

2005-08 ENGINE PERFORMANCE

PGM-FI System - RL

COMPONENT LOCATION INDEX

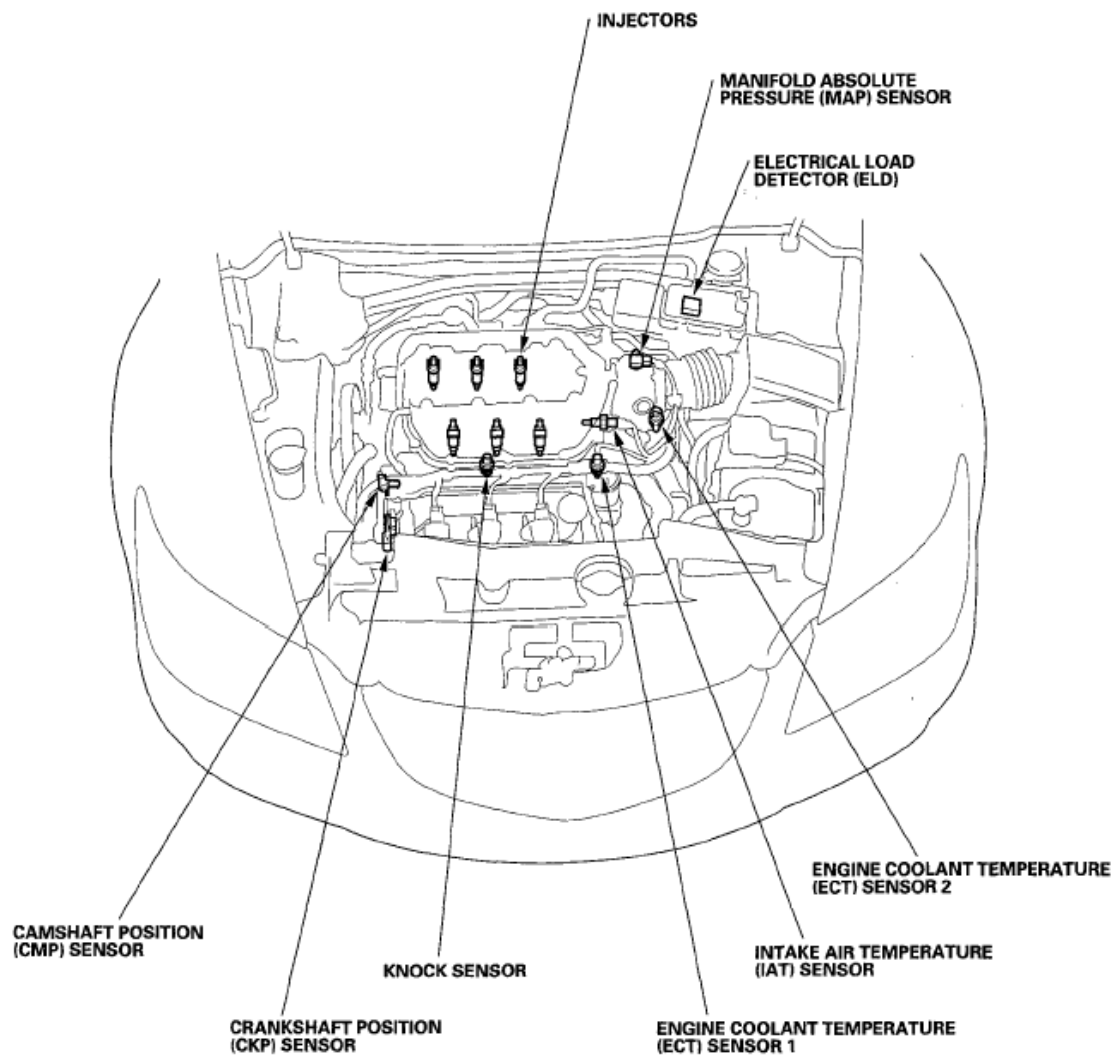


Fig. 1: Identifying PGM-FI System Component Location (1 Of 2)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

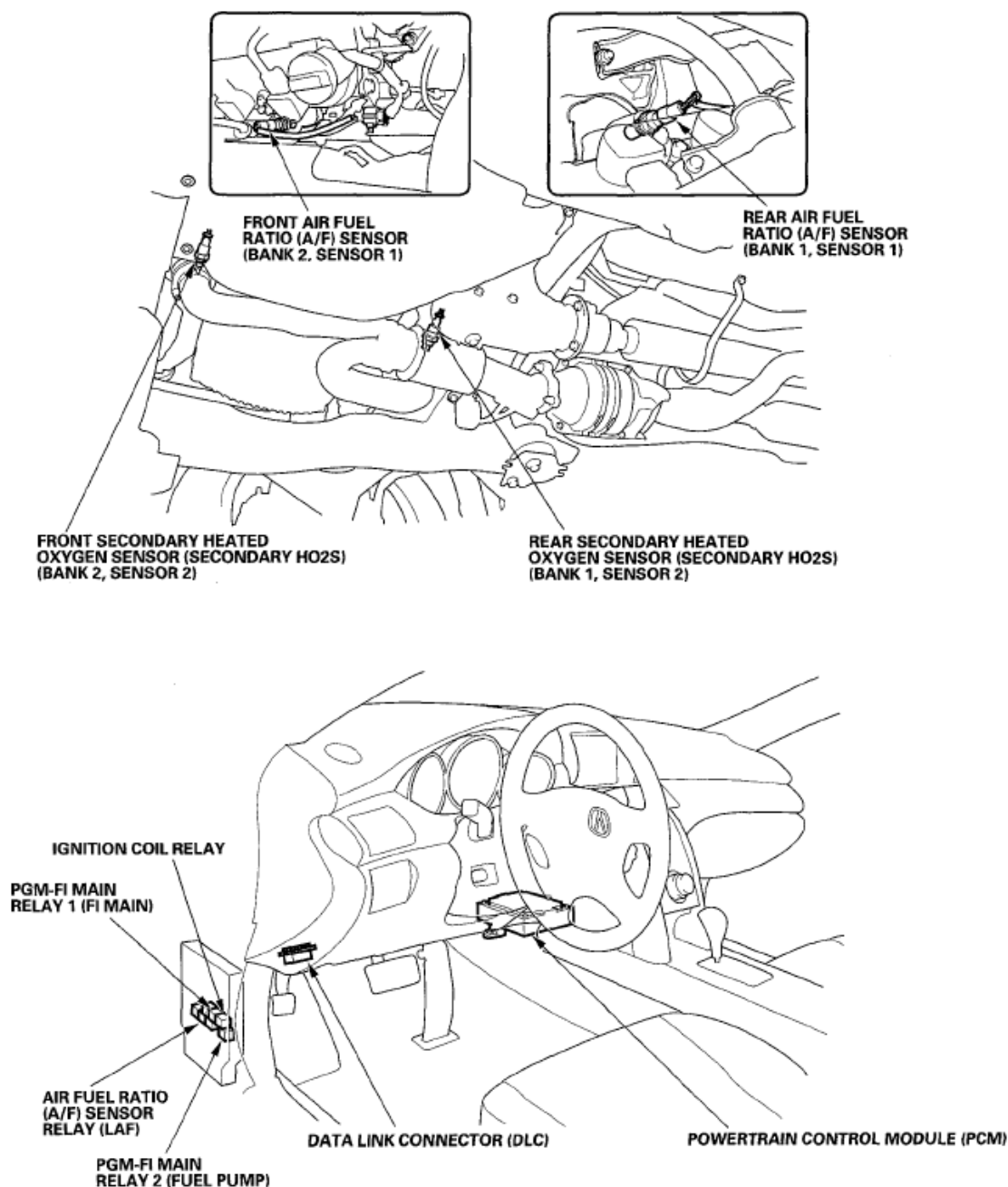


Fig. 2: Identifying PGM-FI System Component Location (2 Of 2)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING

DTC P0107: MAP SENSOR CIRCUIT LOW VOLTAGE

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

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, the 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.

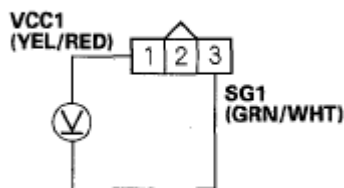
Is about 3 kPa (1.0 in.Hg, 26 mmHg), or 0.23 V or less indicated ?

YES - Go to step 9.

NO - Go to step 7.

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

MAP SENSOR 3P CONNECTOR



Wire side of female terminals

Fig. 3: Measuring Voltage Between MAP Sensor 3P Connector Terminals No. 1 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 13.

NO - Go to step 8.

8. Measure voltage between PCM connector terminals C4 and C6.

PCM CONNECTOR C (22P)

Wire side of female terminals

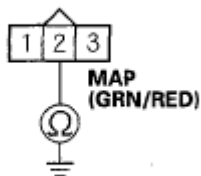
Fig. 4: Measuring Voltage Between PCM Connector Terminals C4 And C6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair open in the wire between the PCM (C6) and the MAP sensor, then go to step 15.

NO - Go to step 20.

9. Turn the ignition switch OFF.
10. Jump the SCS line with the HDS.
11. Disconnect PCM connector C (22P).
12. Check for continuity between MAP sensor 3P connector terminal No. 2 and body ground.

MAP SENSOR 3P CONNECTOR

Wire side of female terminals

Fig. 5: Checking Continuity Between MAP Sensor 3P Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (C5) and the MAP sensor, then go to step 15.

NO - Go to step 20.

13. Turn the ignition switch OFF.
14. Replace the MAP sensor (see **MAP SENSOR 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.

Is DTC P0107 indicated?

YES - Check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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

Is DTC P0107 indicated?

YES - Check for poor connections or loose terminals at the MAP sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0108: MAP SENSOR CIRCUIT HIGH VOLTAGE

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

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

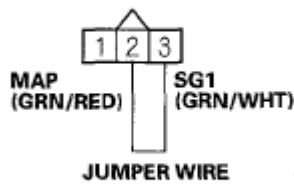
Is 160 kPa (47.1 in.Hg, 1,197 mmHg), or 4.49 V or more indicated?

YES - Go to step 3.

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

MAP SENSOR 3P CONNECTOR



Wire side of female terminals

Fig. 6: Connecting MAP Sensor 3P Connector Terminals No. 2 And No. 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.

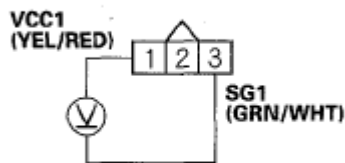
Is 160 kPa (47.1 in.Hg, 1,197 mmHg), or 4.49 V or more indicated?

YES - Go to step 8.

NO - Go to step 19.

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

MAP SENSOR 3P CONNECTOR



Wire side of female terminals

Fig. 7: Measuring Voltage Between MAP Sensor 3P Connector Terminals No. 1 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

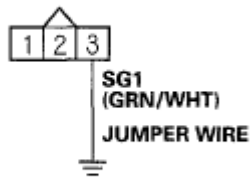
Is there about 5 V?

YES - Go to step 15.

NO - Go to step 10.

10. Turn the ignition switch OFF.
11. Jump the SCS line with the HDS.
12. Disconnect PCM connector C (22P).
13. Connect MAP sensor 3P connector terminal No. 3 to body ground with a jumper wire.

MAP SENSOR 3P CONNECTOR



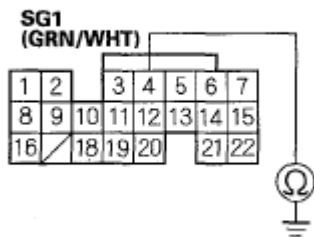
Wire side of female terminals

Fig. 8: Connecting MAP Sensor 3P Connector Terminal No. 3 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Check for continuity between PCM connector terminal C4 and body ground.

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 9: Checking Continuity Between PCM Connector Terminal C4 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 26.

NO - Repair open in the wire between the PCM (C4) and the MAP sensor, then go to step 21.

15. Turn the ignition switch OFF.
16. Connect PCM connector terminals C4 and C5 with a jumper wire.

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 10: Connecting PCM Connector Terminals C4 And C5 With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Turn the ignition switch ON (II).
18. Check the MAP SENSOR in the DATA LIST with the HDS.

Is 160 kPa (47.1 in.Hg, 1,197 mmHg), or 4.49 V or more indicated?

YES - Go to step 26.

NO - Repair open in the wire between the PCM (C5) and the MAP sensor, then go to step 21.

19. Turn the ignition switch OFF.
20. Replace the MAP sensor (see **MAP SENSOR 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. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0108 indicated?

YES - Check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

26. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0108 indicated?

YES - Check for poor connections or loose terminals at the MAP sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0111: IAT SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM

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

1. Check for poor connections or loose terminals at ECT sensor 1 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 REPLACEMENT**).
3. Allow the IAT sensor to cool to ambient temperature.
4. Note the ambient temperature.
5. Connect the IAT sensor to its 2P connector, but do not install it on the intake manifold.
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 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 IAT sensor for a few seconds. Do not apply the heat longer than a few seconds or you will damage the sensor.
11. Connect the IAT sensor to its 2P connector, but do not install it on the intake manifold.
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, the 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 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.

Is DTC P0111 indicated?

YES - Check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0112: IAT SENSOR CIRCUIT LOW VOLTAGE

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

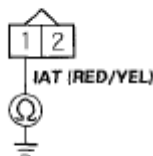
Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

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 (31P).
10. Check for continuity between IAT sensor 2P connector terminal No. 1 and body ground.

IAT SENSOR 2P CONNECTOR



Wire side of female terminals

Fig. 11: Checking Continuity Between IAT Sensor 2P Connector Terminal No. 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 (A5), then go to step 13.

NO - Go to step 18.

11. Turn the ignition switch OFF.
12. Replace the IAT sensor (see **IAT SENSOR 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.

Is DTC P0112 indicated?

YES - Check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

18. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
19. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0112 indicated?

YES - Check for poor connections or loose terminals at the IAT sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0113: IAT SENSOR CIRCUIT HIGH VOLTAGE

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

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

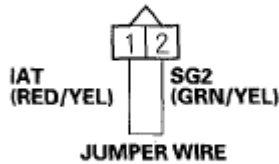
Is about -40°F(-40°C) or less, or 4.90 V or more indicated?

YES - Go to step 3.

NO - Intermittent failure, the 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.

IAT SENSOR 2P CONNECTOR



Wire side of female terminals

Fig. 12: Connecting IAT Sensor 2P Connector Terminals No. 1 And No. 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.

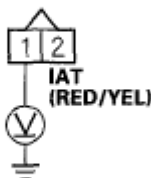
Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

YES - Go to step 8.

NO - Go to step 18.

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

IAT SENSOR 2P CONNECTOR



Wire side of female terminals

Fig. 13: Measuring Voltage Between IAT Sensor 2P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

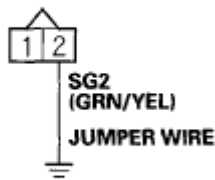
Is there about 5V?

YES - Go to step 12.

NO - Go to step 17.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector C (22P).
15. Connect IAT sensor 2P connector terminal No. 2 to body ground with a jumper wire.

IAT SENSOR 2P CONNECTOR



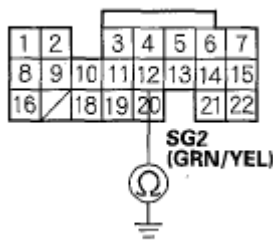
Wire side of female terminals

Fig. 14: Connecting IAT Sensor 2P Connector Terminal No. 2 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Check for continuity between PCM connector terminal C12 and body ground.

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 15: Checking Continuity Between PCM Connector Terminal C12 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 PCM (C12) and the IAT sensor, then go to step 20.

17. Measure voltage between PCM connector terminal A5 and body ground.

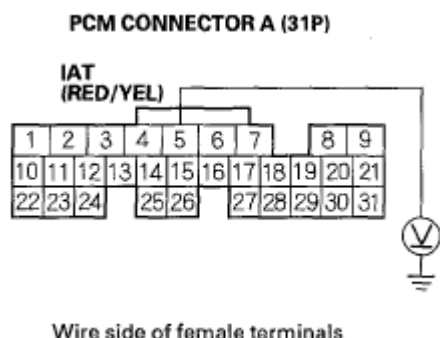


Fig. 16: Measuring Voltage Between PCM Connector Terminal A5 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair open in the wire between the PCM (A5) and the IAT sensor, then go to step 20.

NO - Go to step 25.

18. Turn the ignition switch OFF.
19. Replace the IAT sensor (see **IAT SENSOR REPLACEMENT**).
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.

Is DTC P0113 indicated?

YES - Check for poor connections or loose terminals at the IAT sensor and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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

Is DTC P0113 indicated?

YES - Check for poor connections or loose terminals at the IAT sensor and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0116: ECT SENSOR 1 CIRCUIT RANGE/PERFORMANCE PROBLEM

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

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

Does ECT SENSOR 1 change 18°F (10°C) or more?

YES - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1 and the PCM

NO - Go to step 11.

6. Note the value of ECT SENSOR 1 in the DATA LIST with the HDS.
7. Turn the ignition switch OFF.
8. Open the hood, and let the engine cool for 3 hours.
9. Turn the ignition switch ON (II).
10. Check ECT SENSOR 1 in the DATA LIST with the HDS.

Does ECT SENSOR 1 change 18°F (10°C) or more?

YES - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1 and the PCM

NO - Go to step 11.

11. Turn the ignition switch OFF.
12. Replace ECT sensor 1 (see ECT SENSOR 1 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.

Is DTC P0116 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1 and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0117: ECT SENSOR 1 CIRCUIT LOW VOLTAGE

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

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

3. Turn the ignition switch OFF.
4. Disconnect ECT sensor 1 2P connector.
5. Turn the ignition switch ON (II).
6. Check ECT 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 A (31P).
10. Check for continuity between ECT sensor 1 2P connector terminal No. 1 and body ground.

ECT SENSOR 1 2P CONNECTOR



Wire side of female terminals

Fig. 17: Checking Continuity Between ECT Sensor 1 2P Connector Terminal No. 1 And Body Ground**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

Is there continuity?

YES - Repair short in the wire between ECT sensor 1 and the PCM (A14), then go to step 13.

NO - Go to step 18.

11. Turn the ignition switch OFF.
12. Replace ECT sensor 1 (see **ECT 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.

Is DTC P0117 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1 and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

18. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
19. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0117 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1 and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0118: ECT SENSOR 1 CIRCUIT HIGH VOLTAGE

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

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

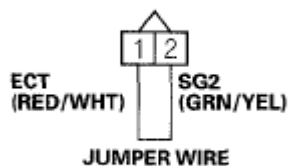
Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

YES - Go to step 3.

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

3. Turn the ignition switch OFF.
4. Disconnect ECT sensor 1 2P connector.
5. Connect ECT sensor 1 2P connector terminals No. 1 and No. 2 with a jumper wire.

ECT SENSOR 1 2P CONNECTOR



Wire side of female terminals

Fig. 18: Connecting ECT Sensor 1 2P Connector Terminals No. 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

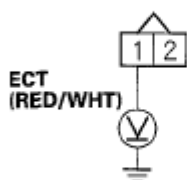
Is about -40°F (-40°C) or less, or 4.90 V or more indicated?

YES - Go to step 8.

NO - Go to step 18.

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

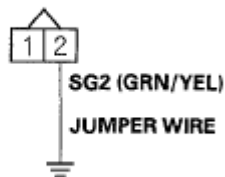
ECT SENSOR 1 2P CONNECTOR



Wire side of female terminals

Fig. 19: Measuring Voltage Between ECT Sensor 1 2P Connector Terminal No. 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 17.

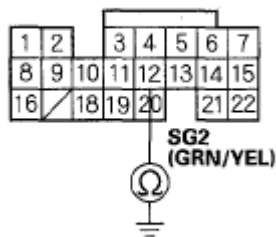
12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector C (22P).
15. Connect ECT sensor 1 2P connector terminal No. 2 to body ground with a jumper wire.

ECT SENSOR 1 2P CONNECTOR

Wire side of female terminals

Fig. 20: Connecting ECT Sensor 1 2P Connector Terminal No. 2 To Body Ground With Jumper Wire**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

16. Check for continuity between PCM connector terminal C12 and body ground.

PCM CONNECTOR C (22P)

Wire side of female terminals

Fig. 21: Checking Continuity Between PCM Connector Terminal C12 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 PCM (C12) and ECT sensor 1, then go to step 20.

17. Measure voltage between PCM connector terminal A14 and body ground.

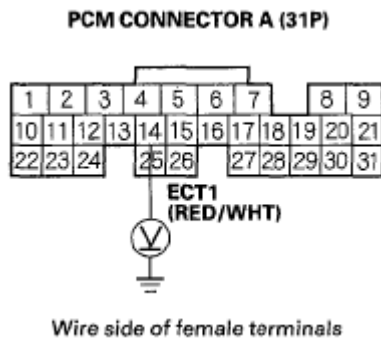


Fig. 22: Measuring Voltage Between PCM Connector Terminal A14 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair open in the wire between the PCM (A14) and ECT sensor 1, then go to step 20.

NO - Go to step 25.

18. Turn the ignition switch OFF.
19. Replace ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**).
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.

Is DTC P0118 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1 and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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

Is DTC P0118 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1 and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated,

go to the indicated DTCs troubleshooting

DTC P0125: ECT SENSOR 1 MALFUNCTION/SLOW RESPONSE

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

1. Start the engine, and let it idle 5 minutes or more.
2. Check ECT SENSOR 1 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 9.

NO - Go to step 3.

3. Allow the engine to cool to 104°F (40°C) or less.
4. Note the value of ECT SENSOR 1 and ECT SENSOR 2 in the DATA LIST with the HDS.
5. Start the engine, and let it idle.
6. Let the engine idle until ECT SENSOR 1 goes up 49°F (27°C) or more from the recorded temperature.
7. Note the value of ECT SENSOR 2 in the DATA LIST with the HDS.
8. Compare ECT SENSOR 2 and the recorded temperature.

Did ECT SENSOR 2 change 17°F (9.5°C) or more?

YES - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM

NO - Check the thermostat (see FAN MOTOR TEST), then go to step 9.

9. Turn the ignition switch OFF.
10. Replace ECT sensor 1 (see ECT SENSOR 1 REPLACEMENT).
11. Turn the ignition switch ON (II).
12. Reset the PCM with the HDS.
13. Do the PCM idle learn procedure (see PCM IDLE LEARN PROCEDURE).
14. Allow the engine to cool to the ambient temperature.
15. Start the engine, and let it idle 20 minutes.
16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0125 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM, then go to step 1.

NO - Go to step 17.

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

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 16, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 15.

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).**

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 off, then go to step 6.

6. Check the radiator fan operation.

Does the radiator fan keep running?

YES - Check the cooling system (see **RADIATOR CAP TEST**). If the cooling system is OK, go to step 20.

