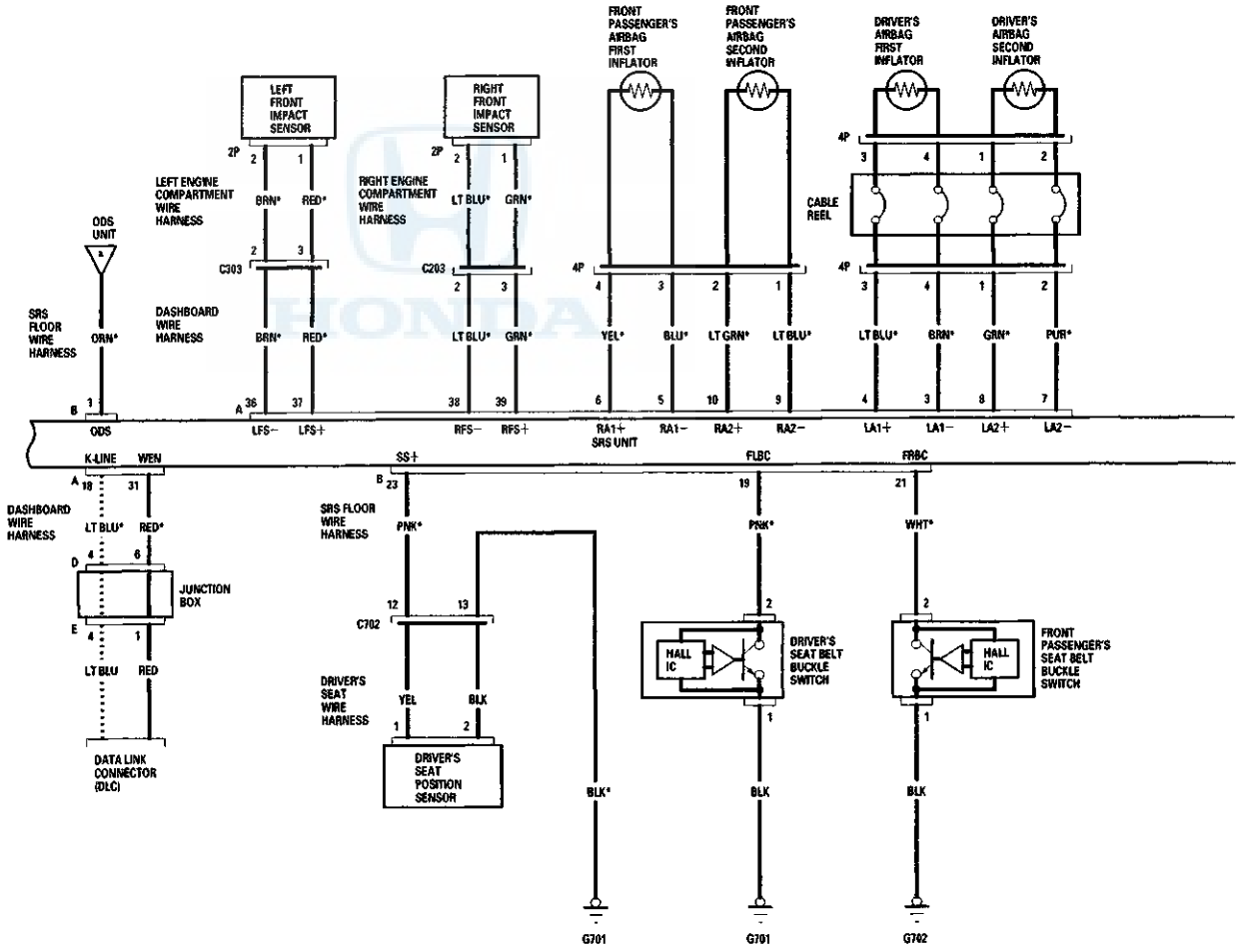
2-Door


* : Wire colors may be substituted for SRS circuits
: CAN line
: Shielding
BATTERY
UNDER-HOOD FUSE/RELAY BOX
IGNITION SWITCH
BAT
IG1
DRIVER'S UNDER-DASH FUSE/RELAY BOX
No. 12 (7.5 A)
No. 5 (7.5 A)
No. 11 (10 A)
JUNCTION BOX
YEL
BRN
DASHBOARD WIRE HARNESS
No. 6 (7.5 A) FUSE (PASSENGER'S UNDER-DASH FUSE/RELAY BOX)
GAUGE CONTROL MODULE
C401
AUDIO WIRE HARNESS
GRY
DASHBOARD WIRE HARNESS
PASSENGER'S AIRBAG CUTOFF INDICATOR
SIDE AIRBAG CUTOFF INDICATOR
SEAT BELT REMINDER INDICATOR
SRS INDICATOR
