2003-06 ENGINE PERFORMANCE

PGM-FI System - MDX

COMPONENT LOCATION INDEX

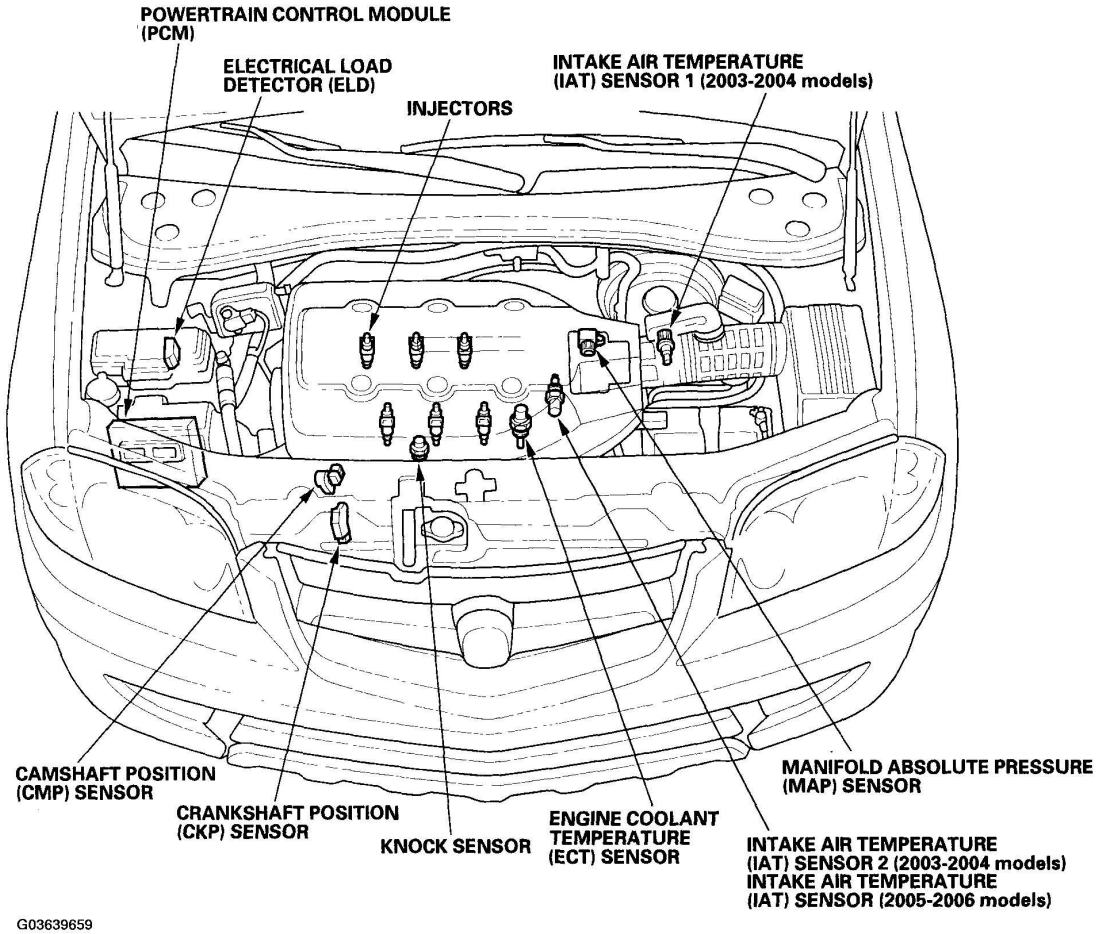


Fig. 1: Identifying PGM-FI System Components Location (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

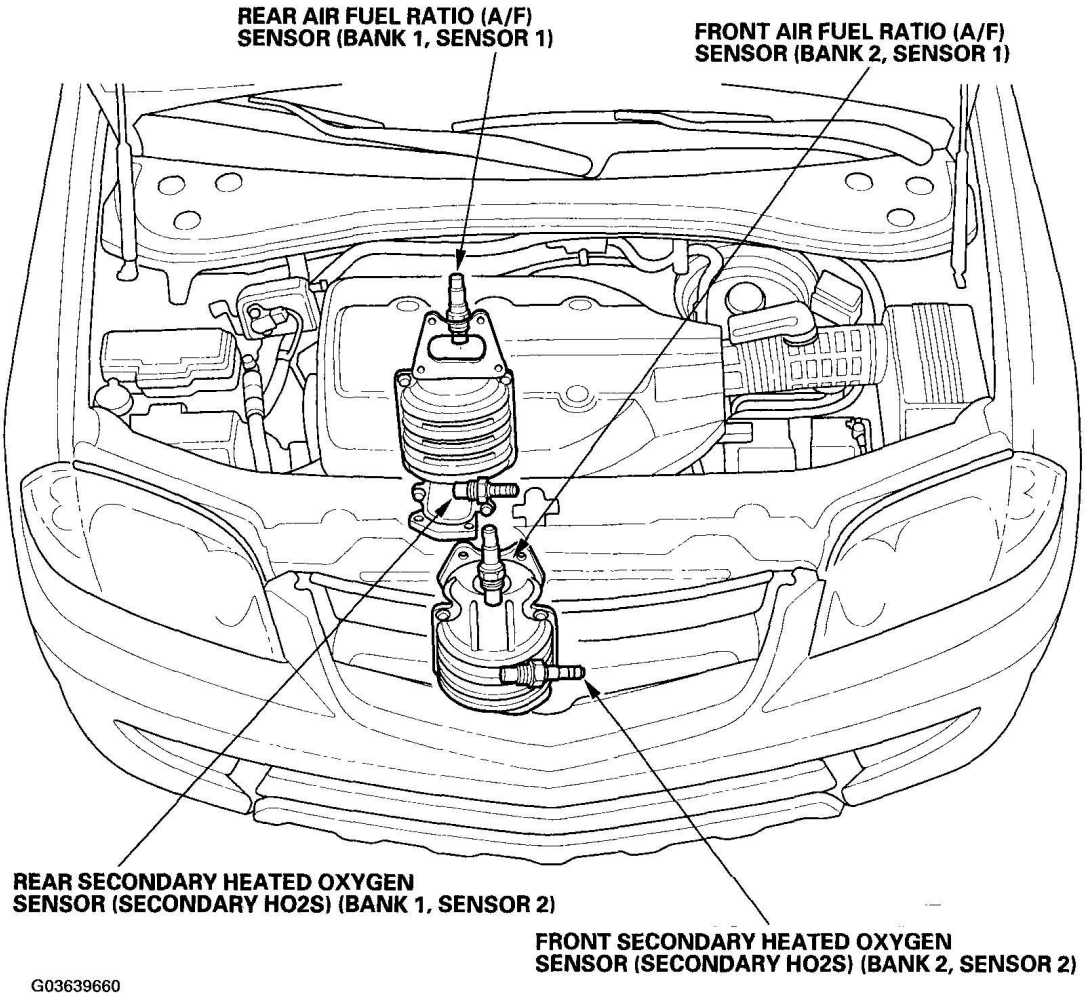


Fig. 2: Identifying PGM-FI System Components Location (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

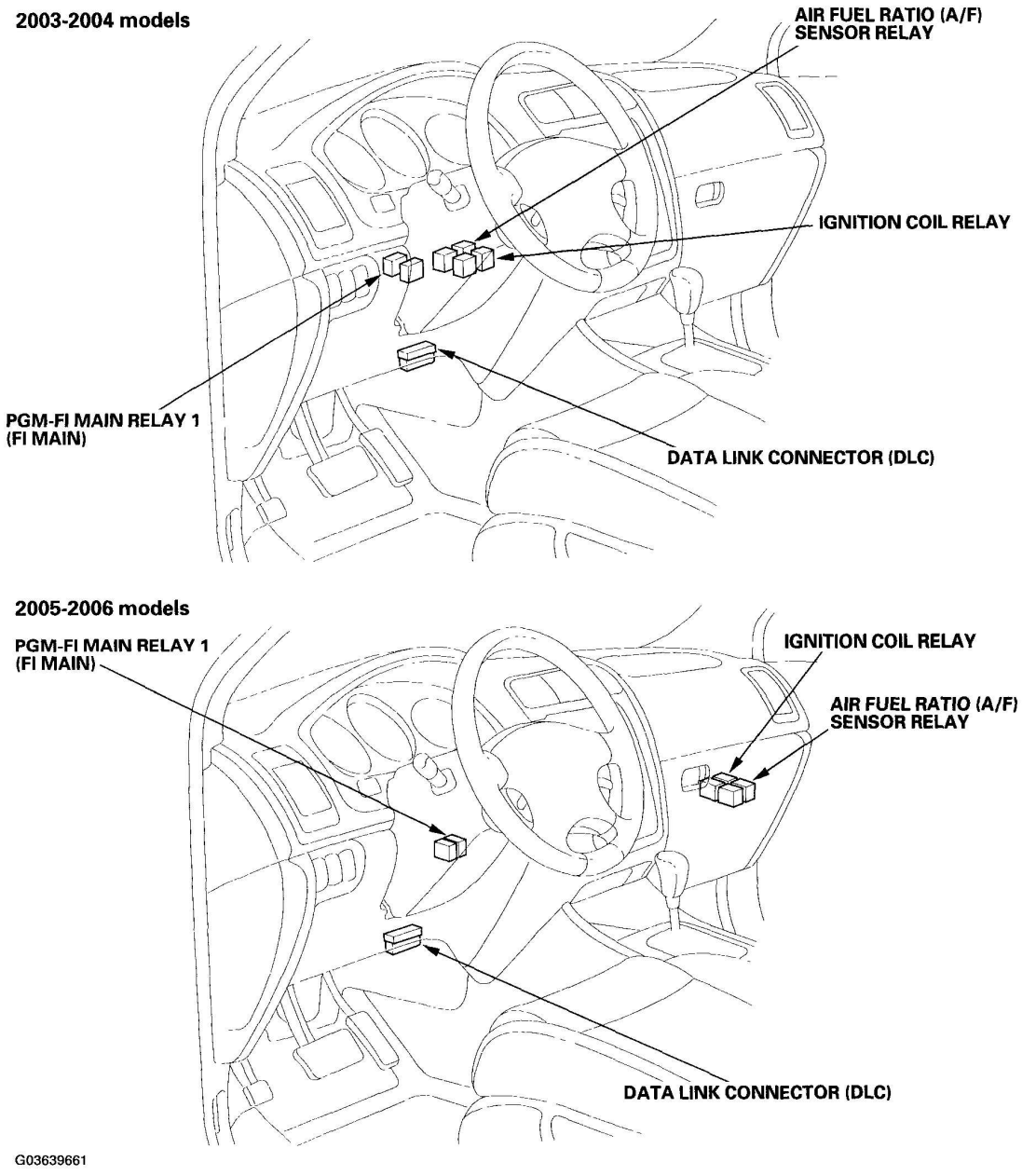


Fig. 3: Identifying PGM-FI System Component Locations (2003-04 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC CODES

DTC CHARTS

DTC	Description
DTC P0036, P0056	Rear Secondary HO2S (Bank 1, Sensor 2) Heater Circuit Malfunction; Front Secondary HO2S (Bank 2,

	Sensor 2) Heater Circuit Malfunction
DTC P0097	IAT Sensor 2 Circuit Low Voltage (2003-2004 models)
DTC P0098	IAT Sensor 2 Circuit High Voltage (2003-2004 models)
DTC P0107	MAP Sensor Circuit Low Voltage
DTC P0108	MAP Sensor Circuit High Voltage
DTC P0111	IAT Sensor Circuit Range/Performance Problem (2005-2006 models)
DTC P0112	IAT Sensor 1 Circuit Low Voltage (2003-2004 models)
DTC P0112	IAT Sensor Circuit Low Voltage (2005-2006 models)
DTC P0113	IAT Sensor 1 Circuit High Voltage (2003-2004 models)
DTC P0113	IAT Sensor Circuit High Voltage (2005-2006 models)
DTC P0116	ECT Sensor Range/Performance Problem (2003-2004 models)
DTC P0116	ECT Sensor Range/Performance Problem (2005-2006 models)
DTC P0117	ECT Sensor Circuit Low Voltage
DTC P0118	ECT Sensor Circuit High Voltage
DTC P0125	ECT Sensor Malfunction/Slow Response (2003-2004 models)
DTC P0125	ECT Sensor Malfunction/Slow Response (2005-2006 models)
DTC P0128	Cooling System Malfunction
DTC P0133, P0153	Rear A/F Sensor (Bank 1, Sensor 1) Slow Response; Front A/F Sensor (Bank 2, Sensor 1) Slow Response
DTC P0134, P0154	Rear A/F Sensor (Bank 1, Sensor 1) Heater System Malfunction; Front A/F Sensor (Bank 2, Sensor 1) Heater System Malfunction
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
DTC P0137, P0157	Rear Secondary HO2S (Bank 1, Sensor 2) Circuit Low Voltage (2003-2004 models); Front Secondary HO2S (Bank 2, Sensor 2) Circuit Low Voltage (2003-2004 models)
DTC P0137, P0157	Rear Secondary HO2S (Bank 1, Sensor 2) Circuit Low Voltage (2005-2006 models); Front Secondary HO2S (Bank 2, Sensor 2) Circuit Low Voltage (2005-2006 models)
DTC P0138, P0158	Rear Secondary HO2S (Bank 1, Sensor 2) Circuit

	High Voltage (2003-2004 models); Front Secondary HO2S (Bank 2, Sensor 2) Circuit High Voltage (2003-2004 models)
DTC P0138, P0158	Rear Secondary HO2S (Bank 1, Sensor 2) Circuit High Voltage (2005-2006 models); Front Secondary HO2S (Bank 2, Sensor 2) Circuit High Voltage (2005-2006 models)
DTC P0139, P0159	Rear Secondary HO2S (Bank 1, Sensor 2) Circuit Slow Response (2003-2004 models); Front Secondary HO2S (Bank 2, Sensor 2) Circuit Slow Response (2003-2004 models)
DTC P0139, P0159	Rear Secondary HO2S (Bank 1, Sensor 2) Slow Response (2005-2006 models); Front Secondary HO2S (Bank 2, Sensor 2) Slow Response (2005-2006 models)
DTC P0141, P0161	Rear Secondary HO2S (Bank 1, Sensor 2) Heater Circuit Malfunction; Front Secondary HO2S (Bank 2, Sensor 2) Heater Circuit Malfunction
DTC P0171, P0172, P0174, P0175	Rear Bank (Bank 1) Fuel System Too Lean; Rear Bank (Bank 1) Fuel System Too Rich; Front Bank (Bank 2) Fuel System Too Lean; Front Bank (Bank 2) Fuel System Too Rich
DTC P0201, P0202, P0203, P0204, P0205, P0206	No. 1 Injector Circuit Malfunction; No. 2 Injector Circuit Malfunction; No. 3 Injector Circuit Malfunction; No. 4 Injector Circuit Malfunction; No. 5 Injector Circuit Malfunction; No. 6 Injector Circuit Malfunction
DTC P0300, P0301, P0302, P0303, P0304, P0305, P0306	Random Misfire and Any Combination of the Following; No. 1 Cylinder Misfire Detected; No. 2 Cylinder Misfire Detected; No. 3 Cylinder Misfire Detected; No. 4 Cylinder Misfire Detected; No. 5 Cylinder Misfire Detected; No. 6 Cylinder Misfire Detected
DTC P0301, P0302, P0303, P0304, P0305, P0306	No. 1 Cylinder Misfire Detected; No. 2 Cylinder Misfire Detected; No. 3 Cylinder Misfire Detected; No. 4 Cylinder Misfire Detected; No. 5 Cylinder Misfire Detected; No. 6 Cylinder Misfire Detected
DTC P0325	Knock Sensor Circuit Malfunction
DTC P0335, P0385	CKP Sensor A No Signal; CKP Sensor B No Signal
DTC P0339, P0389	CKP Sensor A Intermittent Interruption; CKP Sensor B Intermittent Interruption
DTC P0340	CMP Sensor No Signal
DTC P0344	CMP Sensor Intermittent Interruption
DTC P0563	PCM Power Source Circuit Unexpected Voltage
DTC P0603	PCM Internal Control Module (Keep Alive Memory

	(KAM) Error)
DTC P0630	VIN Not Programmed or Mismatch (2005-2006 models)
DTC P0641	Sensor Reference Voltage A Malfunction; DTC P0651: Sensor Reference Voltage B Malfunction
DTC P0657	A/F Sensor Relay Circuit Malfunction
DTC P0685	PCM Power Control Circuit/Internal Circuit Malfunction
DTC P0700	A/T Control System Malfunction
DTC P1109	BARO Sensor Circuit Out of Range High (2005-2006 models)
DTC P1116	ECT Sensor Performance Problem (2005-2006 models)
DTC P1128	MAP Sensor Signal Lower Than Expected
DTC P1129	MAP Sensor Signal Higher Than Expected
DTC P1172, P1174	Rear A/F Sensor (Bank 1, Sensor 1) Out of Range High (2005-2006 models); Front A/F Sensor (Bank 2, Sensor 1) Out of Range High (2005-2006 models)
DTC P1297	ELD Circuit Low Voltage
DTC P1298	ELD Circuit High Voltage
DTC P2195, P2197	Rear A/F Sensor (Bank 1, Sensor 1) Signal Stuck Lean; Front A/F Sensor (Bank 2, Sensor 1) Signal Stuck Lean
DTC P2199	IAT Sensor 1, 2 Correlation (2003-2004 models)
DTC P2227	BARO Sensor Circuit Range/Performance Problem
DTC P2228	BARO Sensor Circuit Low Voltage
DTC P2229	BARO Sensor Circuit High Voltage
DTC P2237, P2240	Rear A/F Sensor (Bank 1, Sensor 1) IP Line High Voltage; Front A/F Sensor (Bank 2, Sensor 1) IP Line High Voltage
DTC P2238, P2241	Rear A/F Sensor (Bank 1, Sensor 1) IP Line Low Voltage; Front A/F Sensor (Bank 2, Sensor 1) IP Line Low Voltage
DTC P2243, P2247	Rear A/F Sensor (Bank 1, Sensor 1) VCENT Line High Voltage; Front A/F Sensor (Bank 2, Sensor 1) VCENT Line High Voltage
DTC P2245, P2249	Rear A/F Sensor (Bank 1, Sensor 1) VCENT Line Low Voltage; Front A/F Sensor (Bank 2, Sensor 1) VCENT Line Low Voltage
DTC P2251, P2254	Rear A/F Sensor (Bank 1, Sensor 1) VS Line High Voltage; Front A/F Sensor (Bank 2, Sensor 1) VS Line High Voltage
DTC P2252, P2255	Rear A/F Sensor (Bank 1, Sensor 1) VS Line Low

	Voltage; Front A/F Sensor (Bank 2, Sensor 1) VS Line Low Voltage
DTC P2270, P2271, P2272, P2273	Rear Secondary HO2S (Bank 1, Sensor 2) Circuit Signal Stuck Lean (2005-2006 models); Rear Secondary HO2S (Bank 1, Sensor 2) Circuit Signal Stuck Rich (2005-2006 models); Front Secondary HO2S (Bank 2, Sensor 2) Circuit Signal Stuck Lean (2005-2006 models); Front Secondary HO2S (Bank 2, Sensor 2) Circuit Signal Stuck Rich (2005-2006 models)
DTC P2610	PCM Internal Power Off Timer Performance Problem
DTC P2627, P2630	Rear A/F Sensor (Bank 1, Sensor 1) LABEL Circuit Low Voltage; Front A/F Sensor (Bank 2, Sensor 1) LABEL Circuit Low Voltage
DTC P2628, P2631	Rear A/F Sensor (Bank 1, Sensor 1) LABEL Circuit High Voltage; Front A/F Sensor (Bank 2, Sensor 1) LABEL Circuit High Voltage
DTC P2A00, P2A03	Rear A/F Sensor (Bank 1, Sensor 1) Range/Performance Problem; Front A/F Sensor (Bank 2, Sensor 1) Range/Performance Problem
DTC U0073	F-CAN Malfunction (Bus-off)
DTC U0114	F-CAN Malfunction (VTM-4 Control Unit-PCM)
DTC U0122	F-CAN Malfunction (VSA Modulator-Control Unit-PCM)

DTC TROUBLESHOOTING

DTC P0036, P0056: REAR SECONDARY HO2S (BANK 1, SENSOR 2) HEATER CIRCUIT MALFUNCTION; 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 GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch 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 P0036 and/or P0056* indicated?

YES - Go to step 5.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM.

5. Turn the ignition switch OFF.
6. Disconnect the secondary HO2S (Sensor 2) 4P connector.
7. At the secondary HO2S (Sensor 2) side, measure resistance between secondary HO2S (Sensor 2) 4P connector terminals No. 3 and No. 4.

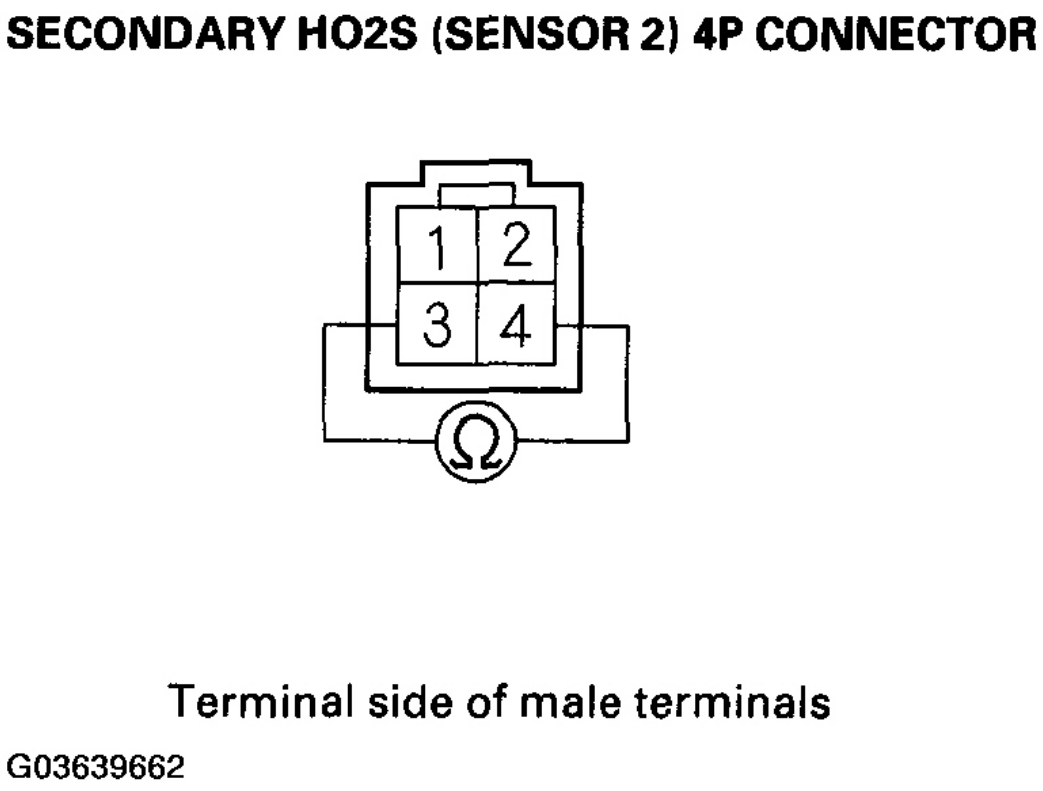


Fig. 4: Measuring Resistance Between Secondary HO2S (Sensor 2) 4P Connector Terminals 3 And 4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 5.4 - 6.6 ohm at room temperature?

YES - Go to step 8.
NO - Go to step 14 .

8. Check for continuity between body ground and secondary HO2S (Sensor 2) 4P connector terminals No. 3 and No. 4 individually.

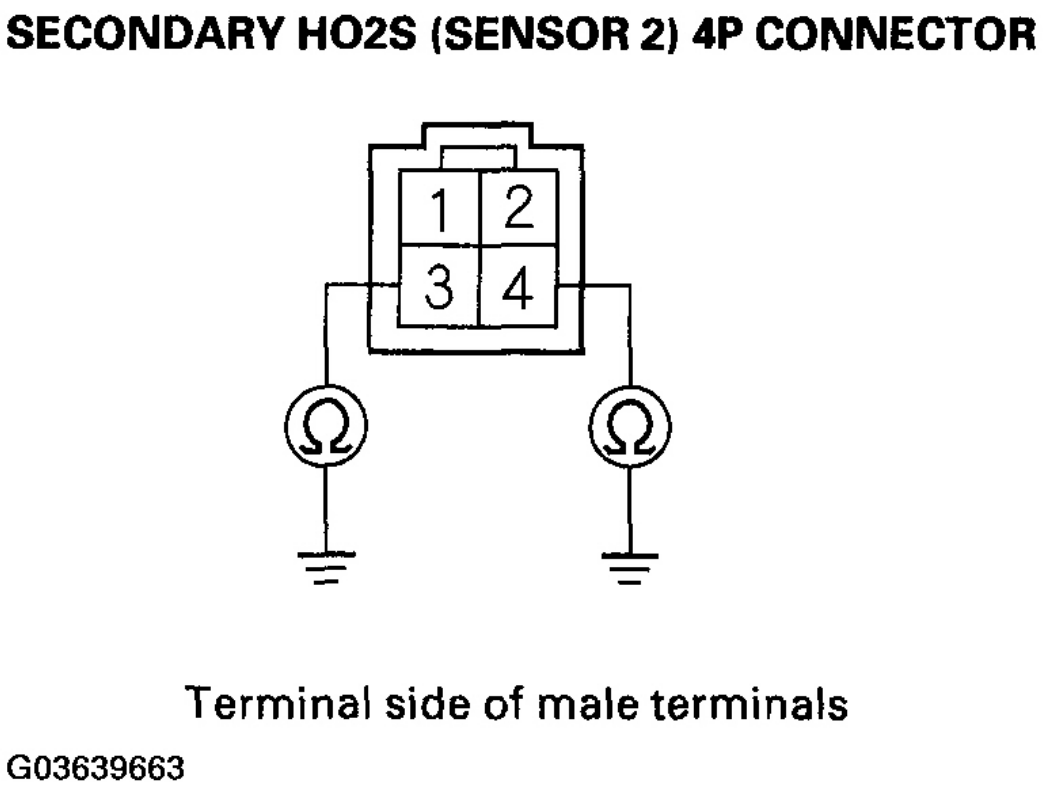


Fig. 5: Checking Continuity Between Body Ground And Secondary HO2S (Sensor 2) 4P Connector Terminals 3 And 4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 14 .
NO - Go to step 9.

9. Jump the SCS line with the HDS.
10. Disconnect PCM connector A (73P).
11. Check for continuity between PCM connector terminal A59 (A60)* and body ground.

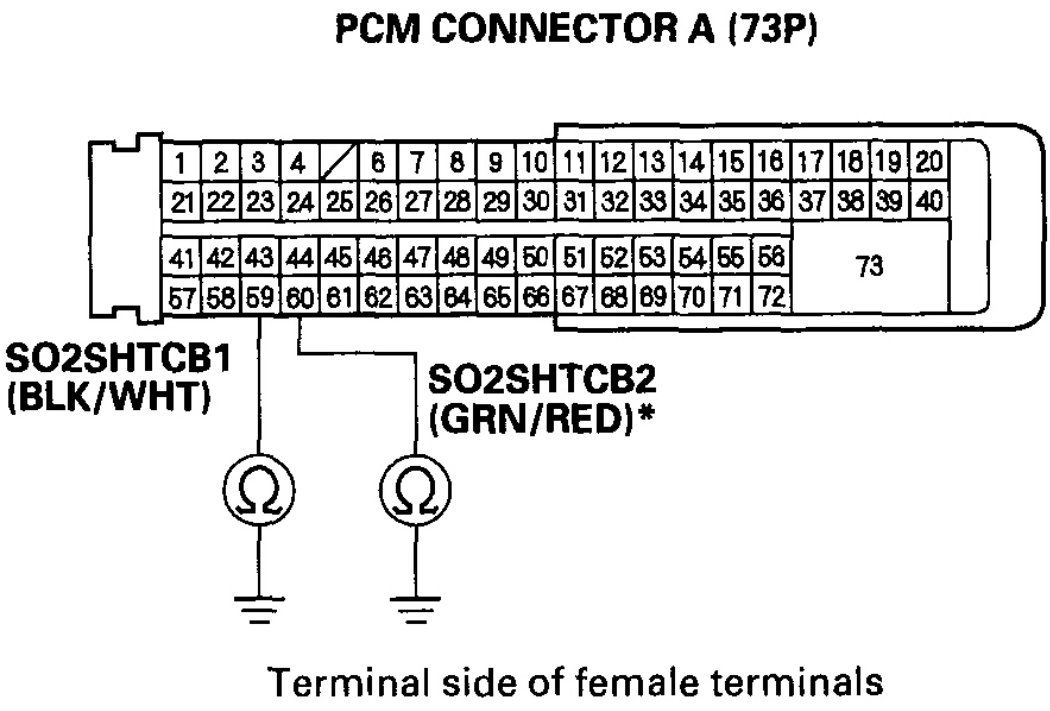


Fig. 6: Checking Continuity Between PCM Connector Terminal A59 (A60)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A59 (A60)*) and the secondary HO2S (Sensor 2), then go to step 15 .

NO - Go to step 12.

12. Connect secondary HO2S (Sensor 2) 4P connector terminal No. 3 to body ground with a jumper wire.

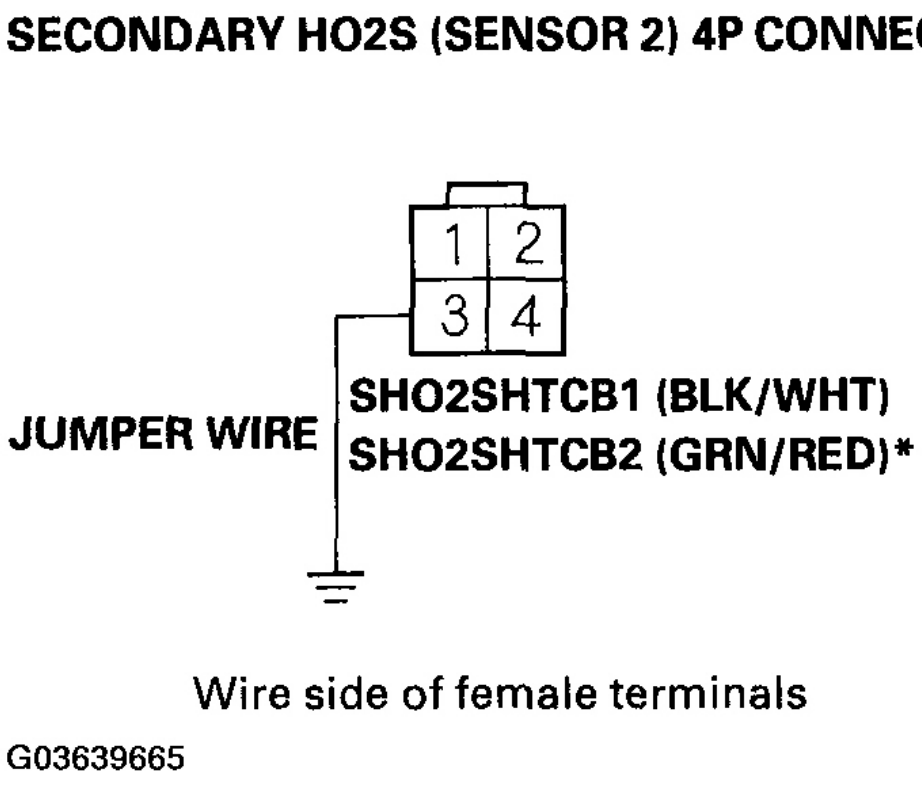


Fig. 7: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Check for continuity between PCM connector terminal A59 (A60)* and body ground.

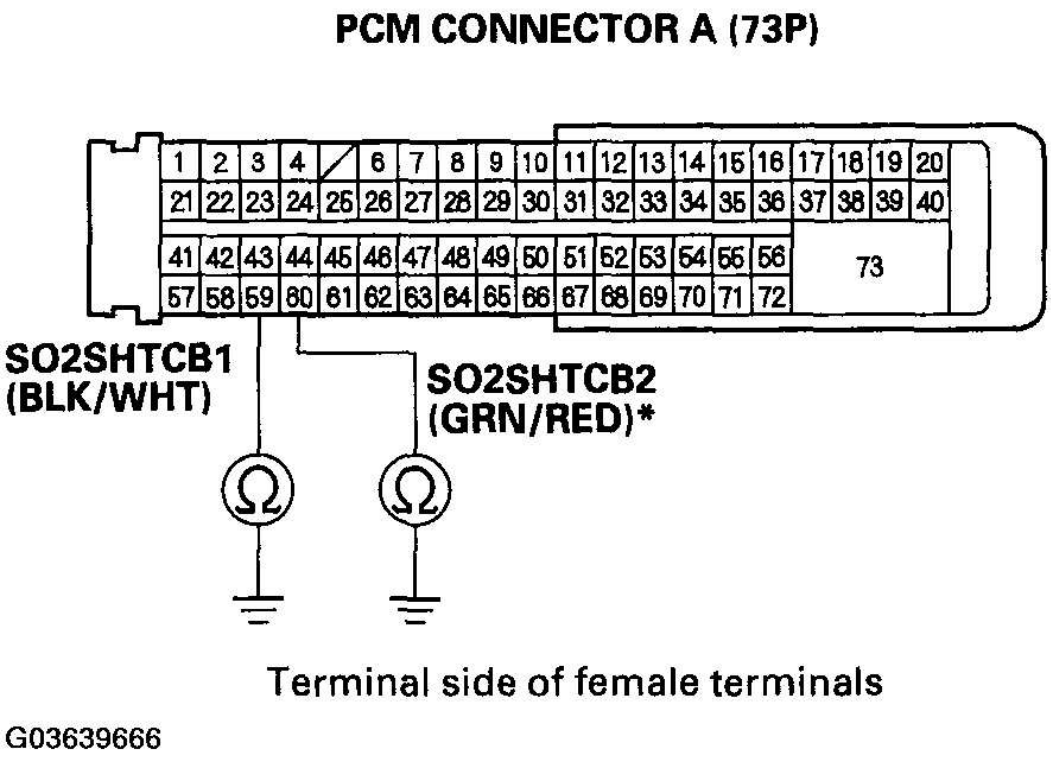


Fig. 8: Checking Continuity Between PCM Connector Terminal A59 (A60)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 20 .

NO - Repair open in the wire between the PCM (A59 (A60)*) and the secondary HO2S (Sensor 2), then go to step 15 .

14. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
15. Reconnect all connectors.
16. Turn the ignition switch ON (II).
17. Reset the PCM with the HDS.
18. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
19. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0036 and/or P0056* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or

DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 20.

20. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
21. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0036 and/or P0056* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0097: IAT SENSOR 2 CIRCUIT LOW VOLTAGE (2003-2004 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check IAT SENSOR 2 in the DATA LIST with the HDS.

Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

YES - Go to step 3.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at IAT sensor 2 and the PCM.

3. Turn the ignition switch OFF.
4. Disconnect IAT sensor 2 2P connector.
5. Turn the ignition switch ON (II).
6. Check IAT SENSOR 2 in the DATA LIST with the HDS.

Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

YES - Go to step 7.

NO - Go to step 11 .

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector A (73P).
10. Check for continuity between IAT sensor 2 2P connector terminal No. 1 and body ground.

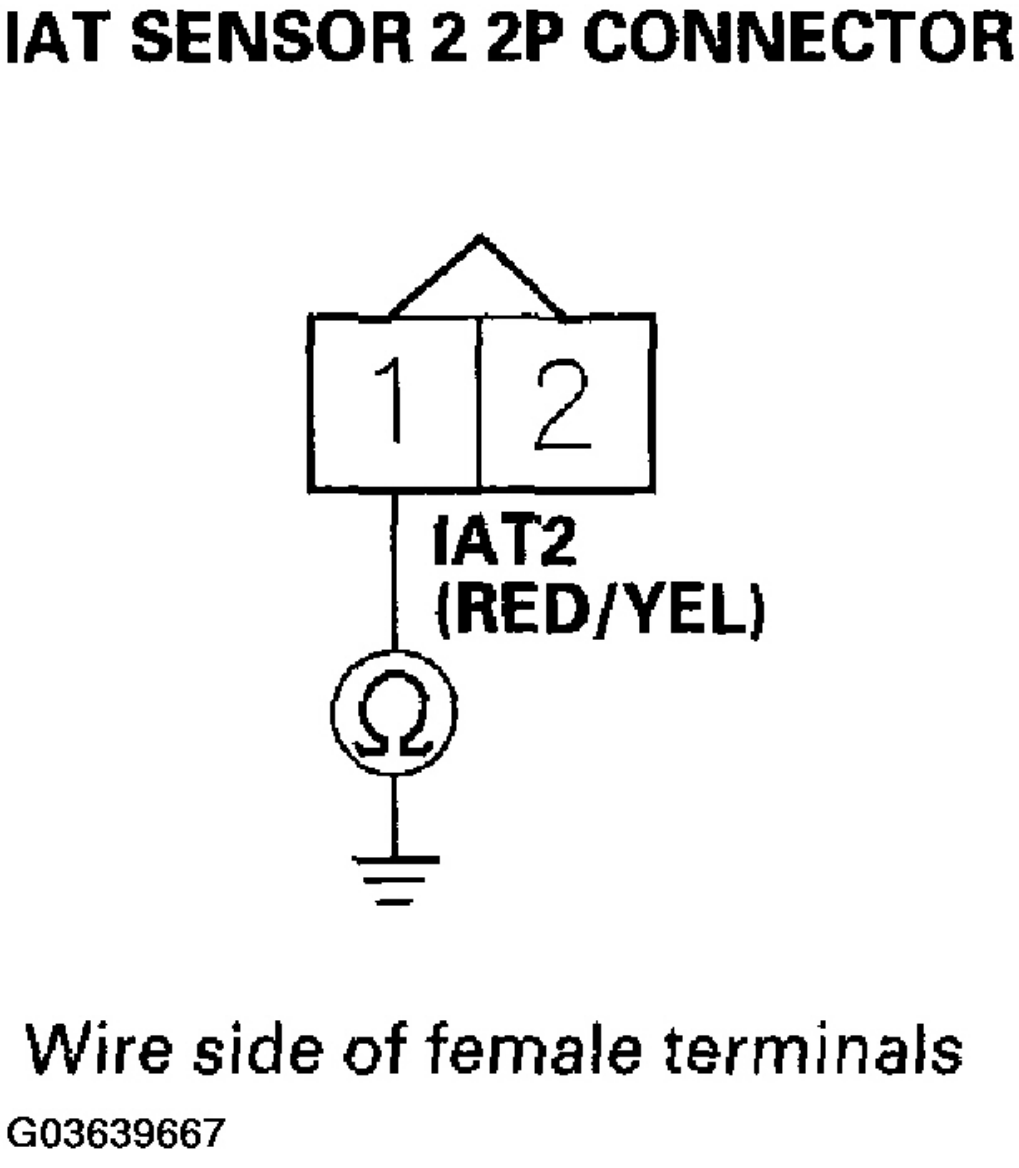


Fig. 9: Checking Continuity Between IAT Sensor 2 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between IAT sensor 2 and the PCM (A24), then go to step 13 .
NO - Go to step 17 .

11. Turn the ignition switch OFF.

12. Replace IAT sensor 2 (see **IAT SENSOR/IAT SENSOR 2 REPLACEMENT**).
13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
16. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0097 is indicated, check for poor connections or loose terminals at IAT sensor 2 and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
17. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
18. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0097 is indicated, check for poor connections or loose terminals at IAT sensor 2 and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0098: IAT SENSOR 2 CIRCUIT HIGH VOLTAGE (2003-2004 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check IAT SENSOR 2 in the DATA LIST with the HDS.

   Is about - 40°F (-40°C) or less, or 4.90 V or more indicated?

   YES - Go to step 3.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at IAT sensor 2 and the PCM.
3. Turn the ignition switch OFF.
4. Disconnect IAT sensor 2 2P connector.
5. Connect IAT sensor 2 2P connector terminals No. 1 and No. 2 with a jumper wire.

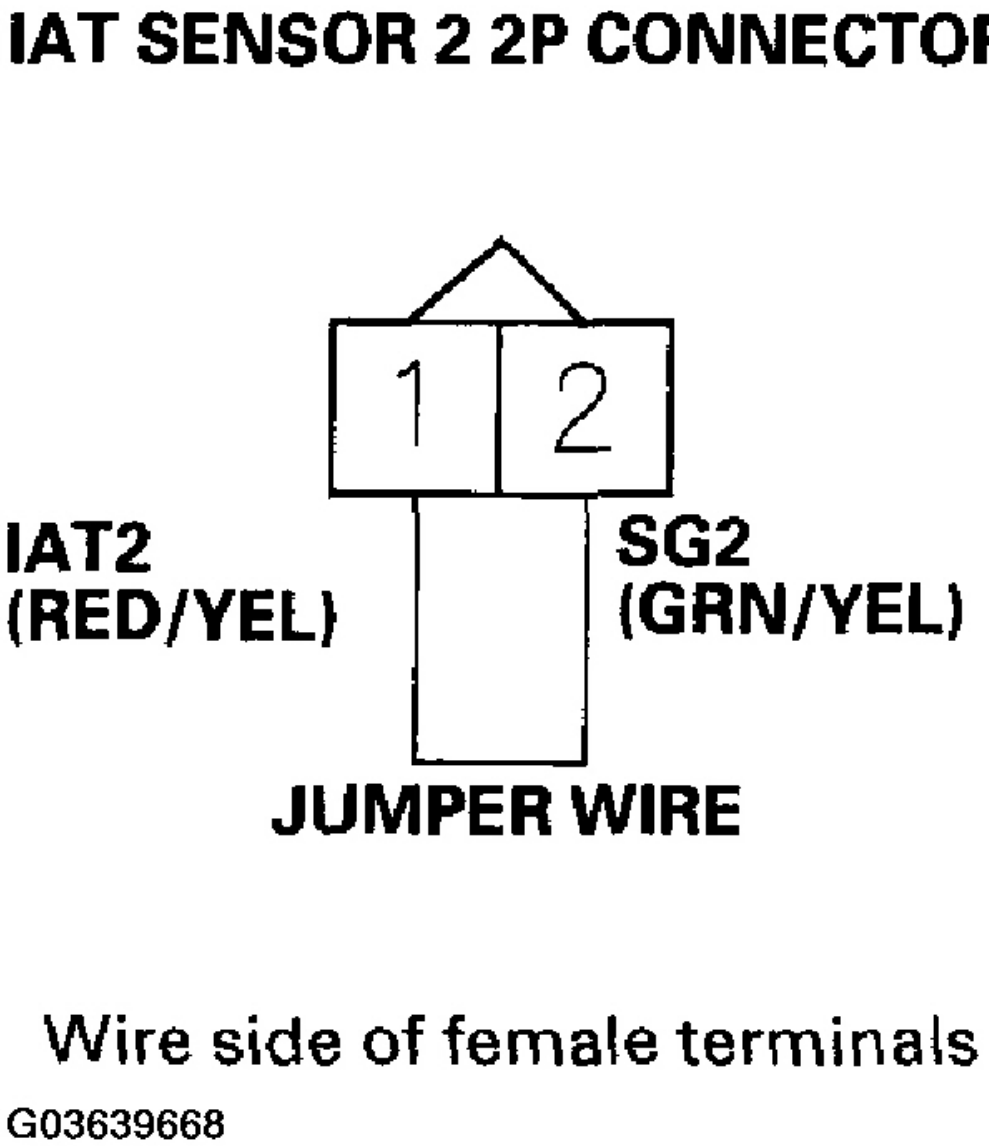


Fig. 10: Connecting IAT Sensor 2 2P Connector Terminals 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch ON (II).
7. Check IAT SENSOR 2 in the DATA LIST with the HDS.

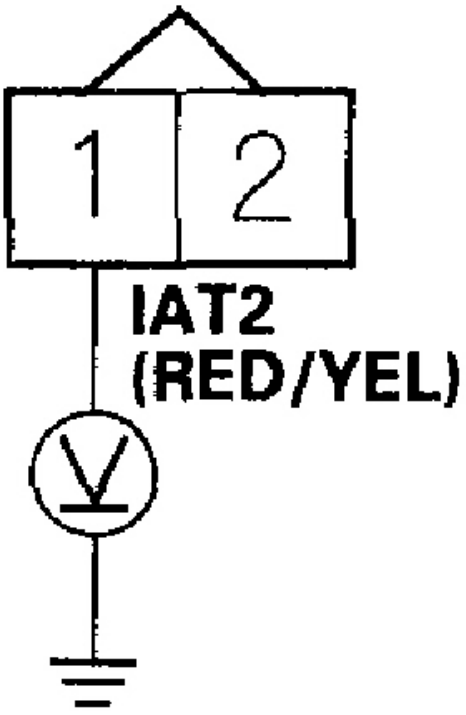
Is about - 40°F (-40 °C) or less, or 4.90 V or more indicated?

YES - Go to step 8.

NO - Go to step 16 .

8. Turn the ignition switch OFF.
9. Remove the jumper wire.
10. Turn the ignition switch ON (II).
11. Measure voltage between IAT sensor 2 2P connector terminal No. 1 and body ground.

IAT SENSOR 2 2P CONNECTOR



Wire side of female terminals

G03639669

Fig. 11: Measuring Voltage Between IAT Sensor 2 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair open in the wire between the PCM (A24) and IAT sensor 2, then go to step 18 .
NO - Go to step 12.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A24 and IAT sensor 2 2P connector terminal No. 1.

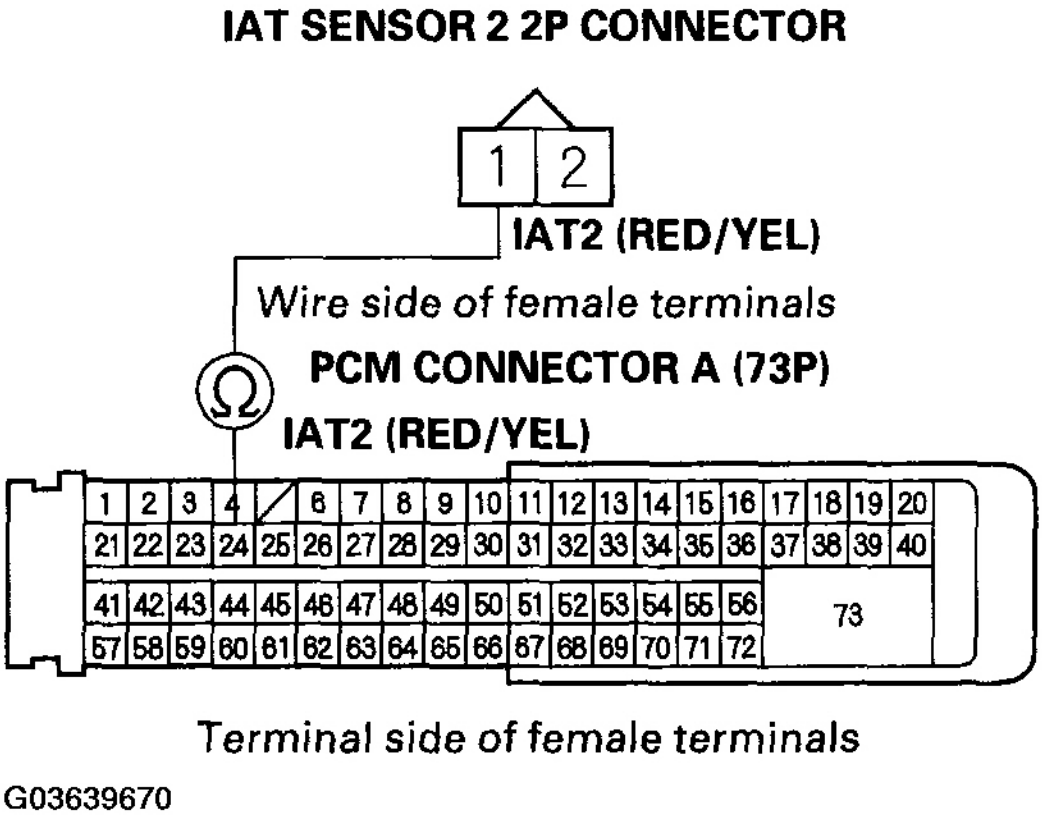


Fig. 12: Checking Continuity Between PCM Connector Terminal A24 And IAT Sensor 2 2P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 22 .

NO - Repair open in the wire between the PCM (A24) and IAT sensor 2, then go to step 18 .

16. Turn the ignition switch OFF.
17. Replace IAT sensor 2 (see **IAT Sensor/IAT Sensor 2 Replacement**).
18. Turn the ignition switch ON (II).
19. Reset the PCM with the HDS.
20. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
21. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC is P0098 indicated, check for poor connections or loose terminals at IAT sensor 2 and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

22. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
23. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0098 is indicated, check for poor connections or loose terminals at IAT sensor 2 and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

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 GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC P0641 is indicated at the same time as DTC P0107, troubleshoot DTC P0641 first, then recheck for P0107.**

1. Turn the ignition switch 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, system is OK at this time. Check for poor connections or loose terminals

at the MAP sensor and the PCM.

3. Turn the ignition switch OFF.
4. Disconnect the MAP sensor 3P connector.
5. Turn the ignition switch 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 18 .
NO - Go to step 7.

7. Measure voltage between MAP sensor 3P connector terminals No. 1 and No. 3.

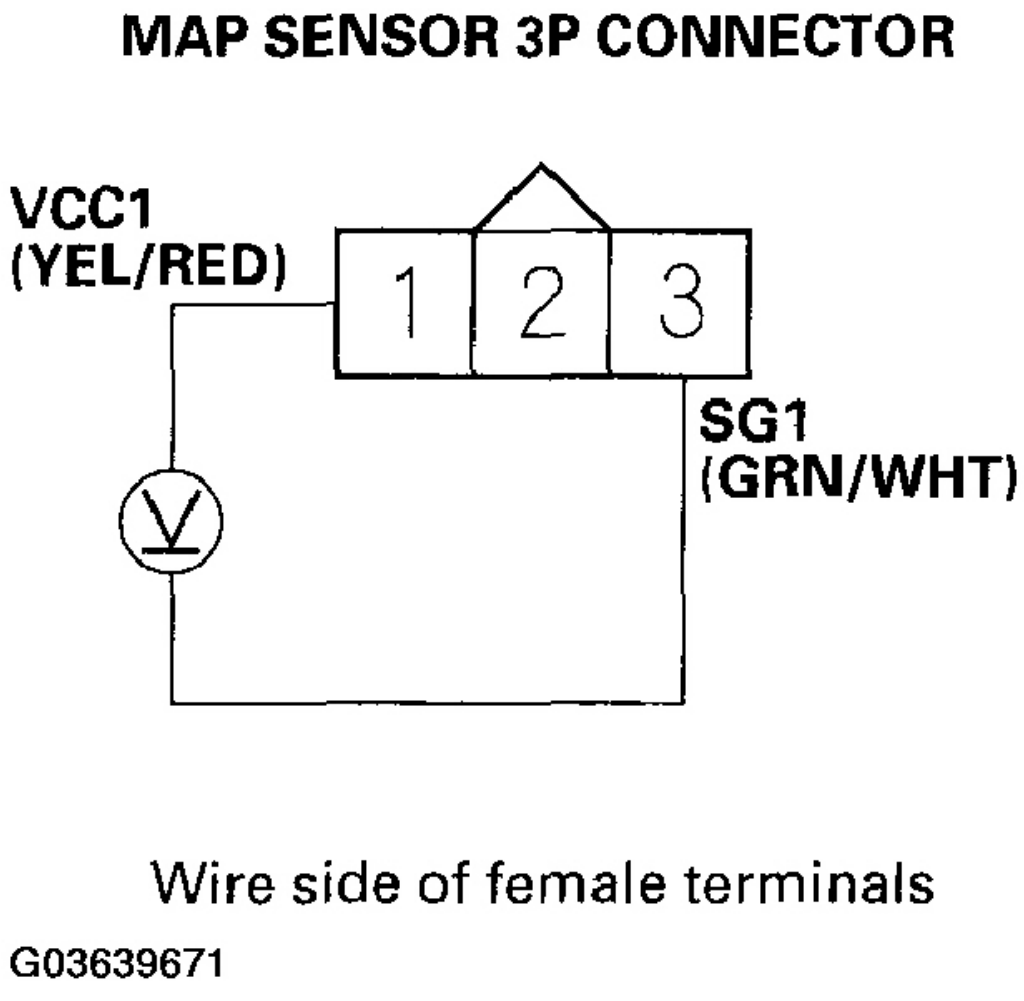


Fig. 13: Measuring Voltage Between MAP Sensor 3P Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 12 .
NO - Go to step 8.

8. Turn the ignition switch OFF.
9. Jump the SCS line with the HDS.
10. Disconnect PCM connector A (73P).
11. Check for continuity between PCM connector terminal A7 and MAP sensor 3P connector terminal No. 1.

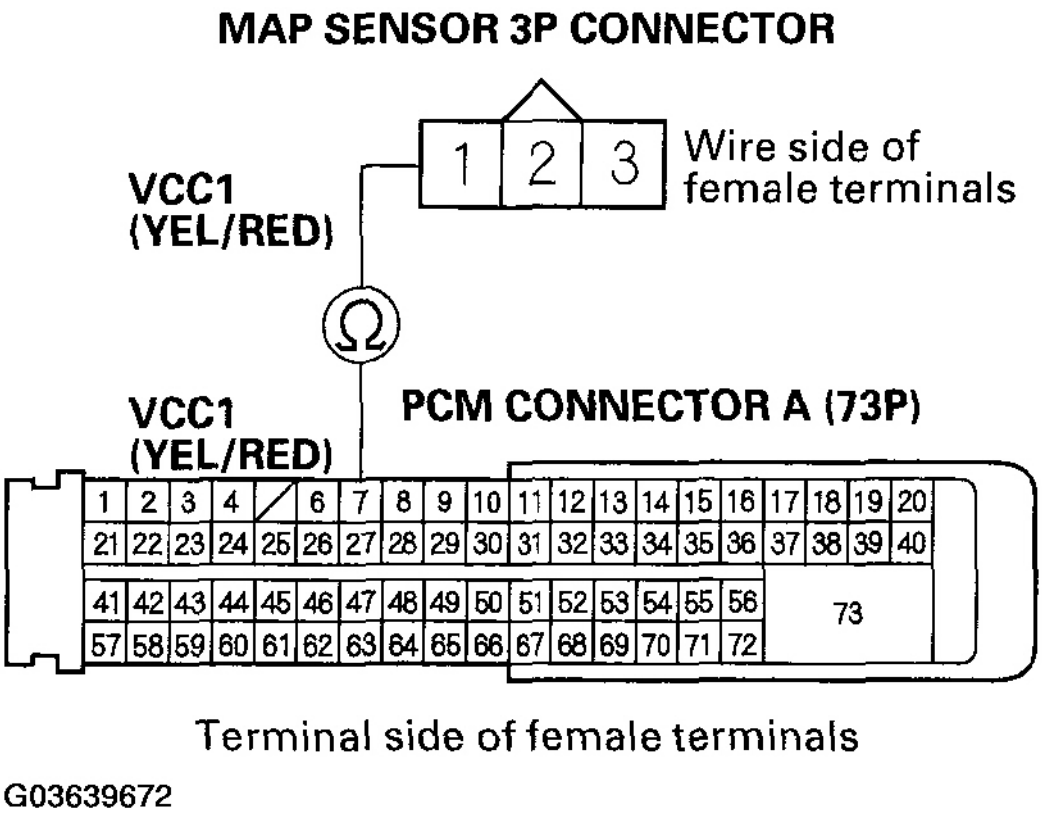


Fig. 14: Checking Continuity Between PCM Connector Terminal A7 And Map Sensor 3P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 22 .

NO - Repair open in the wire between the PCM (A7) and the MAP sensor, then go to step 14 .

12. Turn the ignition switch OFF.
13. Replace the MAP sensor (see **THROTTLE BODY DISASSEMBLY/REASSEMBLY**).
14. Turn the ignition switch ON (II).
15. Reset the PCM with the HDS.
16. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
17. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0107 is indicated, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

18. Turn the ignition switch OFF.
19. Jump the SCS line with the HDS.
20. Disconnect PCM connector A (73P).
21. Check for continuity between MAP sensor 3P connector terminal No. 2 and body ground.

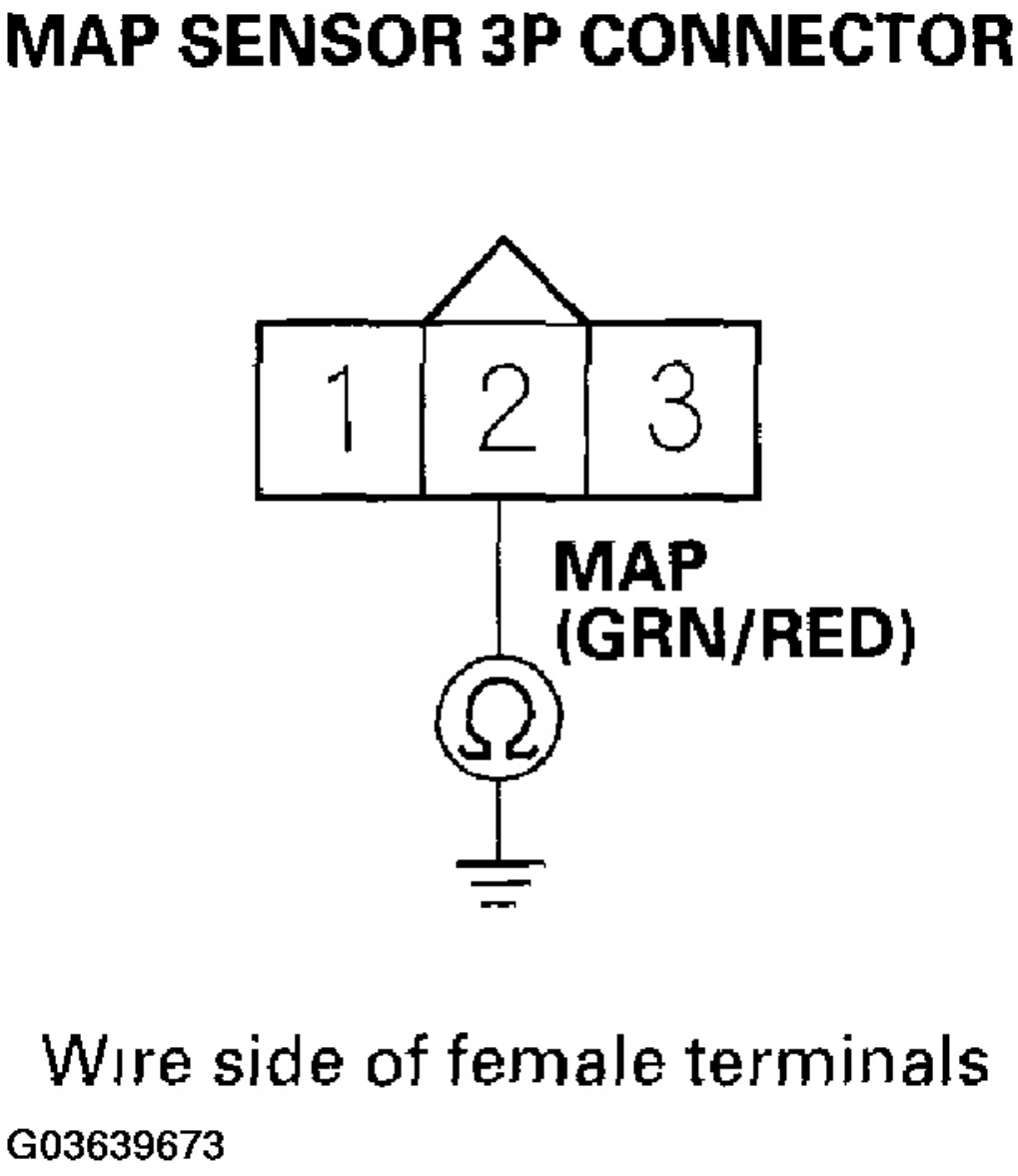


Fig. 15: Checking Continuity Between MAP Sensor 3P Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A6) and the MAP sensor, then go to step 14 .
NO - Go to step 22.

22. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
23. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0107 is indicated, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch 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, system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the PCM.

3. Turn the ignition switch OFF.
4. Disconnect the MAP sensor 3P connector.
5. Connect MAP sensor 3P connector terminals No. 2 and No. 3 with a jumper wire.

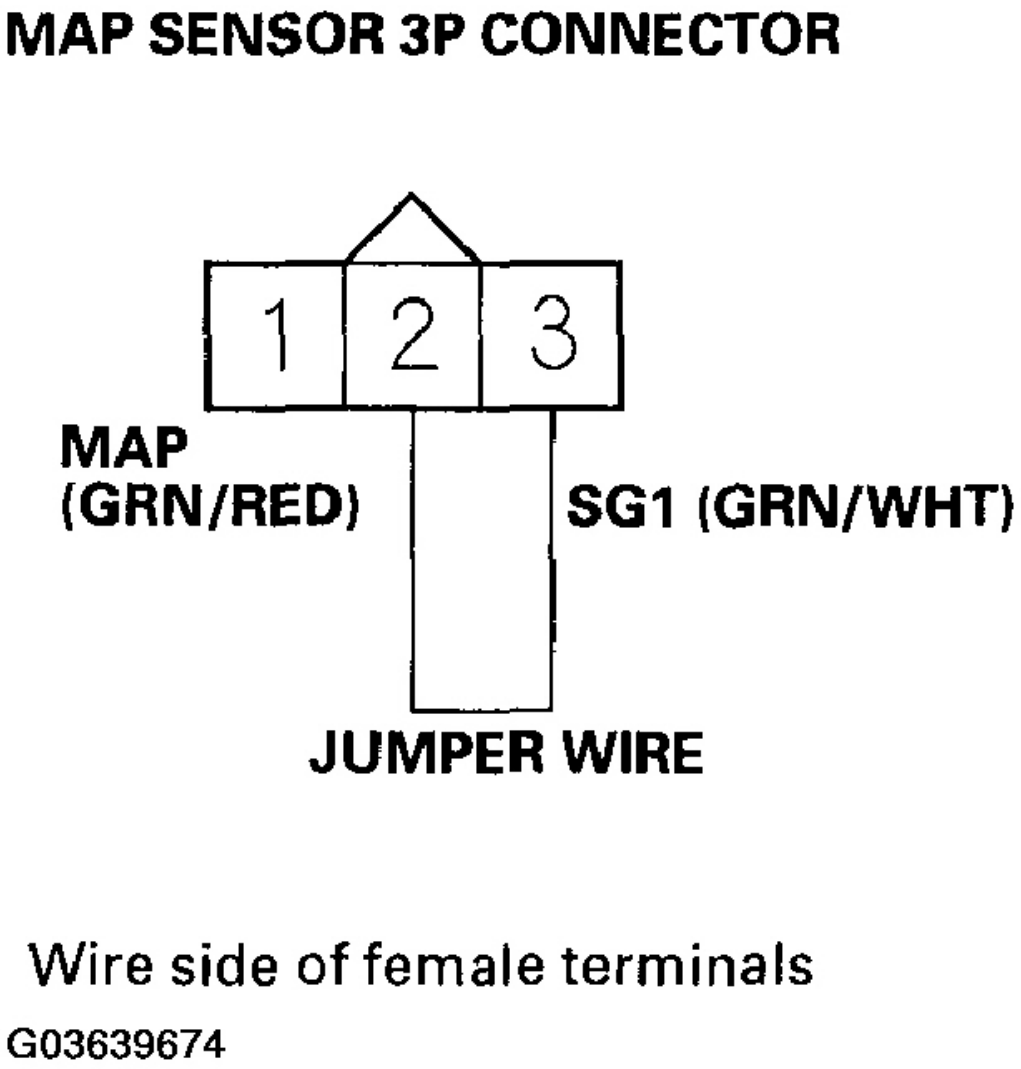


Fig. 16: Connecting MAP Sensor 3P Connector Terminals 2 And 3 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch 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 .

8. Remove the jumper wire.
9. Measure voltage between MAP sensor 3P connector terminals No. 1 and No. 3.

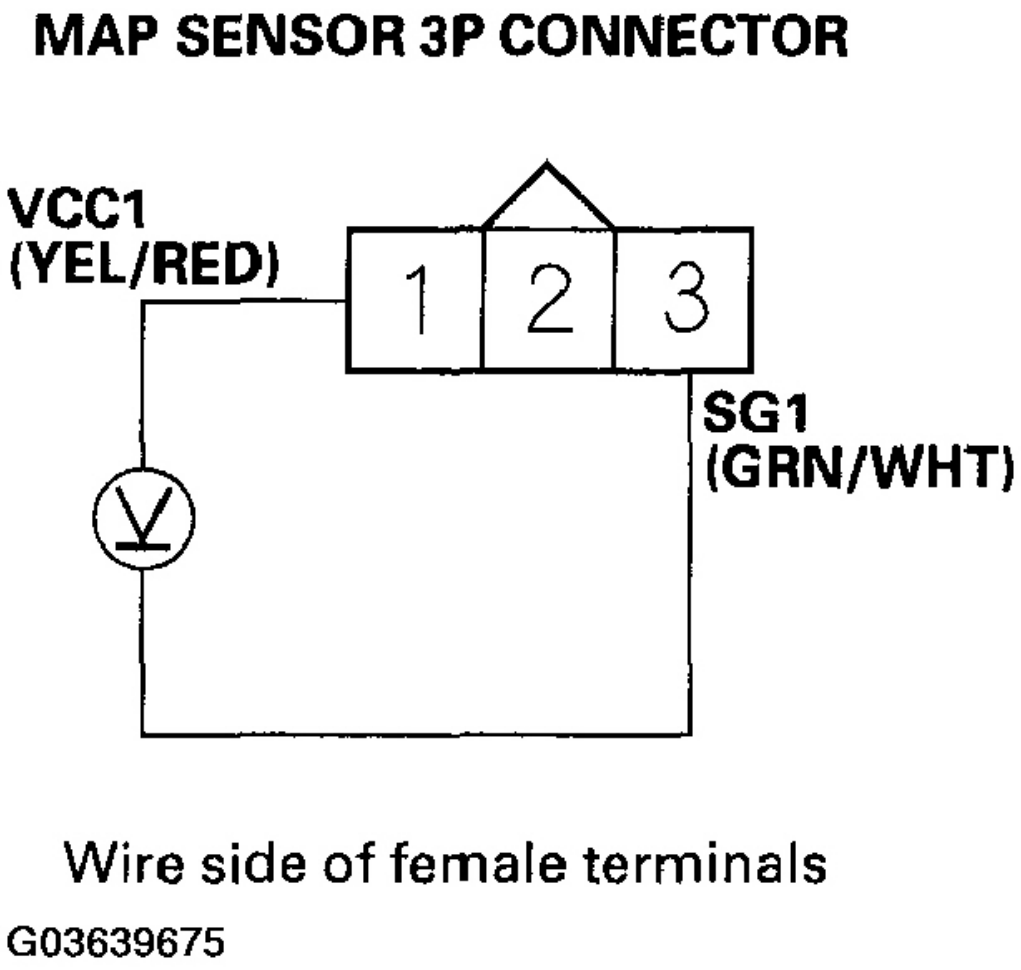


Fig. 17: Measuring Voltage Between MAP Sensor 3P Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 14 .
NO - Go to step 10.

10. Turn the ignition switch OFF.
11. Jump the SCS line with the HDS.

12. Disconnect PCM connector A (73P).
13. Check for continuity between PCM connector terminal A8 and MAP sensor 3P connector terminal No. 3.

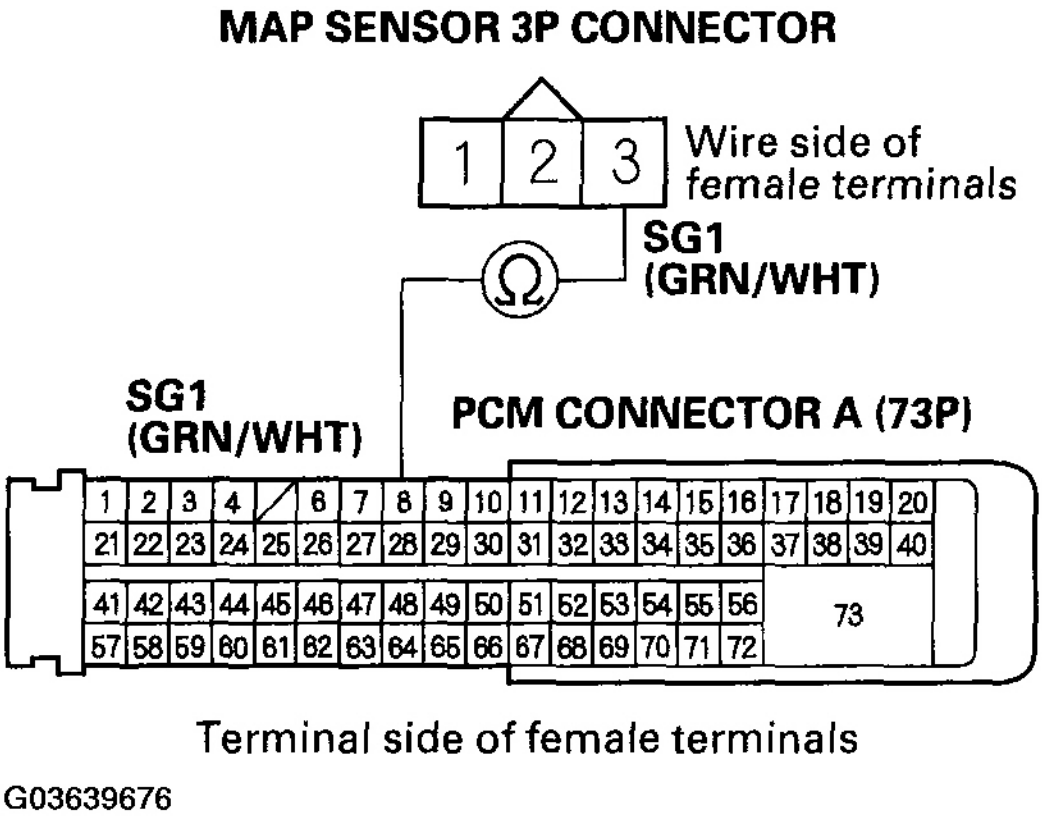


Fig. 18: Checking Continuity Between PCM Connector Terminal A8 And Map Sensor 3P Connector Terminal 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 25 .

NO - Repair open in the wire between the PCM (A8) and the MAP sensor, then go to step 20 .

14. Turn the ignition switch OFF.
15. Jump the SCS line with the HDS.
16. Disconnect PCM connector A (73P).
17. Check for continuity between PCM connector terminal A6 and MAP sensor 3P connector terminal No. 2.

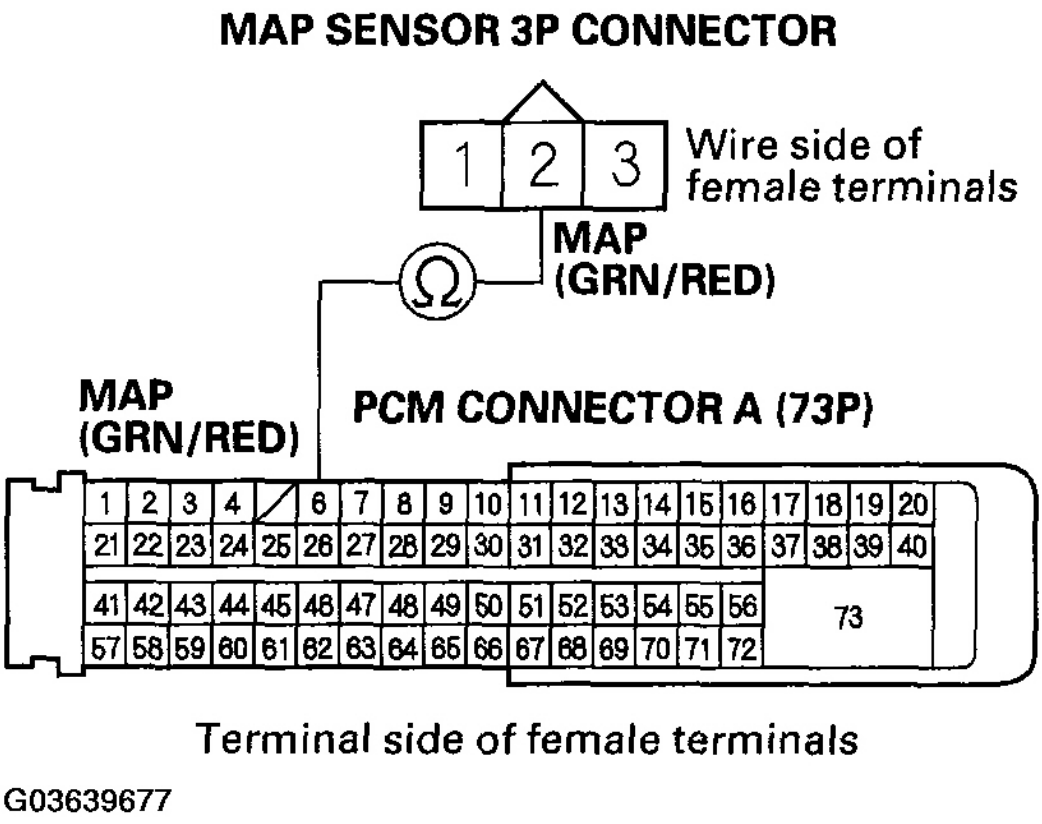


Fig. 19: Checking Continuity Between PCM Connector Terminal A6 And Map Sensor 3P Connector Terminal 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 25 .

NO - Repair open in the wire between the PCM (A6) and the MAP sensor, then go to step 20 .

18. Turn the ignition switch OFF.
19. Replace the MAP sensor (see **THROTTLE BODY DISASSEMBLY/REASSEMBLY**).
20. Reconnect all connectors.
21. Turn the ignition switch ON (II).
22. Reset the PCM with the HDS.
23. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
24. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0108 is indicated, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - Troubleshooting is complete.

25. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
26. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0108 is indicated, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0111: IAT SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (2005-2006 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Check for poor connections or loose terminals at the ECT sensor and the IAT sensor.

Are the connections and terminals OK?

YES - Go to step 2.

NO - Repair the connectors or terminals, then go to step 15 .

2. Remove the IAT sensor (see **IAT SENSOR/IAT SENSOR 2 REPLACEMENT**).
3. Allow IAT sensor to cool to ambient temperature.
4. Note the outside ambient temperature.
5. Connect the IAT sensor to the 2P connector, but do not install them in the intake air duct.
6. Turn the ignition switch 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 and the outside 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 IAT sensor from the 2P connector.
10. Using a heat gun, blow hot air on the MAP/IAT sensor for a few seconds. Do not apply heat longer than a

few seconds or you will damage the sensor.

11. Connect IAT sensor to the 2P connector, but do not install them in the intake air duct.
12. Check the IAT SENSOR in the DATA LIST with the HDS.

Does the IAT SENSOR change 58°F (32°C) or more?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the IAT sensor and the PCM.

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Replace the IAT sensor (see **IAT SENSOR/IAT SENSOR 2 REPLACEMENT**).
15. Turn the ignition switch ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
18. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0111 is indicated, check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

DTC P0112: IAT SENSOR 1 CIRCUIT LOW VOLTAGE (2003-2004 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check IAT SENSOR 1 in the DATA LIST with the HDS.

Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

YES - Go to step 3.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at IAT sensor 1 and the PCM.

3. Turn the ignition switch OFF.
4. Disconnect IAT sensor 1 2P connector.
5. Turn the ignition switch ON (II).
6. Check IAT SENSOR 1 in the DATA LIST with the HDS.

Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

YES - Go to step 7.
NO - Go to step 11 .

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector B (56P).
10. Check for continuity between IAT sensor 1 2P connector terminal No. 1 and body ground.

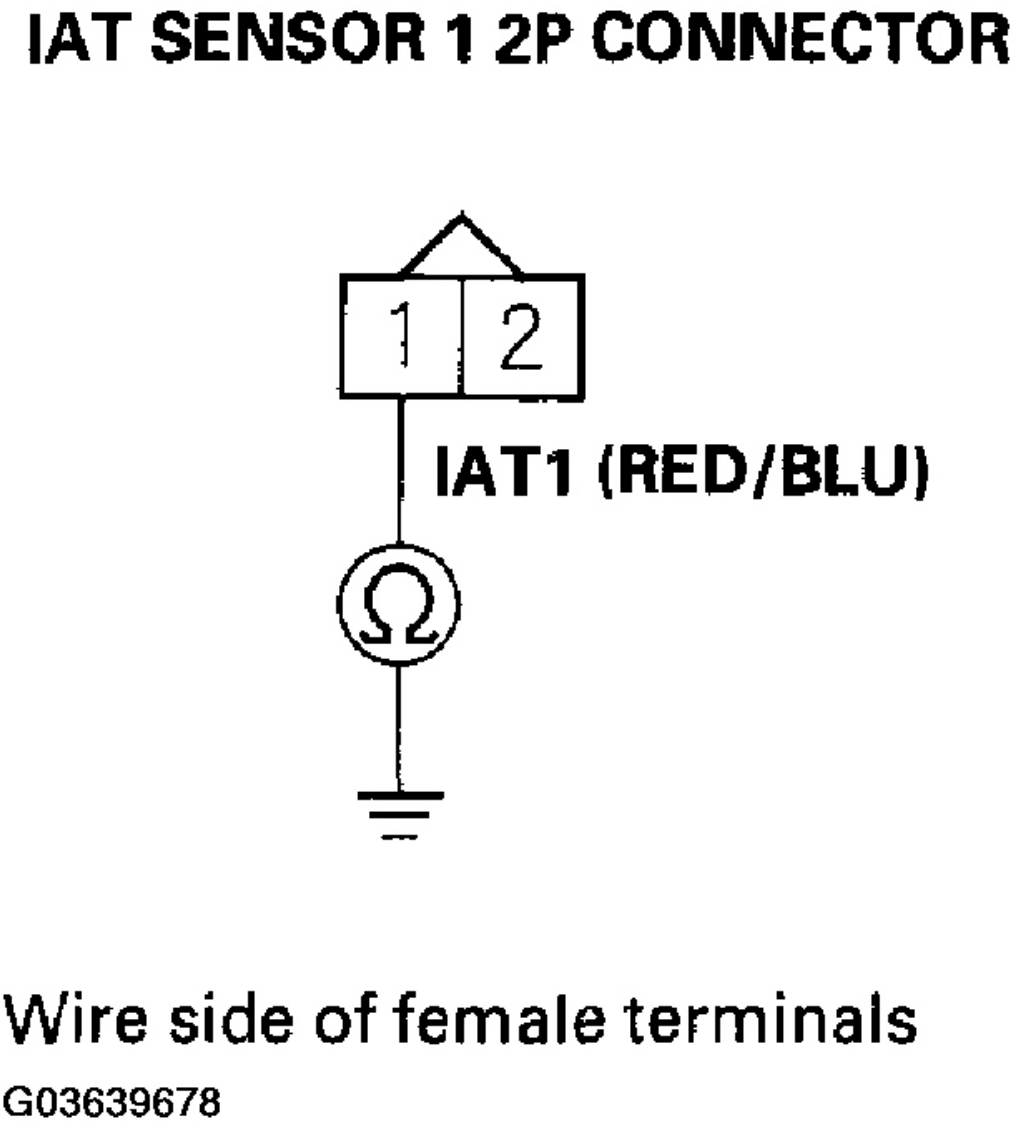


Fig. 20: Checking Continuity Between IAT Sensor 1 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between IAT sensor 1 and the PCM (B53), then go to step 13 .
NO - Go to step 18 .

11. Turn the ignition switch OFF.

12. Replace IAT sensor 1 (see **IAT SENSOR 1 REPLACEMENT**).
13. Reconnect all connectors.
14. Turn the ignition switch ON (II).
15. Reset the PCM with the HDS.
16. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
17. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0112 is indicated, check for poor connections or loose terminals at IAT sensor 1 and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
18. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
19. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0112 is indicated, check for poor connections or loose terminals at IAT sensor 1 and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0112: IAT SENSOR CIRCUIT LOW VOLTAGE (2005-2006 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the IAT SENSOR in the DATA LIST with the HDS.

   Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

   YES - Go to step 3.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the IAT sensor and the PCM.
3. Turn the ignition switch OFF.
4. Disconnect the IAT sensor 2P connector.
5. Turn the ignition switch ON (II).

6. Check the IAT SENSOR in the DATA LIST with the HDS.

   Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

   YES - Go to step 7.
   NO - Go to step 11 .
7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector A (73P).
10. Check for continuity between IAT sensor 2P connector terminal No. 1 and body ground.