NO - Go to step 7.

7. Let the engine cool until the coolant temperature is 104°F(40°C) or less.
8. Note the value of ECT SENSOR 1 and ECT SENSOR 2 in the DATA LIST with the HDS.
9. Start the engine, and let it idle.
10. Let the engine idle until ECT SENSOR 1 goes up 49°F (27°C) or more from the recorded temperature.
11. Check ECT SENSOR 2 in the DATA LIST with the HDS.
12. Compare the recorded value of ECT SENSOR 2 and the present value of ECT SENSOR 2.

Did temperature rise 17°F (9.5°C) or more?

YES - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM

NO - Test the thermostat (see **FAN MOTOR TEST**), then go to step 13.

13. Turn the ignition switch ON (II).
14. Reset the PCM with the HDS.
15. Let the engine cool until the coolant temperature is between 21°F (-6°C) and 104°F (40°C).
16. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
17. Test-drive at a steady speed between 15-75 mph (24-120 km/h) for 10 minutes.
18. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0128 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM. then go to step 1.

NO - Go to step 19.

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

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 17.

20. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
21. Let the engine cool until the coolant temperature is between 21°F (-6°C) and 104°F (40°C).
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 at a steady speed between 15-75 mph (24-120 km/h) for 10 minutes.
24. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0128 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 21. If the PCM was substituted, go to step 1.

NO - Go to step 25.

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

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 21. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 21.

DTC P0133: REAR A/F SENSOR (BANK 1, SENSOR 1) CIRCUIT SLOW RESPONSE; DTC P0153: FRONT A/F SENSOR (BANK 2, SENSOR 1) CIRCUIT 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 (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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Drive the vehicle at 25 mph (40 km/h) or less for 5 minutes, then drive at a steady speed between 26-81 mph (41-130 km/h)
5. Monitor the OBD STATUS for DTC P0133 and/or P01531 in the DTCs MENU with the HDS.

Does the screen indicate FAILED?

YES - Go to step 6.

NO - If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the 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 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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Drive the vehicle at 25 mph (40 km/h) or less for 5 minutes, then drive at a steady speed between 26-81 mph (41-130 km/h)
13. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0133 and/or P0153 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 14.

14. Monitor the OBD STATUS for DTC P0133 and/or P0153* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 12.

**DTC P0134: REAR A/F SENSOR (BANK 1, SENSOR 1) HEATER SYSTEM MALFUNCTION;
DTC P0154: FRONT A/F SENSOR (BANK 2, SENSOR 1) HEATER SYSTEM MALFUNCTION**

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 P01541.
- 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, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), the under-dash fuse/relay box, 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. Hold the engine speed at 3,000 RPM without 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.

Is DTC P0134 and/or P0154 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), the under-dash fuse/relay box, and the PCM, then go to step 1.

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. If any other Temporary DTCs or DTCs were indicated in step 11, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), the under-dash fuse/relay box, and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

**DTC P0135: REAR A/F SENSOR (BANK 1, SENSOR 1) HEATER CIRCUIT MALFUNCTION;
DTC P0155: FRONT A/F SENSOR (BANK 2, SENSOR 1) HEATER CIRCUIT MALFUNCTION**

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), and the PCM

5. Turn the ignition switch OFF.
6. Check these fuses:
 - No. 19 OPTION (40A) fuse in the under-hood fuse/relay box.
 - No. 4 A/F SENSOR (15A) fuse in the under-dash fuse/relay box.
 - No. 23 IGP (7.5A) fuse in the under-dash fuse/relay box.

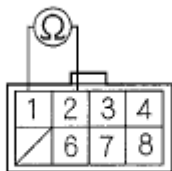
Are any of the fuses blown?

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

NO - Go to step 7.

7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Measure resistance between A/F sensor (Sensor 1) 8P connector terminals No. 1 and No. 2.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Terminal side of male terminals

Fig. 23: Measuring Resistance Between A/F Sensor (Sensor 1) 8P Connector Terminals No. 1 And 2

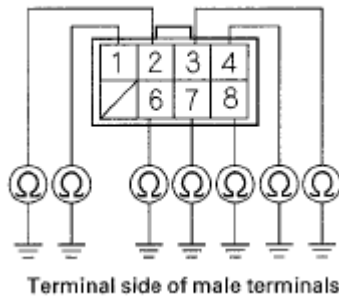
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 2.5-3.2 ohms at room temperature?

YES - Go to step 9.

NO - Go to step 22.

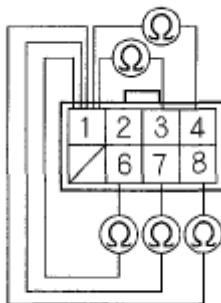
9. Check for continuity between each terminal at the A/F sensor (Sensor 1) 8P connector and body ground.

A/F SENSOR (SENSOR 1) 8P CONNECTOR**Fig. 24: Checking Continuity Between Terminal A/F Sensor (Sensor 1) 8P Connector And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Go to step 22.**NO** - Go to step 10.

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

A/F SENSOR (SENSOR 1) 8P CONNECTOR

Terminal side of male terminals

Fig. 25: Checking Continuity Between A/F Sensor (Sensor 1) 8P Connector Terminals 1 And 3, 4, 6, 7, And 8

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Go to step 22.**NO** - Go to step 11.

11. Jump the SCS line with the HDS.
12. Disconnect PCM connector A (31P).
13. Check for continuity between PCM connector terminal A7 (A6)* and body ground.

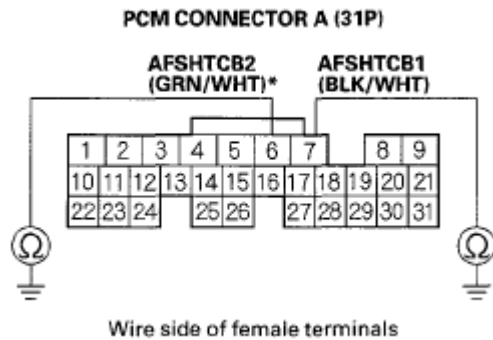


Fig. 26: Checking Continuity Between PCM Connector Terminal A7 (A6) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A7 (A6)*) and the A/F sensor (Sensor 1), then go to step 23.

NO - Go to step 14.

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

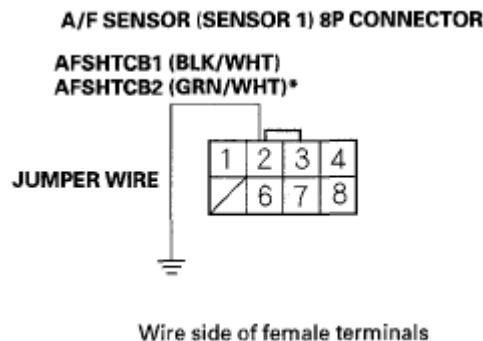


Fig. 27: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal No. 2 To Body Ground With Jumper Wire
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Check for continuity between PCM connector terminal A7 (A6)* and body ground.

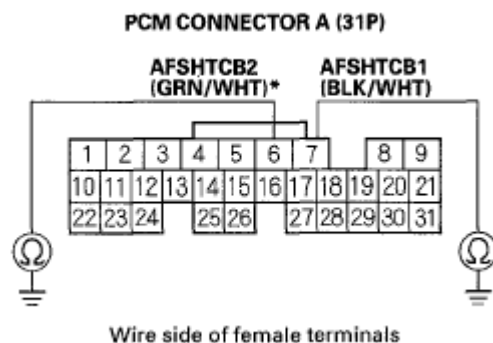


Fig. 28: Checking Continuity Between PCM Connector Terminal A7 (A6) And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 16.

NO - Repair open in the wire between the PCM (A7 (A6) *) and the A/F sensor (Sensor 1), then go to step 23.

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

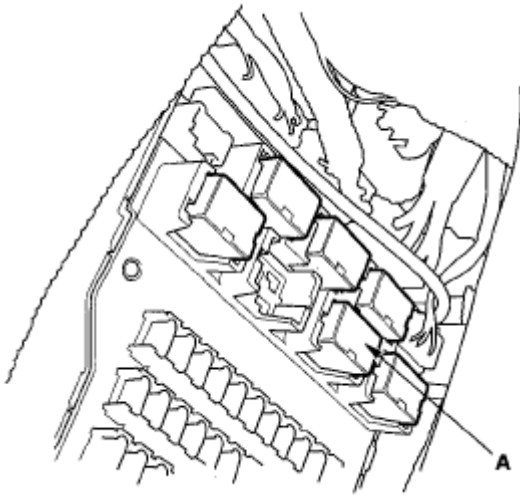


Fig. 29: Identifying A/F Sensor Relay (LAF) (A)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

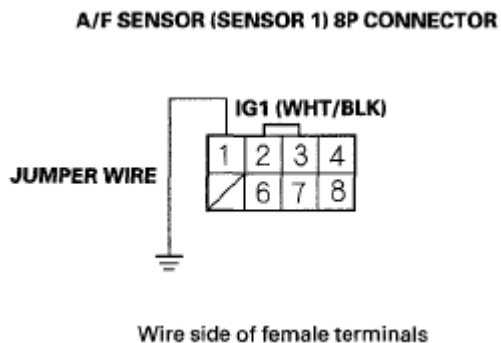
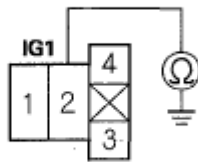


Fig. 30: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal No. 1 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

A/F SENSOR RELAY (LAF) 4P CONNECTOR

Terminal side of female terminals

Fig. 31: Checking Continuity Between A/F Sensor Relay (LAF) 4P Connector Terminal No. 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 (LAF), then go to step 23.

19. Disconnect PCM connector E (31P).
20. Check for continuity between PCM connector terminal E4 and A/F sensor relay (LAF) 4P connector terminal No. 4.

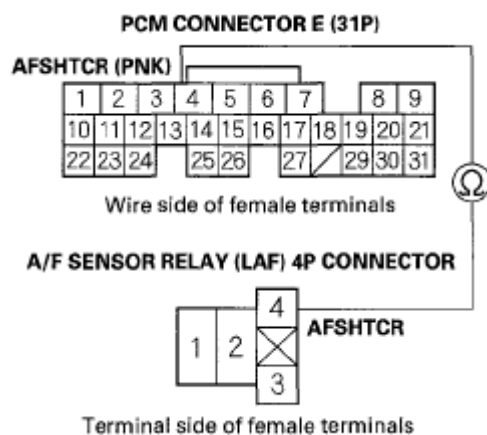


Fig. 32: Checking Continuity Between PCM Connector Terminal E4 And A/F Sensor Relay (LAF) 4P Connector Terminal No. 4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 21.

NO - Repair open in the wire between the PCM (E4) and the A/F sensor relay (LAF), then go to step 23.

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

Is the A/F sensor relay OK?

YES - Go to step 29.

NO - Replace the A/F sensor relay (LAF), then go to step 23.

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

Is DTC P0135 and/or P0155 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), the under-dash fuse/relay box, and the PCM, then go to step 1.

NO - Go to step 28.

28. Monitor the OBD STATUS for DTC P0135 and/or P01551 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), the under-dash fuse/relay box, and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

29. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
30. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0135 and/or P0155 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), the under-dash fuse/relay box, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 31.

31. Monitor the OBD STATUS for DTC P0135 and/or P0155* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the

original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 30, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1), the A/F sensor relay (LAF), the under-dash fuse/relay box, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

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

NOTE:

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

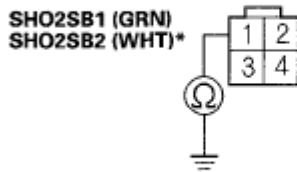
Does the voltage stay at 0.29 V or less?

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 B (24P).
12. Check for continuity between secondary HO2S (Sensor 2) 4P connector terminal No. 1 and body ground.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

Fig. 33: Checking Continuity Between Secondary HO2S (Sensor 2) 4P Connector Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B9 (B18)*) 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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Engine speed at 1,500-3,000 RPM
 - Drive 1 minute or more
21. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0137 and/or P0157 indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1.

NO - Go to step 22.

22. Monitor the OBD STATUS for DTC P0137 and/or P0157* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 21, go to the indicated DTCs troubleshooting

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 20.

23. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Engine speed at 1,500-3,000 RPM
 - Drive 1 minute or more
26. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0137 and/or P0157 indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 24. If the PCM was substituted, go to step 1.

NO - Go to step 27.

27. Monitor the OBD STATUS for DTC P0137 and/or P0157* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 26, go to the indicated DTCs troubleshooting

NO - If the screen indicates **FAILED**, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 24. If the PCM was substituted, go to step 1. If the screen indicates **NOT COMPLETED**, go to step 24.

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

NOTE:

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

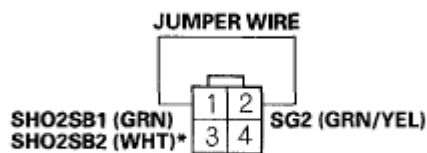
Does the voltage stay at 1.25 V or more?

YES - Go to step 5.

NO - Intermittent failure, the 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.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

Fig. 34: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminals No. 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.

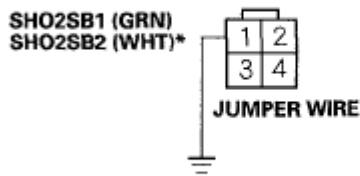
Does the voltage stay at 1.25 V or more?

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.

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

Fig. 35: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal No. 1 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

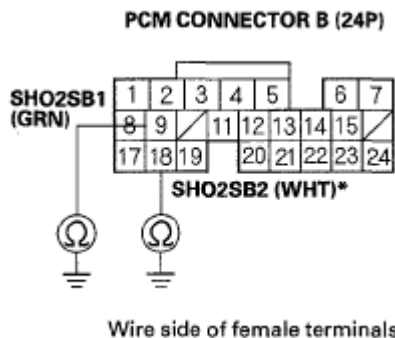
13. Turn the ignition switch ON (II).
14. Check the HO2S S2 in the DATA LIST with the HDS.

Does the voltage stay at 1.25 V or more?

YES - Go to step 15.

NO - Repair open in the wire between the PCM (C12) 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 B (24P).
18. Check for continuity between PCM connector terminal B9 (B18)* and body ground.



Wire side of female terminals

Fig. 36: Checking Continuity Between PCM Connector Terminal B9 (B18) 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 (B9 (B18)*) 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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Engine speed at 1,500-3,000 RPM
 - Drive 1 minute or more
27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0138 and/or P0158 indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1.

NO - Go to step 28.

28. Monitor the OBD STATUS for DTC P0138 and/or P0158* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTCs troubleshooting

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 25.

29. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Engine speed at 1,500-3,000 RPM
 - Drive 1 minute or more
32. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0138 and/or P0158 indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 30. If the PCM was substituted, go to step 1.

NO - Go to step 33.

33. Monitor the OBD STATUS for DTC P0138 and/or P0158* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 32, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 30. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 30.

**DTC P0139: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT SLOW RESPONSE;
DTC P0159: FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT 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**).
- 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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Vehicle speed between 35-55 mph (56-88 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, the 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 (ECT SENSOR 1) above 176°F (80°C)
 - Transmission in D position
 - Vehicle speed between 35-55 mph (56-88 km/h)
 - Drive 5 minutes or more
13. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0139 and/or P0159 indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1.

NO - Go to step 14.

14. Monitor the OBD STATUS for DTC P0139 and/or P01591 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTCs troubleshooting

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.

DTC P0141: REAR SECONDARY HO2S (BANK 1, SENSOR 2) HEATER CIRCUIT MALFUNCTION; DTC P0161: FRONT SECONDARY HO2S (BANK 2, SENSOR 2) HEATER CIRCUIT MALFUNCTION

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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, the system is OK at this time. Check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the A/F sensor relay (LAF), and the PCM

5. Turn the ignition switch OFF.
6. Check these fuses:
 - No. 19 OPTION (40A) fuse in under-hood fuse/relay box.
 - No. 4 A/F SENSOR (15A) fuse in under-dash fuse/relay box.
 - No. 23 IGP (7.5A) fuse in under-dash fuse/relay box.

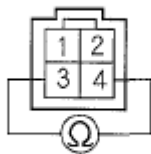
Are any of the fuses blown?

YES - Repair short in the wire between the A/F sensors, the A/F sensor relay (LAF), and the fuses, then replace the fuse(s), and go to step 22.

NO - Go to step 7.

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

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Terminal side of male terminals

Fig. 37: Measuring Resistance Between Secondary HO2S (Sensor 2) 4P Connector Terminals No. 3 And No. 4

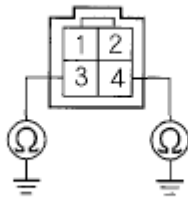
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 5.4-6.6 ohms at room temperature?

YES - Go to step 9.

NO - Go to step 21.

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

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR

Terminal side of male terminals

Fig. 38: 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 21.

NO - Go to step 10.

10. Jump the SCS line with the HDS.
11. Disconnect PCM connector A (31P).
12. Check for continuity between PCM connector terminal A9 (A8) * and body ground.

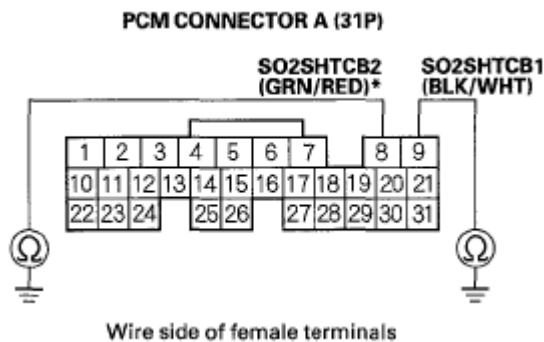


Fig. 39: Checking Continuity Between PCM Connector Terminal A9 (A8) And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

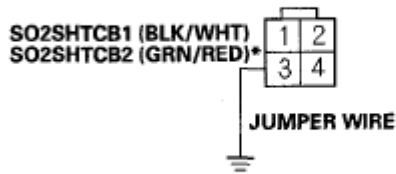
Is there continuity?

YES - Repair short in the wire between the PCM (E9 (E8)*) and the secondary HO2S (Sensor 2), then go to step 22.

NO - Go to step 13.

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

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR



Wire side of female terminals

Fig. 40: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal No. 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Check for continuity between PCM connector terminal A9 (A8)* and body ground.

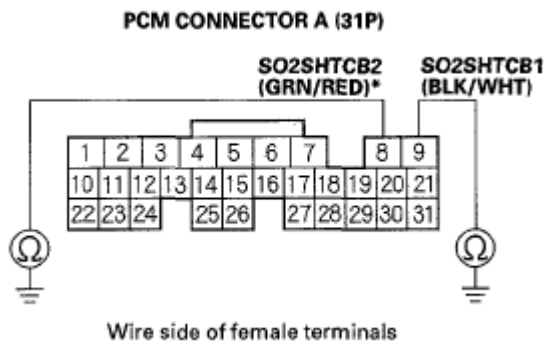


Fig. 41: Checking Continuity Between PCM Connector Terminal A9 (A8) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 15.

NO - Repair open in the wire between the PCM (A9 (A8)*) and the secondary HO2S (Sensor 2), then go to step 22.

15. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS**), then remove the A/F sensor relay (LAF) (A) from the under-dash fuse/relay box.

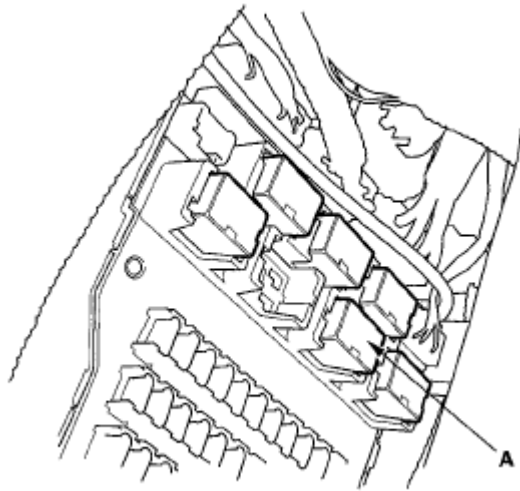
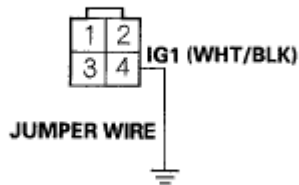


Fig. 42: Identifying A/F Sensor Relay (LAF)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

SECONDARY HO2S (SENSOR 2) 4P CONNECTOR

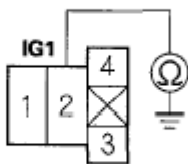


Wire side of female terminals

Fig. 43: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal No. 4 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

A/F SENSOR RELAY (LAF) 4P CONNECTOR



Terminal side of female terminals

Fig. 44: Checking Continuity Between A/F Sensor Relay (LAF) 4P Connector Terminal No. 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 A/F sensor (Sensor 1) and the A/F sensor relay (LAF), then go to step 22.

18. Disconnect PCM connector E (31P).
19. Check for continuity between PCM connector terminal E4 and A/F sensor relay (LAF) 4P connector terminal No. 4.

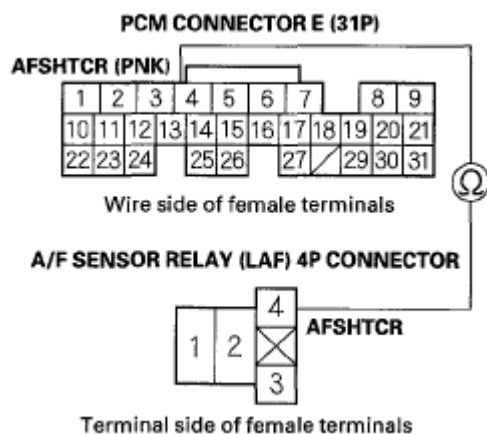


Fig. 45: Checking Continuity Between PCM Connector Terminal E4 And A/F Sensor Relay (LAF) 4P Connector Terminal No. 4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 20.

NO - Repair open in the wire between the PCM (E4) and the A/F sensor relay (LAF), then go to step 22.

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

Is the A/F sensor relay (LAF) OK?

YES - Go to step 28.

NO - Replace the A/F sensor relay (LAF), then go to step 22.

21. Replace the secondary HO2S (Sensor 2) (see **SECONDARY HO2S 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.

Is DTC P0141 and/or P0161 indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the A/F sensor relay (LAF), and the PCM, then go to step 1.

NO - Go to step 27.

27. Monitor the OBD STATUS for DTC P0141 and/or P0161 * in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 26, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the A/F sensor relay (LAF), and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

28. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
29. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0141 and/or P0161 indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the A/F sensor relay (LAF), and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 30.

30. Monitor the OBD STATUS for DTC P0141 and/or P0161* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 29, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2), the A/F sensor relay (LAF), and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

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

NOTE:

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

GENERAL TROUBLESHOOTING INFORMATION).