COMPULSORY TURNING-ON CIRCUIT
DRIVE CIRCUIT
FAIL-SAFE CIRCUIT
MAIN CIRCUIT
F-CAN TRANSCEIVER
YEL*
RED*
BLU
ORN
C701
DASH LIGHTS BRIGHTNESS CONTROLLER (GAUGE CONTROL MODULE)
JUNCTION BOX
RED
WHT
ECM/PCM
WHT*
RED*
BLU*
SRS UNIT
PTT
CAN HI
CAN LO
VA
VB
SRS GND2
SRS GND1
BLK*
SRS FLOOR WIRE HARNESS
ORN
C703
ODS UNIT HARNESS
BLU
GRN
BLK
OPDS SENSOR
ODS UNIT
WHT
RED
LT GRN
BRN
GND
VCC
FRONT PASSENGER'S WEIGHT SENSOR (FRONT INNER SIDE)
FRONT PASSENGER'S WEIGHT SENSOR (FRONT OUTER SIDE)
G702
G504

(cont'd)

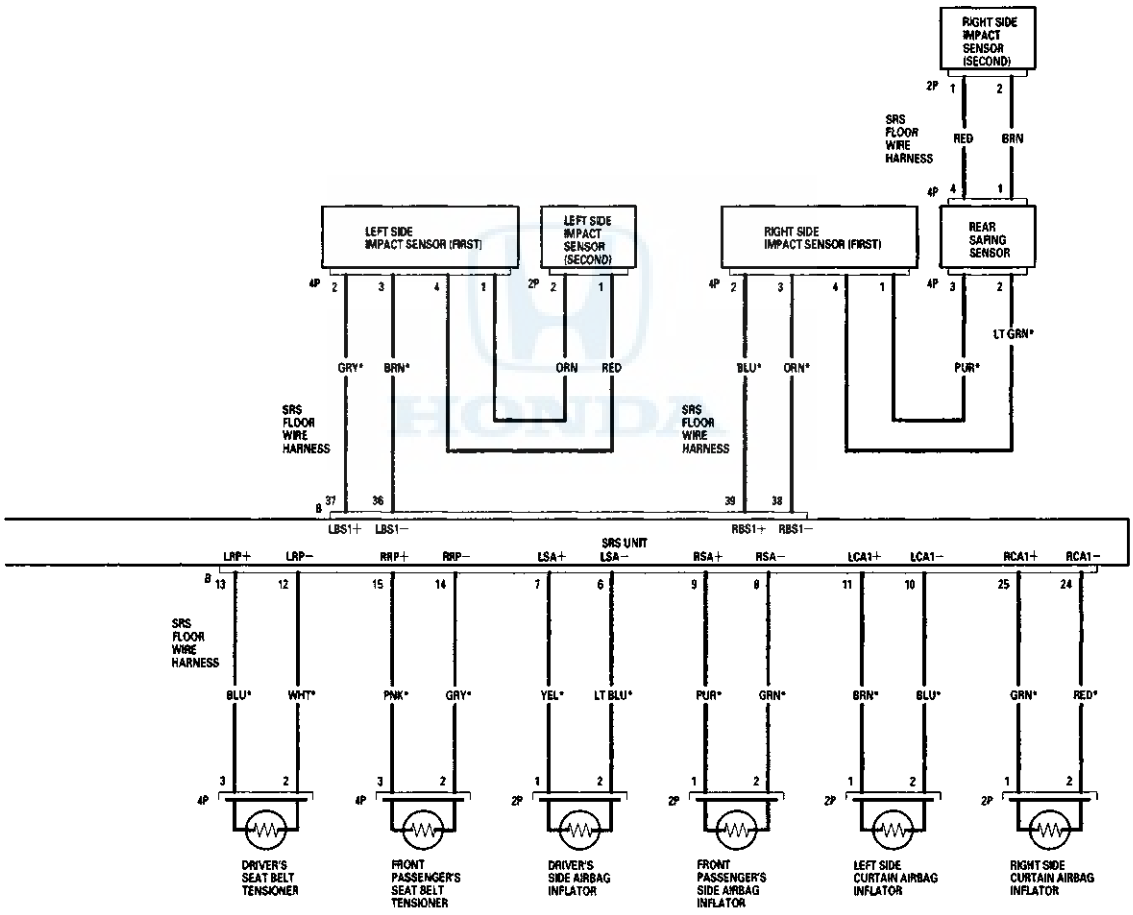
Circuit Diagram (cont'd)