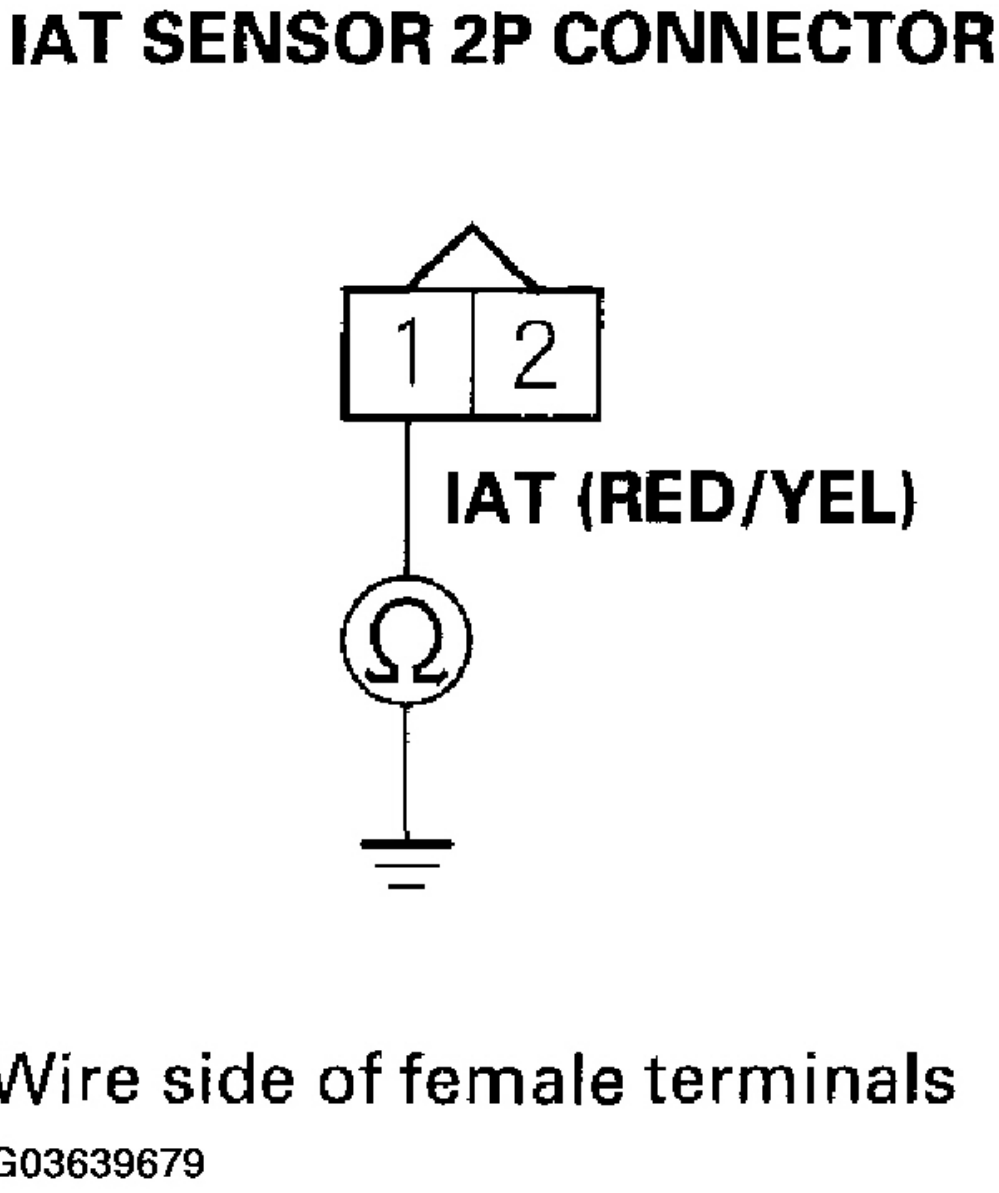


Fig. 21: Checking Continuity Between IAT Sensor 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the IAT sensor and the PCM (A24), then go to step 13 .
NO - Go to step 18 .

11. Turn the ignition switch OFF.
12. Replace the IAT sensor (see **IAT SENSOR/IAT SENSOR 2 REPLACEMENT**).
13. Reconnect all connectors.
14. Turn the ignition switch ON (II).
15. Reset the PCM with the HDS.
16. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
17. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0112 is indicated, check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
18. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
19. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0112 is indicated, check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0113: IAT SENSOR 1 CIRCUIT HIGH VOLTAGE (2003-2004 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check IAT SENSOR 1 in the DATA LIST with the HDS.

   Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

   YES - Go to step 3.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at IAT sensor 1 and the PCM.
3. Turn the ignition switch OFF.
4. Disconnect IAT sensor 1 2P connector.

5. Connect IAT sensor 1 2P connector terminals No. 1 and No. 2 with a jumper wire.

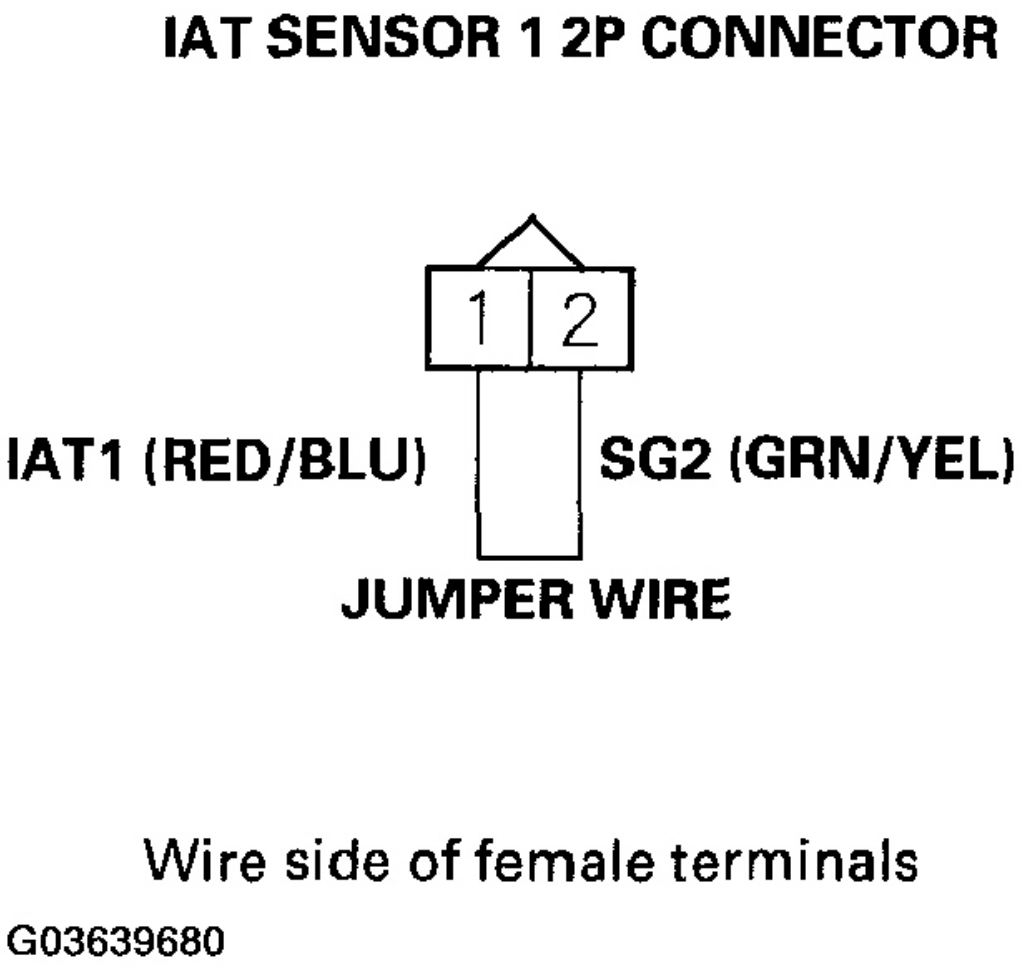


Fig. 22: Connecting IAT Sensor 1 2P Connector Terminals 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch ON (II).
7. Check IAT SENSOR 1 in the DATA LIST with the HDS.

Is about -40 °F (-40 °C) or less, or 4.90 V or more indicated?

YES - Go to step 8.
NO - Go to step 20 .

8. Turn the ignition switch OFF.
9. Remove the jumper wire.
10. Turn the ignition switch ON (II).
11. Measure voltage between IAT sensor 1 2P connector terminal No. 1 and body ground.

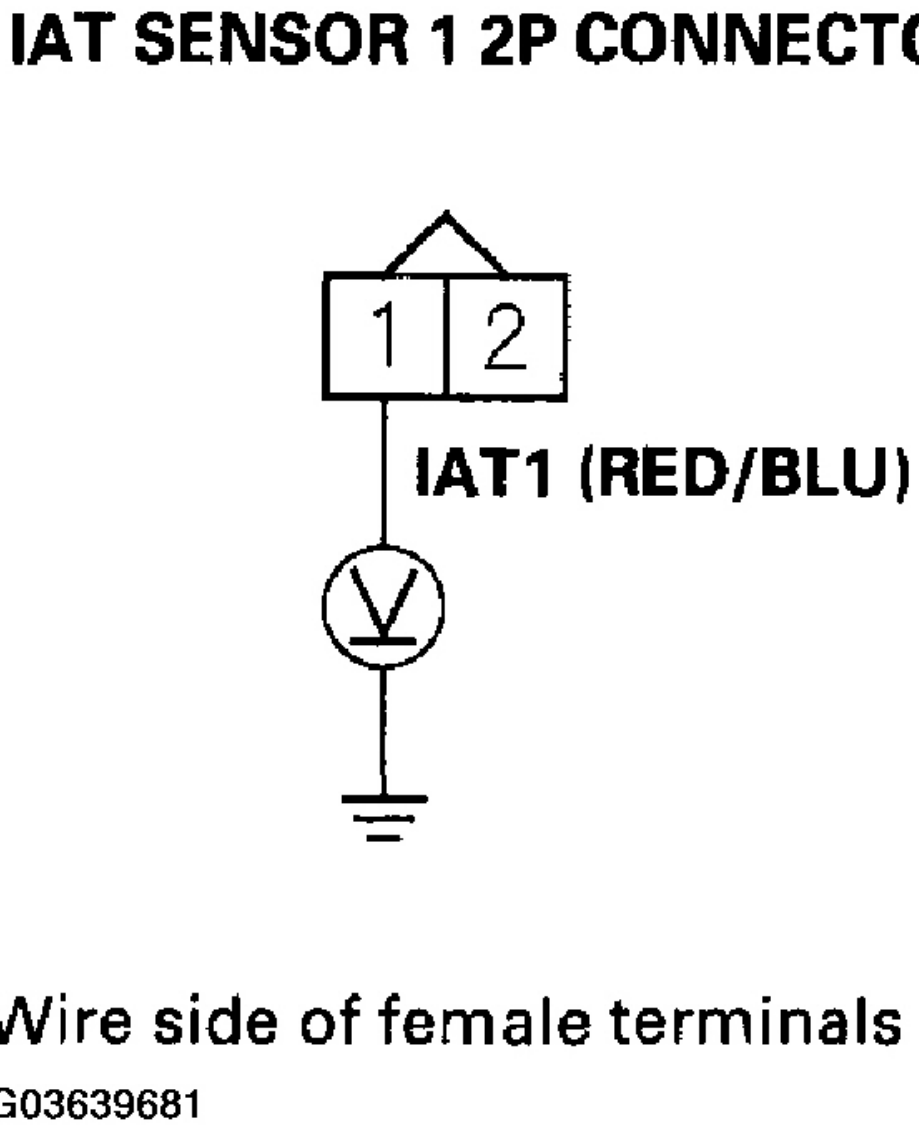


Fig. 23: Measuring Voltage Between IAT Sensor 1 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 12.
NO - Go to step 16 .

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A28 and IAT sensor 1 2P connector terminal No. 2.

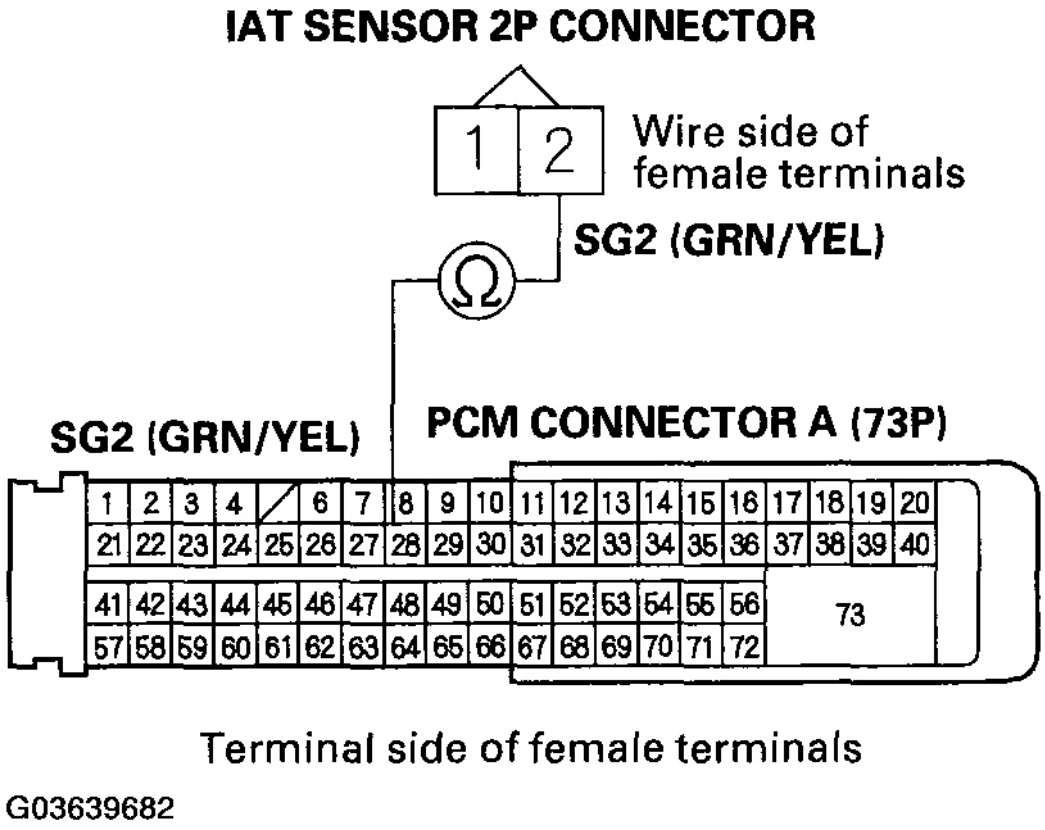


Fig. 24: Checking Continuity Between PCM Connector Terminal A28 And IAT Sensor 1 2P Connector Terminal 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 27 .

NO - Repair open in the wire between the PCM (A28) and IAT sensor 1, then go to step 22 .

16. Turn the ignition switch OFF.
17. Jump the SCS line with the HDS.
18. Disconnect PCM connector B (56P).
19. Check for continuity between PCM connector terminal B53 and IAT sensor 1 2P connector terminal No. 1.

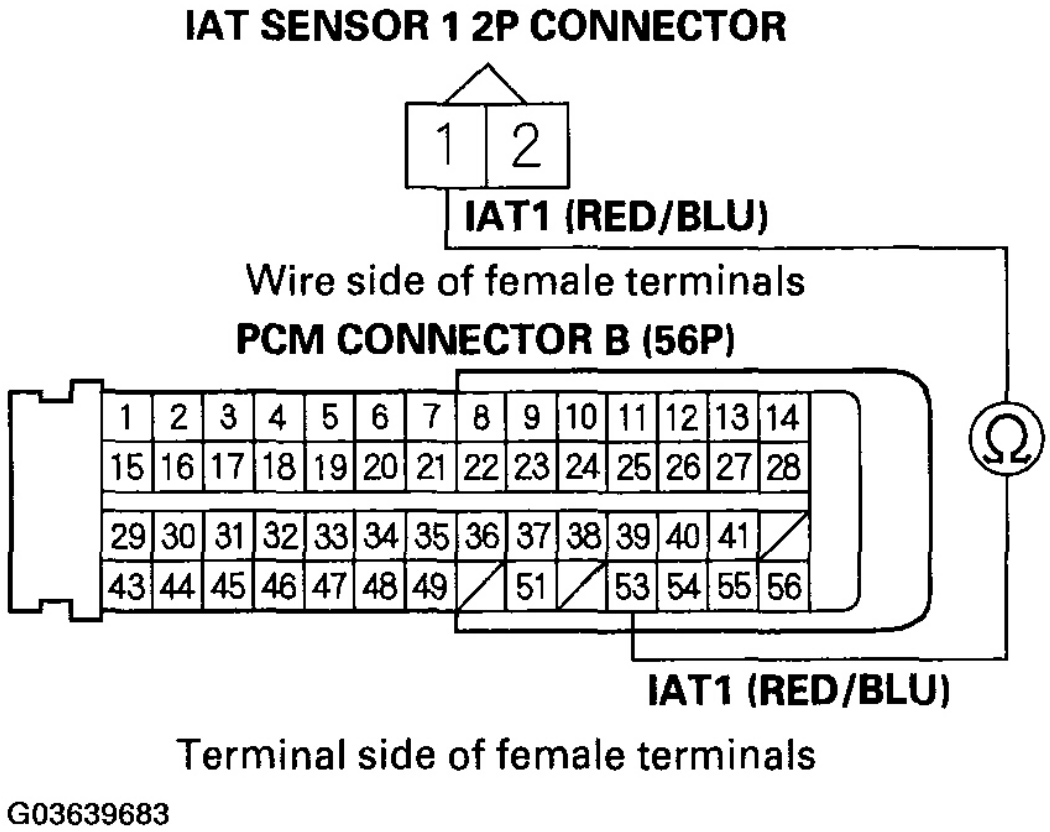


Fig. 25: Checking Continuity Between PCM Connector Terminal B53 And IAT Sensor 1 2P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 27 .

NO - Repair open in the wire between the PCM (B53) and IAT sensor 1, then go to step 22 .

20. Turn the ignition switch OFF.
21. Replace IAT sensor 1 (see **IAT SENSOR 1 REPLACEMENT**).

22. Reconnect all connectors.
23. Turn the ignition switch ON (II).
24. Reset the PCM with the HDS.
25. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
26. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0113 is indicated, check for poor connections or loose terminals at IAT sensor 1 and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    YES - Troubleshooting is complete.
27. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
28. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0113 is indicated, check for poor connections or loose terminals at IAT sensor 1 and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0113: IAT SENSOR CIRCUIT HIGH VOLTAGE (2005-2006 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the IAT SENSOR in the DATA LIST with the HDS.

   Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

   YES - Go to step 3.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the IAT sensor and the PCM.
3. Turn the ignition switch OFF.
4. Disconnect the IAT sensor 2P connector.
5. Connect IAT sensor 2P connector terminals No. 1 and No. 2 with a jumper wire.

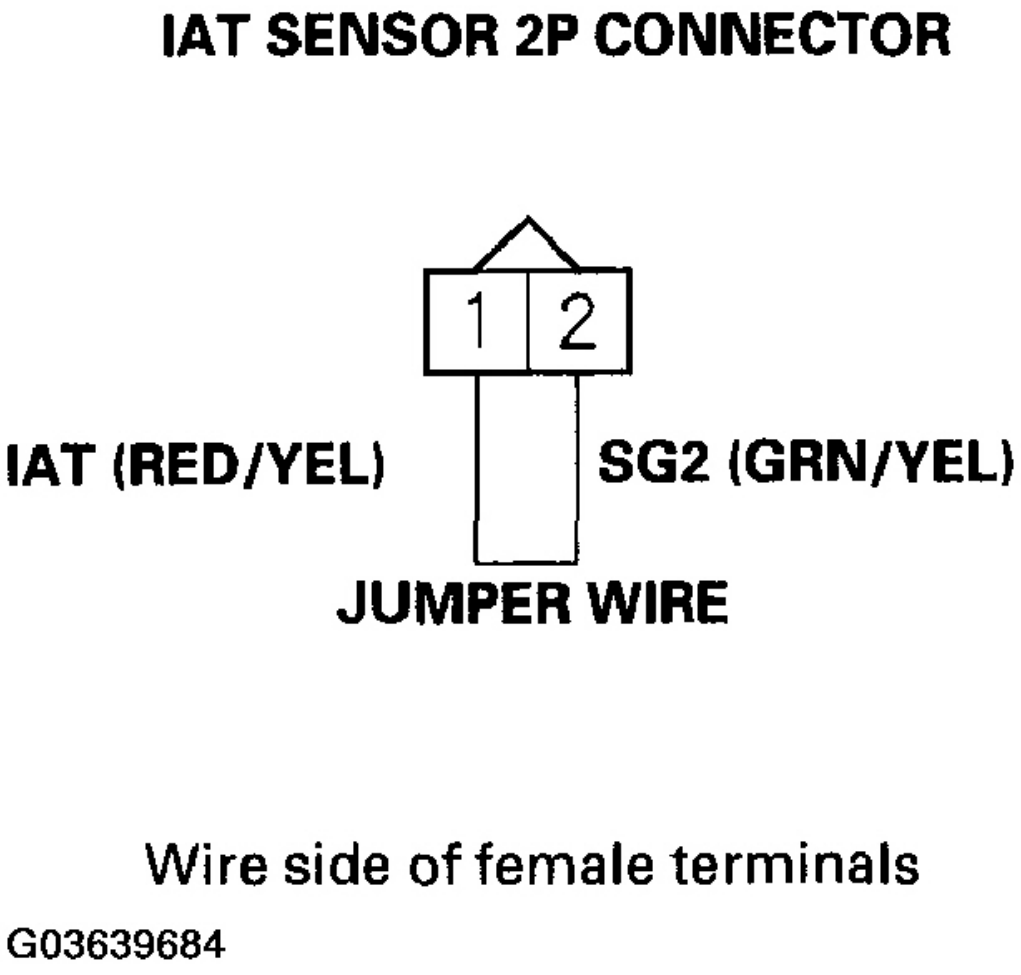


Fig. 26: Connecting IAT Sensor 2P Connector Terminals 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch ON (II).
7. Check the IAT SENSOR in the DATA LIST with the HDS.

Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

YES - Go to step 8.
NO - Go to step 20 .

8. Turn the ignition switch OFF.
9. Remove the jumper wire.

10. Turn the ignition switch ON (II).
11. Measure voltage between IAT sensor 2P connector terminal No. 1 and body ground.

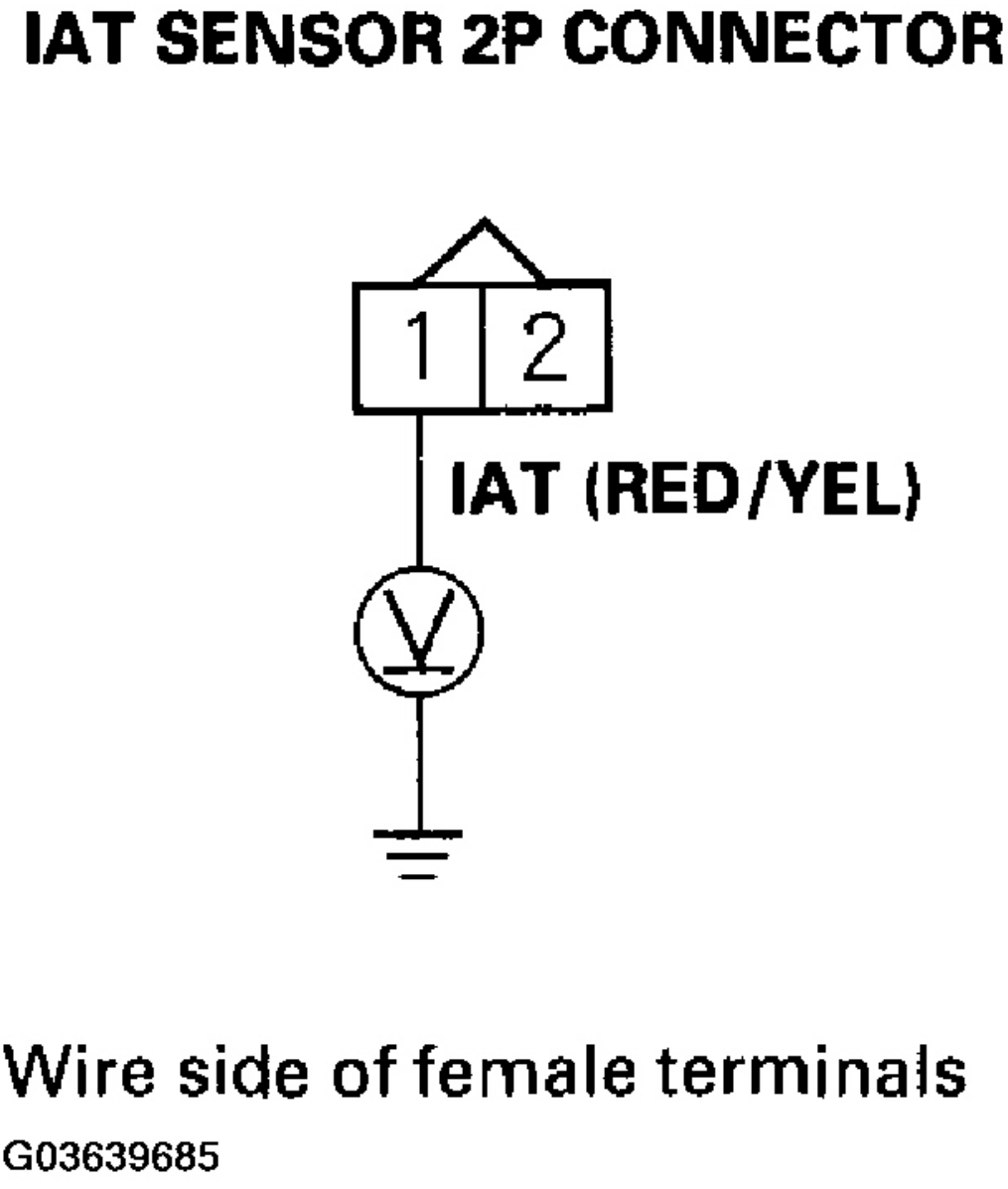


Fig. 27: Measuring Voltage Between IAT Sensor 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 12.

NO - Go to step 16 .

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A28 and IAT sensor 2P connector terminal No. 2.

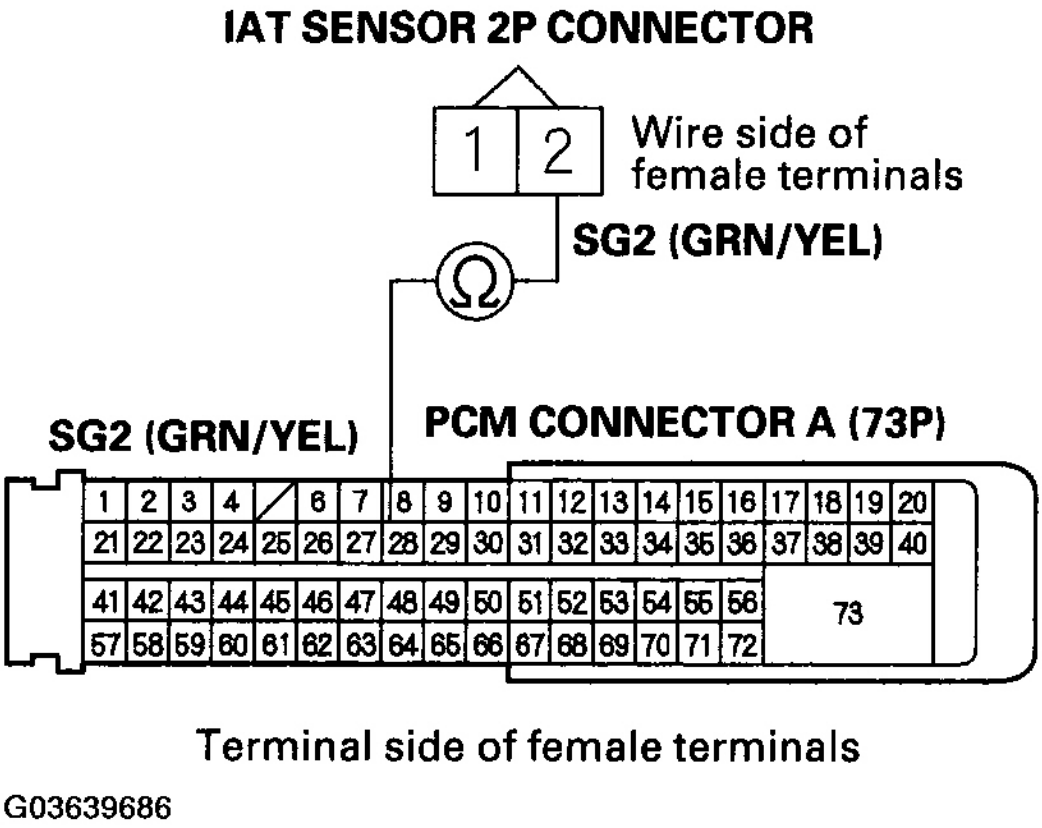


Fig. 28: Checking Continuity Between PCM Connector Terminal A28 And IAT Sensor 2P Connector Terminal 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 27 .

NO - Repair open in the wire between the PCM (A28) and the IAT sensor, then go to step 22 .

16. Turn the ignition switch OFF.

17. Jump the SCS line with the HDS.
18. Disconnect PCM connector A (73P).
19. Check for continuity between PCM connector terminal A24 and IAT sensor 2P connector terminal No. 1.

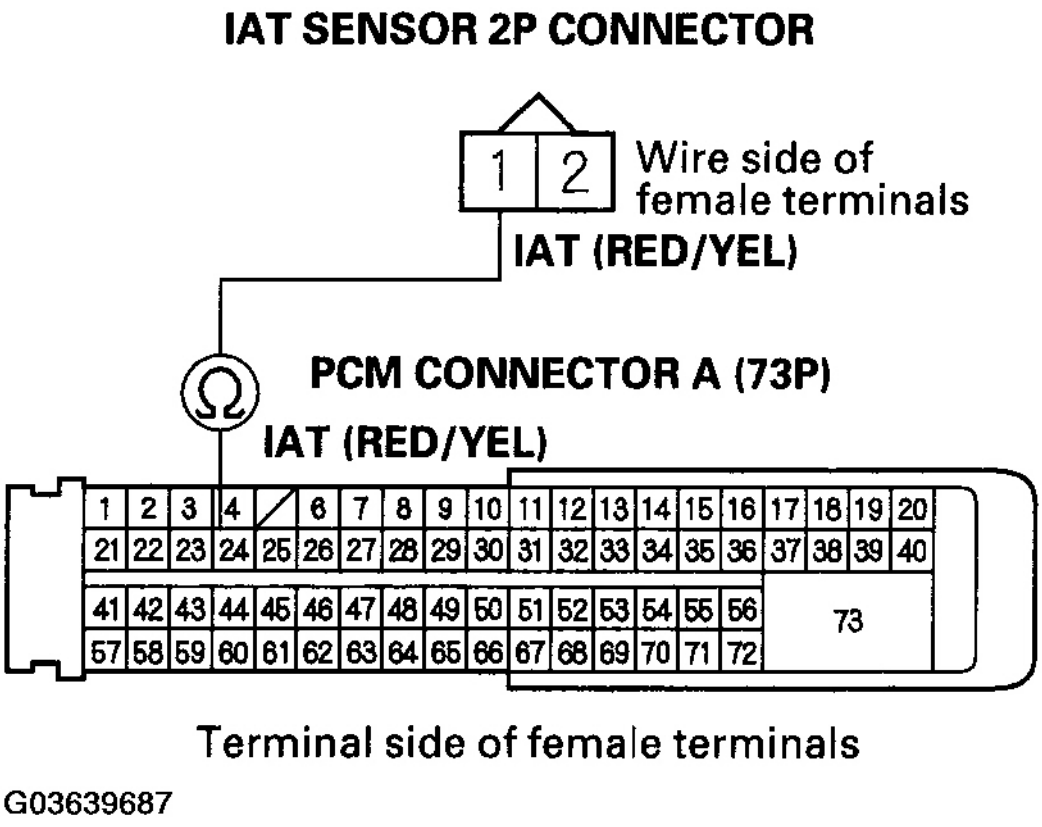


Fig. 29: Checking Continuity Between PCM Connector Terminal A24 And IAT Sensor 2P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 27 .

NO - Repair open in the wire between the PCM (A24) and the IAT sensor, then go to step 22 .

20. Turn the ignition switch OFF.
21. Replace the IAT sensor (see **IAT SENSOR/IAT SENSOR 2 REPLACEMENT**).
22. Reconnect all connectors.
23. Turn the ignition switch ON (II).
24. Reset the PCM with the HDS.

25. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
26. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0113 is indicated, check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
27. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
28. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0113 is indicated, check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0116: ECT SENSOR RANGE/PERFORMANCE PROBLEM (2003-2004 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the ECT SENSOR in the DATA LIST with the HDS.

   Is about 176°F (80°C) or higher, or 0.86 V or less indicated?

   YES - Go to step 3.

   NO - Go to step 7 .
3. Note current coolant temperature.
4. Turn the ignition switch OFF.
5. Cool the engine for 1 hour.
6. Check the ECT SENSOR in the DATA LIST with the HDS.

   Does the ECT change 5.4°F (3°C) or more?

   YES - Intermittent failure, system is OK at this time. Check the thermostat and the cooling system.

   NO - Go to step 10 .

7. Note current coolant temperature.
8. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
9. Check the ECT SENSOR in the DATA LIST with the HDS.

Does the ECT change 5.4°F (3°C) or more?

YES - Intermittent failure, system is OK at this time. Check the thermostat and the cooling system.

NO - Go to step 10.

10. Turn the ignition switch OFF.
11. Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**).
12. Turn the ignition switch ON (II).
13. Reset the PCM with the HDS.
14. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
15. Allow the engine to cool to between 19°F (-7°C) and 86°F (30°C).
16. Start the engine, and let it idle for 20 minutes.
17. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0116 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 18.

18. Monitor the OBD STATUS for DTC P0116 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 15 and recheck.

DTC P0116: ECT SENSOR RANGE/PERFORMANCE PROBLEM (2005-2006 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the ECT SENSOR in the DATA LIST with the HDS.

Is about 176°F (80°C) or higher, or 0.78 V or less indicated?

YES - Go to step 6 .

NO - Go to step 3.

3. Note the value of the ECT SENSOR in the DATA LIST with the HDS.
4. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
5. Check the ECT SENSOR in the DATA LIST with the HDS.

Does the ECT SENSOR change 18°F (10°C) or more?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the ECT sensor and the PCM.

NO - Go to step 11 .

6. Note the value of ECT SENSOR in the DATA LIST with the HDS.
7. Turn the ignition switch OFF.
8. Open the hood, and let the engine cool for 3 hours.
9. Turn the ignition switch ON (II).
10. Check the ECT SENSOR in the DATA LIST with the HDS.

Does ECT SENSOR change 18°F (10°C) or more?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the ECT sensor and the PCM.

NO - Go to step 11.

11. Turn the ignition switch OFF.
12. Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**).
13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
16. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0116 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

DTC P0117: ECT SENSOR CIRCUIT LOW VOLTAGE

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and

review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the ECT SENSOR in the DATA LIST with the HDS.

   Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

   YES - Go to step 3.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the ECT sensor and the PCM.
3. Turn the ignition switch OFF.
4. Disconnect the ECT sensor 2P connector.
5. Turn the ignition switch ON (II).
6. Check the ECT SENSOR in the DATA LIST with the HDS.

   Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

   YES - Go to step 7.

   NO - Go to step 11 .
7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector A (73P).
10. Check for continuity between ECT sensor 2P connector terminal No. 1 and body ground.

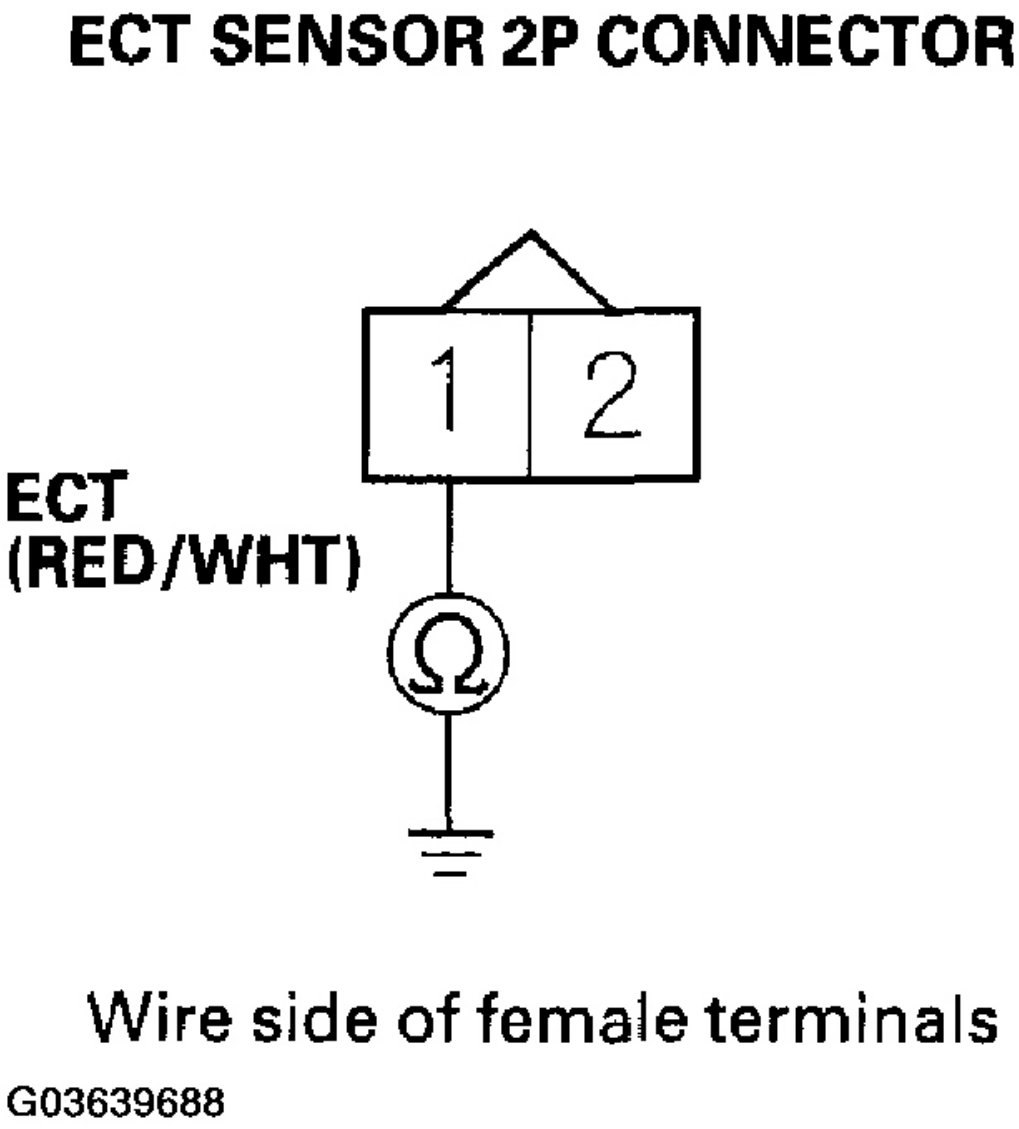


Fig. 30: Checking Continuity Between ECT Sensor 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the ECT sensor and the PCM (A4), then go to step 13 .
NO - Go to step 17 .

11. Turn the ignition switch OFF.

12. Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**).
13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
16. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0117 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
17. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
18. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0117 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then step 1 . 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 **PCM REPLACEMENT**).

DTC P0118: ECT SENSOR CIRCUIT HIGH VOLTAGE

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the ECT SENSOR in the DATA LIST with the HDS.

   Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

   YES - Go to step 3.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the ECT sensor and the PCM.
3. Turn the ignition switch OFF.
4. Disconnect the ECT sensor 2P connector.
5. Connect ECT sensor 2P connector terminals No. 1 and No. 2 with a jumper wire.

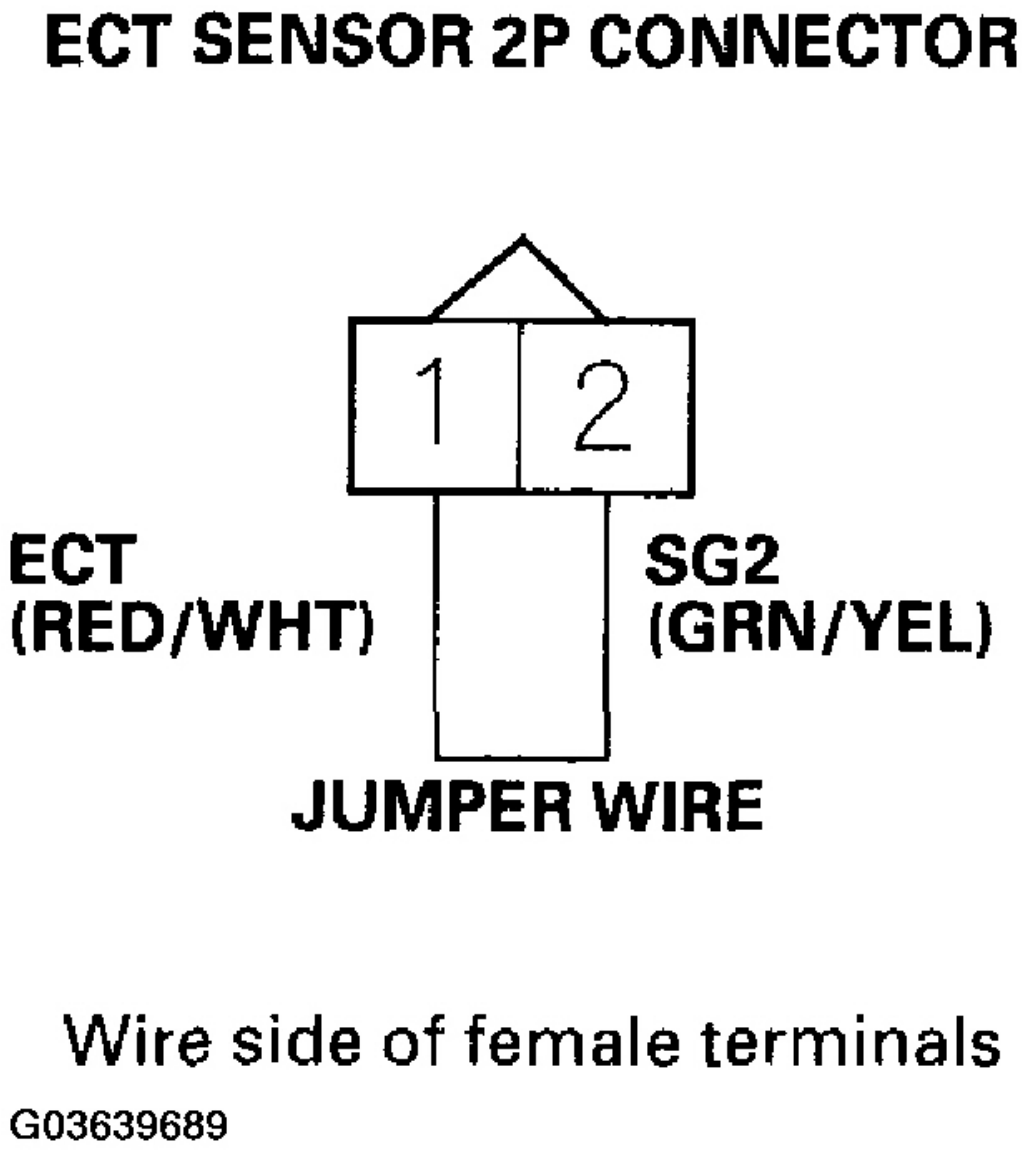


Fig. 31: Connecting ECT Sensor 2P Connector Terminals 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Turn the ignition switch ON (II).
7. Check the ECT SENSOR in the DATA LIST with the HDS.

Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

YES - Go to step 8.

NO - Go to step 20 .

8. Turn the ignition switch OFF.
9. Remove the jumper wire.
10. Turn the ignition switch ON (II).
11. Measure voltage between ECT sensor 2P connector terminal No. 1 and body ground.

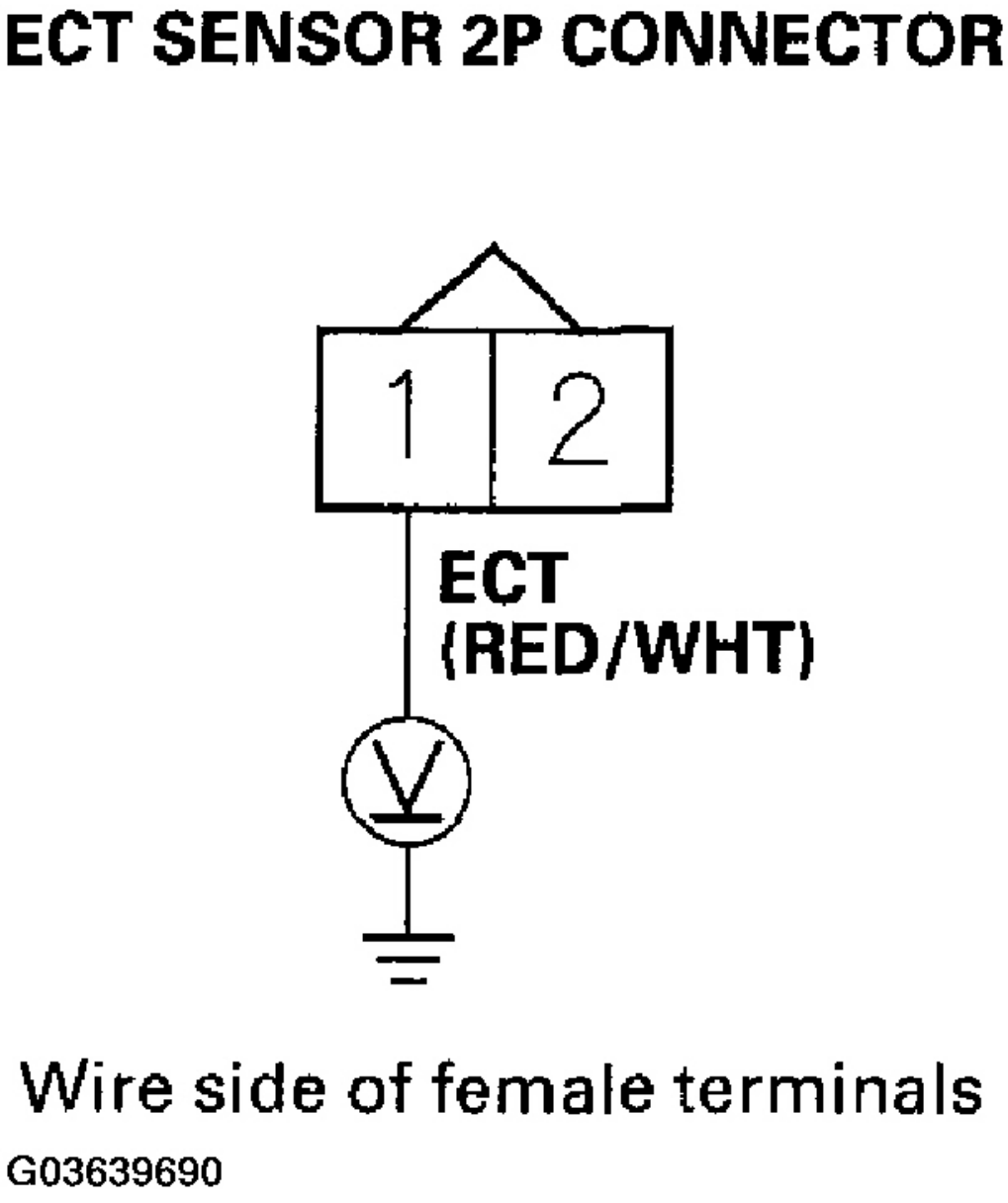


Fig. 32: Measuring Voltage Between ECT Sensor 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 12.

NO - Go to step 16 .

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A28 and ECT sensor 2P connector terminal No. 2.

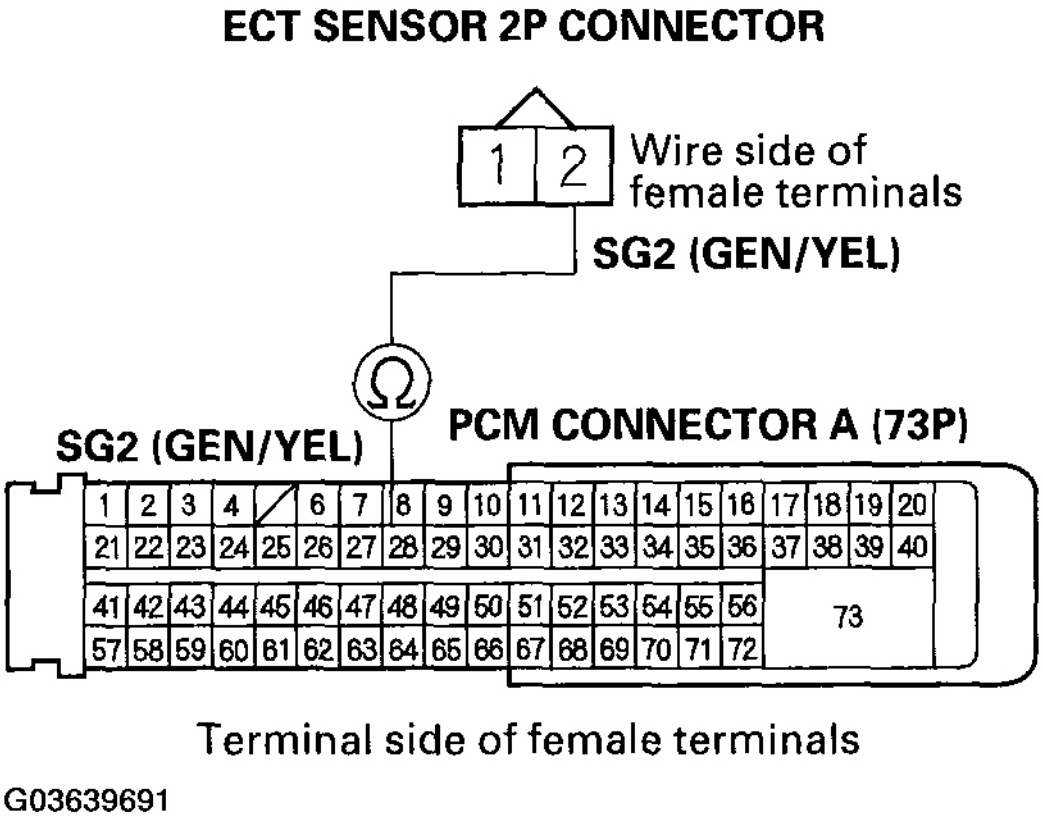


Fig. 33: Checking Continuity Between PCM Connector Terminal A28 And ECT Sensor 2P Connector Terminal 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 27 .

NO - Repair open in the wire between the PCM (A28) and the ECT sensor, then go to step 22 .

16. Turn the ignition switch OFF.
17. Jump the SCS line with the HDS.
18. Disconnect PCM connector A (73P).

19. Check for continuity between PCM connector terminal A4 and ECT sensor 2P connector terminal No. 1.

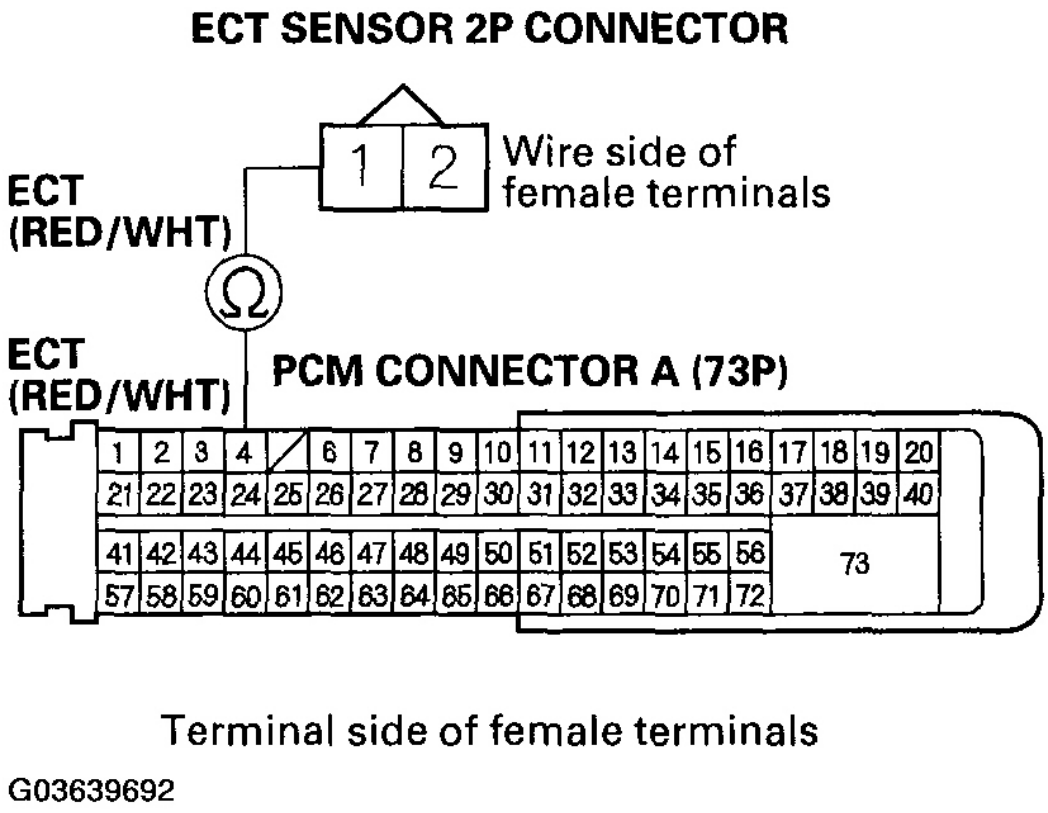


Fig. 34: Checking Continuity Between PCM Connector Terminal A4 And ECT Sensor 2P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 27 .

NO - Repair open in the wire between the PCM (A28) and the ECT sensor, then go to step 22 .

20. Turn the ignition switch OFF.
21. Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**).
22. Reconnect all connectors.
23. Turn the ignition switch ON (II).
24. Clear the DTC with the HDS.
25. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
26. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0118 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

27. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
28. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0118 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0125: ECT SENSOR MALFUNCTION/SLOW RESPONSE (2003-2004 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Start the engine, and let it idle.
2. Check the ECT SENSOR in the DATA LIST with the HDS.

Is about 86°F (30°C) or less, or 2.61 V or more indicated?

YES - Go to step 3.

NO - Intermittent failure, system is OK at this time. Check the thermostat and the cooling system.

3. Let the engine idle for 6 minutes.
4. Check the ECT SENSOR in the DATA LIST with the HDS.

Is 86°F (30°C) or less, or 2.61 V or more indicated?

YES - Go to step 5.

NO - Intermittent failure, system is OK at this time. Check the thermostat and the cooling system.

5. Turn the ignition switch OFF.
6. Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**).
7. Turn the ignition switch ON (II).
8. Reset the PCM with the HDS.
9. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).

10. Allow the engine to cool to between 19°F (-7°C) and 86°F (30°C).
11. Start the engine, and let it idle for 20 minutes.
12. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0125 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 13.

13. Monitor the OBD STATUS for DTC P0125 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates failed, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 10 and recheck.

DTC P0125: ECT SENSOR MALFUNCTION/SLOW RESPONSE (2005-2006 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Start the engine, and let it idle for 5 minutes or more.
2. Check the ECT SENSOR in the DATA LIST with the HDS.

Is about 10°F (-12°C) or less, or 4.45 V or more indicated?

YES - Go to step 3.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the ECT sensor and the PCM.

3. Turn the ignition switch OFF.
4. Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**).
5. Turn the ignition switch ON (II).
6. Reset the PCM with the HDS.
7. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
8. Allow the engine to cool to outside temperature.
9. Start the engine, and let it idle for 20 minutes.
10. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0125 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 11.

11. Monitor the OBD STATUS for DTC P0125 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 8 and recheck.

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 GENERAL TROUBLESHOOTING INFORMATION).**
- **If the DTCs listed below are stored at the same time as DTC P0128, troubleshoot those DTCs first, then recheck for P0128.**

P0097, P0098: Intake air temperature (IAT) sensor 2

P0116, P0117, P0118: Engine coolant temperature (ECT) sensor

P0300: Random misfire

P0301, P0302, P0303, P0304, P0305, P0306: No. 1, No. 2, No. 3, No. 4, No. 5, or No. 6 cylinder misfire

P0335, P0339: Crankshaft position (CKP) sensor A

P0385, P0389: Crankshaft position (CKP) sensor B

P2227, P2228, P2229: Barometric pressure (BARO) sensor

P2646, P2647, P2648, P2649: VTEC system

P0506, P0507: Idle control system malfunction

DTC P0128 can occasionally set when the hood is opened while the engine is running.

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Turn the blower switch OFF.
4. Turn the A/C switch OFF.
5. Check the FAN CTRL in the DATA LIST with the HDS.

   Is it OFF?

   YES - Go to step 6.

   NO - Wait until the FAN CTRL is turned off, then go to step 6.
6. Check the ECT SENSOR in the DATA LIST with the HDS, then check the radiator fan operation.

   Does the radiator fan keep running when the engine coolant temperature is less than 158°F (70°C)?

   YES - Check the radiator fan low speed circuit (see **RADIATOR AND A/C CONDENSER FAN LOW SPEED CIRCUIT TROUBLESHOOTING**), the radiator fan high speed circuit (see **RADIATOR AND A/C CONDENSER FAN HIGH SPEED CIRCUIT TROUBLESHOOTING**), and the radiator fan relay (see **POWER RELAY TEST**). If the circuits and the relay are OK, go to step 21 .

   NO - Go to step 7.
7. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
8. Turn the ignition switch OFF.
9. Turn the ignition switch ON (II).
10. Do the RADIATOR FAN TEST in the INSPECTION MENU with the HDS for 20 minutes.
11. Check the ECT SENSOR in the DATA LIST with the HDS.

    Is about 140°F (60°C) or less, or 1.25 V or more indicated?

    YES - Intermittent failure, system is OK at this time.

    NO - Go to step 12.
12. Turn the ignition switch OFF.
13. Allow the engine to cool to between 19°F (-7°C) and 86°F (30°C).
14. Replace the thermostat (see **THERMOSTAT REPLACEMENT**).
15. Turn the ignition switch ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
18. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
19. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0128 is indicated, check for cooling system, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 20.

20. Monitor the OBD STATUS for DTC P0128 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, check for cooling system, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 19 and recheck.

21. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
22. Cool down the engine until the coolant temperature is between 19°F (-7°C) and 86°F (30°C).
23. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
24. Check for a Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0128 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0133, P0153 : REAR A/F SENSOR (BANK 1, SENSOR 1) SLOW RESPONSE; FRONT A/F SENSOR (BANK 2, SENSOR 1) SLOW RESPONSE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **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.**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:

- Engine coolant temperature above 158°F (70°C)
- A/T in D5 position
- Vehicle speed at 30 mph (48 km/h) or more, and engine speed between 1,200 rpm and 2,250 rpm

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, system is OK at this time. If the screen indicates EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 2 and recheck.
6. Turn the ignition switch OFF.
7. Replace the A/F sensor (Sensor 1) (see **A/F Sensor Replacement**).
8. Turn the ignition switch ON (II).
9. Reset the PCM with the HDS.
10. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
12. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - A/T in D5 position
    - Vehicle speed at 30 mph (48 km/h) or more, and engine speed between 1,200 rpm and 2,250 rpm
13. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0133 and/or P0153* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    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.

    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 EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 11 and recheck.

DTC P0134, P0154: REAR A/F SENSOR (BANK 1, SENSOR 1) HEATER SYSTEM MALFUNCTION; 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 GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC P1153, P1155, P1173* and/or P1175* is stored at the same time as DTC P0134 and/or P0154*, troubleshoot DTC P1153, P1155, P1173* and/or P1175* 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 ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
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, 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 OFF.
6. Replace the A/F sensor (Sensor 1) (see **A/F Sensor Replacement**).
7. Turn the ignition switch ON (II).
8. Reset the PCM with the HDS.
9. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
10. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
11. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0134 and/or P0154* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 12.
12. 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.

    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, go to step 10 and recheck.

DTC P0135, P0155: REAR A/F SENSOR (BANK 1, SENSOR 1) HEATER CIRCUIT MALFUNCTION;

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 GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch 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, 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 OFF.
6. Check the No. 9 LAFHT (15 A) fuse in the underhood subfuse box.

   Is the fuse blown?

   YES - Repair short in the wire between the A/F sensors, A/F sensor relay and the fuse, then go to step 25 .

   NO - Go to step 7.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. At the sensor side, measure resistance between A/F sensor (Sensor 1) 8P connector terminals No. 1 and No. 2.

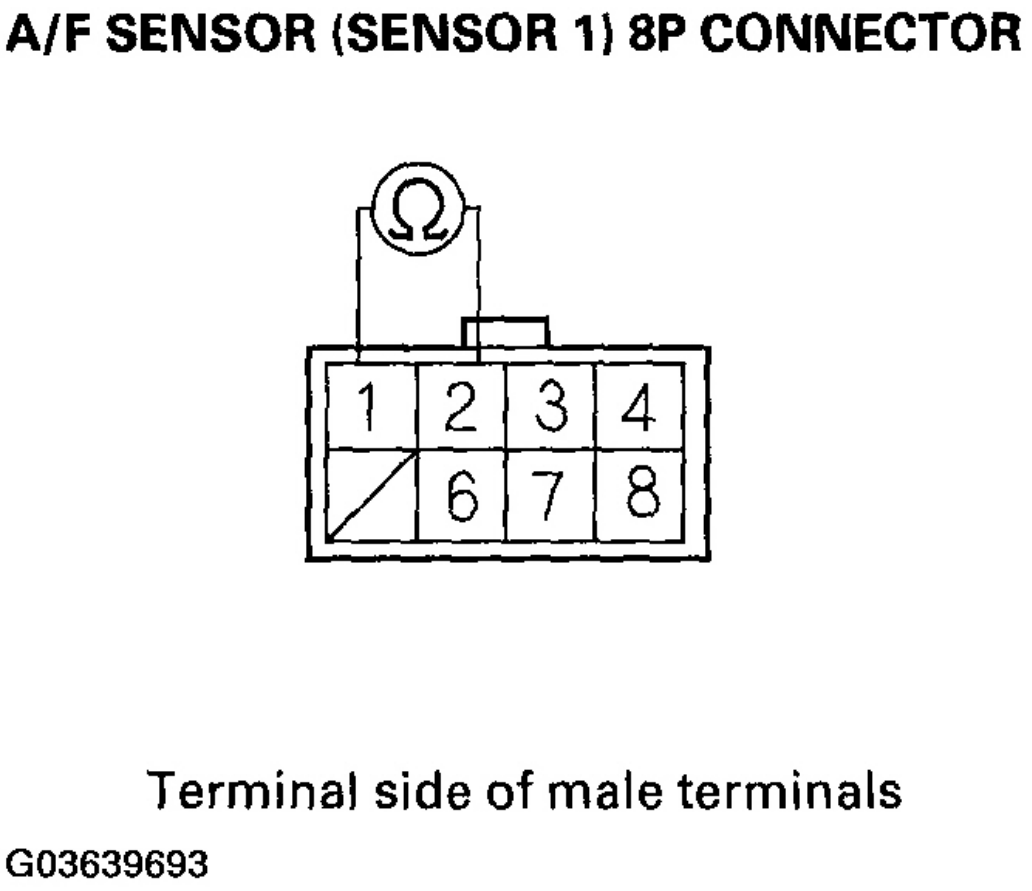


Fig. 35: Measuring Resistance Between A/F Sensor (Sensor 1) 8P Connector Terminals 1 And 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 2.5 - 3.2 ohm, at room temperature?

YES - Go to step 9.
NO - Go to step 24 .

9. Check for continuity between each terminal at the A/F sensor (Sensor 1) 8P connector and body ground.

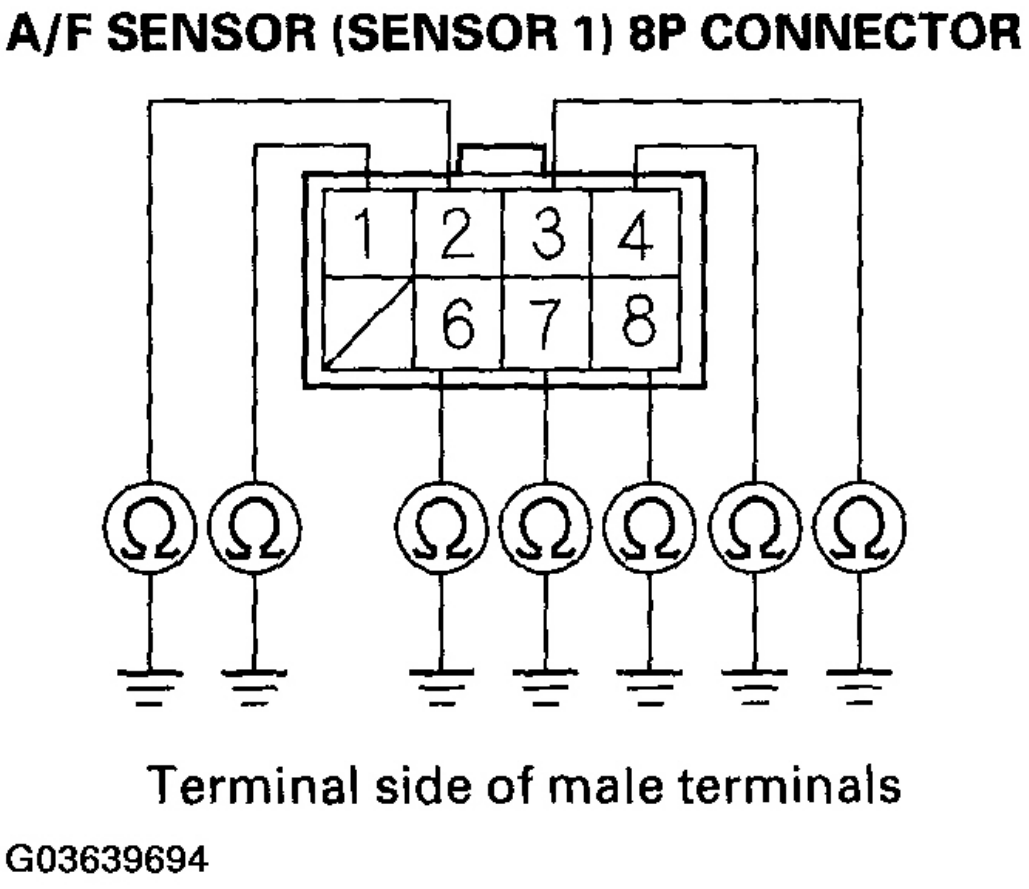


Fig. 36: Checking Continuity Between Terminal At A/F Sensor (Sensor 1) 8P Connector And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 24 .

NO - Go to step 10.

10. Check for continuity between A/F sensor (Sensor 1) 8P connector terminals No. 1 and No. 3, and No. 4, No. 6, No. 7, and No. 8 individually.

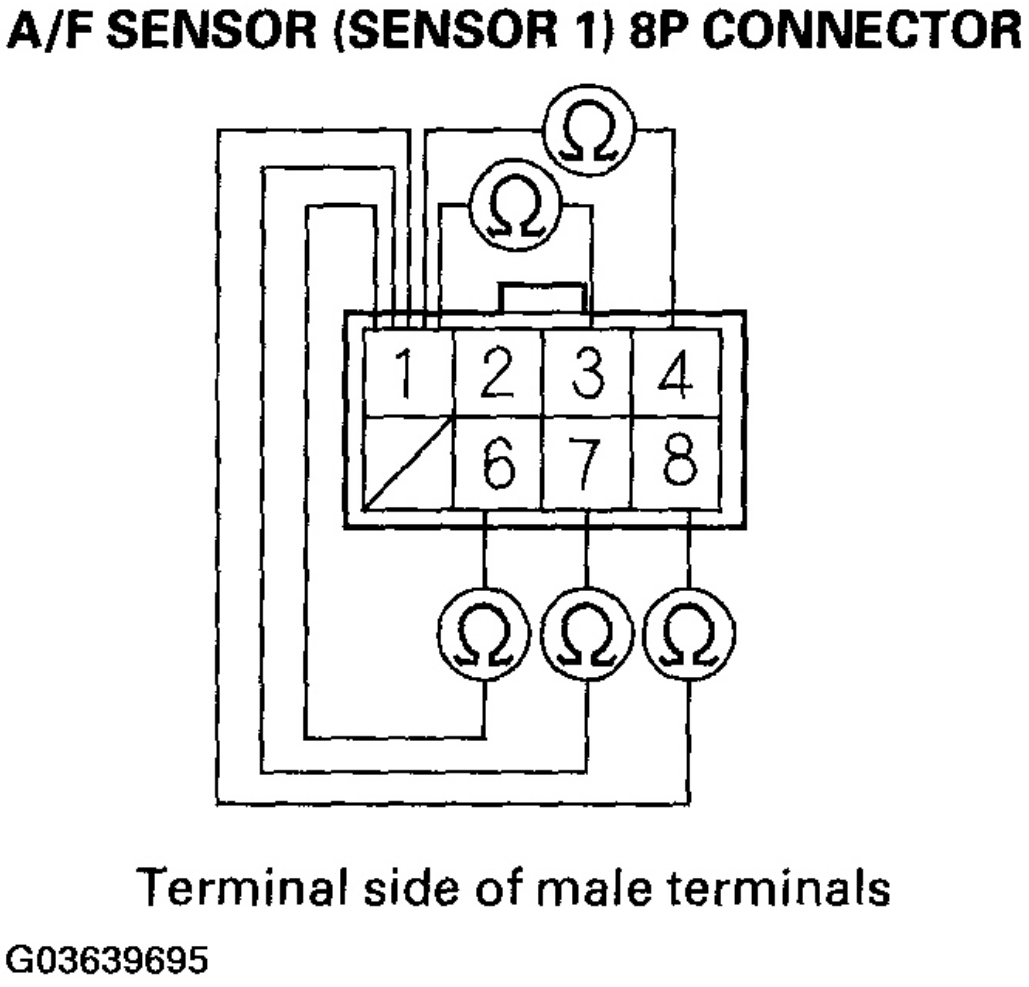


Fig. 37: Checking Continuity Between A/F Sensor (Sensor 1) 8P Connector Terminals 1 & 3, 4 & 6 And 7 & 8
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 24 .
NO - Go to step 11.

11. Jump the SCS line with the HDS.
12. Disconnect PCM connector A (73P).
13. Check for continuity between PCM connector terminal A57 (A58)* and body ground.

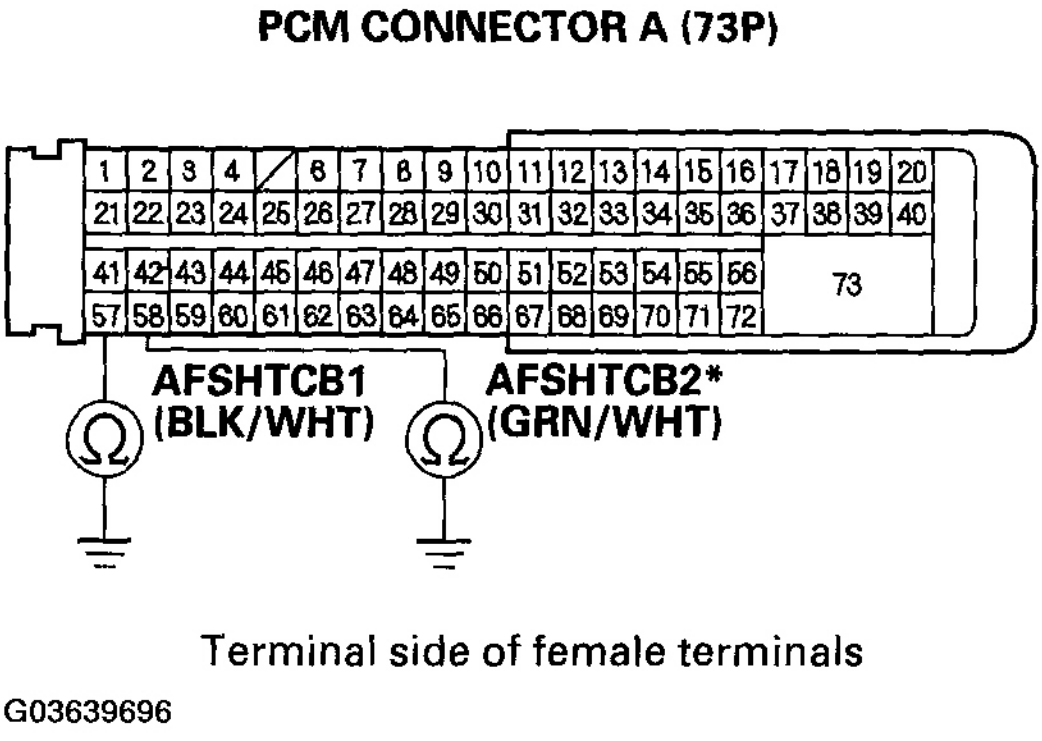


Fig. 38: Checking Continuity Between PCM Connector Terminal A57 (A58)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A57 (A58)*) and the A/F sensor (Sensor 1), then go to step 25 .

NO - Go to step 14.

14. Connect A/F sensor (Sensor 1) 8P connector terminal No. 2 to body ground with a jumper wire.

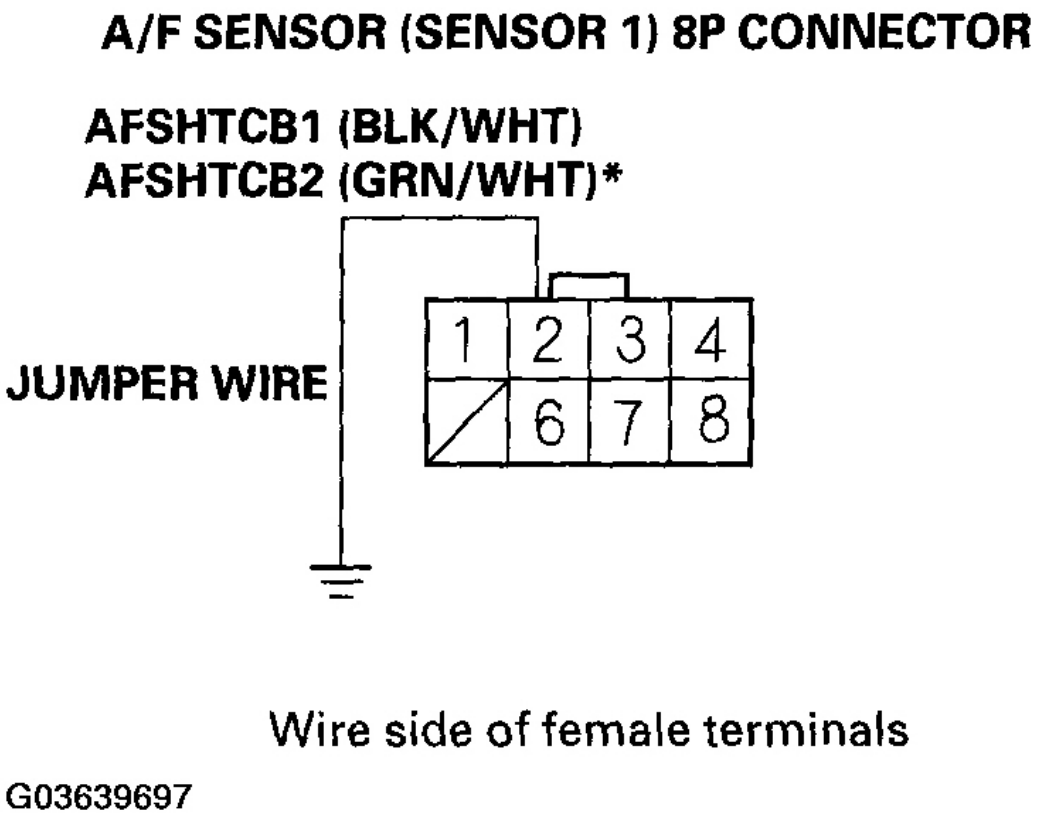


Fig. 39: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal 2 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Check for continuity between PCM connector terminal A57 (A58)* and body ground.

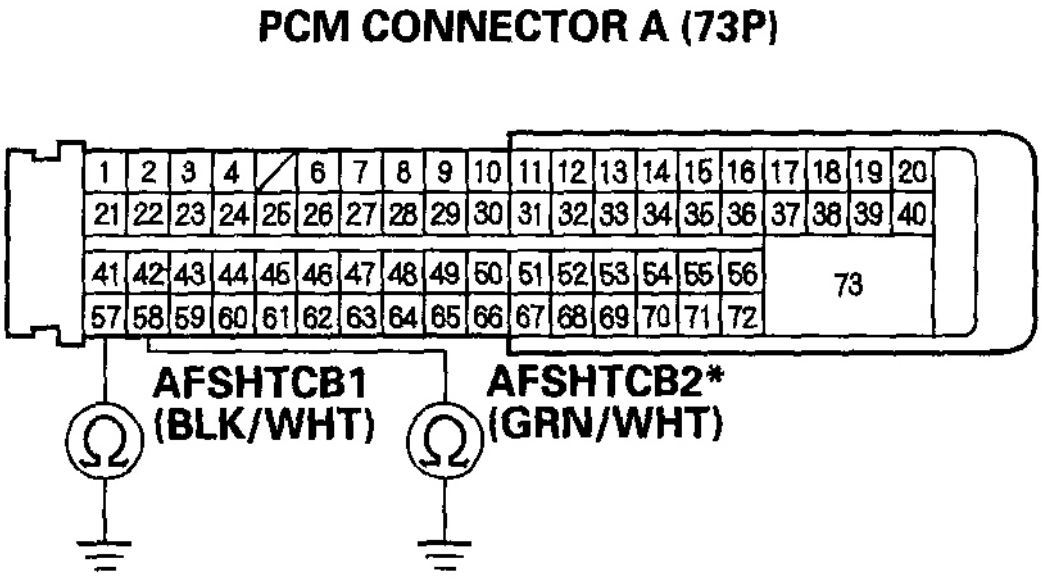


Fig. 40: Checking Continuity Between PCM Connector Terminal A57 (A58)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 16.

NO - Repair open in the wire between the PCM (A57 (A58)*) and the A/F sensor (Sensor 1), then go to step 25 .

16. Remove the A/F sensor relay (A).

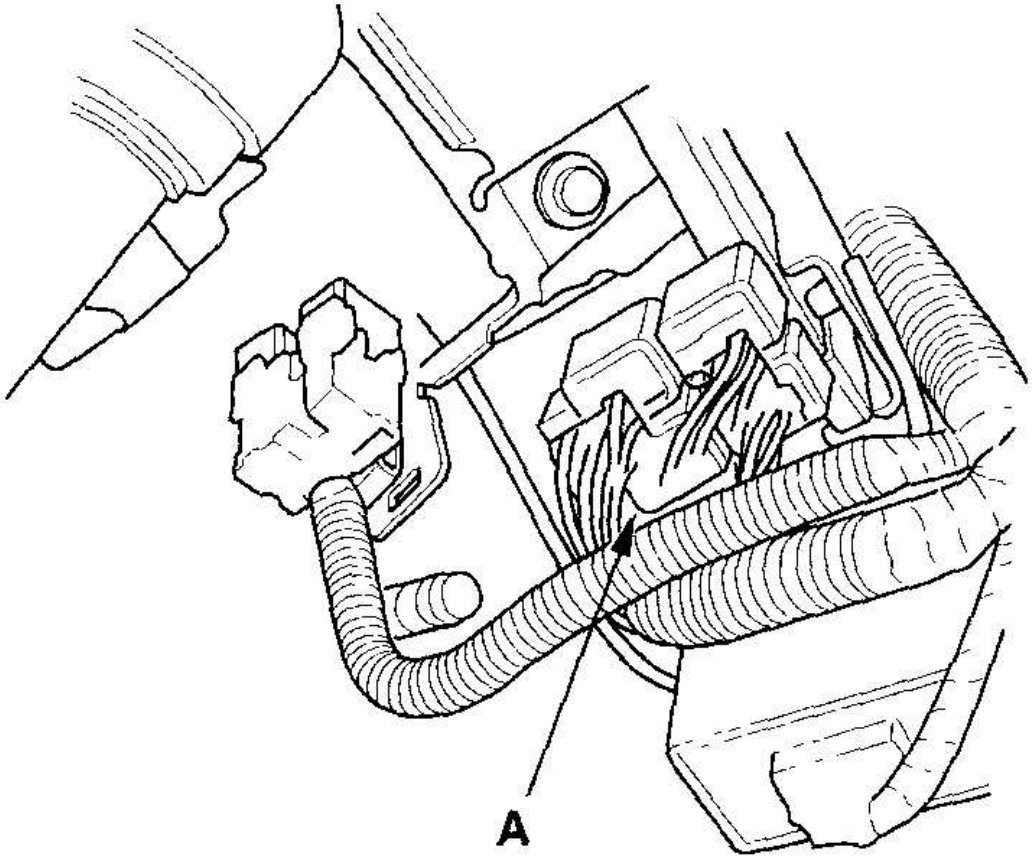


Fig. 41: Removing A/F Sensor Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Connect A/F sensor (Sensor 1) 8P connector terminal No. 1 to body ground with a jumper wire.

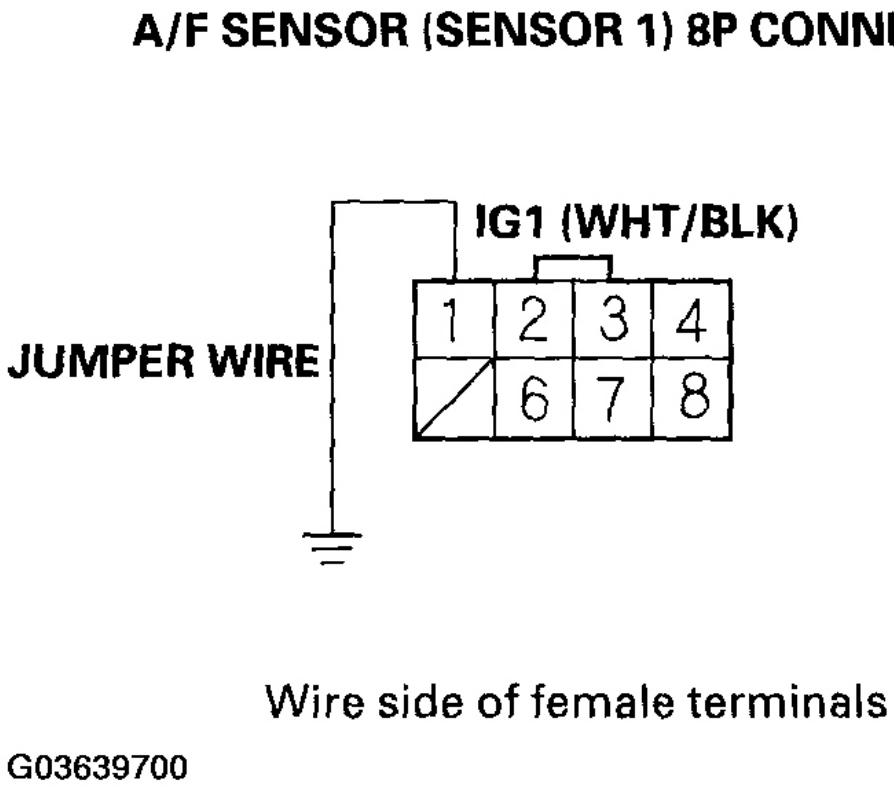


Fig. 42: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal 1 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Check for continuity between A/F sensor relay 4P connector terminal No. 2 and body ground.