- 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, P1172, P1173, P2195, P2197, P2237, 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, P2270, P2271, P2272, P2273: 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

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

Is the fuel pressure OK?

YES - Check the valve clearances and adjust them if needed (DTC P0172 and 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 feed pipe, and the fuel filter. If they are all OK, replace the fuel pressure regulator (see **FUEL PRESSURE REGULATOR REPLACEMENT**), 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 (ECT SENSOR 1) above 158°F (70°C)
 - Transmission in D position
 - Drive at a steady speed between 25-55 mph (40-88 km/h) for 5 minutes, then drive at a steady speed between 15-75 mph (24-120 km/h) for 15 minutes.

NOTE: DTC P0171, P0172, P0174, and/or P0175 may take up to 80 minutes of test driving to set. Using the HDS, monitor the long term fuel trim (LT

FUEL TRIM) or the air fuel feed back average (AF FB AVE). If the long term fuel trim/air fuel feed back average stays within 0.86-1.17, there is no problem at this time.

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

Is DTC P0171, P0172, P0174, or P0175 indicated?

YES - Check for poor connections or loose terminals at the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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

Special Tools Required

- Pressure gauge adapter 07NAJ-P07010A
- A/T low pressure gauge w/panel 07406-0070301
- A/T pressure hose 07406-0020201
- A/T pressure hose, 2,210 mm 07MAJ-PY4011A
- A/T pressure adapter 07MAJ-PY40120
- Oil pressure hose 07ZAJ-S5AA200

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If the misfire is frequent enough to trigger detection of increased emissions during two consecutive driving cycles, the MIL will come on, and DTC P0300 (and some combination of P0301 through P0306) will be stored.**
- **If the misfire is frequent enough to damage the catalyst, the MIL will blink whenever the misfire occurs, and DTC P0300 (and some combination of P0301 through P0306) will be stored. When the misfire stops, the MIL will remain on.**
- **Troubleshoot the following DTCs first, if any of them were stored along with the random misfire DTC(s):**

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****P2646, P2647, P2648, P2649: VTEC system****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 5. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, wait for several minutes, then 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
 - VSS
 - TP SENSOR A
 - CLV (calculated load value)
 - ECT SENSOR 1
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 8. 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, the system is OK at this time

8. Turn the ignition switch OFF.

9. Check the fuel quality.

Is the quality good?

YES - Go to step 10.

NO - Drain the fuel tank (see **FUEL TANK DRAINING**), and fill it with a known-good fuel, then go to step 19.

10. Inspect the spark plugs (see **SPARK PLUG INSPECTION**). If the spark plugs are fouled or worn, replace them.

11. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

- ENGINE SPEED
- VSS
- TP SENSOR A
- CLV (calculated load value)
- ECT SENSOR 1

12. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

YES - Go to step 13.

NO - 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, then attach the rocker arm oil pressure switch (VTEC oil pressure switch) to the pressure gauge adapter (B).

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

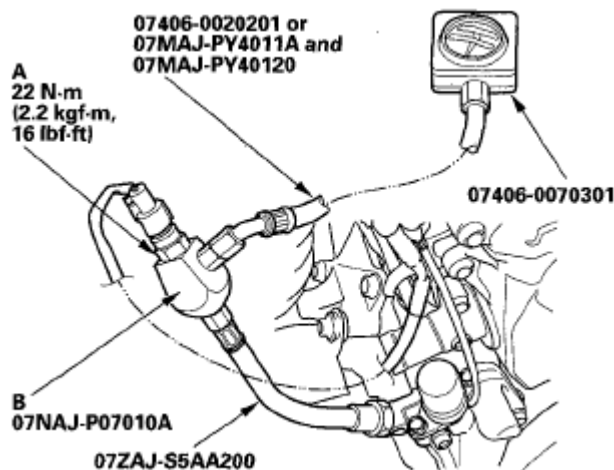


Fig. 46: Identifying Rocker Arm Oil Pressure Switch And Pressure Gauge Adapter With Torque Specifications

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 3000 RPM without load (in Park or neutral) until the radiator fan comes on.
18. Check the oil pressure at engine speeds of 1000 and 2000 RPM. Keep the measuring time as short as possible (less than 1 minute) because the engine is running without load.

Is the oil pressure below 49 kPa (0.5 kgf/cm² , 7 psi)?

YES - Check for air in the fuel line, then go to step 19.

NO - Inspect the VTEC system (see **VTEC ROCKER ARM TEST**), 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 **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN**).
24. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
 - ENGINE SPEED

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- VSS
- TP SENSOR A
- CLV (calculated load value)
- ECT SENSOR 1

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

Is DTC P0300 and any combination of DTC P0301, P0302, P0303, P0304, P0305, or P0306 indicated?

YES - Check for poor connections or loose terminals at the ignition coil, the injector, and the PCM, then go to step 1.

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. If any other Temporary DTCs or DTCs were indicated in step 25, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connection or loose terminals at the ignitions coil, the injector, 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 24.

DTC P0301: NO. 1 CYLINDER MISFIRE DETECTED; DTC P0302: NO. 2 CYLINDER MISFIRE DETECTED; DTC P0303: NO. 3 CYLINDER MISFIRE DETECTED; DTC P0304: NO. 4 CYLINDER MISFIRE DETECTED; DTC P0305: NO. 5 CYLINDER MISFIRE DETECTED; DTC P0306: NO. 6 CYLINDER MISFIRE DETECTED

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

1. Turn the ignition switch ON (II).
2. Do the DTC CLEAR in the CLEAR MENU with the HDS.
3. Start the engine (in Park or neutral), then let it idle without load.
4. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

Does the screen indicate FAILED?

YES - Go to step 9.

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

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5. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

YES - Go to step 9.

NO - Go to step 6.

6. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

- ENGINE SPEED
- VSS
- TP SENSOR A
- CLV (calculated load value)
- ECT SENSOR 1

7. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

Does the screen indicate FAILED?

YES - Go to step 9.

NO - If the screen indicates PASSED, go to step 9. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 8 and recheck.

8. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

YES - Go to step 9.

NO - Intermittent failure, the system is OK at this time. Check the fuel and ignition system circuit connectors for loose wires or poor connections

9. Turn the ignition switch OFF.
10. Exchange the ignition coil from the problem cylinder with one from another cylinder.
11. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
 - ENGINE SPEED
 - VSS
 - TP SENSOR A
 - CLV (calculated load value)
 - ECT SENSOR 1
12. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE,

and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

YES - Go to step 13.

NO - Intermittent misfire due to poor contact at the ignition coil connector (no misfire at this time). Check for poor connections or loose terminals at the ignition coils

13. Determine which cylinder had the misfire.

Does the misfire occur in the cylinder where the ignition coil was moved?

YES - Replace the faulty ignition coil (see **IGNITION COIL REMOVAL/INSTALLATION**), then go to step 55.

NO - Go to step 14.

14. Turn the ignition switch OFF.

15. Exchange the spark plug from the problem cylinder with one from another cylinder.

16. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

- ENGINE SPEED
- VSS
- TP SENSOR A
- CLV (calculated load value)
- ECT SENSOR 1

17. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

Does CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE show misfire counts?

YES - Go to step 18.

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

18. Determine which cylinder had the misfire.

Does the misfire occur in the cylinder where the spark plug was moved?

YES - Replace the faulty spark plug, then go to step 54.

NO - Go to step 19.

19. Turn the ignition switch OFF.

20. Exchange the injector from the problem cylinder with one from another cylinder.

21. Start the engine, and let it idle 2 minutes.
22. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
 - ENGINE SPEED
 - VSS
 - TP SENSOR A
 - CLV (calculated load value)
 - ECT SENSOR 1
23. 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 24.

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

24. Determine which cylinder had the misfire.

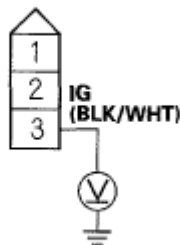
Does the misfire occur in the cylinder where the injector was exchanged?

YES - Replace the faulty injector (see **INJECTOR REPLACEMENT**), then go to step 55.

NO - Go to step 25.

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

IGNITION COIL 3P CONNECTOR



Wire side of female terminals

Fig. 47: Measuring Voltage Between Ignition Coil 3P Connector Terminal No. 3 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

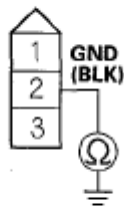
YES - Go to step 29.

NO - Repair open in the wire between the ignition coil and the ignition coil relay, then go to step 55.

29. Turn the ignition switch OFF.

30. Check for continuity between ignition coil 3P connector terminal No. 2 and body ground.

IGNITION COIL 3P CONNECTOR



Wire side of female terminals

Fig. 48: Checking Continuity Between Ignition Coil 3P Connector Terminal No. 2 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 31.

NO - Repair open in the wire between the ignition coil and G101, then go to step 55.

31. Turn the ignition switch OFF.

32. Jump the SCS line with the HDS.

33. Disconnect PCM connector A (31P).

34. Check for continuity between body ground and the appropriate PCM connector terminal (see **WIRE COLOR SPECIFICATION**).

WIRE COLOR SPECIFICATION

| PROBLEM CYLINDER | DTC | PCM TERMINAL | WIRE COLOR |
|------------------|-------|--------------|------------|
| No. 1 | P0301 | A20 | YEL/GRN |
| No. 2 | P0302 | A19 | BLU/RED |
| No. 3 | P0303 | A18 | WHT/BLU |
| No. 4 | P0304 | A17 | BRN |
| No. 5 | P0305 | A16 | BLK/RED |
| No. 6 | P0306 | A15 | BRN/WHT |

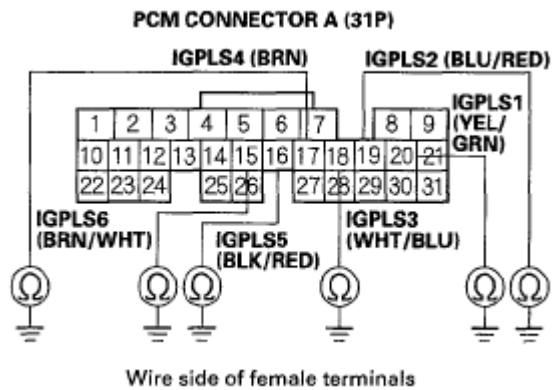


Fig. 49: Checking Continuity Between Body Ground And PCM Connector Terminal
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM and the ignition coil, then go to step 55.

NO - Go to step 35.

35. Connect appropriate ignition coil 3P connector terminal No. 1 to body ground with a jumper wire (see **WIRE COLOR SPECIFICATION**).

WIRE COLOR SPECIFICATION

| 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 |

IGNITION COIL 3P CONNECTOR

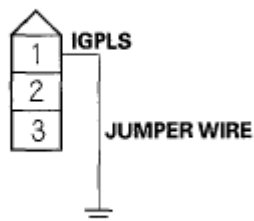


Fig. 50: Connecting Ignition Coil 3P Connector Terminal No. 1 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. Check for continuity between body ground and the appropriate PCM connector terminal (see **WIRE COLOR SPECIFICATION**).

WIRE COLOR SPECIFICATION

| PROBLEM CYLINDER | DTC | PCM TERMINAL | WIRE COLOR |
|------------------|-------|--------------|------------|
| No. 1 | P0301 | A20 | YEL/GRN |
| No. 2 | P0302 | A19 | BLU/RED |
| No. 3 | P0303 | A18 | WHT/BLU |
| No. 4 | P0304 | A17 | BRN |
| No. 5 | P0305 | A16 | BLK/RED |
| No. 6 | P0306 | A15 | BRN/WHT |

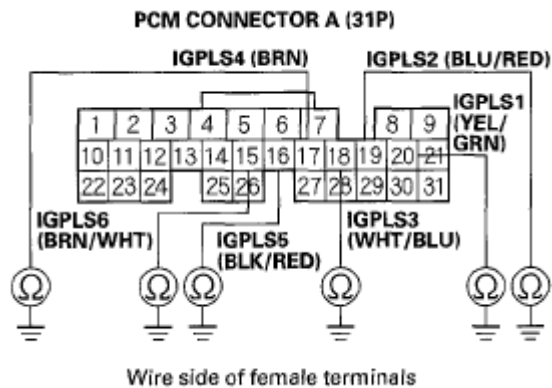


Fig. 51: Checking Continuity Between Body Ground And PCM Connector Terminal
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 37.

NO - Repair open in the wire between the PCM and the ignition coil, then go to step 55.

37. Reconnect the ignition coil 3P connector and PCM connector A (31P).

38. Do an engine compression and a cylinder leakdown test.

Did the engine pass both tests?

YES - Go to step 39.

NO - Repair the engine, then go to step 55.

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

Did the engine pass the test?

YES - Go to step 40.

NO - Repair the VTEC rocker arm, then go to step 55.

40. Turn the ignition switch OFF.

41. Jump the SCS line with the HDS.

42. Disconnect PCM connector A (31P).
43. Turn the ignition switch ON (II).
44. Measure voltage between body ground and the appropriate PCM connector terminal (see **WIRE COLOR SPECIFICATION**).

WIRE COLOR SPECIFICATION

| PROBLEM CYLINDER | DTC | PCM TERMINAL | WIRE COLOR |
|------------------|-------|--------------|------------|
| No. 1 | P0301 | A21 | BRN |
| No. 2 | P0302 | A31 | RED |
| No. 3 | P0303 | A30 | BLU |
| No. 4 | P0304 | A29 | YEL |
| No. 5 | P0305 | A28 | BLK/RED |
| No. 6 | P0306 | A27 | WHT/BLU |

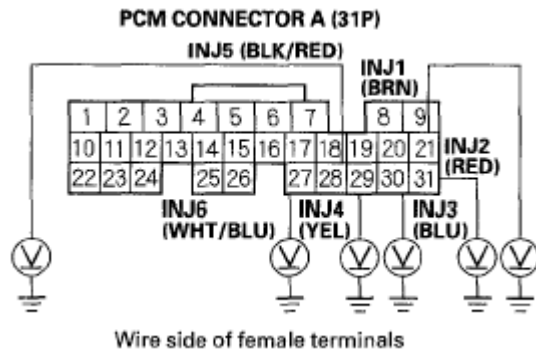


Fig. 52: Measuring Voltage Between Body Ground And PCM Connector Terminal
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

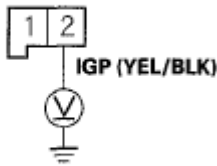
Is there battery voltage?

YES - Go to step 54.

NO - Go to step 45.

45. Turn the ignition switch OFF.
46. Remove the intake manifold (see **REMOVAL**).
47. Disconnect the injector 2P connector from the problem cylinder.
48. Turn the ignition switch ON (II).
49. Measure voltage between injector 2P connector terminal No. 2 and body ground.

INJECTOR 2P CONNECTOR



Wire side of female terminals

Fig. 53: Measuring Voltage Between Injector 2P Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 50.

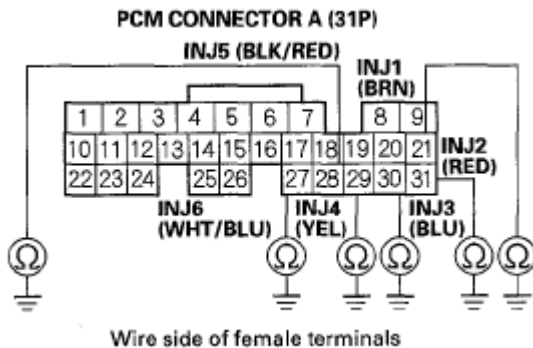
NO - Repair open in the wire between the injector and PGM-FI main relay 1 (FI MAIN), then go to step 55.

50. Turn the ignition switch OFF.

51. Check for continuity between body ground and the appropriate PCM connector terminal (see **WIRE COLOR SPECIFICATION**).

WIRE COLOR SPECIFICATION

| PROBLEM CYLINDER | DTC | PCM TERMINAL | WIRE COLOR |
|------------------|-------|--------------|------------|
| No. 1 | P0301 | A21 | BRN |
| No. 2 | P0302 | A31 | RED |
| No. 3 | P0303 | A30 | BLU |
| No. 4 | P0304 | A29 | YEL |
| No. 5 | P0305 | A28 | BLK/RED |
| No. 6 | P0306 | A27 | WHT/BLU |



Wire side of female terminals

Fig. 54: Checking Continuity Between Body Ground And 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 55.

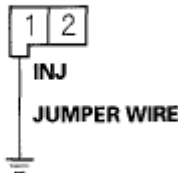
NO - Go to step 52.

52. Connect appropriate injector 2P connector terminal No. 1 to body ground with a jumper wire (see **WIRE COLOR SPECIFICATION**).

WIRE COLOR SPECIFICATION

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

INJECTOR 2P CONNECTOR



Wire side of female terminals

Fig. 55: Connecting Injector 2P Connector Terminal No. 1 To Body Ground With Jumper Wire
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

53. Check for continuity between body ground and the appropriate PCM connector terminal (see **WIRE COLOR SPECIFICATION**).

WIRE COLOR SPECIFICATION

| PROBLEM CYLINDER | DTC | PCM TERMINAL | WIRE COLOR |
|------------------|-------|--------------|------------|
| No. 1 | P0301 | A21 | BRN |
| No. 2 | P0302 | A31 | RED |
| No. 3 | P0303 | A30 | BLU |
| No. 4 | P0304 | A29 | YEL |
| No. 5 | P0305 | A28 | BLK/RED |
| No. 6 | P0306 | A27 | WHT/BLU |

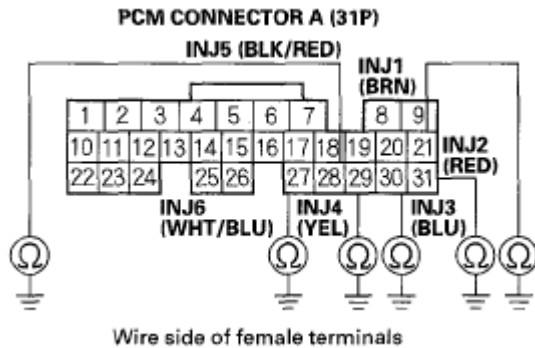


Fig. 56: Checking Continuity Between Body Ground And PCM Connector Terminal
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 54.

NO - Repair open in the wire between the PCM and the injector, then go to step 55.

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

INJECTOR 2P CONNECTOR



Terminal side of male terminals

Fig. 57: Measuring Resistance Between Injector 2P Connector Terminals No. 1 And No. 2
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 10-13 ohms?

YES - Go to step 65.

NO - Replace the injector (see **INJECTOR REPLACEMENT**), then go to step 55.

55. Reconnect all connectors.
56. Turn the ignition switch ON (II).
57. Reset the PCM with the HDS.
58. Clear the CKP pattern with the HDS.
59. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
60. Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN**).
61. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

- ENGINE SPEED
- VSS
- TP SENSOR A
- CLV (calculated load value)
- ECT SENSOR 1

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

Is DTC P0301, P0302, P0303, P0304, P0305, or P0306 indicated?

YES - Check for poor connections or loose terminals at the ignition coil, the injector, and the PCM, then go to step 1.

NO - Go to step 63.

63. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 63, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the ignition coil, the injector, 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 61.

64. Reconnect all connectors.

65. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).

66. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

- ENGINE SPEED
- VSS
- REL TP SENSOR
- CLV (calculated load value)
- GEAR POSITION
- ECT SENSOR 1

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

Is DTC P0301, P0302, P0303, P0304, P0305, or P0306 indicated?

YES - Check for poor connections or loose terminals at the ignition coil, the injector, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 66. If the PCM was substituted, go to step 1.

NO - Go to step 68.

68. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 67, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the ignition coil, the injector, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 67. If the PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 67.

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.

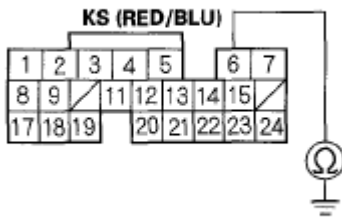
Is DTC P0325 indicated?

YES - Go to step 6.

NO - Intermittent failure, the 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 B (24P).
10. Check for continuity between PCM connector terminal B6 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

Fig. 58: Checking Continuity Between PCM Connector Terminal B6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

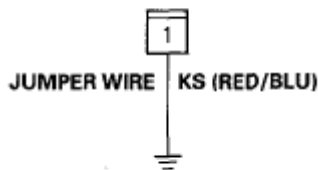
Is there continuity?

YES - Repair short in the wire between the PCM (B6) and the knock sensor, then go to step 17.

NO - Go to step 11.

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

KNOCK SENSOR SUBHARNESS 1P
CONNECTOR

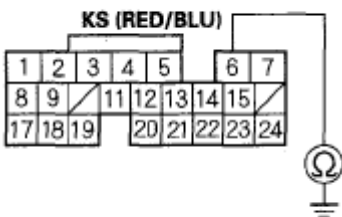


Wire side of female terminals

Fig. 59: Connecting Knock Sensor Subharness 1P Connector Terminal To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Check for continuity between PCM connector terminal B6 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

Fig. 60: Checking Continuity Between PCM Connector Terminal B6 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 (B6) and the knock sensor, then go to step 17.

13. Remove the intake manifold (see **REMOVAL**).
14. Check the knock sensor subharness 1P connector and the knock sensor for an open or short.

Is the harness OK?

YES - Go to step 15.

NO - Repair the knock sensor subharness, then go to step 17.

15. Replace the knock sensor (see **KNOCK SENSOR REPLACEMENT**).
16. Install the intake manifold (see **INSTALLATION**).
17. Reconnect all connectors.
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. Hold the engine speed at 3,000-4,000 RPM for at least 10 seconds.
22. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0325 indicated?

YES - Check for poor connections or loose terminals at the knock sensor and the PCM, then go to step 1.

NO - Go to step 23.

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

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 22, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the knock sensor and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 21.

24. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
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. Hold the engine speed at 3,000-4,000 RPM for at least 10 seconds.
27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0325 indicated?

YES - Check for poor connections or loose terminals at the ignition coil, the injector, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 26. If the PCM was substituted, go to step 1.

NO - Go to step 28.

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

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 27, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the ignition coil, the injector, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 26. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 26.

DTC P0335: CKP SENSOR A NO SIGNAL; DTC P0385: 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.

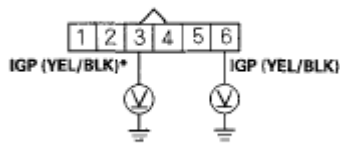
Is DTC P0335 and/or P0385 indicated?

YES - Go to step 5.

NO - Intermittent failure, the 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.

CKP SENSOR A/B 6P CONNECTOR



Wire side of female terminals

Fig. 61: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminal No. 6 (No. 3) And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

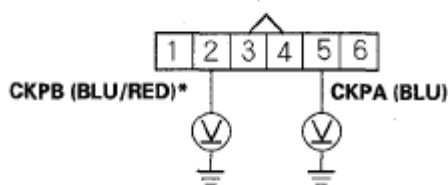
Is there battery voltage?