2-Door



* : Wire colors may be substituted for SRS circuits

. . . . . : Other communication line



DTC Troubleshooting

DTC 56-31: Lost Communication With the ECM/PCM (PGM-FI system)

NOTE:
- Before doing this troubleshooting procedure, review SRS Precautions and Procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23), General Troubleshooting Information, refer to the 2008-2009 Accord Service Manual (see page 24-34), and Battery Terminal Disconnection and Reconnection, refer to the 2008-2009 Accord Service Manual (see page 22-89).
- Check for any F-CAN and B-CAN communication DTCs, and troubleshoot those DTCs before doing this troubleshooting procedure.
- 2-door: Before replacing the SRS unit, check the SRS unit software version with the HDS. If the software version is not the latest, update the SRS unit software, refer to the 2008-2009 Accord Service Manual (see page 24-37).

1. Clear the DTC memory, refer to the 2008-2009 Accord Service Manual (see page 24-35).
2. Turn the ignition switch to ON (II), and wait for 10 seconds.
3. Read the DTC, refer to the 2008-2009 Accord Service Manual (see page 24-35).

   Is DTC 56-31 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. Go to Troubleshooting Intermittent Failures, refer to the 2008-2009 Accord Service Manual (see page 24-36). If another DTC is indicated, troubleshoot the DTC.
4. Turn the ignition switch to ON (II), and see if the malfunction indicator lamp (MIL) comes on.

   Does the MIL come on?

   YES—Go to the PGM-FI System troubleshooting (see page 11-3).

   NO—Go to step 5.
5. Read the DTC, refer to the 2008-2009 Accord Service Manual (see page 24-35).

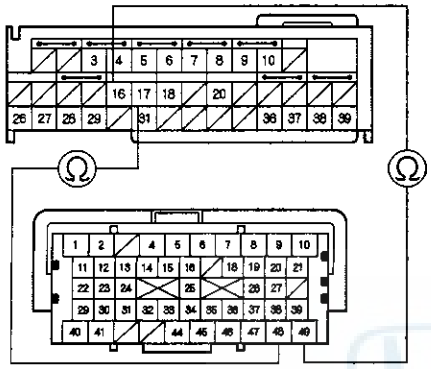
   Are any other DTCs indicated with DTC 56-21 or 56-31?

   YES—Go to step 6.