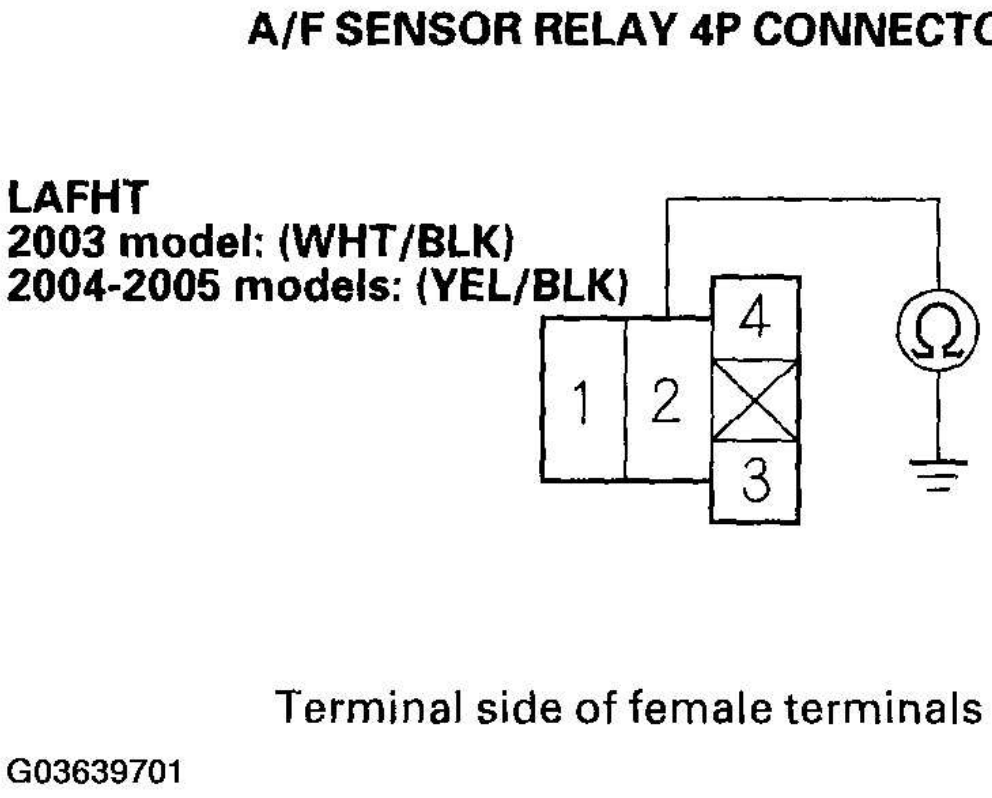


Fig. 43: Checking Continuity Between A/F Sensor Relay 4P Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 19.

NO - Repair open in the wire between the A/F sensor (Sensor 1) and the A/F sensor relay, then go to step 25 .

19. Disconnect PCM connector B (56P).
20. Check for continuity between PCM connector terminal B10 and body ground.

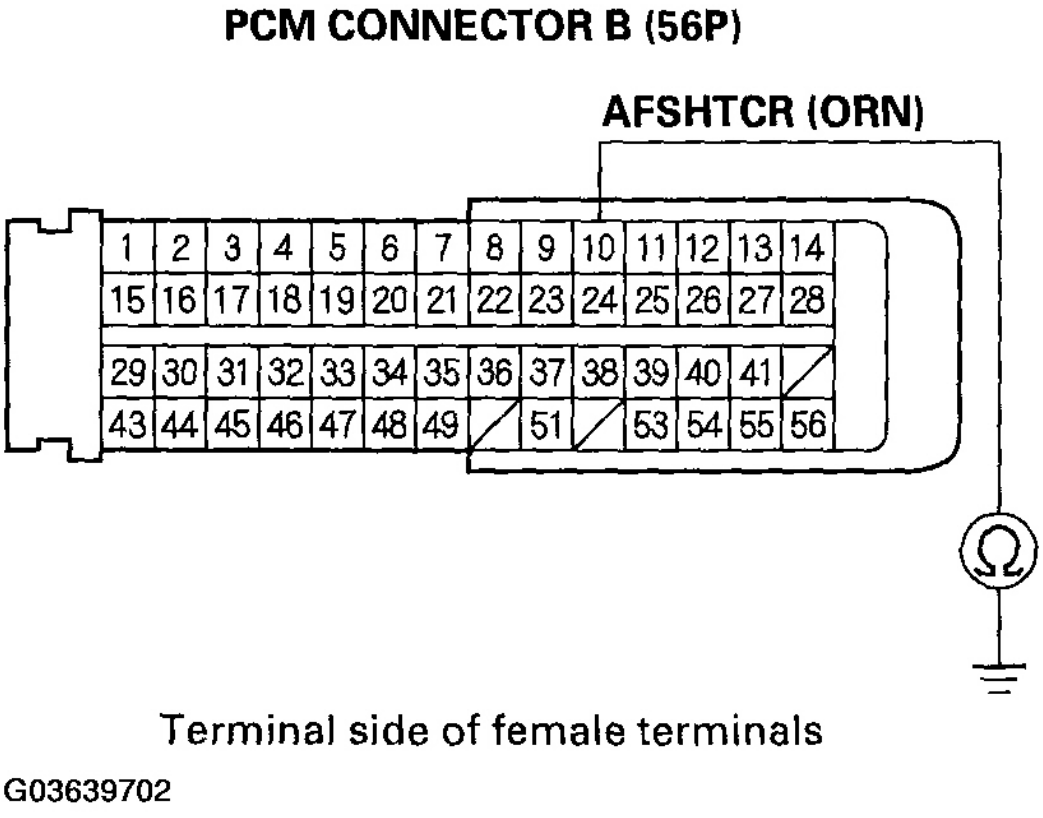


Fig. 44: Checking Continuity Between PCM Connector Terminal B10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B10) and the A/F sensor relay, then go to step 25 .

NO - Go to step 21.

21. Connect A/F sensor relay 4P connector terminal No. 3 and body ground with a jumper wire.

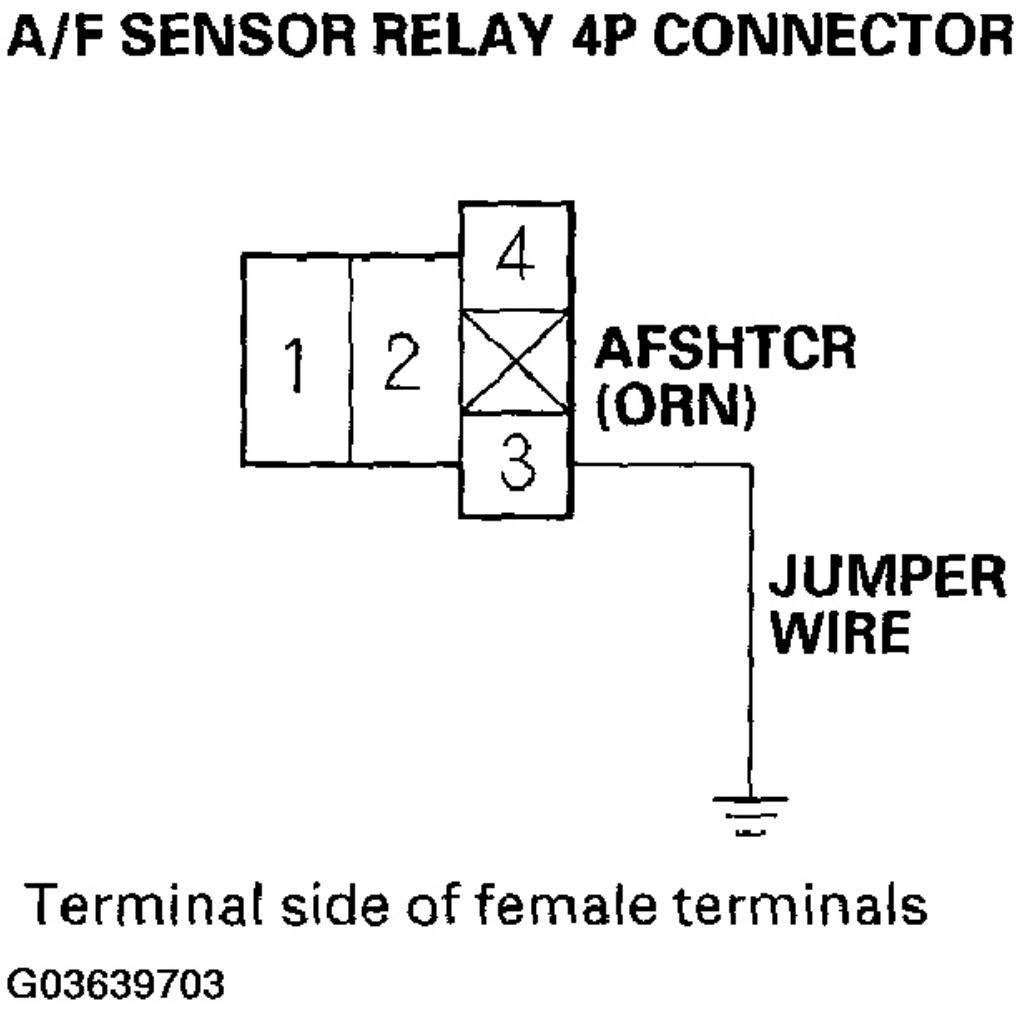


Fig. 45: Connecting A/F Sensor Relay 4P Connector Terminal 3 And Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Check for continuity between PCM connector terminal B10 and body ground.

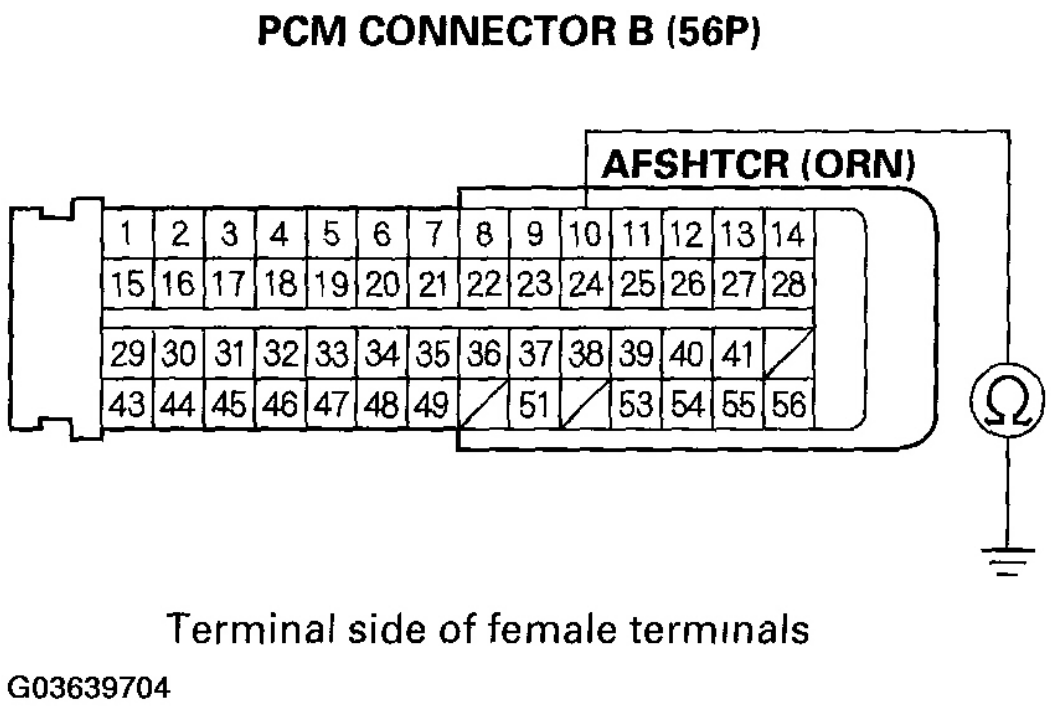


Fig. 46: Checking Continuity Between PCM Connector Terminal B10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 23.
NO - Repair open in the wire between the PCM (B10) and the A/F sensor relay, then go to step 25 .

23. Test the A/F sensor relay (see **POWER RELAY TEST**).

Is the A/F sensor relay OK?

YES - Go to step 30 .
NO - Replace the A/F sensor relay, then go to step 25 .

24. Replace the A/F sensor (Sensor 1) (see **A/F Sensor Replacement**).
25. Turn the ignition switch ON (II).
26. Reset the PCM with the HDS.
27. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
28. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0135 and/or P0155* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 29.

29. 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.

    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, go to step 26 and recheck.

30. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
31. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0135 and/or P0155* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0137, P0157: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT LOW VOLTAGE (2003-2004 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT LOW VOLTAGE (2003-2004 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Check the AF FB AVE in the DATA LIST with the HDS.

   Is the value 1.00 or more?

   YES - Go to step 5.

   NO - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the

PCM, then go to step 1 .

5. Check the HO2S S2 in the DATA LIST with the HDS.

Is the voltage 0.29 V or less?

YES - Go to step 6.
NO - Go to step 10 .

6. Turn the ignition switch OFF.
7. Disconnect the secondary HO2S (Sensor 2) 4P connector.
8. Turn the ignition switch ON (II).
9. Check the HO2S S2 in the DATA LIST with the HDS.

Is voltage 0.29 V or less?

YES - Go to step 12 .
NO - Go to step 16 .

10. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - A/T in D5 position
    - Engine speed at 2,000-3,000 rpm
    - Drive about 10 minutes, then decelerate (with the throttle fully closed) for 5 seconds
11. Monitor the OBD STATUS for DTC P0137 or P0157* in the DTCs MENU with the HDS.

Does the screen indicate FAILED?

YES - Go to step 16 .
NO - If the screen indicates PASSED, intermittent failure, system is OK at this time. If the screen indicates EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 10 and recheck.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (73P).
15. Check for continuity between secondary HO2S (Sensor 2) 4P connector terminal No. 1 and body ground.

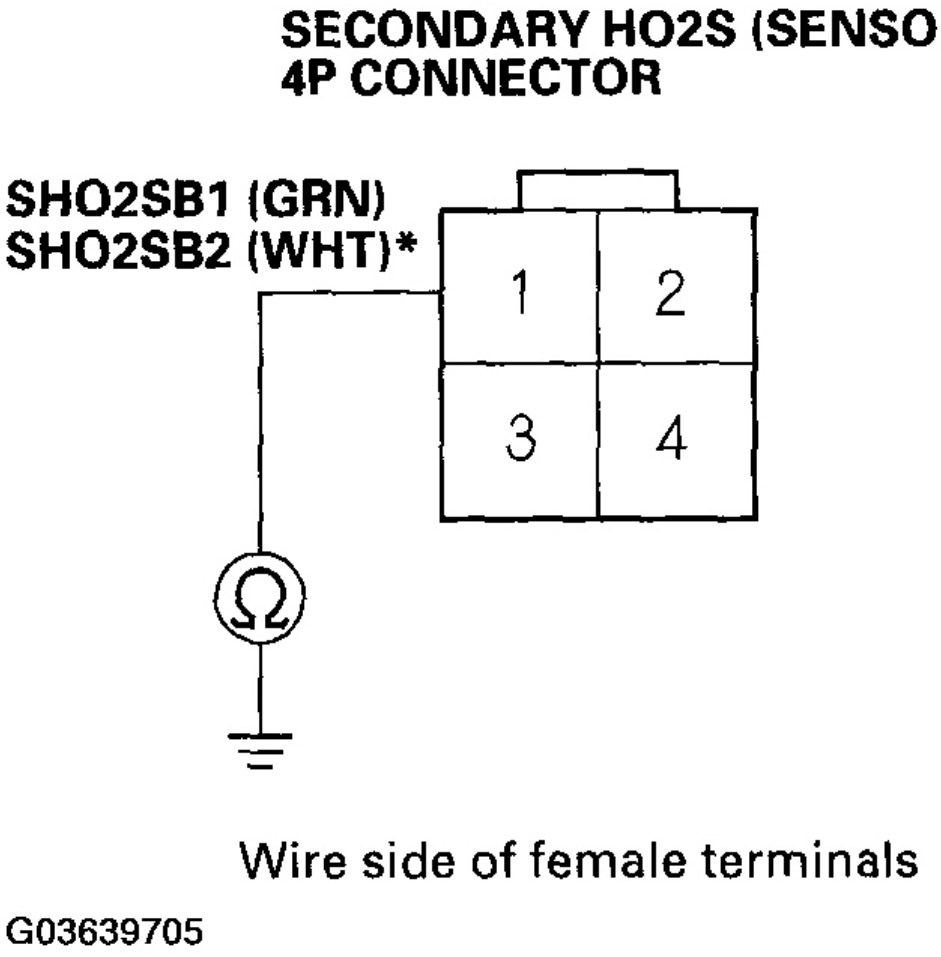


Fig. 47: Checking Continuity Between Secondary HO2S (Sensor 2) 4P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A21 (A22)*) and the secondary HO2S (Sensor 2), then go to step 18 .

NO - Go to step 26 .

16. Turn the ignition switch OFF.
17. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
18. Reconnect all connectors.
19. Turn the ignition switch ON (II).

20. Reset the PCM with the HDS.
21. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
22. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
23. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - A/T in D5 position
    - Engine speed at 2,000-3,000 rpm
    - Drive about 10 minutes, then decelerate (with the throttle fully closed) for 5 seconds
24. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0137 and/or P0157* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 25.
25. 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.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the 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, go to step 22 and recheck.
26. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
27. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
28. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - A/T in D5 position
    - Engine speed at 2,000-3,000 rpm
    - Drive about 10 minutes, then decelerate (with the throttle fully closed) for 5 seconds
29. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0137 and/or P0157* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0137, P0157: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT LOW VOLTAGE (2005-2006 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT LOW VOLTAGE (2005-2006 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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 0.29 V or less?

   YES - Go to step 5.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM.
5. Turn the ignition switch OFF.
6. Disconnect the secondary HO2S (Sensor 2) 4P connector.
7. Turn the ignition switch ON (II).
8. Check the HO2S S2 in the DATA LIST with the HDS.

   Does the voltage stay at 0.29 V or less?

   YES - Go to step 9.

   NO - Go to step 13 .
9. Turn the ignition switch OFF.
10. Jump the SCS line with the HDS.
11. Disconnect PCM connector A (73P).
12. Check for continuity between secondary HO2S (Sensor 2) 4P connector terminal No. 1 and body ground.

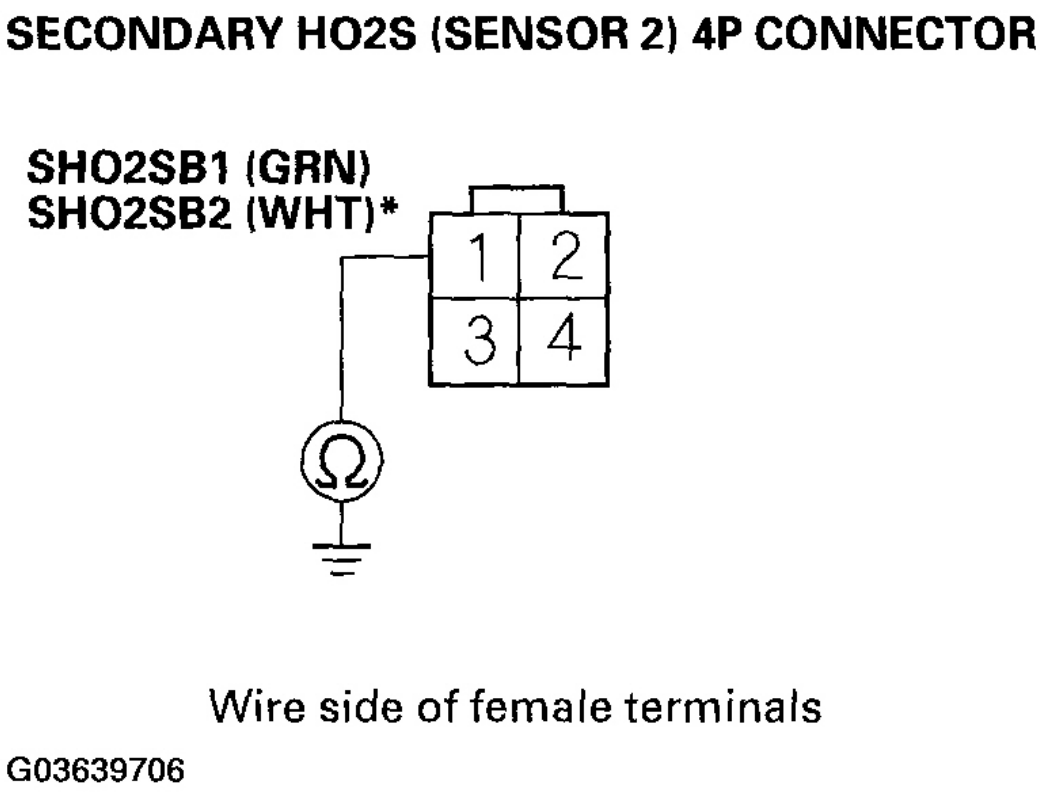


Fig. 48: Checking Continuity Between Secondary HO2S (Sensor 2) 4P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A21 (A22)*) and the secondary HO2S (Sensor 2), then go to step 15 .

NO - Go to step 23 .

13. Turn the ignition switch OFF.
14. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
15. Reconnect all connectors.
16. Turn the ignition switch ON (II).
17. Reset the PCM with the HDS.
18. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
19. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.

20. Test-drive under these conditions
    - Engine coolant temperature above 176°F (80°C)
    - A/T in D5 position
    - Engine speed at 1,500-3,000 rpm
    - Drive 1 minute or more
21. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0137 and/or P0157* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    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.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the 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, go to step 19 and recheck.
23. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
24. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
25. Test-drive under these conditions:
    - Engine coolant temperature above 176°F (80°C)
    - A/T in D5 position
    - Engine speed at 1,500-3,000 rpm
    - Drive 1 minute or more
26. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0137 and/or P0157* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go step 1 . 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 **PCM REPLACEMENT**).

DTC P0138, P0158: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT HIGH VOLTAGE

(2003-2004 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT HIGH VOLTAGE (2003-2004 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Check the AF FB AVE in the DATA LIST with the HDS.

   Is the value 1.00 or less?

   YES - Go to step 5.

   NO - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 .
5. Check the HO2S S2 in the DATA LIST with the HDS.

   Is the voltage 0.75 V or more?

   YES - Go to step 8 .

   NO - Go to step 6.
6. Test-drive under these conditions:
   - Engine coolant temperature above 158°F (70°C)
   - A/T in D5 position
   - Engine speed at 2,000-3,000 rpm
   - Drive about 10 minutes, then decelerate (with the throttle fully closed) for 5 seconds
7. Monitor the OBD STATUS for DTC P0138 and/or P0158* in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES - Go to step 19 .

   NO - If the screen indicates PASSED, intermittent failure, 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, go to step 6 and recheck.
8. Turn the ignition switch OFF.
9. Disconnect the secondary HO2S (Sensor 2) 4P connector.
10. Connect secondary HO2S (Sensor 2) 4P connector terminals No. 1 and No. 2 with a jumper wire.

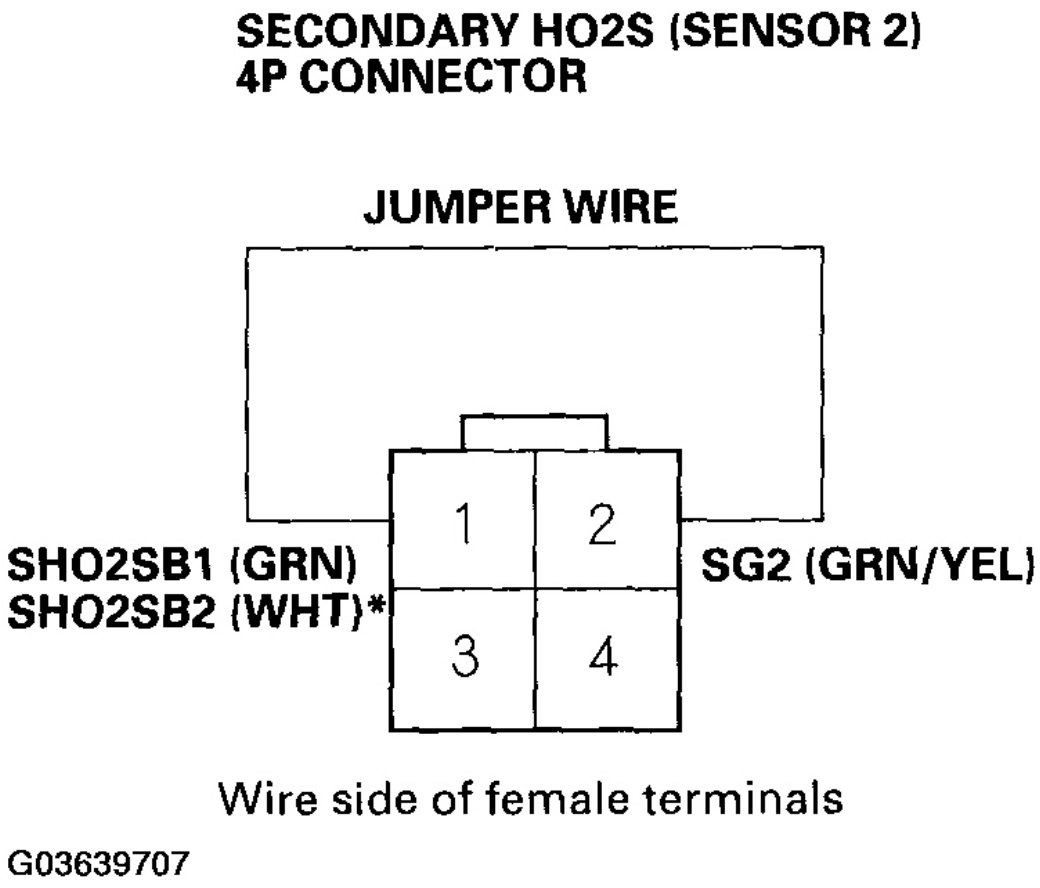


Fig. 49: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminals 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Turn the ignition switch ON (II).
12. Check the HO2S S2 in the DATA LIST with the HDS.

Is the voltage 0.75 V or more?

YES - Go to step 13.
NO - Go to step 19 .

13. Turn the ignition switch OFF.
14. Jump the SCS line with the HDS.
15. Disconnect PCM connector A (73P).
16. Check for continuity between PCM connector terminals A21 (A22)* and A28.

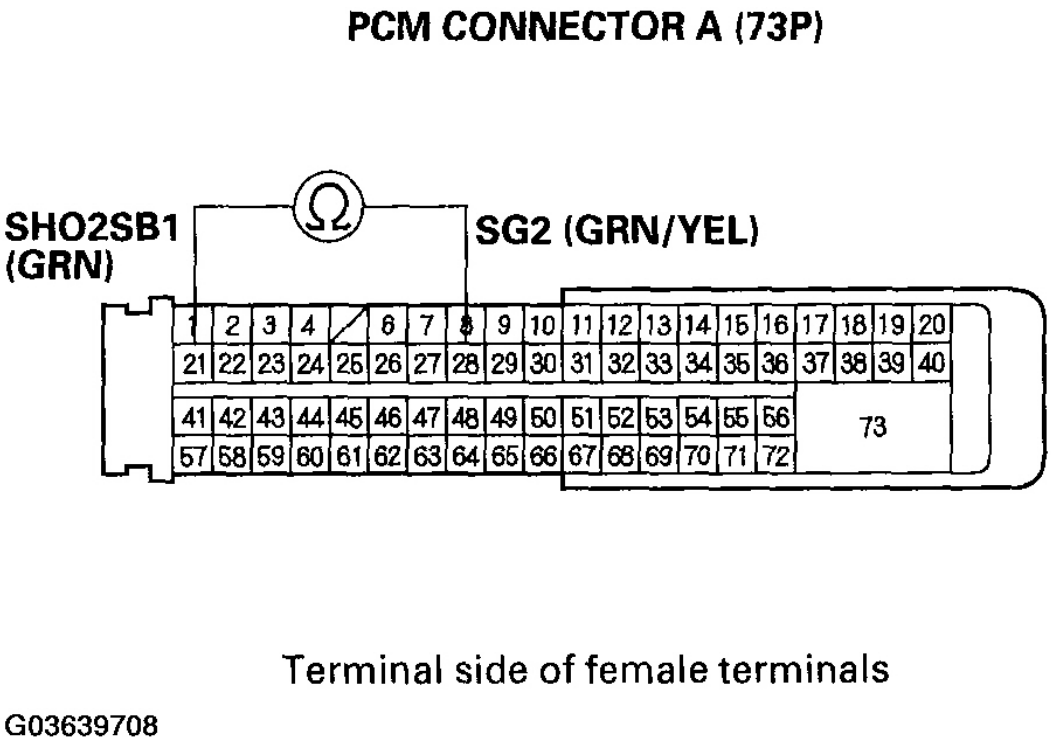


Fig. 50: Checking Continuity Between PCM Connector Terminals A21 And A28
Courtesy of AMERICAN HONDA MOTOR CO., INC.

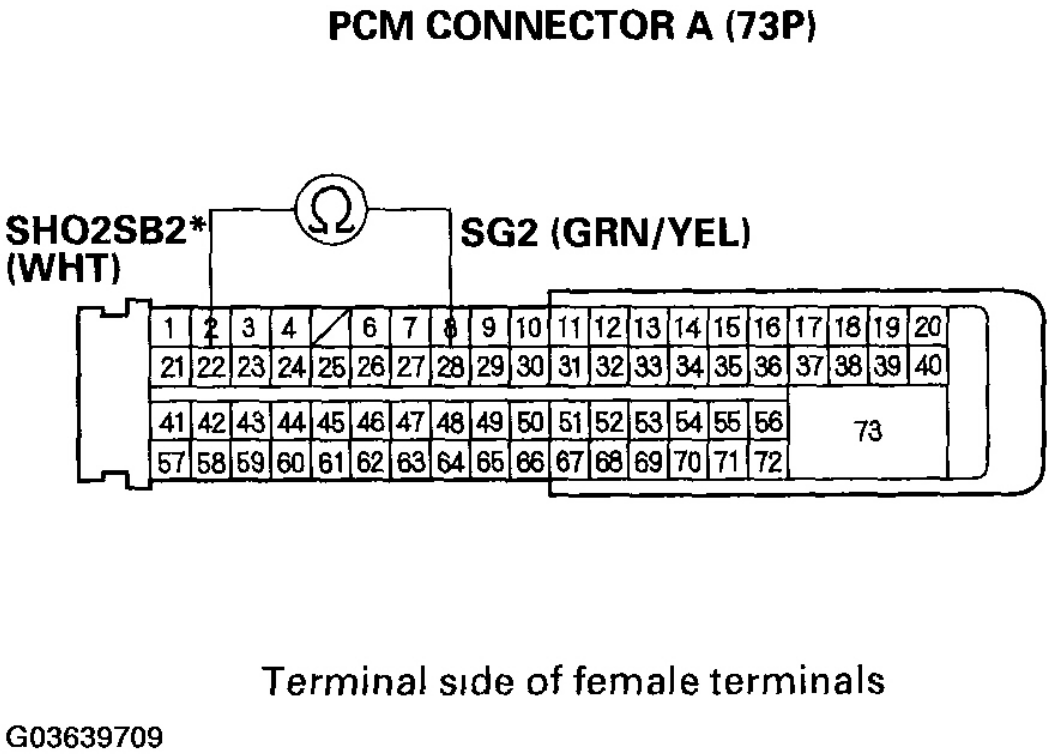


Fig. 51: Checking Continuity Between PCM Connector Terminals A22* And A28
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 28 .

NO - Go to step 17.

17. Remove the jumper wire from the secondary HO2S (Sensor 2) 4P connector.
18. Check for continuity between PCM connector terminal A21 (A22)* and secondary HO2S (Sensor 2) (B1/B2*) 4P connector terminal No. 1.

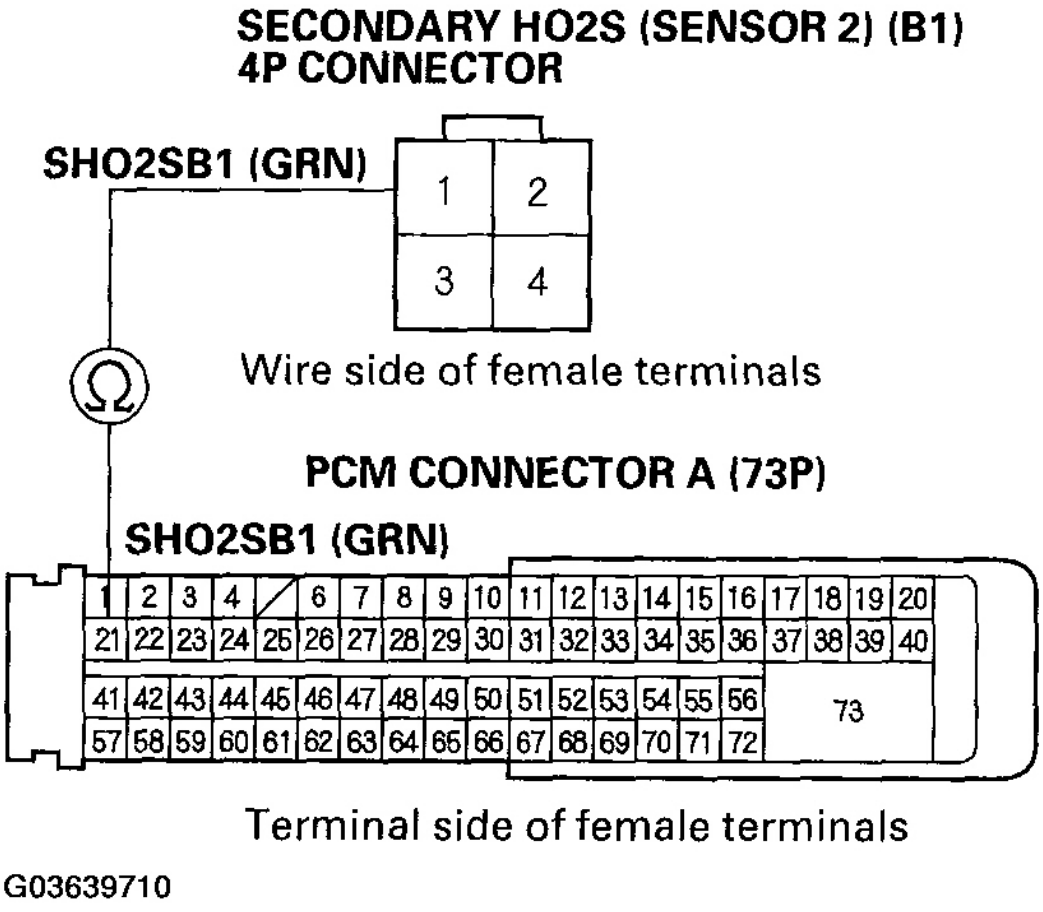


Fig. 52: Checking Continuity Between PCM Connector Terminal A21 And Secondary HO2S (Sensor 2) (B1) 4P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

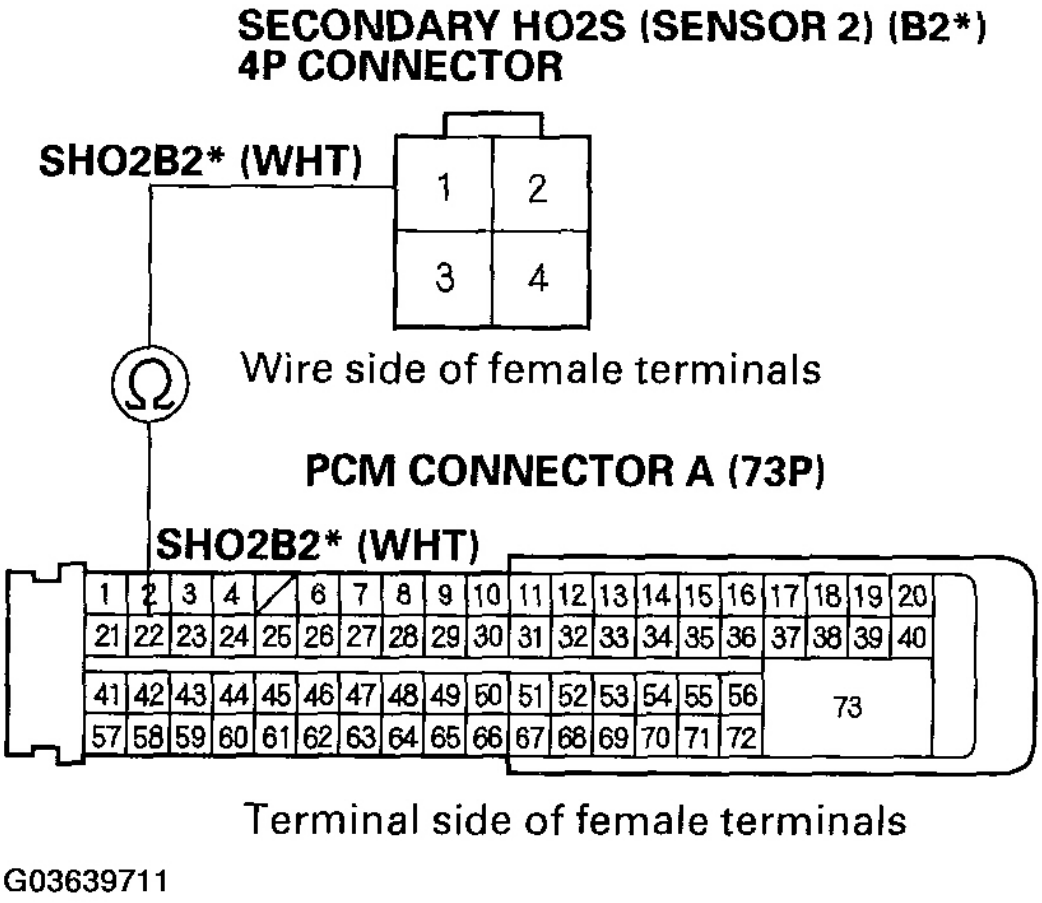


Fig. 53: Checking Continuity Between PCM Connector Terminal A21 And Secondary HO2S (Sensor 2) (B2*) 4P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair open in the wire between the PCM (A28) and the secondary HO2S (Sensor 2), then go to step 21 .

NO - Repair open in the wire between the PCM A21 (A22)* and the secondary HO2S (Sensor 2), then go to step 21 .

19. Turn the ignition switch OFF.
20. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
21. Turn the ignition switch ON (II).
22. Reset the PCM with the HDS.
23. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).

24. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
25. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - A/T in D5 position
    - Engine speed at 2,000-3,000 rpm
    - Drive about 10 minutes, then decelerate (with the throttle fully closed) for 5 seconds
26. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0138 and/or P0158* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 27.
27. 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.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, go to step 1 . If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 23 and recheck.
28. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
29. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
30. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - A/T in D5 position
    - Engine speed at 2,000-3,000 rpm
    - Drive about 10 minutes, then decelerate (with the throttle fully closed) for 5 seconds
31. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0138 and/or P0158* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0138, P0158: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT HIGH VOLTAGE (2005-2006 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT HIGH VOLTAGE (2005-2006 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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 1.25 V or more?

   YES - Go to step 5.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM.
5. Turn the ignition switch OFF.
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.

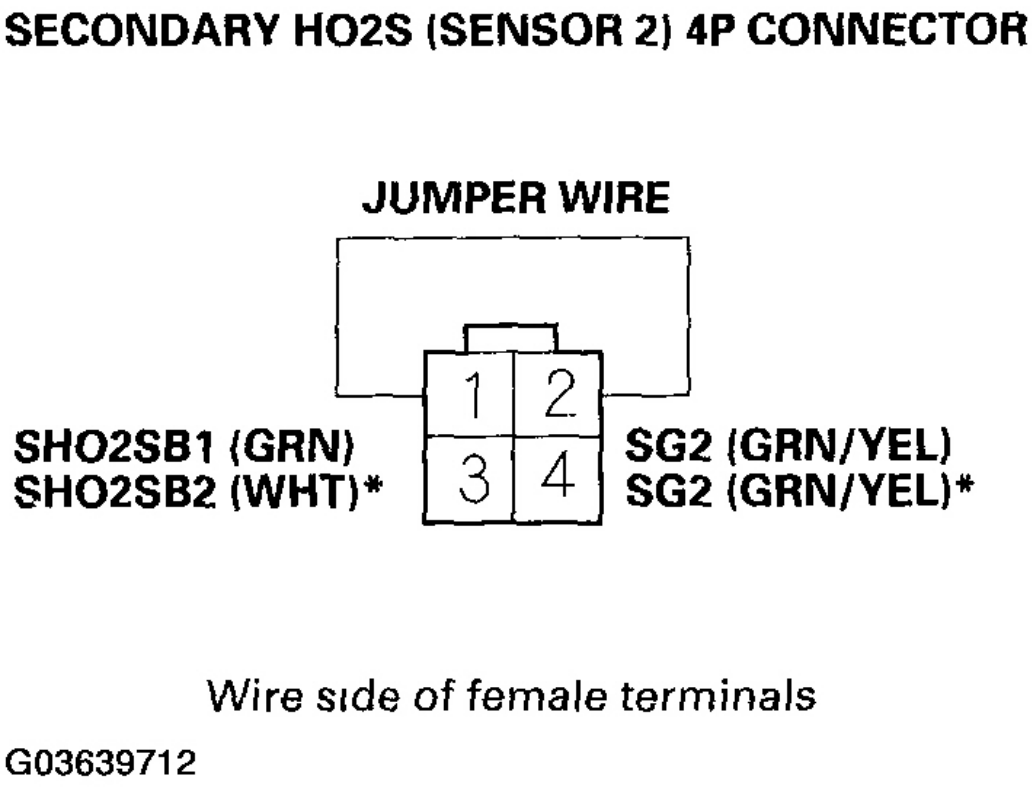


Fig. 54: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminals 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Turn the ignition switch ON (II).
9. Check the HO2S S2 in the DATA LIST with the HDS.

Does the voltage stay at 1.25 V or more?

YES - Go to step 10.
NO - Go to step 19 .

10. Turn the ignition switch OFF.
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.

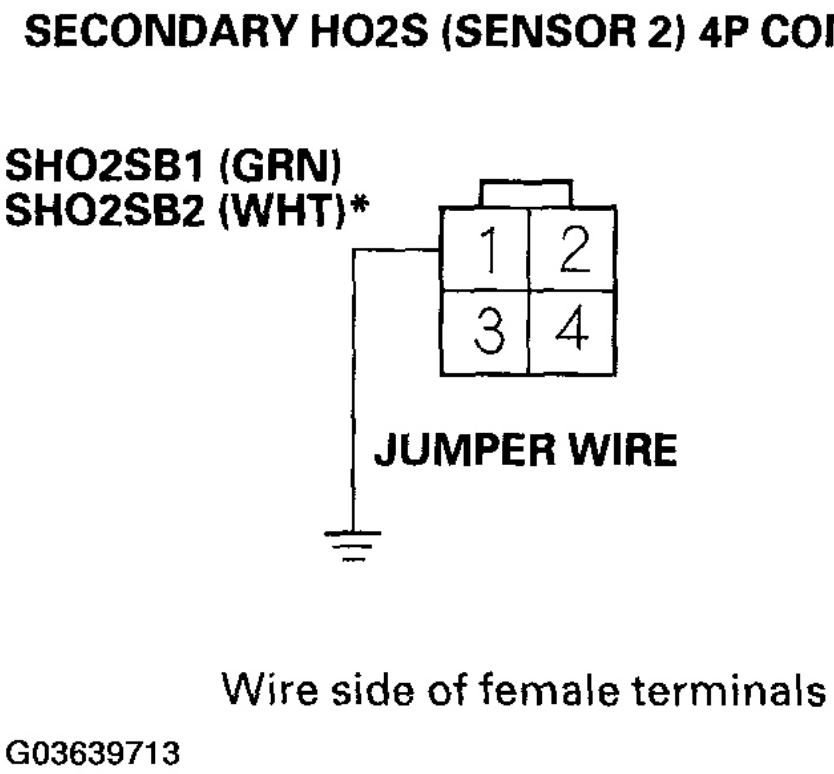


Fig. 55: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal 1 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Turn the ignition switch ON (II).
14. Check the HO2S S2 in the DATA LIST with the HDS.

Does the voltage stay at 1.25 V or more?

YES - Go to step 15.

NO - Repair open in the wire between the PCM A28 and the secondary HO2S (Sensor 2), then go to step 21 .

15. Turn the ignition switch OFF.
16. Jump the SCS line with the HDS.
17. Disconnect PCM connector A (73P).
18. Check for continuity between PCM connector terminal A21 (A22)* and body ground.

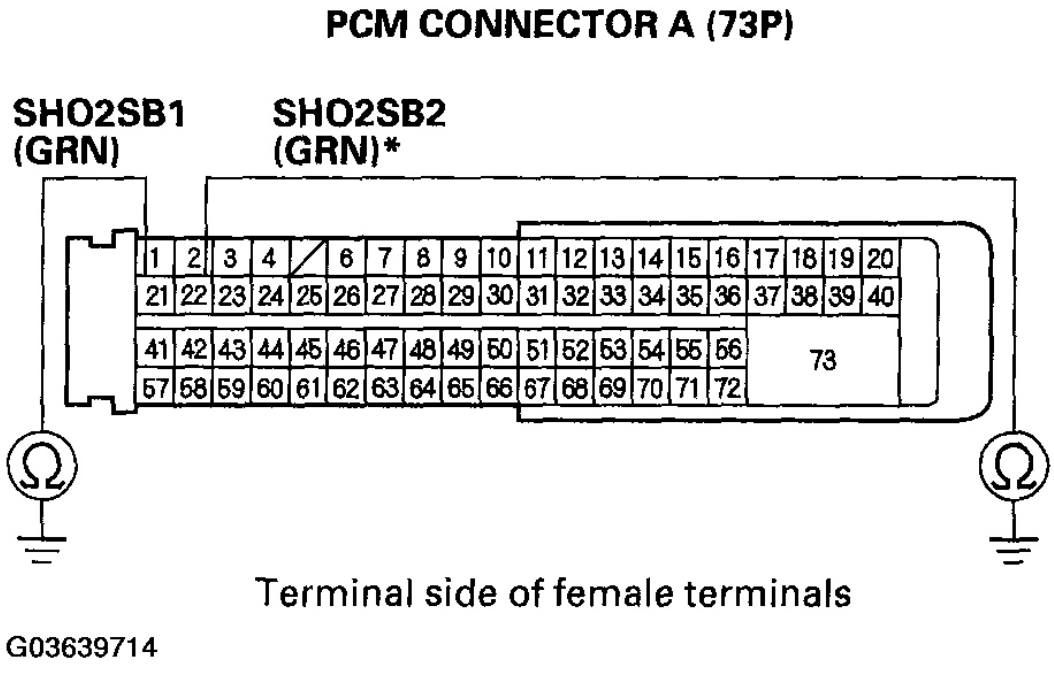


Fig. 56: Checking Continuity Between PCM Connector Terminal A21 (A22)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 29 .

NO - Repair open in the wire between the PCM (A21 (A22)*) and the secondary HO2S (Sensor 2), then go to step 21 .

19. Turn the ignition switch OFF.
20. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
21. Reconnect all connectors.
22. Turn the ignition switch ON (II).
23. Reset the PCM with the HDS.
24. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
25. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
26. Test-drive under these conditions:
    - Engine coolant temperature above 176°F (80°C)
    - A/T in D5 position
    - Engine speed at 1,500-3,000 rpm

- Drive 1 minute or more

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

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0138 and/or P0158* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    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.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the 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, go to step 26 and recheck.

29. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
30. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
31. Test-drive under these conditions:
    - Engine coolant temperature above 176°F (80°C)
    - A/T in D5 position
    - Engine speed at 1,500-3,000 rpm
    - Drive 1 minute or more
32. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0138 and/or P0158* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0139, P0159: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT SLOW RESPONSE (2003-2004 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT SLOW RESPONSE (2003-2004 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see**

GENERAL TROUBLESHOOTING INFORMATION).

- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Test-drive with the throttle fully opened, then decelerate with the throttle completely closed for 3 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, 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, go to step 3 and recheck.

6. Turn the ignition switch OFF.
7. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
8. Turn the ignition switch ON (II).
9. Reset the PCM with the HDS.
10. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
11. Test-drive with the throttle fully opened, then decelerate with the throttle completely closed for 3 seconds.
12. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0139 and/or P0159* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 13.

13. 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.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the 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, go to step 11 and recheck.

DTC P0139, P0159: REAR SECONDARY HO2S (BANK 1, SENSOR 2) SLOW RESPONSE (2005-2006 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) SLOW RESPONSE (2005-2006 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:
   - Engine coolant temperature above 176°F (80°C)
   - A/T in D5 position
   - Vehicle speed between 35 mph (56 km/h) and 55 mph (88 km/h)
   - Drive 5 minutes or more
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, system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
8. Turn the ignition switch ON (II).
9. Reset the PCM with the HDS.
10. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
12. Test-drive under these conditions:
    - Engine coolant temperature above 176°F (80°C)
    - A/T in D5 position
    - Vehicle speed between 35 mph (56 km/h) and 55 mph (88 km/h)
    - Drive 5 minutes or more
13. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0139 and/or P0159* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

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.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the 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, go to step 11 and recheck.

DTC P0141, P0161: REAR SECONDARY HO2S (BANK 1, SENSOR 2) HEATER CIRCUIT MALFUNCTION; 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 GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch 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, system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM.

5. Turn the ignition switch OFF.
6. Check the No. 9 LAFHT (15 A) fuse in the underhood subfuse box.

Is the fuse blown?

YES - Repair short in the wire between the A/F sensors, the A/F sensor relay and the fuse, then go to step 24 .

NO - Go to step 7.

7. Disconnect the secondary HO2S (Sensor 2) 4P connector.
8. At the secondary HO2S (Sensor 2) side, measure resistance between secondary HO2S (Sensor 2) 4P connector terminals No. 3 and No. 4.

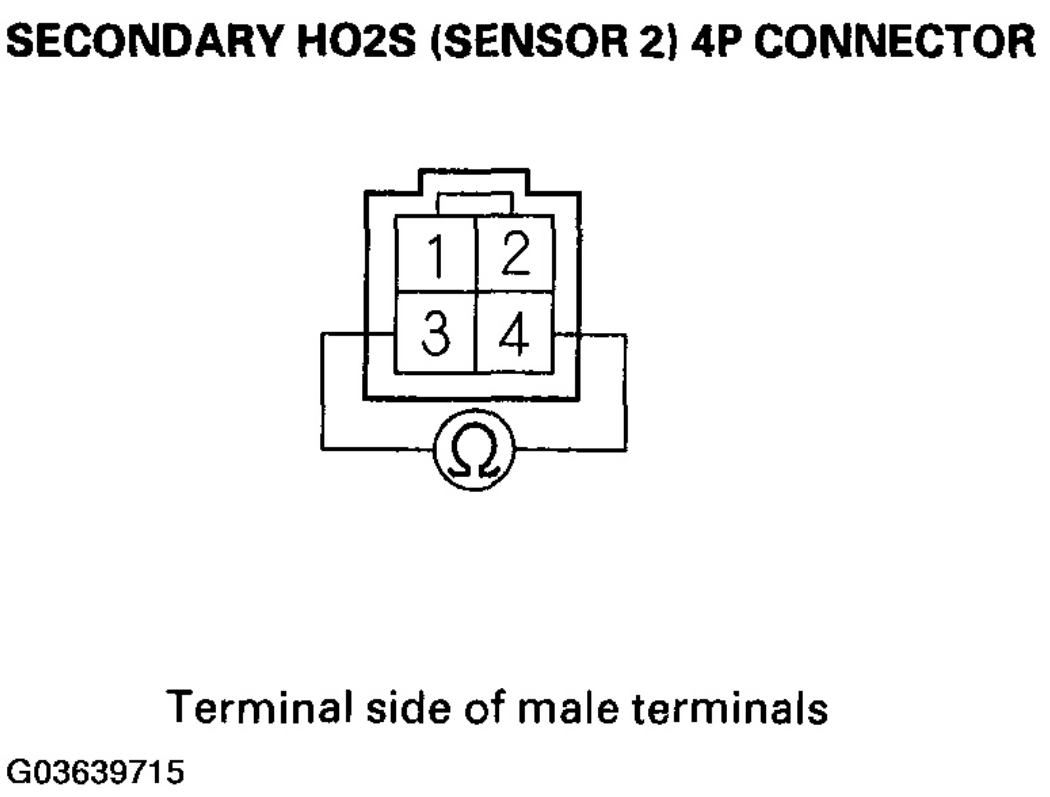


Fig. 57: Measuring Resistance Between Secondary HO2S (Sensor 2) 4P Connector Terminals 3 And 4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 5.4 - 6.6 ohm at room temperature?

YES - Go to step 9.
NO - Go to step 23 .

9. Check for continuity between body ground and secondary HO2S (Sensor 2) 4P connector terminals No. 3 and No. 4 individually.

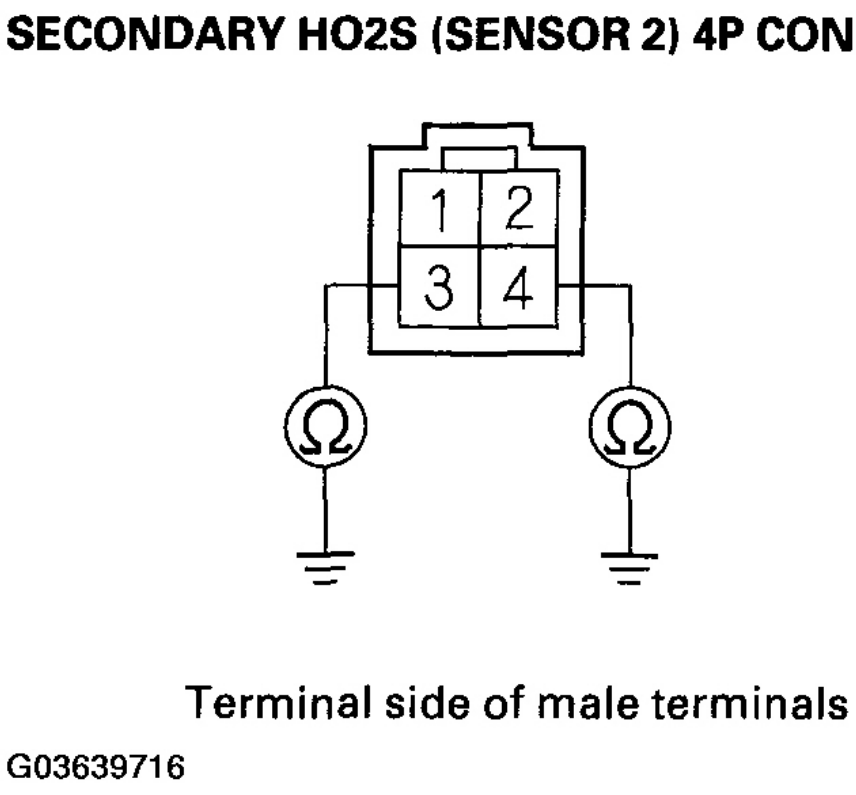


Fig. 58: Checking Continuity Between Body Ground And Secondary HO2S (Sensor 2) 4P Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 23 .
NO - Go to step 10.

10. Jump the SCS line with the HDS.
11. Disconnect PCM connector A (73P).
12. Check for continuity between PCM connector terminal A59 (A60)* and body ground.

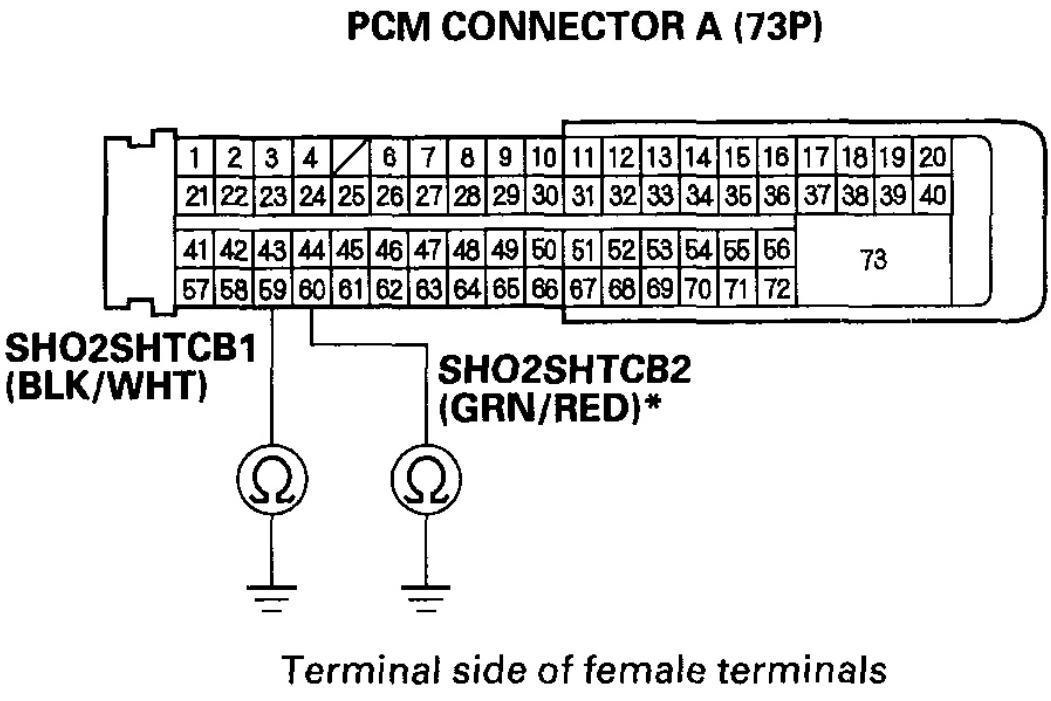


Fig. 59: Checking Continuity Between PCM Connector Terminal A59 (A60)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A59 (A60)*) and the secondary HO2S (Sensor 2), then go to step 24 .

NO - Go to step 13.

13. Connect secondary HO2S (Sensor 2) 4P connector terminal No. 3 to body ground with a jumper wire.

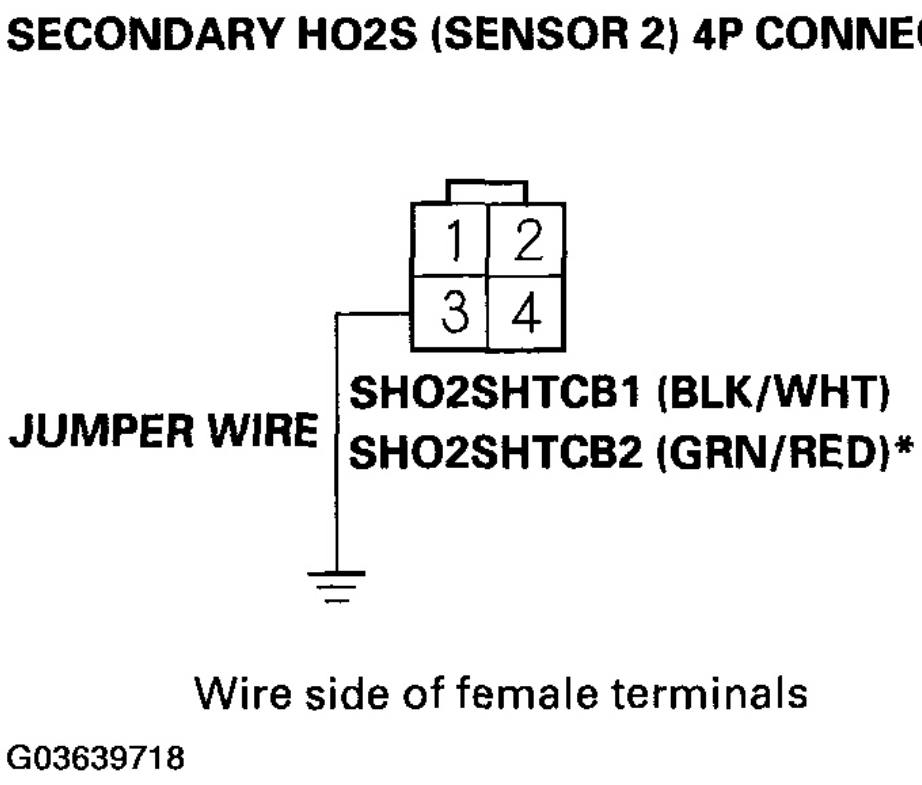


Fig. 60: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Check for continuity between PCM connector terminal A59 (A60)* and body ground.

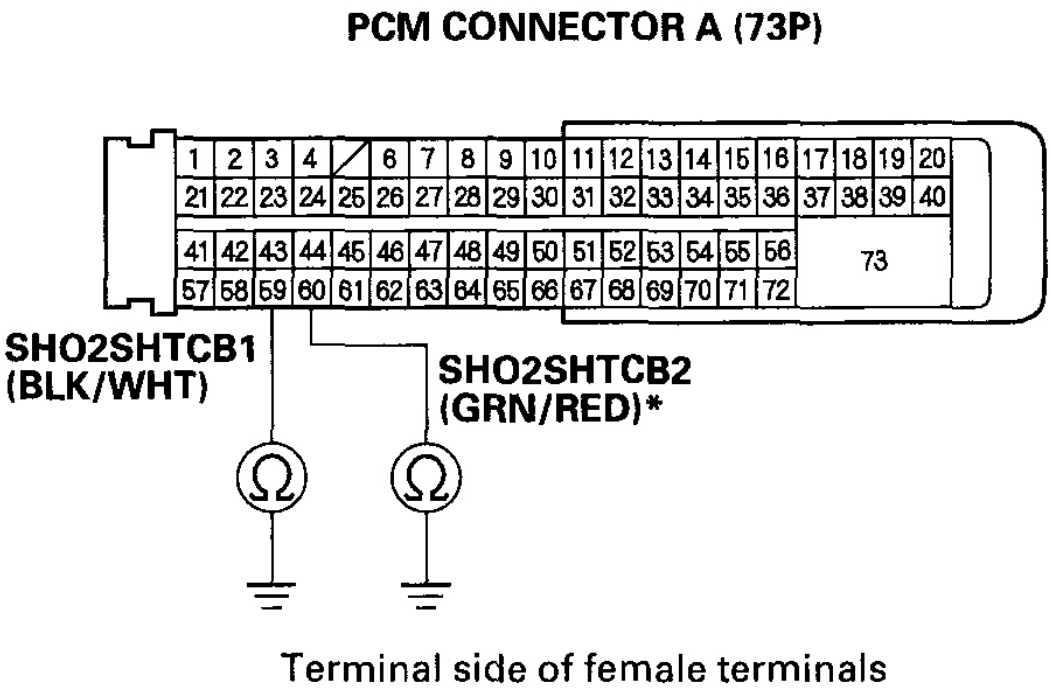


Fig. 61: Checking Continuity Between PCM Connector Terminal A59 (A60)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 15.

NO - Repair open in the wire between the PCM (A59 (A60)*) and the secondary HO2S (Sensor 2), then go to step 24 .

15. Connect secondary HO2S (Sensor 2) 4P connector terminal No. 4 to body ground with a jumper wire.

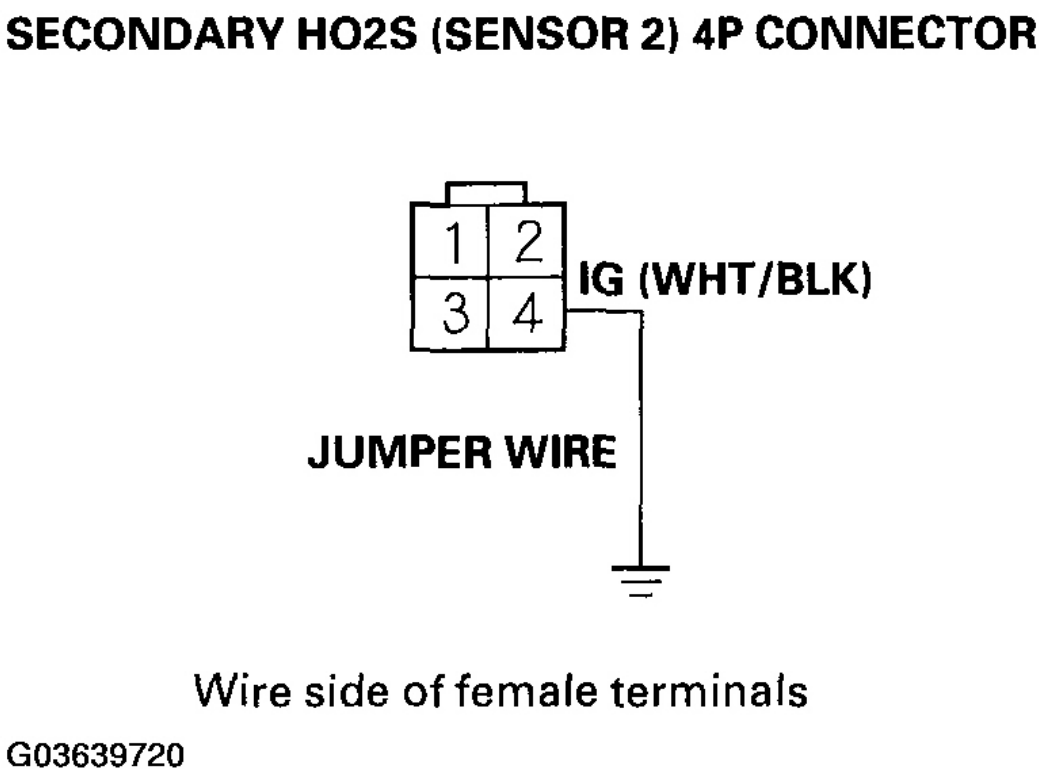


Fig. 62: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal 4 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Remove the A/F sensor relay (A).

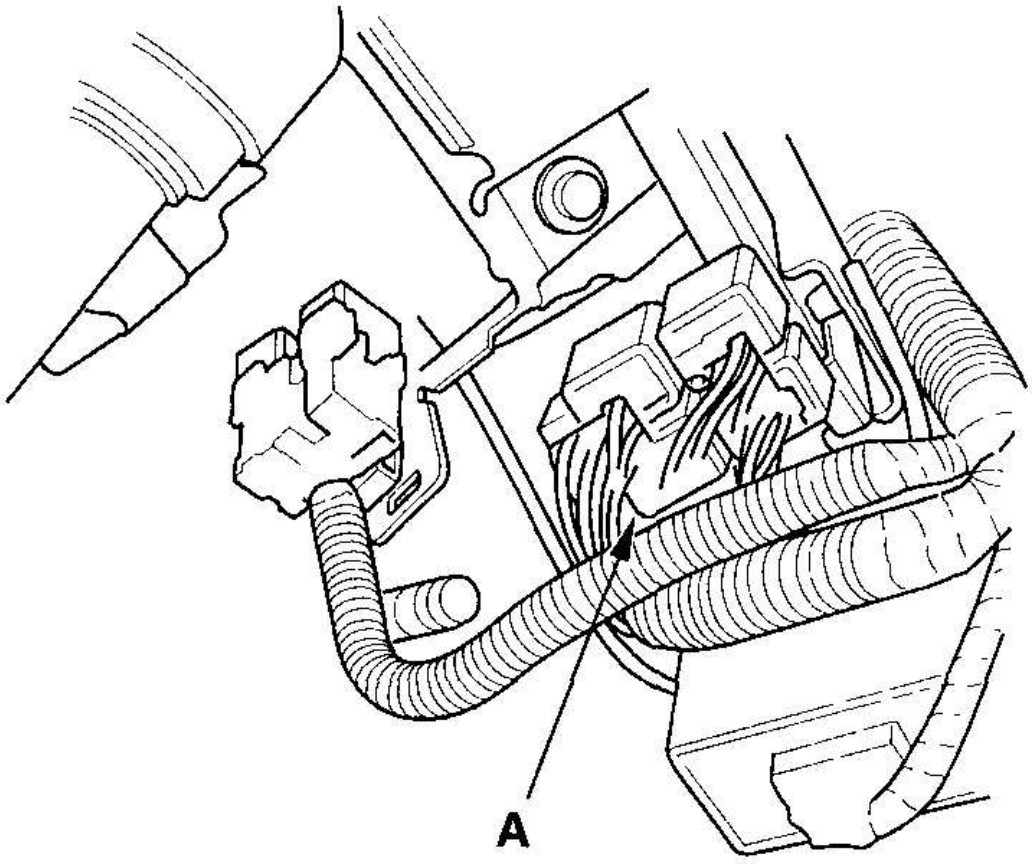


Fig. 63: Removing A/F Sensor Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Check for continuity between A/F sensor relay 4P connector terminal No. 2 and body ground.

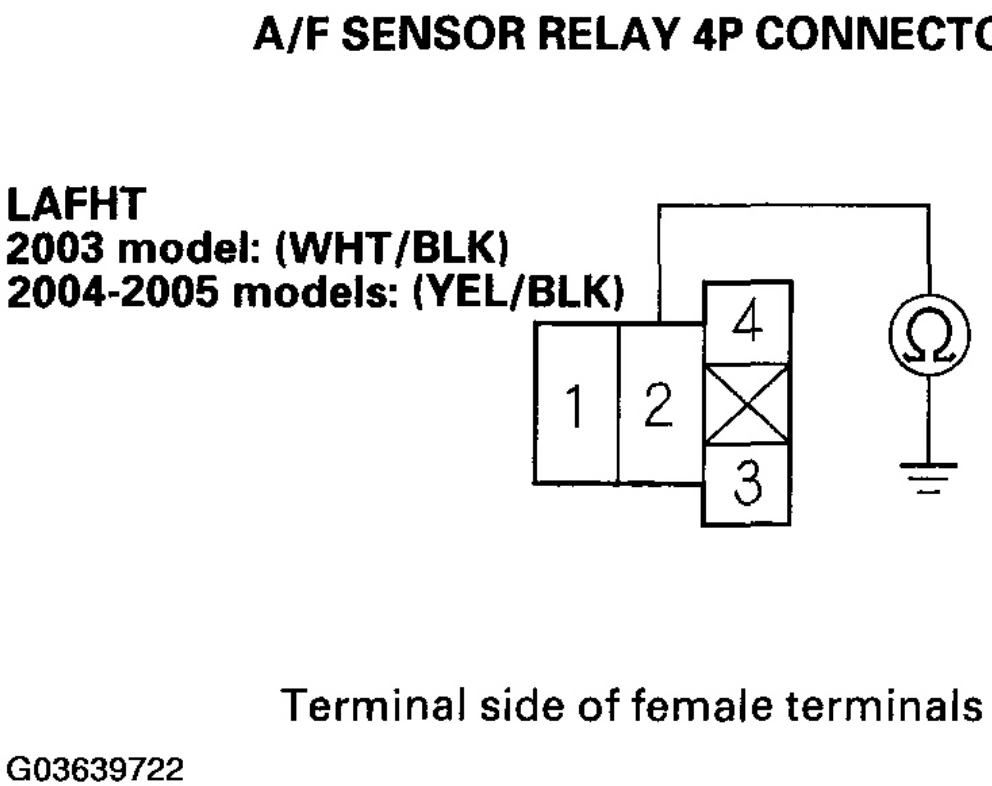


Fig. 64: Checking Continuity Between A/F Sensor Relay 4P Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 18.

NO - Repair open in the wire between the secondary HO2S (Sensor 2) and the A/F sensor relay, then go to step 24 .

18. Disconnect PCM connector B (56P).
19. Check for continuity between PCM connector terminal B10 and body ground.

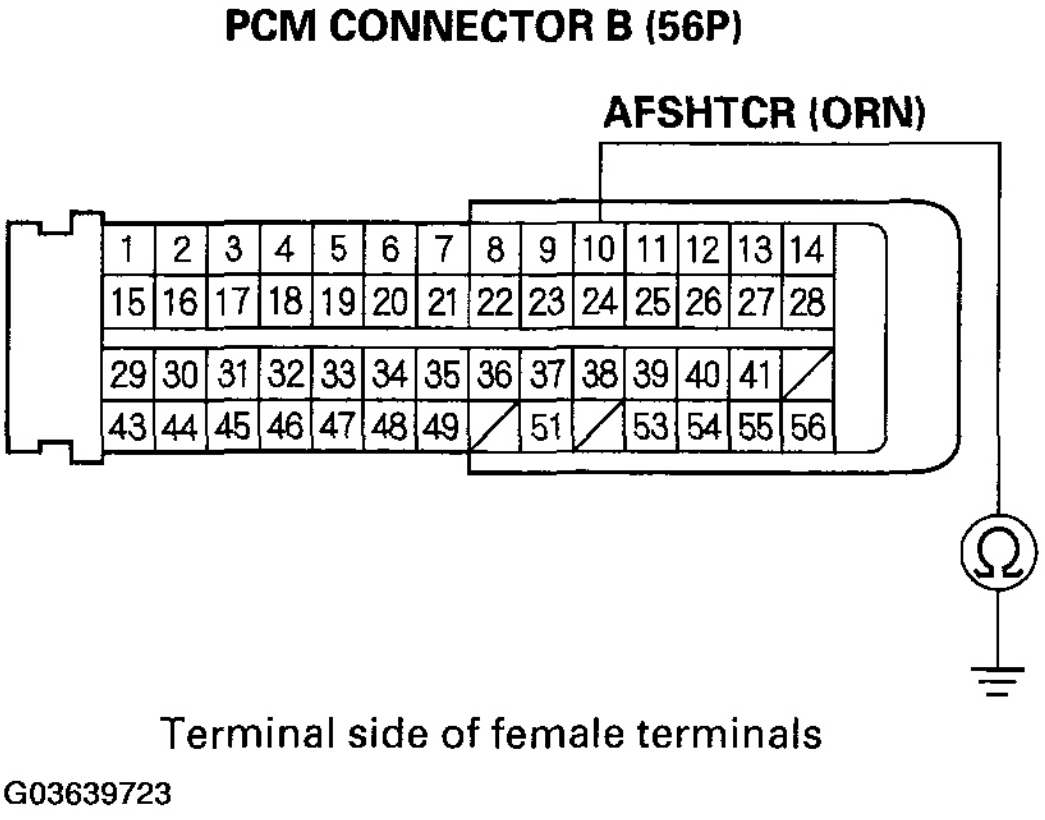


Fig. 65: Checking Continuity Between PCM Connector Terminal B10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B10) and the A/F sensor relay, then go to step 24 .

NO - Go to step 20.

20. Connect A/F sensor relay 4P connector terminal No. 3 to body ground with a jumper wire.

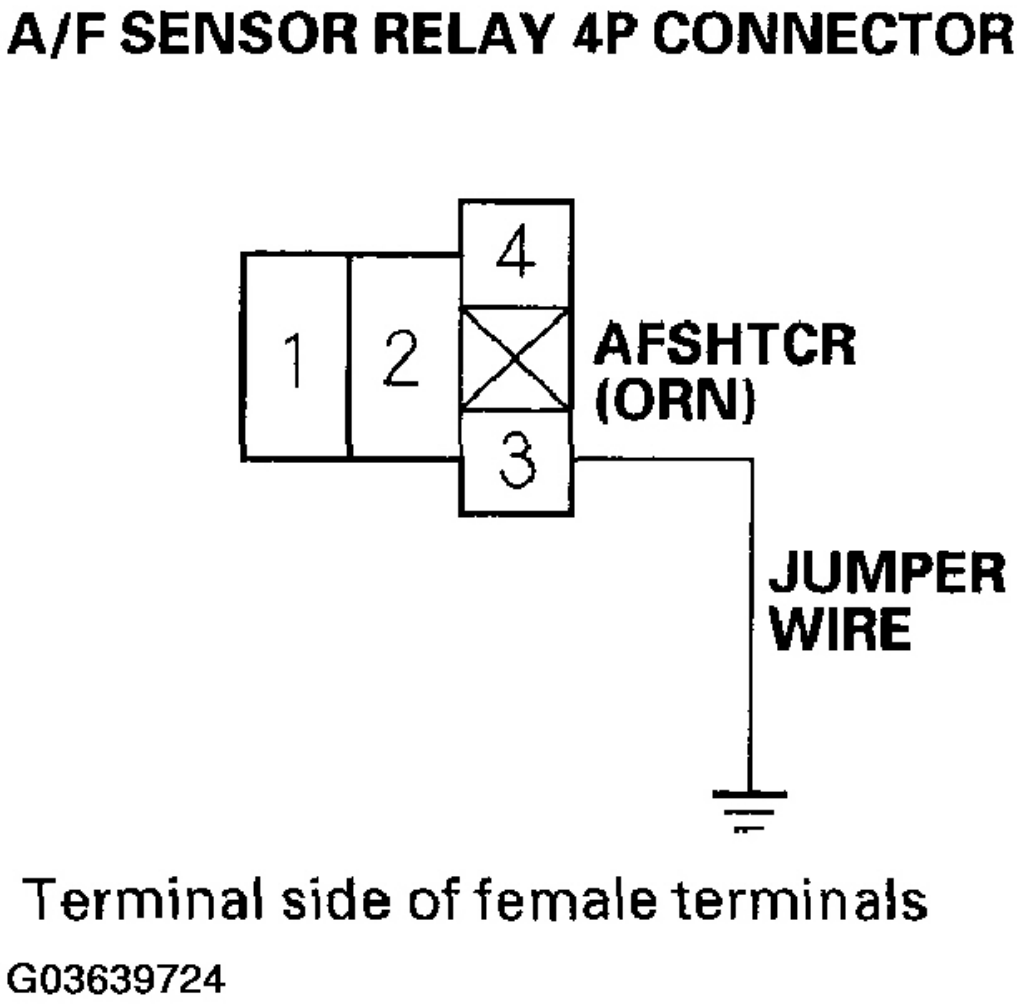


Fig. 66: Connecting A/F Sensor Relay 4P Connector Terminal 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Check for continuity between PCM connector terminal B10 and body ground.

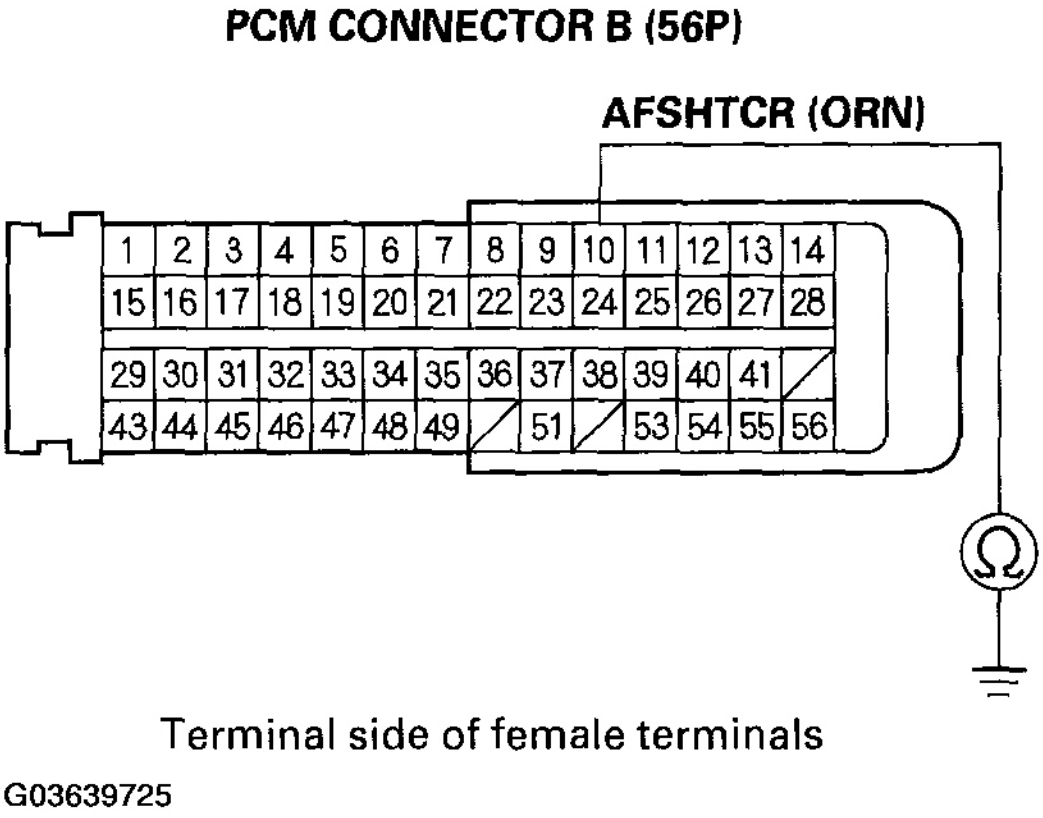


Fig. 67: Checking Continuity Between PCM Connector Terminal B10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 22.

NO - Repair open in the wire between the PCM (B10) and the A/F sensor relay, then go to step 24 .

22. Test the A/F sensor relay (see **POWER RELAY TEST**).

Is the A/F sensor relay OK?

YES - Go to step 30 .

NO - Replace the A/F sensor relay, then go to step 24 .

23. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
24. Reconnect all connectors.
25. Turn the ignition switch ON (II).
26. Reset the PCM with the HDS.

27. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
28. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0141 and/or P0161* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 29.
29. 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.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 28 and recheck.
30. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
31. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0141 and/or P0161* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0171, P0172, P0174, P0175: REAR BANK (BANK 1) FUEL SYSTEM TOO LEAN; REAR BANK (BANK 1) FUEL SYSTEM TOO RICH; FRONT BANK (BANK 2) FUEL SYSTEM TOO LEAN; FRONT BANK (BANK 2) FUEL SYSTEM TOO RICH

NOTE: **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.**

P0107, P0108, P1128, P1129: Manifold absolute pressure (MAP) sensor

P0133, P0153, P2195, P2197, 2237, P2238, P2240, P2241, P2243, P2245, P2247, P2249, P2251, P2252, P2254, P2255, P2627, P2628, P2630, P2631, 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: Secondary HO2S (Sensor 2)

P0141, P0161: Secondary HO2S (Sensor 2) heater

P2646, P2647, P2648, P2649: VTEC system

P0401, P0404, P0406, P2413: Exhaust gas recirculation (EGR) system

P2279: Intake air leakage

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Check the fuel pressure (see **FUEL PRESSURE TEST**).

   Is the fuel pressure OK?

   YES - Check the valve clearances and adjust if necessary (P0172, P0175 only). If the valve clearances are OK, replace the injectors (see **INJECTOR REPLACEMENT**), then go to step 2.

   NO - Check these items:

   - If the pressure is too high, replace the fuel pressure regulator (see **FUEL PRESSURE REGULATOR REPLACEMENT**), then go to step 2. If the pressure is too low, check the fuel pump, the fuel filter, and the fuel feed pipe, then go to step 2.
2. Turn the ignition switch ON (II).
3. Reset the PCM with the HDS.
4. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
5. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
6. Test-drive under these conditions:
   - Engine coolant temperature above 158°F (70°C)
   - A/T in D5 position
   - Drive at a steady speed between 25 mph (40 km/h) and 55 mph (88 km/h) for 5 minutes, then drive at a steady speed between 15 mph (24 km/h) and 75 mph (120 km/h) for 15 minutes.

   NOTE: DTC P0171, P0172, P0174, and/or P0175 may take up to 40 minutes of test driving to set. Using the HDS monitor the AF FB AVE for 15 minutes of driving. If the AF FB AVE stays at about 1.0 (0.0%) there is no problem at this time.