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.

CKP SENSOR A/B 6P CONNECTOR



Wire side of female terminals

Fig. 62: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminal No. 5 (No. 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)*.

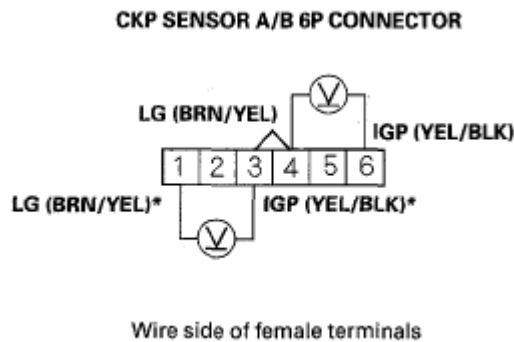


Fig. 63: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminals No. 4 (No. 1) And 6 (No. 3)

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. Measure voltage between PCM connector terminal B17(B1)* and body ground.

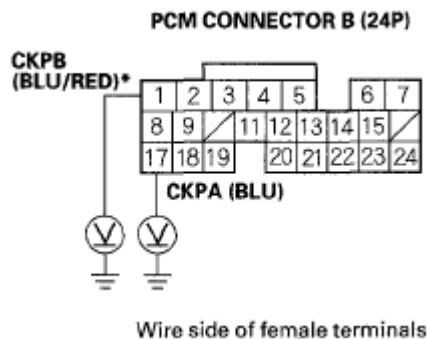


Fig. 64: Measuring Voltage Between PCM Connector Terminal B17(B1) And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair open in the wire between the PCM (B17 (B1)*) and CKP sensor A/B, 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 B (24P).
15. Check for continuity between PCM connector terminal B17 (B1)* and body ground.

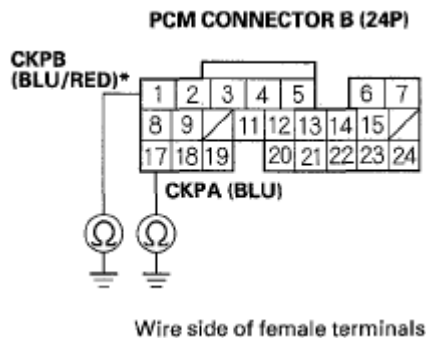


Fig. 65: Checking Continuity Between PCM Connector Terminal B17 (B1) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B17 (B1)*) and CKP sensor A/B, then go to step 18.

NO - Go to step 26.

16. Turn the ignition switch OFF.
17. Replace CKP sensor A/B (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 **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN**).
24. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0335 and/or P0385 indicated?*

YES - Check for poor connections or loose terminals at CKP sensor A/B and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

25. Reconnect all connectors.
26. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0335 and/or P0385 indicated?*

YES - Check for poor connections or loose terminals at CKP sensor A/B and the PCM. If the PCM

was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0339: CKP SENSOR A CIRCUIT INTERMITTENT INTERRUPTION; DTC P0389: CKP SENSOR B CIRCUIT 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. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
 - ENGINE SPEED
 - VSS
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0339 and/or P0389 indicated?*

YES - Go to step 5.

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

5. 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 6.

NO - Repair the connectors or terminals, then go to step 9.

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

Is there damage?

YES - Replace CKP sensor A/B pulse plate/timing belt drive pulley (see **TIMING BELT DRIVE**

PULLEY REPLACEMENT), then go to step 9.

NO - Go to step 7.

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

Is DTC P0339 and/or P0389 indicated?*

YES - Check for poor connections or loose terminals at CKP sensor A/B and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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).**

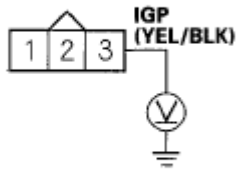
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0340 indicated?

YES - Go to step 5.

NO - Intermittent failure, the 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.

CMP SENSOR 3P CONNECTOR

Wire side of female terminals

Fig. 66: Measuring Voltage Between CMP Sensor 3P Connector Terminal No. 3 And Body Ground

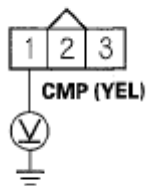
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

CMP SENSOR 3P CONNECTOR

Wire side of female terminals

Fig. 67: Measuring Voltage Between CMP Sensor 3P Connector Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

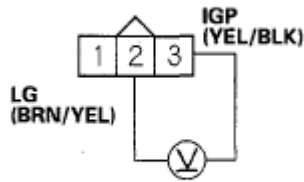
Is there about 5 V?

YES - Go to step 10.

NO - Go to step 11.

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

CMP SENSOR 3P CONNECTOR



Wire side of female terminals

Fig. 68: Measuring Voltage Between CMP Sensor 3P Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

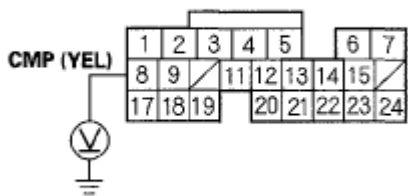
Is there battery voltage?

YES - Go to step 16.

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

11. Measure voltage between PCM connector terminal B8 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

Fig. 69: Measuring Voltage Between PCM Connector Terminal B8 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair open in the wire between the PCM (B8) and the CMP sensor, 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 B (24P).
15. Check for continuity between PCM connector terminal B8 and body ground.

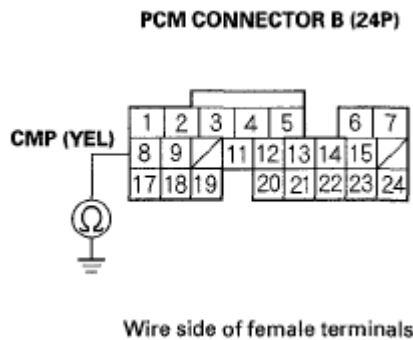


Fig. 70: Checking Continuity Between PCM Connector Terminal B8 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B8) and the CMP sensor, then go to step 18.

NO - Go to step 26.

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. 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 **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN**).
24. Start the engine.
25. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0340 indicated?

YES - Check for poor connections or loose terminals at the CMP sensor and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

26. Reconnect all connectors.
27. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
28. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0340 indicated?

YES - Check for poor connections or loose terminals at the CMP sensor and the PCM. If the PCM

was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle 10 seconds.
4. Check the CMP NOISE 2 count in the DATA LIST with the HDS.

Are 0 counts indicated?

YES - Go to step 7.

NO - Go to step 5.

5. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
 - ENGINE SPEED
 - VSS
6. Check the CMP NOISE 2 count in the DATA LIST with the HDS.

Are 0 counts indicated?

YES - Go to step 7.

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

7. 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 8.

NO - Reconnect or repair the connectors or terminals, then go to step 11.

8. 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 **CAMSHAFT, ROCKER ARM ASSEMBLY, CAMSHAFT SEAL, AND PULLEY INSTALLATION**), then go to step 11.

NO - Go to step 9.

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

Is DTC P0344 indicated?

YES - Check for poor connections or loose terminals at the CMP sensor and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0562: CHARGING SYSTEM LOW VOLTAGE

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**).
- If any high current load accessories are installed, this DTC can beset.
- If DTC P16BB and/or P16BC is stored at the same time as DTC P0562, troubleshoot DTC P16BB and/or P16BC first, then recheck for DTC P0562.

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check under these conditions:
 - A/Con
 - Temperature control at maximum cool

- Blower fan at maximum speed
 - Rear window defogger on
 - Headlights on high beam
5. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
 6. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0562 indicated?

YES - Replace the alternator (see **ALTERNATOR REMOVAL AND INSTALLATION**), then go to step 7.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, and check the battery performance (see **BATTERY TEST**)

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.
11. Check under these conditions:
 - A/Con
 - Temperature control at maximum cool
 - Blower fan at maximum speed
 - Rear window defogger on
 - Headlights on high beam
12. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
13. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0562 indicated?

YES - Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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, the system is OK at this time. Check for poor connections or loose terminals at PGM-FI main relay 1 (FI MAIN) and the No. 8 FI ECU (PCM) (15A) fuse in the under-hood fuse/relay box and the PCM.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector E (31P).
10. Measure voltage between PCM connector terminal E5 and body ground.

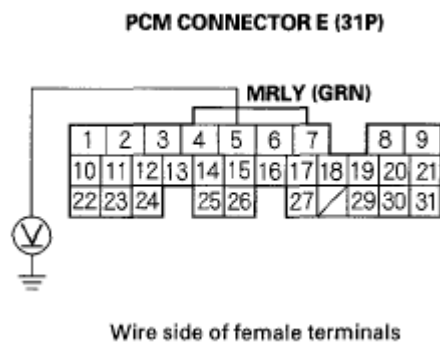


Fig. 71: Measuring Voltage Between PCM Connector Terminal E5 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 13.

NO - Go to step 11.

11. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS**). Then remove PGM-FI main relay 1 (FI MAIN) (A) from the under-dash fuse/relay box.

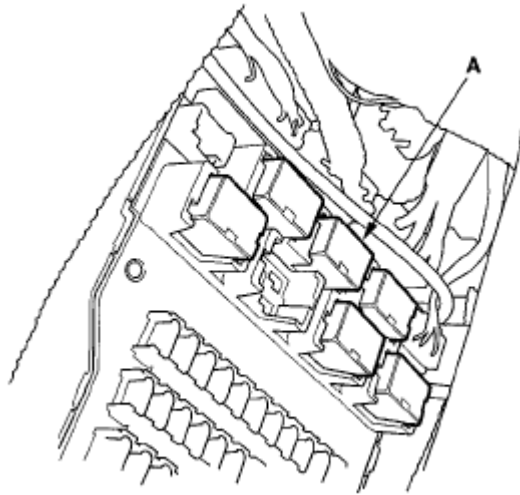


Fig. 72: Identifying PGM-FI Main Relay 1 (FI MAIN)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Check for continuity between PCM connector terminal E5 and body ground.

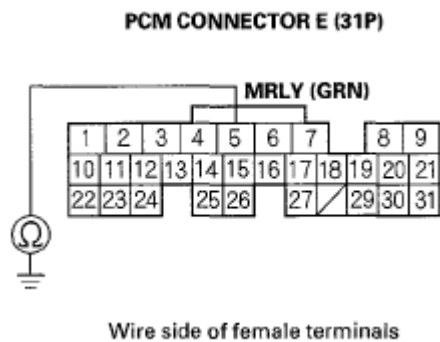


Fig. 73: Checking Continuity Between PCM Connector Terminal E5 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (E5) and PGM-FI main relay 1 (FI MAIN), then go to step 20.

NO - Go to step 19.

13. Reconnect PCM connector E (31P).
14. Measure voltage between PCM connector terminal E5 and body ground.

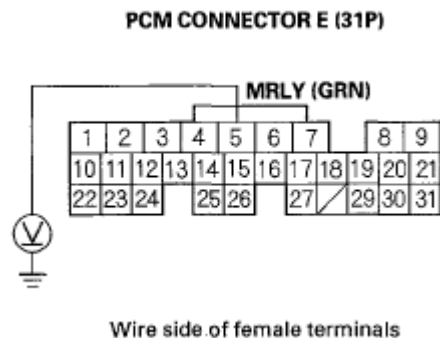


Fig. 74: Measuring Voltage Between PCM Connector Terminal E5 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 15.

NO - Go to step 27.

15. Disconnect PCM connector A (31P).

16. Measure voltage between PCM connector terminal A4 and body ground.

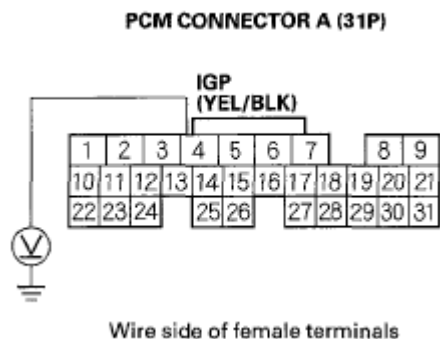


Fig. 75: Measuring Voltage Between PCM Connector Terminal A4 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 17.

NO - Go to step 27.

17. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS**). Then remove PGM-FI main relay 1 (FI MAIN) (A) from the under-dash fuse/relay box.

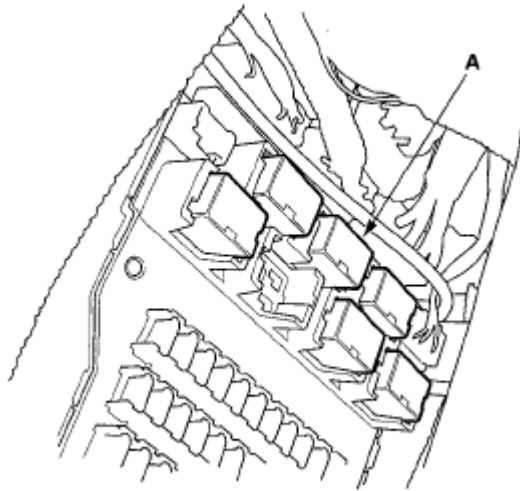


Fig. 76: Identifying PGM-FI Main Relay 1 (FI MAIN)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Measure voltage between PCM connector terminal A4 and body ground.

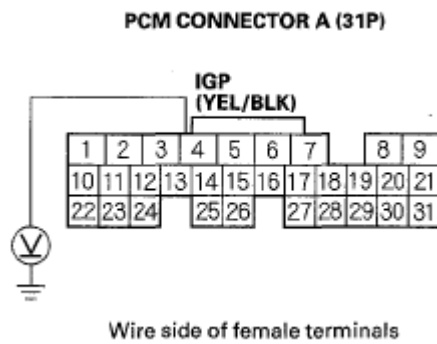


Fig. 77: Measuring Voltage Between PCM Connector Terminal A4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair short to power in the wire between the PCM (A4) and PGM-FI main relay 1 (FI MAIN), then go to step 20.

NO - Go to step 19.

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

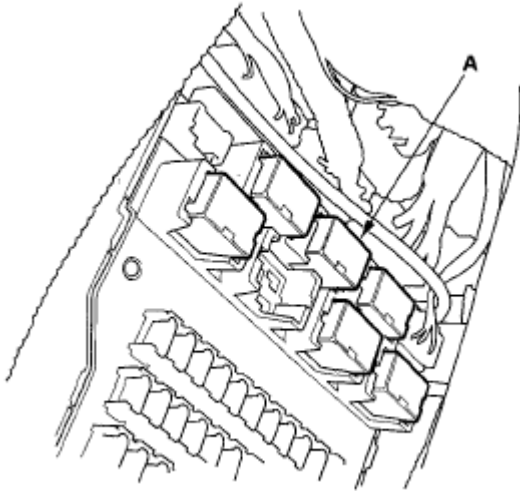


Fig. 78: Identifying PCM (A4) And PGM-FI Main Relay 1 (FI MAIN)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Reconnect all connectors.
21. Turn the ignition switch ON (II).
22. Reset the PCM with the HDS.
23. Turn the ignition switch OFF.
24. Wait for 10 seconds.
25. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
26. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0563 indicated?

YES - Check for poor connections or loose terminals at PGM-FI main relay 1 (FI MAIN) and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

27. Reconnect all connectors.
28. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **BATTERY TEST**).
29. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0563 indicated?

YES - Check for poor connections or loose terminals at PGM-FI main relay 1 (FI MAIN) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0602: PCM PROGRAMMING ERROR**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 indicated when update is not completed.
- Do not turn the ignition switch OFF while updating the PCM. If you turn the ignition switch OFF before completion, the PCM can be damaged.

1. Do the PCM update procedure (see UPDATING THE PCM).
2. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0602 indicated?

YES - Replace the original PCM (see PCM REPLACEMENT).

NO - The update is complete

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 - Go to step 4.

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

4. Update the PCM if it does not have the latest software (see UPDATING THE PCM), or substitute a known-good PCM (see SUBSTITUTING THE PCM).
5. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0603 indicated?

YES - If the PCM was updated, substitute a known-good PCM (see SUBSTITUTING THE PCM), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see PCM REPLACEMENT). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0630: VIN NOT PROGRAMMED OR MISMATCH

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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 - Do the troubleshooting for P0603 (see **DTC P0603: PCM INTERNAL CONTROL MODULE KEEP ALIVE MEMORY (KAM) ERROR**)

NO - Go to step 9.

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.

Is DTC P0603 indicated?

YES - Go to step 9.

NO - Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

9. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
10. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0630 indicated?

YES - If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P0685: PCM INTERNAL CIRCUIT MALFUNCTION (POWER CONTROL CIRCUIT)

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.

Is DTC P0685 indicated?

YES - Go to step 4.

NO - Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

4. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
5. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0685 indicated?

YES - If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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**).**
- **This 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 DTCs troubleshooting.

DTC P1109: BARO SENSOR CIRCUIT OUT OF RANGE HIGH

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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 - Go to step 4.

NO - Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

4. Update the PCM if it does not have the latest software (see UPDATING THE PCM), or substitute a known-good PCM (see SUBSTITUTING THE PCM).
5. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1109 indicated?

YES - If the PCM was updated, substitute a known-good PCM (see SUBSTITUTING THE PCM), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see PCM REPLACEMENT). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P1116: ECT SENSOR 1 CIRCUIT RANGE/PERFORMANCE PROBLEM

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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 ECT sensor 1 and ECT sensor 2.

Are the connections and terminals OK?

YES - Go to step 2.

NO - Repair the connectors or terminals, then go to step 27.

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

Are DTC P1116 and P2183 indicated at the same time?

YES - Go to step 15.

NO - Go to step 4.

4. Start the engine, and let it idle 10 minutes.
5. Check ECT SENSOR 1 in the DATA LIST with the HDS.

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

YES - Replace ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**), then go to step 27.

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Drain the coolant (see **COOLANT CHECK**).
8. Remove ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**).
9. Allow ECT sensor 1 to cool to 77°F (25°C).
10. Note the ambient temperature.
11. Connect ECT sensor 1 to its 2P connector, but do not install it into the engine.
12. Turn the ignition switch ON (II).
13. Note the value of ECT SENSOR 1 quickly in the DATA LIST with the HDS.
14. Compare the value of ECT SENSOR 1 and the outside temperature.

Does the value of ECT SENSOR 1 differ 5.4°F (3°C) or more?

YES - Replace ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**), then go to step 27.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM

15. Start the engine, and let it idle for 10 minutes.
16. Check ECT SENSOR 1 in the DATA LIST with the HDS.

Is about 118°F (48°C) or less, or 1.75 V or more indicated?

YES - Replace ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**), then go to step 27.

NO - Go to step 17.

17. Let the engine idle 10 minutes.
18. Check ECT SENSOR 2 in the DATA LIST with the HDS.

Is about 131°F (55°C) or less, or 1.50 V or more indicated?

YES - Replace ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**), then go to step 27.

NO - Go to step 19.

19. Turn the ignition switch OFF.
20. Drain the coolant (see **COOLANT CHECK**).
21. Remove ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**), and ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**).
22. Allow the sensors to cool to 77°F (25°C).
23. Note the ambient temperature.
24. Connect ECT sensor 1 to its 2P connector and ECT sensor 2 to its 2P connector, but do not install them onto the engine.
25. Note the value of ECT SENSOR 1 and ECT SENSOR 2 quickly in the DATA LIST with the HDS.
26. Compare the value of ECT SENSOR 1 and the ambient temperature, and the value of ECT SENSOR 2 and the ambient temperature individually.

Does either sensor differ more than 5.4°F (3°C) from the ambient temperature?

YES - Replace the sensor that differed more than 5.4°F (3°C) from the ambient temperature, then go to step 27.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM

27. Turn the ignition switch ON (II).
28. Reset the PCM with the HDS.
29. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
30. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0116 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P1128: MAP SENSOR SIGNAL LOWER THAN EXPECTED

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

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

Is there less than 54.1 kPa (16.0 in.Hg, 406 mmHg) or 1.61 V held for more than 5 seconds?

YES - Go to step 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 (ECT SENSOR 1) above 158°F (70°C)
 - Engine speed between 1,400 and 6,500 RPM
 - Transmission in D position
 - Vehicle speed accelerated from 16-31 mph (25-50 km/h) under half throttle
6. Monitor the OBD STATUS for DTC P1128 in the DTCs MENU with the HDS.

Does the screen indicate FAILED?

YES - Go to step 7.

NO - If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the PCM. If the screen indicates NOT COMPLETED, go to step 4 and recheck.

7. Turn the ignition switch OFF.
8. Replace the MAP sensor (see **MAP SENSOR REPLACEMENT**).
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 (ECT SENSOR 1) above 158°F (70°C)
 - Engine speed between 1,400 and 6,500 RPM
 - Transmission in D position
 - Vehicle speed accelerated from 16-31 mph (25-50 km/h) under half throttle
14. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1128 indicated?

YES - Check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1.

NO - Go to step 15.

15. Monitor the OBD STATUS for DTC P1128 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTCs troubleshooting

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 13.

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
- Intake manifold
- Brake booster
- Brake booster hose

Are there any vacuum leaks?

YES - Repair or replace parts with vacuum leaks, then go to step 9.

NO - Go to step 2.

2. Start the engine. Hold the engine speed at 3,000 RPM without load (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 there more than 36.9 kPa (11.0 in.Hg, 277 mmHg) or 1.14 V held for more than 5 seconds?

YES - Go to step 7.

NO - Go to step 4.

4. Clear the DTC with the HDS.
5. Test-drive under these conditions:
 - Engine coolant temperature (ECT SENSOR 1) above 158°F (70°C)
 - Engine speed between 1,400 and 6,500 RPM
 - Transmission in D position
 - Vehicle speed 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, the 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 **MAP SENSOR REPLACEMENT**).
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 (ECT SENSOR 1) above 158°F (70°C)
 - Engine speed between 1,400 and 6,500 RPM
 - Transmission in D position
 - Vehicle speed 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.

Is DTC P1129 indicated?

YES - Check for poor connections or loose terminals at the MAP sensor and the PCM, then go to step 1.

NO - Go to step 15.

15. Monitor the OBD STATUS for DTC P1129 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 14, go to the indicated DTCs troubleshooting

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 13.

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

NOTE:

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

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, the 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 without 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.

Is DTC P1172 and/or P1174 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 12.

12. Monitor the OBD STATUS for DTC P1172 and/or P1174* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 11, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates EXECUTING or OUT OF CONDITION, keep idling until a result comes on.

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, the 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 E (31P).
10. Check for continuity between PCM connector terminal E18 and body ground.

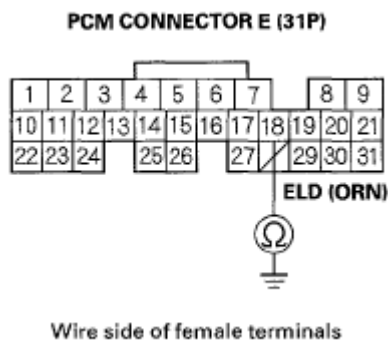


Fig. 79: Checking Continuity Between PCM Connector Terminal E18 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (E18) and the ELD, then go to step 13.