   NO—Go to the PGM-FI System troubleshooting (see page 11-3).
6. Turn the ignition switch to LOCK (0).
7. Disconnect the negative cable from the battery, then wait for 3 minutes.
8. Disconnect SRS unit connector A (39P) from the SRS unit, refer to the 2008-2009 Accord Service Manual (see page 24-221).
9. Disconnect ECM/PCM connector A (49P) from the ECM/PCM (see page 11-6).

10. Check for continuity between the terminal No. 16 of the SRS unit connector A (39P) and the terminal No.49 of the ECM/PCM connector E (49P), and between the terminal No. 17 of the SRS unit connector A (39P) and the terminal No. 48 of the ECM/PCM connector (49P).

SRS UNIT CONNECTOR A (39P)
Wire side of female terminals



ECM/PCM CONNECTOR A (49P)
Terminal side of female terminals

Is there continuity?

YES—Faulty SRS unit or poor connection at SRS unit connector A (39P) and the SRS unit. Check the connection between the connector and the SRS unit. If the connection is OK, replace the SRS unit, refer to the 2008-2009 Accord Service Manual (see page 24-221).■

NO—Open in the left engine compartment wire harness or the dashboard wire harness; replace the faulty harness.■

DTC 56-32, 56-33: Undefined Data Received From the ECM/PCM (PGM-FI system)

NOTE:
- Before doing this troubleshooting procedure, review SRS Precautions and Procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23), General Troubleshooting Information, refer to the 2008-2009 Accord Service Manual (see page 24-34), and Battery Terminal Disconnection and Reconnection, refer to the 2008-2009 Accord Service Manual (see page 22-89).
- Check for any F-CAN and B-CAN communication DTCs, and troubleshoot those DTCs before doing this troubleshooting procedure.

1. Turn the ignition switch to LOCK (0), and wait for 10 seconds.

2. Turn the ignition switch to ON (II), and wait for 10 seconds.

3. Check that the malfunction indicator lamp (MIL) comes on.

   Does the MIL come on?

   YES—Go to step 4.

   NO—Go to the PGM-FI System troubleshooting (see page 11-3).

4. Clear the DTC memory, refer to the 2008-2009 Accord Service Manual (see page 24-35).

5. Turn the ignition switch to LOCK (0), and wait for 10 seconds.

6. Turn the ignition switch to ON (II), and wait for 10 seconds.

7. Read the DTC, refer to the 2008-2009 Accord Service Manual (see page 24-35).

   Is DTC 56-32 or 56-33 indicated?

   YES—Faulty ECM/PCM; replace the ECM/PCM (see page 11-282).■

   NO—Intermittent failure, the system is OK at this time. Go to Troubleshooting Intermittent Failures, refer to the 2008-2009 Accord Service Manual (see page 24-36). If another DTC is indicated, troubleshoot the DTC.

Front Passenger's Weight Sensor Replacement

4-Door

Removal

NOTE:
- Removal of the front passenger's weight sensors must be done according to Precautions and Procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23).
- The front passenger's weight sensor are part of the seat frame and must be replaced as an assembly.

1. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89), then wait at least 3 minutes before starting work.

2. Remove the front passenger's seat:

   - With power seat (see page 20-8)
   - Without power seat, refer to the 2008-2009 Accord Service Manual (see page 20-181)

3. Remove the front passenger's seat frame:

   - With power seat (see page 20-13)
   - Without power seat, refer to the 2008-2009 Accord Service Manual (see page 20-198)

Installation

NOTE:
- Be sure to install the harness wires so they are not pinched or interfere with other parts.
- The front passenger's weight sensor are part of the seat frame and must be replaced as an assembly.

1. Install the parts in the reverse order of removal.

2. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

3. Calibrate the ODS unit, refer to the 2008-2009 Accord Service Manual (see page 24-38).

4. Confirm proper SRS operation: Turn the ignition switch to ON (II); the SRS indicator should come on for about 6 seconds and then go off.