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

   Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0171, P0172, P0174, or P0175 is indicated, go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

DTC P0201, P0202, P0203, P0204, P0205, P0206: NO. 1 INJECTOR CIRCUIT MALFUNCTION; NO. 2 INJECTOR CIRCUIT MALFUNCTION; NO. 3 INJECTOR CIRCUIT MALFUNCTION; NO. 4 INJECTOR CIRCUIT MALFUNCTION; NO. 5 INJECTOR CIRCUIT MALFUNCTION; NO. 6 INJECTOR CIRCUIT MALFUNCTION

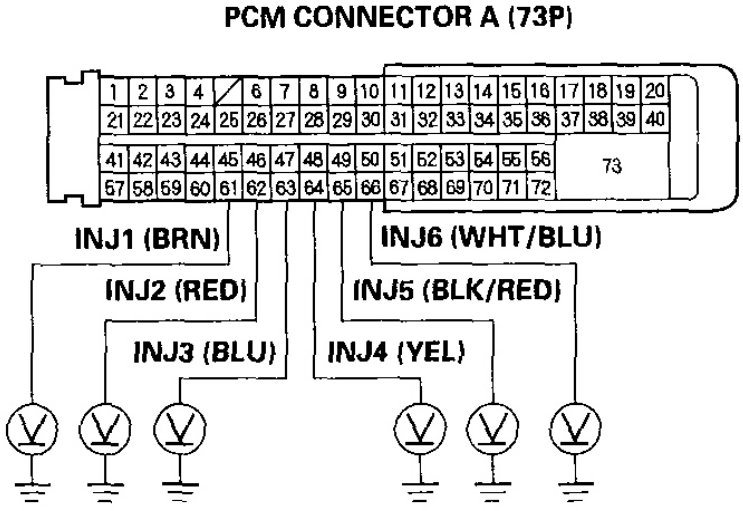
NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Clear the DTC with the HDS.
2. Start the engine, and let it idle without load (in Park or neutral).
3. Check for Temporary DTCs or DTCs with the HDS.

   Is P0201, P0202, P0203, P0204, P0205, and/or P0206 indicated?

   YES - Go to step 4.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the appropriate injector and the PCM.
4. Turn the ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Disconnect PCM connector A (73P).
7. Turn the ignition switch ON (II).
8. Measure voltage between body ground and the appropriate PCM connector terminal.



PROBLEM CYLINDER	DTC	WIRE COLOR	PCM TERMINAL
No. 1	P0201	BRN	A61
No. 2	P0202	RED	A62
No. 3	P0203	BLU	A63
No. 4	P0204	YEL	A64
No. 5	P0205	BLK/RED	A65
No. 6	P0206	WHT/BLU	A66

G03639726

Fig. 68: Measuring Voltage Between Body Ground And Appropriate PCM Connector Terminal
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 19 .
NO - Go to step 9.

9. Turn the ignition switch OFF.
10. Remove the intake manifold (see **REMOVAL**).
11. Disconnect the injector 2P connector from the problem cylinder.
12. Turn the ignition switch ON (II).

13. Measure voltage between injector 2P connector terminal No. 1 and body ground.

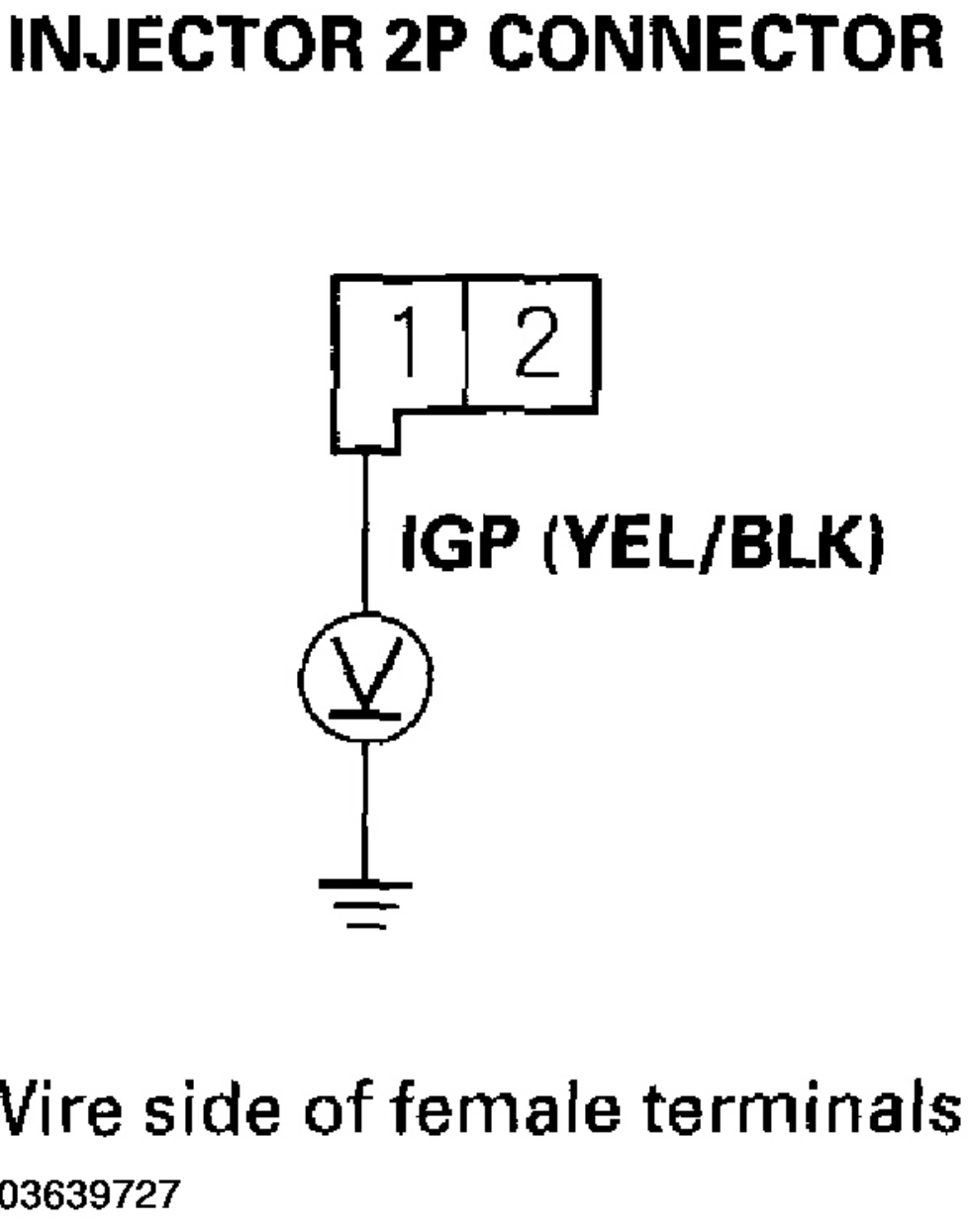


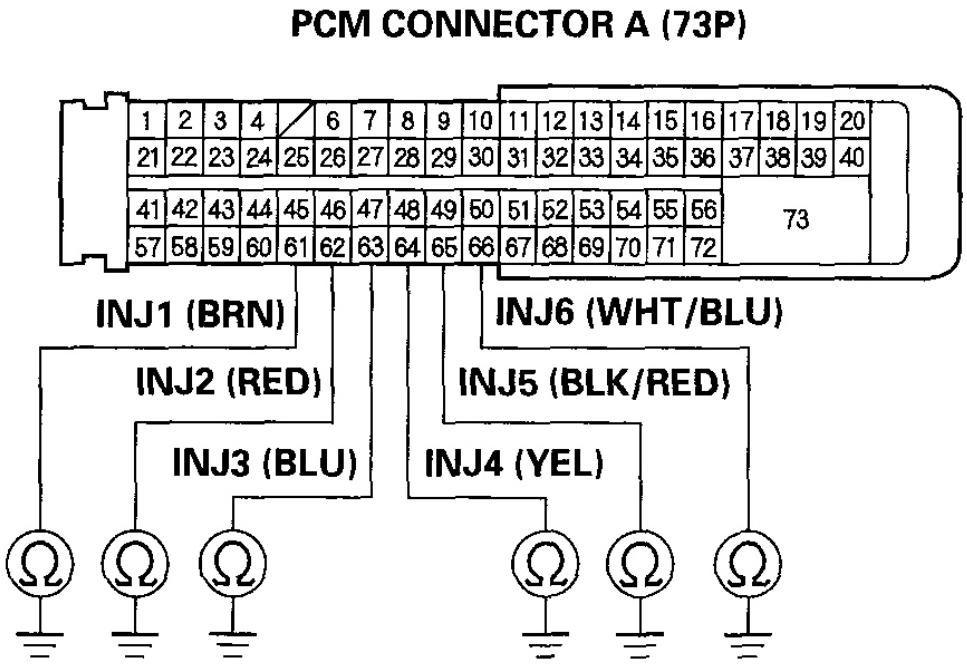
Fig. 69: Measuring Voltage Between Injector 2P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 14.

NO - Repair open in the wire between the injector and PGM-FI main relay 1 (FI MAIN), then go to step 24 .

14. Turn the ignition switch OFF.
15. Check for continuity between body ground and the appropriate PCM connector terminal.



Terminal side of female terminals

PROBLEM CYLINDER	DTC	WIRE COLOR	PCM TERMINAL
No. 1	P0201	BRN	A61
No. 2	P0202	RED	A62
No. 3	P0203	BLU	A63
No. 4	P0204	YEL	A64
No. 5	P0205	BLK/RED	A65
No. 6	P0206	WHT/BLU	A66

G03639728

Fig. 70: Checking Continuity Between Body Ground And Appropriate PCM Connector Terminal

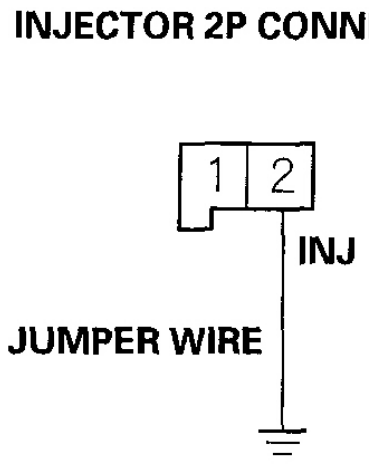
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM and the injector, then go to step 24 .

NO - Go to step 16.

16. Connect appropriate injector 2P connector terminal No. 2 to body ground with a jumper wire (see **Fig. 71**).



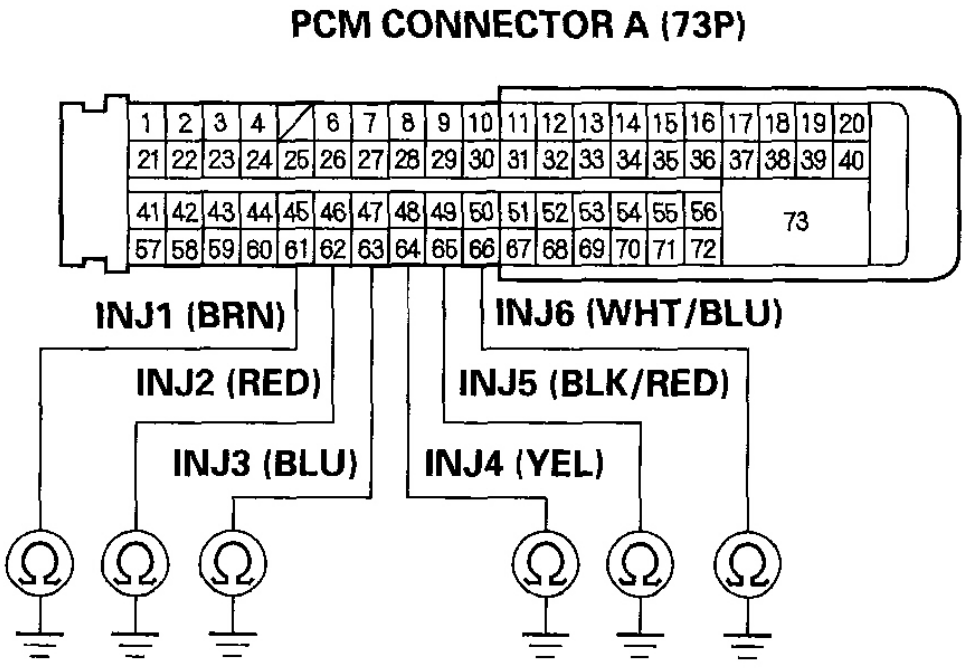
Wire side of female terminals

PROBLEM CYLINDER	DTC	WIRE COLOR	PCM TERMINAL
No. 1	P0201	BRN	A61
No. 2	P0202	RED	A62
No. 3	P0203	BLU	A63
No. 4	P0204	YEL	A64
No. 5	P0205	BLK/RED	A65
No. 6	P0206	WHT/BLU	A66

G03639729

Fig. 71: Connecting Appropriate Injector 2P Connector Terminal 2 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Check for continuity between body ground and the appropriate PCM connector terminal.



PROBLEM CYLINDER	DTC	WIRE COLOR	PCM TERMINAL
No. 1	P0201	BRN	A61
No. 2	P0202	RED	A62
No. 3	P0203	BLU	A63
No. 4	P0204	YEL	A64
No. 5	P0205	BLK/RED	A65
No. 6	P0206	WHT/BLU	A66

G03639730

Fig. 72: Checking Continuity Between Body Ground And PCM Connector Terminal
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 18.

NO - Repair open in the wire between the PCM and the injector, then go to step 24 .

18. Measure resistance between injector 2P connector terminals No. 1 and No. 2.

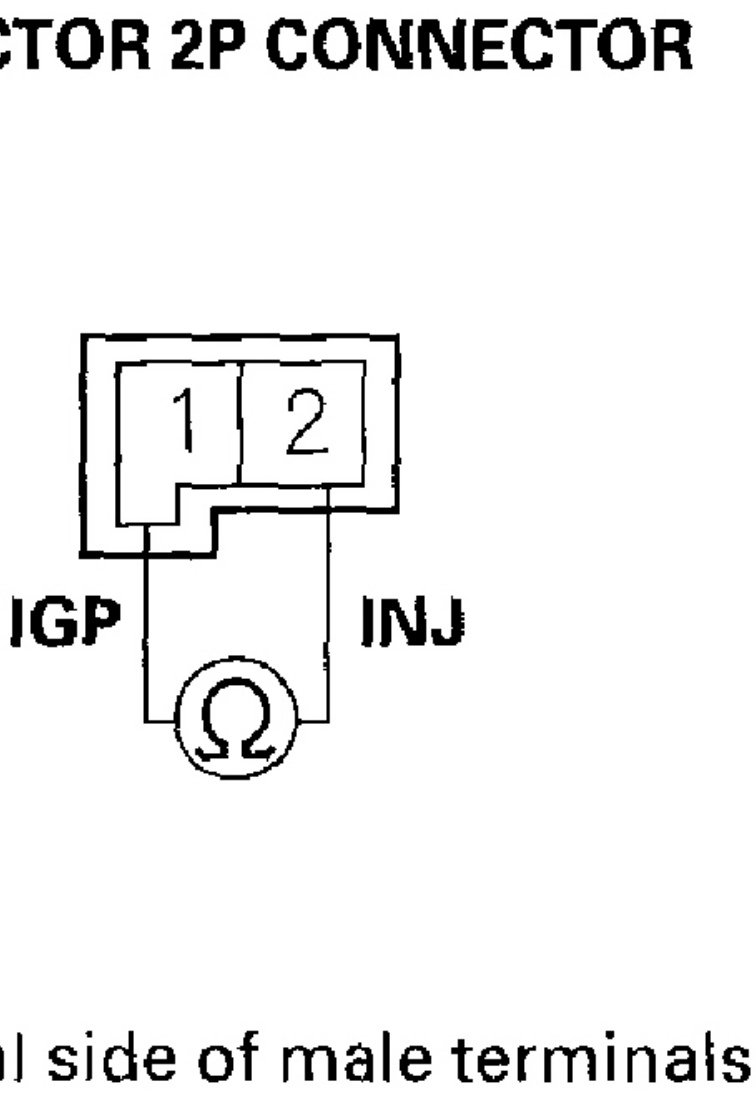


Fig. 73: Measuring Resistance Between Injector 2P Connector Terminals 1 And 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 10 - 13 ohm?

YES - Go to step 19.

NO - Replace the injector (see **INJECTOR REPLACEMENT**), then go to step 24 .

19. Substitute a known-good injector to the problem cylinder.
20. Reconnect PCM connector A (73P).
21. Start the engine, and let it idle for 2 minutes.
22. Test-drive the vehicle for several minutes in the range of the recorded freeze data.
23. Check the CYL1, CYL2, CYL3, CYP4, CYL5, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

Does CYL1, CYL2, CYL3, CYL4, CYL5, and/or CYL6 MISFIRE count the misfire?

YES - Go to step 30 .

NO - Replace the original injector (see **INJECTOR REPLACEMENT**), then go to step 24 .

24. Reconnect all connectors.
25. Turn the ignition switch ON (II).
26. Reset the PCM with the HDS.
27. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
28. Test-drive the vehicle for several minutes in the range of the recorded freeze data.
29. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0201, P0202, P0203, P0204, P0205, or P0206 is indicated, check for poor connections or loose terminals at the injector and the PCM, then go to troubleshooting DTC P0201, P0202, P0203, P0204, P0205, or P0206. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

30. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
31. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - Engine speed
    - Vehicle speed
    - Throttle position
    - CLV (calculated load value)
    - Gear position
    - Engine coolant temperature
32. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0201, P0202, P0203, P0204, P0205, or P0206 is indicated, check for poor connections or loose terminals at the injector, and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs indicated, go to indicated DTC's troubleshooting.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**).

DTC P0300, P0301, P0302, P0303, P0304, P0305, P0306: RANDOM MISFIRE AND ANY COMBINATION OF THE FOLLOWING; NO. 1 CYLINDER MISFIRE DETECTED; NO. 2 CYLINDER MISFIRE DETECTED; NO. 3 CYLINDER MISFIRE DETECTED; NO. 4 CYLINDER MISFIRE DETECTED; NO. 5 CYLINDER MISFIRE DETECTED; NO. 6 CYLINDER MISFIRE DETECTED

Special Tools Required

- Pressure gauge adapter 07NAJ-P07010A
- A/T low pressure gauge w/panel 07406-0070300
- 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-S5A0200

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If the misfire is frequent enough to trigger detection of increased emissions during 2 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):**

P0107, P0108, P1128, P1129: Manifold absolute pressure (MAP) sensor

P0171, P0172: Fuel system

P0335, P0339, P0385, P0389: Crankshaft position (CKP) sensor A/B

P0506, P0507: Idle control system

P0340, P0344: Camshaft position (CMP) sensor

P0401, P0404, P0406, P2413: Exhaust gas recirculation (EGR) system

1. Clear the DTC with the HDS.
2. Start the engine, and let it idle without load (in Park or neutral).
3. 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 8 .

   NO - If the screen indicates PASSED, go to step 4. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, wait for several minutes, and recheck.
4. 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 8 .

   NO - Go to step 5.
5. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
   - Engine speed
   - Vehicle speed
   - Throttle position
   - CLV (calculated load value)
   - Gear position
   - Engine coolant temperature
6. 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 8 .

   NO - If the screen indicates PASSED, go to step 7. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 5 and recheck.
7. 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 8.

NO - Intermittent failure, system is OK at this time.

8. Turn the ignition switch OFF.
9. Check fuel quality.

Is the quality good?

YES - Go to step 10.

NO - Drain the tank and fill it with a known-good fuel, then go to step 19 .

10. Clean all the spark plugs.
11. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - Engine speed
    - Vehicle speed
    - Throttle position
    - CLV (calculated load value)
    - Gear position
    - Engine coolant temperature
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 - Go to step 19 .

13. Check the fuel pressure (see **FUEL PRESSURE TEST**).

Is the fuel pressure OK?

YES - Go to step 14.

NO -

- If the pressure is too high, replace the fuel pressure regulator (see **FUEL PRESSURE REGULATOR REPLACEMENT**), then go to step 19 .
- If the pressure is too low, check the fuel pump, the fuel feed pipe, and the fuel filter. If they are OK, replace the fuel pressure regulator (see **FUEL PRESSURE REGULATOR REPLACEMENT**), then go to step 19 .

14. Turn the ignition switch OFF.
15. Remove the rocker arm oil pressure switch (VTEC oil pressure switch) (A), and install the special tools as shown in **Fig. 74** , then install the rocker arm oil pressure switch (VTEC oil pressure switch) (A) in the pressure gauge adapter (B).

NOTE: Install the part in the reverse order of removal with a new O-ring.

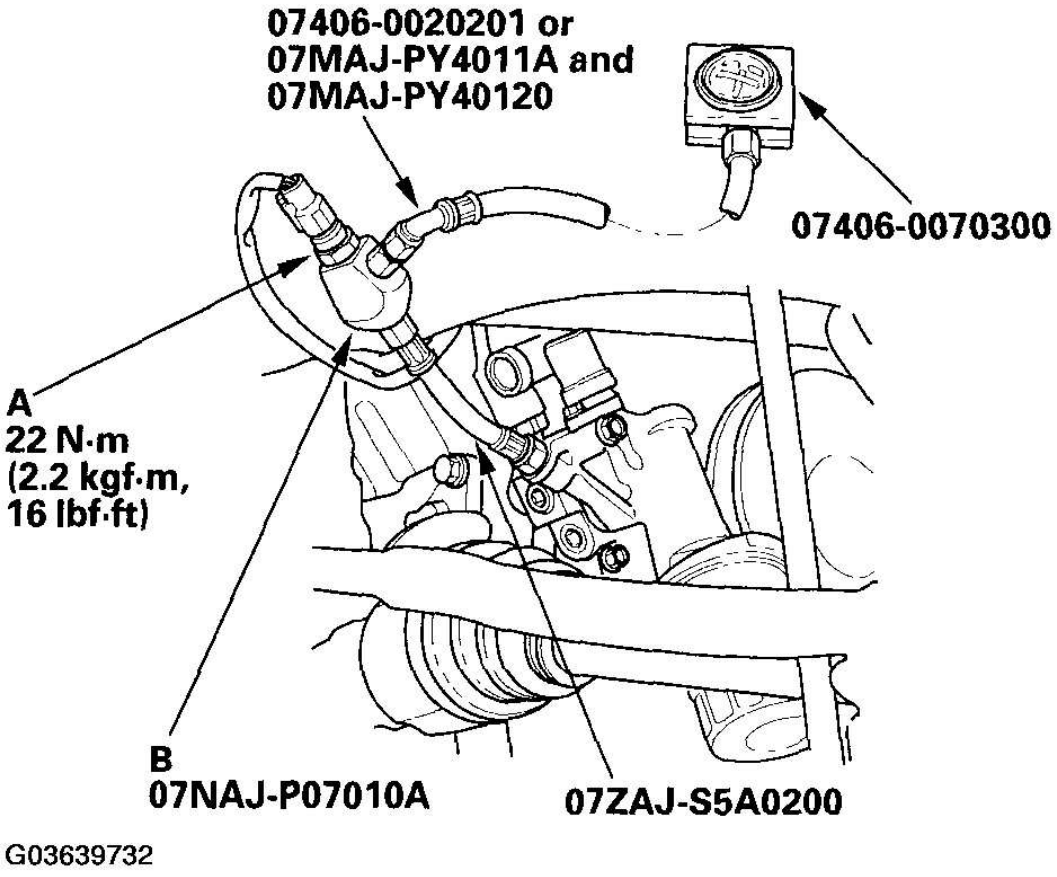


Fig. 74: Removing Rocker Arm Oil Pressure (VTEC Oil Pressure Switch) And Installing Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Reconnect the rocker arm oil pressure switch (VTEC oil pressure switch) 2P connector.
17. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on.
18. 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/cm^2 , 7 psi)?

YES - Check for air in the fuel line (see **FUEL LINE INSPECTION**), then go to step 19.

NO - Inspect the rocker arm oil control solenoid (VTEC solenoid valve), then go to step 19.

19. Turn the ignition switch ON (II).

20. Reset the PCM with the HDS.
21. Clear the CKP PATTERN with the HDS.
22. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
23. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).
24. Test-drive the vehicle for several minutes in the range of the recorded freeze data.
25. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0301, P0302, P0303, P0304, P0305, or P0306 are indicated, check for poor connections or loose terminals at the ignition coil, the injector, and the PCM, then go to troubleshooting DTC P0301, P0302, P0303, P0304, P0305, or P0306 (see **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**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 26.
26. 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.

    NO - If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 24 and recheck.

DTC P0301, P0302, P0303, P0304, P0305, P0306: CYLINDER MISFIRE DETECTED; NO. 2 CYLINDER MISFIRE DETECTED; NO. 3 CYLINDER MISFIRE DETECTED; NO. 4 CYLINDER MISFIRE DETECTED; NO. 5 CYLINDER MISFIRE DETECTED; 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 GENERAL TROUBLESHOOTING INFORMATION).

1. Clear the DTC with the HDS.
2. Start the engine, and let it idle without load (in Park or neutral).
3. 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 8 .

NO - If the screen indicates PASSED, go to step 4. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, wait for several minutes, and recheck.

4. 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 8 .

   NO - Go to step 5.

5. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
   - Engine speed
   - Vehicle speed
   - Throttle position
   - CLV (calculated load value)
   - Gear position
   - Engine coolant temperature

6. 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 8 .

   NO - If the screen indicates PASSED, go to step 7. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 5 and recheck.

7. 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 8.

   NO - Intermittent failure, system is OK at this time.

8. Turn the ignition switch OFF.
9. Remove the intake manifold cover (see step 1 in **REMOVAL**).
10. Start the engine, and listen for a clicking sound at the injector of the problem cylinder.

    Does the injector click?

    YES - Go to step 11.

NO - Go to step 21 .

11. Turn the ignition switch OFF.
12. Exchange the ignition coil from the problem cylinder with one from another cylinder.
13. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - Engine speed
    - Vehicle speed
    - Throttle position
    - CLV (calculated load value)
    - Gear position
    - Engine coolant temperature
14. 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 15.

    NO - Intermittent misfire due to poor contact at the ignition coil connector (no misfire at this time). Make sure the coil connections are secure.
15. 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**IGNITION COIL REMOVAL/INSTALLATION**), then go to step 42 .

    NO - Go to step 16.
16. Turn the ignition switch OFF.
17. Exchange the spark plug from the problem cylinder with one from another cylinder.
18. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - Engine speed
    - Vehicle speed
    - Throttle position
    - CLV (calculated load value)
    - Gear position
    - Engine coolant temperature
19. 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 20.

NO - Intermittent misfire due to spark plug fouling (no misfire at this time).

20. 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 42 .

NO - Go to step 21.

21. Turn the ignition switch OFF.
22. Exchange the injector from the problem cylinder with one from the another cylinder.
23. Start the engine, and let it idle for 2 minutes.
24. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - Engine speed
    - Vehicle speed
    - Throttle position
    - CLV (calculated load value)
    - Gear position
    - Engine coolant temperature
25. 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 26.

NO - Intermittent misfire due to bad contact in the injector connector (no misfire at this time). Check for poor connections or loose terminals at the injector.

26. Determine which cylinder had the misfire.

Does the misfire occur in the cylinder where the injector was exchanged?

YES - Replace the faulty injector (see **INJECTOR REPLACEMENT**), then go to step 42 .

NO - Go to step 27.

27. Turn the ignition switch OFF.
28. Disconnect the ignition coil 3P connector from the problem cylinder.
29. Turn the ignition switch ON (II).
30. Measure voltage between ignition coil 3P connector terminal No. 3 and body ground.

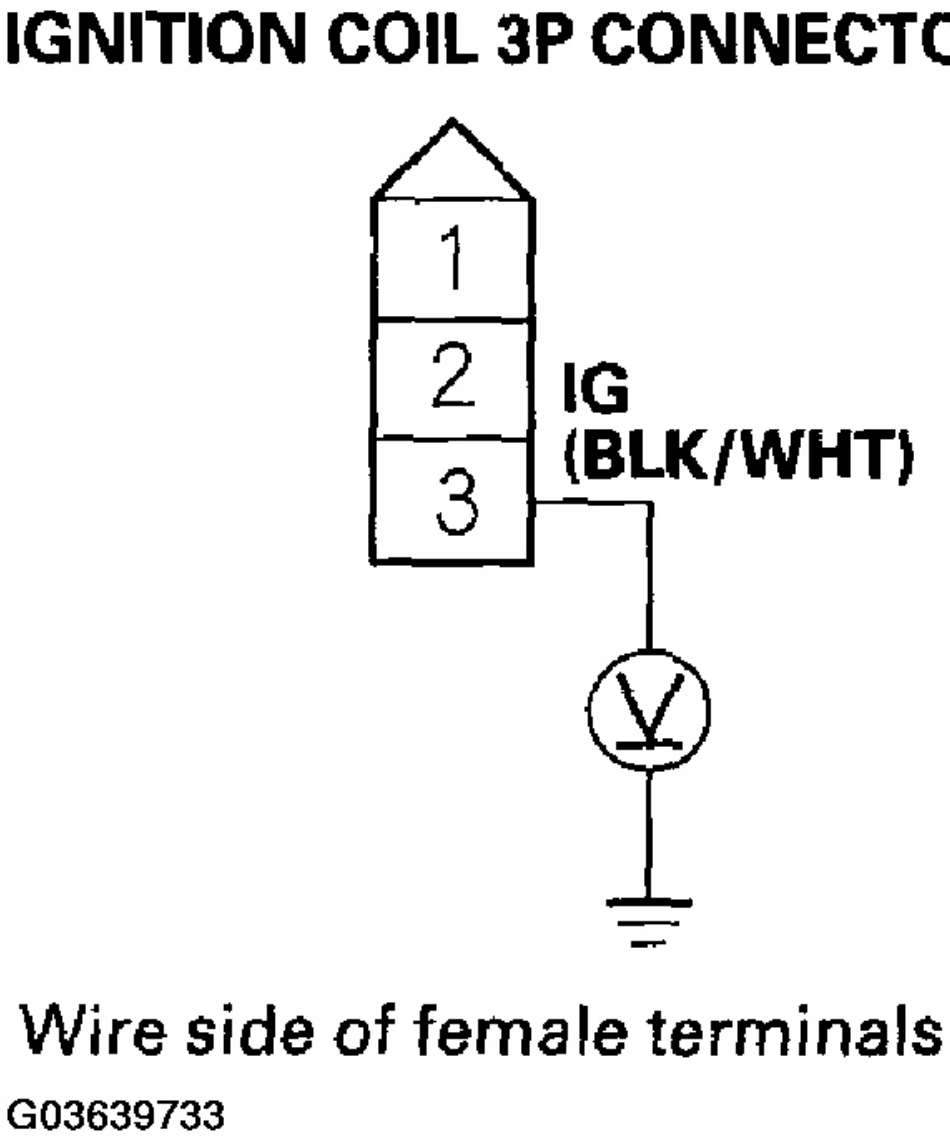


Fig. 75: Measuring Voltage Between Ignition Coil 3P Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 31.

NO - Repair open in the wire between the ignition coil and the ignition coil relay, then go to step 42 .

31. Turn the ignition switch OFF.
32. Check for continuity between ignition coil 3P connector terminal No. 2 and body ground.

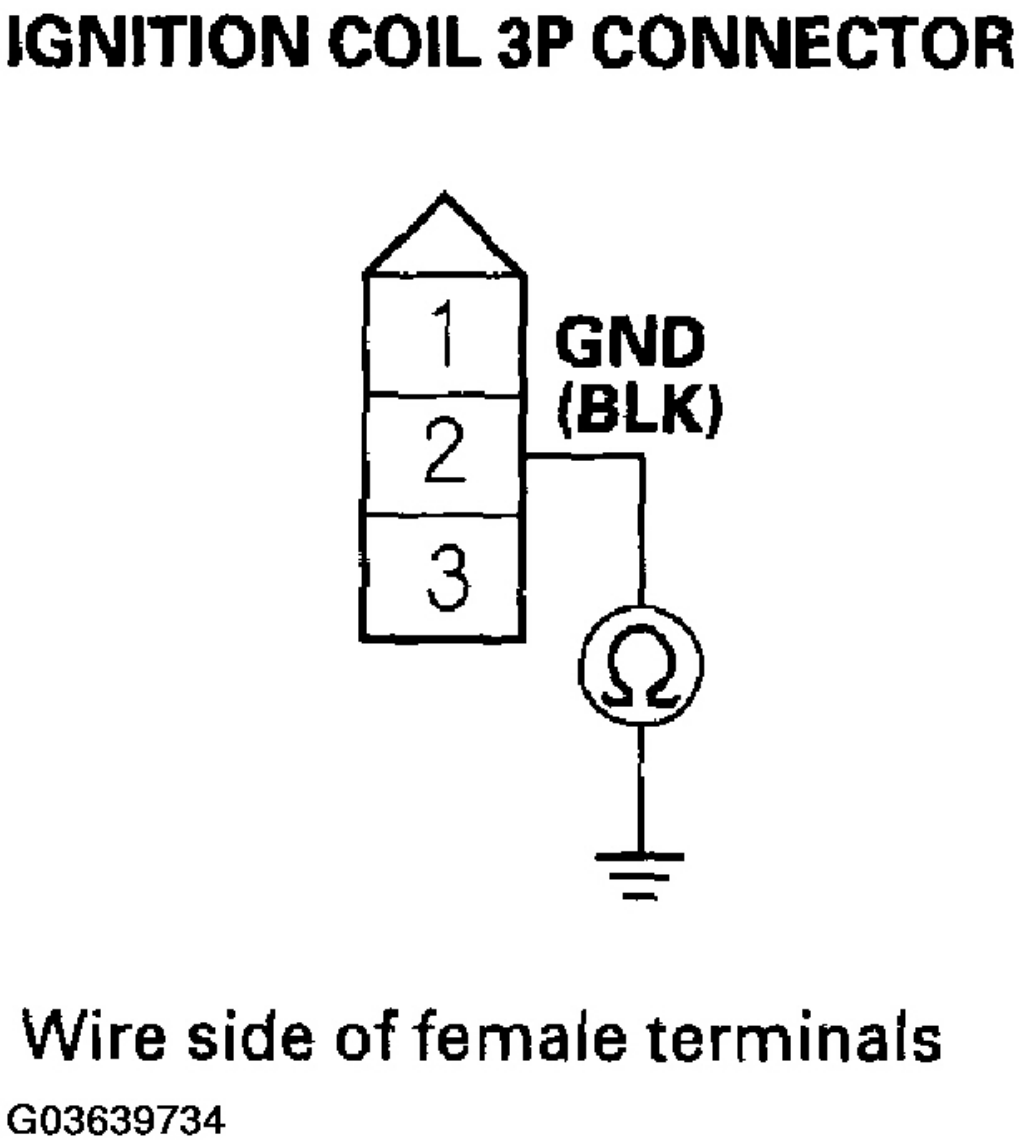


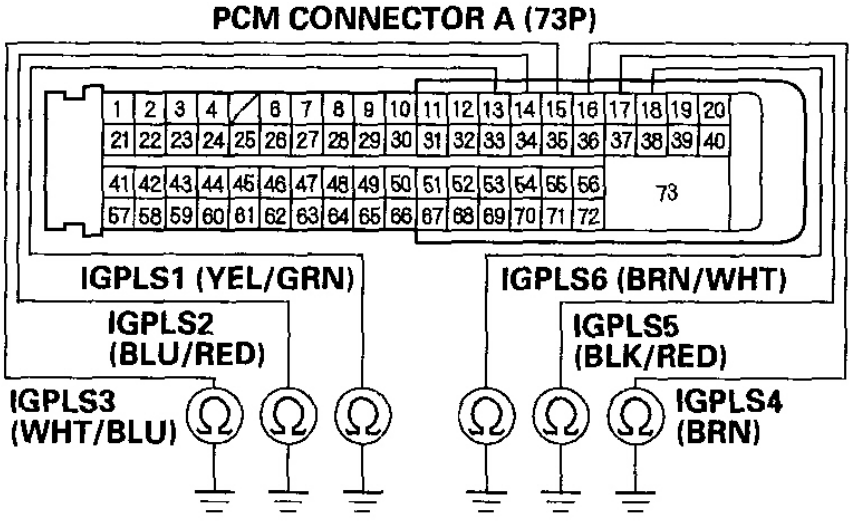
Fig. 76: Checking Continuity Between Ignition Coil 3P Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 33.

NO - Repair open in the wire between the ignition coil and G101 and G102, then go to step 42 .

33. Turn the ignition switch OFF.
34. Jump the SCS line with the HDS.
35. Disconnect PCM connector A (73P).
36. Check for continuity between body ground and the appropriate PCM connector terminal (see **Fig. 77**).



PROBLEM CYLINDER	DTC	PCM TERMINAL	WIRE COLOR
No. 1	P0301	A33	YEL/GRN
No. 2	P0302	A34	BLU/RED
No. 3	P0303	A35	WHT/BLU
No. 4	P0304	A36	BRN
No. 5	P0305	A37	BLK/RED
No. 6	P0306	A38	BRN/WHT

G03639735

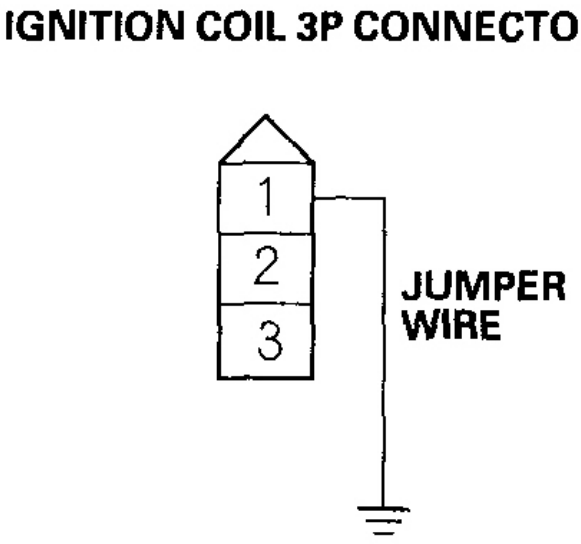
Fig. 77: Checking Continuity Between Body Ground And Appropriate PCM Connector Terminal Chart
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM and the ignition coil, then go to step 42 .

NO - Go to step 37.

37. Connect appropriate ignition coil 3P connector terminal No. 1 to body ground with a jumper wire (see **Fig. 78**).

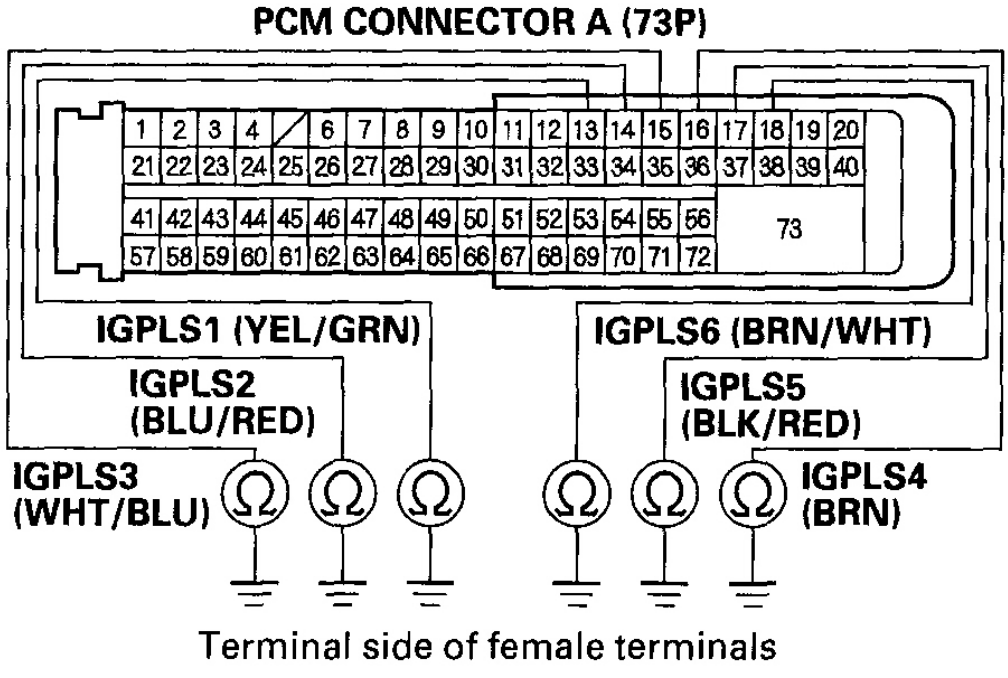


PROBLEM CYLINDER	DTC	WIRE COLOR
No. 1	P0301	YEL/GRN
No. 2	P0302	BLU/RED
No. 3	P0303	WHT/BLU
No. 4	P0304	BRN
No. 5	P0305	BLK/RED
No. 6	P0306	BRN/WHT

G03639736

Fig. 78: Connecting Ignition Coil 3P Connector Terminal 1 To Body Ground With Jumper Wire Chart
Courtesy of AMERICAN HONDA MOTOR CO., INC.

38. Check for continuity between body ground and the appropriate PCM connector terminal (see **Fig. 79**).



PROBLEM CYLINDER	DTC	PCM TERMINAL	WIRE COLOR
No. 1	P0301	A33	YEL/GRN
No. 2	P0302	A34	BLU/RED
No. 3	P0303	A35	WHT/BLU
No. 4	P0304	A36	BRN
No. 5	P0305	A37	BLK/RED
No. 6	P0306	A38	BRN/WHT

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Fig. 79: Checking Continuity Between Body Ground And PCM Connector Terminal Chart
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 39.

NO - Repair open in the wire between the PCM and the ignition coil, then go to step 42 .

39. Reconnect the ignition coil 3P connector and PCM connector A (73P).
40. Do an engine compression and a cylinder leakdown test.

Did the engine pass both tests?

YES - Go to step 41.
NO - Repair the engine, then go to step 42 .

41. Do the VTEC rocker arm test (see **VTEC ROCKER ARM TEST**).

Did the engine pass test?

YES - Go to step 50 .
NO - Repair the VTEC rocker arm (see **VTEC ROCKER ARM TEST**), then go to step 42.

42. Turn the ignition switch ON (II).
43. Reset the PCM with the HDS.
44. Clear the CKP PATTERN with the HDS.
45. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
46. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).
47. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - Engine speed
    - Vehicle speed
    - Throttle position
    - CLV (calculated load value)
    - Gear position
    - Engine coolant temperature
48. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0301, P0302, P0303, P0304, P0305, or P0306 are indicated, check for poor connections or loose terminals at the ignition coil, the injector, and the PCM, then go to troubleshooting DTC P0301, P0302, P0303, P0304, P0305, or P0306 (see **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**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 49.

49. 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.

NO - If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 47 and recheck.

50. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
51. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
    - Engine speed
    - Vehicle speed
    - Throttle position
    - CLV (calculated load value)
    - Gear position
    - Engine coolant temperature
52. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0301, P0302, P0303, P0304, P0305, or P0306 are indicated, check for poor connections or loose terminals at the injector, the ignition coil, and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, system is OK at this time. Check for poor connections or loose terminals at the knock sensor and the PCM.

6. Turn the ignition switch OFF.

7. Jump the SCS line with the HDS.
8. Disconnect the knock sensor subharness 1P connector.
9. Disconnect PCM connector A (73P).
10. Check for continuity between PCM connector terminal A26 and body ground.

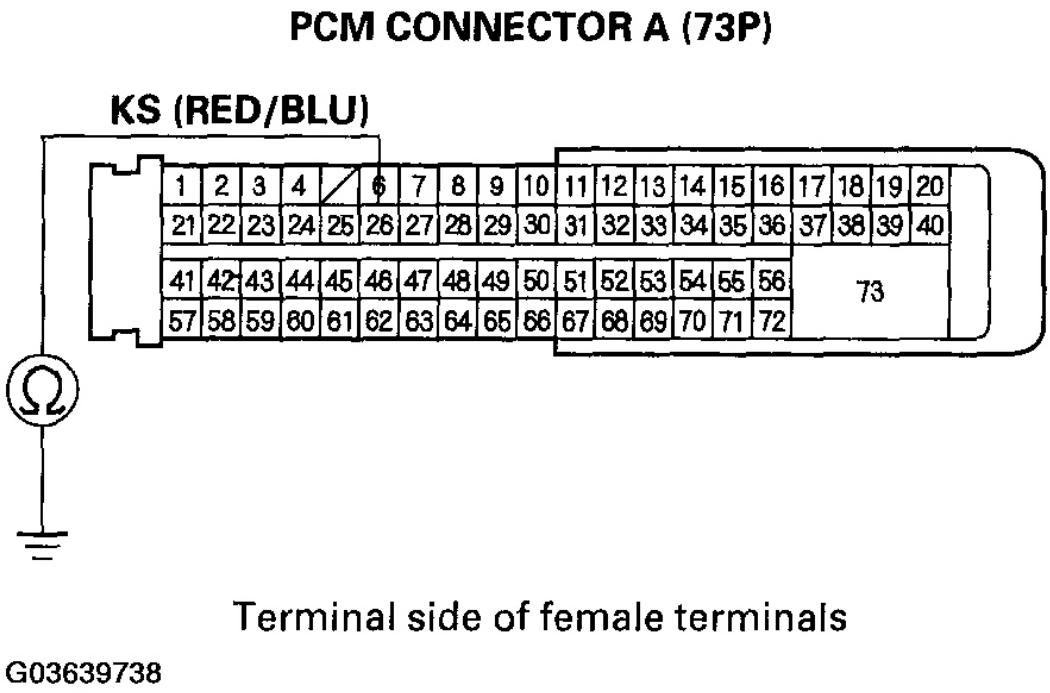


Fig. 80: Checking Continuity Between PCM Connector Terminal A26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A26) and the knock sensor subharness, then go to step 19 .

NO - Go to step 11.

11. Connect the knock sensor subharness 1P connector terminal to body ground with a jumper wire.

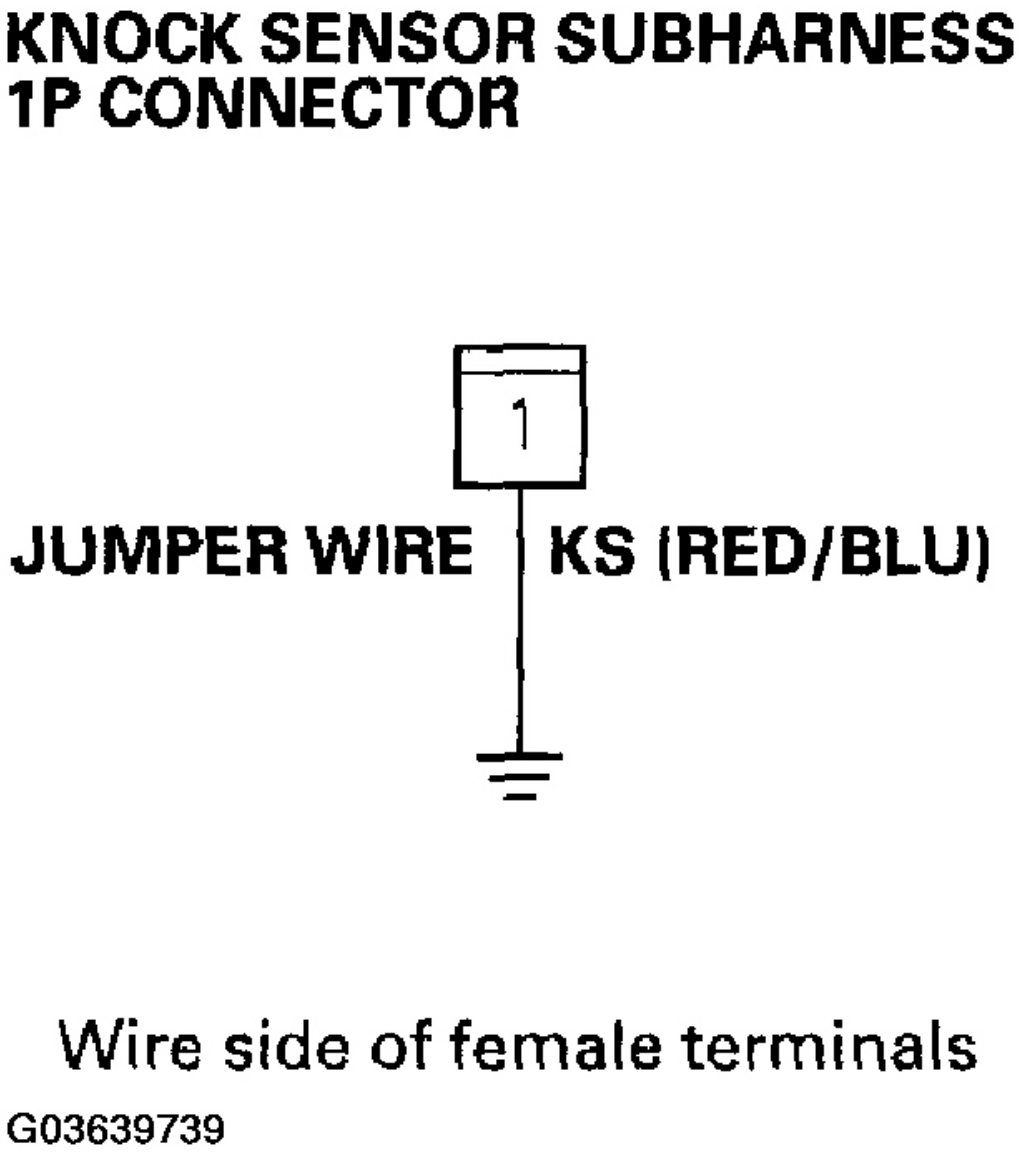


Fig. 81: Connecting Knock Sensor 1P Connector Terminal To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Check for continuity between PCM connector terminal A26 and body ground.

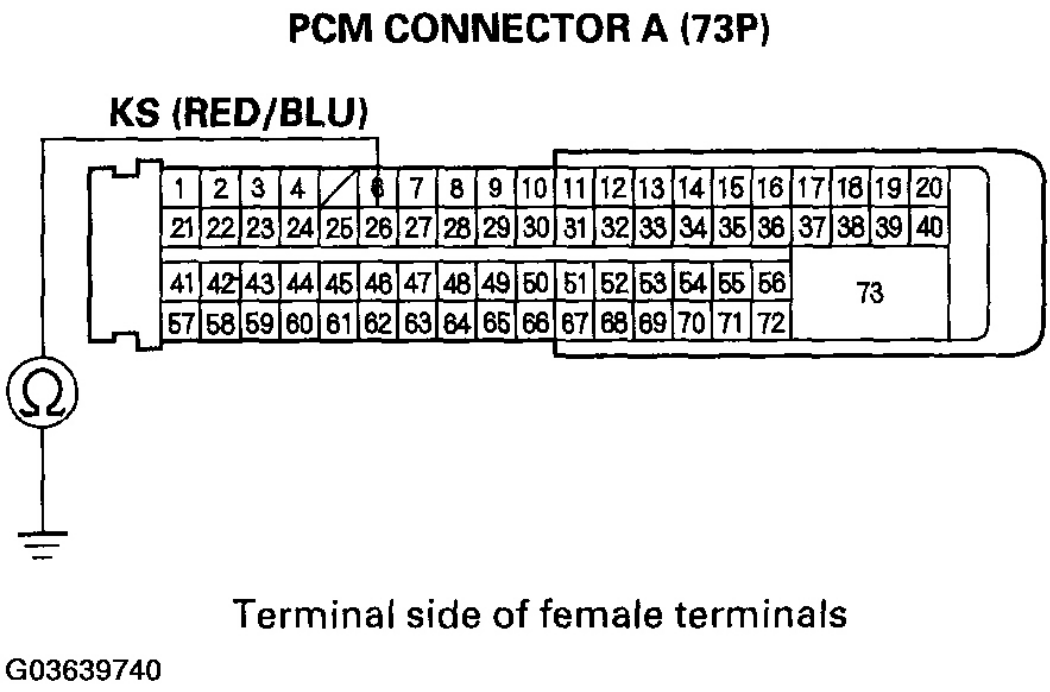


Fig. 82: Checking Continuity Between PCM Connector Terminal A26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 13.

NO - Repair open in the wire between the PCM (A26) and the knock sensor subharness, then go to step 19 .

13. Remove the intake manifold (see **REMOVAL**).
14. Disconnect the knock sensor 1P connector.
15. Check for continuity between the knock sensor subharness 1P connector terminal to body ground.

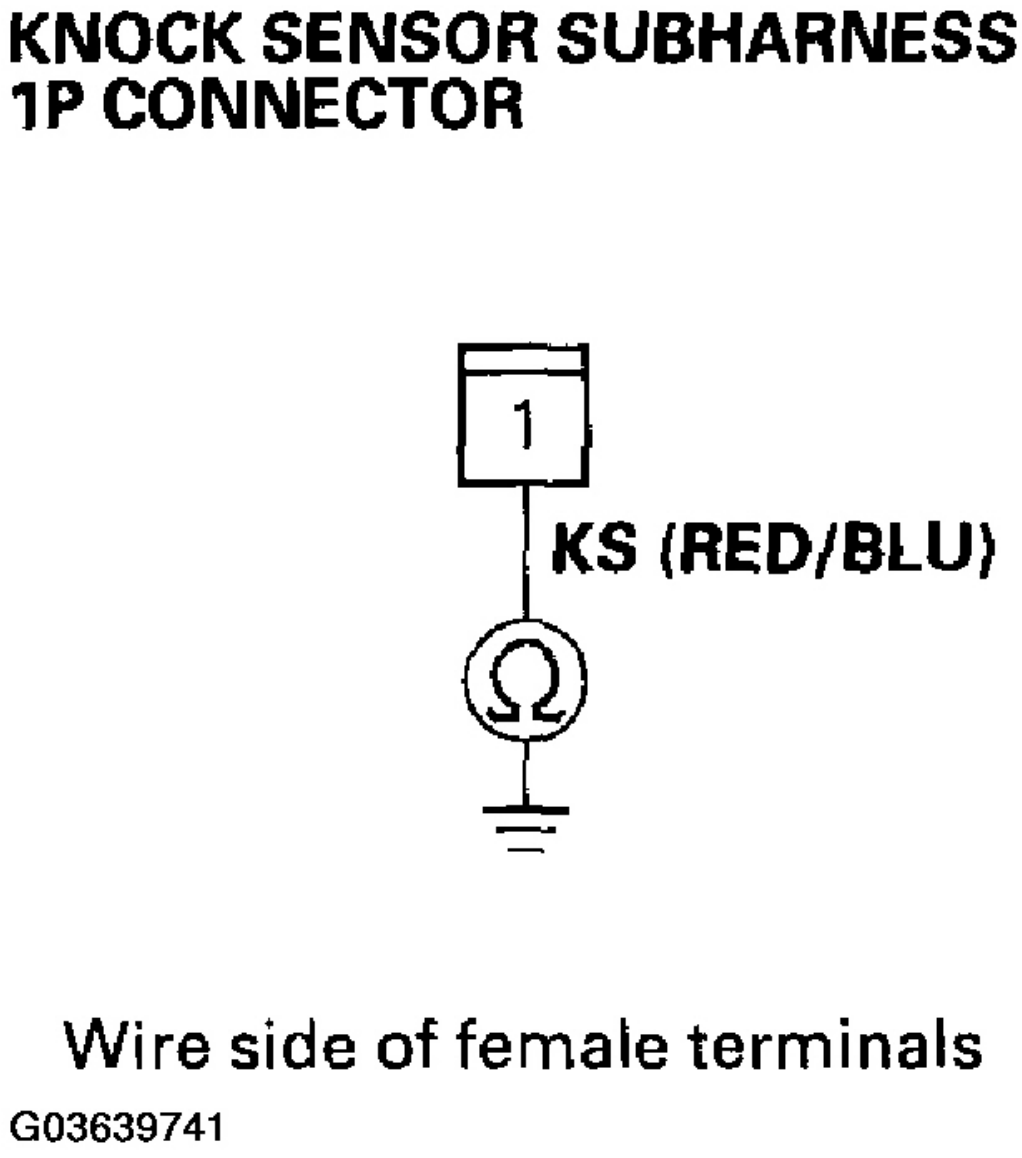


Fig. 83: Checking Continuity Between Knock Sensor Subharness 1P Connector Terminal To Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the knock sensor subharness, then go to step 18 .
NO - Go to step 16.

16. Check the knock sensor subharness for a open.

Is the harness OK?

YES - Go to step 17.

NO - Repair open in the knock sensor subharness, then go to step 18 .

17. Replace the knock sensor (see **ECT SENSOR REPLACEMENT**).
18. Install the intake manifold (see **INSTALLATION**).
19. Turn the ignition switch ON (II).
20. Reset the PCM with the HDS.
21. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
22. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
23. Hold the engine speed at 3,000-4,000 rpm for at least 10 seconds.
24. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0325 is indicated, go to step 26 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 25.

25. Monitor the OBD STATUS for DTC P0325 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, go to step 1 . If the screen indicates NOT COMPLETED, go to step 22 and recheck.

26. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
27. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
28. Hold the engine speed at 3,000-4,000 rpm for at least 10 seconds.
29. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0325 is indicated, check for poor connections or loose terminals at the knock sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0335, P0385: CKP SENSOR A NO SIGNAL; CKP SENSOR B NO SIGNAL

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to CKP sensor B.**

1. Turn the ignition switch 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 and/or P0385 indicated?

   YES - Go to step 5.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at CKP sensor A/B and the PCM.
5. Turn the ignition switch OFF.
6. Disconnect CKP sensor A/B 6P connector (see **CKP SENSOR REPLACEMENT**).
7. Turn the ignition switch ON (II).
8. Measure voltage between CKP sensor A/B 6P connector terminal No. 6 (No. 3)* and body ground.

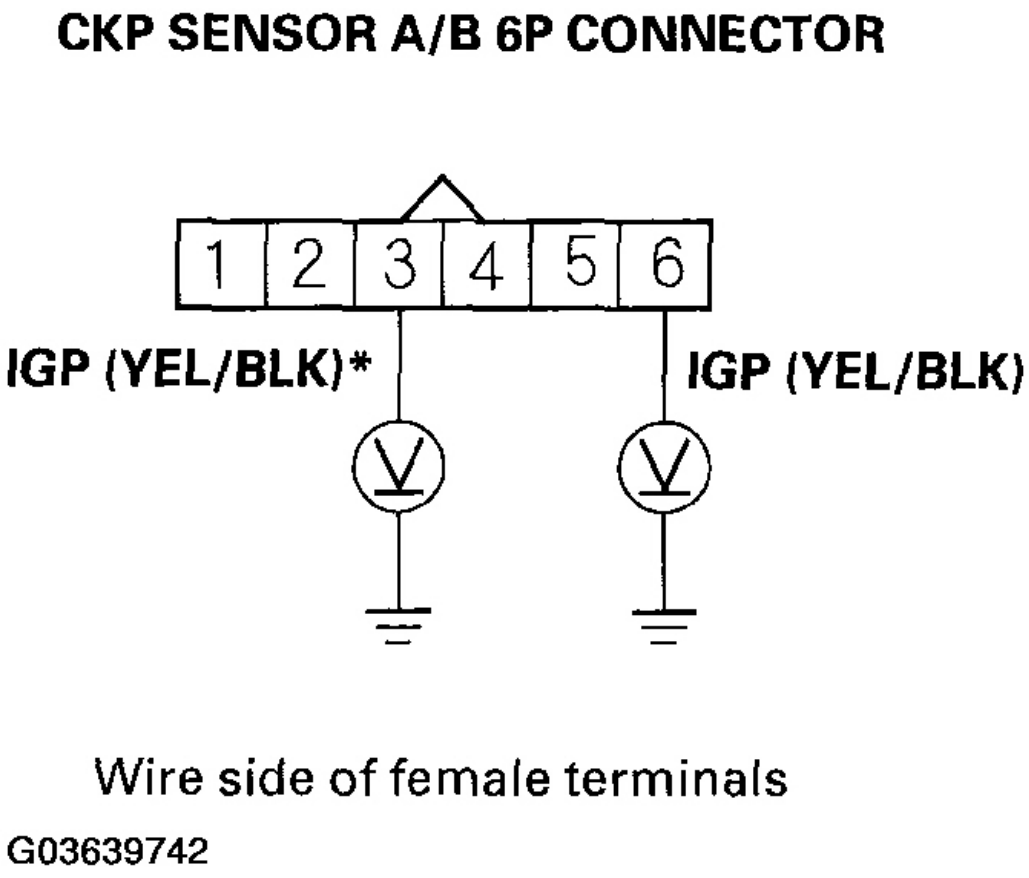


Fig. 84: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminal 6 (3*) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 9.

NO - Repair open in the wire between CKP sensor A/B and PGM-FI main relay 1 (FI MAIN), then go to step 18 .

9. Measure voltage between CKP sensor A/B 6P connector terminal No. 5 (No. 2)* and body ground.

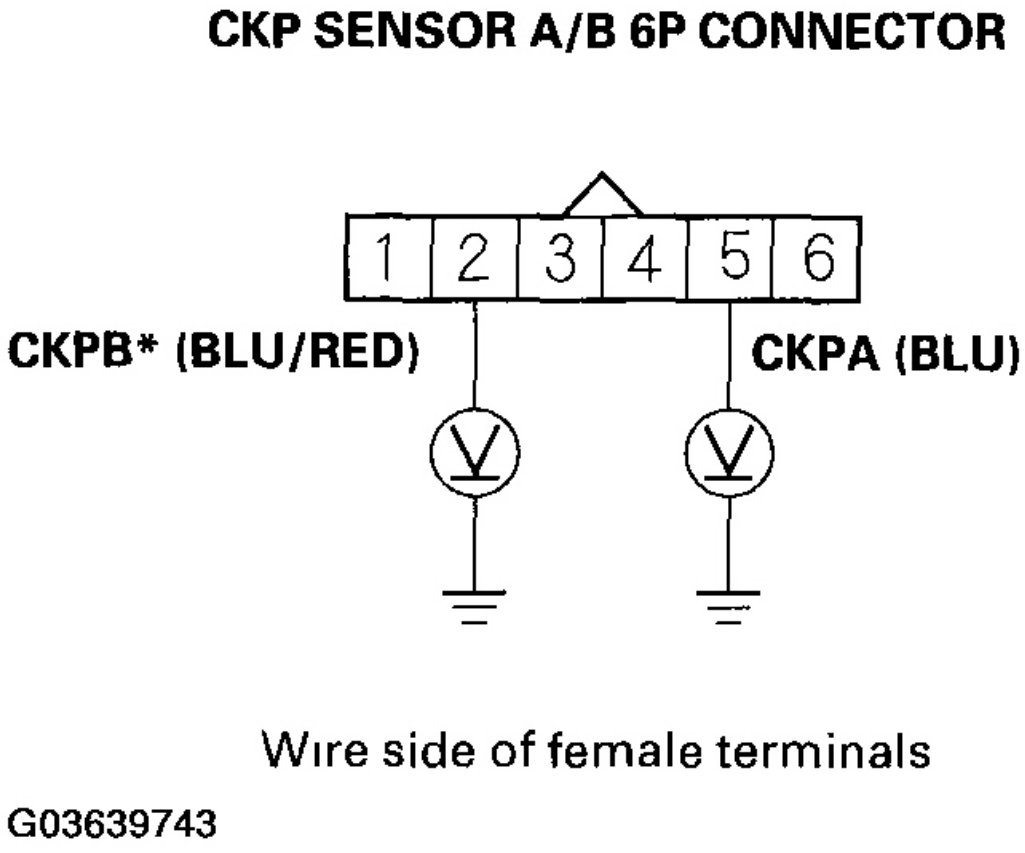


Fig. 85: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminal 5 (2*) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 10.
NO - Go to step 11 .

10. Measure voltage between CKP sensor A/B 6P connector terminals No. 4 (No. 1)* and No. 6 (No. 3)*.

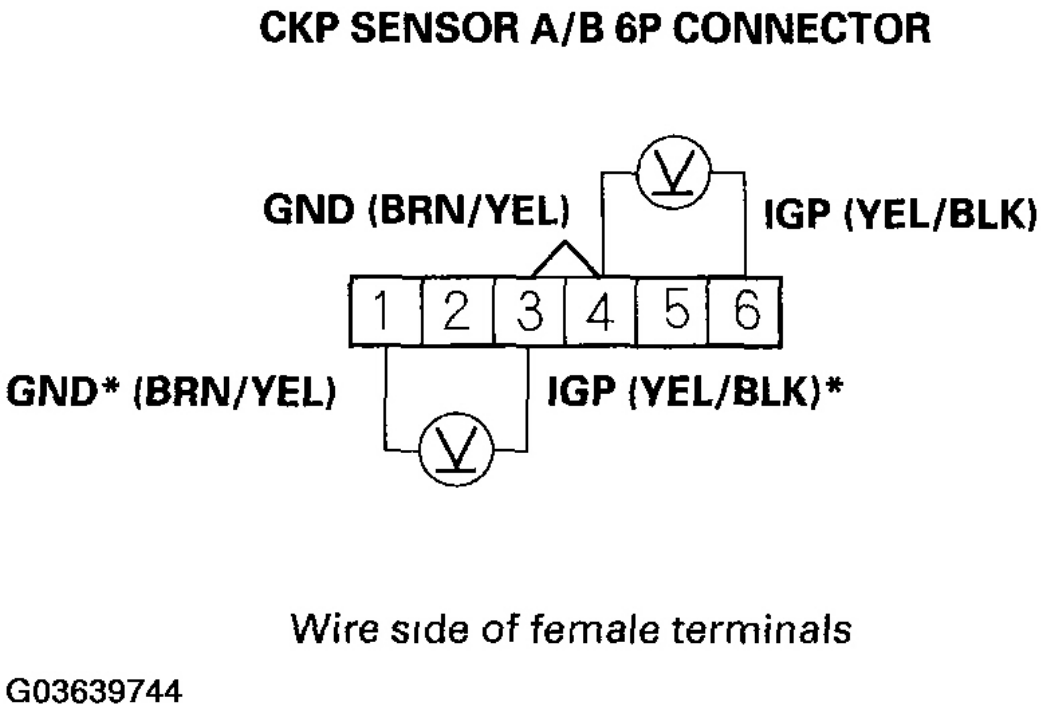


Fig. 86: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminals 4 (1*) And 6 (3*)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 16 .

NO - Repair open in the wire between CKP sensor A/B and G101, then go to step 18 .

11. Turn the ignition switch OFF.
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector A (73P).
14. Check for continuity between PCM connector terminal A44/A46* and CKP sensor A/B 6P connector No. 5/No. 2*.

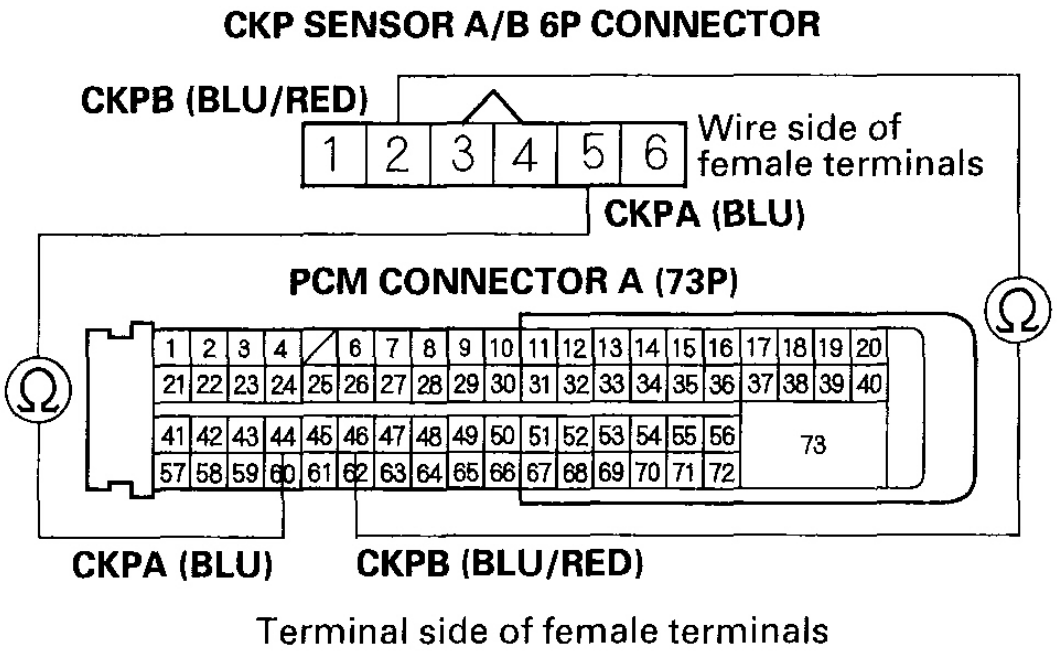


Fig. 87: Checking Continuity Between PCM Connector Terminal A44/A46* And CKP Sensor A/B 6P Connector 5/2*
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 15.

NO - Repair open in the wire between the PCM (A44/A46*) and the CKP sensor, then go to step 18 .

15. Check for continuity between PCM connector terminal A44/A46* and body ground.

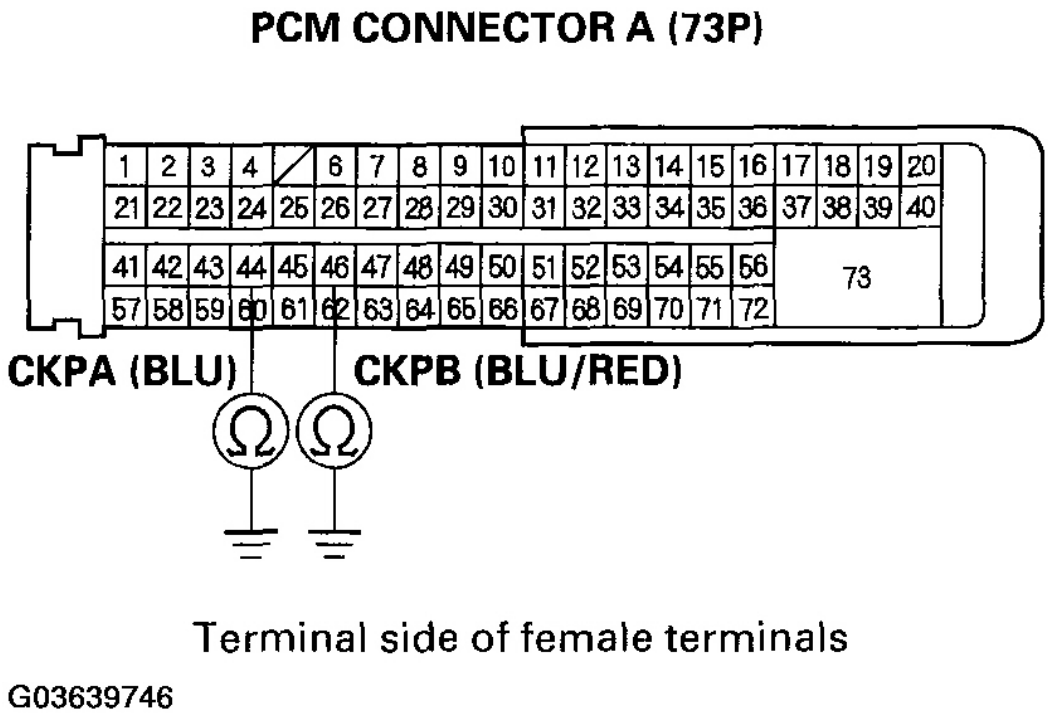


Fig. 88: Checking Continuity Between PCM Connector Terminal A44/A46* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A44/A46*) and CKP sensor A/B, then go to step 18 .

NO - Go to step 25 .

16. Turn the ignition switch OFF.
17. Replace the CKP sensor (see **CKP SENSOR REPLACEMENT**).
18. Reconnect all connectors.
19. Turn the ignition switch ON (II).
20. Reset the PCM with the HDS.
21. Clear the CKP PATTERN with the HDS.
22. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
23. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).
24. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0335 and/or P0385* is indicated, check for poor connections or loose terminals at CKP sensor A/B and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

25. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
26. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0335 and/or P0385* is indicated, check for poor connections or loose terminals at CKP sensor A/B and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0339, P0389: CKP SENSOR A INTERMITTENT INTERRUPTION; CKP SENSOR B INTERMITTENT INTERRUPTION

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to CKP sensor B.**

1. Clear the DTC with the HDS.
2. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
   - Engine speed
   - Vehicle speed
3. Check for Temporary DTCs or DTCs with the HDS.

Is DTCs P0339* and/or P0389* indicated?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at CKP sensor A/B and the PCM.

NO - Go to step 4.

4. Check for poor or loose connections at these connectors and terminals:
   - CKP sensor A/B
   - PCM
   - Engine ground
   - Body ground

Are the connections OK?

YES - Go to step 5.

NO - Repair the connectors or terminals, then go to step 8 .

5. Check for damage to the CKP sensor pulse plate on the timing belt drive pulley (see **TIMING BELT DRIVE PULLEY REPLACEMENT**).

Is there damage?

YES - Replace the CKP sensor pulse plate/timing belt drive pulley (see **TIMING BELT DRIVE PULLEY REPLACEMENT**), then go to step 8 .

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Replace CKP sensor (see **CKP SENSOR REPLACEMENT**).
8. Turn the ignition switch ON (II).
9. Reset the PCM with the HDS.
10. Clear the CKP pattern with the HDS.
11. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
12. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).
13. Start the engine, and let it idle for 10 seconds.
14. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0339 and/or P0389 is indicated, check for poor connections or loose terminals at CKP sensor A/B and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

DTC P0340: CMP SENSOR NO SIGNAL

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch 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 P0340 indicated?

YES - Go to step 5.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals

at the CMP sensor and the PCM.

5. Turn the ignition switch OFF.
6. Disconnect the CMP sensor 3P connector.
7. Turn the ignition switch ON (II).
8. Measure voltage between CMP sensor 3P connector terminal No. 3 and body ground.

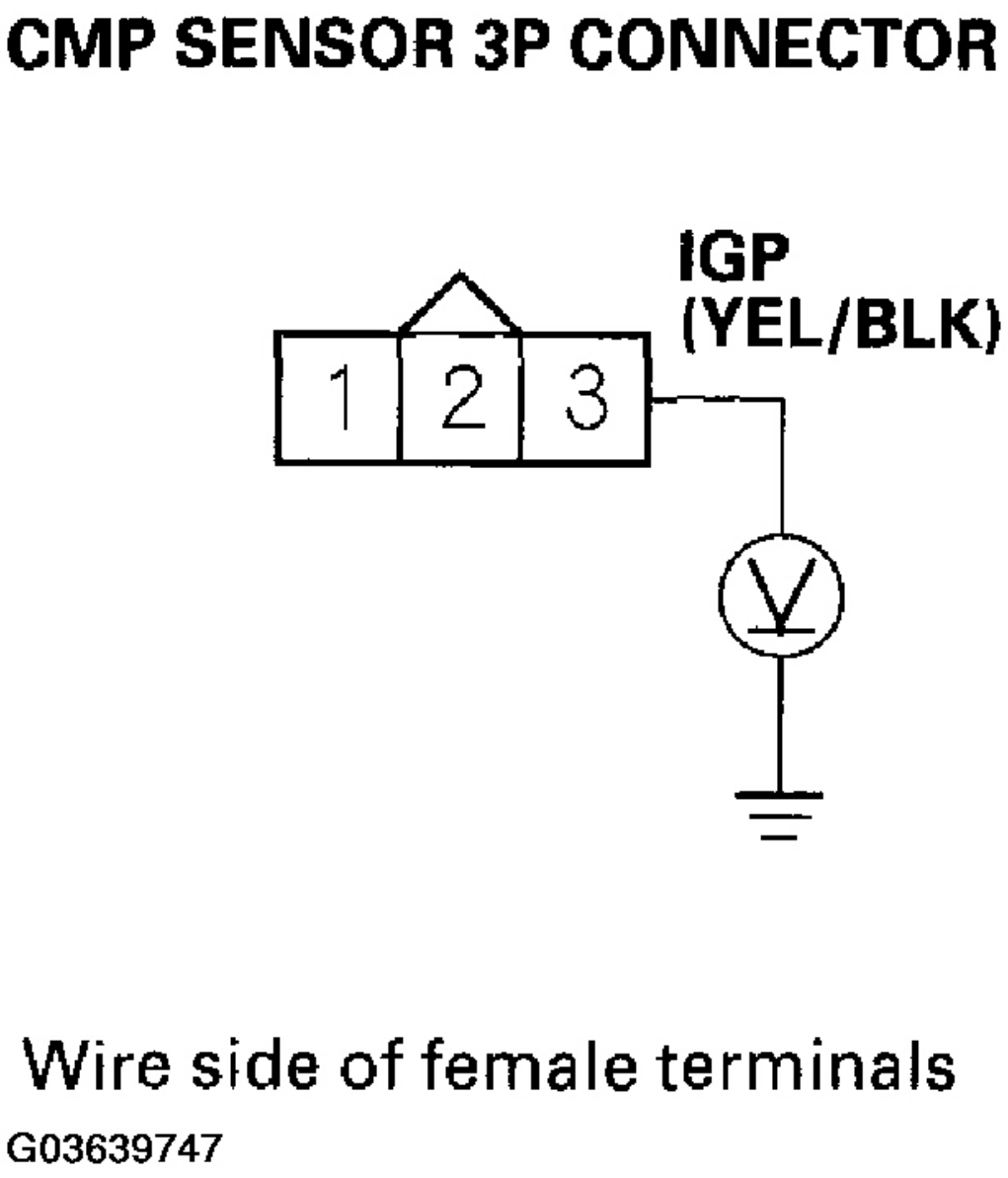


Fig. 89: Measuring Voltage Between CMP Sensor 3P Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 (FI MAIN), then go to step 18 .

9. Measure voltage between CMP sensor 3P connector terminal No. 1 and body ground.

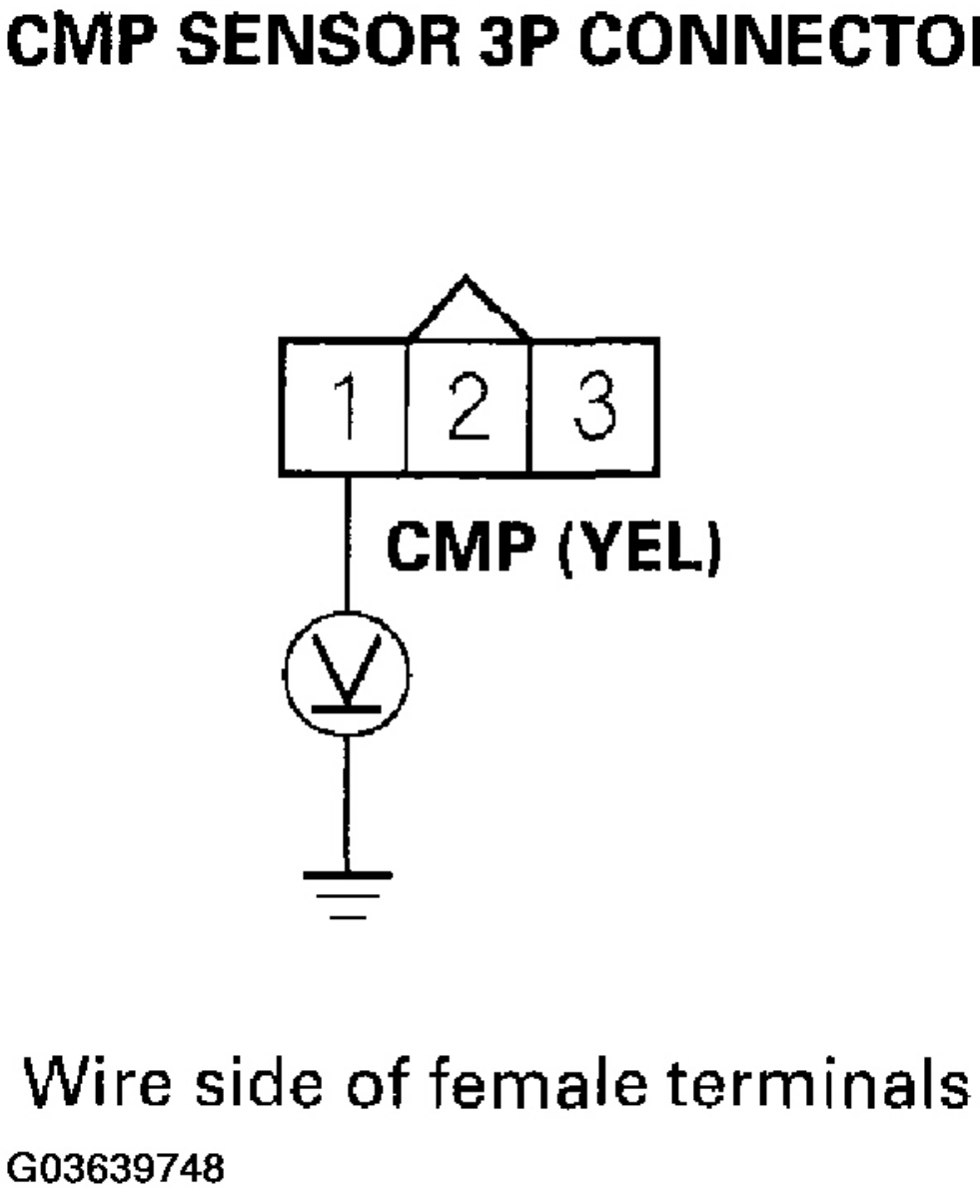


Fig. 90: Measuring Voltage Between CMP Sensor 3P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 10.
NO - Go to step 11 .