NO - Go to step 20.

11. Turn the ignition switch OFF.
12. Replace the under-hood fuse/relay box (see **REMOVAL AND INSTALLATION**).
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. Start the engine.
18. Turn on the headlights.
19. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1297 indicated?

YES - Check for poor connections or loose terminals at the ELD unit and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

20. Reconnect all connectors.
21. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
22. Start the engine.
23. Turn on the headlights.
24. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1297 indicated?

YES - Check for poor connections or loose terminals at the ELD unit and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 22. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P1298: ELD CIRCUIT HIGH VOLTAGE

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

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

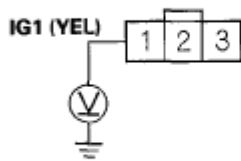
Is 0.2 A or less indicated?

YES - Go to step 3.

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

ELD 3P CONNECTOR



Wire side of female terminals

Fig. 80: Measuring Voltage Between ELD 3P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

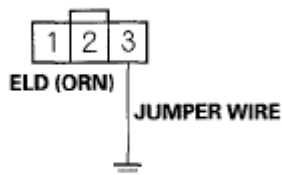
Is there battery voltage?

YES - Go to step 7.

NO - Repair open in the wire between the No. 18 ACG (15A) fuse and the ELD, then go to step 14.

7. Turn the ignition switch OFF.
8. Connect ELD 3P connector terminal No. 3 to body ground with a jumper wire.

ELD 3P CONNECTOR



Wire side of female terminals

Fig. 81: Connecting ELD 3P Connector Terminal No. 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Jump the SCS line with the HDS.
10. Disconnect PCM connector E (31P).
11. Check for continuity between PCM connector terminal E18 and body ground.

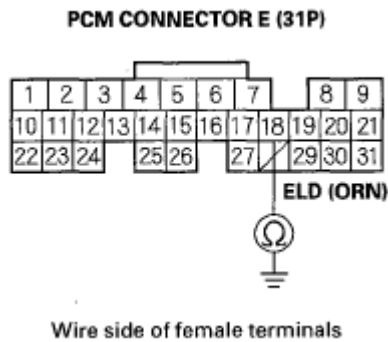


Fig. 82: Checking Continuity Between PCM Connector Terminal E18 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 12.

NO - Repair open in the wire between the PCM (E18) and the ELD, then go to step 14.

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

ELD 3P CONNECTOR

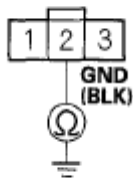


Fig. 83: Checking Continuity Between ELD 3P Connector Terminal No. 2 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 13.

NO - Repair open in the wire between the ELD and G301, then go to step 14.

13. Replace the under-hood fuse/relay box (see **REMOVAL AND INSTALLATION**).
14. Reconnect all connectors.
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.

Is DTC P1298 indicated?

YES - Go to step 19.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

19. Reconnect all connectors.
20. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
21. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1298 indicated?

YES - Check for poor connections or loose terminals at the ELD unit and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P1549: CHARGING SYSTEM HIGH VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**).**
- **If a high voltage battery (24 V, etc.) is connected to the vehicle, this DTC can be stored.**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check under these conditions:
 - A/C off
 - Headlights off
 - Rear window defogger off
5. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
6. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1549 indicated?

YES - Replace the alternator (see **ALTERNATOR REMOVAL AND INSTALLATION**), then go to step 7.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box

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.
11. Check under these conditions:
 - A/C off
 - Headlights off
 - Rear window defogger off
12. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
13. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1549 indicated?

YES - Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P16BB: ALTERNATOR B TERMINAL CIRCUIT LOW VOLTAGE

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

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine.
4. Check under these conditions:
 - A/Con
 - Temperature control on maximum cool
 - Blower fan at maximum speed
 - Rear window defogger on
 - Headlights on high beam
5. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
6. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BB indicated?

YES - Go to step 7.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, and check the battery performance (see **BATTERY TEST**)

7. Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box

Are the connections and terminals OK?

YES - Go to step 8.

NO - Reconnect or repair the connectors or terminals, then go to step 9.

8. Check for an open in the wire between the alternator and under-hood fuse/relay box at the starter subharness.

Is the harness OK?

YES - Replace the alternator (see **ALTERNATOR REMOVAL AND INSTALLATION**), then go to step 9.

NO - Repair open in the wire between the alternator and the under-hood fuse/relay box, then go to step 9.

9. Turn the ignition switch 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.
13. Check under these conditions:
 - A/Con
 - Temperature control on maximum cool
 - Blower fan at maximum speed
 - Rear window defogger on
 - Headlights on high beam
14. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
15. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BB indicated?

YES - Check for poor connections or loose terminals at the alternator and the under-hood fuse/relay box, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P16BC: ALTERNATOR FR TERMINAL CIRCUIT/IGP CIRCUIT LOW VOLTAGE

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

1. Check for poor connections at the alternator 4P connector.

Are the connections OK?

YES - Go to step 2.

NO - Reconnect or repair the connector, then go to step 19.

2. Turn the ignition switch ON (II).
3. Clear the DTC with the HDS.
4. Start the engine.
5. Check under these conditions:
 - A/C on
 - Temperature control on maximum cool
 - Blower fan at maximum speed
 - Rear window defogger on
 - Headlights on high beam
6. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
7. Check for Temporary DTCs or DTCs with the HDS.

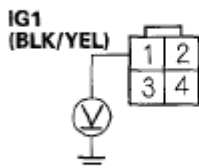
Is DTC P16BC indicated?

YES - Go to step 8.

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

8. Turn the ignition switch OFF.
9. Disconnect the alternator 4P connector.
10. Turn the ignition switch ON (II).
11. Measure voltage between alternator 4P connector terminal No. 1 and body ground.

ALTERNATOR 4P CONNECTOR



Wire side of female terminals

Fig. 84: Measuring Voltage Between Alternator 4P Connector Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

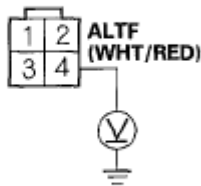
Is there battery voltage?

YES - Go to step 12.

NO - Repair open in the wire between the alternator (IG1 line) and the No. 18 ACG (15A) fuse in the driver's under-dash fuse/relay box, then go to step 18.

12. Measure voltage between alternator 4P connector terminal No. 4 and body ground.

ALTERNATOR 4P CONNECTOR



Wire side of female terminals

Fig. 85: Measuring Voltage Between Alternator 4P Connector Terminal No. 4 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

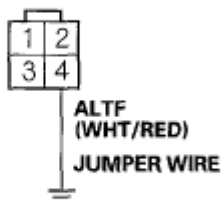
Is there about 5 V?

YES - Replace the alternator (see **ALTERNATOR REMOVAL AND INSTALLATION**), then go to step 18.

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Jump the SCS line with the HDS.
15. Disconnect PCM connector A (31P).
16. Connect alternator 4P connector terminal No. 4 to body ground with a jumper wire.

ALTERNATOR 4P CONNECTOR



Wire side of female terminals

Fig. 86: Connecting Alternator 4P Connector Terminal No. 4 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Check for continuity between PCM connector terminal A12 and body ground.

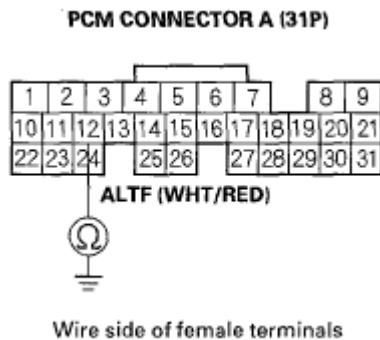


Fig. 87: Checking Continuity Between PCM Connector Terminal A12 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 26.

NO - Repair open in the wire between the PCM (A12) and the alternator, then go to step 18.

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 under these conditions:
 - A/Con
 - Temperature control on maximum cool
 - Blower fan at maximum speed
 - Rear window defogger on
 - Headlights on high beam
24. Hold the engine speed at 2,000 RPM (in Park or neutral) for 1 minute.
25. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BC indicated?

YES - Check for poor connections or loose terminals at the alternator and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

26. Reconnect all connectors.
27. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
28. Start the engine.
29. Check under these conditions:
 - A/C on

- Temperature control at maximum cool
- Blower fan at maximum speed
- Headlights on high beam

30. Hold the engine speed at 2,000 RPM (in Park or neutral) 1 minute.
31. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BC indicated?

YES - Check for poor connections or loose terminals at the alternator and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 28. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P16BD: STARTER RELAY 2 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 and wait 5 seconds.
3. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BD indicated?

YES - Go to step 4.

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

4. Replace starter relay 2.
5. Reset the PCM with the HDS.
6. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
7. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BD indicated?

YES - Check for poor connections or loose terminals at starter relay 2 and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P16BE: STARTER RELAY 1 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 and wait 5 seconds.
3. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BE indicated?

YES - Go to step 4.

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

4. Replace starter relay 1.
5. Reset the PCM with the HDS.
6. Do the PCM idle learn procedure (see PCM IDLE LEARN PROCEDURE).
7. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BE indicated?

YES - Check for poor connections or loose terminals at starter relay 1 and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P16BF: STARTER RELAY STRLY 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 and wait 5 seconds.
3. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BF indicated?

YES - Go to step 4.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at starter relay 1, starter relay 2, and the PCM

4. Turn the ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Remove starter relay 1 and starter relay 2.

7. Disconnect PCM connector E (31P).
8. Check for continuity between PCM connector terminal E21 and body ground.

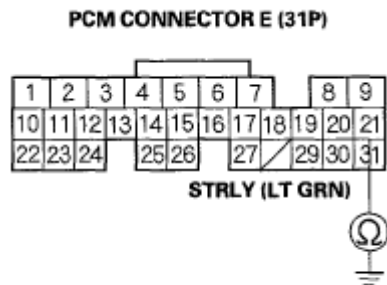


Fig. 88: Checking Continuity Between PCM Connector Terminal E21 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (E21) and starter relay 1 or starter relay 2, then go to step 9.

NO - Go to step 14.

9. Reconnect all connectors.
10. Turn the ignition switch ON (II).
11. Reset the PCM with the HDS.
12. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
13. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BF indicated?

YES - Check for poor connections or loose terminals at starter relay 1, starter relay 2, and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

14. Reconnect all connectors.
15. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
16. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P16BF indicated?

YES - Check for poor connections or loose terminals at starter relay 1, starter relay 2, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substitute, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2183: ECT SENSOR 2 CIRCUIT RANGE/PERFORMANCE PROBLEM

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**).
- If DTC P0111 is stored at the same time as DTC P2183, troubleshoot DTC P0111 first, then recheck for DTC P2183.

1. Check for poor connections or loose terminals at ECT sensor 1 and ECT sensor 2.

Are the connections and terminals OK?

YES - Go to step 2.

NO - Repair the connectors or terminals, then go to step 27.

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

Are DTC P1116 and P2183 indicated at the same time?

YES - Go to step 15.

NO - Go to step 4.

4. Start the engine, and let it idle 10 minutes.
5. Check ECT SENSOR 2 in the DATA LIST with the HDS.

Is about 131°F (55°C) or less, or 1.50 V or more indicated?

YES - Replace ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**), then go to step 27.

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Drain the coolant (see **COOLANT CHECK**).
8. Remove ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**).
9. Allow ECT sensor 2 to cool to 77°F (25°C).
10. Note the ambient temperature.
11. Connect ECT sensor 2 to its 2P connector, but do not install it onto the engine.
12. Turn the ignition switch ON (II).
13. Note the value of ECT SENSOR 2 quickly in the DATA LIST with the HDS.
14. Compare the value of ECT SENSOR 2 and the outside temperature.

Does ECT SENSOR 2 differ 5.4°F (3°C) or more?

YES - Replace ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**), then go to step 27.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM

15. Start the engine, and let it idle 10 minutes.
16. Check ECT SENSOR 1 in the DATA LIST with the HDS.

Is about 118°F (48°C) or less, or 1.75 V or more indicated?

YES - Replace ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**), then go to step 27.

NO - Go to step 17.

17. Let the engine idle 10 minutes.
18. Check ECT SENSOR 2 in the DATA LIST with the HDS.

Is about 131°F (55°C) or less, or 1.50 V or more indicated?

YES - Replace ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**), then go to step 27.

NO - Go to step 19.

19. Turn the ignition switch OFF.
20. Drain the coolant (see **COOLANT CHECK**).
21. Remove ECT sensor 1 (see **ECT SENSOR 1 REPLACEMENT**), and ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**).
22. Allow the sensors to cool to ambient temperature.
23. Note the ambient temperature.
24. Connect ECT sensor 1 to its 2P connector, and ECT sensor 2 to its 2P connector, but do not install them on the engine.
25. Note the value of ECT SENSOR 1 and ECT SENSOR 2 quickly in the DATA LIST with the HDS.
26. Compare the value of ECT SENSOR 1 and the ambient temperature, and the value of ECT SENSOR 2 and the ambient temperature individually.

Does one of the sensor differ more than 5.4°F (3°C) from the ambient temperature?

YES - Replace the sensor that differed more than 5.4°F (3°C) from the ambient temperature, then go to step 27.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM

27. Turn the ignition switch ON (II).
28. Reset the PCM with the HDS.

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

Is DTC P2183 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 1, ECT sensor 2, and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2184: ECT SENSOR 2 CIRCUIT LOW VOLTAGE

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

1. Turn the ignition switch ON (II).
2. Check ECT 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, the system is OK at this time. Check for poor connections or loose terminals at ECT sensor 2 and the PCM

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

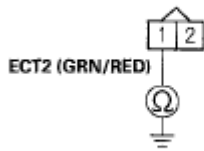
Is about 356°F (180°C) or higher, or 0.08 V or less indicated?

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 B (24P).
10. Check for continuity between ECT sensor 2 2P connector terminal No. 1 and body ground.

ECT SENSOR 2 2P CONNECTOR



Wire side of female terminals

Fig. 89: Checking Continuity Between ECT Sensor 2 2P Connector Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between ECT sensor 2 and the PCM (B24), then go to step 13.

NO - Go to step 18.

11. Turn the ignition switch OFF.
12. Replace ECT sensor 2 (see **ECT 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.

Is DTC P2184 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 2 and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

18. Reconnect all connectors.
19. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
20. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2184 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 2 and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2185: ECT SENSOR 2 CIRCUIT HIGH VOLTAGE

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

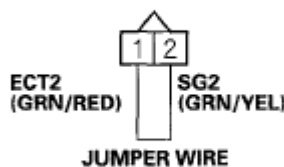
1. Turn the ignition switch ON (II).
2. Check ECT SENSOR 2 in the DATA LIST with the HDS.

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

YES - Go to step 3.

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

3. Turn the ignition switch OFF.
4. Disconnect ECT sensor 2 2P connector.
5. Connect ECT sensor 2 2P connector terminals No. 1 and No. 2 with a jumper wire.

ECT SENSOR 2 2P CONNECTOR

Wire side of female terminals

Fig. 90: Connecting ECT Sensor 2 2P Connector Terminals No. 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

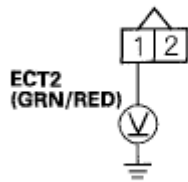
6. Turn the ignition switch ON (II).
7. Check ECT SENSOR 2 in the DATA LIST with the HDS.

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

YES - Go to step 8.

NO - Go to step 18.

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

ECT SENSOR 2 2P CONNECTOR

Wire side of female terminals

Fig. 91: Measuring Voltage Between ECT Sensor 2 2P Connector Terminal No. 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 17.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector C (22P).
15. Connect ECT sensor 2 2P connector terminal No. 2 to body ground with a jumper wire.

ECT SENSOR 2 2P CONNECTOR

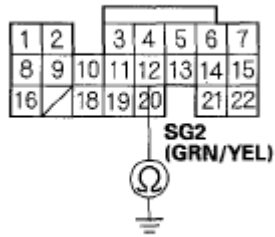
Wire side of female terminals

Fig. 92: Connecting ECT Sensor 2 2P Connector Terminal No. 2 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Check for continuity between PCM connector terminal C12 and body ground.

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 93: Checking Continuity Between PCM Connector Terminal C12 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

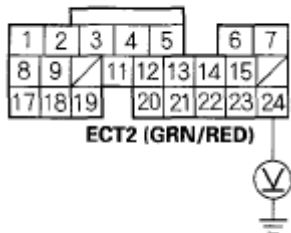
Is there continuity?

YES - Go to step 25.

NO - Repair open in the wire between the PCM (C12) and ECT sensor 2, then go to step 20.

17. Measure voltage between PCM connector terminal B24 and body ground.

PCM CONNECTOR B (24P)



Wire side of female terminals

Fig. 94: Measuring Voltage Between PCM Connector Terminal B24 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair open in the wire between the PCM (B24) and ECT sensor 2, then go to step 20.

NO - Go to step 25.

18. Turn the ignition switch OFF.
19. Replace ECT sensor 2 (see **ECT SENSOR 2 REPLACEMENT**).
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.

Is DTC P2185 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 2 and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

25. Reconnect all connectors.
26. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2185 indicated?

YES - Check for poor connections or loose terminals at ECT sensor 2 and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2195: REAR A/F SENSOR (BANK 1, SENSOR 1) SIGNAL STUCK LEAN; DTC P2197: FRONT A/F SENSOR (BANK 2, SENSOR 1) SIGNAL STUCK LEAN

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 DTC P2101, P2108, P2118, P2135, P2138, P2176, U0107, or a combination of P2122 and P2127, P2122 and P2138, or P2127 and P2138 is stored at the same time, troubleshoot those DTCs first, then recheck for DTC P2195 and/or 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 - Go to step 4.

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. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2195 and/or P2197 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 8.

8. Monitor the OBD STATUS for DTC P2195 and/or P2197* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 7, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

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 those DTCs first, then recheck for DTC P2227.

1. Turn the ignition switch ON (II), and wait 2 seconds.
2. Check the BARO SENSOR in the DATA LIST with the HDS.

Is about 101 kPa (29.9 in.Hg, 760 mmHg), or about 2.9 V at sea level indicated?

YES - Go to step 3.

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

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 (ECT SENSOR 1) above 158°F (70°C)

- Transmission in D position
 - Throttle position between 14 degrees and 45 degrees for 2 seconds
6. Monitor the OBD STATUS for DTC P2227 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

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

NO - If the screen indicates FAILED, go to step 7. If the screen indicates NOT COMPLETED, go to step 4.

7. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
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 without load (in Park or neutral) until the radiator fan comes on, then let it idle.
11. Test-drive under these conditions:
- Engine coolant temperature (ECT SENSOR 1) above 158°F (70°C)
 - Transmission in D position
 - Throttle position between 14 degrees and 45 degrees for 2 seconds
12. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2227 indicated?

YES - If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 10. If the PCM was substituted, go to step 1.

NO - Go to step 13.

13. Monitor the OBD STATUS for DTC P2227 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then go to step 10. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 10.

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 SENSOR in the DATA LIST with the HDS.

Is about 53 kPa (15.6 in.Hg, 397 mmHg), or 1.58 V or less indicated?

YES - Go to step 3.

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

3. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2228 indicated?

YES - Check for poor connections or loose terminals at the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted in step 3, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2229: BARO SENSOR CIRCUIT HIGH VOLTAGE

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

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

Is about 160 kPa (47.2 in.Hg, 1,200 mmHg), or 4.5 V or more indicated?

YES - Go to step 3.

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

3. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PGM (see **SUBSTITUTING THE PCM**).
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2229 indicated?

YES - Check for poor connections or loose terminals at the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted

in step 3, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2237: REAR A/F SENSOR (BANK 1, SENSOR 1) IP CIRCUIT HIGH VOLTAGE; DTC P2240: FRONT A/F SENSOR (BANK 2, SENSOR 1) IP CIRCUIT HIGH VOLTAGE

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

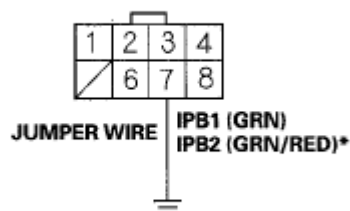
Is DTC P2237 and/or P2240 indicated?*

YES - Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (24P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 7 to body ground with a jumper wire.

A/F SENSOR (SENSOR 1) 8P CONNECTOR



Wire side of female terminals

Fig. 95: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal No. 7 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal B14 (B22)* and body ground.

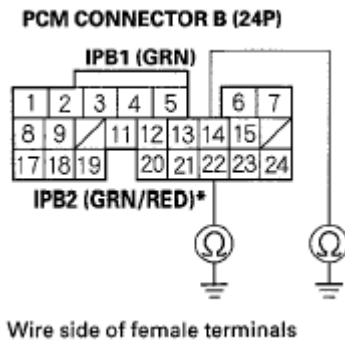


Fig. 96: Checking Continuity Between PCM Connector Terminal B14 (B22) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (B14 (B22) *) 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, then reconnect PCM connector B (24P).
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 2 minutes.
13. Measure voltage between PCM connector terminals B14 (B22)* and C12.

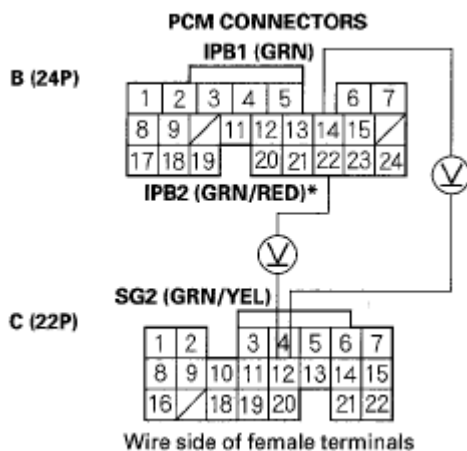


Fig. 97: Measuring Voltage Between PCM Connector Terminals B14 (B22) And C12
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 21.

NO - Go to step 14.

14. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR 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.

Is DTC P2237 and/or P2240 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 20.

20. Monitor the OBD STATUS for DTC P2237 and/or P2240* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

21. Turn the ignition switch OFF.
22. Reconnect all connectors.
23. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
24. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2237 and/or P2240 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 25.

25. Monitor the OBD STATUS for DTC P2237 and/or P2240* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor

(Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2238: REAR A/F SENSOR (BANK 1, SENSOR DIP CIRCUIT LOW VOLTAGE; DTC P2241: FRONT A/F SENSOR (BANK 2, SENSOR DIP 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 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2238 and/or P2241 indicated?*

YES - Go to step 5.

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

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 B (24P).
9. Check for continuity between PCM connector terminals B14 (B22)* and C12.