2-Door

Removal

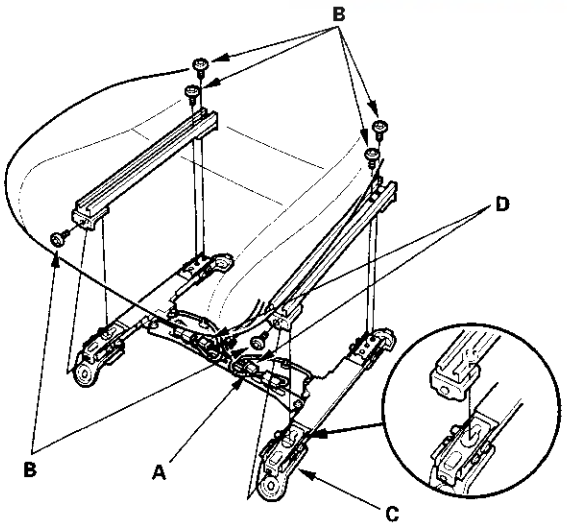
NOTE:
- Removal of the front passenger's weight sensors must be done according to Precautions and Procedures, refer to the 2008-2009 Accord Service Manual (see page 24-23).
- The front passenger's weight sensor are part of the seat rail must be replaced as an assembly.

1. Do the battery terminal disconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89), then wait at least 3 minutes before starting work.

2. Remove the front passenger's seat assembly, refer to the 2008-2009 Accord Service Manual (see page 20-181).

3. Remove the upper rail outer cover and upper rail inner cover, refer to the 2008-2009 Accord Service Manual (see page 20-196).

4. Disconnect the sensor connectors (A) from the ODS unit harness, then remove the mounting bolts (B) from weight sensors (C).

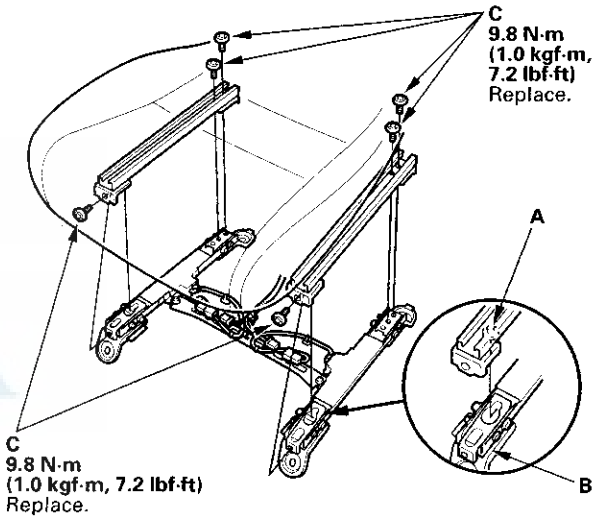


5. Disconnect the sensor connectors (D) from the ODS unit harness, then remove the front passenger's weight sensors.

Installation

NOTE:
- Be sure to install the harness wires so they are not pinched or interfere with other parts.
- Make sure both of the hooks (A) on the seat track are properly secured to the front bracket (B). If the hooks are not properly secured, the seat weight sensors will not perform properly.

1. Install and torque the new front passenger's weight sensors with new mounting bolts (C) under the seat cushion.



2. Reinstall the upper rail outer cover and upper rail inner cover, refer to the 2008-2009 Accord Service Manual (see page 20-196).

3. Reinstall the front passenger's seat, refer to the 2008-2009 Accord Service Manual (see page 20-181).

4. Do the battery terminal reconnection procedure, refer to the 2008-2009 Accord Service Manual (see page 22-89).

5. Calibrate the ODS unit, refer to the 2008-2009 Accord Service Manual (see page 24-38).

6. Confirm proper SRS operation: Turn the ignition switch to ON (II); the SRS indicator should come ON for about 6 seconds and then go off.

NOTES

NOTES

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