10. Measure voltage between CMP sensor 3P connector terminals No. 2 and No. 3.

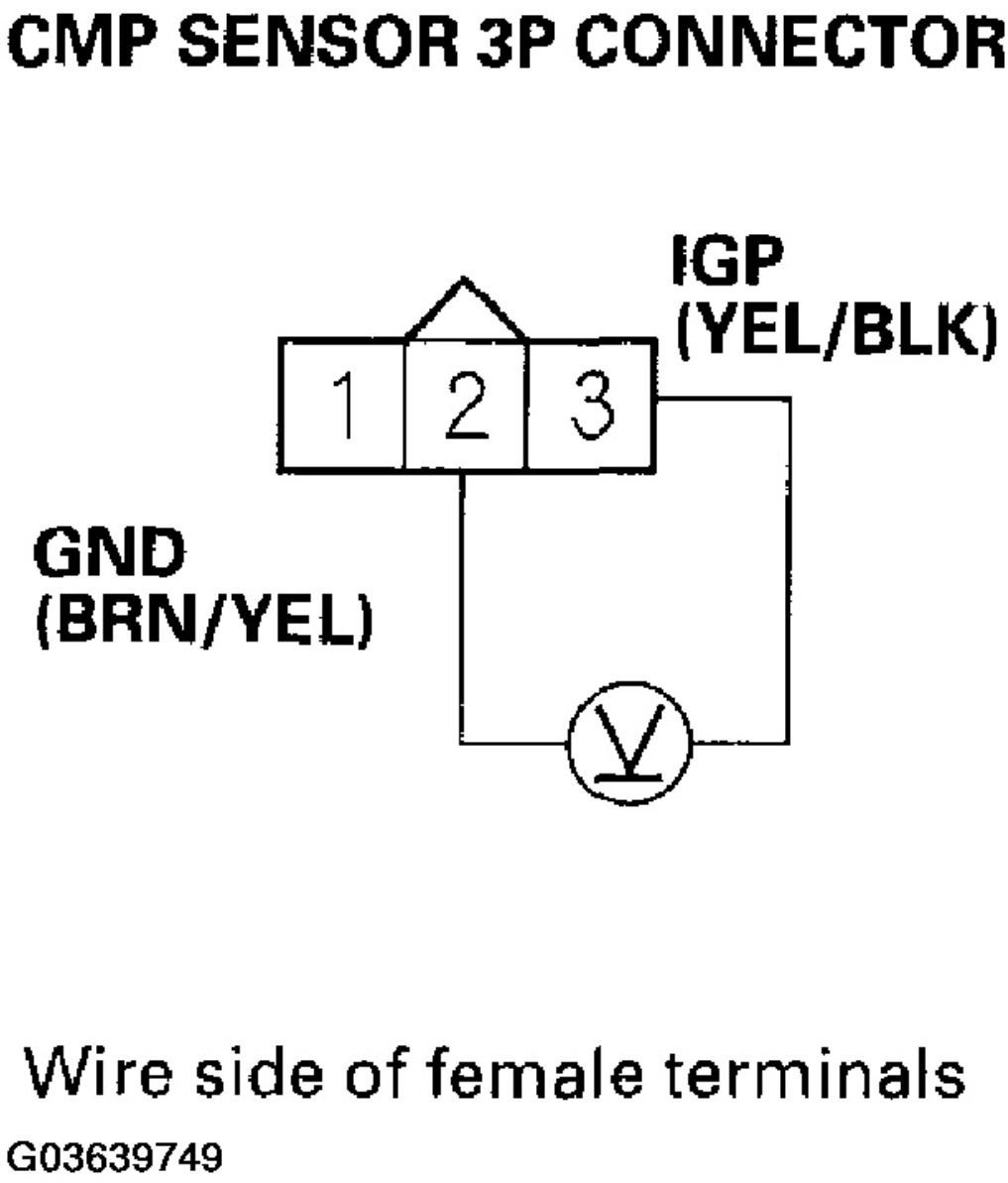


Fig. 91: Measuring Voltage Between CMP Sensor 3P Connector Terminals 2 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 16 .

NO - Repair open in the wire between the CMP sensor and G101, then go to step 18 .

11. Turn the ignition switch OFF.
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector A (76P).
14. Check for continuity between PCM connector terminal A45 and CMP sensor 3P connector terminal No. 1.

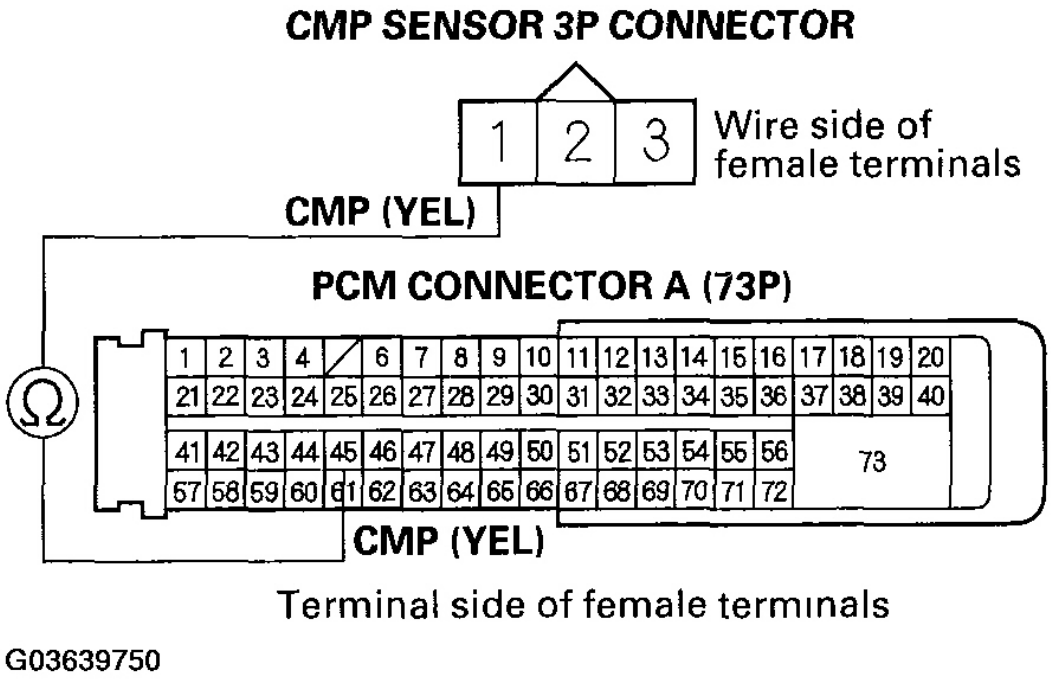


Fig. 92: Checking Continuity Between PCM Connector Terminal A45 And CMP Sensor 3P Connector Terminal 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 15.

NO - Repair open in the wire between the PCM (A45) and the CMP sensor, then go to step 18 .

15. Check for continuity between CMP sensor 3P connector terminal No. 1 and body ground.

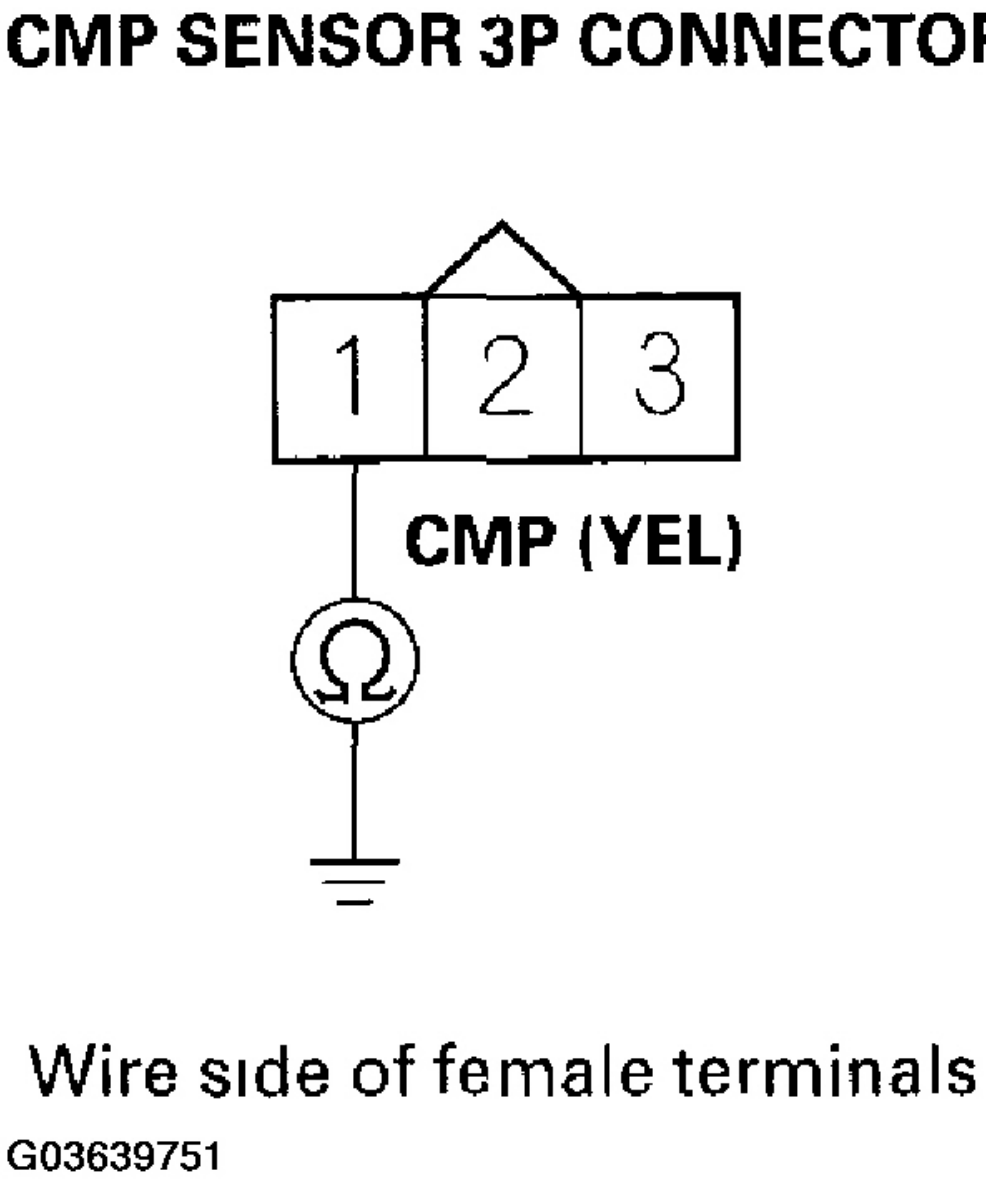


Fig. 93: Checking Continuity Between CMP Sensor 3P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A45) and the CMP sensor, then go to step 18 .
NO - Go to step 24 .

16. Turn the ignition switch OFF.
17. Replace the CMP sensor (see **CMP SENSOR REPLACEMENT**).
18. Reconnect all connectors.
19. Turn the ignition switch ON (II).
20. Reset the PCM with the HDS.
21. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
22. Start the engine.
23. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0340 is indicated, check for poor connections or loose terminals at the CMP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
24. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
25. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0340 is indicated, check for poor connections or loose terminals at the CMP sensor and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0344: CMP SENSOR INTERMITTENT INTERRUPTION

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Clear the DTC with the HDS.
2. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
   - Engine speed
   - Vehicle speed
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0344 indicated?

   YES - Go to step 4.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the CMP sensor and the PCM.

4. Check for poor or loose connections at these connectors and terminals:
   - CMP sensor
   - PCM
   - Engine ground
   - Body ground

   Are the connections OK?

   YES - Go to step 5.

   NO - Repair the connectors or terminals, then go to step 8 .
5. Check for damage to the CMP sensor pulse projection on the front camshaft pulley (see **CMP SENSOR REPLACEMENT**).

   Is there damage?

   YES - Replace the front camshaft pulley (see **CMP SENSOR REPLACEMENT**), then go to step 8 .

   NO - Go to step 6.
6. Turn the ignition switch OFF.
7. Replace the CMP sensor (see **CMP SENSOR REPLACEMENT**).
8. Turn the ignition switch ON (II).
9. Reset the PCM with the HDS.
10. Clear the CKP pattern with the HDS.
11. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
12. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).
13. Start the engine, and let it idle for 10 seconds.
14. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0344 is indicated, check for poor connections or loose terminals at CKP sensor A/B and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.

DTC P0563: 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 GENERAL

TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch OFF.
4. Wait 10 seconds.
5. Turn the ignition switch ON (II).
6. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0563 indicated?

YES - Go to step 7.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the No. 6 FI ECU (PCM) (15 A) fuse in the driver's under-dash fuse/relay box and the PCM.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector B (56P).
10. Measure voltage between PCM connector terminal B12 and body ground.

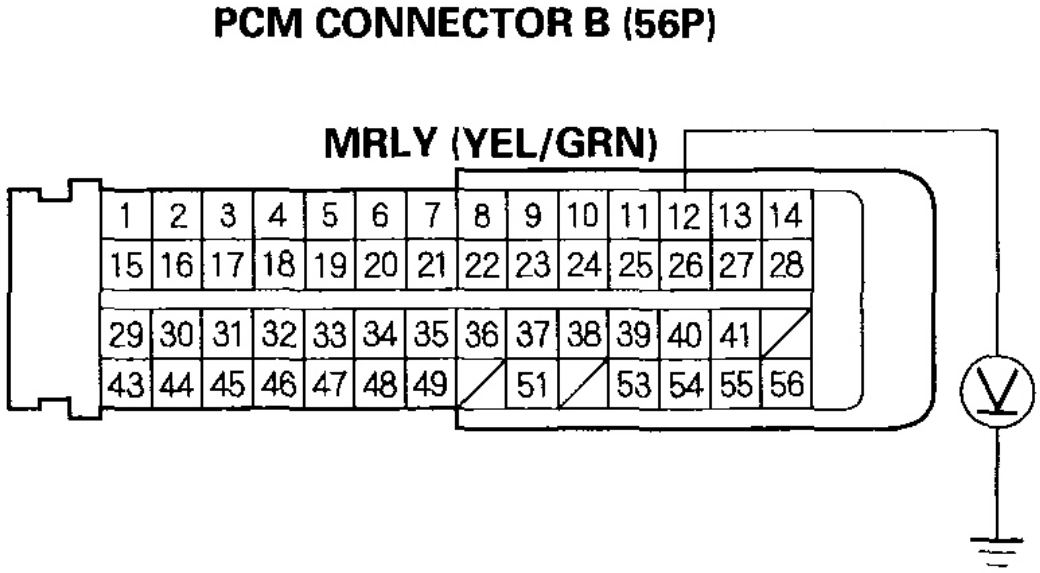


Fig. 94: Measuring Voltage Between PCM Connector Terminal B12 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 14 .

NO - Go to step 11.

11. Remove the driver's dashboard lower cover (see **DASHBOARD LOWER COVER REMOVAL/INSTALLATION**), then remove PGM-FI main relay 1 (FI MAIN) (A).

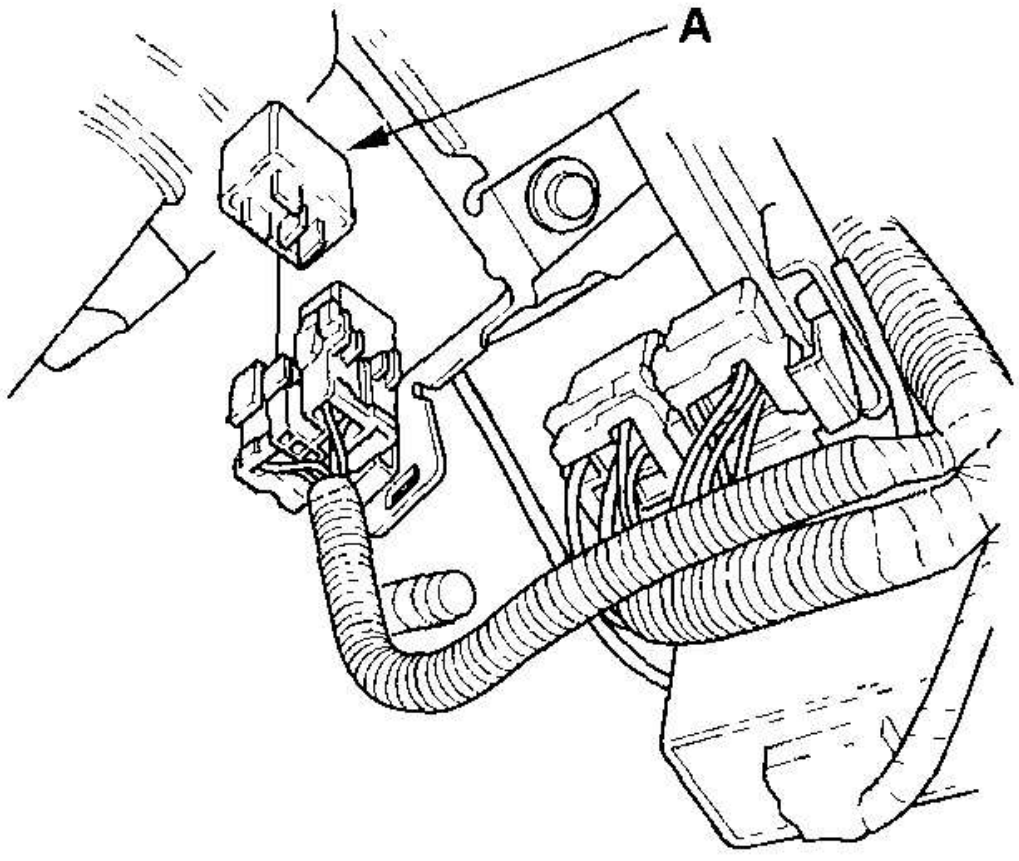


Fig. 95: Removing PGM-FI Main Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the ignition coil relay (A) and throttle actuator control module relay (B).

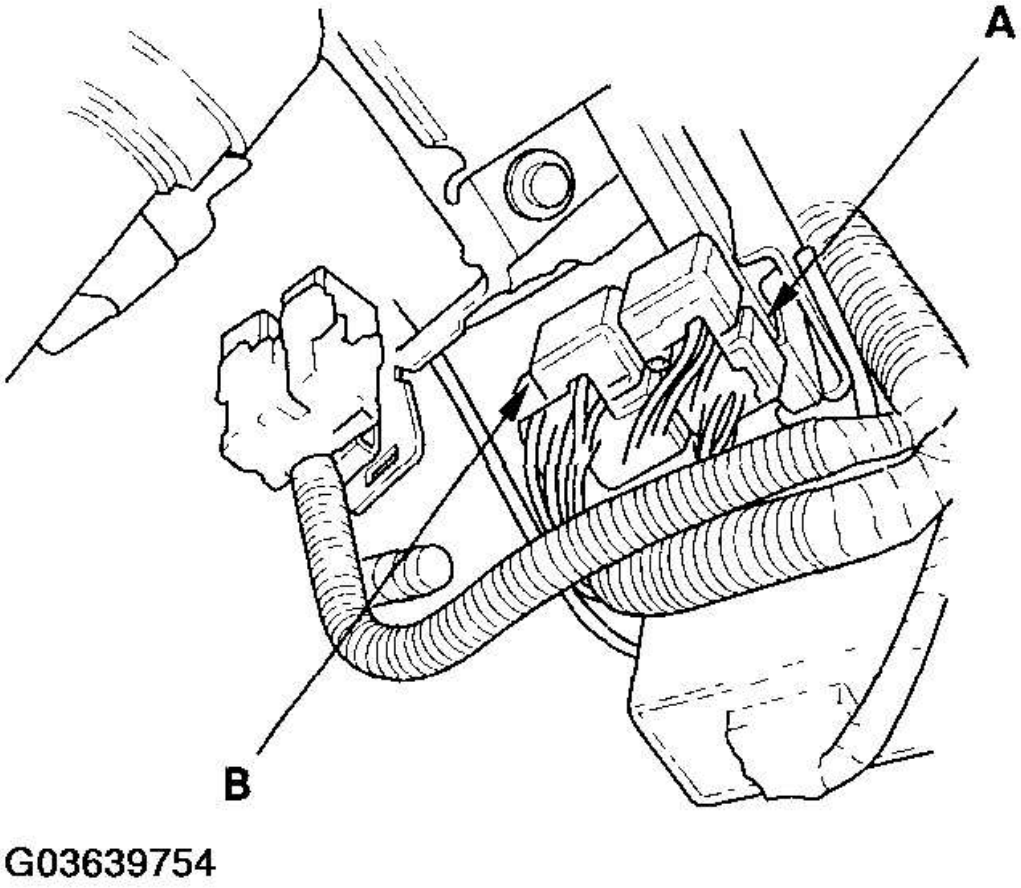


Fig. 96: Removing Ignition Coil Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Check for continuity between PCM connector terminal B12 and body ground.

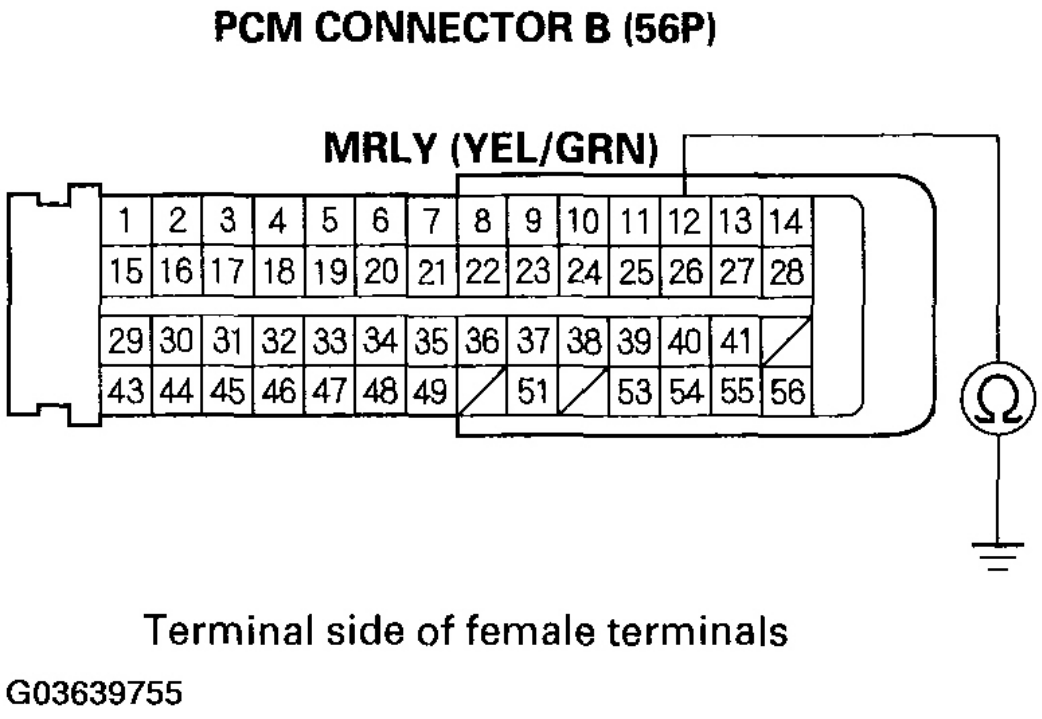


Fig. 97: Checking Continuity Between PCM Connector Terminal B12 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B12) and PGM-FI main relay 1 (FI MAIN), then go to step 21 .

NO - Go to step 20 .

14. Reconnect PCM connector B (56P).
15. Measure voltage between PGM-FI main relay 1 (FI MAIN) 4P connector terminal No. 3 and body ground.

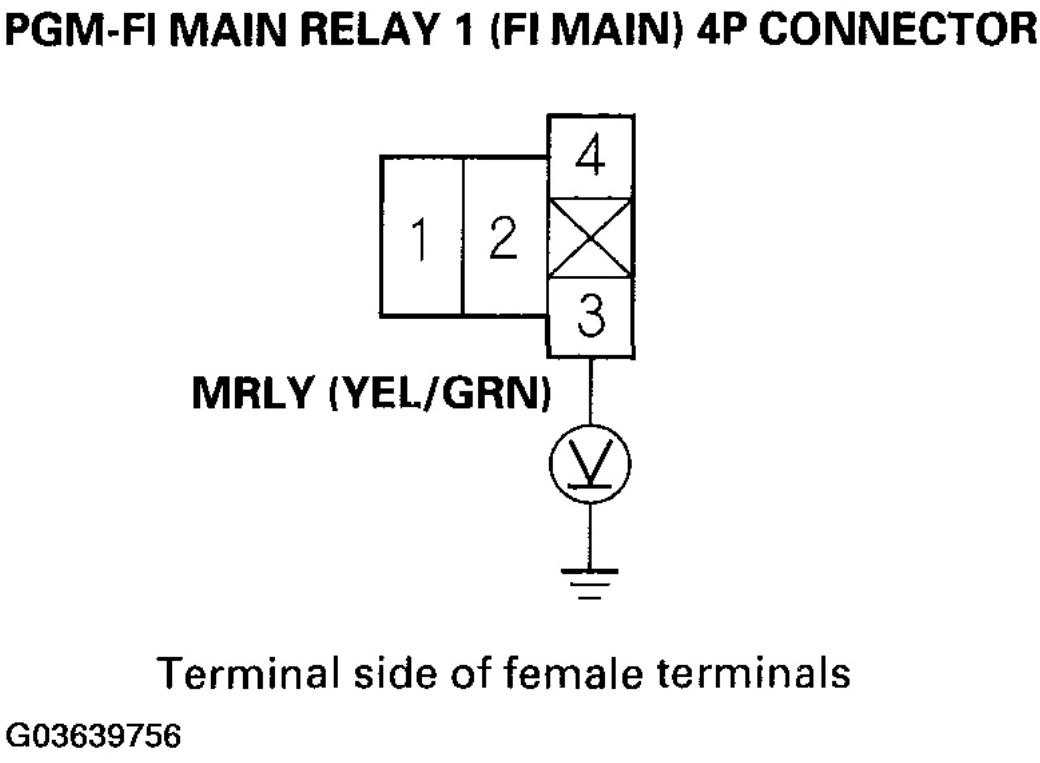


Fig. 98: Measuring Voltage Between PGM-FI Main Relay 1 4P Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 16.
NO - Go to step 27 .

16. Disconnect PCM connector A (73P).
17. Measure voltage between PCM connector terminal A18 and body ground.

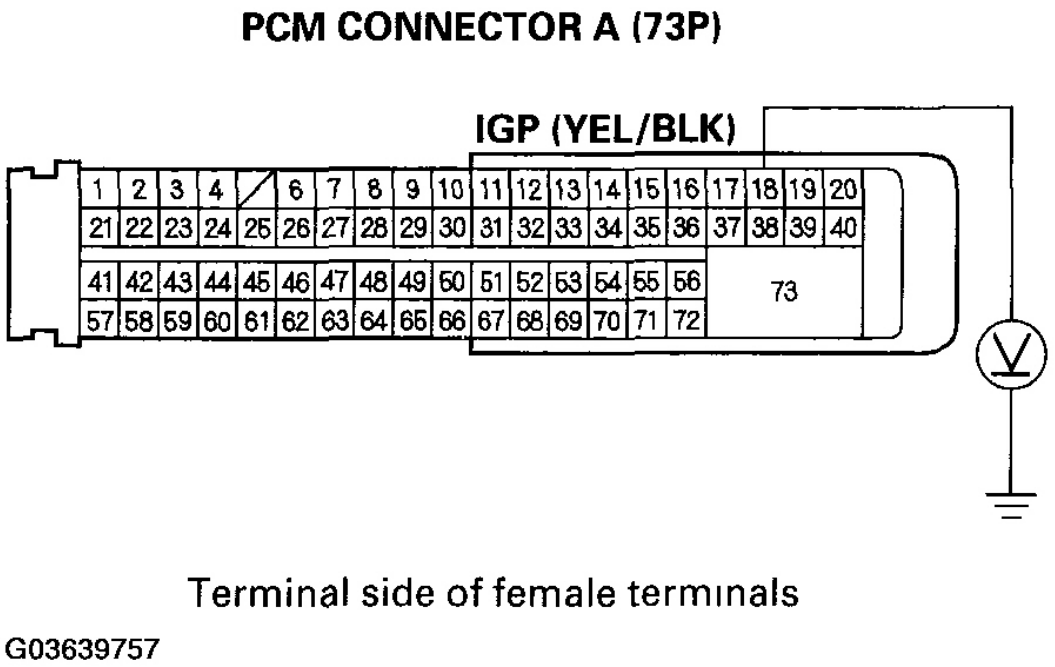


Fig. 99: Measuring Voltage Between PCM Connector Terminal A18 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 18.

NO - Go to step 27 .

18. Remove the driver's dashboard lower cover (see **DASHBOARD LOWER COVER REMOVAL/INSTALLATION**), then remove PGM-FI main relay 1 (FI MAIN) (A).

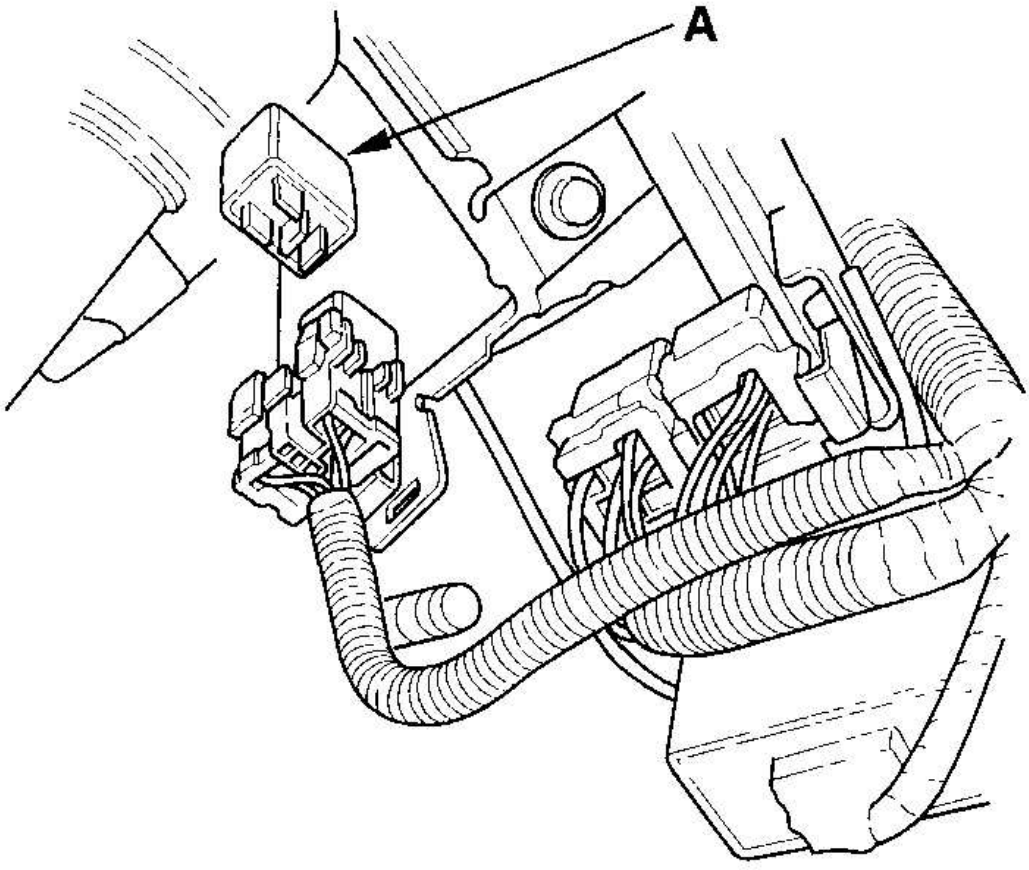


Fig. 100: Removing PGM-FI Main Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Measure voltage between PCM connector terminal A18 and body ground.

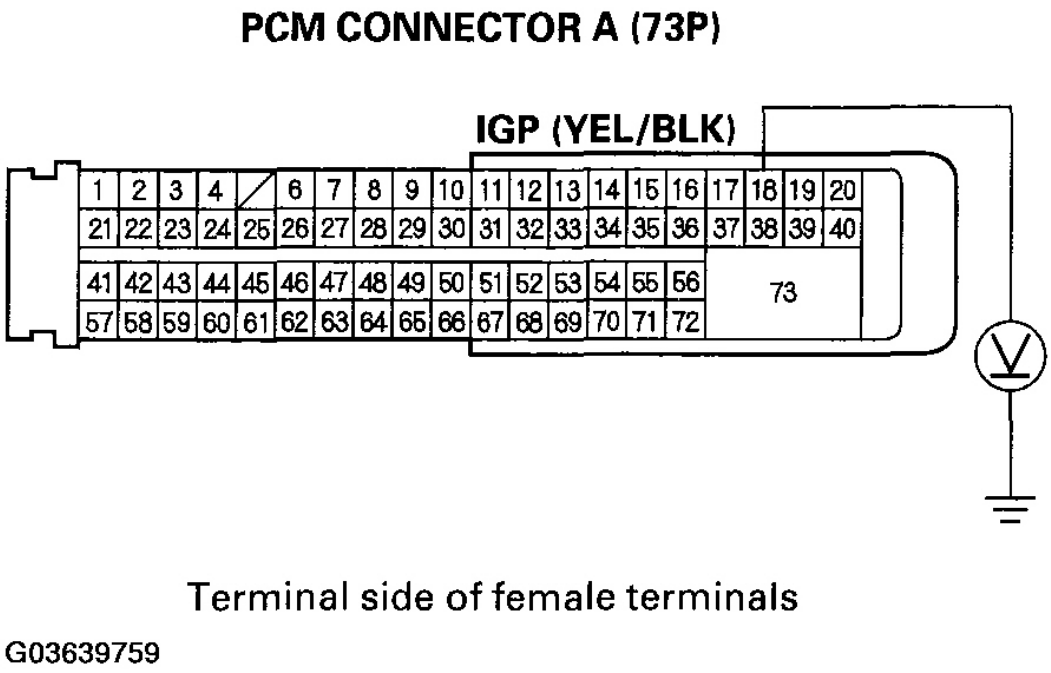


Fig. 101: Measuring Voltage Between PCM Connector Terminal A18 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair short to power in the wire between the PCM (A18) and PGM-FI main relay 1 (FI MAIN), then go to step 21 .

NO - Go to step 20.

20. Replace PGM-FI main relay 1 (FI MAIN) (A).

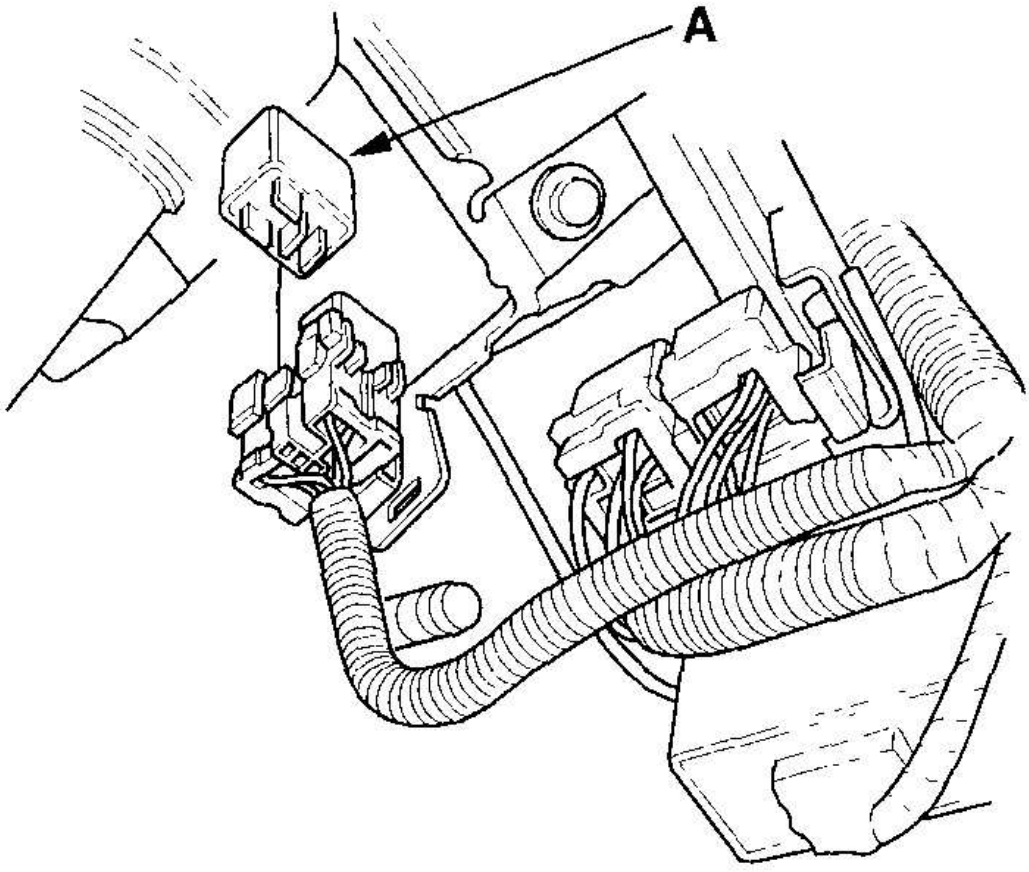


Fig. 102: Replacing PGM-FI Main Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Turn the ignition switch ON (II).
22. Clear the DTC with the HDS.
23. Turn the ignition switch OFF.
24. Wait 10 seconds.
25. Turn the ignition switch ON (II).
26. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0563 is indicated, check for poor connections or loose terminals at PGM-FI main relay 1 (FI MAIN) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are

indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

27. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
28. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0563 is indicated, check for poor connections or loose terminals at PGM-FI main relay 1 (FI MAIN) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0603: 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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch 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 - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**).

NO - Intermittent failure, system is OK at this time.

DTC P0630: VIN NOT PROGRAMMED OR MISMATCH (2005-2006 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **This DTC is stored only when the PCM does not have the VIN information of the vehicle. Use the HDS to input the missing VIN information.**

1. Turn the ignition switch 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 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 P0603 indicated?

YES - Go to the DTC P0603 troubleshooting.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**).

5. Clear the DTC with the HDS.
6. Turn the ignition switch OFF.
7. Turn the ignition switch ON (II), and wait 5 seconds.
8. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0630 is indicated, update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Intermittent failure, system is OK at this time.

DTC P0641, P0651: SENSOR REFERENCE VOLTAGE A MALFUNCTION; 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 GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to DTC P0651.**

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

Is DTC P0641 and/or P0651 indicated?

YES - If P0641 is indicated, go to step 4. If P0651 is indicated, go to step 19 .

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals between the PCM and these connectors:

- MAP sensor
- APP sensor A
- Output shaft (countershaft) speed sensor
- IMT (IMRC) actuator*
- Input shaft (mainshaft) speed sensor*
- EGR valve position sensor*
- APP sensor B*
- FTP sensor*

4. Turn the ignition switch OFF.
5. Disconnect the MAP sensor 3P connector.
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 9.

NO - Replace the MAP sensor (see **THROTTLE BODY DISASSEMBLY/REASSEMBLY**), then go to step 49 .

9. Turn the ignition switch OFF.
10. Disconnect APP sensor A/B 6P connector.
11. Turn the ignition switch ON (II).
12. Clear the DTC with the HDS.
13. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0641 indicated?

YES - Go to step 14.

NO - Replace the APP sensor (see **APP SENSOR REPLACEMENT**), then go to step 49 .

14. Turn the ignition switch OFF.
15. Disconnect the output shaft (countershaft) speed sensor 3P connector.
16. Turn the ignition switch ON (II).
17. Clear the DTC with the HDS.
18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0641 indicated?

YES - Go to step 43 .

NO - Replace the output shaft (countershaft) speed sensor (see **OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT**), then go to step 49 .

19. Turn the ignition switch OFF.
20. Disconnect the IMT (IMRC) actuator* 16P connector.
21. Turn the ignition switch ON (II).
22. Clear the DTC with the HDS.
23. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0651 indicated?

YES - Go to step 24.

NO - Replace the IMT (IMRC) actuator* (see **IMT (IMRC) ACTUATOR REPLACEMENT**), then go to step 49 .

24. Turn the ignition switch OFF.
25. Disconnect the input shaft (mainshaft) speed sensor* 3P connector.
26. Turn the ignition switch ON (II).
27. Clear the DTC with the HDS.
28. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0651 indicated?

YES - Go to step 29.

NO - Replace the input shaft (mainshaft) speed sensor* (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT**), then go to step 49 .

29. Turn the ignition switch OFF.
30. Disconnect the EGR valve position sensor* 5P connector.
31. Turn the ignition switch ON (II).
32. Clear the DTC with the HDS.
33. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0651 indicated?

YES - Go to step 34.

NO - Replace the EGR valve position sensor* (see **EGR VALVE REPLACEMENT**), then go to step 49 .

34. Turn the ignition switch OFF.
35. Disconnect APP sensor A/B 6P connector.
36. Turn the ignition switch ON (II).

37. Clear the DTC with the HDS.
38. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0651 indicated?

YES - Go to step 39.

NO - Replace the APP sensor (see **APP SENSOR REPLACEMENT**), then go to step 49 .

39. Turn the ignition switch OFF.
40. Disconnect the FTP sensor* 3P connector.
41. Turn the ignition switch ON (II).
42. Clear the DTC with the HDS.
43. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0651 indicated?

YES - Go to step 44.

NO - Replace the FTP sensor; 2003-2004 models (see **FTP SENSOR REPLACEMENT**)*, 2005-2006 models (see **FTP SENSOR REPLACEMENT**)*, then go to step 49 .

44. Jump the SCS line with the HDS.
45. Turn the ignition switch OFF.
46. Disconnect PCM connector A (73P).
47. Disconnect PCM connector B (56P).
48. Check for continuity between PCM connector terminals (A7/A27*, B43/B29*, B46*) and body ground.

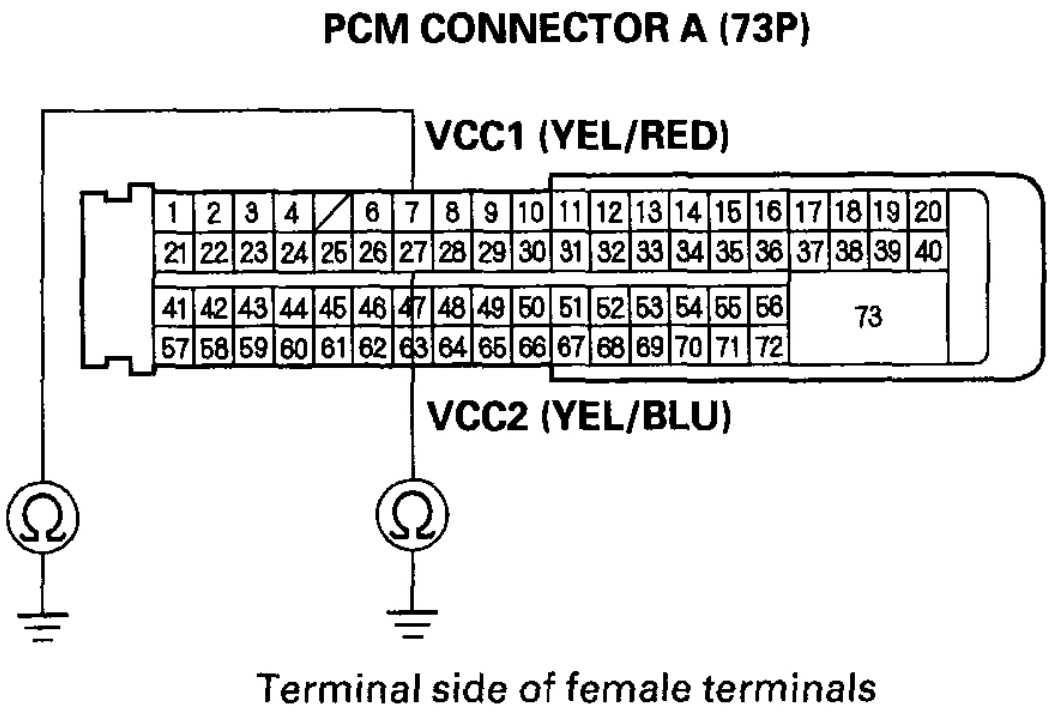


Fig. 103: Checking Continuity Between PCM Connector Terminals A7/A27* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

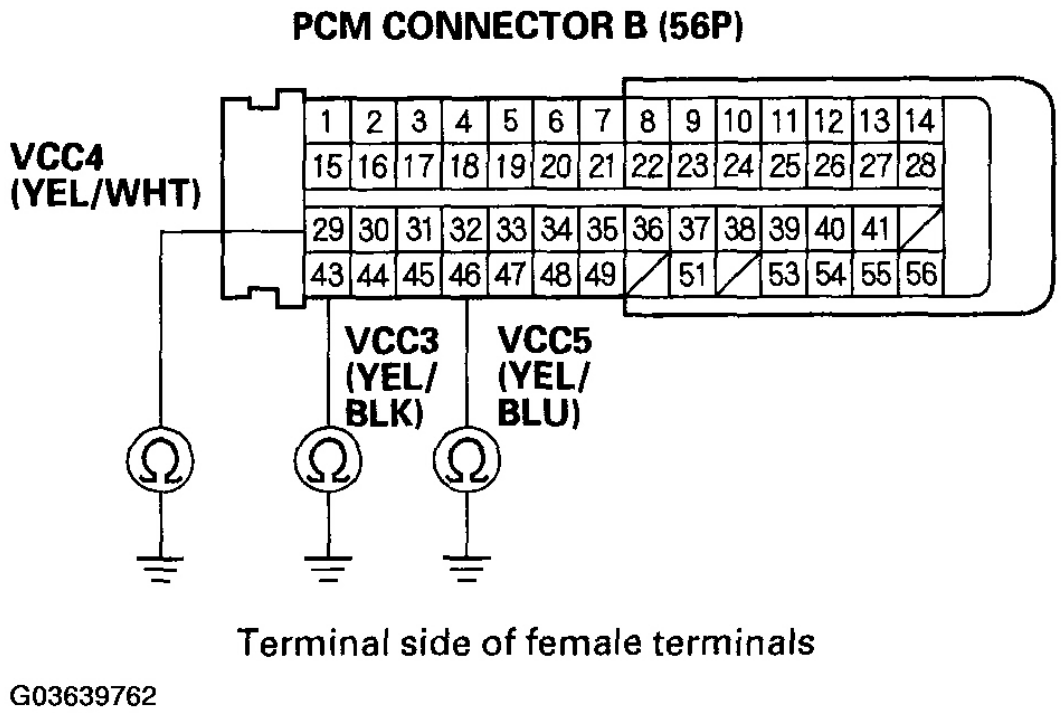


Fig. 104: Checking Continuity Between PCM Connector Terminals B43/B29*, B46* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A7, B43/A27*, B29*, B46*) and body ground.
NO - Go to step 53 .

49. Turn the ignition switch ON (II).
50. Reset the PCM with the HDS.
51. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
52. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0641 and/or P0651 is indicated, check for poor connections or loose terminals between the PCM and these connectors:

- MAP sensor
- APP sensor A
- Output shaft (countershaft) speed sensor

- IMT (IMRC) actuator*
- Input shaft (mainshaft) speed sensor*
- EGR valve position sensor*
- APP sensor B*
- FTP sensor*

After checking above, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

53. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
54. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
55. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0641 and/or P0651 indicated, check for poor connections or loose terminals between the PCM and these connectors:

- MAP sensor
- APP sensor A
- Output shaft (countershaft) speed sensor
- IMT (IMRC) actuator*
- Input shaft (mainshaft) speed sensor*
- EGR valve position sensor*
- APP sensor B*
- FTP sensor*

After checking above, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0657: A/F SENSOR RELAY CIRCUIT MALFUNCTION

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch 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, system is OK at this time. Check for poor connections or loose terminals at the PCM, the A/F sensor relay, and the No. 9 LAFHT (15 A) fuse in the under-hood subfuse box.
4. Turn the ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Disconnect PCM connector B (56P).
7. Remove the A/F sensor relay (A).

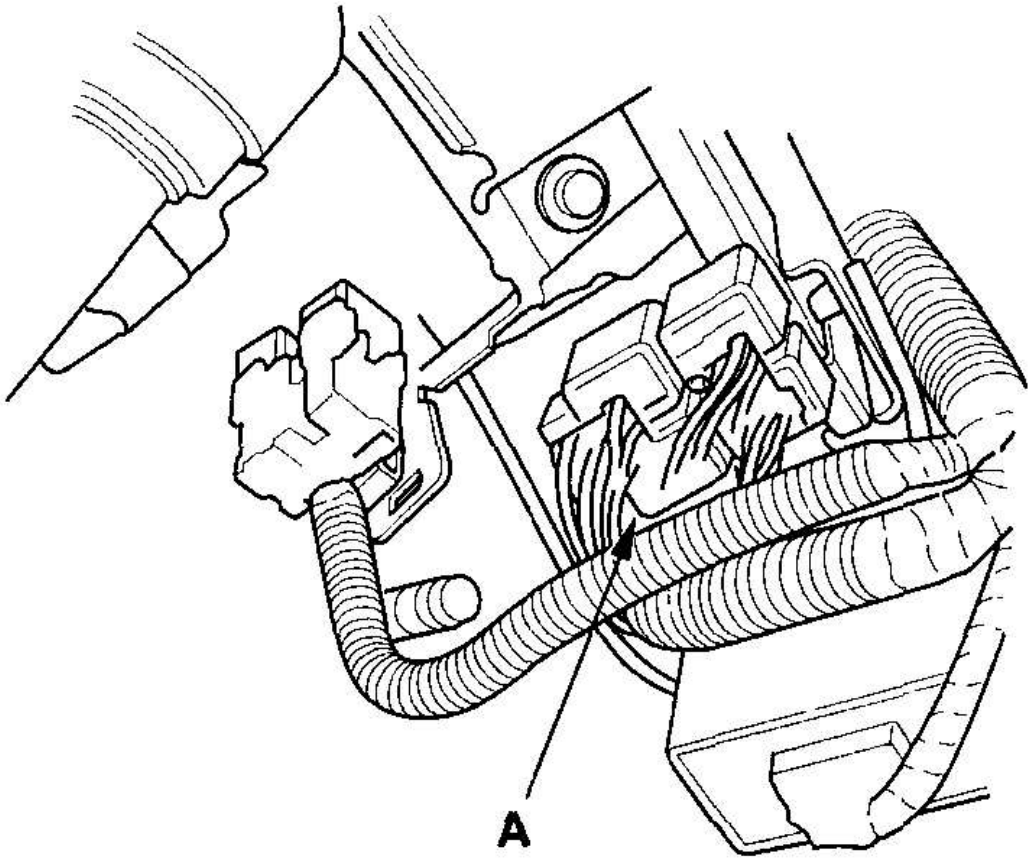


Fig. 105: Removing A/F Sensor Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Connect A/F sensor relay 4P connector terminal No. 3 and body ground with a jumper wire.

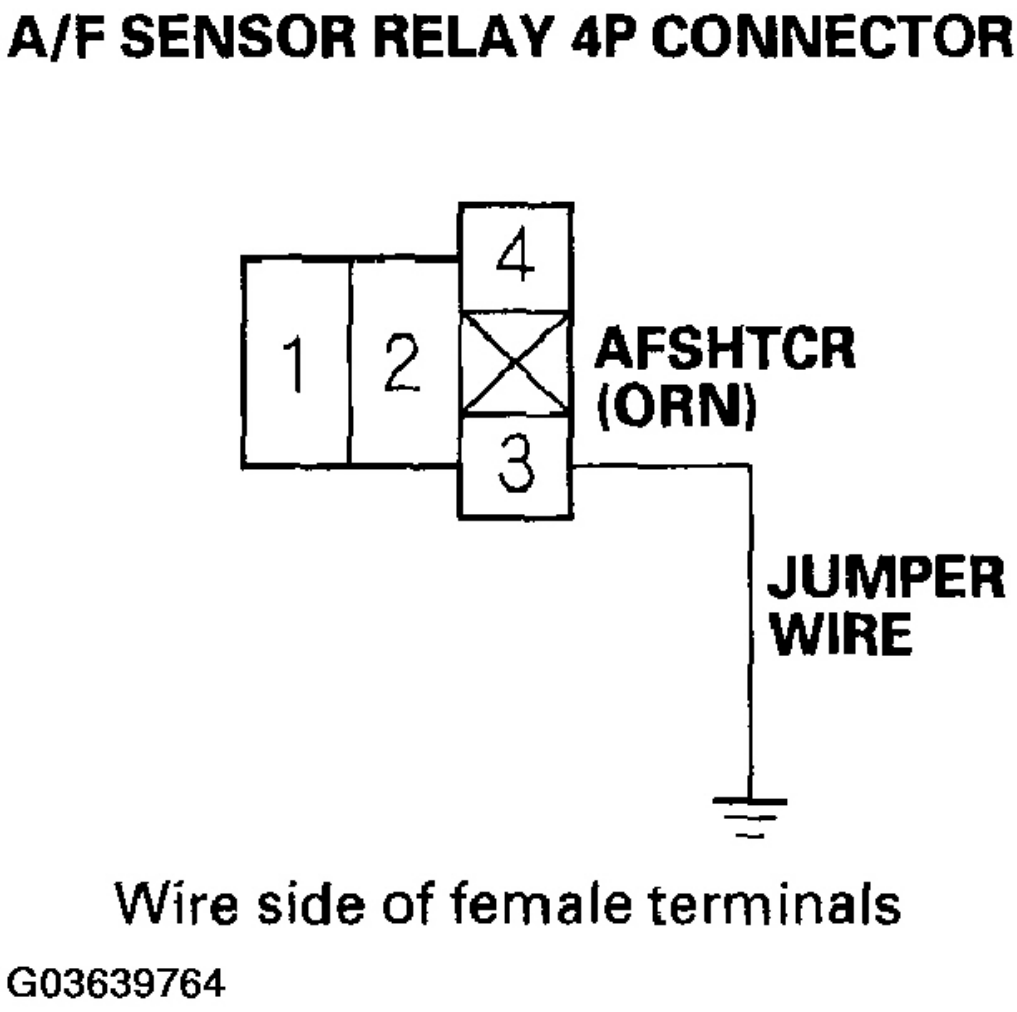


Fig. 106: Connecting A/F Sensor Relay 4P Connector Terminal 3 And Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Check for continuity between PCM connector terminal B10 and body ground.

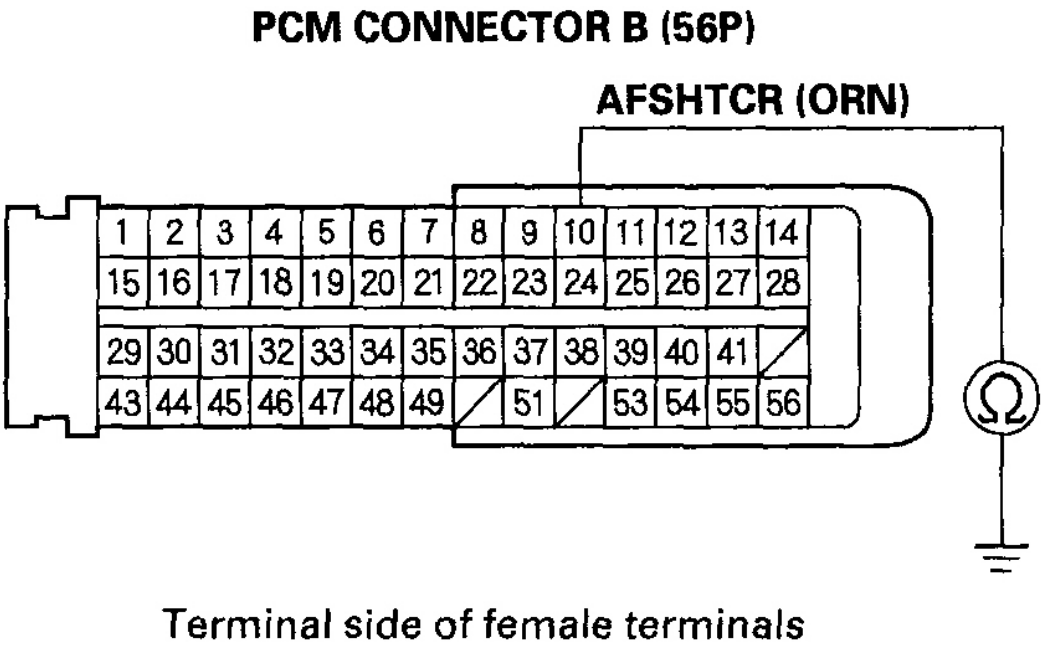


Fig. 107: Checking Continuity Between PCM Connector Terminal B10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair open in the wire between the PCM (B10) and the A/F sensor relay, then go to step 12 .

10. Check for continuity between PCM connector terminal B10 and body ground.

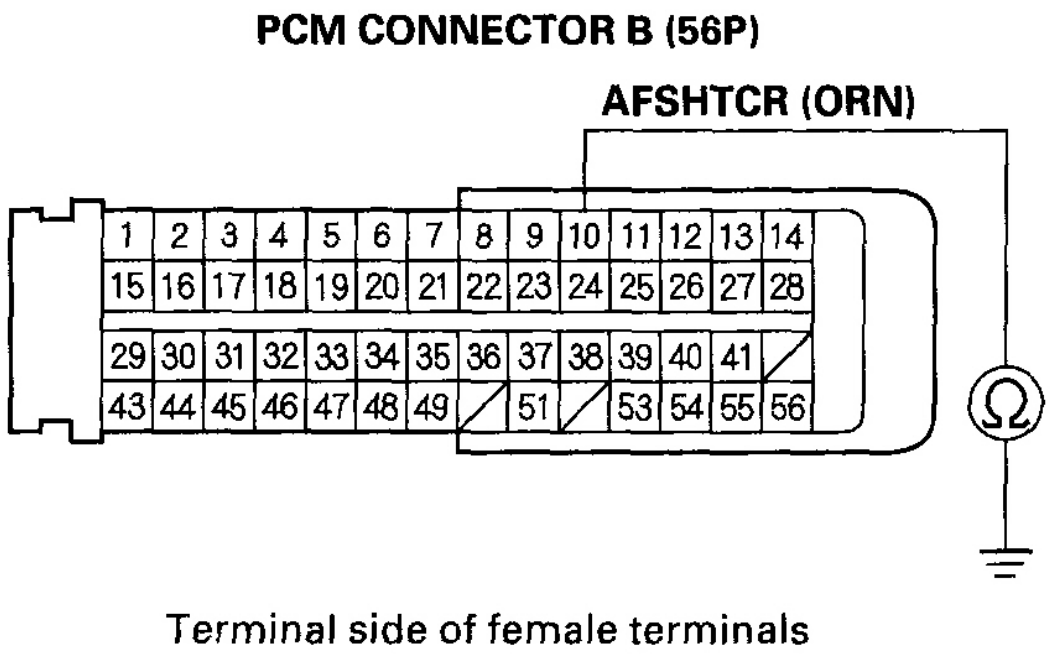


Fig. 108: Checking Continuity Between PCM Connector Terminal B10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B10) and the A/F sensor relay, then go to step 12 .

NO - Go to step 11.

11. Measure voltage between A/F sensor relay 4P connector terminal No. 4 and body ground.

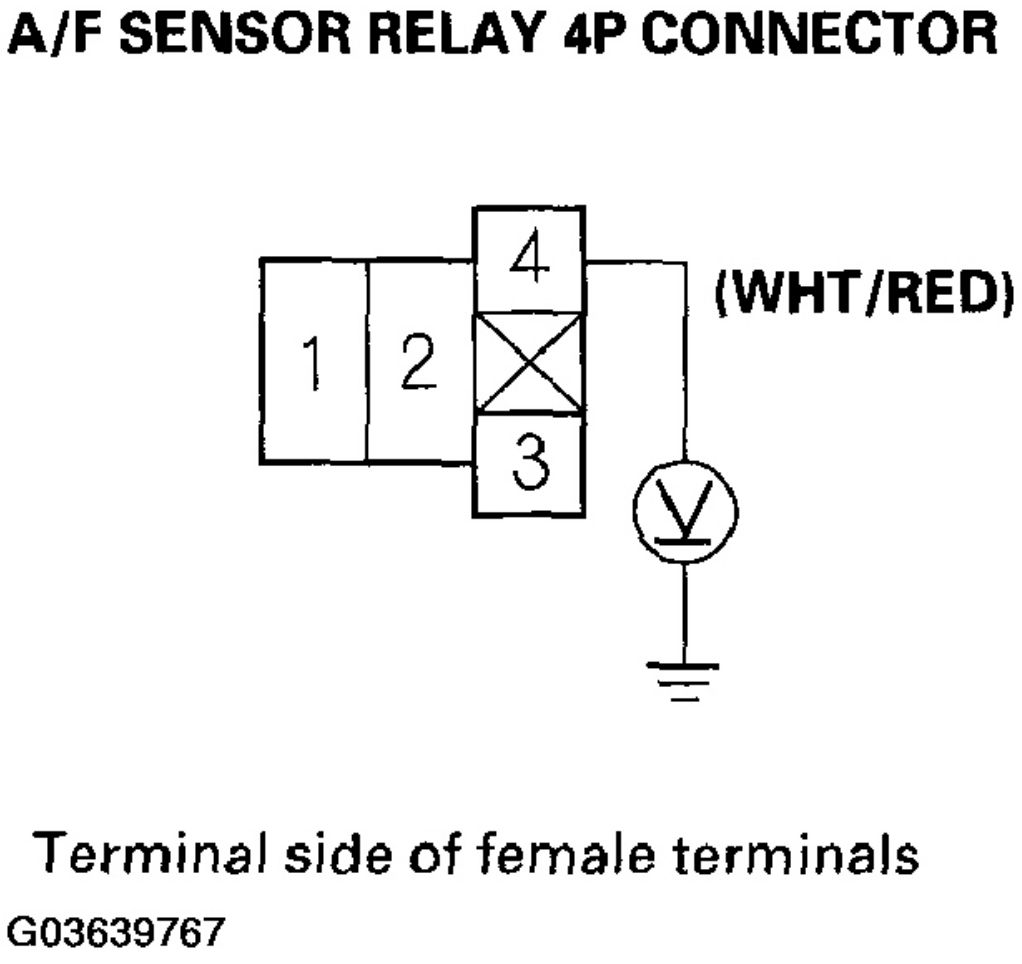


Fig. 109: Measuring Voltage Between A/F Sensor Relay 4P Connector Terminal 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage

YES - Go to step 17 .

NO - Repair open in the wire between the A/F sensor relay and the No. 9 LAFHT (15 A) fuse in the under-hood subfuse box. If the No. 9 LAFHT (15 A) fuse is blown, repair the cause, then go to step 12.

12. Install the A/F sensor relay, and reconnect PCM connector B (56P).
13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.

15. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
16. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0657 is indicated, check for poor connections or loose terminals at the A/F sensor relay and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
17. Test the A/F sensor relay (see **POWER RELAY TEST**).

    Is the relay OK?

    YES - Go to step 22 .

    NO - Replace the A/F sensor relay, then go to step 18.
18. Turn the ignition switch ON (II).
19. Reset the PCM with the HDS.
20. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
21. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0657 is indicated, check for poor connections or loose terminals at the A/F sensor relay and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
22. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
23. Turn the ignition switch ON (II).
24. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0657 is indicated, check for poor connections or loose terminals at the A/F sensor relay and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P0685: 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 GENERAL TROUBLESHOOTING INFORMATION).

- **If the problem does not return after clearing the DTC, or if this DTC is stored intermittently, check for loose terminals at the IGP line connectors before you replace the PCM.**

1. Turn the ignition switch 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 - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**).

NO - Intermittent failure, system is OK at this time.

DTC P0700: A/T CONTROL SYSTEM MALFUNCTION

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **DTC is stored when there is a problem in the A/T control system. Check for A/T DTCs with the HDS, and go to the indicated DTC's troubleshooting.**

DTC P1109: BARO SENSOR CIRCUIT OUT OF RANGE HIGH (2005-2006 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Reset the PCM with the HDS.
2. Start the engine.
3. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1109 indicated?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**).

NO - Intermittent failure, system is OK at this time.

DTC P1116: ECT SENSOR PERFORMANCE PROBLEM (2005-2006 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **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 the ECT sensor.

   Are the connections and terminals OK?

   YES - Go to step 2.
   NO - Repair the connectors or terminals, then go to step 14 .
2. Start the engine, and let it idle for 10 minutes.
3. Check the ECT SENSOR in the DATA LIST with the HDS.

   Is about 129°F (54°C) or less, or 1.54 V or more indicated?

   YES - Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**), then go to step 14 .
   NO - Go to step 5 .
4. Turn the ignition switch OFF.
5. Drain the coolant (see **COOLANT REPLACEMENT**).
6. Remove the ECT sensor (see **ECT SENSOR REPLACEMENT**).
7. Allow the ECT sensor to cool to 77°F (25°C).
8. Note the outside temperature.
9. Connect the ECT sensor to the 2P connector, but do not install them in the engine.
10. Turn the ignition switch ON (II).
11. Note the value of the ECT SENSOR quickly in the DATA LIST with the HDS.
12. Compare the value of the ECT SENSOR and the outside temperature.

    Does the value of the ECT SENSOR differ 5.4°F (3°C) or higher?

    YES - Replace the ECT sensor (see **ECT SENSOR REPLACEMENT**), then go to step 13.
    NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the ECT sensor and the PCM.
13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
16. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0116 is indicated, check for poor connections or loose terminals at the ECT sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch 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 indicated for more than 5 seconds?

   YES - Go to step 6 .

   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 (in Park or neutral) until the radiator fan comes on, then let it idle.
5. Test-drive under these conditions:
   - Engine coolant temperature above 158°F (70°C)
   - Engine speed between 1,100 rpm and 6,000 rpm
   - A/T in D5 position
   - Vehicle speed is accelerated from 16 mph (25 km/h) to 31 mph (50 km/h) with 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, system is OK at this time. If the screen indicates NOT COMPLETED, go to step 4 and recheck.
7. Turn the ignition switch OFF.
8. Replace the MAP sensor (see **THROTTLE BODY DISASSEMBLY/REASSEMBLY**).
9. Turn the ignition switch ON (II).
10. Reset the PCM with the HDS.
11. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
12. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.

13. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - Engine speed between 1,100 rpm and 6,000 rpm
    - A/T in D5 position
    - Vehicle speed is accelerated from 16 mph (25 km/h) to 31 mph (50 km/h) with half throttle
14. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P1128 is indicated, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    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.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 12 and recheck.

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Check for vacuum leaks in these parts:
    - PCV valve
    - PCV hose
    - EVAP canister purge valve
    - Throttle body
    - Brake booster hose
    - Engine mount control solenoid valve, hose, and pipe

    Are the parts OK?

    YES - Go to step 2.

    NO - Repair or replace parts as needed, then go to step 9 .
2. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.

3. Check the MAP SENSOR in the DATA LIST with the HDS.

   Is more than 36.9 kPa (11.0 in.Hg, 277 mmHg) or 1.14 V indicated for more than 5 seconds

   YES - Go to step 7 .

   NO - Go to step 4.
4. Clear the DTC with the HDS.
5. Test-drive under these conditions:
   - Engine coolant temperature above 158 °F (70 °C)
   - Engine speed between 1,100 rpm and 6,000 rpm
   - A/T in D5 position
   - Vehicle speed is decelerated from more than 50 mph (80 km/h) with the throttle fully closed for at least 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, system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the PCM. If the screen indicates NOT COMPLETED, go to step 5 and recheck.
7. Turn the ignition switch OFF.
8. Replace the MAP sensor (see **THROTTLE BODY DISASSEMBLY/REASSEMBLY**).
9. Turn the ignition switch ON (II).
10. Reset the PCM with the HDS.
11. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
12. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
13. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - Engine speed between 1,100 rpm and 6,000 rpm
    - A/T in D5 position
    - Vehicle speed is decelerated from more than 50 mph (80 km/h) with the throttle fully closed for at least 5 seconds
14. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P1129 is indicated, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

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.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 12 and recheck.

DTC P1172, P1174: REAR A/F SENSOR (BANK 1, SENSOR 1) OUT OF RANGE HIGH (2005-2006 MODELS); FRONT A/F SENSOR (BANK 2, SENSOR 1) OUT OF RANGE HIGH (2005-2006 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 3 and recheck.
5. Turn the ignition switch OFF.
6. Replace the A/F sensor (Sensor 1) (see **A/F Sensor Replacement**).
7. Turn the ignition switch ON (II).
8. Reset the PCM with the HDS.
9. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
10. Start the engine. Hold the engine speed at 3,000 rpm withtout load (in Park or neutral) until the radiator fan comes on, then let it idle.
11. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

YES - If DTC P1172 and/or P1174* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

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.

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 EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 10 and recheck.

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch 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, system is OK at this time. Check for poor connections or loose terminals at the ELD and the PCM.

3. Turn the ignition switch OFF.
4. Disconnect the ELD 3P connector.
5. Turn the ignition switch 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 OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector B (56P).
10. Check for continuity between PCM connector terminal B25 and body ground.

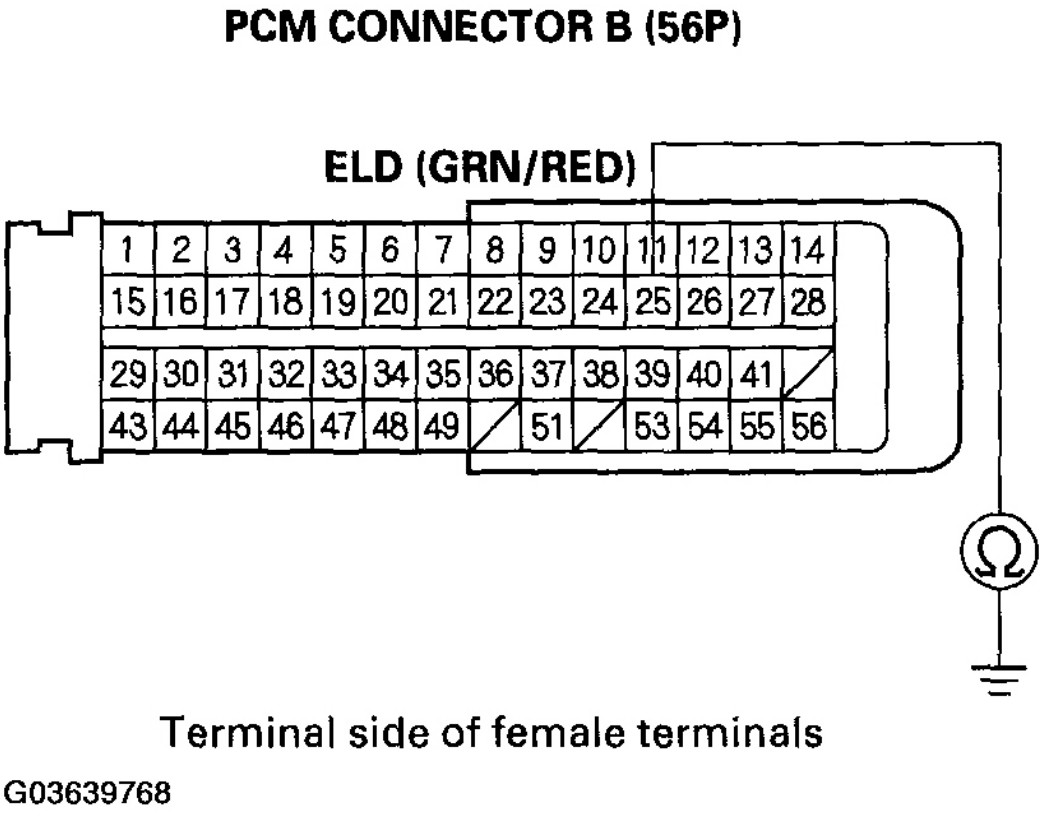


Fig. 110: Checking For Continuity Between PCM Connector Terminal B25 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B25) and the ELD, then go to step 13 .
NO - Go to step 19 .

11. Turn the ignition switch OFF.
12. Replace the under-hood fuse/relay box (the ELD unit is built-in).
13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
16. Start the engine.
17. Turn on the headlights.
18. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P1297 is indicated, check for poor connections or loose terminals at the ELD and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

19. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
20. Start the engine.
21. Turn on the headlights.
22. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P1297 is indicated, check for poor connections or loose terminals at the ELD and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
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, system is OK at this time. Check for poor connections or loose terminals at the ELD and the PCM.

3. Turn the ignition switch OFF.
4. Disconnect the ELD 3P connector.
5. Turn the ignition switch ON (II).
6. Measure voltage between ELD 3P connector terminal No. 1 and body ground.

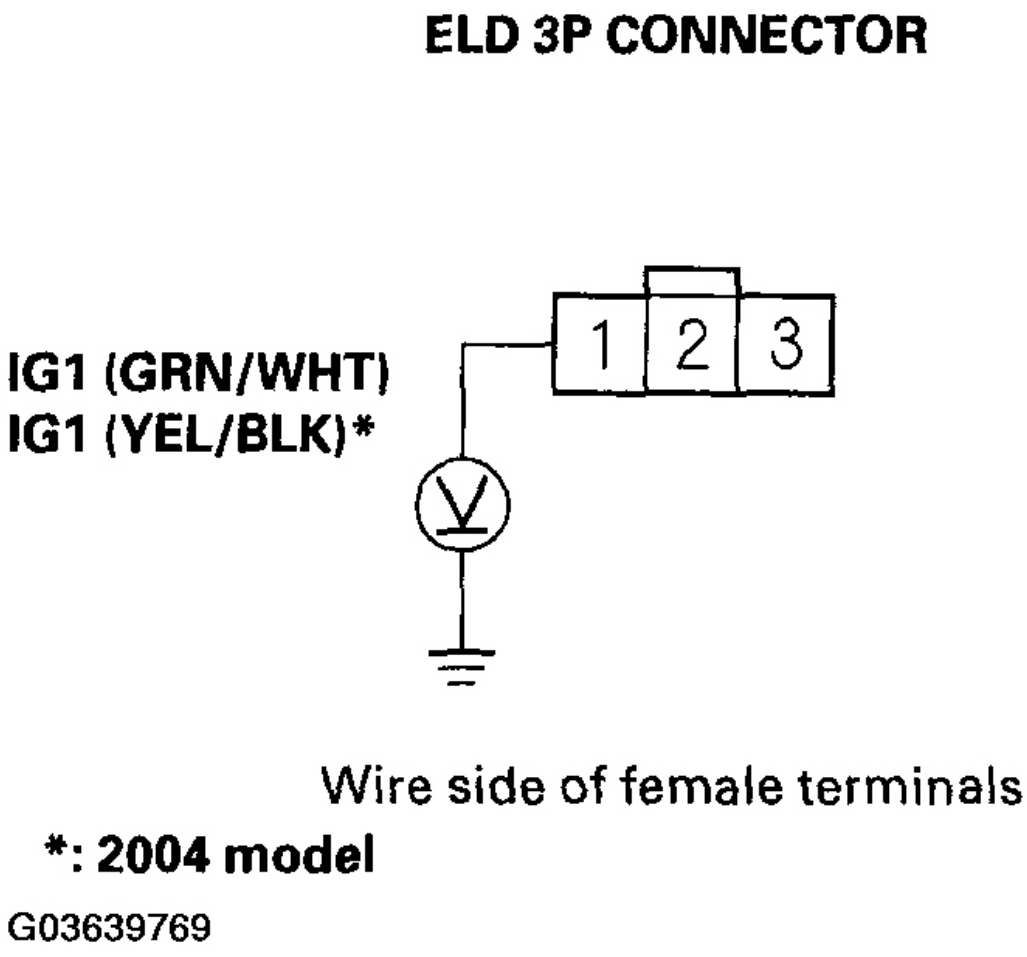


Fig. 111: Measuring Voltage Between ELD 3P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 7.

NO - Check the No. 92 IG1 (7.5 A) fuse in the auxiliary fuse holder (2003 model) or the No. 9 LAFHT (15 A) fuse in the under-hood subfuse box (2004-2006 models). If the fuse is OK, repair open in the wire between the No. 9 LAFHT (15 A) fuse and the ELD, then go to step 13 .

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector B (56P).
10. Check for continuity between PCM connector terminal B25 and ELD 3P connector terminal No. 3.

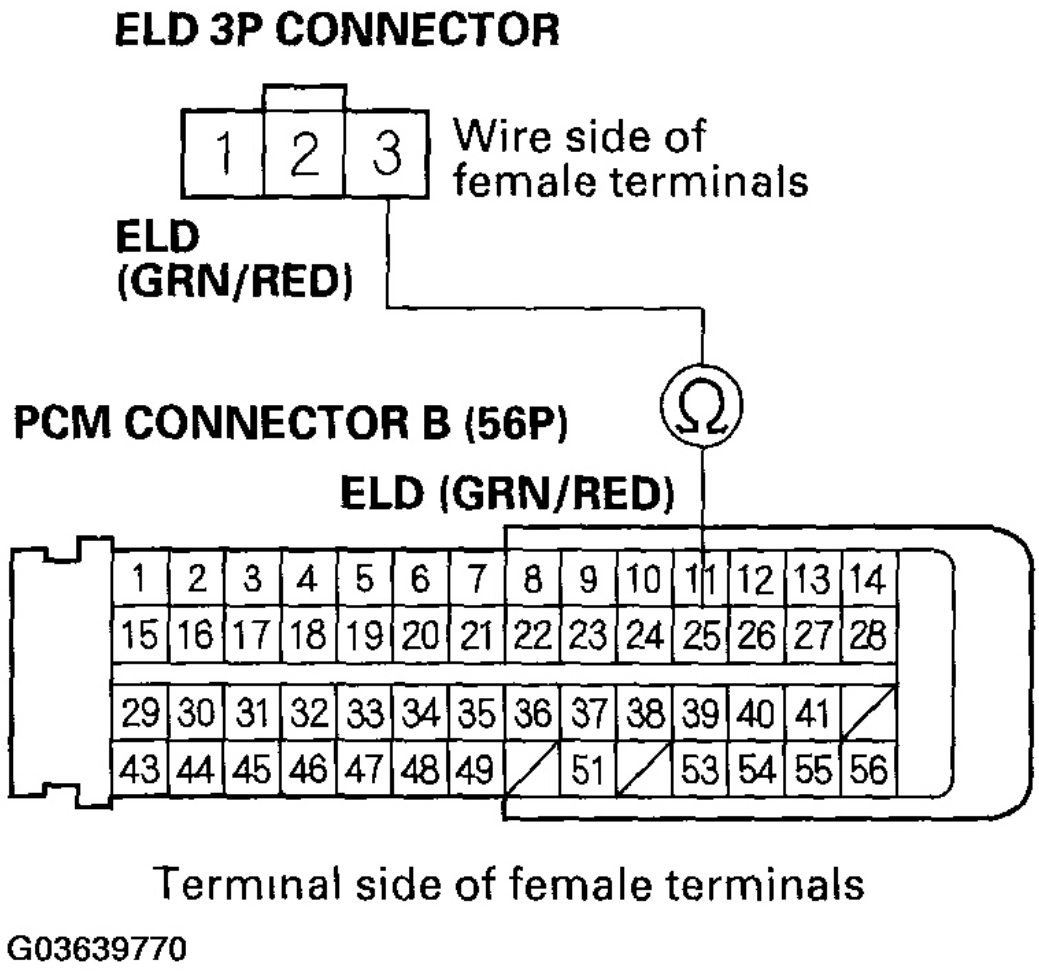


Fig. 112: Checking Continuity Between PCM Connector Terminal B25 And ELD 3P Connector Terminal 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (B25) and the ELD, then go to step 13 .

11. Check for continuity between ELD 3P connector terminal No. 2 and body ground.

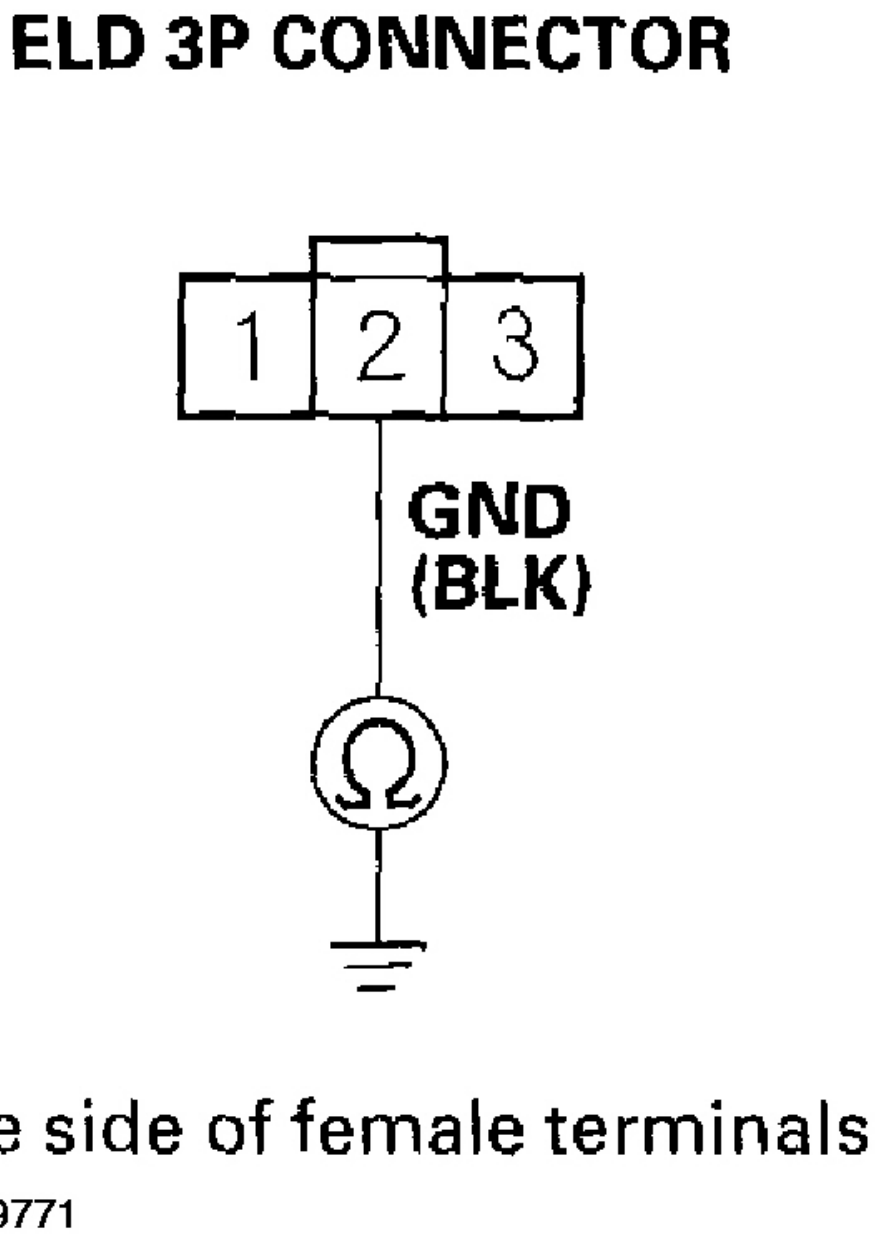


Fig. 113: Checking Continuity Between ELD 3P Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 12.

NO - Repair open in the wire between the ELD and G201, then go to step 13 .

12. Replace the under-hood fuse/relay box, the ELD unit is built-in.
13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.
15. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
16. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P1298 is stored, go to step 17. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

17. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
18. Check for Temporary DTCs or DTCs in the DTCs MENU with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P1298 is indicated, check for poor connections or loose terminals at the ELD and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2195, P 2197: REAR A/F SENSOR (BANK 1, SENSOR 1) SIGNAL STUCK LEAN; 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 GENERAL TROUBLESHOOTING INFORMATION).**
- **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 P0135, P2101, P2108, P2118, P2135, P2176, U0107 or a combination of P2122 and P2127, P2122 and P2128 or P2127 and P2128 is stored at the same time, troubleshoot them first, then recheck for DTC P2195 (P2197)*

1. Inspect the condition of the A/F sensor (Sensor 1).

Is it loose in the exhaust pipe?