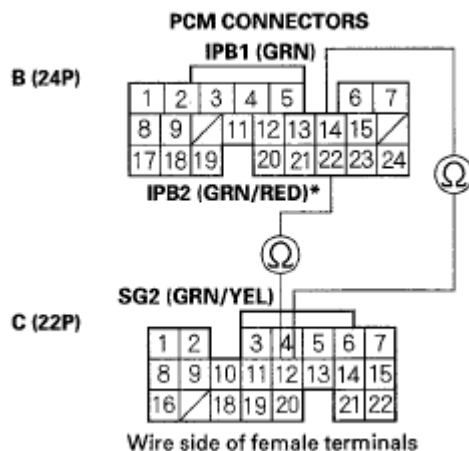


Fig. 98: Checking Continuity Between PCM Connector Terminals B14 (B22) And C12
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B14(B22)*) and the A/F sensor (Sensor 1), then go to step 14.

NO - Go to step 10.

10. Reconnect PCM connector B (24P).
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 2 minutes.
12. Measure voltage between PCM connector terminals B14 (B22)* and C12.

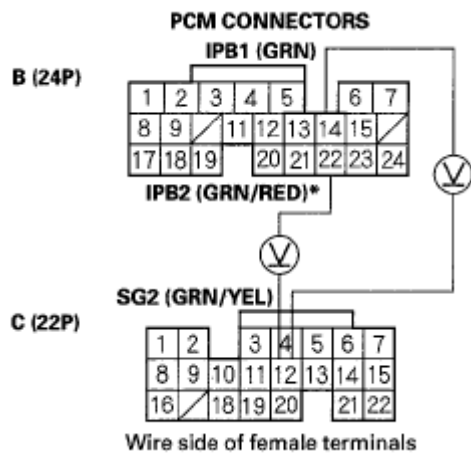


Fig. 99: Measuring Voltage Between PCM Connector Terminals B14 (B22) And C12
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 20.

NO - Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
14. Reconnect all connectors.
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.

Is DTC P2238 and/or P2241 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 19.

19. Monitor the OBD STATUS for DTC P2238 and/or P2241* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch OFF.
21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
23. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2238 and/or P2241 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 24.

24. Monitor the OBD STATUS for DTC P2238 and/or P2241 * in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2243: REAR A/F SENSOR (BANK 1, SENSOR 1) VCENT CIRCUIT HIGH VOLTAGE; DTC P2247: FRONT A/F SENSOR (BANK 2, SENSOR 1) VCENT CIRCUIT HIGH VOLTAGE

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

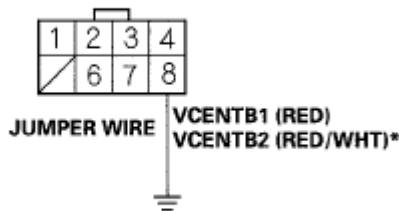
Is DTC P2243 and/or P2247 indicated?*

YES - Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (24P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 8 to body ground with a jumper wire.

A/F SENSOR (SENSOR 1) 8P CONNECTOR

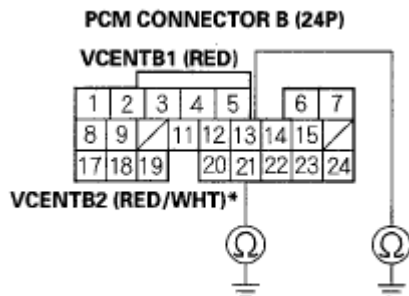


Wire side of female terminals

Fig. 100: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal No. 8 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal B13 (B21)* and body ground.



Wire side of female terminals

Fig. 101: Checking Continuity Between PCM Connector Terminal B13 (B21) 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 (B13 (B21)*) 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, then reconnect PCM connector B (24P).
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 2 minutes.
13. Measure voltage between PCM connector terminals B13 (B21)* and C12.

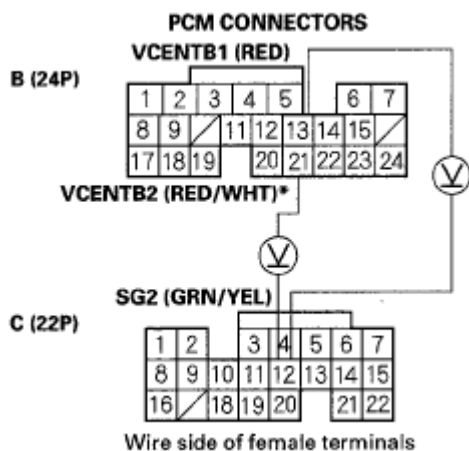


Fig. 102: Measuring Voltage Between PCM Connector Terminals B13 (B21) And C12
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 21.

NO - Go to step 14.

14. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR 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.

Is DTC P2243 and/or P2247 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 20.

20. Monitor the OBD STATUS for DTC P2243 and/or P2247* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

21. Turn the ignition switch OFF.
22. Reconnect all connectors.
23. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
24. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2243 and/or P2247 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 25.

25. Monitor the OBD STATUS for DTC P2243 and/or P2247* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2245: REAR A/F SENSOR (BANK 1, SENSOR 1) VCENT CIRCUIT LOW VOLTAGE; DTC P2249: FRONT A/F SENSOR (BANK 2, SENSOR 1) VCENT CIRCUIT LOW VOLTAGE

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 2 minutes.

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

Is DTC P2245 and/or P2249 indicated?*

YES - Go to step 5.

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

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 B (24P).
9. Check for continuity between PCM connector terminal B13 (B21)* and body ground.

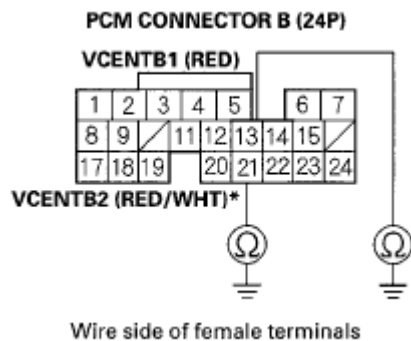


Fig. 103: Checking Continuity Between PCM Connector Terminal B13 (B21) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B13 (B21) *) and the A/F sensor (Sensor 1), then go to step 14.

NO - Go to step 10.

10. Reconnect PCM connector B (24P).
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 2 minutes.
12. Measure voltage between PCM connector terminals B13 (B21)* and C12.

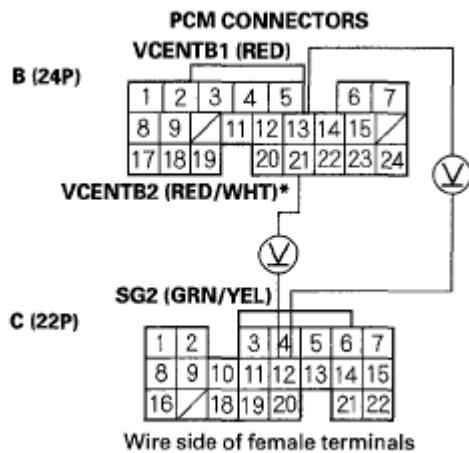


Fig. 104: Measuring Voltage Between PCM Connector Terminals B13 (B21) And C12
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 20.

NO - Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
14. Reconnect all connectors.
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.

Is DTC P2245 and/or P2249 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 19.

19. Monitor the OBD STATUS for DTC P2245 and/or P2249* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch OFF.

21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
23. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2245 and/or P2249 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 24.

24. Monitor the OBD STATUS for DTC P2245 and/or P2249* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2251: REAR A/F SENSOR (BANK 1, SENSOR 1) VS CIRCUIT HIGH VOLTAGE; DTC P2254: FRONT A/F SENSOR (BANK 2, SENSOR 1) VS CIRCUIT HIGH VOLTAGE

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2251 and/or P2254 indicated?*

YES - Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector B (24P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 6 to body ground with a jumper wire.

A/F SENSOR (SENSOR 1) 8P CONNECTOR

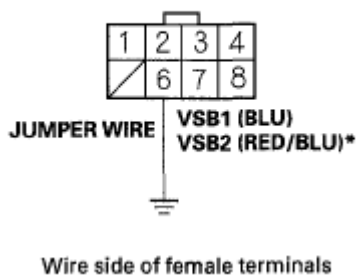


Fig. 105: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal No. 6 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal B12 (B20)* and body ground.

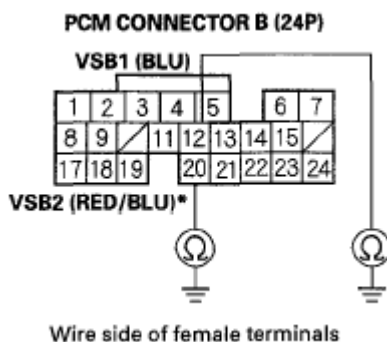


Fig. 106: Checking Continuity Between PCM Connector Terminal B12 (B20) And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (B12 (B20)*) 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, then reconnect PCM connector B (24P).
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 2 minutes.

13. Measure voltage between PCM connector terminals B12 (B20)* and C12.

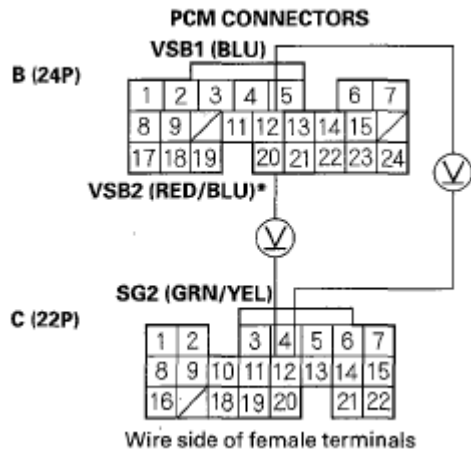


Fig. 107: Measuring Voltage Between PCM Connector Terminals B12 (B20) And C12
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 21.

NO - Go to step 14.

14. Replace the A/F sensor (see **A/F SENSOR 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.

Is DTC P2251 and/or P2254 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 20.

20. Monitor the OBD STATUS for DTC P2251 and/or P2254* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 19, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling

until a result comes on.

21. Turn the ignition switch OFF.
22. Reconnect all connectors.
23. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
24. Check for Temporary DTCs or DTCs with the HDS.

If DTC P2251 and/or P2254 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 25.

25. Monitor the OBD STATUS for DTC P2251 and/or P2254* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 24, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

DTC P2252: REAR A/F SENSOR (BANK 1, SENSOR 1) VS CIRCUIT LOW VOLTAGE; DTC P2255: FRONT A/F SENSOR (BANK 2, SENSOR 1) VS CIRCUIT LOW VOLTAGE

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2252 and/or P2255 indicated?*

YES - Go to step 5.

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

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 B (24P).
9. Check for continuity between PCM connector terminal B12 (B20)* and body ground.

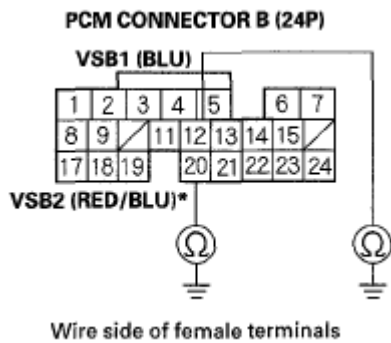


Fig. 108: Checking Continuity Between PCM Connector Terminal B12 (B20) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B12 (B20))* and the A/F sensor (Sensor 1), then go to step 14.

NO - Go to step 10.

10. Reconnect PCM connector B (24P).
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 2 minutes.
12. Measure voltage between PCM connector terminals B12 (B20)* and C12.

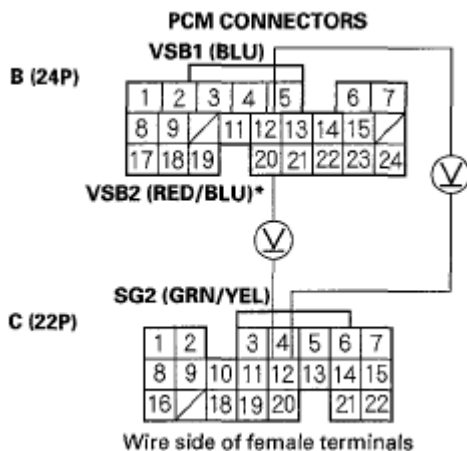


Fig. 109: Measuring Voltage Between PCM Connector Terminals B12 (B20) And C12

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.2 V or less?

YES - Go to step 20.

NO - Go to step 13.

13. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
14. Reconnect all connectors.
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.

Is DTC P2252 and/or P2255 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 19.

19. Monitor the OBD STATUS for DTC P2252 and/or P2255* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 18, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch OFF.
21. Reconnect all connectors.
22. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
23. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2252 and/or P2255 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - Go to step 24.

24. Monitor the OBD STATUS for DTC P2252 and/or P2255* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs were indicated in step 23, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

**DTC P2270: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT SIGNAL STUCK LEAN;
DTC P2271: REAR SECONDARY HO2S (BANK 1, SENSOR 2) CIRCUIT SIGNAL STUCK RICH;
DTC P2272: FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT SIGNAL STUCK
LEAN; DTC P2273: FRONT SECONDARY HO2S (BANK 2, SENSOR 2) CIRCUIT SIGNAL
STUCK RICH**

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 (ECT SENSOR 1) above 176°F (80°C)
 - Vehicle speed between 35-55 mph (56-88 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, the 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.

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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 (ECT SENSOR 1) above 176°F (80°C)
 - Vehicle speed between 35-55 mph (56-88 km/h)
 - Drive 1 minute or more
13. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2270, P2271, P2272, and/or P2273* indicated?*

YES - Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the PCM, then go to step 1.

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. If any other Temporary DTCs or DTCs were indicated in step 13, go to the indicated DTCs troubleshooting

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.

DTC P2610: PCM INTERNAL POWER OFF TIMER 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.

Is DTC P2610 indicated?

YES - Go to step 4.

NO - Intermittent failure, the system is OK at this time. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

4. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).

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

Is DTC P2610 indicated?

YES - If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2627: REAR A/F SENSOR (BANK 1, SENSOR 1) LABEL CIRCUIT LOW VOLTAGE; DTC P2630: FRONT A/F SENSOR (BANK 2, SENSOR 1) LABEL CIRCUIT LOW VOLTAGE

NOTE:

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

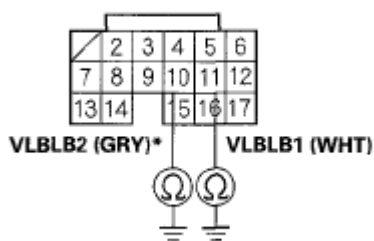
Is DTC P2627 and/or P2630 indicated?*

YES - Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect PCM connector D (17P).
8. Check for continuity between PCM connector terminal D11 (D10)* and body ground.

PCM CONNECTOR D (17P)



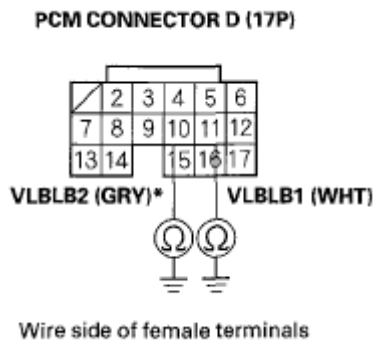
Wire side of female terminals

Fig. 110: Checking Continuity Between PCM Connector Terminal D11 (D10) And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Go to step 9.**NO** - Go to step 17.

9. Disconnect the A/F sensor (Sensor 1) 8P connector.
10. Check for continuity between PCM connector terminal D11 (D10)* and body ground.

**Fig. 111: Checking Continuity Between PCM Connector Terminal D11 (D10) And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Repair short in the wire between the PCM (D11 (D10)*) and the A/F sensor (Sensor 1), then go to step 12.**NO** - Go to step 11.

11. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
12. Reconnect all connectors.
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.

Is DTC P2627 and/or P2630 indicated?***YES** - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.**NO** - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

17. Reconnect all connectors.
18. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
19. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2627 and/or P2630 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2628: REAR A/F SENSOR (BANK 1, SENSOR 1) LABEL CIRCUIT HIGH VOLTAGE; DTC P2631: FRONT A/F SENSOR (BANK 2, SENSOR 1) LABEL CIRCUIT HIGH VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

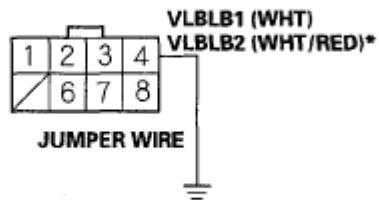
Is DTC P2628 and/or P2631 indicated?*

YES - Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect PCM connector D(17P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 4 to body ground with a jumper wire.

A/F SENSOR (SENSOR 1) 8P CONNECTOR

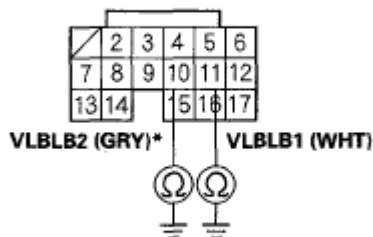


Wire side of female terminals

Fig. 112: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal No. 4 To Body Ground With Jumper Wire
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between PCM connector terminal D11 (D10)* and body ground.

PCM CONNECTOR D (17P)



Wire side of female terminals

Fig. 113: Checking Continuity Between PCM Connector Terminal D11 (D10) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

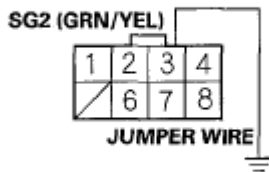
Is there continuity?

YES - Go to step 11.

NO - Repair open in the wire between the PCM (D11 (D10)*) and the A/F sensor (Sensor 1), then go to step 19.

11. Remove the jumper wire from the A/F sensor (Sensor 1) 8P connector.
12. Disconnect PCM connector C (22P).
13. Connect A/F sensor (Sensor 1) 8P connector terminal No. 3 to body ground with a jumper wire.

A/F SENSOR (SENSOR 1) 8P CONNECTOR

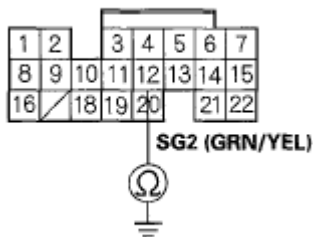


Wire side of female terminals

Fig. 114: Connecting A/F Sensor (Sensor 1) 8P Connector Terminal No. 3 To Body Ground With Jumper Wire
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Check for continuity between PCM connector terminal C12 and body ground.

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 115: Checking Continuity Between PCM Connector Terminal C12 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 (C12) and the A/F sensor (Sensor 1), then go to step 19.

15. Remove the jumper wire from the A/F sensor (Sensor 1) 8P connector, then reconnect PCM connectors C (22P) and D (17P).
16. 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 2 minutes.
17. Measure voltage between PCM connector terminals D11 (D10)* and C12.

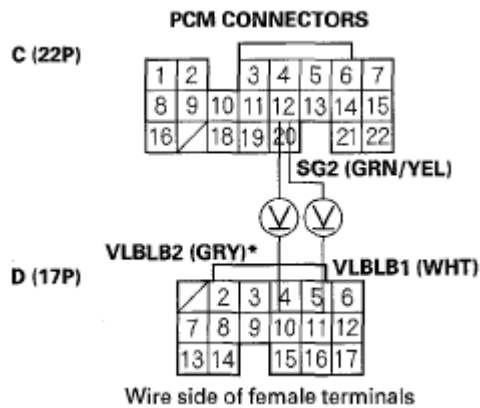


Fig. 116: Measuring Voltage Between PCM Connector Terminals D11 (D10) And C12
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 18.

NO - Go to step 24.

18. Replace the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT**).
19. Reconnect all connectors.
20. Turn the ignition switch ON (II).
21. Reset the PCM with the HDS.
22. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
23. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2628 and/or P2631 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

24. Turn the ignition switch OFF.
25. Reconnect all connectors.
26. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**).
27. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P2628 and/or P2631 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the PCM was substituted, go to step 1.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC P2A00: REAR A/F SENSOR (BANK 1, SENSOR 1) CIRCUIT RANGE/PERFORMANCE PROBLEM; DTC P2A03: FRONT A/F SENSOR (BANK 2, SENSOR 1) CIRCUIT RANGE/PERFORMANCE PROBLEM

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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 (ECT SENSOR 1) above 158°F (70 °C)
 - Transmission in D position
 - Vehicle speed at 30 mph (48 km/h) or more, and engine speed at 2,600 RPM or less
 - Drive at an engine speed of 1,600 RPM. Accelerate to full open throttle for 5 seconds, then slow down 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, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM. If it is 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. Test-drive under these conditions:
 - Engine coolant temperature (ECT SENSOR 1) above 158°F (70°C)
 - Transmission in D position
 - Vehicle speed at 30 mph (48 km/h) or more, and engine speed at 2,600 RPM or less
 - Drive at an engine speed of 1,600 RPM. Accelerate to full open throttle for 5 seconds, then slow

down with the throttle completely closed.

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

Is DTC P2A00 and/or P2A03 indicated?*

YES - Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1.

NO - Go to step 13.

13. Monitor the OBD STATUS for DTC P2A00 and/or P2A03* in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTCs troubleshooting

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 11.

DTC U0073: F-CAN MALFUNCTION (BUS-OFF); DTC U0155: F-CAN MALFUNCTION (GAUGE CONTROL MODULE-PCM)

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 U0073 and/or U0155 indicated?

YES - Go to step 4.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module, the VSA modulator-control unit, the SH-AWD control unit, the navigation unit, the adaptive cruise control (ACC) unit, the TPMS control unit, the E-pretensioner unit, and the PCM

4. Check for DTCs in the Body Electrical system DTCs menu with the HDS.

Is DTC B1168, B1169, and/or B1178 indicated?

YES - Go to step 5.

NO - Do the gauge control module input test (see GAUGE CONTROL MODULE INPUT TEST)

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect PCM connector E (31P).
8. Remove the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**).
9. Disconnect the gauge control module 30P connector.
10. Disconnect the VSA modulator-control unit 47P connector.
11. Disconnect SH-AWD control unit connector A (26P).
12. Disconnect the navigation unit 20P connector.
13. Disconnect the adaptive cruise control (ACC) unit 20P connector.
14. Disconnect the TPMS control unit 20P connector.
15. Disconnect the E-pretensioner unit 14P connector.
16. Check for continuity between body ground and PCM connector terminals E15 and E26 individually.

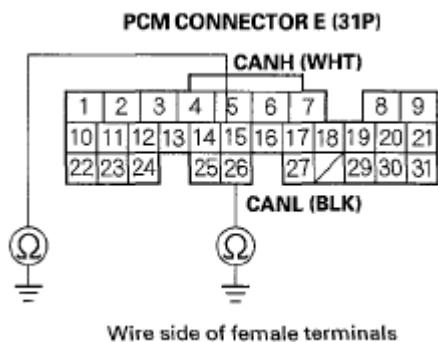


Fig. 117: Checking Continuity Between Body Ground And PCM Connector Terminals E15 And E26

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the gauge control module, the VSA modulator-control unit, the navigation unit, the SH-AWD control unit, the adaptive cruise control (ACC) unit, the TPMS control unit, the e-pretensioner unit, and the PCM (E15 (E26)), then go to step 21.