YES - Go to step 2.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM.

2. Turn the ignition switch OFF.
3. Reinstall the A/F sensor (Sensor 1) (see **A/F Sensor Replacement**).
4. Turn the ignition switch ON (II).
5. Reset the PCM with the HDS.
6. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
7. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
8. Check for Temporary DTCs or DTCs with the HDS.

Are any DTCs or DTCs indicated?

YES - If DTC P2195 and/or P2197* is indicated, replace the A/F sensor (Sensor 1), then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 9.

9. 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.

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, go to step 7 and recheck.

DTC P2199: IAT SENSOR 1, 2 CORRELATION (2003-2004 MODELS)

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch OFF.
2. Disconnect IAT sensor 1 2P connector and remove IAT sensor 1 (see **IAT SENSOR 1 REPLACEMENT**).
3. Disconnect IAT sensor 2 2P connector and remove IAT sensor 2 (see **IAT SENSOR/IAT SENSOR 2 REPLACEMENT**).
4. Cool the sensors to under 77°F (25°C).
5. Connect the 2P connectors to the IAT sensors.
6. Turn the ignition switch ON (II).
7. Check IAT SENSOR-1 and IAT SENSOR-2 in the DATA LIST with the HDS.

Is the temperature difference between IAT-1 sensor and IAT-2 sensor 45°F (25°C) or more?

YES - Go to step 8.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at IAT sensor 1, IAT sensor 2 and the PCM.

8. Replace the sensor that has the largest difference from room temperature.
9. Turn the ignition switch ON (II).
10. Reset the PCM with the HDS.
11. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
12. Turn the ignition switch OFF.
13. Let the vehicle sit for more than 8 hours.
14. Start the engine.
15. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2199 is indicated, check for poor connections or loose terminals at IAT sensor 1, IAT sensor 2 and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 16.

16. Monitor the OBD STATUS for DTC P2199 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at IAT sensor 1, IAT sensor 2, and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 12 .

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 GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC P0107, P0108, P1128, and/or P1129 are stored at the same time as DTC P2227, troubleshoot these DTCs first, then recheck for DTC P2227.**

1. Turn the ignition switch ON (II), and wait 2 seconds.
2. Check the BARO in the DATA LIST with the HDS.

Is atmospheric pressure indicated?

YES - Go to step 3.

NO - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see

PCM UPDATING AND SUBSTITUTION FOR TESTING), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**), then go to step 1 .

3. Clear the DTC with the HDS.
4. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
5. Test-drive under these conditions, then connect the HDS.
   - Engine coolant temperature above 158°F (70°C)
   - A/T in D5 position
   - Throttle position between 12 degrees and 20 degrees for 2 seconds
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, system is OK at this time. If the screen indicates NOT COMPLETED, go to step 4 and recheck.

7. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
8. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2227 is indicated, check for poor connections or loose terminals at the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the BARO 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, system is OK at this time.

3. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM**

UPDATING AND SUBSTITUTION FOR TESTING).

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

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2228 is indicated, check for poor connections or loose terminals at the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Check the BARO in the DATA LIST with the HDS.

Is about 160 kPa (47.2 in.Hg, 1,200 mmHg), or 4.5 V or more indicated?

YES - Go to step 3.

NO - Intermittent failure, system is OK at this time.

3. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
4. Check for a Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2229 is indicated, check for poor connections or loose terminals at the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2237, P2240: REAR A/F SENSOR (BANK 1, SENSOR 1) IP LINE HIGH VOLTAGE; FRONT A/F SENSOR (BANK 2, SENSOR 1) IP LINE HIGH VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC P2237 and/or P2240* is stored at the same time as DTC P0134 and/or P0154*, troubleshoot DTC P2237 and/or P2240* 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 ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, 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 OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector A (73P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 7 to body ground with a jumper wire.

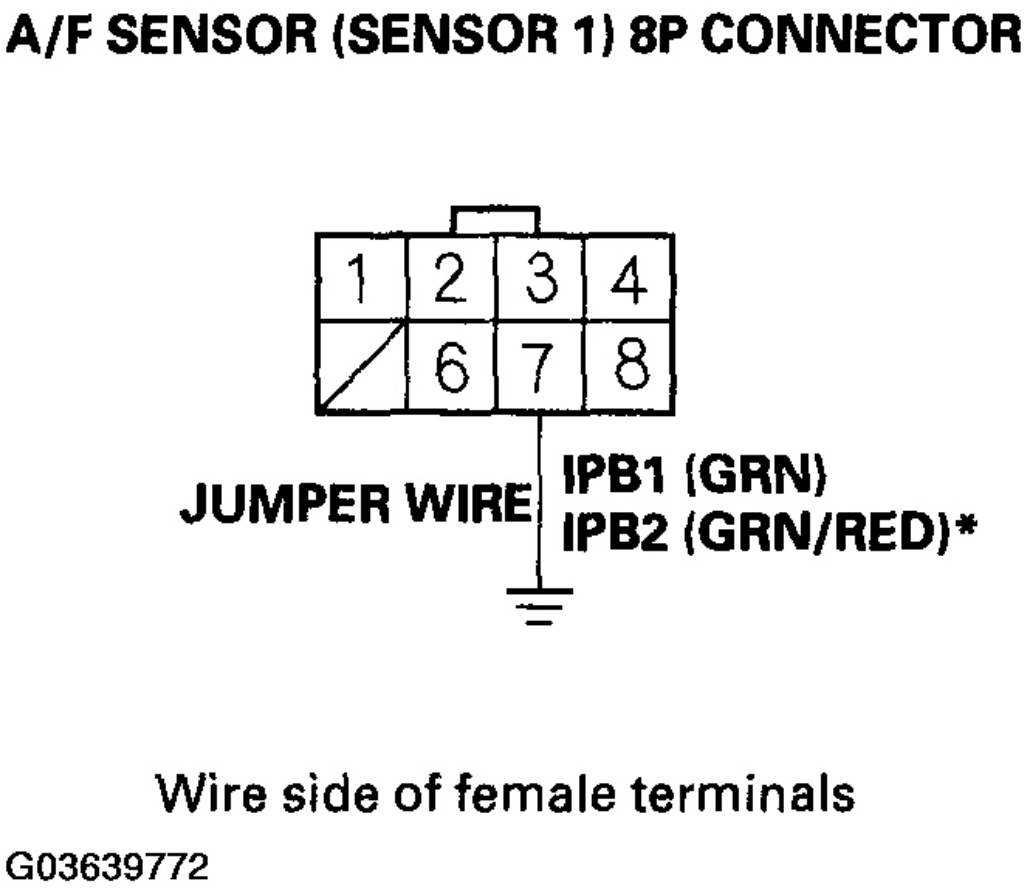


Fig. 114: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal 7 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal A55 (A51)* and body ground.

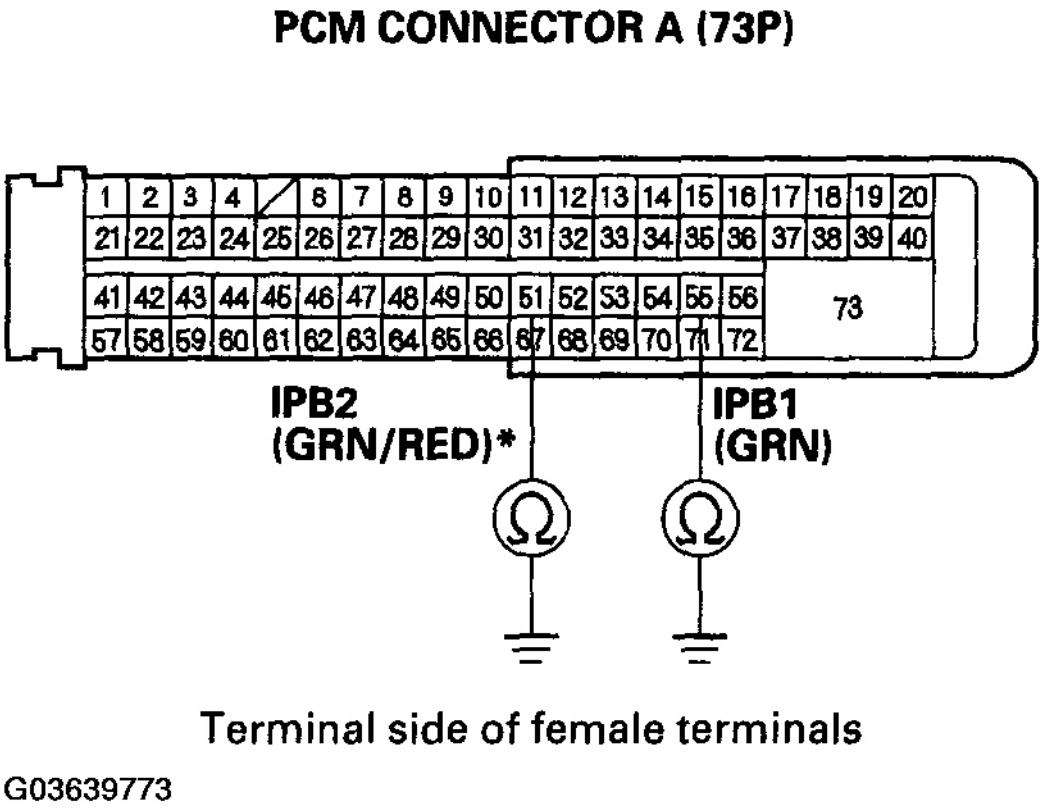


Fig. 115: Checking Continuity Between PCM Connector Terminal A55 (A51)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (A55 (A51)*) and the A/F sensor (Sensor 1), then go to step 15 .

11. Remove the jumper wire from the A/F sensor (Sensor 1) 8P connector, and reconnect PCM connector A (73P).
12. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
13. Measure voltage between A/F sensor (Sensor 1) 8P connector terminal No. 7 and body ground.

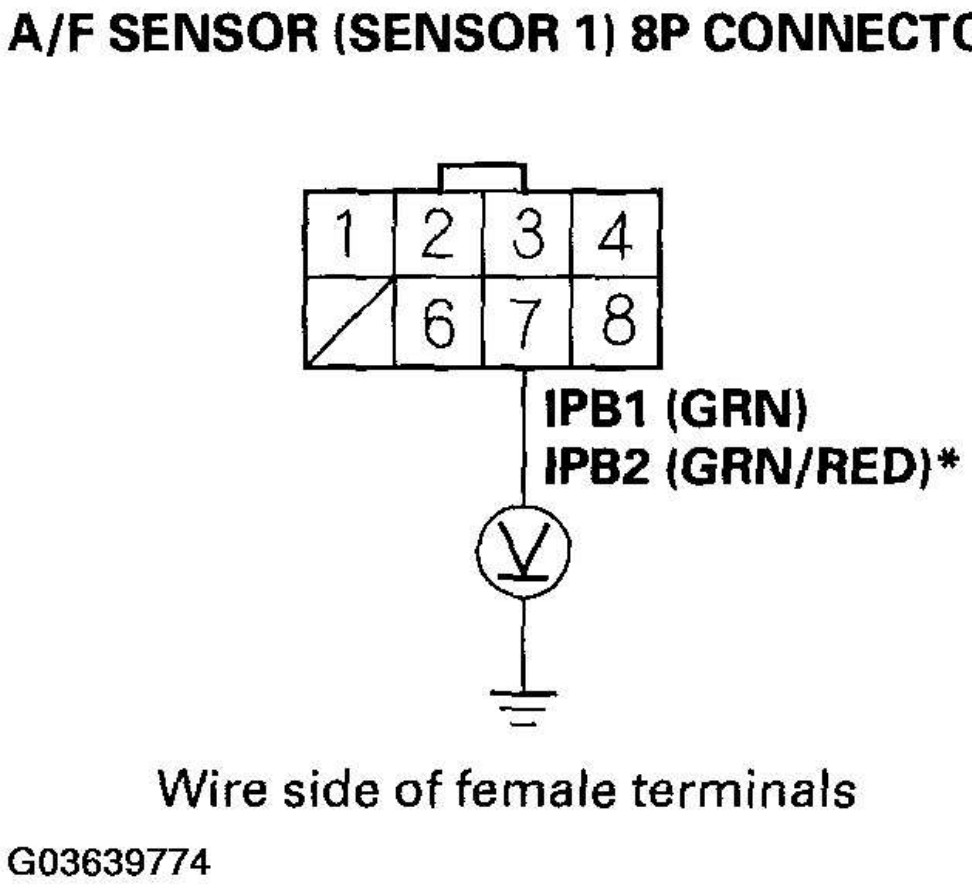


Fig. 116: Measuring Voltage Between A/F Sensor (Sensor 1) 8P Connector Terminal 7 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 22 .
NO - Go to step 14.

14. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
15. Reconnect PCM connector A (73P) and the A/F sensor (Sensor 1) 8P connector.
16. Turn the ignition switch ON (II).
17. Reset the PCM with the HDS.
18. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
19. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator

fan comes on, then let it idle for 2 minutes.

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

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2237 and/or P2240* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 21.

21. 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.

    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, go to step 19 and recheck.

22. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
23. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
24. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2237 and/or P2240* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

    NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**).

DTC P2238, P2241: REAR A/F SENSOR (BANK 1, SENSOR 1) IP LINE LOW VOLTAGE; FRONT A/F SENSOR (BANK 2, SENSOR 1) IP LINE LOW VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, 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 OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector A (73P).
9. Check for continuity between PCM connector terminal A55 (A51)* and body ground.

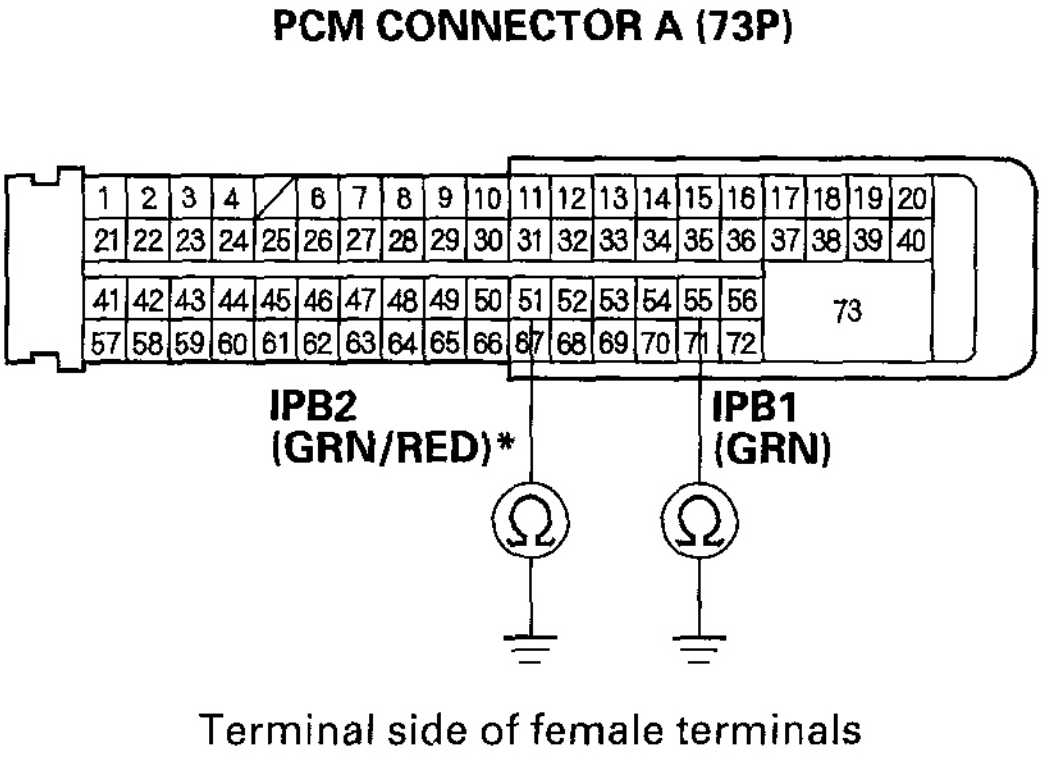


Fig. 117: Checking Continuity Between PCM Connector Terminal A55 (A51)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A55 (A51)*) and the A/F sensor (Sensor 1), then go to step 14 .

NO - Go to step 10.

10. Reconnect PCM connector A (73P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure voltage between A/F sensor (Sensor 1) 8P connector terminal No. 7 and body ground.

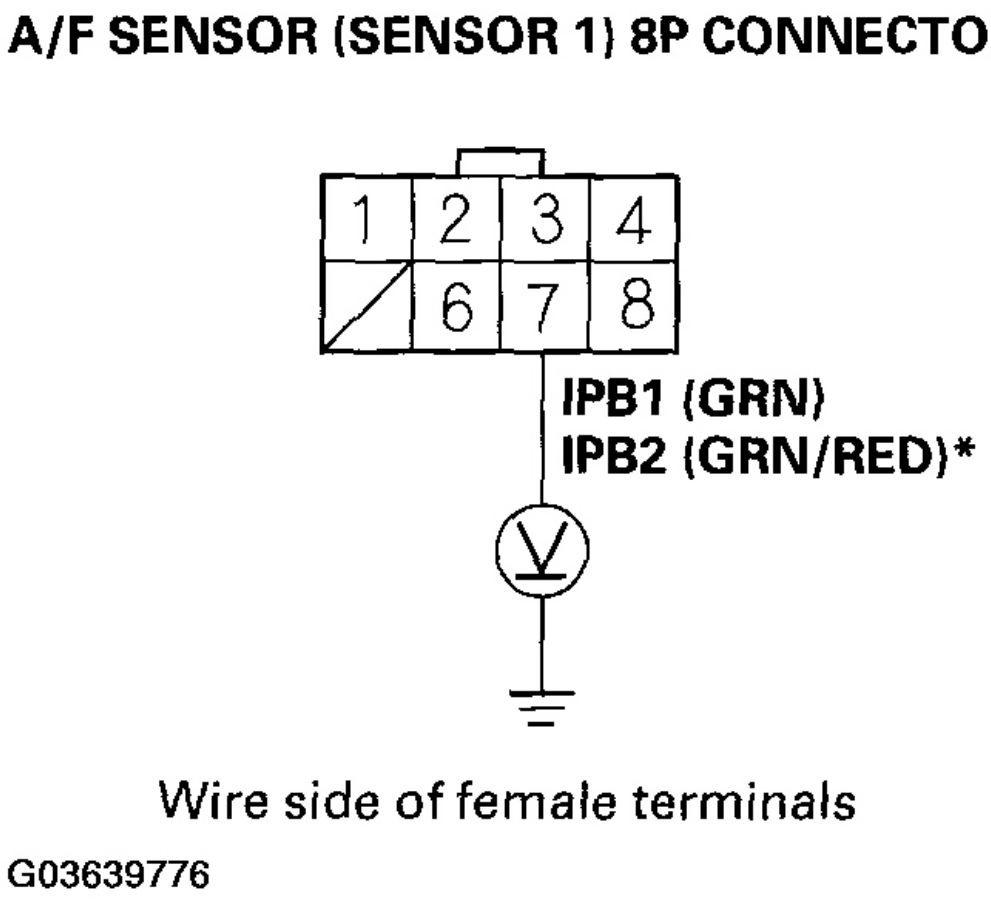


Fig. 118: Measuring Voltage Between A/F Sensor (Sensor 1) 8P Connector Terminal 7 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 21 .

NO - Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
14. Reconnect PCM connector A (73P) and the A/F sensor (Sensor 1) 8P connector.
15. Turn the ignition switch ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
18. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
19. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2238 and/or P2241* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 20.
20. 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.

    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, go to step 18 and recheck.
21. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
22. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
23. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2238 and/or P2241* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2243, P2247: REAR A/F SENSOR (BANK 1, SENSOR 1) VCENT LINE HIGH VOLTAGE; FRONT A/F SENSOR (BANK 2, SENSOR 1) VCENT LINE HIGH VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board**

snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

- **Information marked with an asterisk (*) applies to the front bank.**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, 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 OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector A (73P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 8 to body ground with a jumper wire.

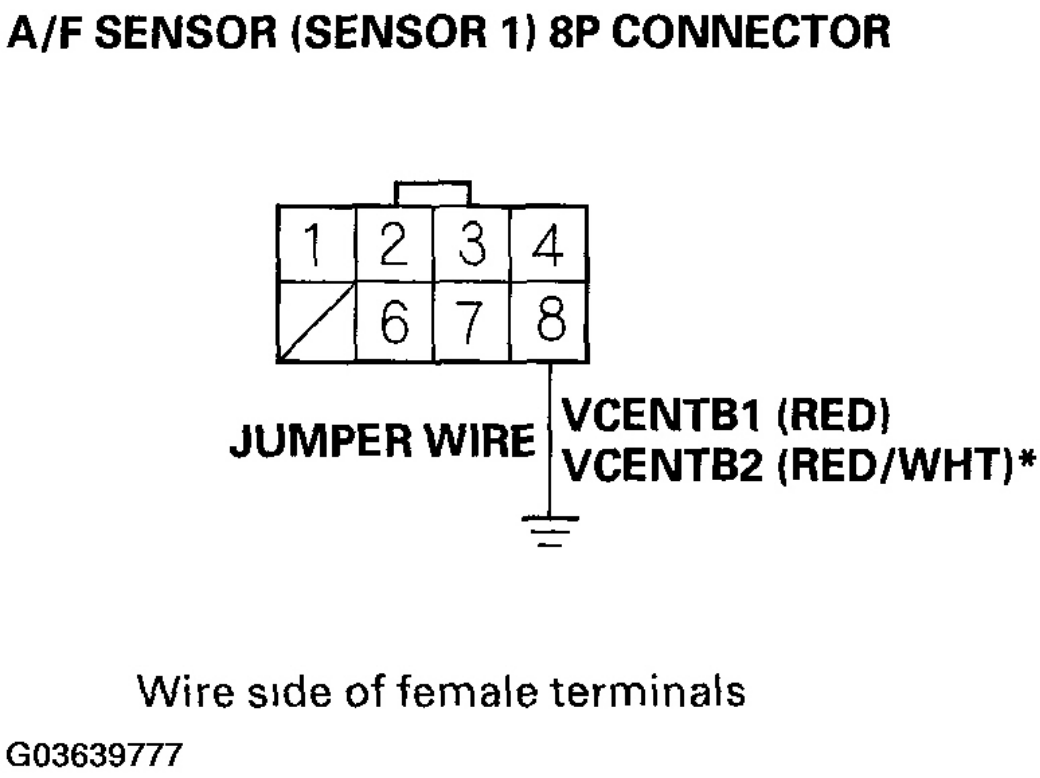


Fig. 119: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal 8 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal A54 (A50)* and body ground.

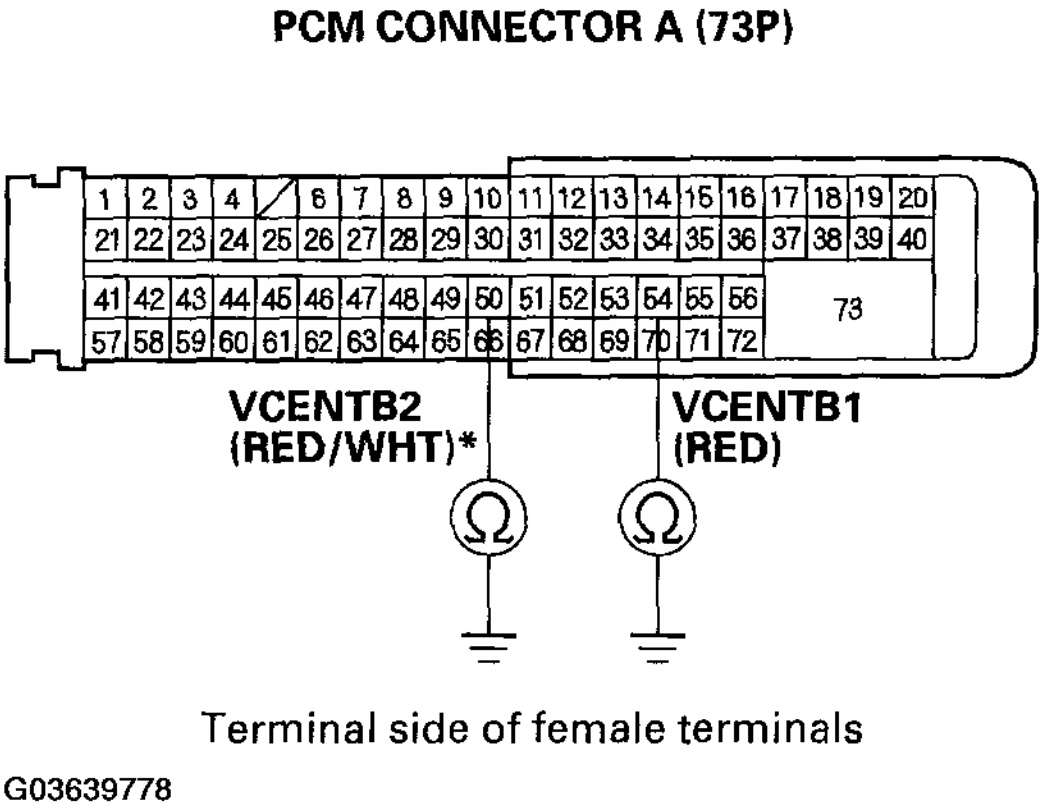


Fig. 120: Checking Continuity Between PCM Connector Terminal A54 (A50)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (A54 (A50)*) and the A/F sensor (Sensor 1), then go to step 15 .

11. Remove the jumper wire from the A/F sensor (Sensor 1) 8P connector, and reconnect PCM connector A (73P).
12. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
13. Measure voltage between A/F sensor (Sensor 1) 8P connector terminal No. 8 and body ground.

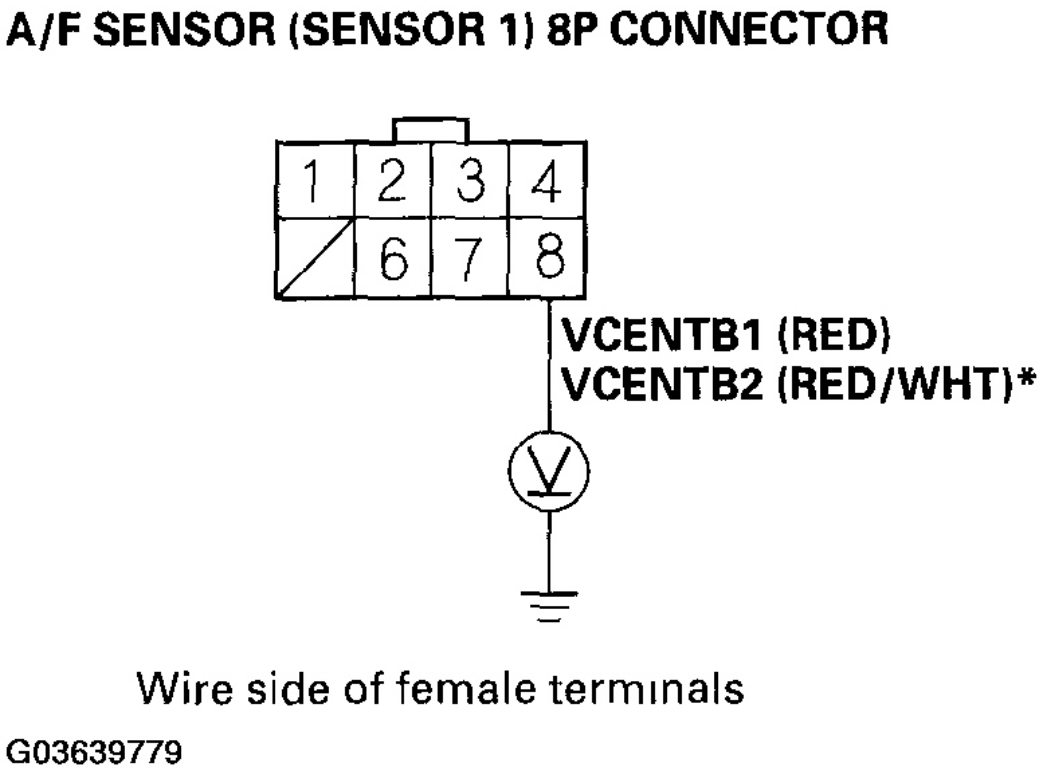


Fig. 121: Measuring Voltage Between A/F Sensor (Sensor 1) 8P Connector Terminal 8 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 22 .

NO - Go to step 14.

14. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
15. Reconnect PCM connector A (73P) and the A/F sensor (Sensor 1) 8P connector.
16. Turn the ignition switch ON (II).
17. Reset the PCM with the HDS.
18. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
19. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
20. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2243 and/or P2247* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 21.

21. 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.

    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, go to step 19 and recheck.

22. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
23. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
24. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2243 and/or P2247* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2245, P2249: REAR A/F SENSOR (BANK 1, SENSOR 1) VCENT LINE LOW VOLTAGE; FRONT A/F SENSOR (BANK 2, SENSOR 1) VCENT LINE LOW VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, 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 OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector A (73P).
9. Check for continuity between PCM connector terminal A54 (A50)* and body ground.

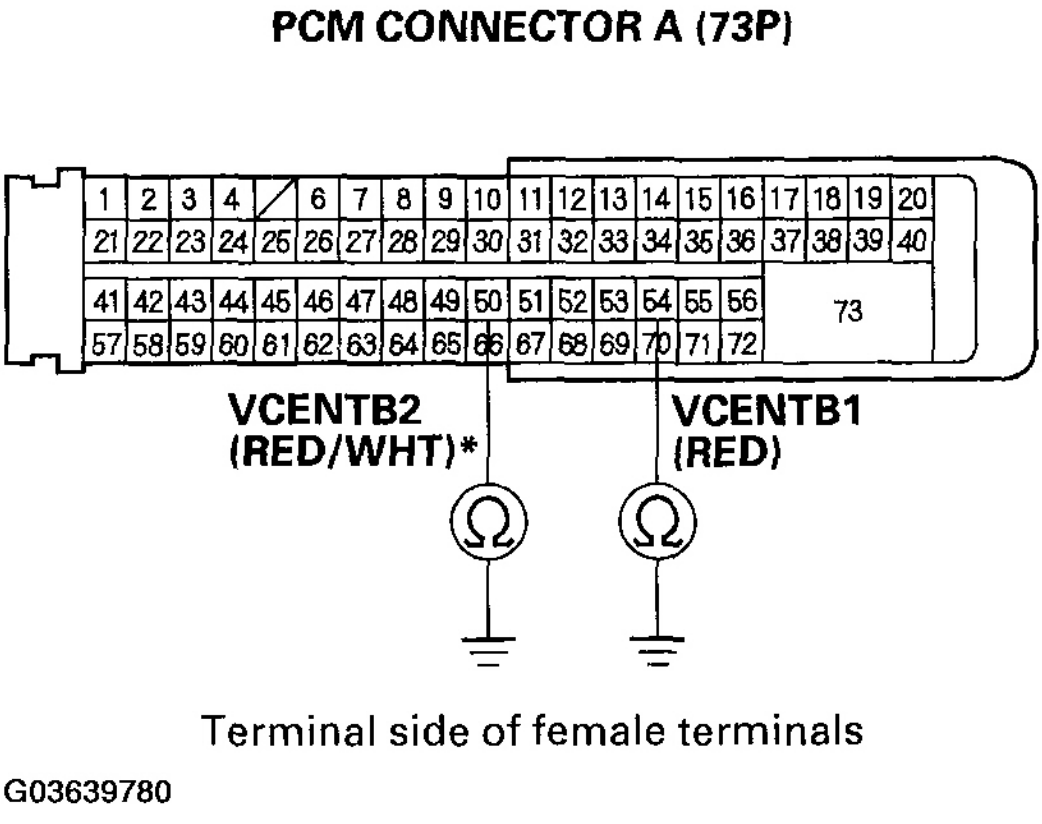


Fig. 122: Checking Continuity Between PCM Connector Terminal A54 (A50)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A54 (A50)*) and the A/F sensor (Sensor 1), then go to step 14 .

NO - Go to step 10.

10. Reconnect PCM connector A (73P).

11. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
12. Measure voltage between A/F sensor (Sensor 1) 8P connector terminal No. 8 and body ground.

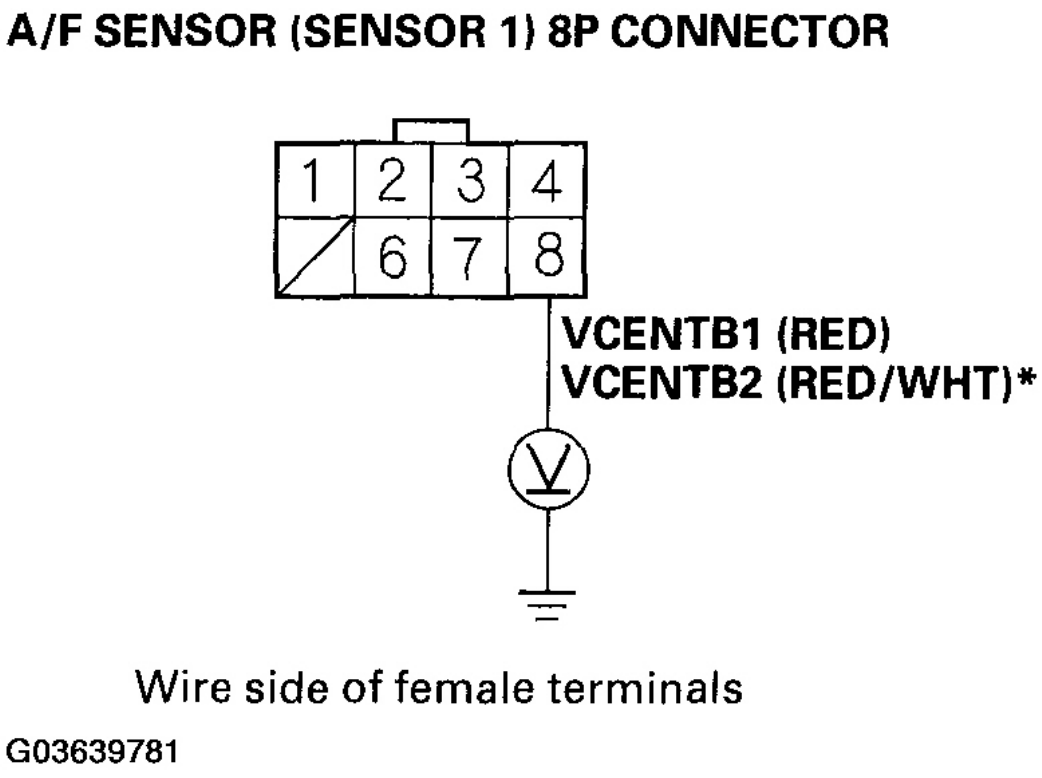


Fig. 123: Measuring Voltage Between A/F Sensor (Sensor 1) 8P Connector Terminal 8 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 21 .
NO - Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
14. Reconnect PCM connector A (73P) and the A/F sensor (Sensor 1) 8P connector.
15. Turn the ignition switch ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
18. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator

fan comes on, then let it idle for 2 minutes.

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

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2245 and/or P2249* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 20.

20. 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.

    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, go to step 18 and recheck.

21. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
22. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
23. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2245 and/or P2249* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2251, P2254: REAR A/F SENSOR (BANK 1, SENSOR 1) VS LINE HIGH VOLTAGE; FRONT A/F SENSOR (BANK 2, SENSOR 1) VS LINE HIGH VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **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 ON (II).

2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, 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 OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector A (73P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 6 to body ground with a jumper wire.

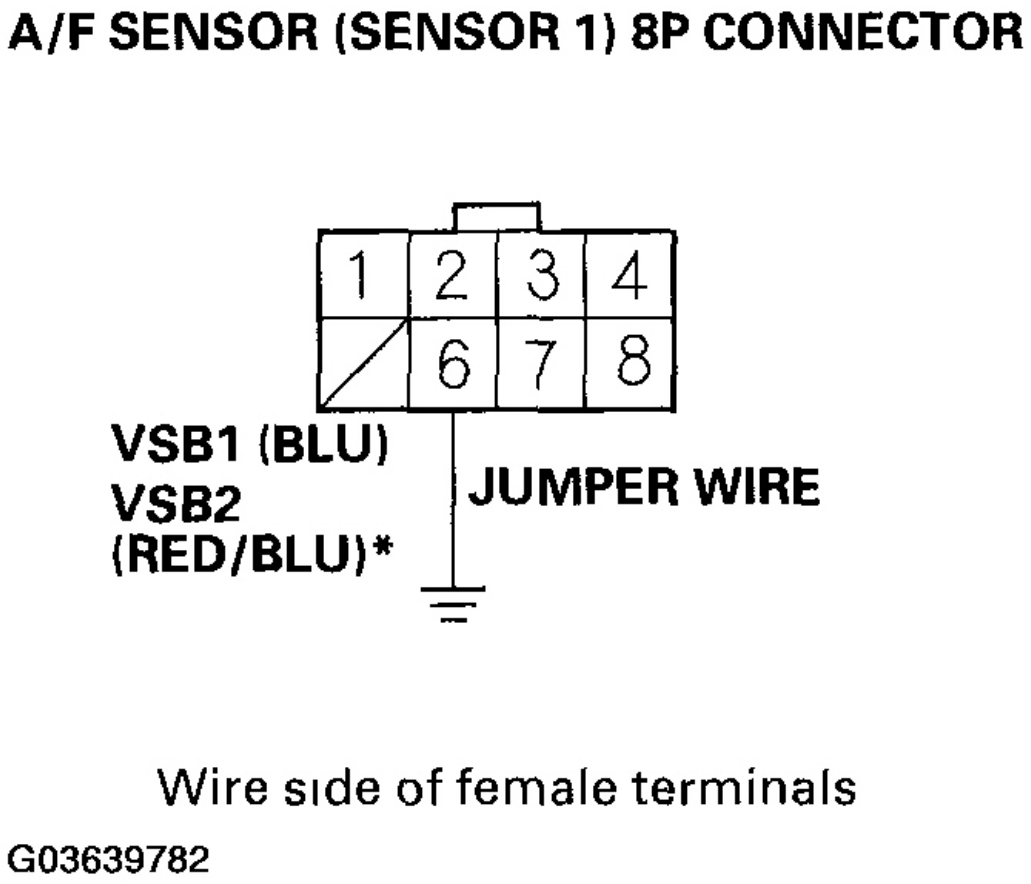


Fig. 124: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal 6 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal A53 (A49)* and body ground.

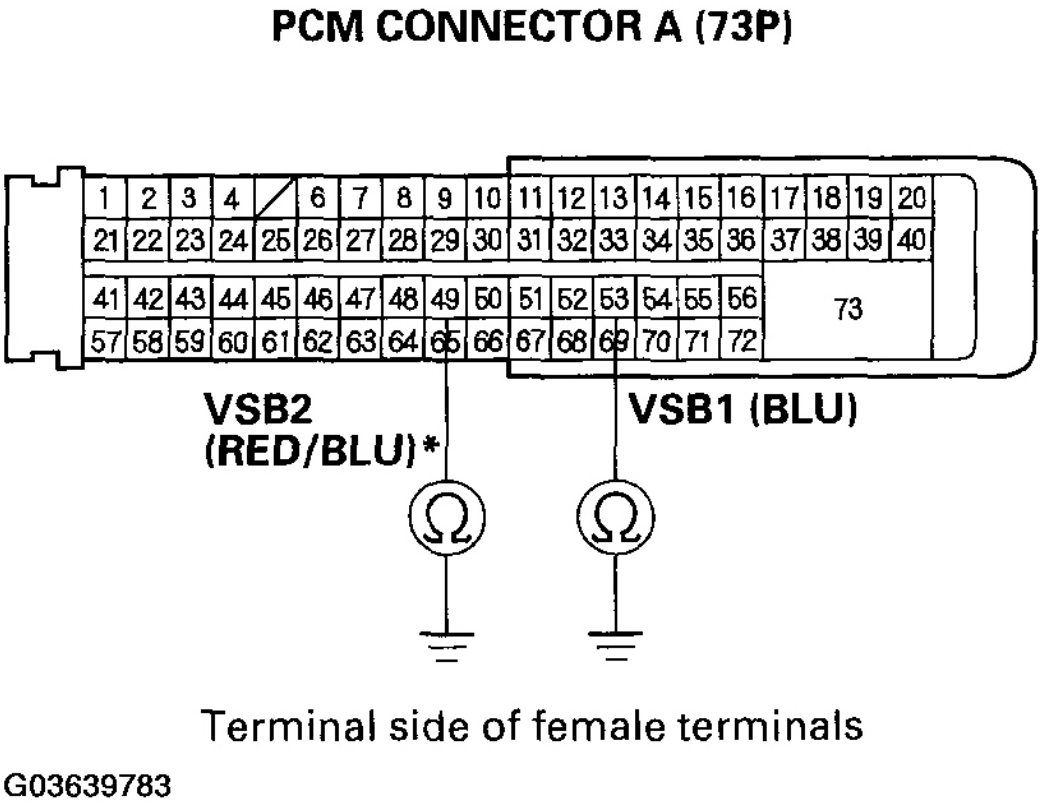


Fig. 125: Checking Continuity Between PCM Connector Terminal A53 (A49)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (A53 (A49)*) and the A/F sensor (Sensor 1), then go to step 15 .

11. Remove the jumper wire from the A/F sensor (Sensor 1) connector, and reconnect PCM connector A (73P).
12. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
13. Measure voltage between A/F sensor (Sensor 1) 8P connector terminal No. 6 and body ground.

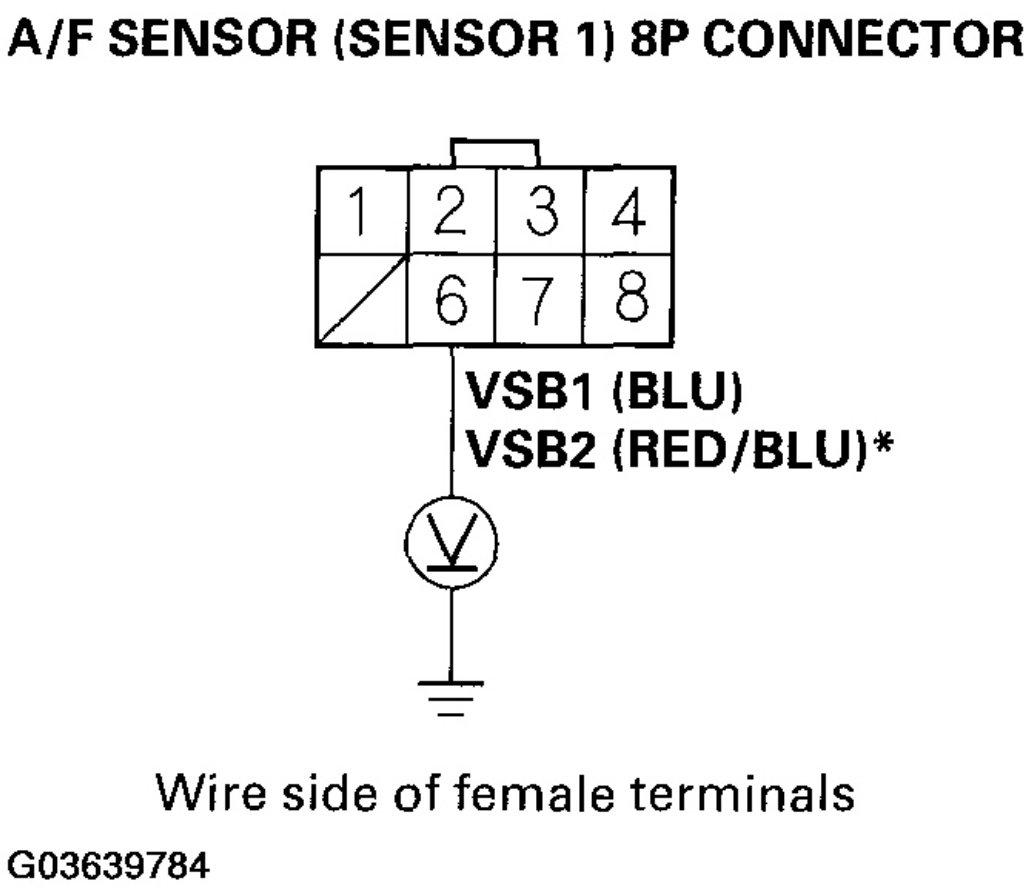


Fig. 126: Measuring Voltage Between A/F Sensor (Sensor 1) 8P Connector Terminal 6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 22 .
NO - Go to step 14.

14. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
15. Reconnect PCM connector A (73P) and the A/F sensor (Sensor 1) 8P connector.
16. Turn the ignition switch ON (II).
17. Reset the PCM with the HDS.
18. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
19. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.

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

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2251 and/or P2254* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 21.

21. 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.

    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, go to step 19 and recheck.

22. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
23. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
24. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P1153 and/or P1173* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2252, P2255: REAR A/F SENSOR (BANK 1, SENSOR 1) VS LINE LOW VOLTAGE; FRONT A/F SENSOR (BANK 2, SENSOR 1) VS LINE LOW VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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, 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 OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector A (73P).
9. Check for continuity between PCM connector terminal A53 (A49)* and body ground.

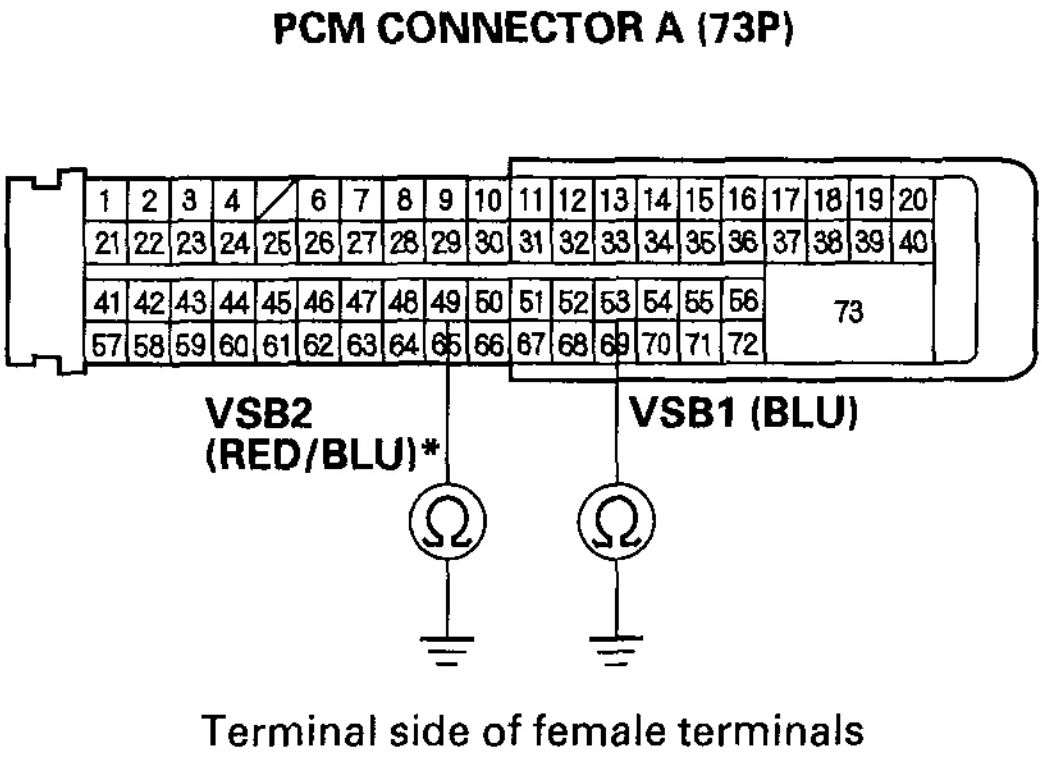


Fig. 127: Checking Continuity Between PCM Connector Terminal A53 (A49)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A53 (A49)*) and the A/F sensor (Sensor 1), then go to step 14 .

NO - Go to step 10.

10. Reconnect PCM connector A (73P).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
12. Measure voltage between A/F sensor (Sensor 1) 8P connector terminal No. 6 and body ground.

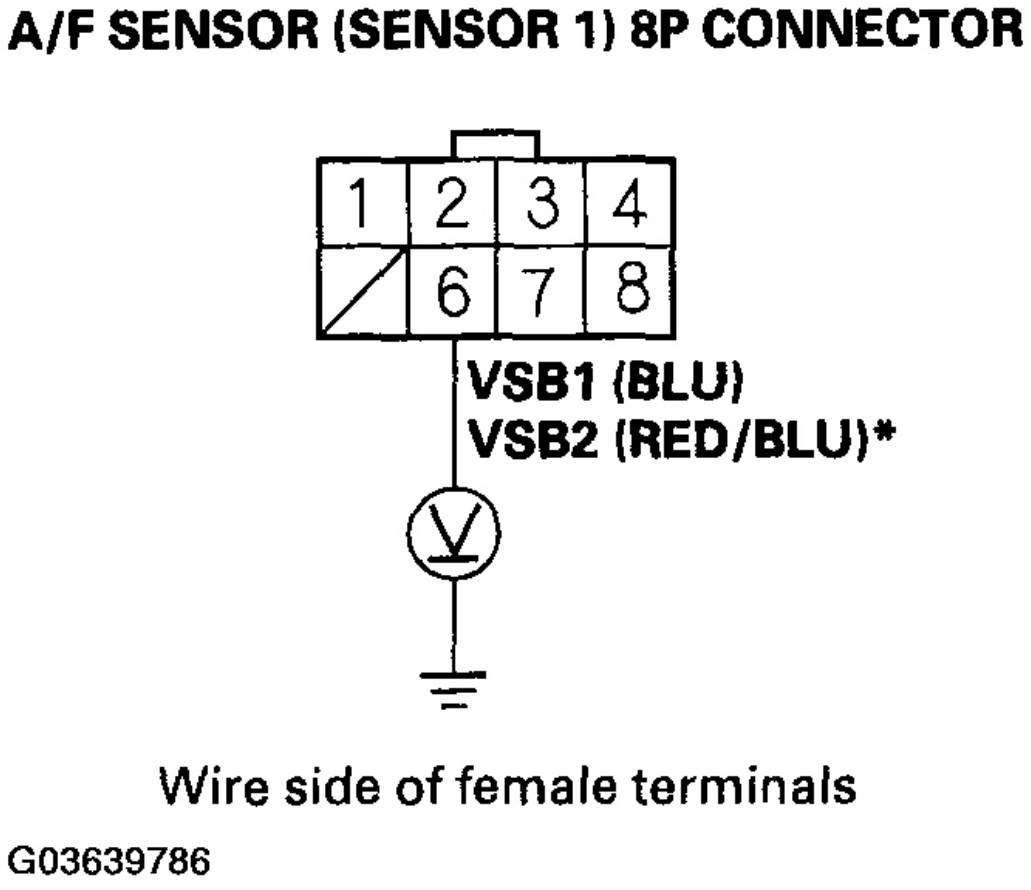


Fig. 128: Measuring Voltage Between A/F Sensor (Sensor 1) 8P Connector Terminal 6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 21 .

NO - Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).

14. Reconnect PCM connector A (73P) and the A/F sensor (Sensor 1) 8P connector.
15. Turn the ignition switch ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
18. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
19. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2252 and/or P2255* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 20.
20. 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.

    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, go to step 18 and recheck.
21. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
22. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
23. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2252 and/or P2255* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2270, P2271, P2272, P2273: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT SIGNAL STUCK LEAN (2005-2006 MODELS); REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT SIGNAL STUCK RICH (2005-2006 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT SIGNAL STUCK LEAN (2005-2006 MODELS); FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT SIGNAL STUCK RICH (2005-2006 MODELS)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board**

snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:
   - Engine coolant temperature above 176°F (80°C)
   - Vehicle speed between 35 mph (56 km/h) and 55 mph (88 km/h)
   - Drive 1 minute or more
5. Monitor the OBD STATUS for DTC P2270, P2271, P2272* and/or P2273* 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, system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 3 and recheck.
6. Turn the ignition switch OFF.
7. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S REPLACEMENT**).
8. Turn the ignition switch ON (II).
9. Reset the PCM with the HDS.
10. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
12. Test-drive under these conditions:
    - Engine coolant temperature above 176°F (80°C)
    - Vehicle speed between 35 mph (56 km/h) and 55 mph (88 km/h)
    - Drive 1 minute or more
13. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2270, P2271, P2272* and/or P2273* is indicated, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 14.

14. Monitor the OBD STATUS for DTC P2270, P2271, P2272* and/or P2273* in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES - Troubleshooting is complete.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the 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, go to step 11 and recheck.

DTC P2610: PCM INTERNAL POWER OFF TIMER PERFORMANCE PROBLEM

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

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

   Is DTC P2610 indicated?

   YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**).

   NO - Intermittent failure, system is OK at this time. Check for poor connection or loose terminals at the PCM.

DTC P2627, P2630: REAR A/F SENSOR (BANK 1, SENSOR 1) LABEL CIRCUIT LOW VOLTAGE; 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 GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

Are DTC P0107, P0112, P0117, P2122, P2127, P2228, P0452, P0700, P2627, and P2630 simultaneously indicated?

YES - Go to step 12 .

NO - Go to step 5.

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

Is DTC P2627 and/or P2630* indicated?

YES - Go to step 6.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM.

6. Turn the ignition switch OFF.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connector A (73P).
9. Check for continuity between PCM connector terminal A56 (A52)* and body ground.

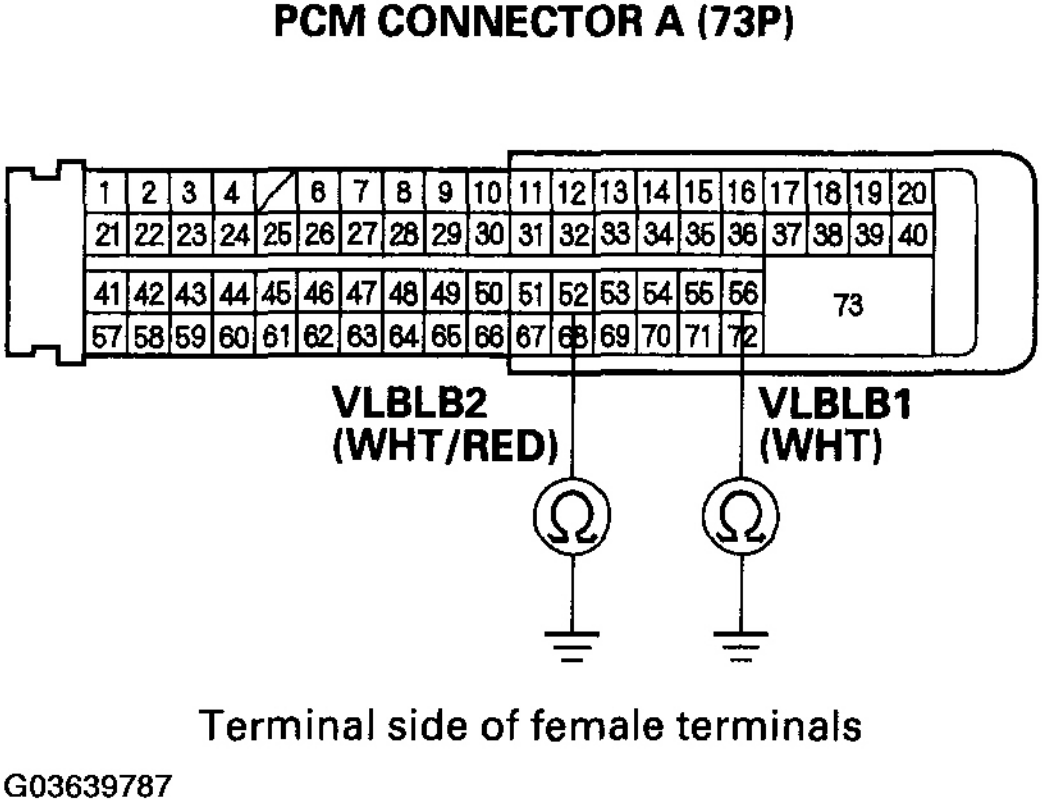


Fig. 129: Checking Continuity Between PCM Connector Terminal A56 (A52)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.
NO - Go to step 26 .

10. Disconnect the A/F sensor (Sensor 1) 8P connector.
11. Check for continuity between PCM connector terminal A56 (A52)* and body ground.

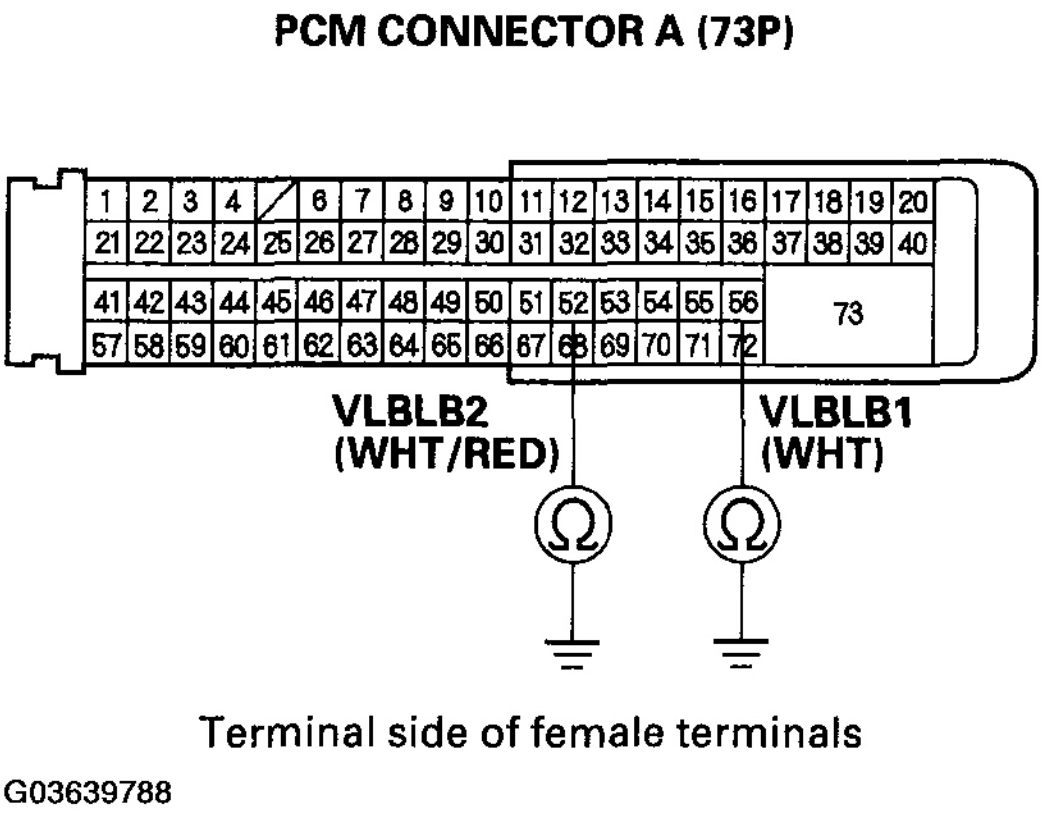


Fig. 130: Checking Continuity Between PCM Connector Terminal A56 (A52)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 15 .
NO - Go to step 18 .

12. Turn the ignition switch OFF.

13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (73P).
15. Remove the A/F sensor relay (A).

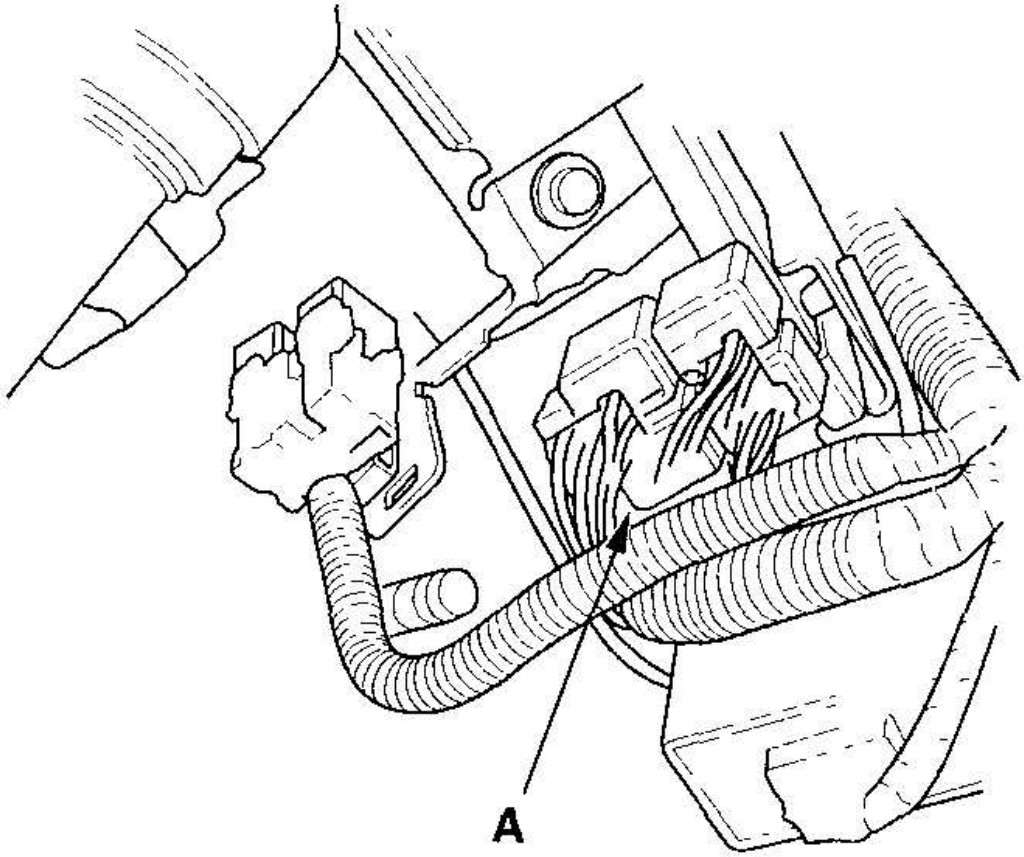


Fig. 131: Removing A/F Sensor Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Disconnect these connectors:
    - ELD unit
    - Engine mount control solenoid valve
    - Front and rear A/F sensors (Sensor 1)
    - Front and rear secondary heated oxygen sensors (Sensor 2)
    - EVAP canister vent shut valve

- EVAP bypass solenoid valve (2003-2004 models)
- EVAP canister purge valve

17. Check for continuity between A/F sensor relay 4P connector terminal No. 2 and body ground.

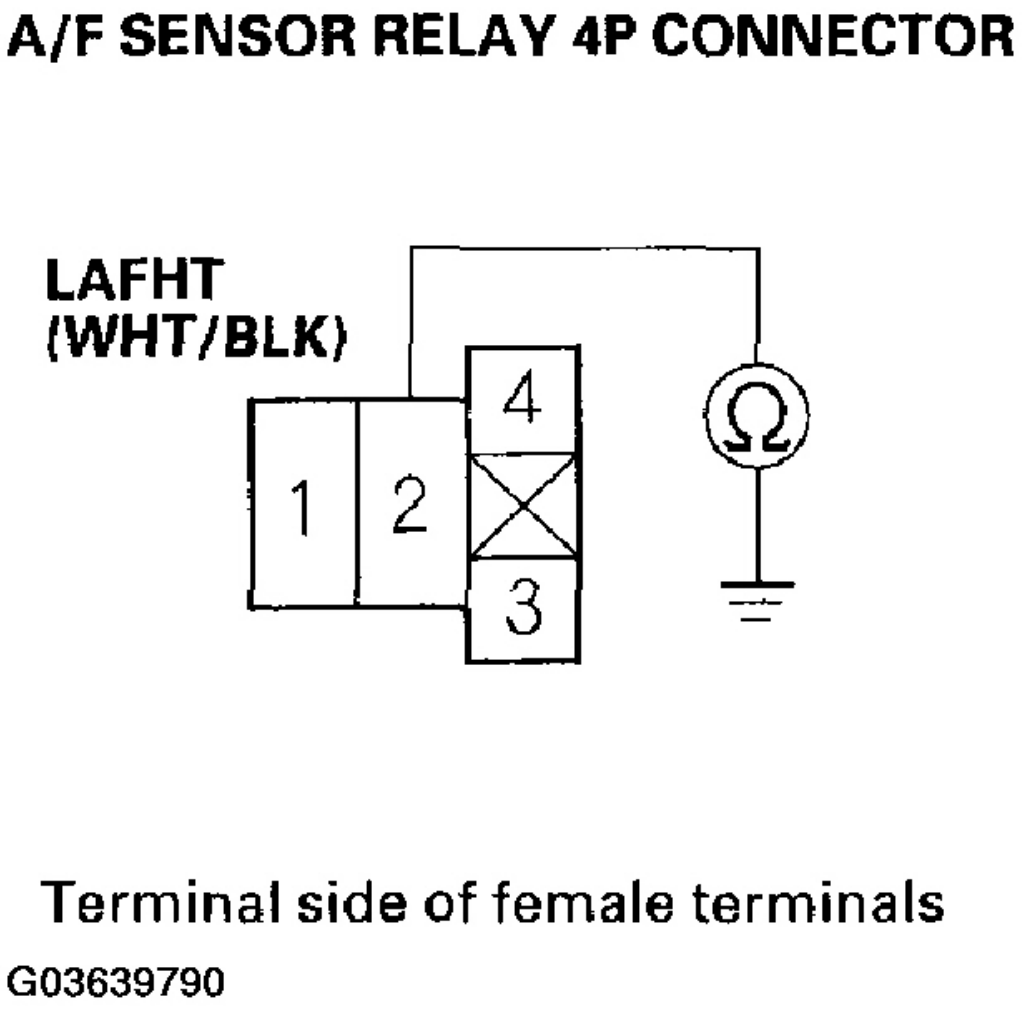


Fig. 132: Checking Continuity Between A/F Sensor Relay 4P Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the A/F sensor relay and each connector, then go to step 19 .

NO - Go to step 26 .

18. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
19. Reconnect each sensor connectors (skip this step, if the connector is already connected.).
20. Replace the A/F sensor relay.
21. Turn the ignition switch ON (II).
22. Reset the PCM with the HDS.
23. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
24. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
25. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2627 and/or P2630* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Troubleshooting is complete.
26. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
27. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
28. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2627 and/or P2630* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2628, P2631: REAR A/F SENSOR (BANK 1, SENSOR 1) LABEL CIRCUIT HIGH VOLTAGE; 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 GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or 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 P2628 and/or P2631* indicated?

   YES - Go to step 5.

   NO - Intermittent failure, 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 OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector A (73P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 4 to body ground with a jumper wire.

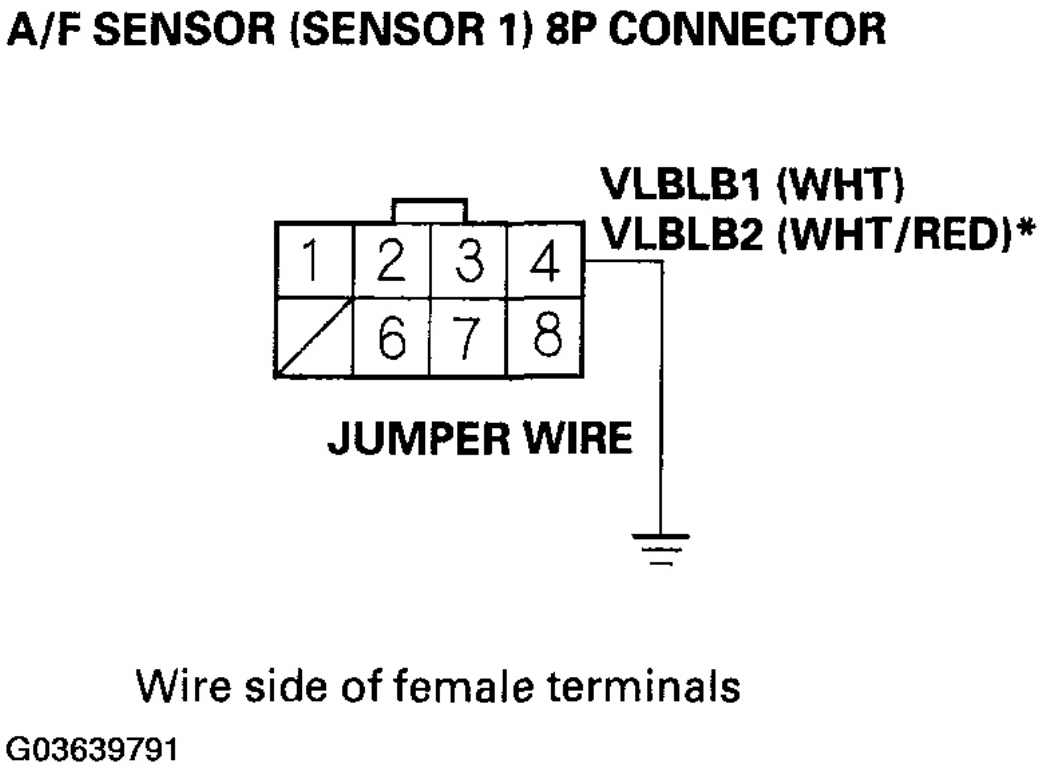


Fig. 133: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal 4 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal A56 (A52)* and body ground.

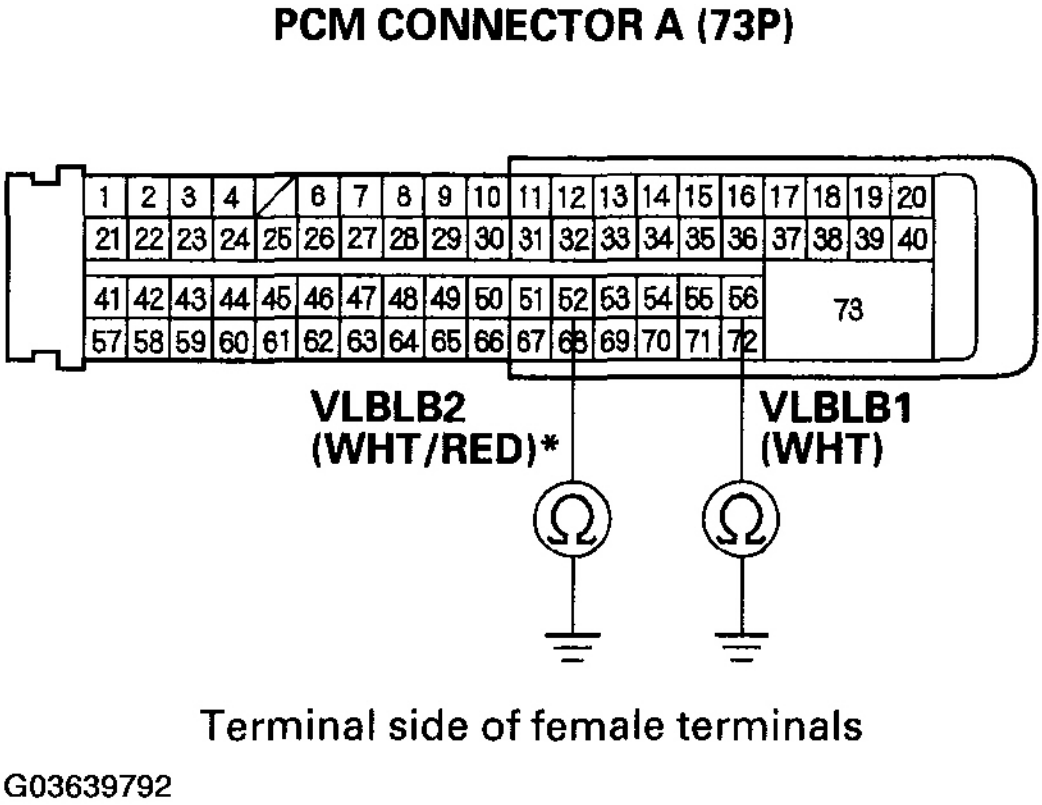


Fig. 134: Checking Continuity Between PCM Connector Terminal A56 (52)* And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (A56 (A52)*) and the A/F sensor (Sensor 1), then go to step 17 .

11. Remove the jumper wire from the A/F sensor (Sensor 1) 8P connector.
12. Check for continuity between A/F sensor (Sensor 1) 8P connector terminal No. 3 and body ground.

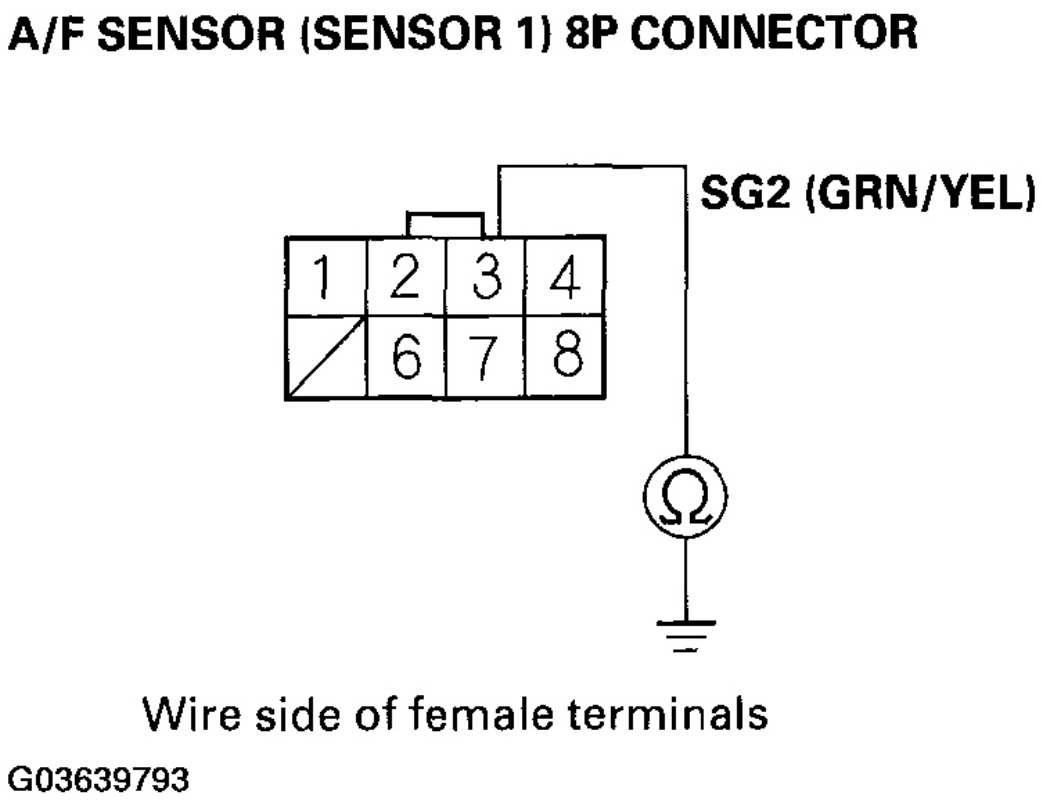


Fig. 135: Checking Continuity Between A/F Sensor (Sensor 1) 8P Connector Terminal 3 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 13.

NO - Repair open in the wire between the A/F sensor (Sensor 1) and body ground, then go to step 17 .

13. Reconnect PCM connector A (73P).
14. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
15. Measure voltage between A/F sensor (Sensor 1) 8P connector terminal No. 4 and body ground.

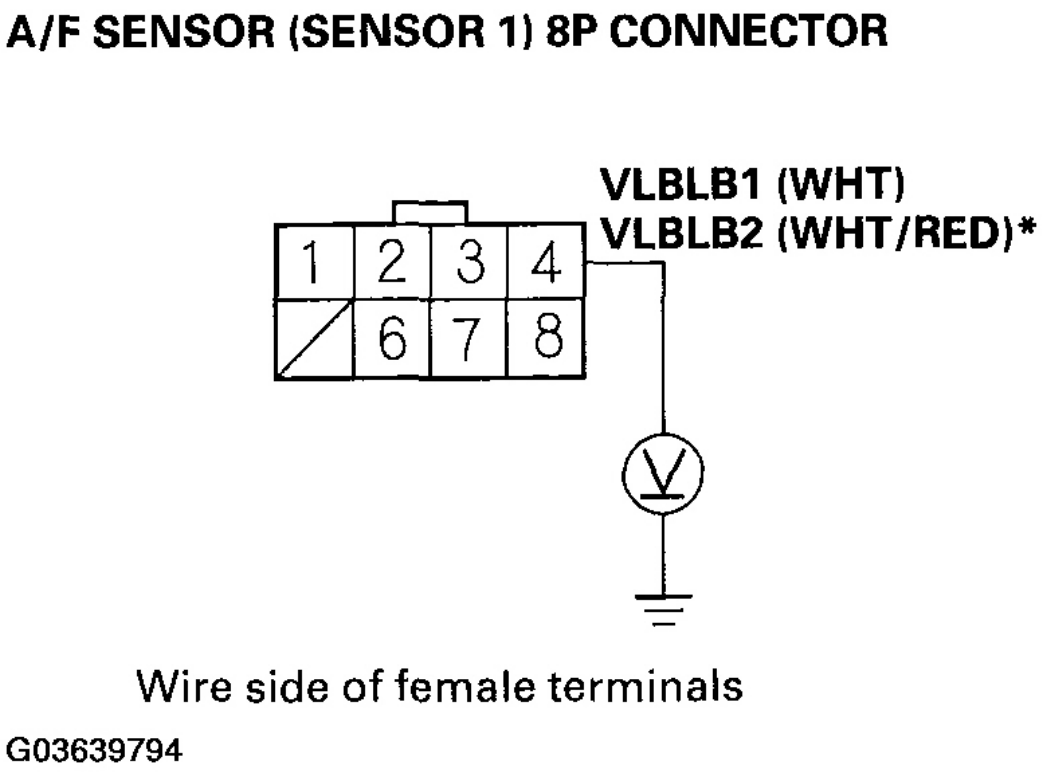


Fig. 136: Measuring Voltage Between A/F Sensor (Sensor 1) 8P Connector Terminal 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 16.
NO - Go to step 23 .

16. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
17. Reconnect PCM connector A (73P) and the A/F sensor (Sensor 1) 8P connector.
18. Turn the ignition switch ON (II).
19. Reset the PCM with the HDS.
20. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
21. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
22. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2628 and/or P2631* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

23. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
24. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
25. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2628 and/or P2631* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC P2A00, P2A03: REAR A/F SENSOR (BANK 1, SENSOR 1) RANGE/PERFORMANCE PROBLEM; FRONT A/F SENSOR (BANK 2, SENSOR 1) RANGE/PERFORMANCE PROBLEM

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Information marked with an asterisk (*) applies to the front bank (Bank 2).**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:
   - Engine coolant temperature above 158°F (70°C)
   - A/T in D5 position
   - Vehicle speed at 30 mph (48 km/h) or more, and engine speed at 2,300 rpm or less
   - Drive with the throttle fully opened for 5 seconds from an engine speed of 1,600 rpm, then decelerate with the throttle completely closed.
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, 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, go to step 3 and recheck.

6. Turn the ignition switch OFF.
7. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
8. Turn the ignition switch ON (II).
9. Reset the PCM with the HDS.
10. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
11. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
12. Test-drive under these conditions:
    - Engine coolant temperature above 158°F (70°C)
    - A/T in D5 position
    - Vehicle speed at 30 mph (48 km/h) or more, and engine speed at 2,300 rpm or less
    - Drive with the throttle fully opened for 5 seconds from an engine speed of 1,600 rpm, then decelerate with the throttle completely closed.
13. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P2A00 and/or P2A03* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 14.
14. 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.

    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 EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 11 and recheck.

DTC U0073: F-CAN MALFUNCTION (BUS-OFF)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC U0114 and/or U0122 are stored at the same time as DTC U0073, troubleshoot DTC U0073 first, then recheck for DTC U0114 and/or U0122.**

1. Turn the ignition switch ON (II).

2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0073 indicated?

YES - Go to step 4.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the VTM-4 control unit, the VSA modulator-control unit, the navigation unit, and the PCM.

4. Turn the ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Disconnect PCM connector B (56P).
7. Measure resistance between PCM connector terminals B15 and B16.

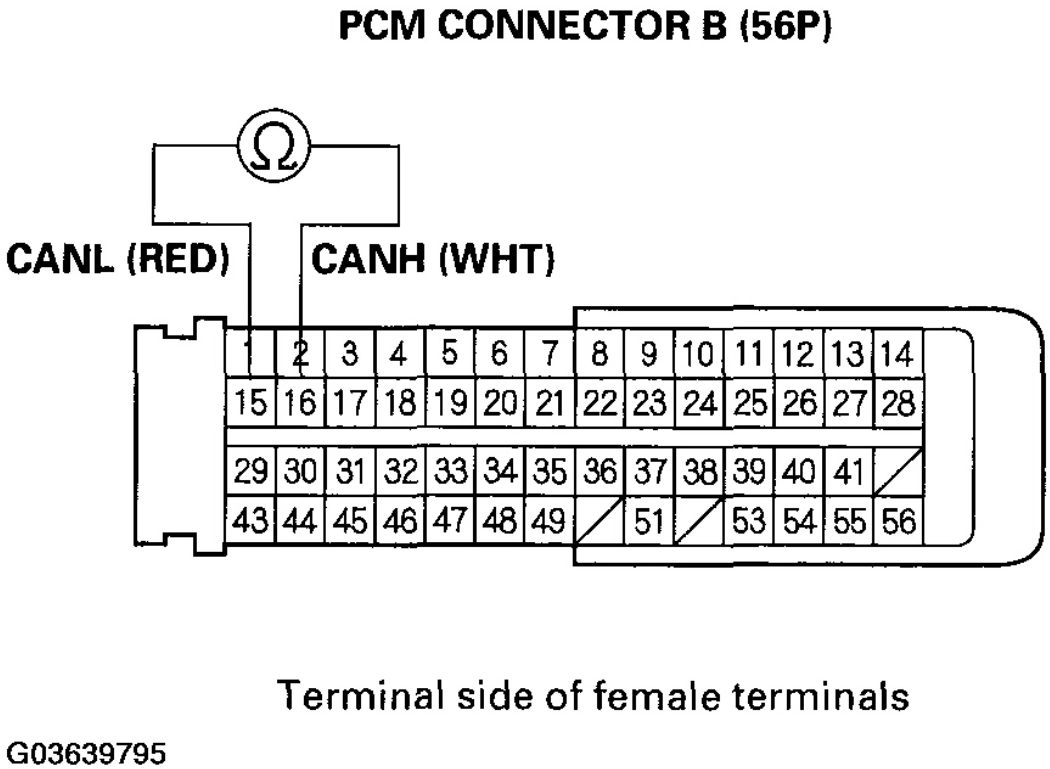


Fig. 137: Measuring Resistance Between PCM Connector Terminals B15 And B16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 54 - 66 ohm?

YES - Go to step 21 .

NO - Go to step 8.

8. Check the resistance again.

Is there 54 - 66 ohm or less?

YES - Repair open in the wire between PCM terminals B15 and B16, then go to step 47 .
NO - Go to step 9.

9. Disconnect the navigation unit 20P connector.
10. Disconnect VTM-4 control unit connector A (22P).
11. Measure resistance between VSA modulator-control unit 47P connector terminals No. 14 and No. 30.

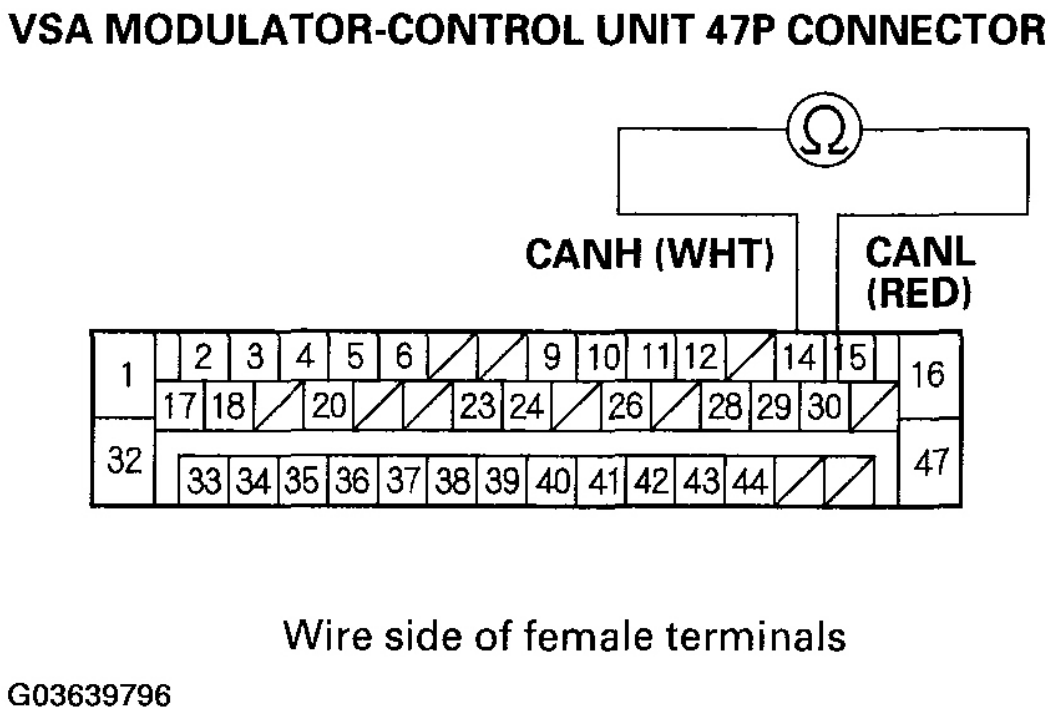


Fig. 138: Measuring Resistance Between VSA Modulator-Control Unit 47P Connector Terminals 14 And 30
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 108 - 132 ohm?

YES - Go to step 12.

NO - Substitute a known-good VSA modulator-control unit, then go to step 47 and recheck. If no DTC is indicated, replace the original VSA modulator-control unit, then go to step 47 .

12. Disconnect the VSA modulator-control unit 47P connector.
13. Reconnect VTM-4 control unit connector A (22P).
14. Measure resistance between VTM-4 control unit connector terminals A11 and A22.

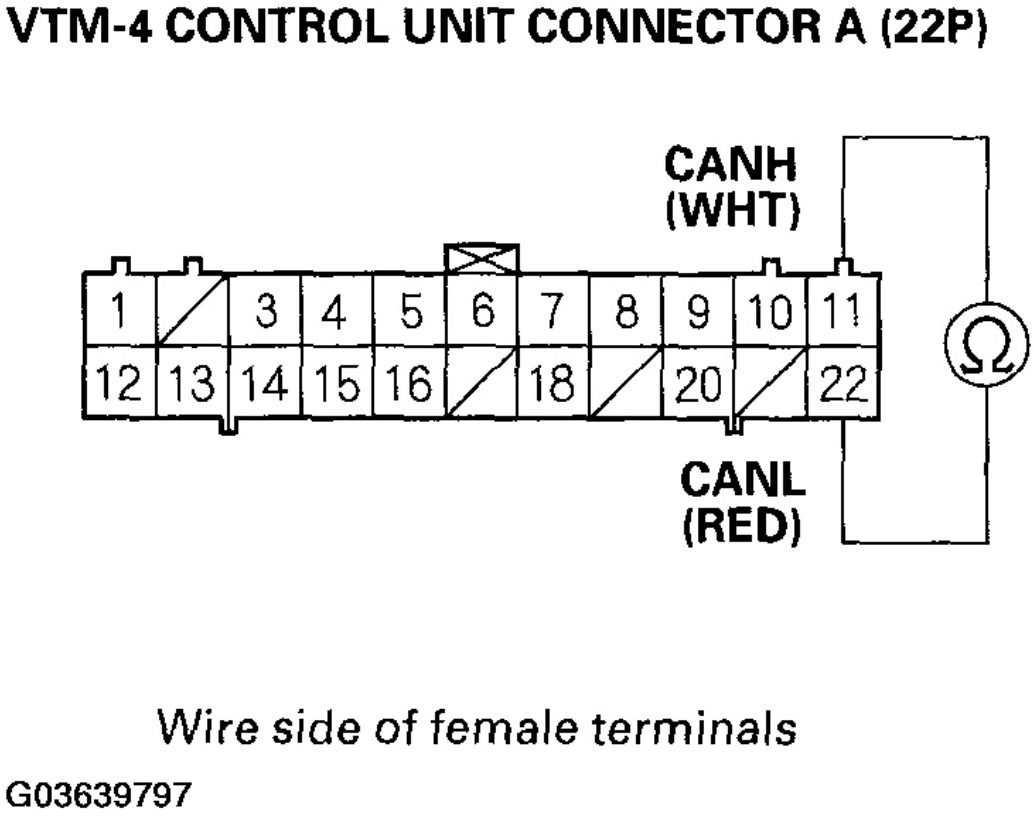


Fig. 139: Measuring Resistance Between VTM-4 Control Unit Connector Terminals A11 And A22
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 108 - 132 ohm ?

YES - Go to step 15.

NO - Substitute a known-good VTM-4 control unit, then go to step 47 , and recheck. If no DTC is indicated, replace the original VTM-4 control unit, then go to step 47 .

15. Disconnect VTM-4 control unit connector A (22P).
16. Reconnect the navigation unit 20P connector.
17. Measure resistance between navigation unit 20P connector terminals No. 8 and No. 18.

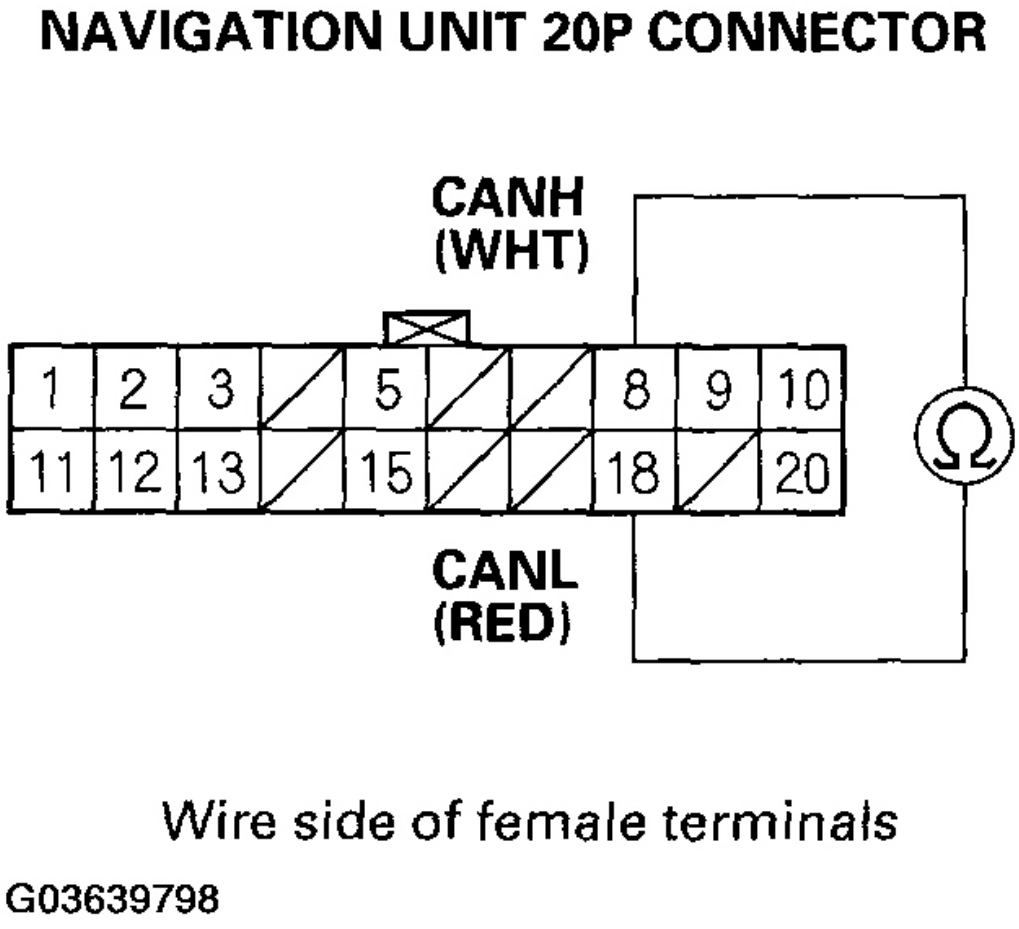


Fig. 140: Measuring Resistance Between Navigation Unit 20P Connector Terminals 8 And 18
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 2.6 k ohm?

YES - Go to step 18.

NO - Substitute a known-good navigation unit, then go to step 47 , and recheck. If no DTC is indicated, replace the original navigation unit, then go to step 47 .

18. Disconnect the navigation unit 20P connector.
19. Reconnect PCM connector B (56P).
20. Measure resistance between PCM connector terminals B15 and B16.

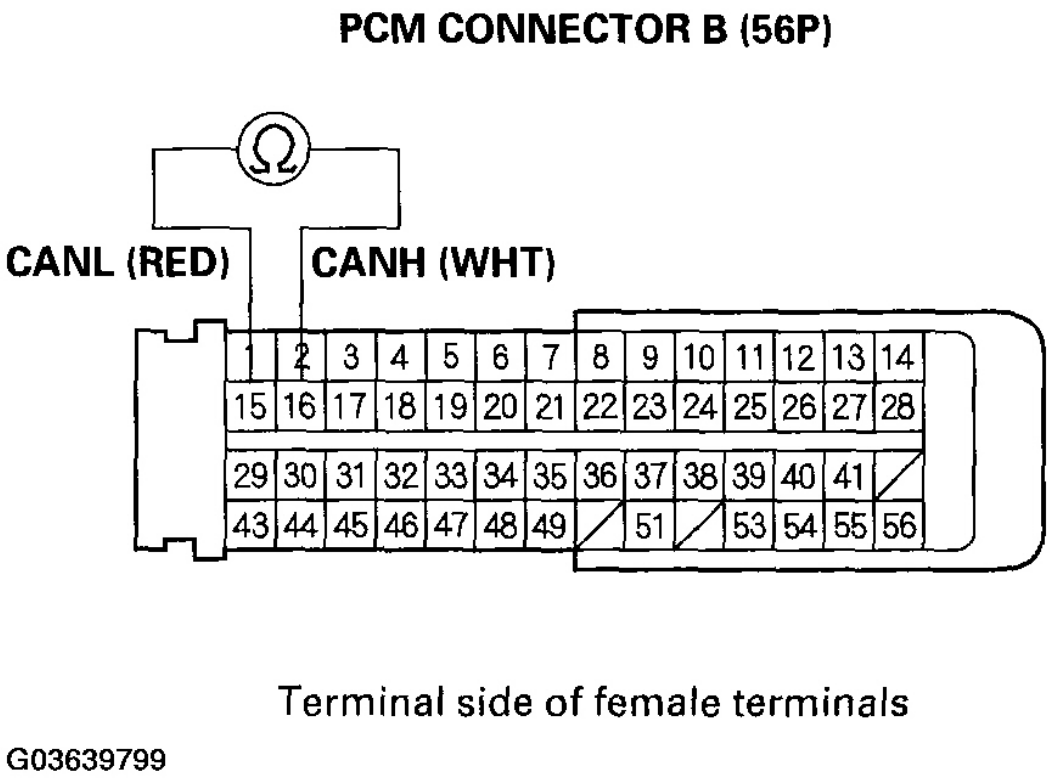


Fig. 141: Measuring Resistance Between PCM Connector Terminals B15 And B16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 2.6 kohm?

YES -

- Repair open in the wire between VTM-4 control unit connector (A11 (A22)*) and the PCM (B16 (B15)*), then go to step 47 .
- Repair open in the wire between the navigation unit 20P connector (No. 8 (No. 18)*) and the PCM (B16 (B15)*), then go to step 47 .
- Repair open in the wire between the VSA modulator-control unit (No. 14 (No. 30)*) and the PCM (B16 (B15)*), then go to step 47 .

*: CANL line

NO - Go to step 52 .

21. Disconnect the VSA modulator-control unit 47P connector.
22. Check for continuity between VSA modulator-control unit 47P connector terminal No. 32 and body ground.

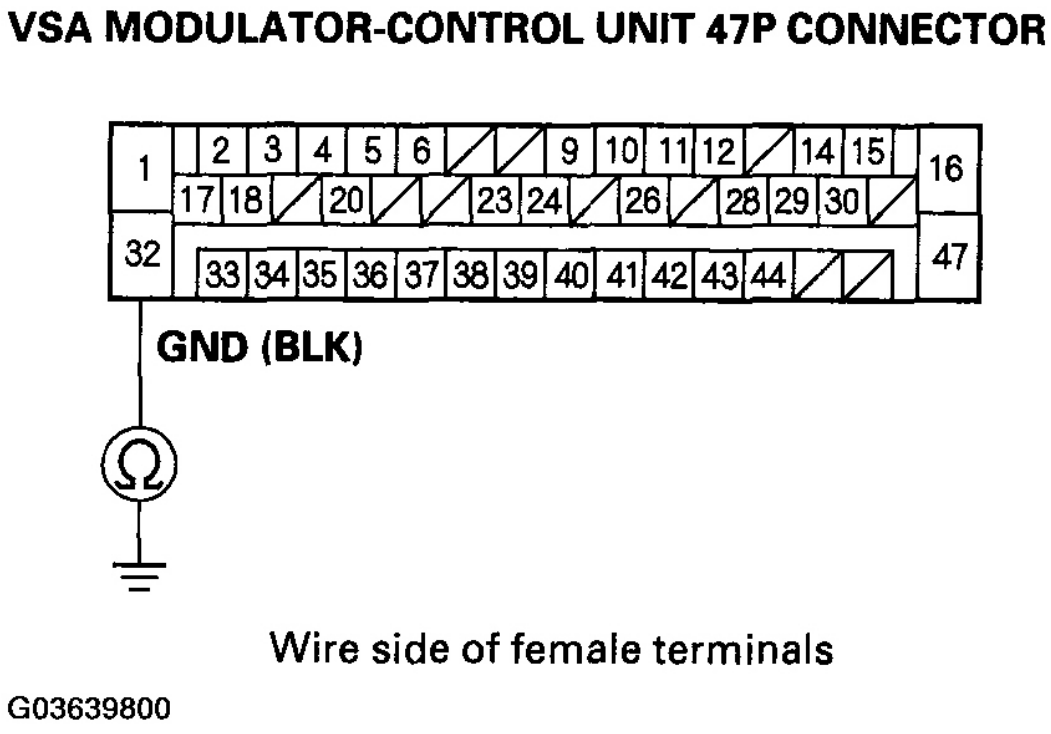


Fig. 142: Checking Continuity Between VSA Modulator - Control Unit 47P Connector Terminal 32 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 23.

NO - Repair open in the wire between the VSA modulator-control unit and G302, then go to step 47 .

23. Disconnect VTM-4 control unit connector A (22P).
24. Check for continuity between VTM-4 control unit connector terminal A10 and body ground.

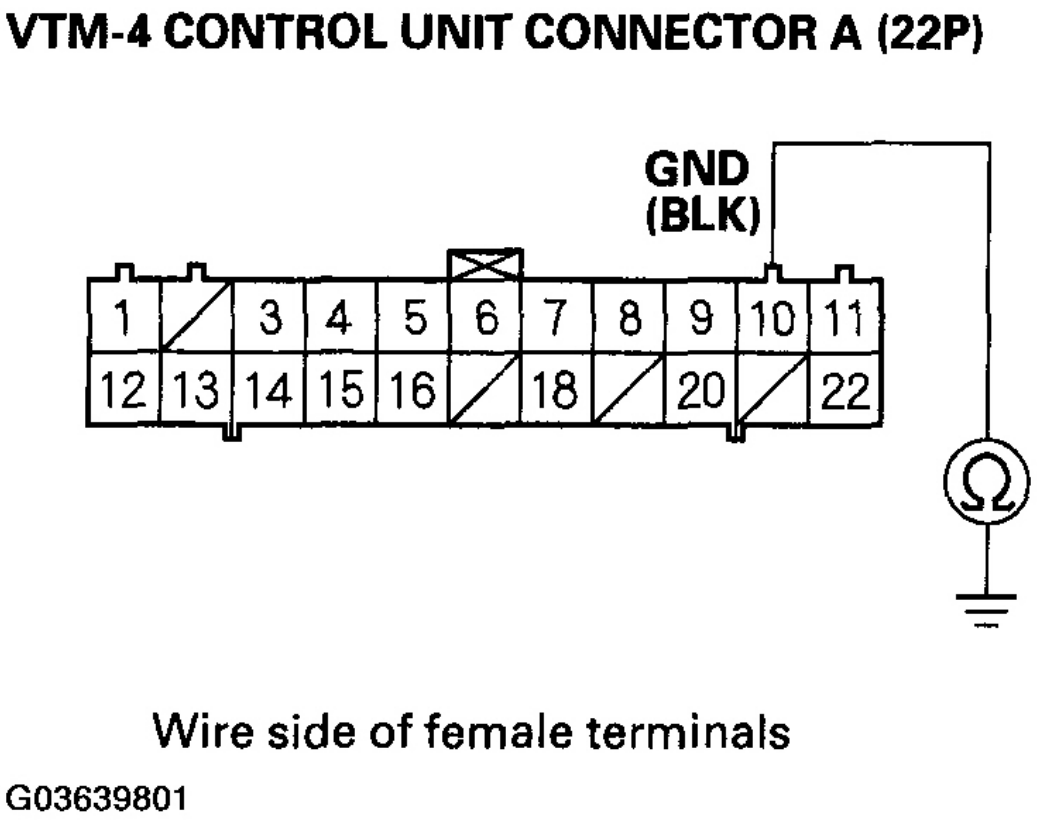


Fig. 143: Checking Continuity Between VTM - 4 Control Unit Connector Terminal A10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 25.

NO - Repair open in the wire between the VTM-4 control unit and G652, then go to step 47 .

25. Disconnect the navigation unit 8P connector.
26. Check for continuity between navigation unit 8P connector terminal No. 4 and body ground.

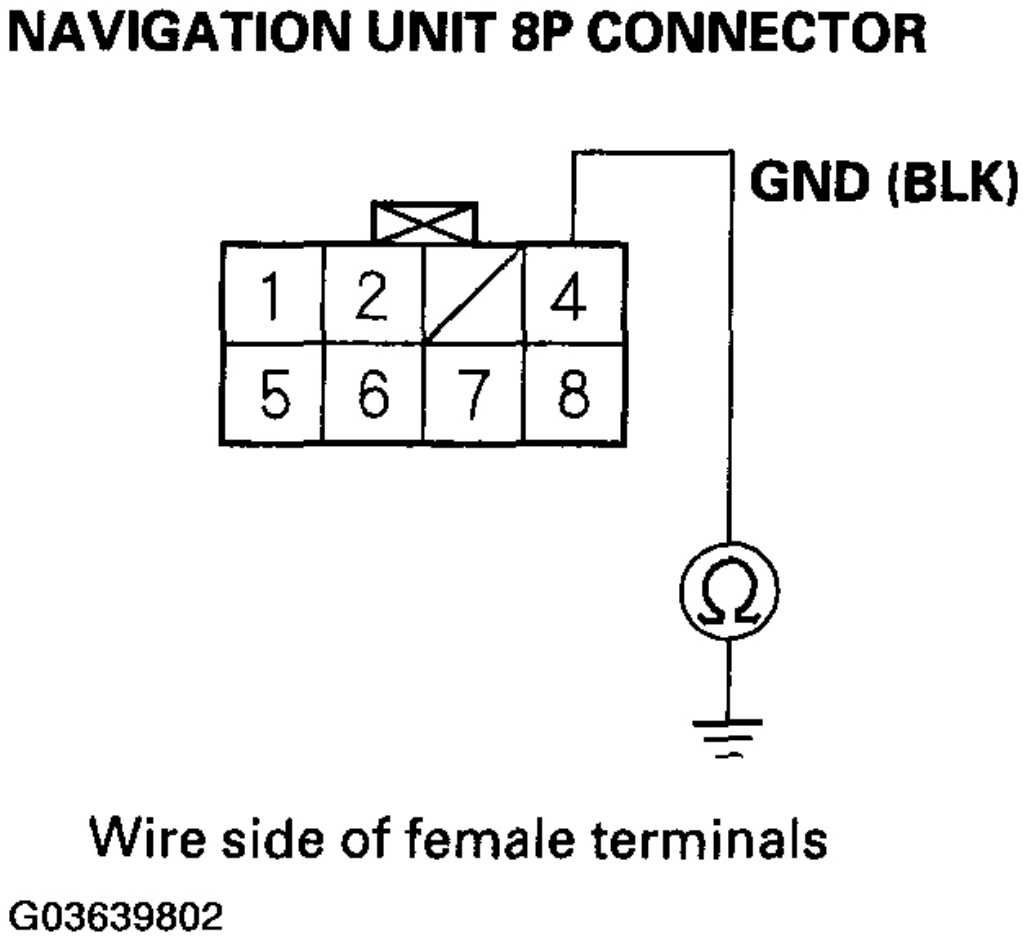


Fig. 144: Checking Continuity Between Navigation Unit 8P Connector Terminal 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 27.
NO - Repair open in the wire between the navigation unit and G502, then go to step 47 .

27. Disconnect the navigation unit 20P connector.
28. Check for continuity between PCM connector terminals B15 and B16 and body ground individually.

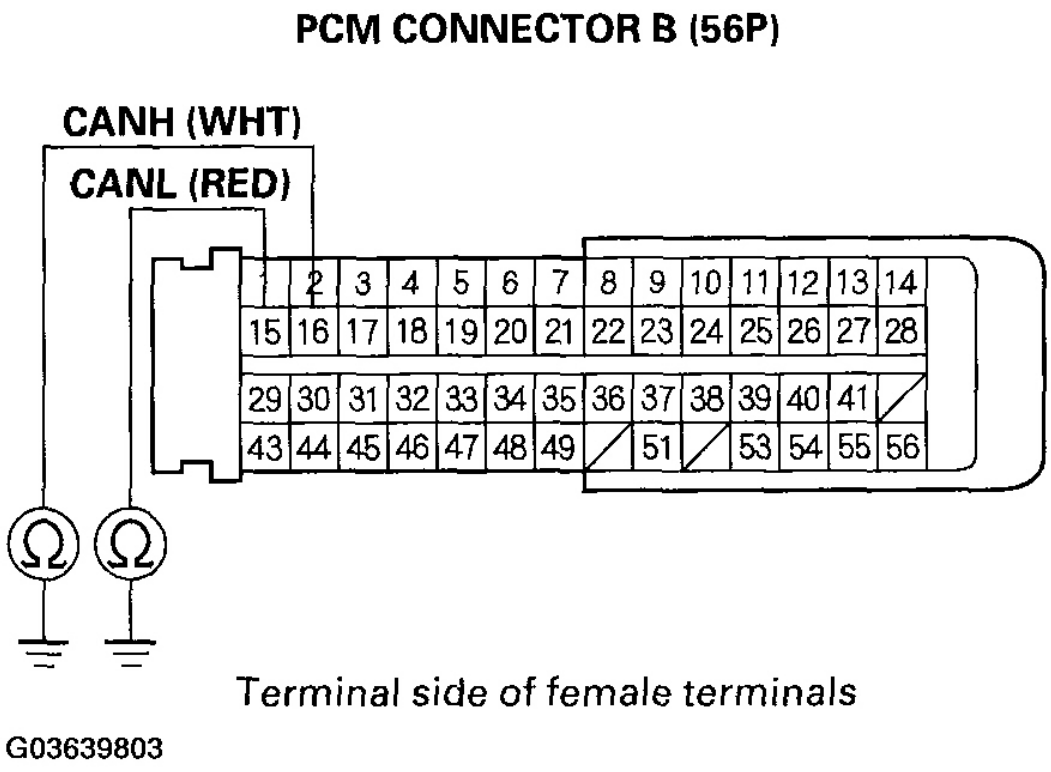


Fig. 145: Checking Continuity Between PCM Connector Terminals B15 And B16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the VSA modulator-control unit, the VTM-4 control unit, the navigation unit, and the PCM (B16 (B15)*), then go to step 47 .

*: CANL line

NO - Go to step 29.

29. Reconnect PCM connector B (56P).
30. Reconnect VTM-4 control unit connector A (22P).
31. Reconnect the navigation unit 20P connector and 8P connector.
32. Turn the ignition switch ON (II).
33. Clear the DTC with the HDS.
34. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0073 indicated?

YES - Go to step 35.

NO - Substitute a known-good VSA modulator-control unit, then go to step 47 , and recheck. If no DTC is indicated, replace the original VSA modulator-control unit, then go to step 47 .

35. Turn the ignition switch OFF.
36. Reconnect the VSA modulator-control unit 47P connector.
37. Disconnect VTM-4 control unit connector A (22P).
38. Turn the ignition switch ON (II).
39. Clear the DTC with the HDS.
40. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0073 indicated?

YES - Go to step 41.

NO - Substitute a known-good VTM-4 control unit, then go to step 47 , and recheck. If no DTC is indicated, replace the original VTM-4 control unit, then go to step 47 .

41. Turn the ignition switch OFF.
42. Reconnect VTM-4 control unit connector A (22P).
43. Disconnect the navigation unit 20P connector.
44. Turn the ignition switch ON (II).
45. Clear the DTC with the HDS.
46. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0073 indicated?

YES - Go to step 52 .

NO - Substitute a known-good navigation unit, then go to step 47, and recheck. If no DTC is indicated, replace the original navigation unit, then go to step 47.

47. Reconnect all connectors.
48. Turn the ignition switch ON (II).
49. Reset the PCM with the HDS.
50. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
51. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC U0073 is indicated, check for poor connections or loose terminals at the VTM-4 control unit, the navigation unit, and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

52. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
53. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
54. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC U0073 is indicated, check for poor connections or loose terminals at the VTM-4 control unit, the navigation unit, and the PCM, then go to step 1 . 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 **PCM REPLACEMENT**).

DTC U0114: F-CAN MALFUNCTION (VTM-4 CONTROL UNIT-PCM)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If the DTC U0073 is stored at the same time as DTC U0114, troubleshoot DTC U0073 first, then recheck for DTC U0114.**

1. Turn the ignition switch 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, system is OK at this time. Check for poor connections or loose terminals at the VTM-4 control unit and the PCM.

4. Check for the DTCs of the VTM-4 system (see **GENERAL TROUBLESHOOTING INFORMATION**).

Is DTC 41 stored?

YES - Go to step 5.

NO - Check the VTM-4 system, then go to step 11 .

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect PCM connector B (56P).
8. Disconnect VTM-4 control unit connector A (22P).
9. Connect VTM-4 control unit connector terminals A11 and A22 to body ground with a jumper wires.

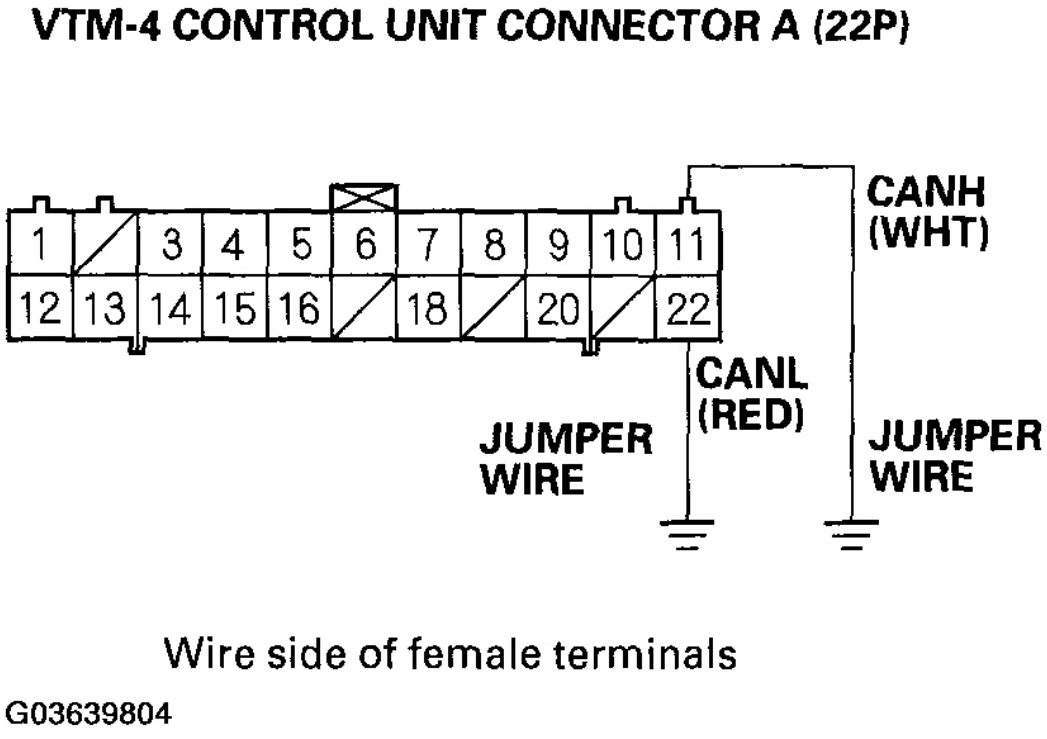


Fig. 146: Connecting VTM - 4 Control Unit Connector Terminals A11 And A22 To Body Ground With Jumper Wires
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminals B15, B16 and body ground, one at a time.

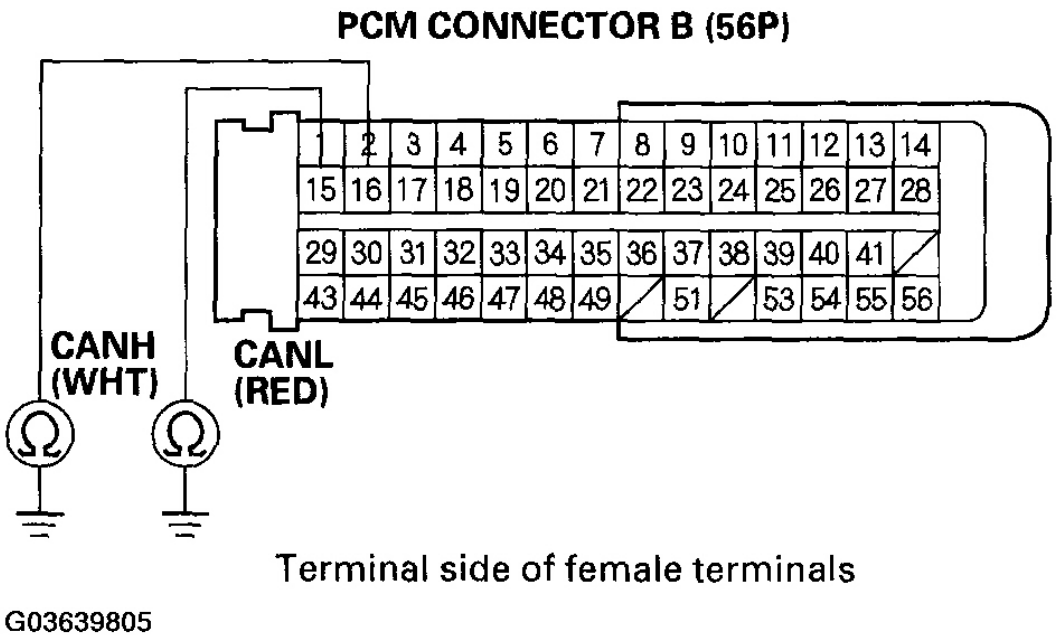


Fig. 147: Checking Continuity Between PCM Connector Terminals B15, B16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - VTM-4 control unit internal circuit failure; replace the VTM-4 control unit (see **VTM-4 CONTROL UNIT REPLACEMENT**), then go to step 11 .

NO - Repair open in the wire between the PCM and the VTM-4 control unit, then go to step 11 .

11. Turn the ignition switch ON (II).
12. Clear the DTC with the HDS.
13. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
14. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC U0114 is indicated, check for poor connections or loose terminals at the VTM-4 control unit and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

DTC U0122: F-CAN MALFUNCTION (VSA MODULATOR-CONTROL UNIT-PCM)

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC U0073 is stored at the same time as DTC U0122, troubleshoot DTC U0073 first, then recheck for DTC U0122.**

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

   Is DTC U0122 indicated?

   YES - Go to step 4.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the gauge assembly, the VSA modulator-control unit and the PCM.
4. Check for a DTC in the DTCs MENU with the HDS.

   Is VSA DTC 86 indicated?

   YES - Go to step 5.

   NO - Go to step 9 .
5. Turn the ignition switch OFF.
6. Disconnect the VSA modulator-control unit 47P connector.
7. Check for continuity between VSA modulator-control unit 47P connector terminals No. 3 and No. 18.

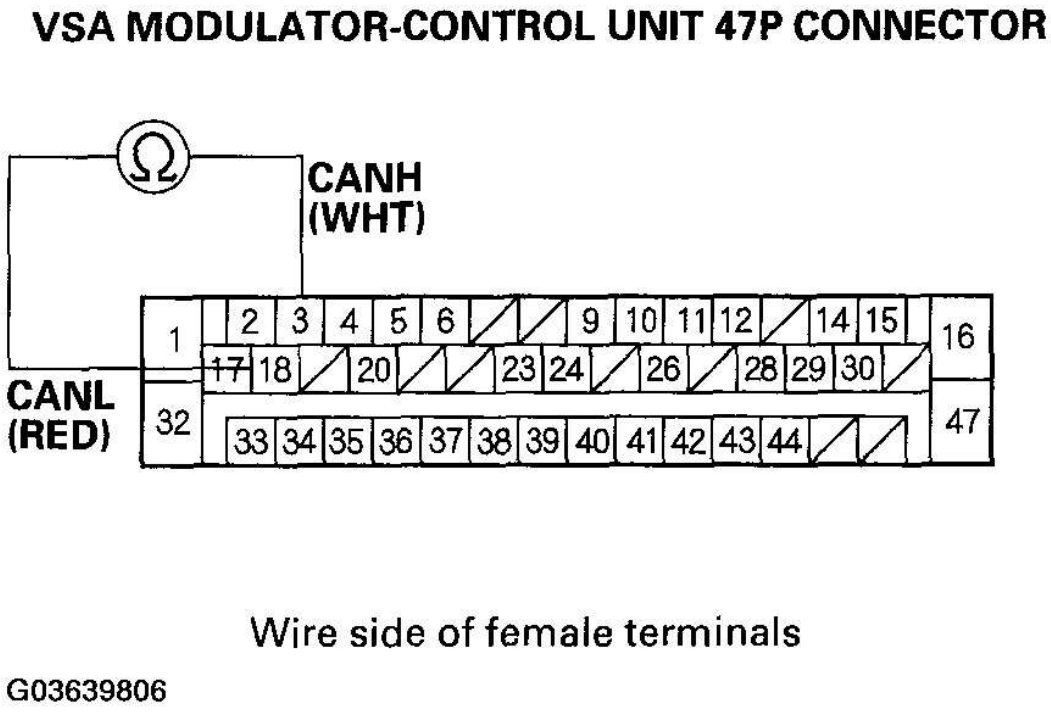


Fig. 148: Checking Continuity Between VSA Modulator-Control Unit 47P Connector Terminals 3 And 18
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 8.

NO - Repair open in the wire between the VSA modulator-control unit (No. 3 (No. 18)*) and the PCM (B16 (B15)*), then go to step 14 .

*: CANL line

8. Check for poor connection at left engine compartment wire harness/dashboard wire harness A 14P connector.

Is it OK?

YES - Substitute a known-good VSA modulator-control unit, then go to step 14 and recheck. If no DTC is indicated, replace the original VSA modulator-control unit, then go to step 14 .

NO - Reconnect the left engine compartment wire harness/dashboard wire harness A 14P connector, then go step 14 .

9. Turn the ignition switch OFF.
10. Disconnect the VSA modulator-control unit 47P connector.
11. Turn the ignition switch ON (II).
12. Measure voltage between VSA modulator-control unit 47P connector terminal No. 38 and body ground.

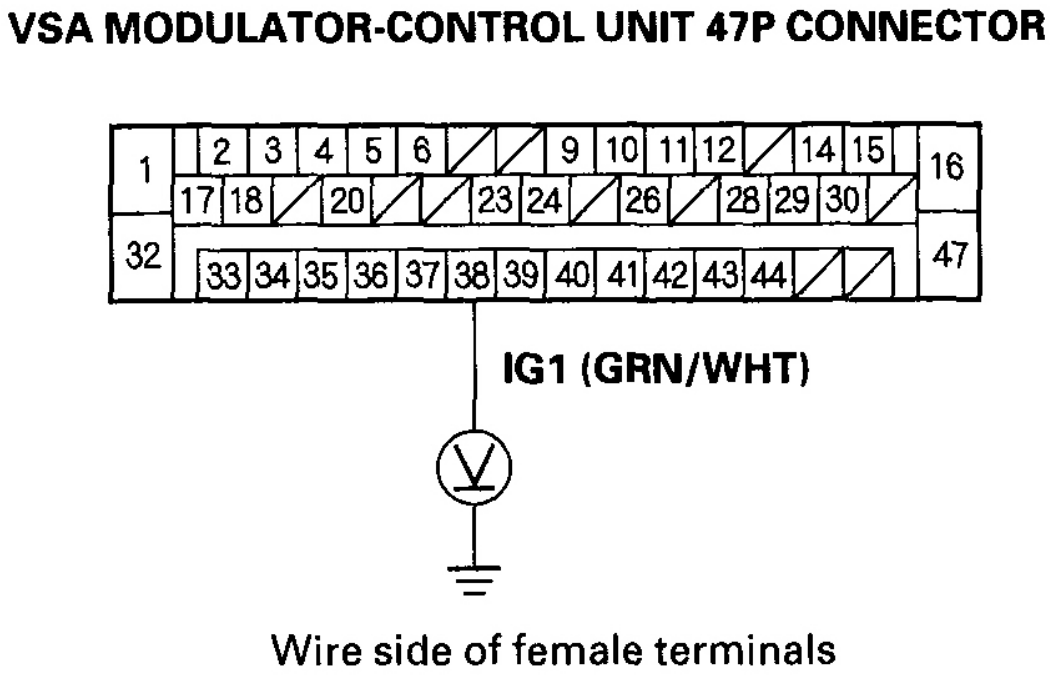


Fig. 149: Measuring Voltage Between VSA Modulator-Control Unit 47P Connector Terminal 38 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 13.

NO - Check the No. 9 IG METER (10 A) fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between the No. 10 IG METER (10 A) fuse and the VSA modulator-control unit, then go to step 14 .

13. Check for continuity between VSA modulator-control unit 47P connector terminal No. 32 and body ground.

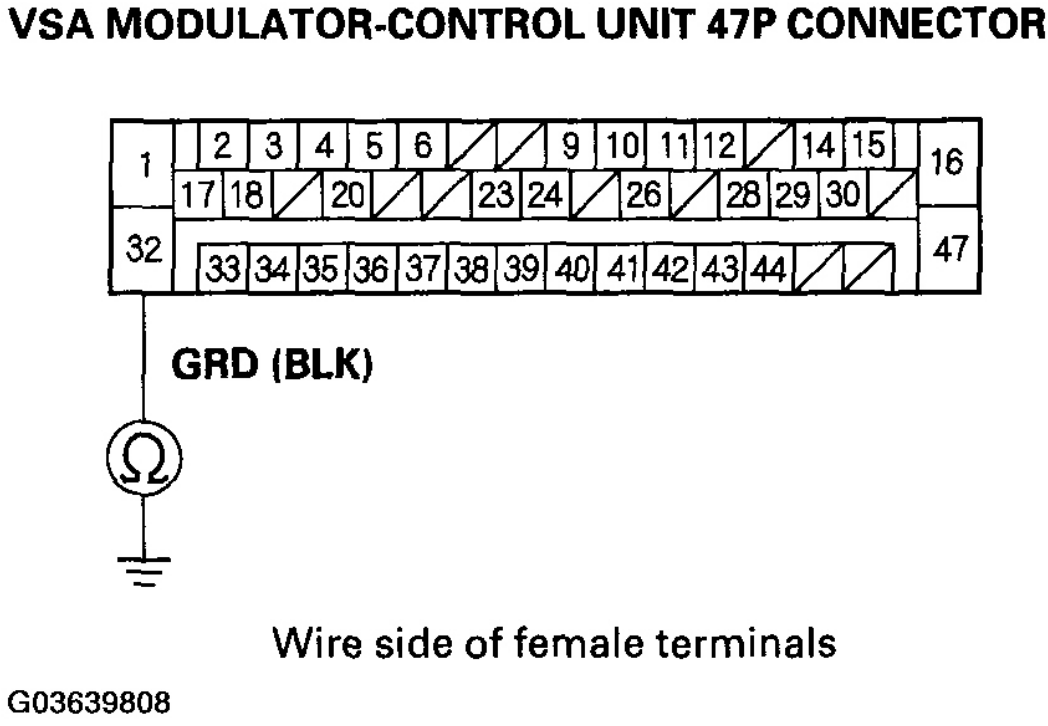


Fig. 150: Checking Continuity Between VSA Modulator-Control Unit 47P Connector Terminal 32 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Substitute a known-good VSA modulator-control unit, then go to step 14 and recheck. If no DTC is does not indicated, replace the original VSA modulator-control unit, then go to step 14.

NO - Repair open in the wire between the VSA modulator-control unit and G302, then go to step 14.

14. Turn the ignition switch ON (II).
15. Clear the DTC with the HDS.
16. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
17. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC U0122 is indicated, check for poor connections or loose terminals at the gauge assembly, the VSA modulator-control unit and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

MIL CIRCUIT TROUBLESHOOTING

1. Connect the HDS (see **GENERAL TROUBLESHOOTING INFORMATION**).
2. Turn the ignition switch ON (II), and read the HDS.

   Does the HDS communicate with the PCM?,

   YES - Go to step 3.
   NO - Go to DLC Circuit Troubleshooting (see **DLC CIRCUIT TROUBLESHOOTING**).
3. 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 - Go to step 4.
4. Turn the ignition switch OFF.
5. Turn the ignition switch ON (II).

   Does the MIL come on and stay on for more than 20 seconds after turning the ignition switch ON (II)?

   YES - If the MIL always comes on and stays on, go to step 22 . But if the MIL sometimes works normally, first check for these problems.
   - An intermittent short in the wire between the PCM (B54) and the data link connector (DLC) connector.
   - An intermittent short in the wire between the PCM (B5) and the gauge assembly.

   NO - If the MIL is always off, go to step 6. But if the MIL sometimes works normally, first check for these problems.
   - A loose No. 9 BACK UP LIGHT, INSTRUMENT LIGHT (10 A) fuse in the driver's under-dash fuse/ relay box.
   - A loose No. 46 ACG S (15 A) fuse in the under-hood fuse/relay box.
   - A loose No. 1 FUEL PUMP (15 A) fuse in the driver's under-dash fuse/relay box.
   - A poor connection at PCM terminal B5.
   - An intermittent open in the GRN/ORN wire between the PCM (B5) and the gauge assembly.
   - An intermittent short in the wire between the PCM (A7) and the manifold absolute pressure (MAP) sensor, the output shaft (countershaft) speed sensor.
   - An intermittent short in the wire between the PCM (A27) and the exhaust gas recirculation (EGR) valve position sensor, the input shaft (mainshaft) speed sensor, or the intake manifold tuning (IMT) (intake manifold runner control (IMRC)) actuator.
   - An intermittent short in the wire between the PCM (B43) and APP sensor A.

- An intermittent short in the wire between the PCM (B29) and APP sensor B.
- An intermittent short in the wire between the PCM (B46) and the fuel tank pressure (FTP) sensor.

6. Turn the ignition switch OFF and then ON (II) again. Is the low oil pressure light on?

   YES - Go to step 7.

   NO - Check for these problems:

   - A blown No. 9 BACK UP LIGHT, INSTRUMENT LIGHT (10 A) fuse in the driver's under-dash fuse/relay box.
   - A short or open in the wire between No. 9 BACK UP LIGHT, INSTRUMENT LIGHT (10 A) fuse and the gauge assembly.

7. Try to start the engine.

   Does the engine start?

   YES - Go to step 8.

   NO - Go to step 12 .

8. Turn the ignition switch OFF.
9. Disconnect PCM connector B (56P).
10. Connect PCM connector terminal B5 to body ground with a jumper wire.

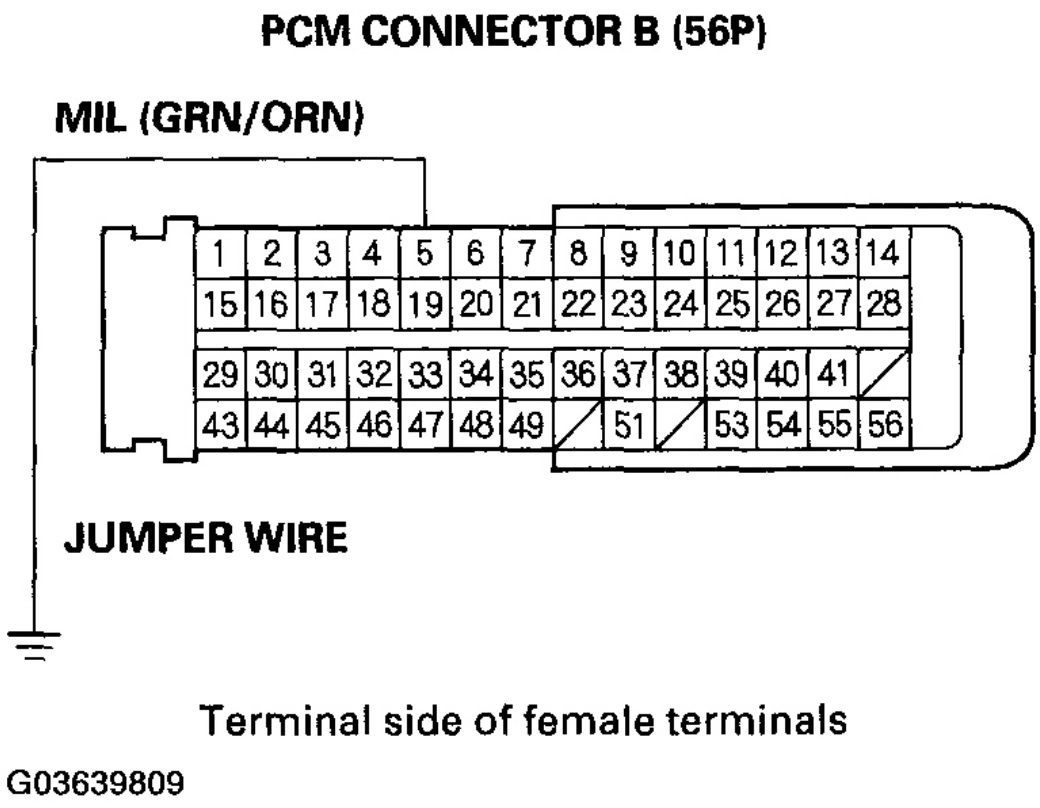


Fig. 151: Connecting PCM Connector Terminal B5 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Turn the ignition switch ON (II).

    Is the MIL on?

    YES - Substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**) and recheck. If the symptom/indication goes away, replace the original PCM (see **PCM REPLACEMENT**).

    NO - Check for an open in the wire between the PCM (B5) and the gauge assembly. Also check for a blown MIL bulb.

12. Turn the ignition switch OFF.
13. Inspect the No. 46 ACGS (15 A) fuse in the under-hood fuse/relay box.

    Is the fuse OK?

    YES - Go to step 14.

NO - Check for these problems:

- A short in the wire between the No. 46 ACGS (15 A) fuse and the PGM-FI main relay.
- A short in the wire between the PGM-FI main relay and the PCM, injectors, CKP sensors or CMP sensor.

14. Inspect the No. 1 FUEL PUMP (15 A) fuse in the under-dash fuse/relay box.

Is the fuse OK?

YES - Go to step 15.

NO - Check for these problems:

- A short in the wire between the No. 1 FUEL PUMP (15 A) fuse and the PGM-FI main relay.
- A short in the wire between the PGM-FI main relay and the fuel pump.
- A faulty PGM-FI main relay or a faulty fuel pump.

15. Disconnect PCM connectors A (73P) and B (56P).
16. Check for continuity between body ground and PCM connector terminals A7, A27, B29, B43, and B46 individually.

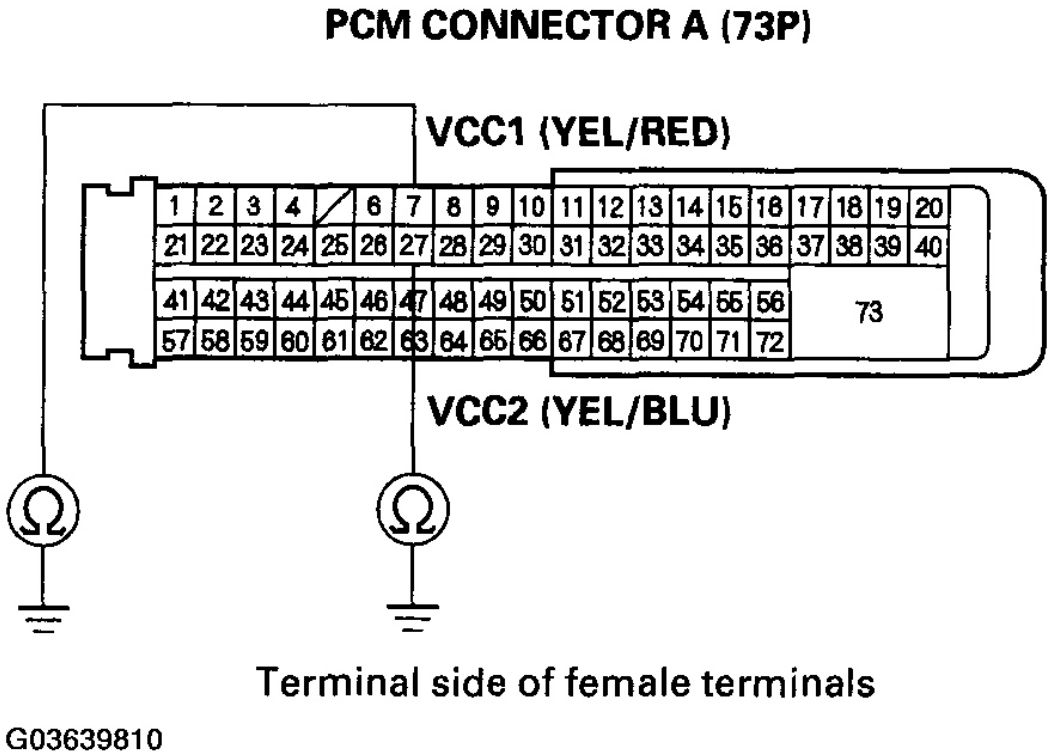


Fig. 152: Checking Continuity Between Body Ground And PCM Connector Terminals A7 And A27

Courtesy of AMERICAN HONDA MOTOR CO., INC.

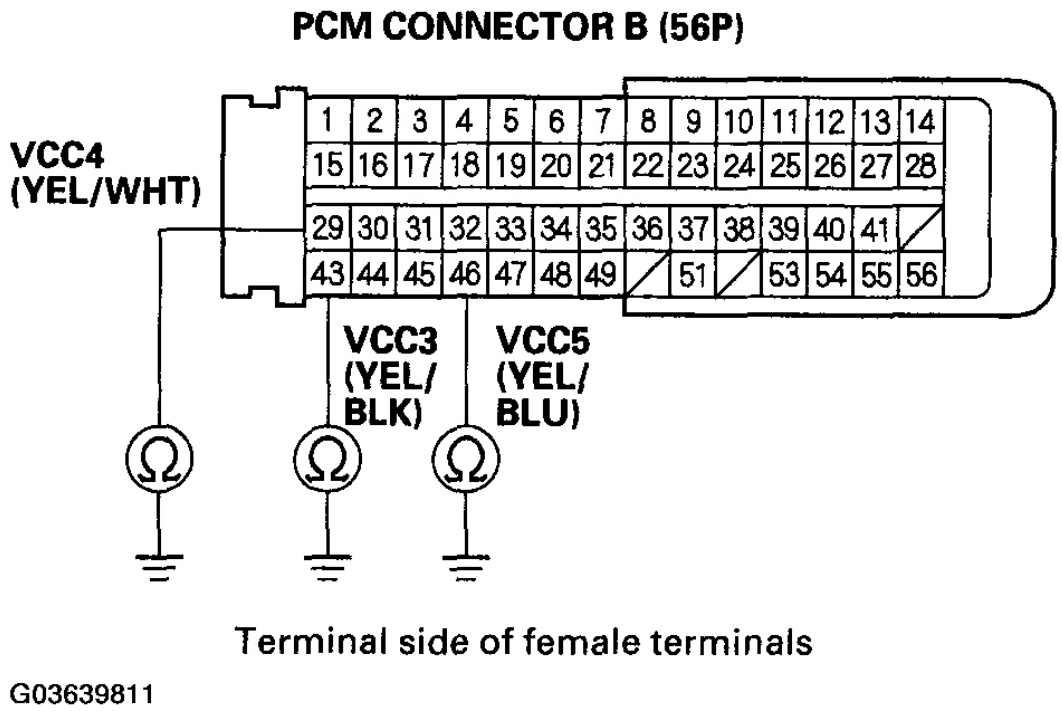


Fig. 153: Checking Continuity Between Body Ground And PCM Connector Terminals B29, B43 And B46
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 17.
NO - Go to step 18 .

17. Disconnect the connector from each of these sensors, one at a time, and check for continuity between body ground and PCM connector terminal A7, A27, B29, B43, and B46 individually.
    - Manifold absolute pressure (MAP) sensor
    - Output shaft (countershaft) speed sensor
    - Exhaust gas recirculation (EGR) valve position sensor
    - Accelerator pedal position (APP) sensor
    - Fuel tank pressure (FTP) sensor
    - Input shaft (mainshaft) speed sensor
    - IMT(IMRC) actuator

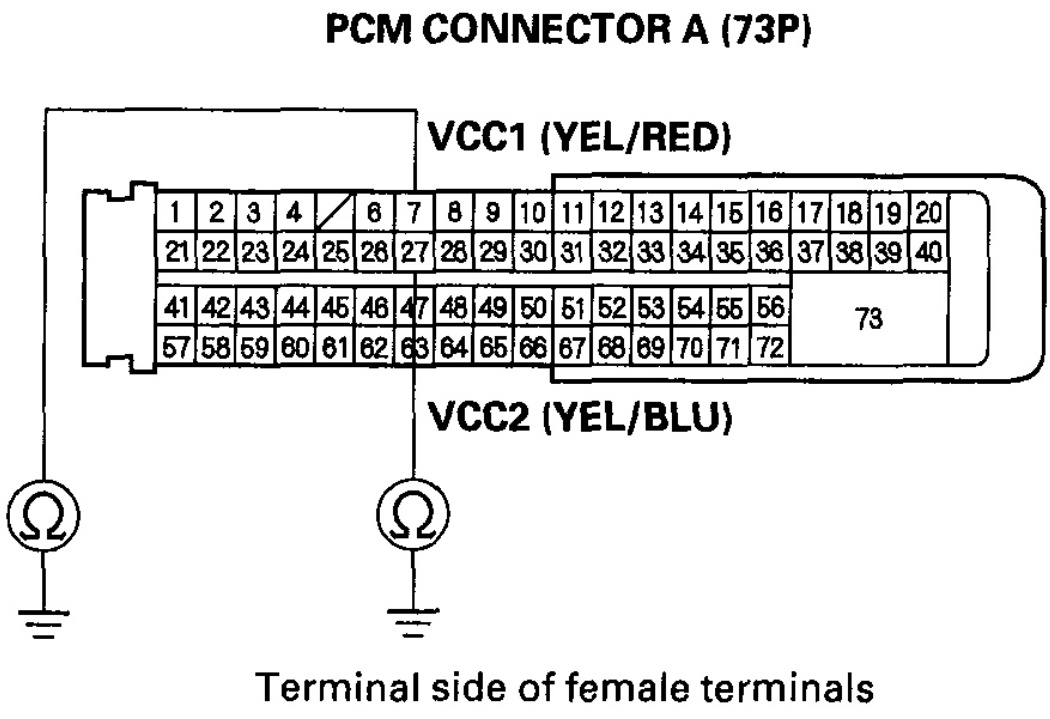


Fig. 154: Checking Continuity Between Body And PCM Connector Terminals A7 And A27
Courtesy of AMERICAN HONDA MOTOR CO., INC.

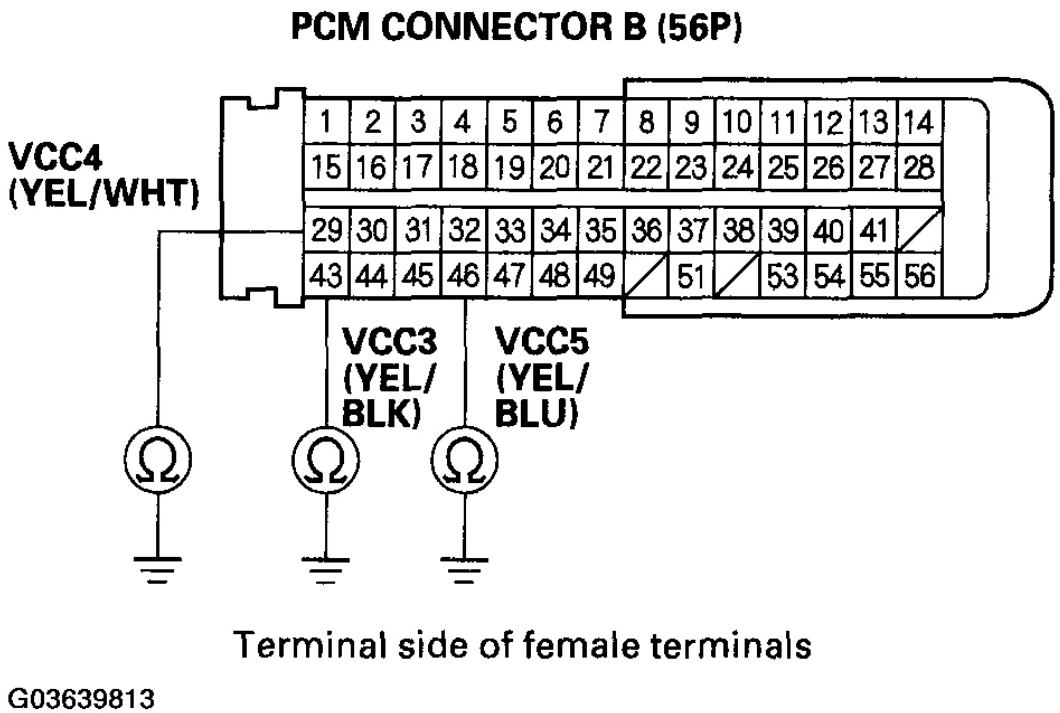


Fig. 155: Checking Continuity Between Body And PCM Connector Terminals B29, B43 And B46
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between PCM and these sensors:

- MAP sensor (A7)
- APP sensor A (B43)
- Output shaft (countershaft) speed sensor (A7)
- Input shaft (mainshaft) speed sensor (A27)
- EGR valve position sensor (A27)
- APP sensor B (B29)
- FTP sensor (B46)
- IMT (IMRC) actuator

NO - Replace the sensor that made continuity to body ground go away when disconnected.

18. Reconnect PCM connector B (56P).
19. Turn the ignition switch ON (II).
20. Measure voltage between body ground and PCM connector terminal A18.

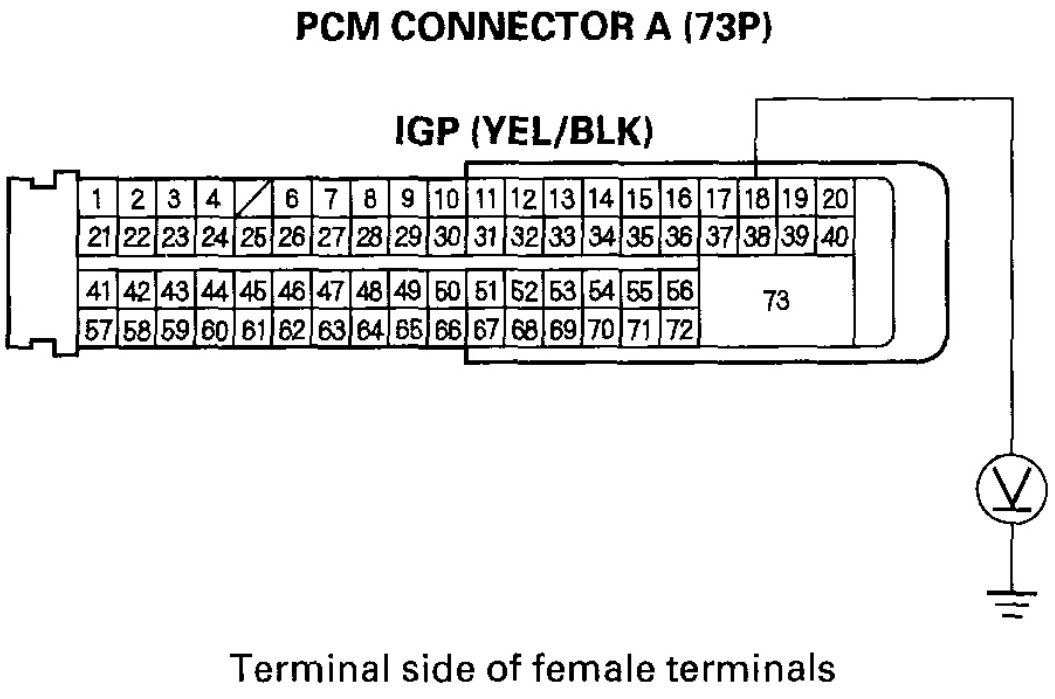


Fig. 156: Measuring Voltage Between Body Ground And PCM Connector Terminal A18
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 21.

NO - Check for these problems:

- An open in the wire(s) between the PGM-FI main relay and PCM connector terminals A18.
- Poor connections at the PGM-FI main relay.
- A faulty PGM-FI main relay (see **FUEL PUMP CIRCUIT TROUBLESHOOTING**). If necessary, repair or replace the part.

21. Check for continuity between PCM connector terminals A39, A40, and A73.

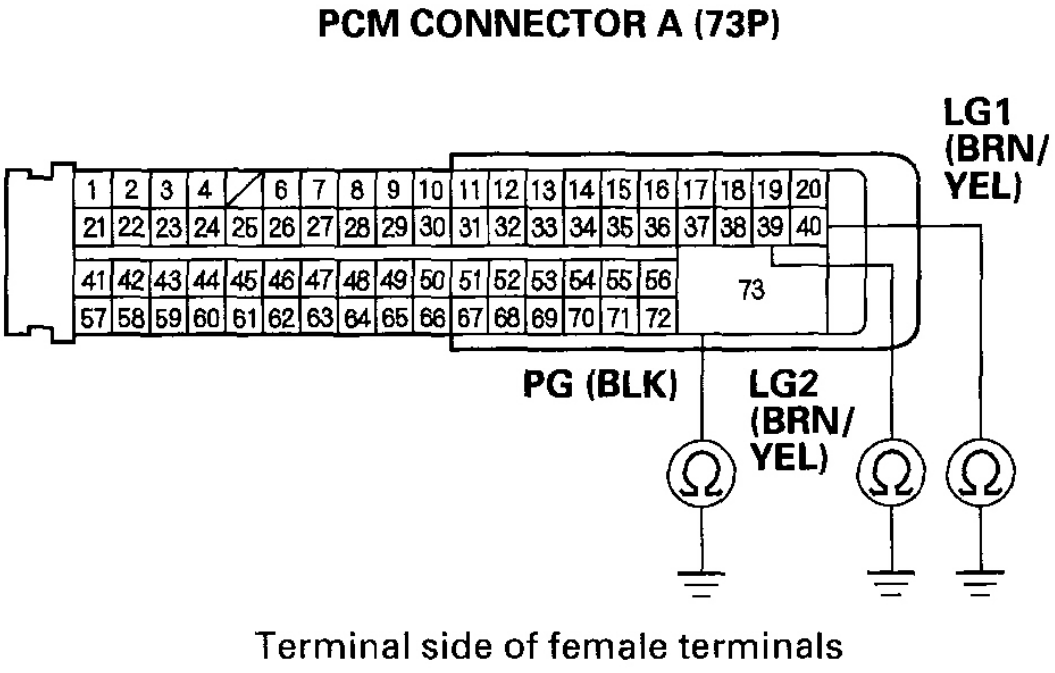


Fig. 157: Checking Continuity Between PCM Connector Terminals A39, A40 And A73
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**) and recheck. If the symptom/indication goes away, replace the original PCM (see **PCM REPLACEMENT**).

NO - Repair the open in the wire(s) between PCM (A39, A40, A73) and body ground (G101).

22. Reconnect PCM connectors.
23. Turn the ignition switch OFF, then turn it back ON (II) and measure voltage between DLC terminal No. 9 and body ground.

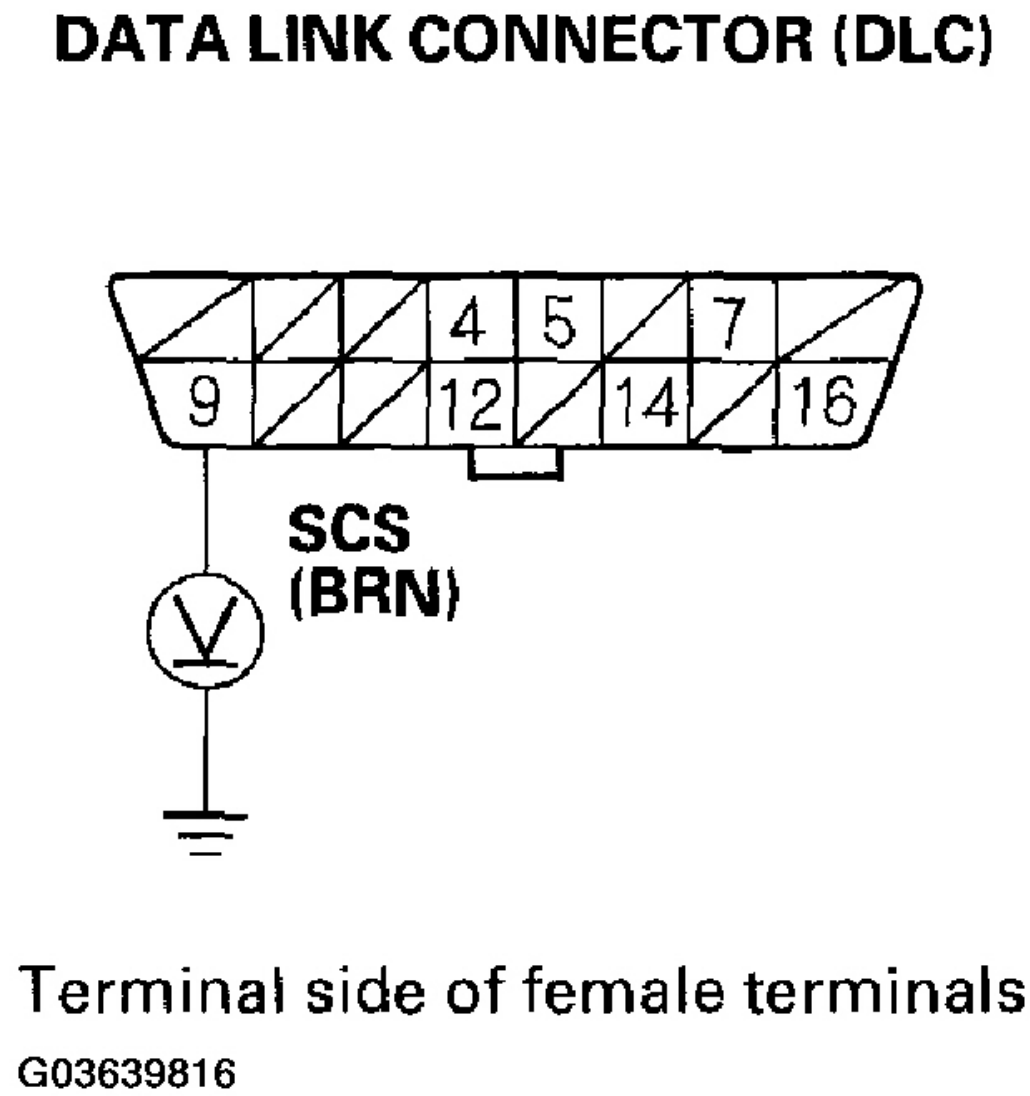


Fig. 158: Measuring Voltage Between DLC Terminal 9 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V (or battery voltage)?

YES - Go to step 27 .
NO - Go to step 24.

24. Turn the ignition switch OFF.
25. Disconnect PCM connector B (56P).

26. Check for continuity between PCM connector terminal B54 and body ground.

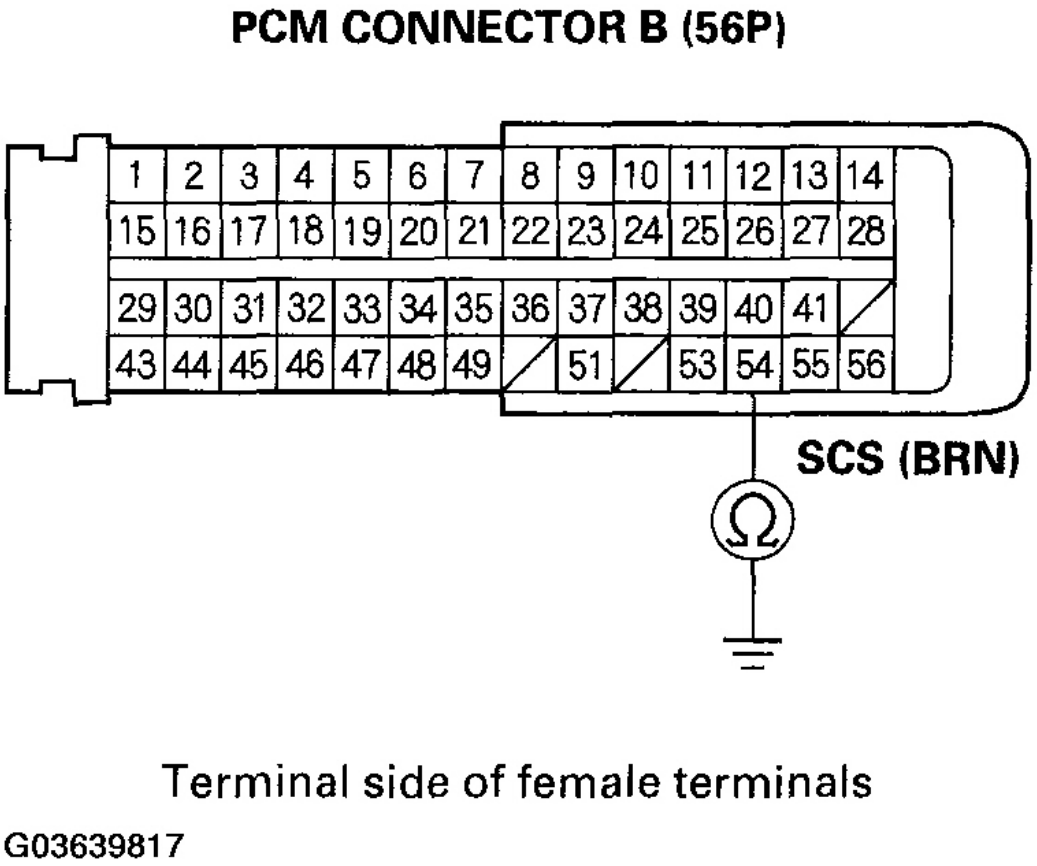


Fig. 159: Checking Continuity Between PCM Connector Terminal B54 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the data link connector and the PCM (B54).

NO - Substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**) and recheck. If the symptom/indication goes away, replace the original PCM (see **PCM REPLACEMENT**).

27. Turn the ignition switch OFF.
28. Disconnect PCM connector A (73P).
29. Turn the ignition switch ON (II).

Does the MIL stay on?

YES - Repair short in the wire between the gauge assembly and the PCM (B5).

NO - Substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**) and recheck. If the symptom/indication goes away, replace the original PCM (see **PCM REPLACEMENT**).

DLC CIRCUIT TROUBLESHOOTING

NOTE:

- **If the PCM does not communicate with the HDS, or I/M test equipment, do this troubleshooting procedure.**
- **Check that MIL circuit is normal, then do this troubleshooting.**

1. Measure voltage between DLC terminal No. 16 and body ground.

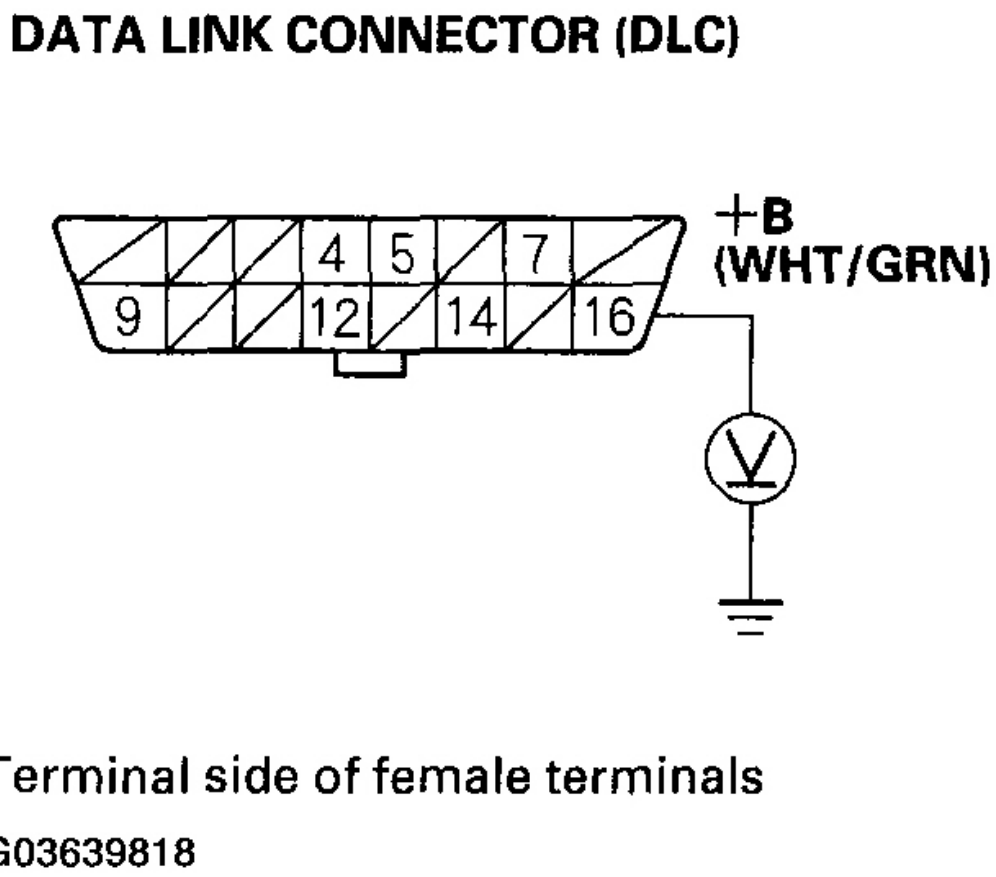


Fig. 160: Measuring Voltage Between DLC Terminal 16 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 2.

NO - Repair open in the wire between DLC terminal No. 16 and the No. 46 ACGS (15 A) fuse in the under-hood fuse/relay box.

2. Measure voltage between DLC terminals No. 4 and No. 16.

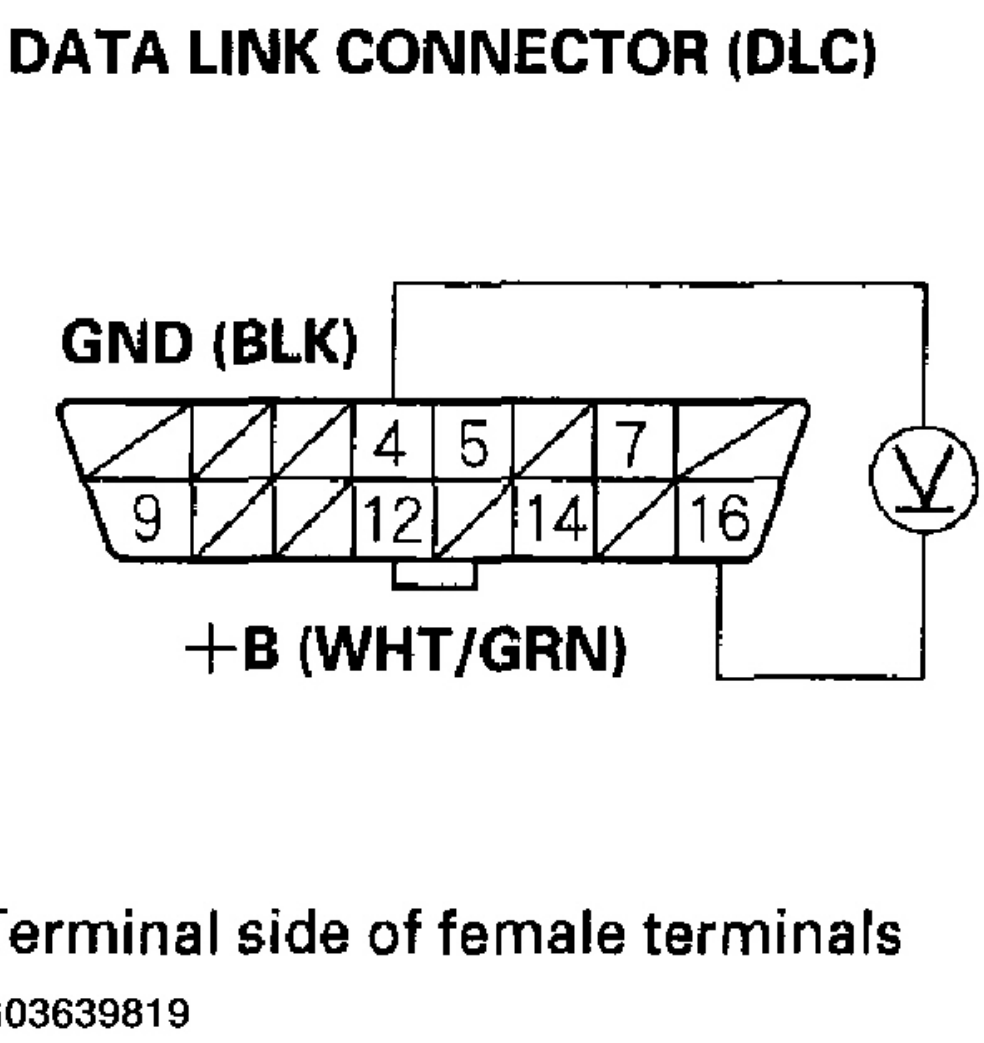


Fig. 161: Measuring Voltage Between DLC Terminals 4 And 16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 3.

NO - Repair open in the wire between DLC terminal No. 4 and body ground (G401).

3. Measure voltage between DLC terminals No. 5 and No. 16.

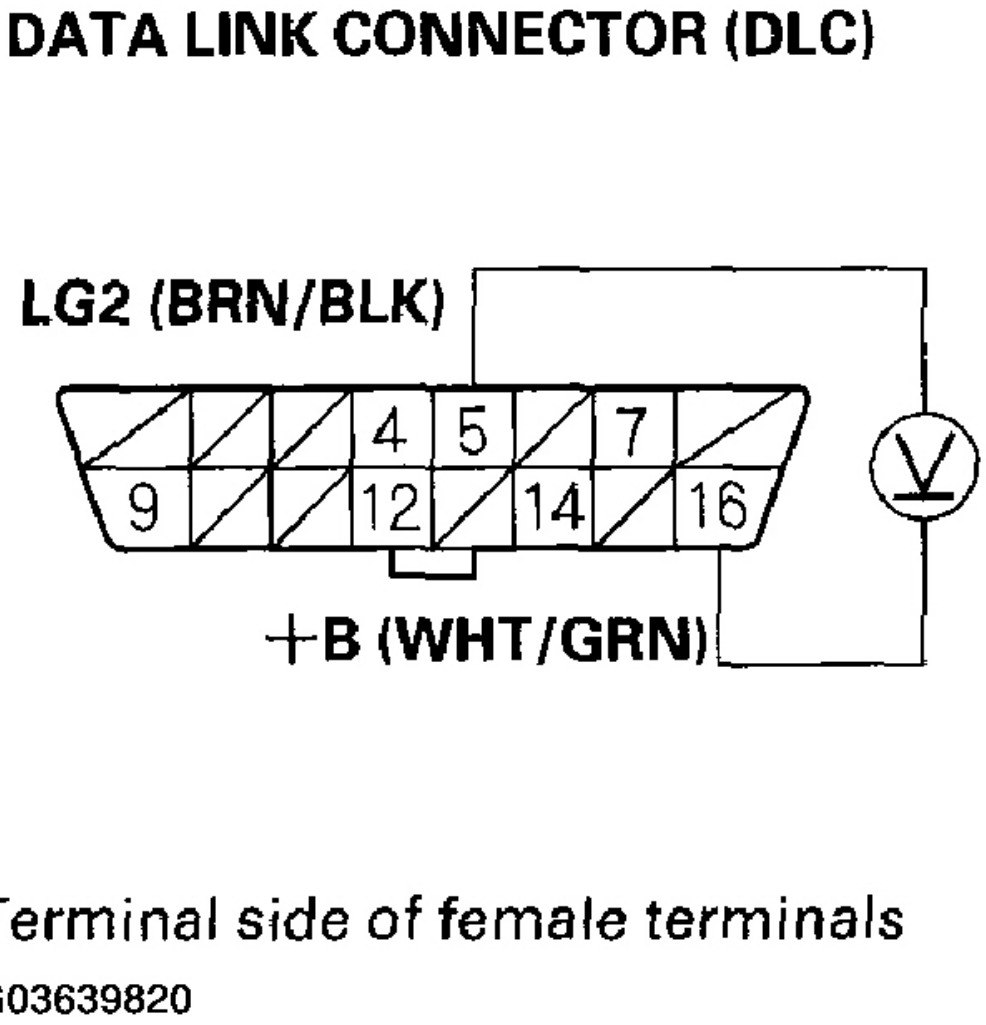


Fig. 162: Measuring Voltage Between DLC Terminals 5 And 16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 4.