NO - Go to step 17.

17. Check for continuity between PCM connector terminals E15 and E26.

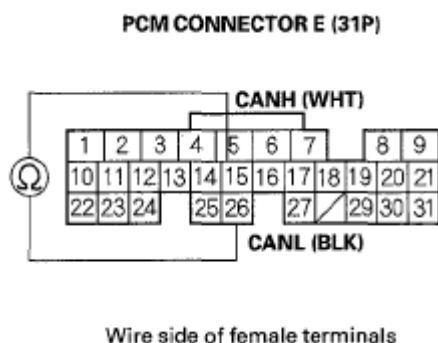


Fig. 118: Checking Continuity Between PCM Connector Terminals E15 And E26
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wires between the PCM E15 (CANH line) and E26 (CANL line), then go to step 21.

NO - Go to step 18.

18. Check for continuity between PCM connector terminal E15 and these connector terminals:

CONNECTOR TERMINAL REFERENCE

| Connector | Terminal |
|--|--------------|
| Gauge control module 28P | No. 16 (WHT) |
| VSA modulator-control unit 47P | No. 14 (WHT) |
| SH-AWD control unit 26P | No. 11 (WHT) |
| Navigation unit 20P | No. 8 (WHT) |
| Adaptive cruise control (ACC) unit 20P | No. 10 (WHT) |
| TPMS control unit 20P | No. 19 (WHT) |
| E-pretensioner unit 14P | No. 3 (WHT) |

Is there continuity between the PCM terminal and each of the terminals in the chart?

YES - Go to step 19.

NO - Repair open in the wire between the PCM (E15) and the appropriate connector, then go to step 21.

19. Check for continuity between PCM connector terminal E26 and these connector terminals:

CONNECTOR TERMINAL REFERENCE

| Connector | Terminal |
|--|--------------|
| Gauge control module 28P | No. 15 (BLK) |
| VSA modulator-control unit 47P | No. 30 (BLK) |
| SH-AWD control unit 26P | No. 10 (BLK) |
| Navigation unit 20P | No. 18 (BLK) |
| Adaptive cruise control (ACC) unit 20P | No. 20 (BLK) |
| TPMS control unit 20P | No. 10 (BLK) |
| E-pretensioner unit 14P | No. 5 (BLK) |

Is there continuity between the PCM terminal and each of the terminals in the chart?

YES - Go to step 20.

NO - Repair open in the wire between the PCM (E26) and the appropriate connector, then go to step 21.

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20. Referring to the following chart. Select the row that most closely represents the combination of DTCs retrieved from the PGM-FI, VSA, TPMS, adaptive cruise control (ACC), and body electrical systems. Then check the connections at the control module indicated in the last column. If all the connections are OK, substitute the control module. After substituting the control module, check for DTCs with the HDS.

CONTROL MODULE REFERENCE

| PGM-FI | VSA | SH-AWD | Body Electrical | ACC | Control module |
|----------------------------------|----------|----------|-------------------------|---------------------------------|------------------------------------|
| U0155 | 86 | 41 77 | B1168 B1169 B1178 | 113 | Gauge Control Module |
| U0073 U0114 U0122 U0155 | 83 86 | 41 77 | B1168 B1169 B1178 | 110 111 | PCM |
| U0073 U0114 U0122 U0155 | 83 86 | 41 77 | B1168 B1170 B1178 | 112 | VSA-modulator control unit |
| U0073 U0114 U0122 U0155 | 83 86 | 41 77 | B1168 B1169 | 115 | SH-AWD control unit |
| U0073 U0104 U0155 | 83 86 | -- | B1171 B1178 | 110 111 112 113 115 | Adaptive cruise control (ACC) unit |

Are the DTCs still indicated?

YES - Substitute the remaining control modules, one at time, until the DTCs are no longer present, then replace the control module that made the DTCs go away. After replacing the faulty control module, go to step 21.

NO - Replace the faulty control module, then go to step 21.

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. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0073 and/or U0155 indicated?

YES - If DTC U0073 and/or U0155 is indicated, check for poor connections or loose terminals at the gauge control module, the VSA modulator-control unit, the SH-AWD control unit, the navigation unit, the adaptive cruise control (ACC) unit, the TPMS control unit, the E-pretensioner unit, 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. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC U0104: F-CAN MALFUNCTION (ADAPTIVE CRUISE CONTROL (ACC) 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 U0104, troubleshoot DTC U0073 first, then recheck for DTC U0104.

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 U0104 indicated?

YES - Go to step 4.

NO - Intermittent failure, the system is OK at this time.. Check for poor connections or loose terminals at the gauge control module, the adaptive cruise control (ACC) unit, and the PCM

4. Check for a DTC in the DTCs MENU with the HDS.

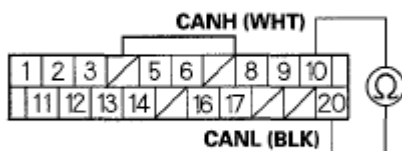
Is ACC DTC 110 or 111 indicated?

YES - Go to step 5.

NO - Go to step 8.

5. Turn the ignition switch OFF.
6. Disconnect the adaptive cruise control (ACC) unit 20P connector.
7. Check for continuity between adaptive cruise control (ACC) unit 20P connector terminals No. 10 and No. 20.

ADAPTIVE CRUISE CONTROL (ACC) UNIT 20P CONNECTOR



Wire side of female terminals

Fig. 119: Checking Continuity Between Adaptive Cruise Control (ACC) Unit 20P Connector Terminals 10 And 20**Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there continuity?*

YES - Substitute a known-good adaptive cruise control (ACC) unit, then go to step 15 and recheck. If DTC U0104 is not indicated, replace the original adaptive cruise control (ACC) unit, then go to step 15.

NO - Repair open in the wire between the adaptive cruise control (ACC) unit (No. 10 (No. 20)) and the PCM (E15 (E26)), then go to step 15.

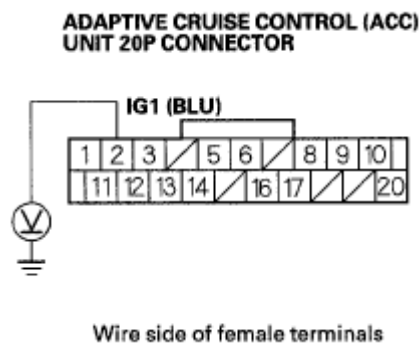
8. Check for a poor connection at the adaptive cruise control (ACC) unit 20P connector.

Is the connection OK?

YES - Go to step 9.

NO - Repair the poor connection at the adaptive cruise control (ACC) unit 20P connector, then go to step 16.

9. Turn the ignition switch OFF.
10. If not already done, disconnect the adaptive cruise control (ACC) unit 20P connector.
11. Turn the ignition switch ON (II).
12. Measure voltage between adaptive cruise control (ACC) unit 20P connector terminal No. 2 and body ground.

**Fig. 120: Measuring Voltage Between Adaptive Cruise Control (ACC) Unit 20P Connector Terminal 2 And Body Ground****Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there battery voltage?*

YES - Go to step 13.

NO - Check the No. 29 (10A) fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between the No. 29 (10A) fuse and the adaptive cruise control (ACC) unit, then go to step 15.

13. Turn the ignition switch OFF.
14. Check for continuity between adaptive cruise control (ACC) unit 20P connector terminal No. 9, No. 11, No. 12, and body ground individually.

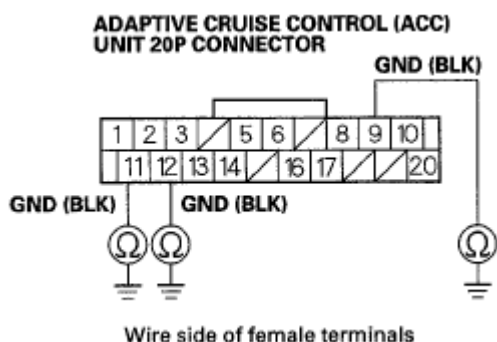


Fig. 121: Checking Continuity Between Adaptive Cruise Control (ACC) Unit 20P Connector Terminal 9, 11, 12, And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Substitute a known-good adaptive cruise control (ACC) unit, then go to step 15 and recheck. If DTC U0104 is not indicated, replace the original adaptive cruise control (ACC) unit, then go to step 15.

NO - Repair open in the wire between the adaptive cruise control (ACC) unit and G501, then go to step 15.

15. Reconnect the adaptive cruise control (ACC) unit 20P 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. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0104 indicated?

YES - Check for poor connections or loose terminals at the gauge control module, the adaptive cruise control (ACC) unit, and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

DTC U0114: F-CAN MALFUNCTION (SH-AWD 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 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.

Is DTC U0114 indicated?

YES - Go to step 4.

NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module, the SH-AWD control unit, and the PCM

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

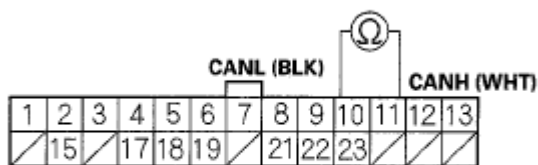
Is SH-AWD system DTC 41 and/or 77 indicated?

YES - Go to step 5.

NO - Go to step 8.

5. Turn the ignition switch OFF.
6. Disconnect SH-AWD control unit connector A (26P).
7. Check for continuity between SH-AWD control unit connector terminals A10 and A11.

SH-AWD CONTROL UNIT CONNECTOR A (26P)



Wire side of female terminals

Fig. 122: Checking Continuity Between SH-AWD Control Unit Connector Terminals A10 And A11

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Substitute a known-good SH-AWD control unit, then go to step 16 and recheck. If DTC U0114 is not indicated, replace the original SH-AWD control unit, then go to step 16.

NO - Repair open in the wire between the SH-AWD control unit (A12 (A10)* and the PCM (E15 (E26)*), then go to step 16.

*:CANL line

8. Check for a poor connection at SH-AWD control unit connectors A (26P) and B (8P).

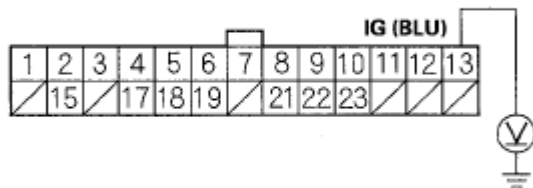
Is the connection OK?

YES - Go to step 9.

NO - Repair the poor connection at SH-AWD control unit connectors A (26P) and B (8P), then go to step 16.

9. Turn the ignition switch OFF.
10. Disconnect SH-AWD control unit connector A (26P).
11. Turn the ignition switch ON (II).
12. Measure voltage between SH-AWD control unit connector terminal A13 and body ground.

SH-AWD CONTROL UNIT CONNECTOR A (26P)



Wire side of female terminals

Fig. 123: Measuring Voltage Between SH-AWD Control Unit Connector Terminal A13 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

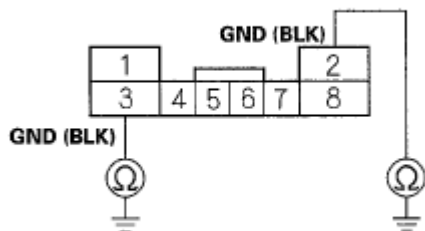
Is there battery voltage?

YES - Go to step 13.

NO - Check the SH-AWD system, then go to step 16.

13. Turn the ignition switch OFF.
14. Disconnect SH-AWD control unit connector B (8P).
15. Check for continuity between body ground and SH-AWD control unit connector terminals B2 and B3 individually, and between SH-AWD control unit connector terminal A12 and body ground.

SH-AWD CONTROL UNIT CONNECTOR B (8P)

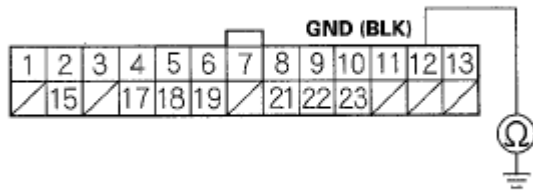


Wire side of female terminals

Fig. 124: Checking Continuity Between Body Ground And SH-AWD Control Unit Connector Terminals B2 And B3

Courtesy of AMERICAN HONDA MOTOR CO., INC.

SH-AWD CONTROL UNIT CONNECTOR A (26P)



Wire side of female terminals

Fig. 125: Checking Continuity Between Body Ground And SH-AWD Control Unit Connector Terminals B2 And B3

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Substitute a known-good SH-AWD control unit, then go to step 16 and recheck. If DTC U0114 is not indicated, replace the original SH-AWD control unit, then go to step 16.

NO - Repair open in the wire between the SH-AWD control unit and G652, then go to step 16.

16. Reconnect all connectors.
17. Turn the ignition switch ON (II).
18. Reset the PCM with the HDS.
19. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
20. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0114 indicated?

YES - Check for poor connections or loose terminals at the gauge control module, the SH-AWD control unit, and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

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, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module, the VSA modulator-control unit, and the PCM

4. Check for DTCs in the DTCs MENU with the HDS.

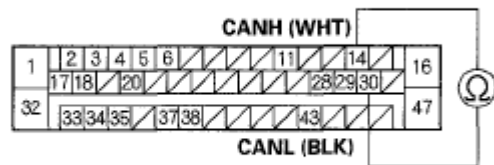
Is VSA system DTC 86 indicated?

YES - Go to step 5.

NO - Go to step 8.

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. 14 and No. 30.

VSA MODULATOR-CONTROL UNIT 47P CONNECTOR



Wire side of female terminals

Fig. 126: Checking Continuity Between VSA Modulator-Control Unit 47P Connector Terminals No. 14 And No. 30

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Substitute a known-good VSA modulator-control unit, then go to step 15 and recheck. If DTC U0122 is not indicated, replace the original VSA modulator-control unit, then go to step 15.

NO - Repair open in the wire between the VSA modulator-control unit (No. 14 (No. 30)) and the PCM (E15 (E26)), then go to step 15.

8. Check for a poor connection at the VSA modulator-control unit 47P connector.

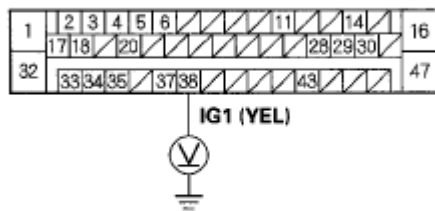
Are the connection OK?

YES - Go to step 9.

NO - Repair the connection(s), then go to step 16.

9. Turn the ignition switch OFF.
10. If not already done, 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.

VSA MODULATOR-CONTROL UNIT 47P CONNECTOR



Wire side of female terminals

Fig. 127: Measuring Voltage Between VSA Modulator-Control Unit 47P Connector Terminal No. 38 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

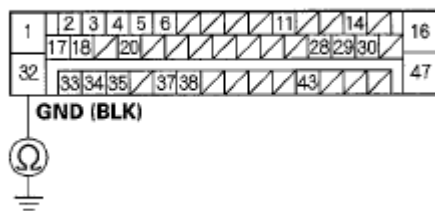
Is there battery voltage?

YES - Go to step 13.

NO - Check the No. 18 (15A) fuse in the driver's under-dash fuse/relay box. If the fuse is OK, repair open in the wire between the No. 18 (15A) fuse and the VSA modulator-control unit, then go to step 15.

13. Turn the ignition switch OFF.
14. Check for continuity between VSA modulator-control unit 47P connector terminal No. 32 and body ground.

VSA MODULATOR-CONTROL UNIT 47P CONNECTOR



Wire side of female terminals

Fig. 128: Checking Continuity Between VSA Modulator-Control Unit 47P Connector Terminal No. 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 15 and recheck. If DTC U0122 is not indicated, replace the original VSA modulator-control unit, then go to step 15.

NO - Repair open in the wire between the VSA modulator-control unit and G203, then go to step 15.

15. Reconnect the VSA modulator-control unit 47P 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. Check for Temporary DTCs or DTCs with the HDS.

Is DTC U0122 indicated?

YES - Check for poor connections or loose terminals at the gauge control module, the VSA modulator-control unit, and the PCM, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting

F-CAN CIRCUIT TROUBLESHOOTING

'08 MODEL

NOTE: Information marked with an asterisk (*) applies to the CANL line.

1. Turn the ignition switch OFF.
2. Jump the SCS line with the HDS.
3. Disconnect PCM connector E (31P), then disconnect the HDS.
4. Measure resistance between PCM connector terminals E15 and E26*.

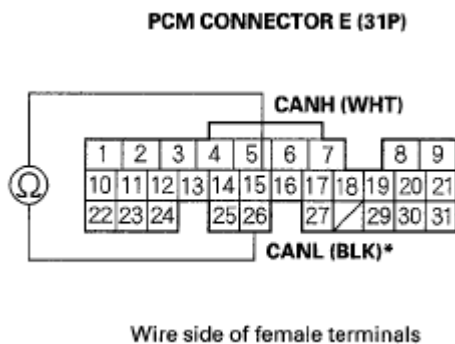


Fig. 129: Measuring Resistance Between PCM Connector Terminals E15 And E26
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 85-103 Ω ?

YES - Go to step 40.

NO - Go to step 5.

5. Disconnect gauge control module connector B (28P) (see **GAUGE CONTROL MODULE REPLACEMENT**).
6. Disconnect the VSA modulator-control unit 47P connector (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION**).
7. Disconnect SH-AWD control unit connector A (26P) (see **SH-AWD CONTROL UNIT REPLACEMENT**).
8. Disconnect the ACC unit 20P connector (see **ADAPTIVE CRUISE CONTROL (ACC) UNIT REMOVAL/INSTALLATION**).
9. Disconnect e-pretensioner unit connector B (14P) (see **E-PRETENSIONER UNIT REPLACEMENT**).
10. Disconnect TPMS unit connector B(20P) (see **TPMS INDICATOR OR TIRE(S) INDICATOR(S) DOES NOT GO OFF, AND NO DTCS ARE STORED**).
11. Check for continuity between PCM connector terminals E15 and E26*.

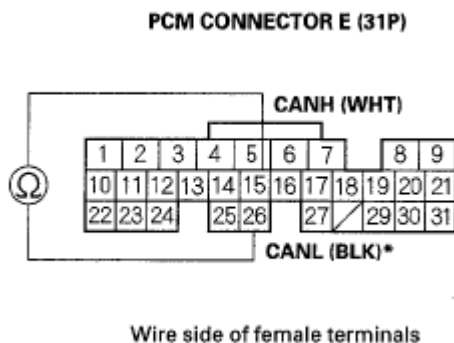


Fig. 130: Checking Continuity Between PCM Connector Terminals E15 And E26
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wires between PCM connector terminals E15 and E26*

NO - Go to step 12.

12. Connect PCM connector terminal E15 to body ground with a jumper wire.

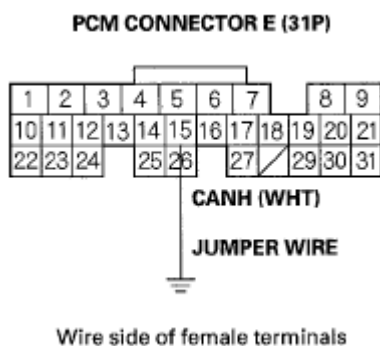
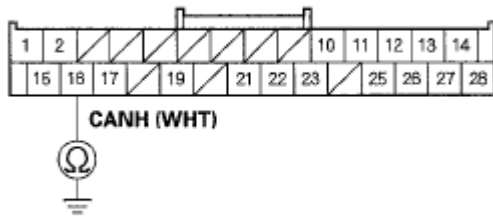


Fig. 131: Connecting PCM Connector Terminal E15 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Check for continuity between gauge control module connector B (28P) terminal No. 16 and body ground.

GAUGE CONTROL MODULE CONNECTOR B (28P)



Wire side of female terminals

Fig. 132: Checking Continuity Between Gauge Control Module Connector B (28P) Terminal No. 16 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

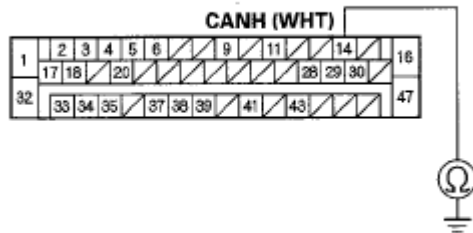
Is there continuity?

YES - Go to step 14.

NO - Repair open in the wire between the PCM (E15) and the gauge control module

14. Check for continuity between VSA modulator-control unit 47P connector terminal No. 14 and body ground.

VSA MODULATOR-CONTROL UNIT 47P CONNECTOR



Wire side of female terminals

Fig. 133: Checking Continuity Between VSA Modulator-Control Unit 47P Connector Terminal No. 14 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

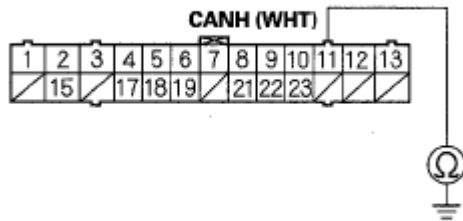
YES - Go to step 15.

NO - Repair open in the wire between the PCM (E15) and the VSA modulator-control unit

15. Check for continuity between SH-AWD control unit connector A (26P) terminal No. 11 and body

ground.

SH-AWD CONTROL UNIT CONNECTOR A (26P)



Wire side of female terminals

Fig. 134: Checking Continuity Between SH-AWD Control Unit Connector A (26P) Terminal No. 11 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

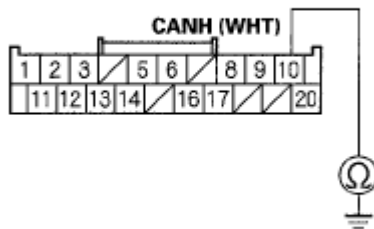
Is there continuity?

YES - Go to step 16.

NO - Repair open in the wire between the PCM (E15) and the SH-AWD control unit

16. Check for continuity between ACC unit 20P connector terminal No. 10 and body ground.

ACC UNIT 20P CONNECTOR



Wire side of female terminals

Fig. 135: Checking Continuity Between ACC Unit 20P Connector Terminal No. 10 And Body Ground

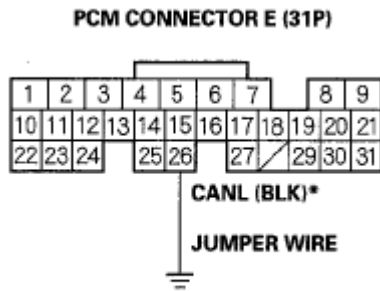
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 17.