NO - Repair open in the wire between DLC terminal No. 5 and body ground (G101).

4. Turn the ignition switch ON (II).
5. Measure voltage between DLC terminals No. 5 and No. 7.

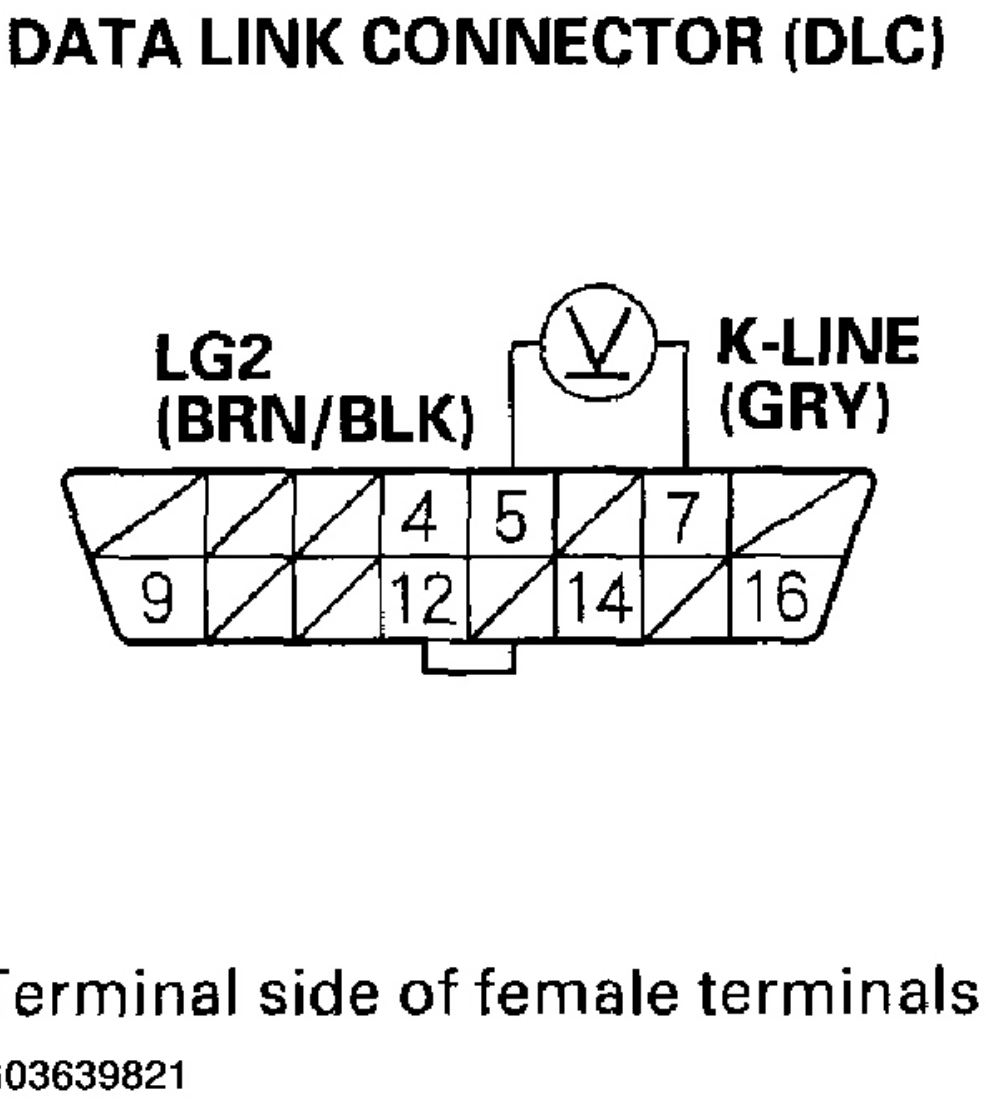


Fig. 163: Measuring Voltage Between DLC Terminals 5 And 7
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 8.5 V or more?

YES - Go to step 12 .

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connector B (56P).
9. Check for continuity between DLC terminal No. 7 and body ground.

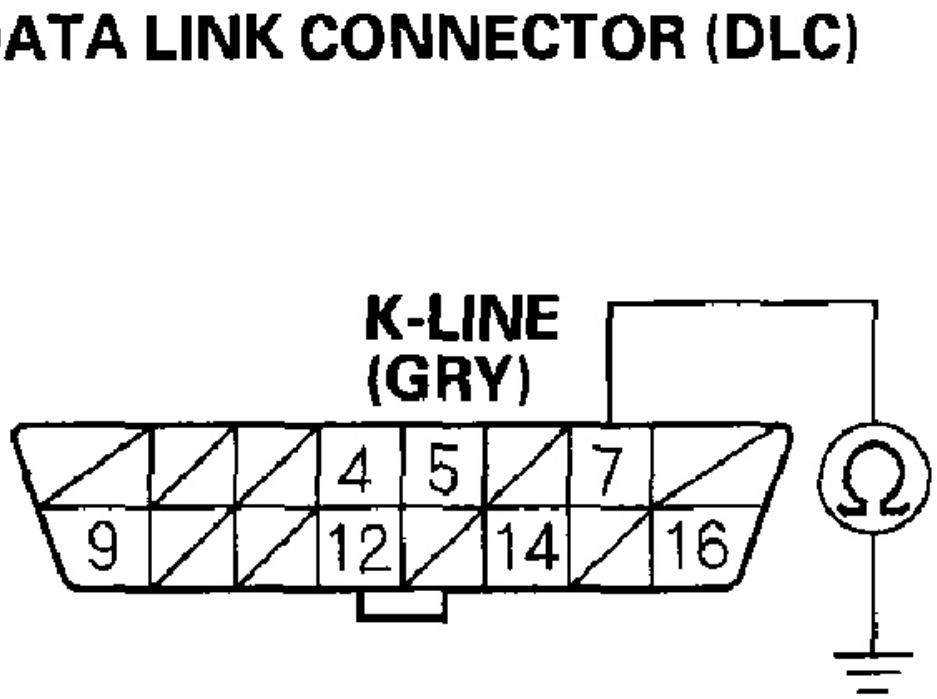


Fig. 164: Checking Continuity Between DLC Terminal 7 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short to ground in the wire between DLC terminal No. 7 and the PCM (B17). After repairing the wire, check for a DTC with the HDS, and go to the indicated DTC's troubleshooting.

NO - Go to step 10.

10. Connect DLC terminal No. 7 to body ground with a jumper wire.

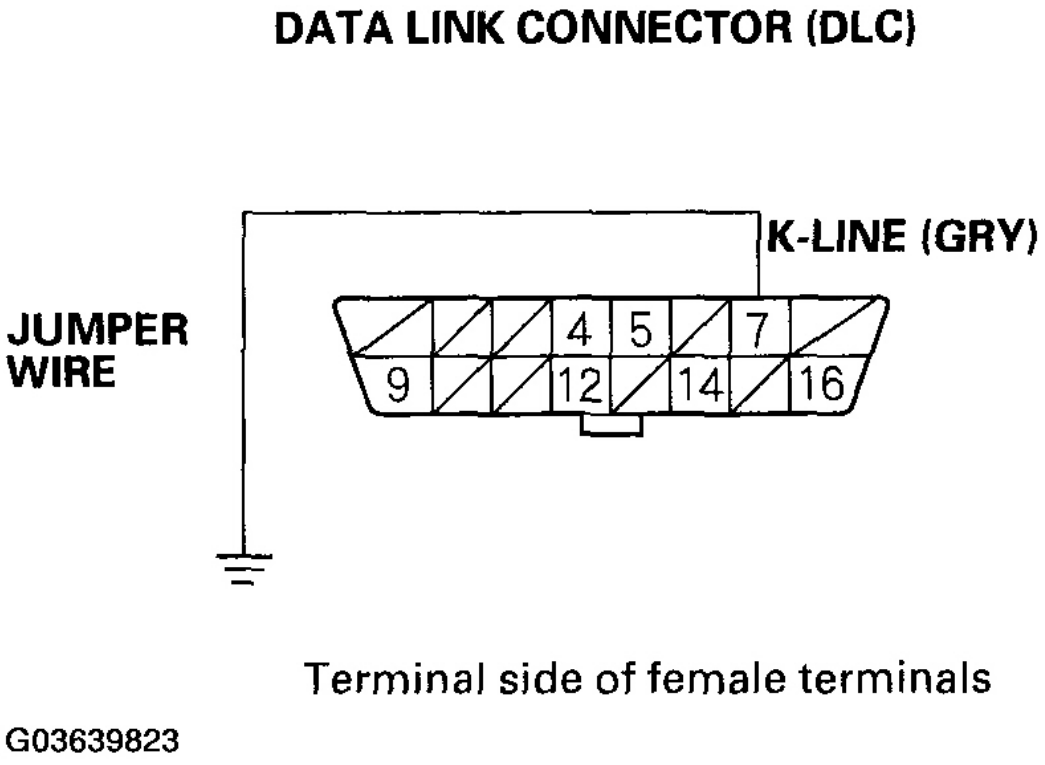


Fig. 165: Connecting DLC Terminal 7 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Check for continuity between PCM connector terminal B17 and body ground.

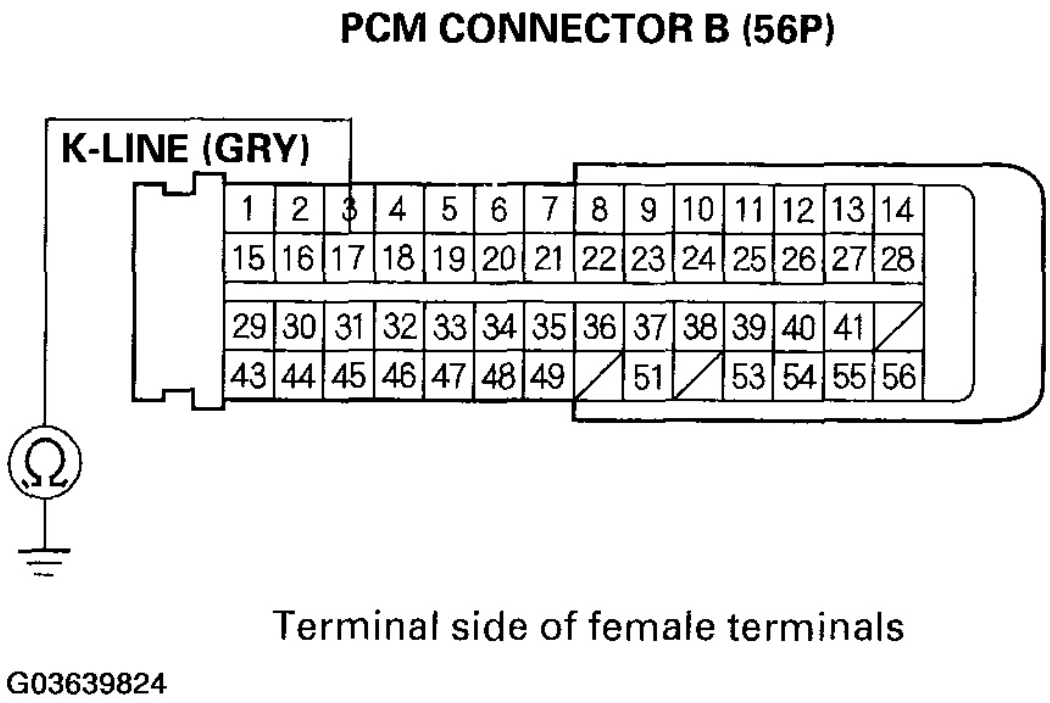


Fig. 166: Checking Continuity Between PCM Connector Terminal B17 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then recheck. If the symptom/ indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**).

NO - Repair open in the wire between DLC terminal No. 7 and the PCM (B17). After repairing the wire, check for a DTC with the HDS, and go to the indicated DTC's troubleshooting.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector B (56P).
15. Turn the ignition switch ON (II).
16. Measure voltage between DLC terminals No. 4 and No. 7.

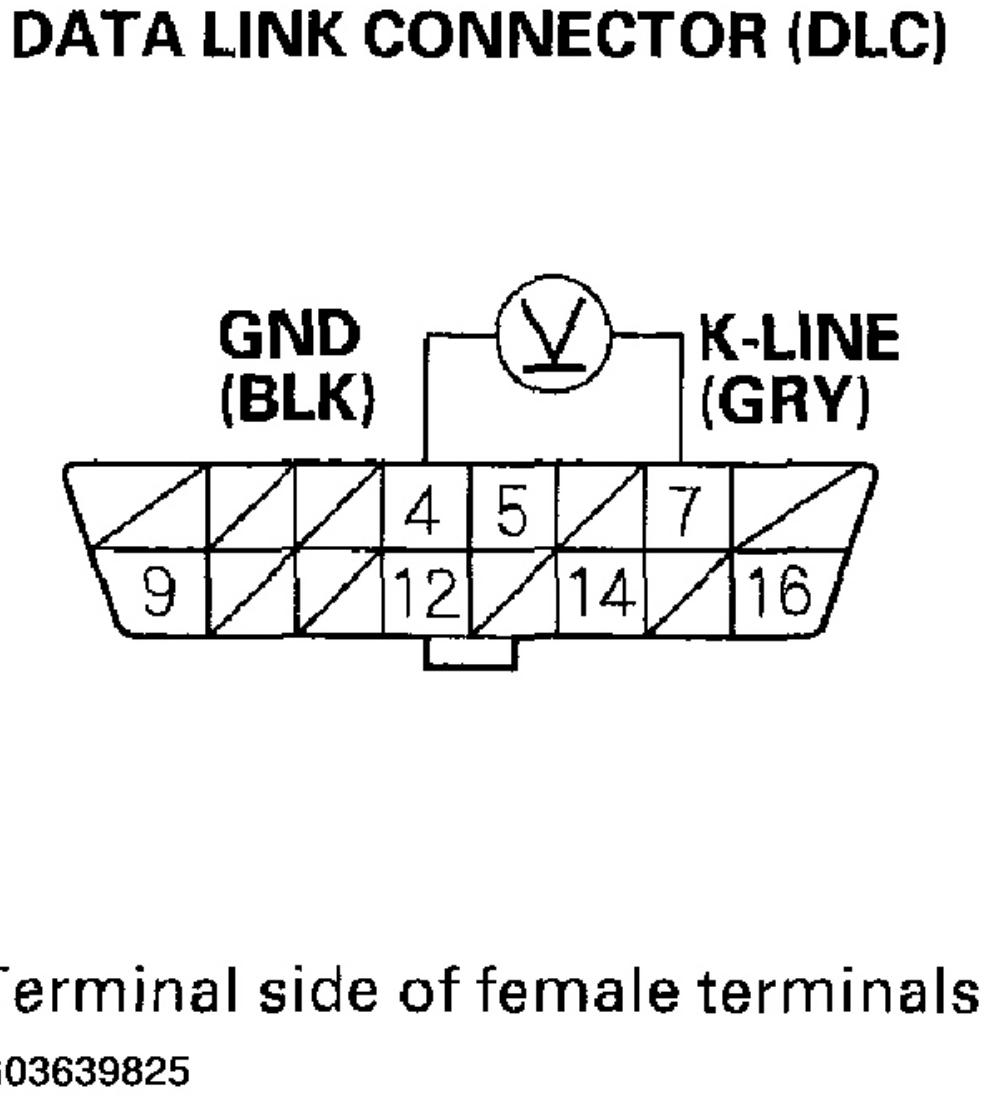


Fig. 167: Measuring Voltage Between DLC Terminals 4 And 7
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0V?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see page 11-6), then recheck. If the symptom/ indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**).

NO - Repair short to power in the wire between DLC terminal No. 7 and the PCM (B17). After repairing the wire, check for a DTC with the HDS, and go to the indicated DTC's troubleshooting.

INJECTOR REPLACEMENT

1. Relieve fuel pressure (see **FUEL PRESSURE RELIEVING**).
2. Remove the intake manifold (see **REMOVAL**).
3. Disconnect the connectors from the injectors (A).

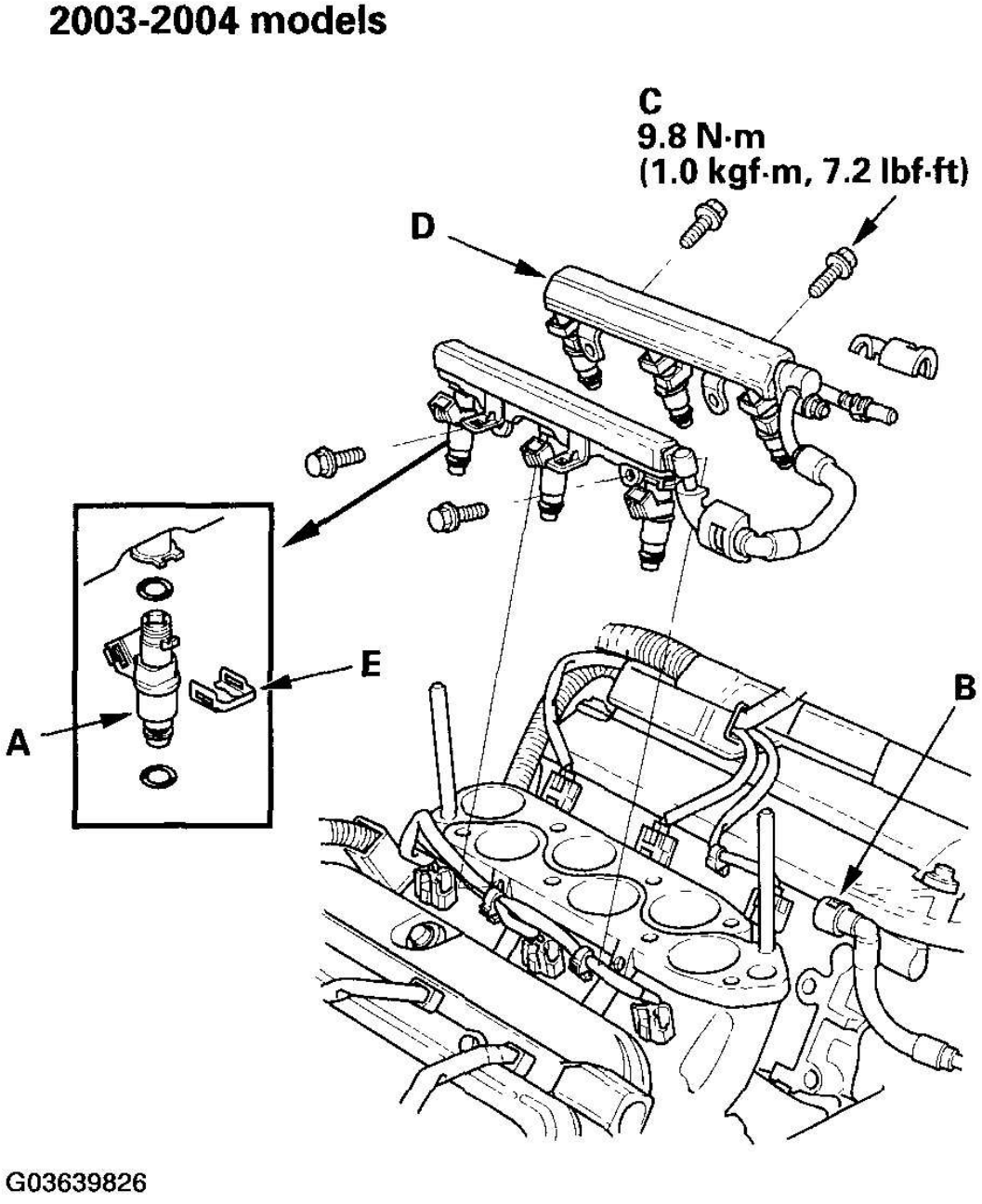


Fig. 168: Disconnecting Connectors From Injectors (2003-04 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

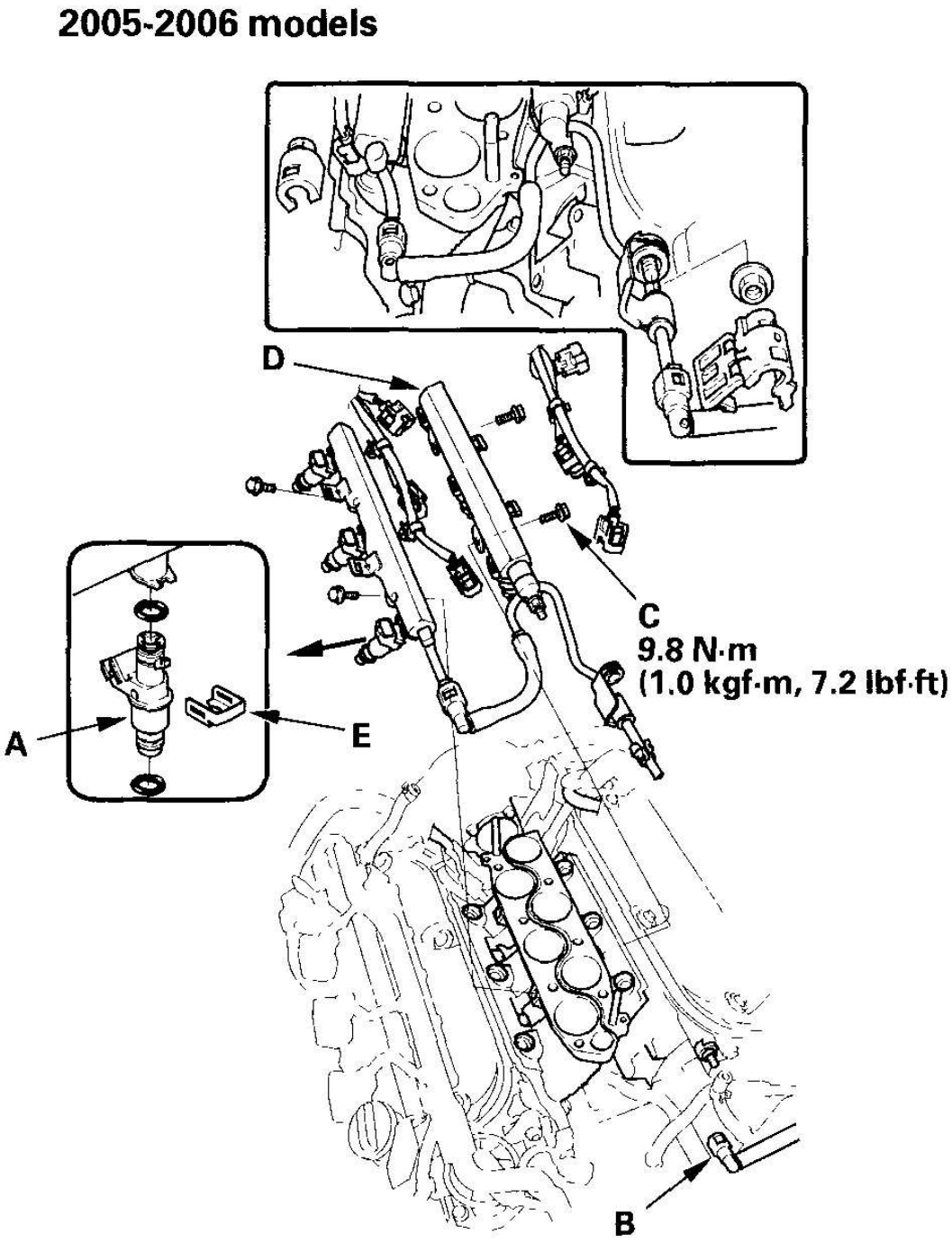


Fig. 169: Disconnecting Connectors From Injectors (2005-06 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Disconnect the quick-connect fitting (B).
5. Remove the fuel rail mounting bolts (C) from the fuel rail (D).
6. Remove the injector clip (E) from the fuel rail.
7. Remove the injectors from the rails.
8. Coat the new O-ring (A) with clean engine oil, and insert the injectors (B) into the fuel rail (C).

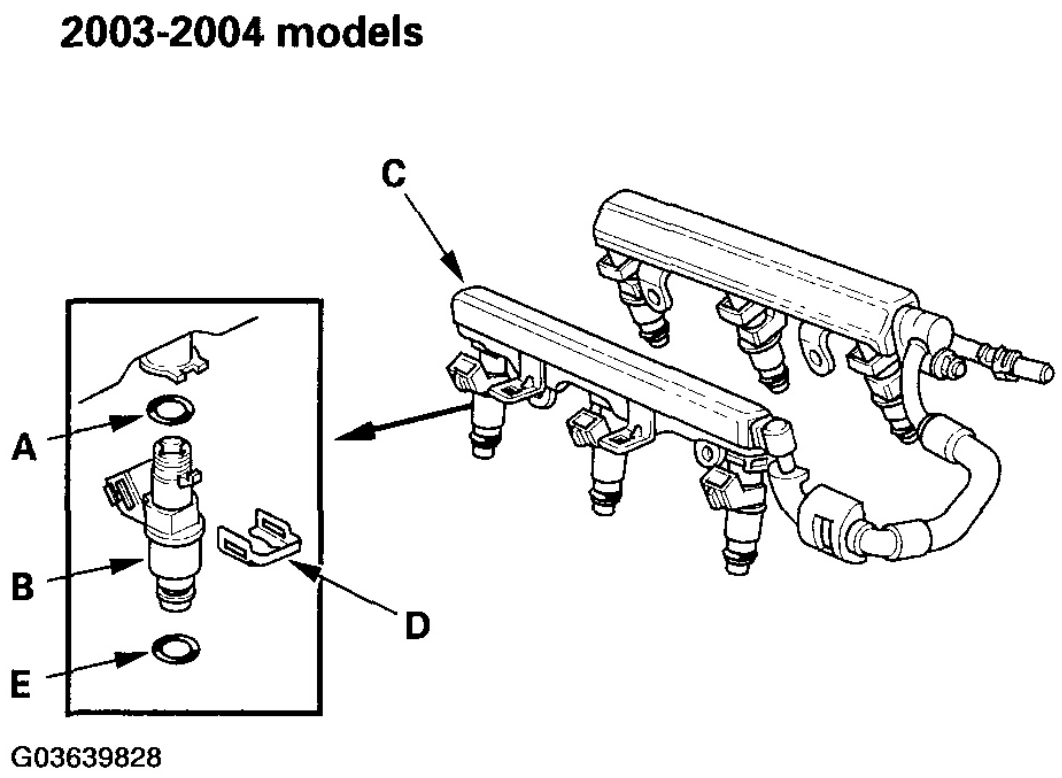


Fig. 170: Inserting Injectors Into Fuel Rail (2003-04 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

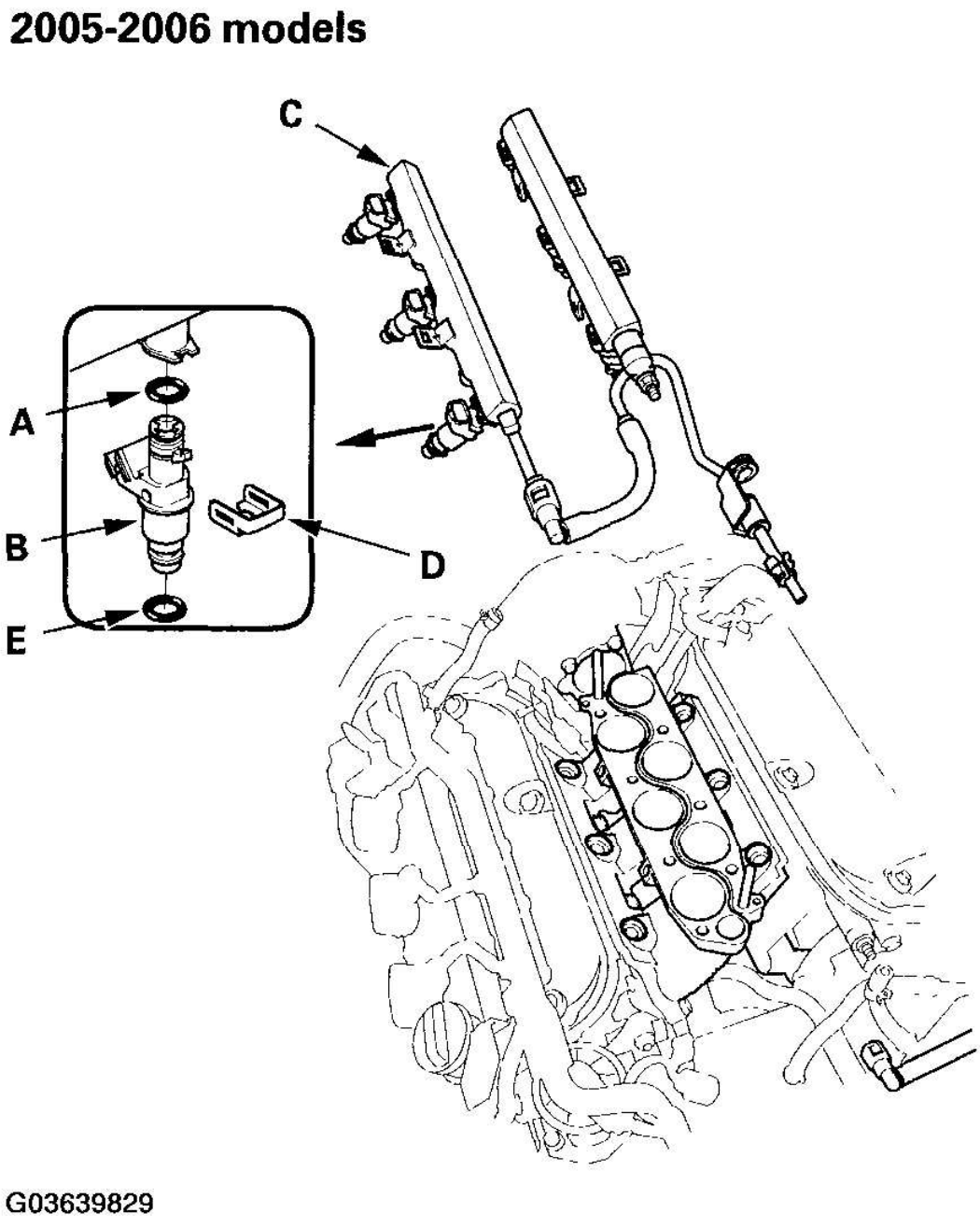


Fig. 171: Inserting Injectors Into Fuel Rail (2005-06 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the injector clip (D).
10. Coat the injector O-ring (E) with clean engine oil.

11. Install the injectors in the injector base.
12. Install the fuel rail mounting bolts.
13. Install the connectors on the injectors.
14. Connect the quick-connect fitting (see **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).
15. Install the intake manifold.
16. Turn the ignition switch ON (II), but do not operate the starter. After the fuel pump runs for about 2 seconds, the fuel pressure in the fuel line rise. Repeat this two or three times, then check for fuel leakage.

A/F SENSOR REPLACEMENT

Special Tools Required

02 sensor socket wrench, commercially available

FRONT BANK (BANK 2)

1. Disconnect the front A/F sensor 8P connector (A), then remove the front A/F sensor (B).

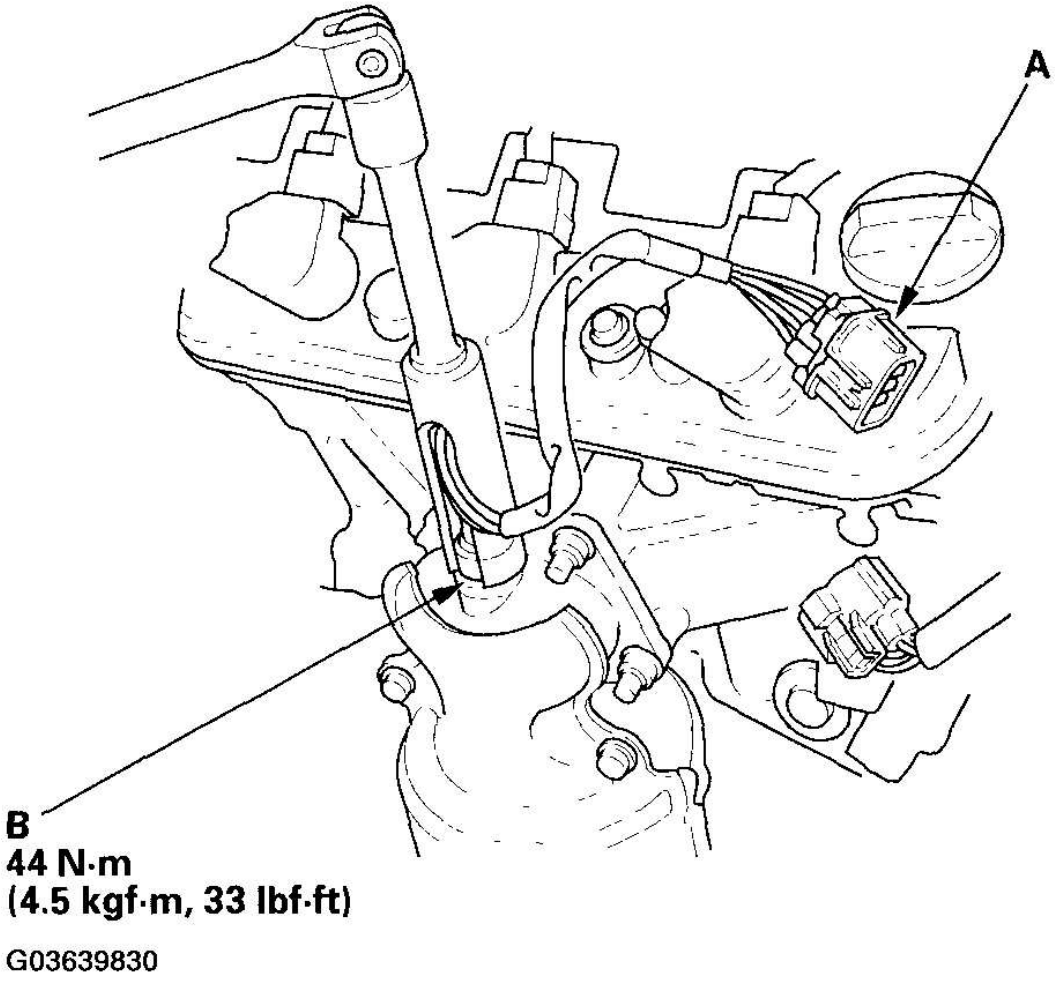


Fig. 172: Disconnecting Front A/F Sensor 8P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the front A/F sensor in the reverse order of removal.

REAR BANK(BANK 1)

1. Disconnect the rear A/F sensor 8P connector (A), then remove the rear A/F sensor (B).

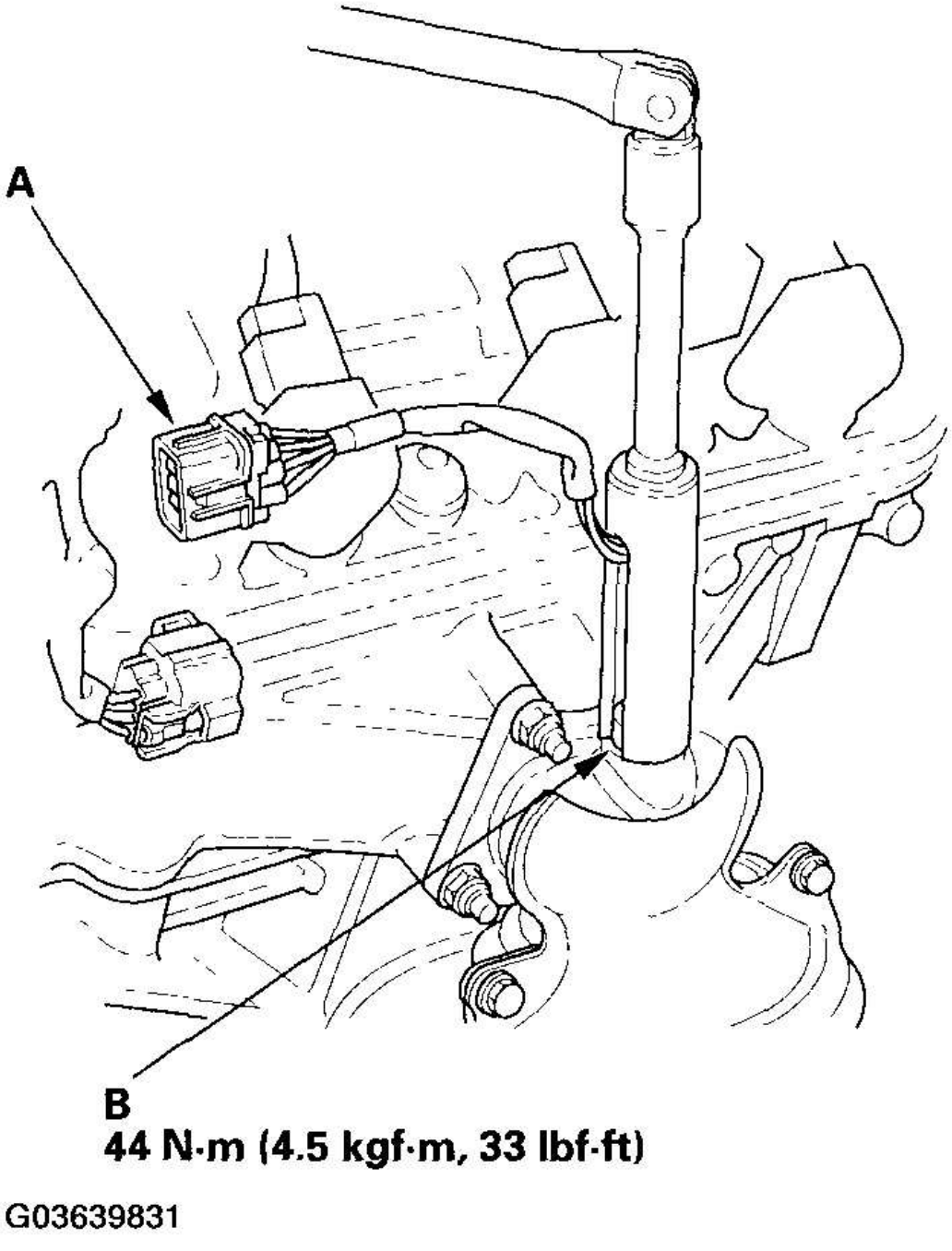


Fig. 173: Disconnecting Rear A/F Sensor 8P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the rear A/F sensor in the reverse order of removal.

SECONDARY HO2S REPLACEMENT

Special Tools Required

02 sensor socket wrench, commercially available

FRONT BANK (BANK 2)

1. Disconnect the front secondary H02S 4P connector (A), then remove the front secondary H02S (B).

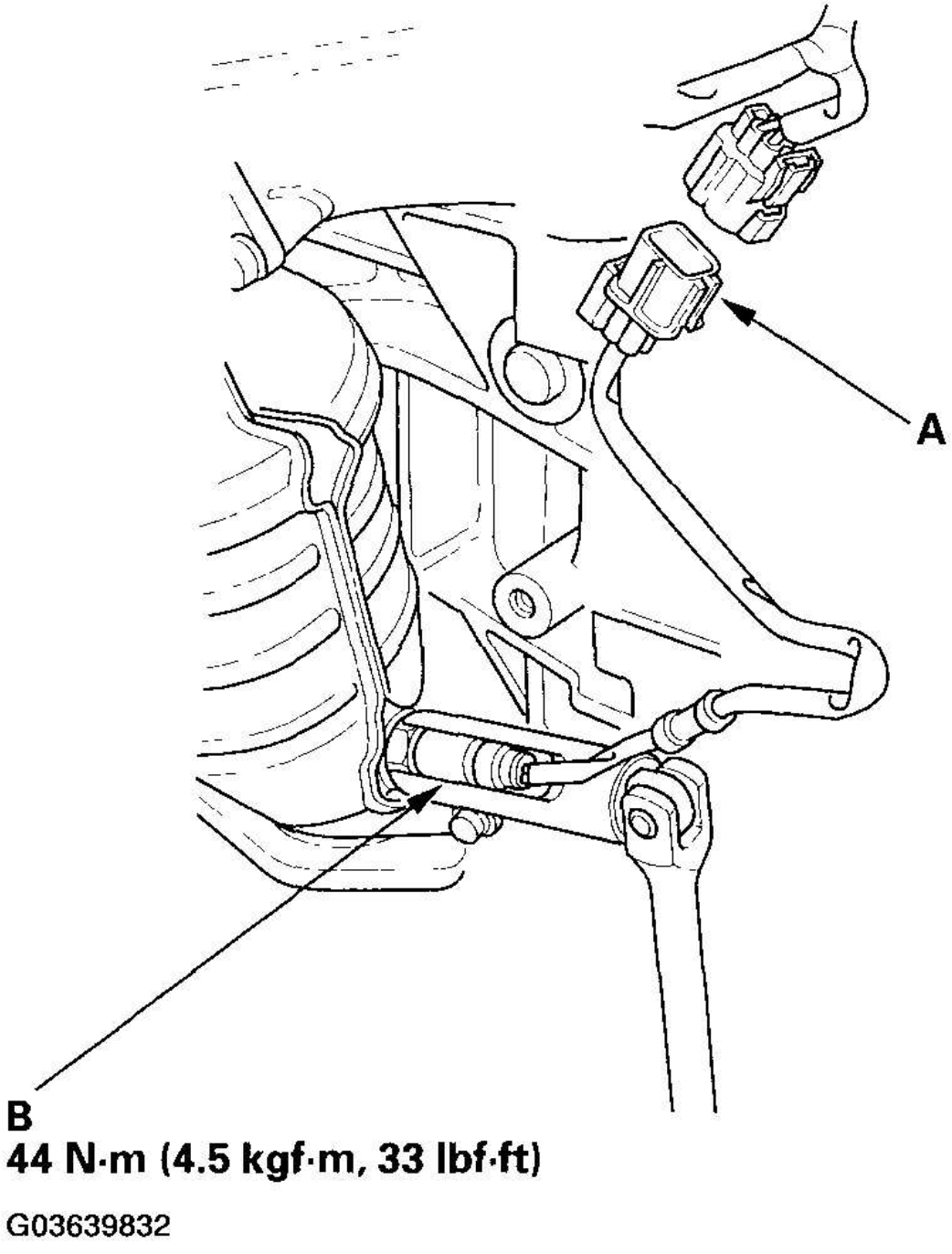


Fig. 174: Disconnecting Front Secondary H02S 4P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the front secondary H02S in the reverse order of removal.

REAR BANK (BANK 1)

1. Disconnect the rear secondary H02S 4P connector (A), then remove the rear secondary H02S (B).

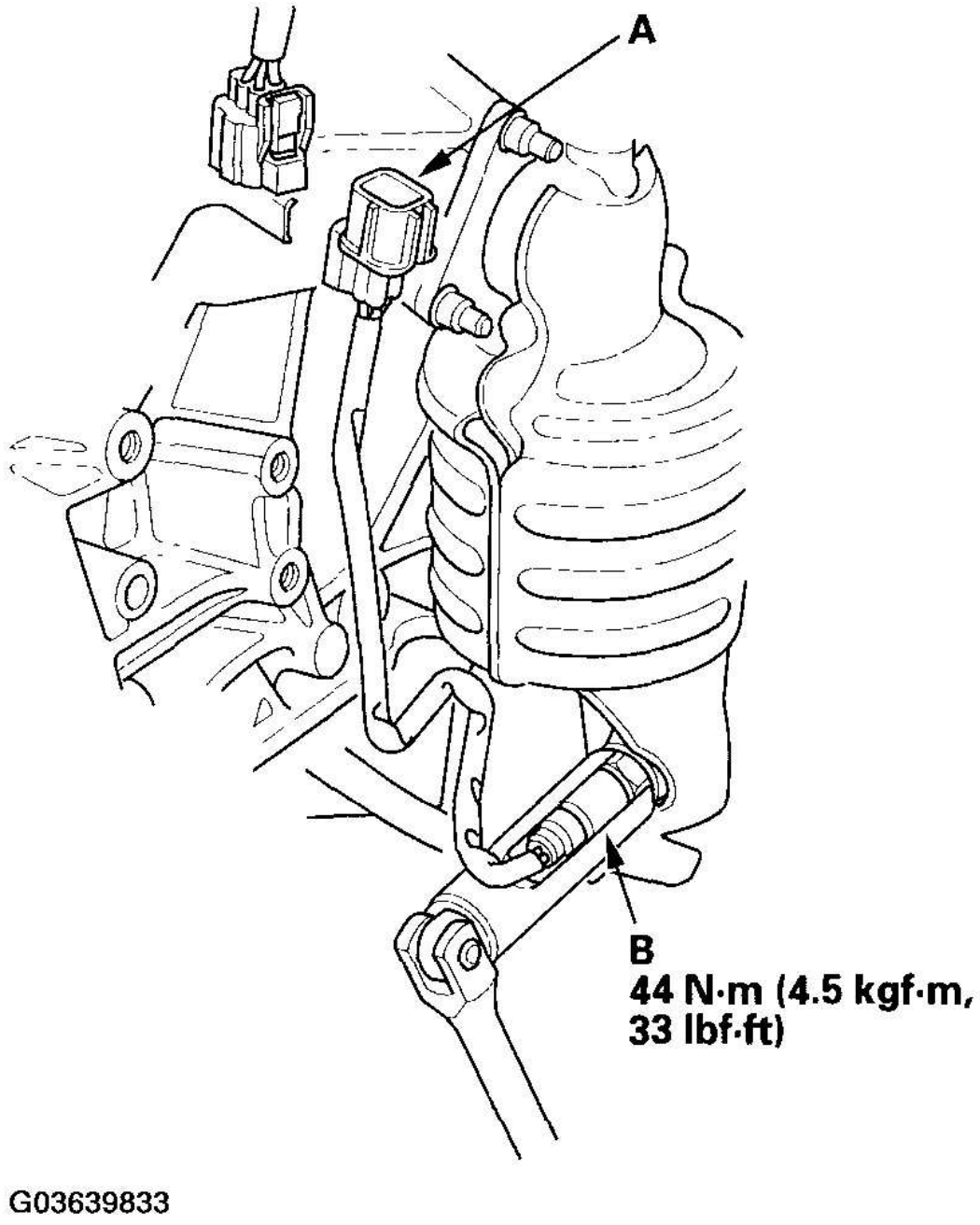


Fig. 175: Disconnecting Rear Secondary H02S 4P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the rear secondary H02S in the reverse order of removal.

ECT SENSOR REPLACEMENT

1. Drain the engine coolant (see **COOLANT REPLACEMENT**).
2. Remove the intake manifold (see **REMOVAL**).
3. Disconnect the ECT sensor 2P connector (A).

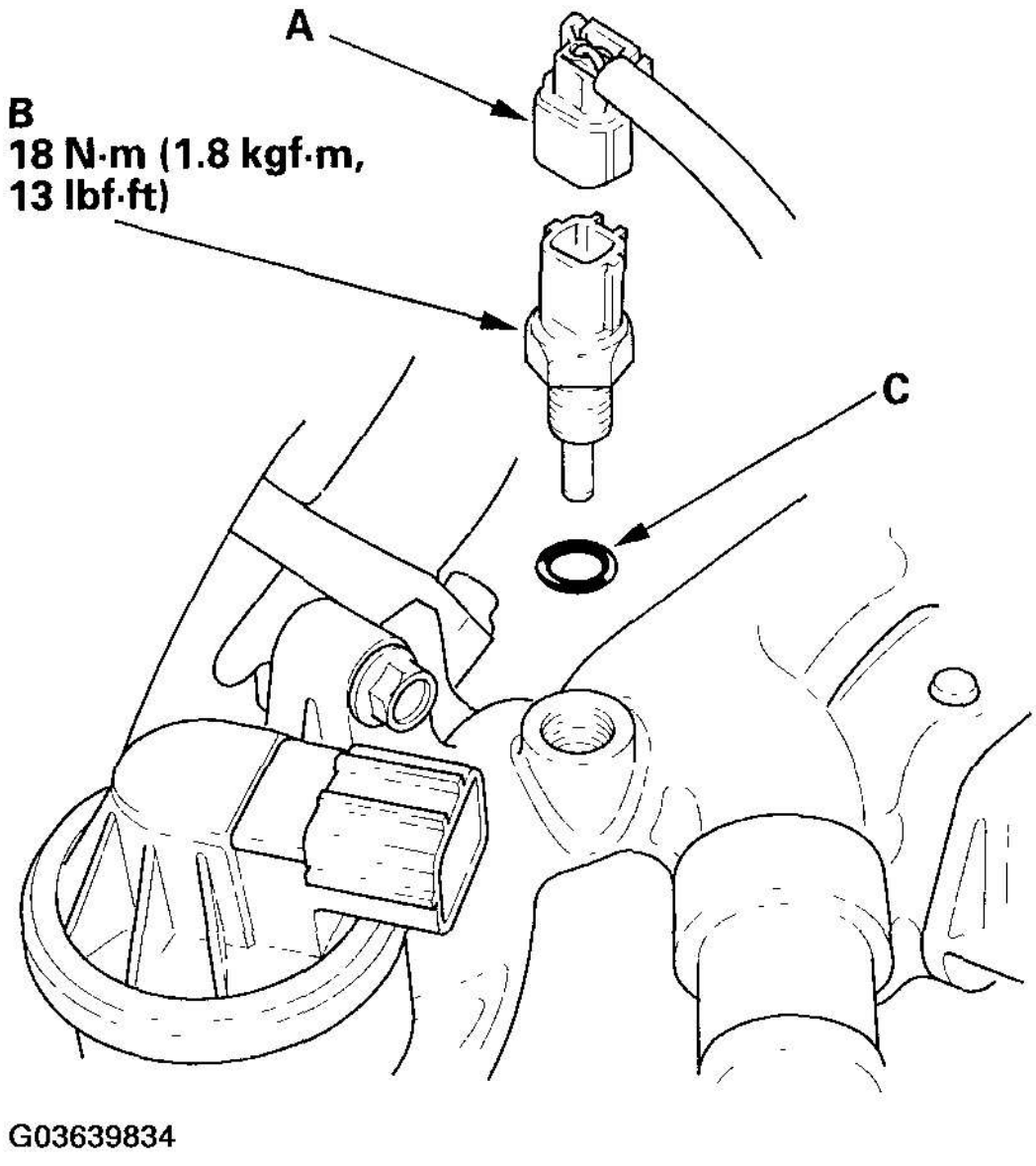


Fig. 176: Disconnecting ECT Sensor 2P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the ECT sensor (B).
5. Install the sensor in the reverse order of removal with a new O-ring (C), then refill the radiator with engine coolant (see **COOLANT REPLACEMENT**), and bleed air from the cooling system with the heater valve open.

KNOCK SENSOR REPLACEMENT

1. Remove the intake manifold (see **REMOVAL**).
2. Remove the injector rails and the base.
3. Disconnect the knock sensor 1P connector (A), then remove the knock sensor (B).

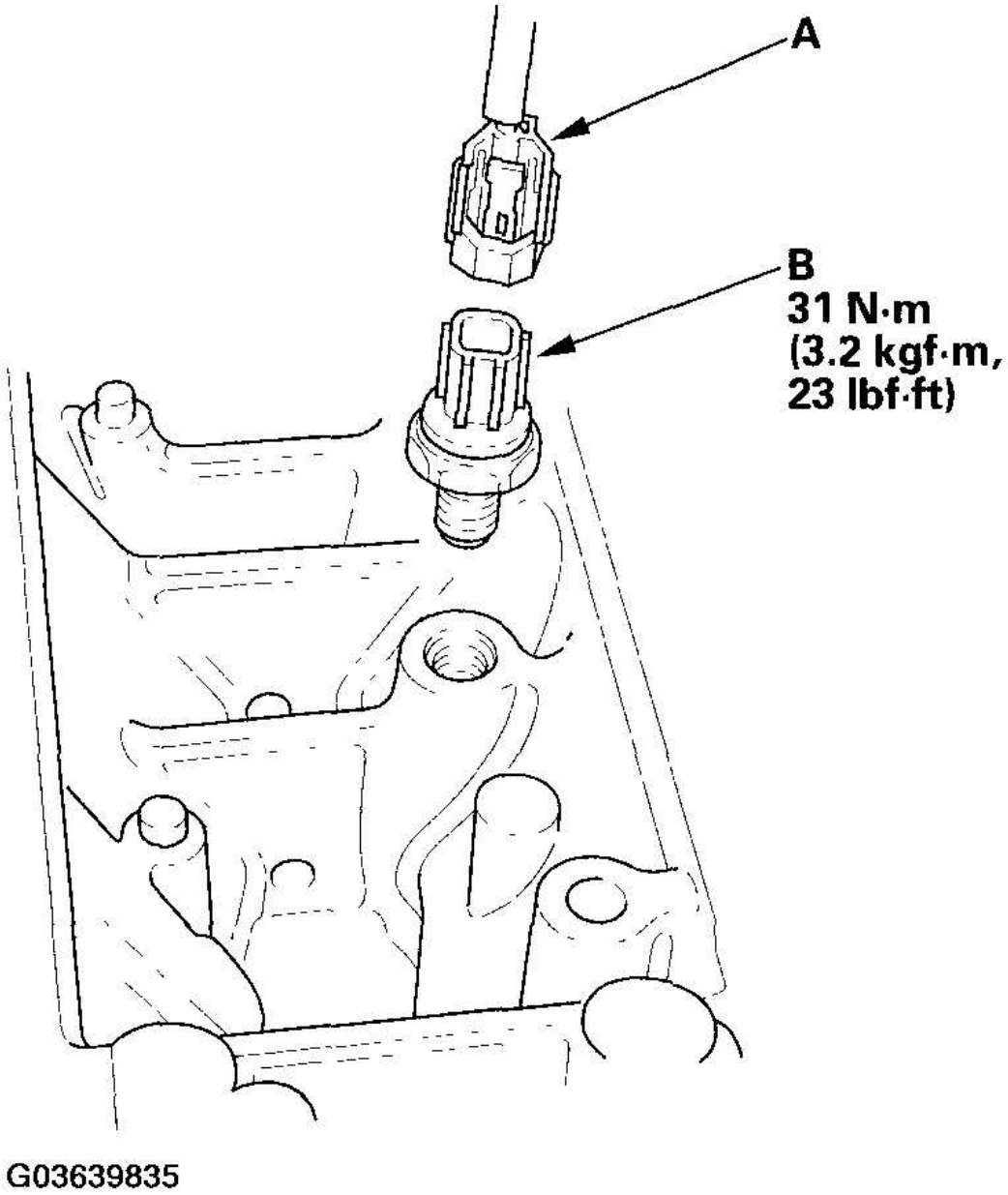


Fig. 177: Disconnecting Knock Sensor 1P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the sensor in the reverse order of removal.

IAT SENSOR 1 REPLACEMENT

2003-2004 MODELS

1. Disconnect IAT sensor 1 2P connector (A).

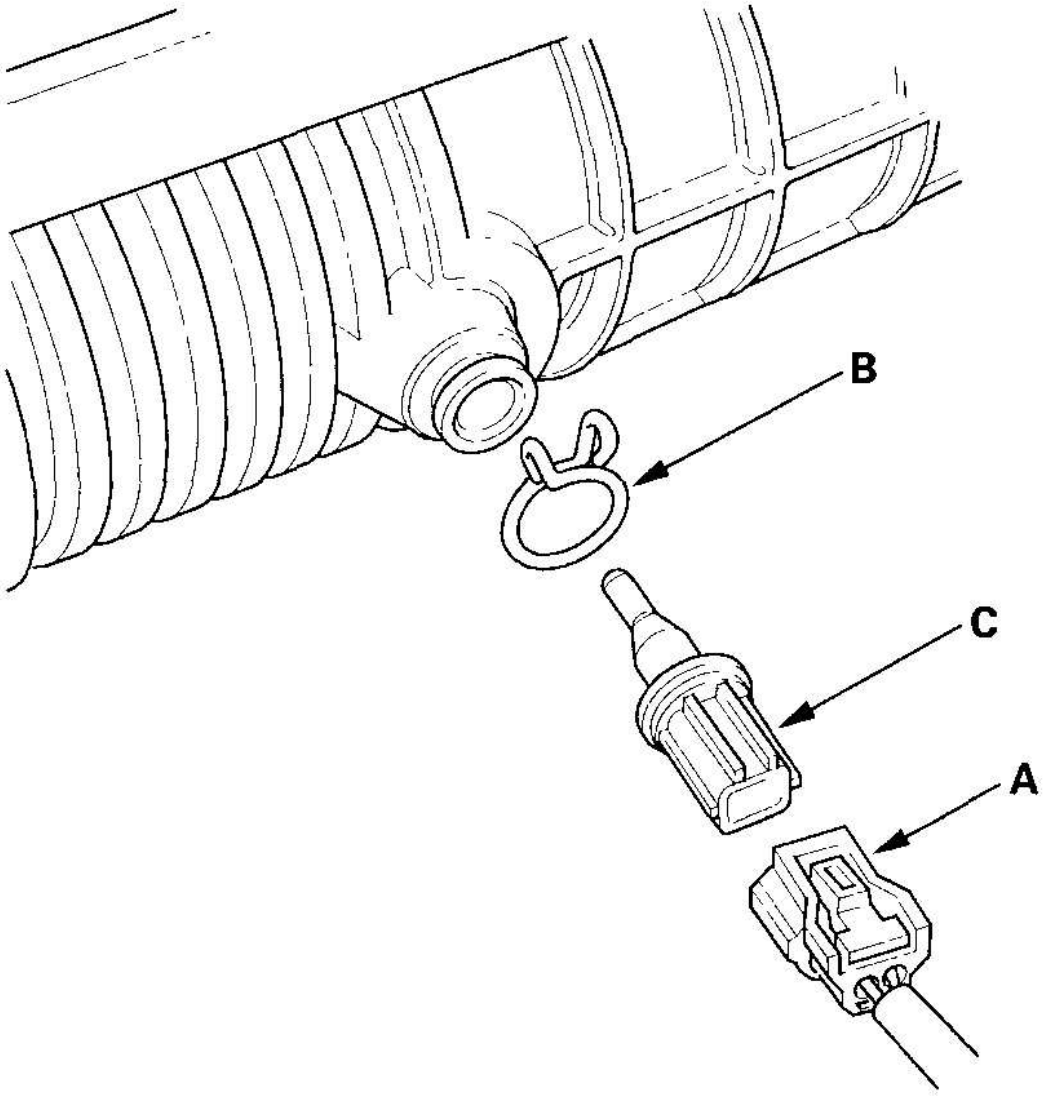


Fig. 178: Disconnecting IAT Sensor 1 2P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the clip (B) and IAT sensor 1 (C).
3. Install the sensor in the reverse order of removal.

IAT SENSOR/IAT SENSOR 2 REPLACEMENT

1. Disconnect IAT sensor/IAT sensor 2 2P connector (A).

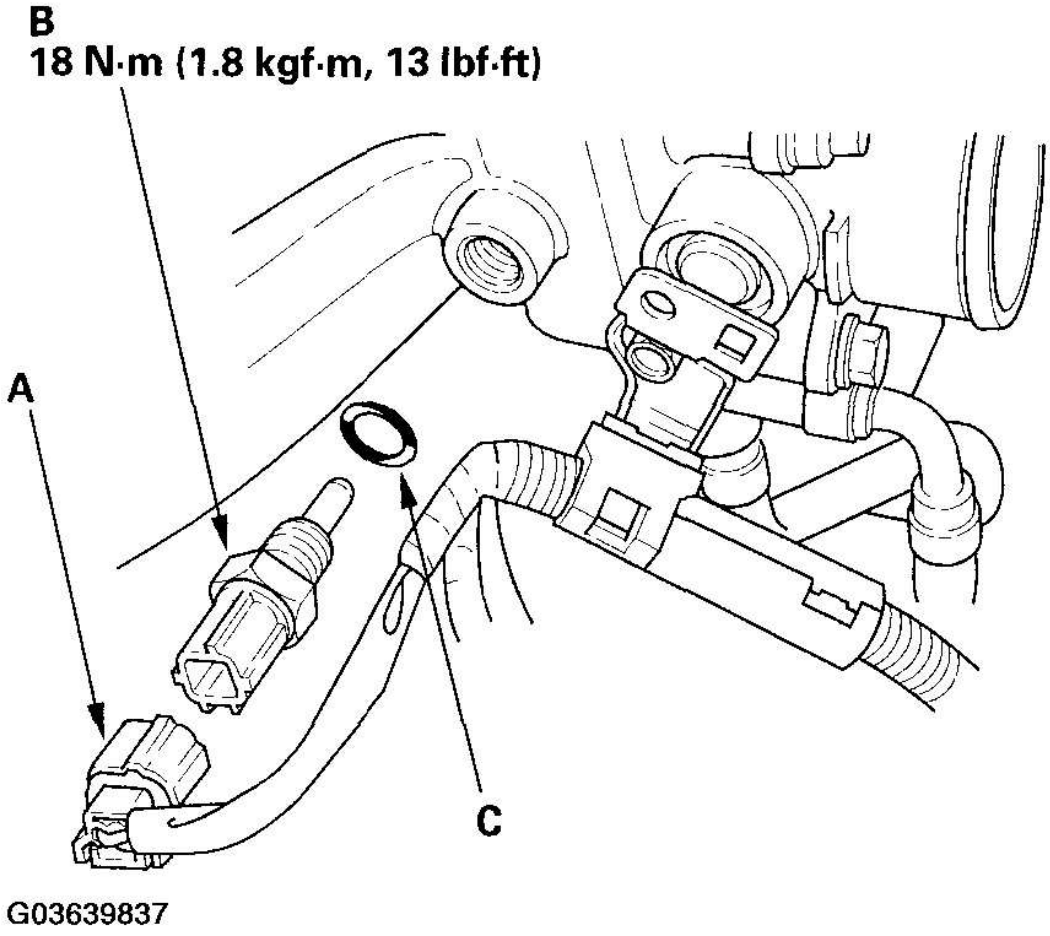


Fig. 179: Disconnecting IAT Sensor/IAT Sensor 2 2P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove IAT sensor/IAT sensor 2 (B).
3. Install the sensor in the reverse order of removal with a new O-ring (C).

CKP SENSOR REPLACEMENT

1. Move the auto-tensioner to remove tension from the drive belt, then remove the belt (see **DRIVE BELT INSPECTION**).
2. Remove the crankshaft pulley (see **CRANKSHAFT PULLEY REMOVAL AND INSTALLATION**).
3. Remove the upper and lower front covers from the engine (see step 9 in **TIMING BELT REMOVAL**).
4. Remove the CKP sensor (A) from the oil pump.

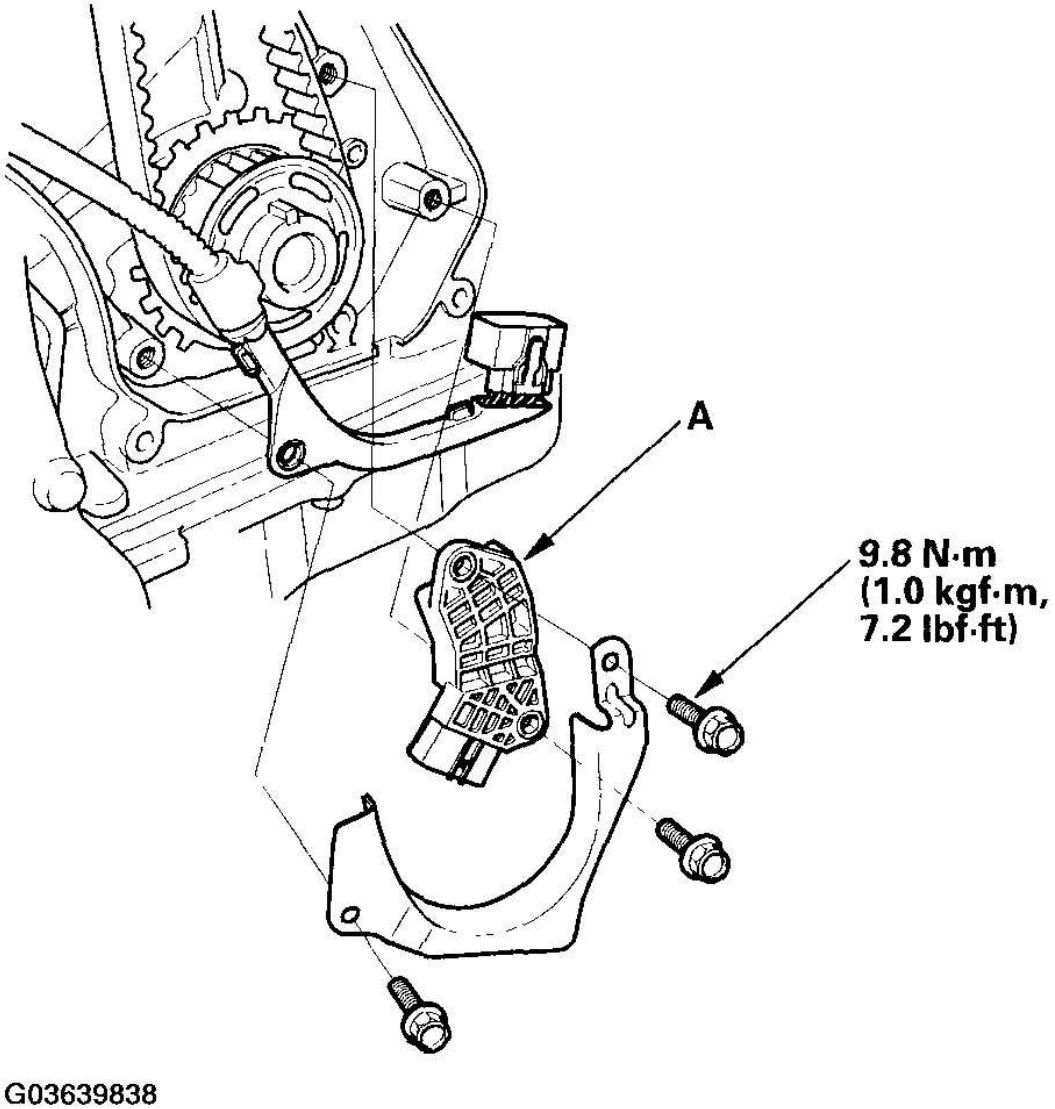
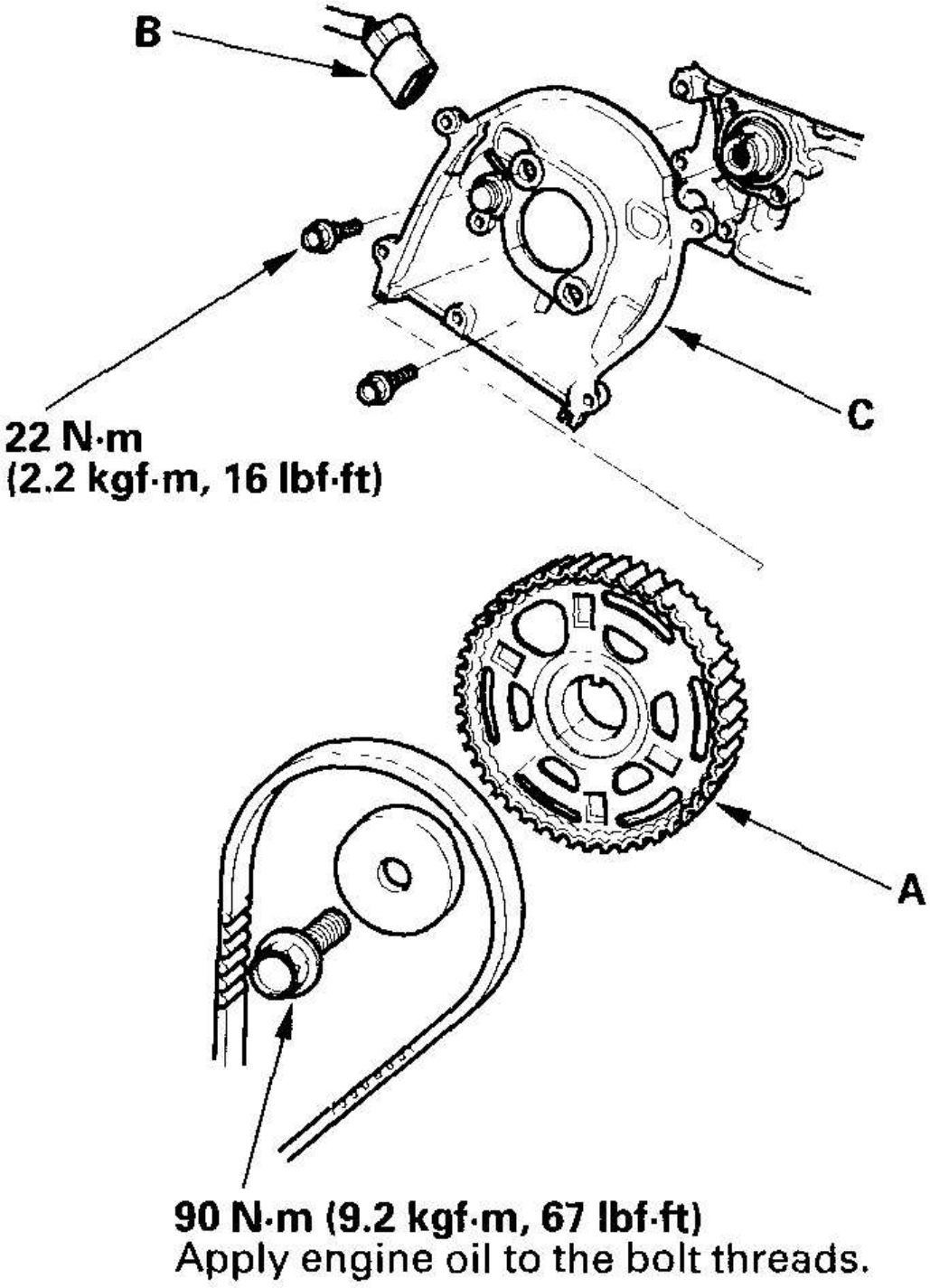


Fig. 180: Removing CKP Sensor From Oil Pump
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the sensor in the reverse order of removal.
6. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).

CMP SENSOR REPLACEMENT

1. Remove the timing belt (see **TIMING BELT INSPECTION**).
2. Remove the front camshaft pulley (CMP sensor pulse plate) (A).


B
C
22 N·m
(2.2 kgf·m, 16 lbf·ft)
A
90 N·m (9.2 kgf·m, 67 lbf·ft)
Apply engine oil to the bolt threads.

G03639839

Fig. 181: Removing Front Camshaft Pulley
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Disconnect the CMP sensor connector (B), then remove the back cover (C).
4. Remove the CMP sensor (A) from the back cover.

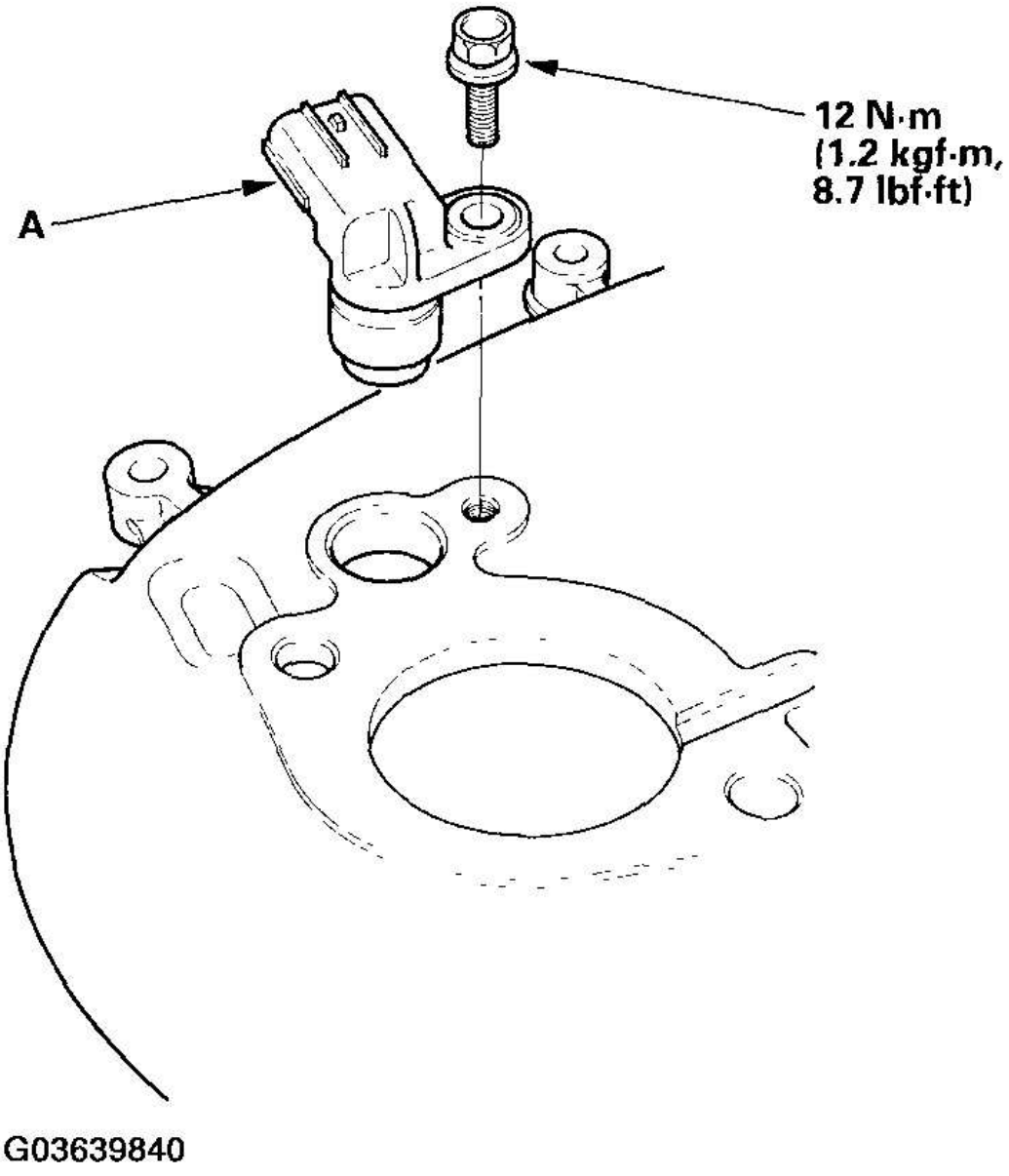


Fig. 182: Removing CMP Sensor From Back Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the sensor in the reverse order of removal. Install the timing belt (see **TIMING BELT INSTALLATION**).
6. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).

PCM REPLACEMENT

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

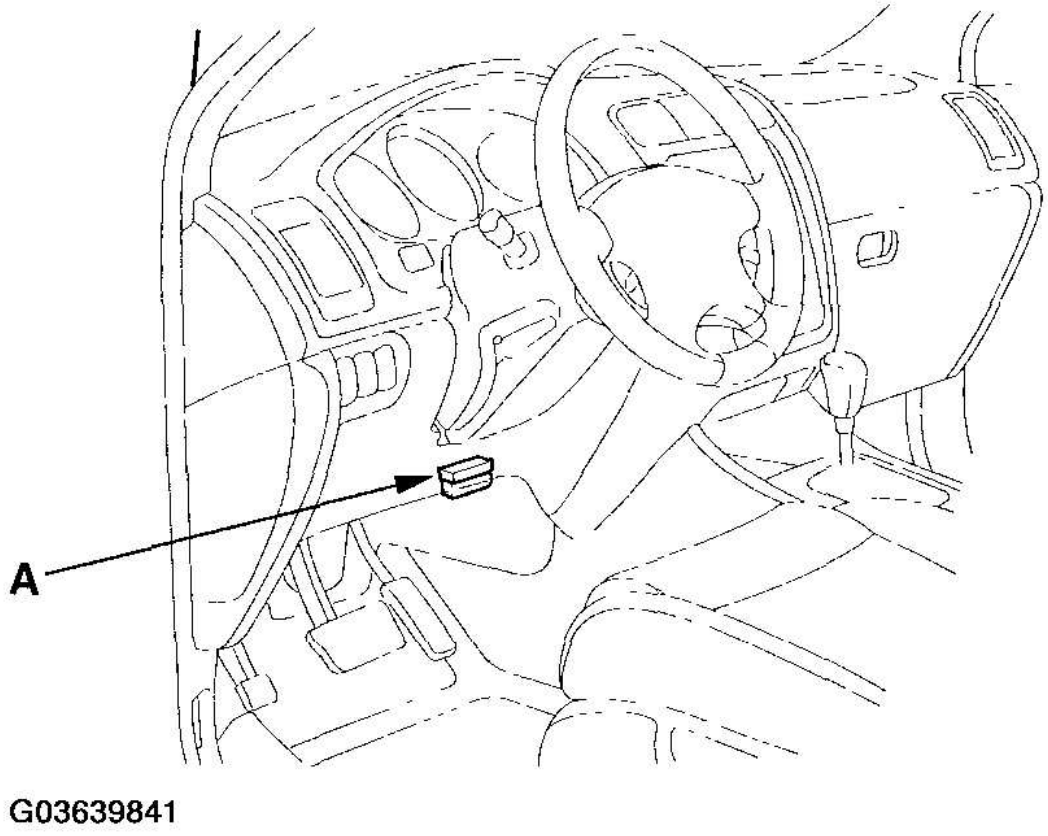


Fig. 183: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Make sure the HDS communicates with the PCM. If it doesn't, skip steps 3 to 5 and clean the throttle body (see **THROTTLE BODY CLEANING**) after this procedure.
3. Turn the ignition switch ON (II).
4. Select the INSPECTION MENU with the HDS.
5. Do the TP POSITION CHECK in the ETCS TEST.
6. Turn the ignition switch OFF.

7. Jump the SCS line with the HDS.
8. Remove the cover (A).

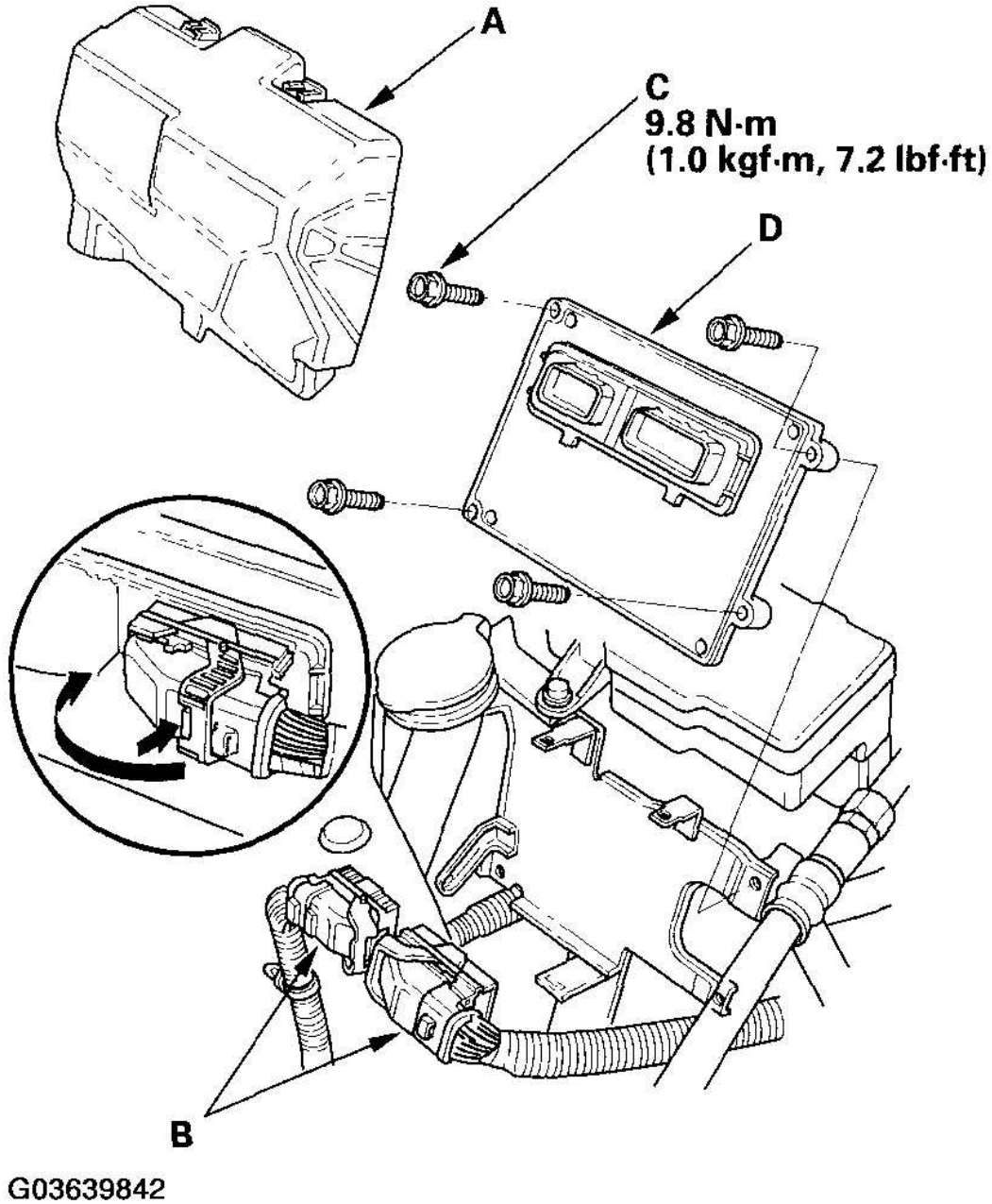


Fig. 184: Removing Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Disconnect the PCM connectors (B).
10. Remove the bolts (C), then remove the PCM (D).
11. Install a known-good PCM in the reverse order of removal.
12. Open the SCS with the HDS.
13. Turn the ignition switch ON (II).

NOTE: For 2005-2006 models: 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. Input the VIN to the PCM with the HDS.
15. Rewrite the immobilizer code with the PCM replacement procedure in the HDS; it allows you to start the engine.
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
18. Do the CKP pattern learn procedure (see **CKP PATTERN CLEAR/CKP PATTERN LEARN**).