NO - Repair open in the wire between the PCM (E15) and ACC unit

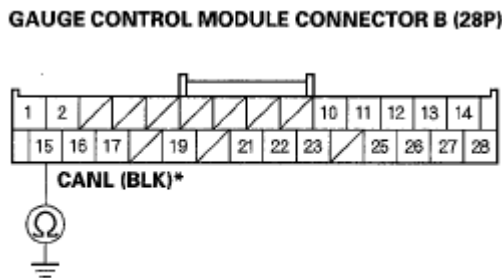
17. Remove the jumper wire from PCM connector E (31P).
18. Connect PCM connector terminal E26* to body ground with a jumper wire.



Wire side of female terminals

Fig. 136: Connecting PCM Connector Terminal E26 To Body Ground With Jumper Wire
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Check for continuity between gauge control module connector B (28P) terminal No. 15* and body ground.



Wire side of female terminals

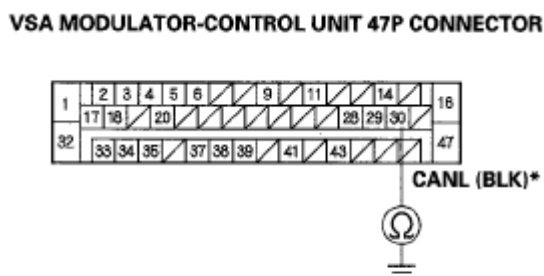
Fig. 137: Checking Continuity Between Gauge Control Module Connector B (28P) Terminal No. 15 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 20.

NO - Repair open in the wire between the PCM (E26) * and the gauge control module

20. Check for continuity between VSA modulator-control unit 47P connector terminal No. 30* and body ground.



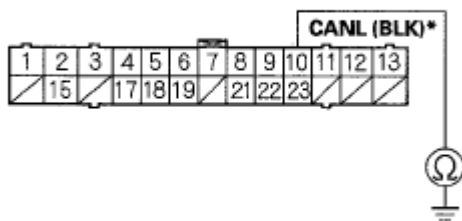
Wire side of female terminals

Fig. 138: Checking Continuity Between VSA Modulator-Control Unit 47P Connector Terminal No. 30 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Go to step 21.**NO** - Repair open in the wire between the PCM (E26)* and the VSA modulator-control unit

21. Check for continuity between SH-AWD control unit connector A (26P) terminal No. 10* and body ground.

SH-AWD CONTROL UNIT CONNECTOR A (26P)

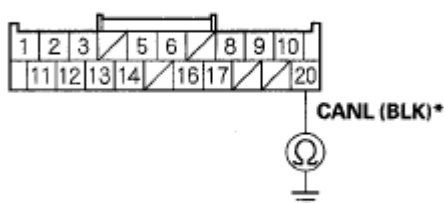
Wire side of female terminals

Fig. 139: Checking Continuity Between SH-AWD Control Unit Connector A (26P) Terminal No. 10 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 (E26) * and the SH-AWD control unit

22. Check for continuity between ACC unit 20P connector terminal No. 20* and body ground.

ACC UNIT 20P CONNECTOR

Wire side of female terminals

Fig. 140: Checking Continuity Between ACC Unit 20P Connector Terminal No. 20 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 (E26)* and the ACC unit

23. Reconnect gauge control module connector B (28P).
24. Measure resistance between PCM connector terminals E15 and E26*.

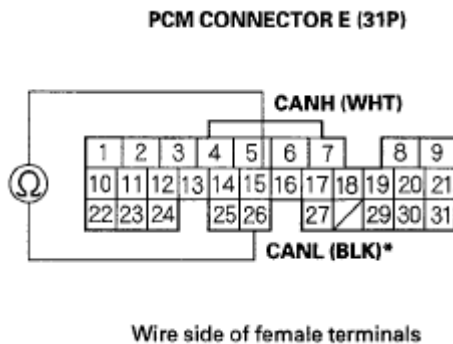


Fig. 141: Measuring Resistance Between PCM Connector Terminals E15 And E26
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 2.34-2.86 kohms?

YES - Go to step 25.

NO - Substitute a known-good gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**). If the HDS identifies the vehicle, replace the original gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**)

25. Disconnect gauge control module connector B (28P).
26. Reconnect the VSA modulator-control unit 47P connector.
27. Measure resistance between PCM connector terminals E15 and E26*.

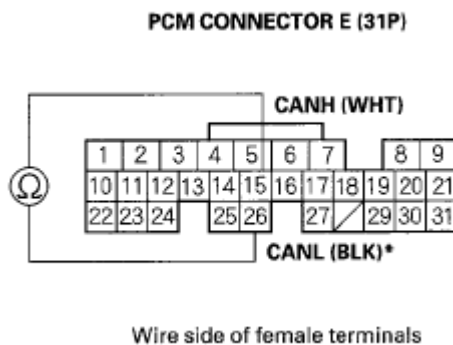


Fig. 142: Measuring Resistance Between PCM Connector Terminals E15 And E26
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 108-132 kohms?

YES - Go to step 28.

NO - Substitute a known-good VSA modulator-control unit (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION**). If the HDS identifies the vehicle, replace the original VSA modulator-control unit (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION**)

28. Disconnect the VSA modulator-control unit 47P connector.
29. Reconnect SH-AWD control unit connector A (26P).
30. Measure resistance between PCM connector terminals E15 and E26*.

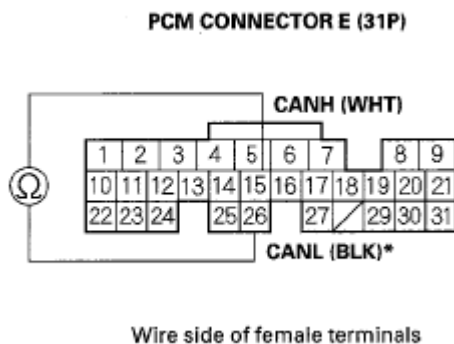


Fig. 143: Measuring Resistance Between PCM Connector Terminals E15 And E26
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 2.34-2.86 kohms?

YES - Go to step 31.

NO - Substitute a known-good SH-AWD control unit (see **SH-AWD CONTROL UNIT REPLACEMENT**). If the HDS identifies the vehicle, replace the original SH-AWD control unit (see **SH-AWD CONTROL UNIT REPLACEMENT**)

31. Disconnect SH-AWD control unit connector A (26P) (see **SH-AWD CONTROL UNIT REPLACEMENT**).
32. Reconnect the ACC unit 20P connector.
33. Measure resistance between PCM connector terminals E15 and E26*.

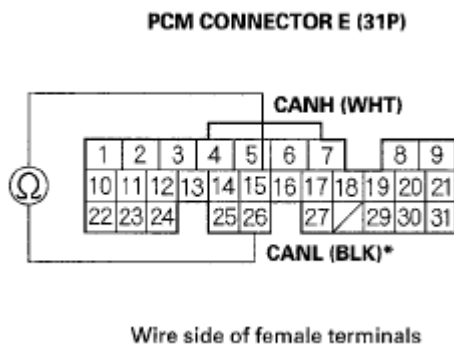


Fig. 144: Measuring Resistance Between PCM Connector Terminals E15 And E26
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 2.34-2.86 kohms?

YES - Go to step 34.

NO - Substitute a known-good ACC unit (see **ADAPTIVE CRUISE CONTROL (ACC) UNIT REMOVAL/INSTALLATION**). If the HDS identifies the vehicle, replace the original ACC unit (see **ADAPTIVE CRUISE CONTROL (ACC) UNIT REMOVAL/INSTALLATION**)

34. Disconnect the ACC unit 20P connector.
35. Reconnect e-pretensioner unit connector B (14P).
36. Measure resistance between PCM connector terminals E15 and E26*.

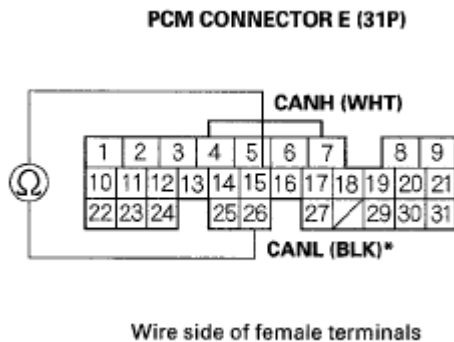


Fig. 145: Measuring Resistance Between PCM Connector Terminals E15 And E26
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 2.34-2.86 kohms?

YES - Go to step 37.

NO - Substitute a known-good e-pretensioner unit (see **E-PRETENSIONER UNIT REPLACEMENT**). If the HDS identifies the vehicle, replace the original e-pretensioner unit (see **E-PRETENSIONER UNIT REPLACEMENT**)

37. Disconnect e-pretensioner unit connector B (14P).
38. Reconnect TPMS unit connector B (20P).
39. Measure resistance between PCM connector terminals E15 and E26*.

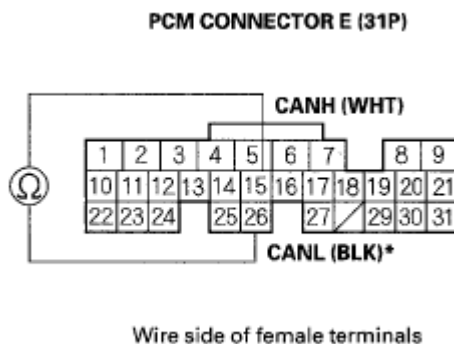


Fig. 146: Measuring Resistance Between PCM Connector Terminals E15 And E26
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 2.34-2.86 kohms?

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

NO - Substitute a known-good TPMS unit (see **TPMS INDICATOR OR TIRE(S) INDICATOR(S) DOES NOT GO OFF, AND NO DTCS ARE STORED**). If the HDS identifies the vehicle, replace the original TPMS unit (see **TPMS INDICATOR OR TIRE(S) INDICATOR(S) DOES NOT GO OFF, AND NO DTCS ARE STORED**)

40. Disconnect gauge control module connector B (28P) (see **GAUGE CONTROL MODULE REPLACEMENT**).
41. Disconnect the VSA modulator-control unit 47P connector (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION**).
42. Disconnect SH-AWD control unit connector A (26P) (see **SH-AWD CONTROL UNIT REPLACEMENT**).
43. Disconnect the ACC unit 20P connector (see **ADAPTIVE CRUISE CONTROL (ACC) UNIT REMOVAL/INSTALLATION**).
44. Disconnect e-pretensioner unit connector B (14P) (see **E-PRETENSIONER UNIT REPLACEMENT**).
45. Disconnect TPMS unit connector B (20P) (see **TPMS INDICATOR OR TIRE(S) INDICATOR(S) DOES NOT GO OFF, AND NO DTCS ARE STORED**).
46. Check for continuity between PCM connector terminal E15 and body ground.

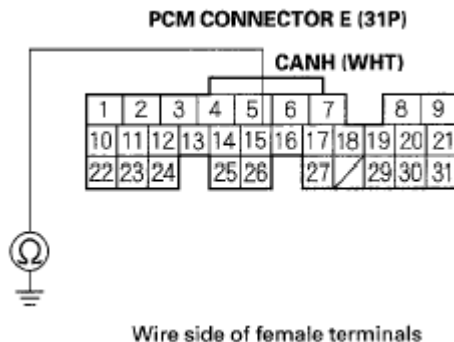


Fig. 147: Checking Continuity Between PCM Connector Terminal E15 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM connector terminal E15 and the gauge control module, the VSA modulator-control unit, the SH-AWD control unit, the ACC unit, the e-pretensioner unit, the TPMS unit, or the DLC

NO - Go to step 47.

47. Check for continuity between PCM connector terminal E26* and body ground.

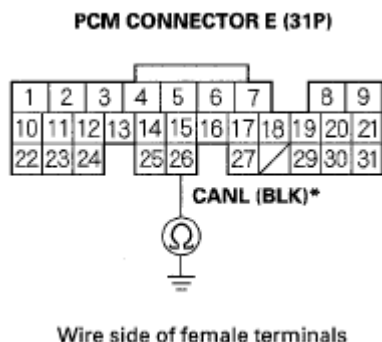


Fig. 148: Checking Continuity Between PCM Connector Terminal E26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between PCM connector terminal E26* and the gauge control module, the VSA modulator-control unit, the SH-AWD control unit, the ACC unit, the e-pretensioner unit, the TPMS unit, or the DLC

NO - Go to step 48.

48. Reconnect all connectors.
49. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION**).
50. Disconnect gauge control module connector B (28P).
51. Turn the ignition switch ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES - Replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**)

NO - Go to step 52.

52. Turn the ignition switch OFF.
53. Reconnect gauge control module connector B (28P).
54. Disconnect the VSA modulator-control unit 47P connector.
55. Turn the ignition switch ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES - Replace the VSA modulator-control unit (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION**)

NO - Go to step 56.

56. Turn the ignition switch OFF.
57. Reconnect the VSA modulator-control unit 47P connector.
58. Disconnect SH-AWD control unit connector A (26P).

59. Turn the ignition switch ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES - Replace the SH-AWD control unit (see **SH-AWD CONTROL UNIT REPLACEMENT**)

NO - Go to step 60.

60. Turn the ignition switch OFF.
61. Reconnect SH-AWD control unit connector A (26P).
62. Disconnect the ACC unit 20P connector.
63. Turn the ignition switch ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES - Replace the ACC unit (see **ADAPTIVE CRUISE CONTROL (ACC) UNIT REMOVAL/INSTALLATION**)

NO - Go to step 64.

64. Turn the ignition switch OFF.
65. Reconnect the ACC unit 20P connector.
66. Disconnect e-pretensioner unit connector B (14P).
67. Turn the ignition switch ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES - Replace the e-pretensioner unit (see **E-PRETENSIONER UNIT REPLACEMENT**)

NO - Go to step 68.

68. Reconnect e-pretensioner unit connector B (14P).
69. Disconnect TPMS unit connector B (20P).
70. Turn the ignition switch ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES - Replace the TPMS unit (see **TPMS INDICATOR OR TIRE(S) INDICATOR(S) DOES NOT GO OFF, AND NO DTCS ARE STORED**)

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

MIL CIRCUIT TROUBLESHOOTING

1. Turn the ignition switch ON (II).
2. Do the gauge self-diagnostic procedure (see **SELF-DIAGNOSTIC FUNCTION**).

Does the MIL indicator flash?

YES - Go to step 3.

NO - Substitute a known-good gauge control module, and recheck. If the MIL circuit is OK, replace the original gauge control module

3. Turn the ignition switch OFF.
4. Turn the ignition switch ON (II), and watch the MIL.

Does the MIL stay off?

YES - Go to step 17.

NO - Go to step 5.

5. Turn the ignition switch OFF.
6. Turn the ignition switch ON (II), wait 20 seconds, and watch the MIL.

Does the MIL stay on or flash more than 5 times?

YES - Go to step 7.

NO - The MIL circuit is OK

7. Turn the ignition switch OFF.
8. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION**).
9. Turn the ignition switch ON (II), and read the HDS.

Does the HDS communicate with the PCM?

YES - Go to step 10.

NO - Go to "**DLC CIRCUIT TROUBLESHOOTING**"

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

Are any Temporary DTCs or DTCs indicated?

YES - Go to the indicated DTCs troubleshooting

NO - Go to step 11.

11. Check the MIL in the DATA LIST with the HDS.

Does it indicate ON?

YES - Go to step 12.

NO - Substitute a known-good gauge control module, and recheck. If the MIL circuit is OK, replace the original gauge control module

12. Check the SCS in the DATA LIST with the HDS.

Is a short indicated?

YES - Go to step 13.

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

13. Turn the ignition switch OFF.
14. Jump the SCS line with the HDS.
15. Disconnect PCM connector E (31P), then disconnect the HDS.
16. Check for continuity between PCM connector terminal E16 and body ground.

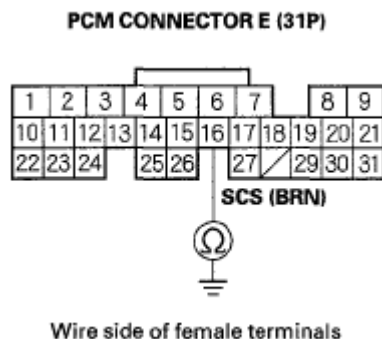


Fig. 149: Checking Continuity Between PCM Connector Terminal E16 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (E16) and the DLC

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

17. Try to start the engine.

Does the engine start and idle smoothly?

YES - Go to step 18.

NO - Go to step 22.

18. Turn the ignition switch OFF.
19. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION**).
20. Turn the ignition switch ON (II), and read the HDS.

Does the HDS communicate with the PCM?

YES - Go to step 21.

NO - Go to "**DLC CIRCUIT TROUBLESHOOTING**"

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

Is DTC U0073 and/or U0155 indicated?

YES - Go to the indicated DTCs troubleshooting

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

22. Turn the ignition switch OFF.
23. Inspect the No. 23 +B IG MAIN (50A) fuse in the under-hood fuse/relay box.

Is the fuse OK?

YES - Repair open in the wire between the No. 23 +B IG MAIN (50A) fuse and the ignition switch. If the wire is OK, go to step 24.

NO - Repair short in the wire between the No. 23 +B IG MAIN (50A) fuse and the under-hood fuse/relay box. Also replace the No. 23 +B IG MAIN (50A) fuse

24. Inspect the No. 8 FI ECU (PCM) (15A) fuse in the under-hood fuse/relay box.

Is the fuse OK?

YES - Go to step 31.

NO - Go to step 25.

25. Remove the blown No. 8 FI ECU (PCM) (15A) fuse from the under-hood fuse/relay box.
26. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS**), then remove PGM-FI main relay 1 (FI MAIN) (A) from the driver's under-dash fuse/relay box.

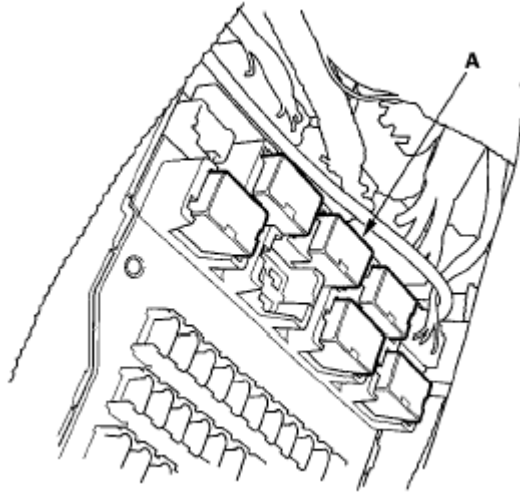
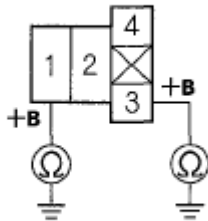


Fig. 150: Identifying PGM-FI Main Relay 1 (FI MAIN)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

27. Check for continuity between body ground and PGM-FI main relay 1 (FI MAIN) 4P connector terminals No. 1 and No. 3 individually.

PGM-FI MAIN RELAY 1 (FI MAIN)
4P CONNECTOR



Terminal side of female terminals

Fig. 151: Checking Continuity Between Body Ground And PGM-FI Main Relay 1 (FI MAIN) 4P Connector Terminals 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

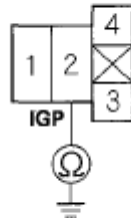
YES - Repair short in the wire between the No. 8 FI ECU (PCM) (15A) fuse and PGM-FI main relay 1 (FI MAIN). Also replace the No. 8 FI ECU (PCM) (15A) fuse

NO - Go to step 28.

28. Disconnect each of the components or connectors below, one at a time, while checking for continuity between PGM-FI main relay 1 (FI MAIN) 4P connector terminal No. 2 and body ground.
- PGM-FI main relay 2 (FUEL PUMP)
 - PCM connector A (31P)
 - Each injector 2P connector
 - Camshaft position (CMP) sensor 3P connector
 - Crankshaft position (CKP) sensor A/B 6P connector

- A/F sensor relay (LAF) 4P connector
- Radiator fan control (RFC) relay 4P connector

**PGM-FI MAIN RELAY 1 (FI MAIN)
4P CONNECTOR**



Terminal side of female terminals

Fig. 152: Checking Continuity Between PGM-FI Main Relay 1 (FI Main) 4P Connector Terminal 2 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does continuity go away when one of the above components is disconnected?

YES - Replace the component that made the short to body ground go away when disconnected. If the item is the PCM, update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **HOW TO TROUBLESHOOT CIRCUITS AT THE PCM CONNECTORS**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**). Also replace the No. 8 FI ECU (PCM) (15A) fuse

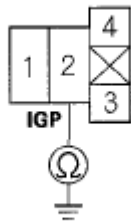
NO - Go to step 29.

29. Disconnect the connectors from these components:

- PGM-FI main relay 2 (FUEL PUMP)
- PCM connector A (31P)
- Injectors
- Camshaft position (CMP) sensor
- Crankshaft position (CKP) sensor A/B
- A/F sensor relay (LAF)
- Radiator fan control (RFC) relay

30. Check for continuity between PGM-FI main relay 1 (FI MAIN) 4P connector terminal No. 2 and body ground.

**PGM-FI MAIN RELAY 1 (FI MAIN)
4P CONNECTOR**



Terminal side of female terminals

Fig. 153: Checking Continuity Between PGM-FI Main Relay 1 (FI Main) 4P Connector Terminal 2 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

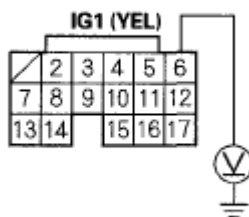
Is there continuity?

YES - Repair short in the wire between PGM-FI main relay 1 (FI MAIN) and each item. Also replace the No. 8 FI ECU (PCM) (15A) fuse

NO - Replace PGM-FI main relay 1 (FI MAIN). Also replace the No. 8 FI ECU (PCM) (15A) fuse

31. Turn the ignition switch ON (II).
32. Measure voltage between PCM connector terminal D6 and body ground.

PCM CONNECTOR D (17P)



Wire side of female terminals

Fig. 154: Measuring Voltage Between PCM Connector Terminal D6 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 33.

NO - Repair open in the wire between the No. 19 FUEL PUMP (20A) fuse and the PCM (D6)

33. Measure voltage between PCM connector terminal E5 and body ground.

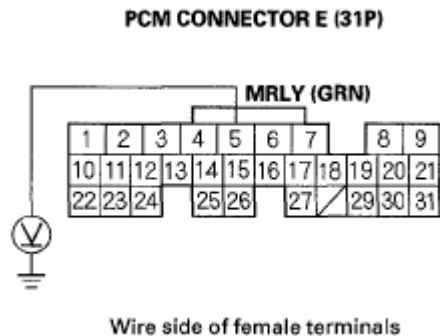


Fig. 155: Measuring Voltage Between PCM Connector Terminal E5 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 40.

NO - Go to step 34.

34. Turn the ignition switch OFF.
35. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS**). Then remove PGM-FI main relay 1 (FI MAIN) (A) from the driver's under-dash fuse/relay box.

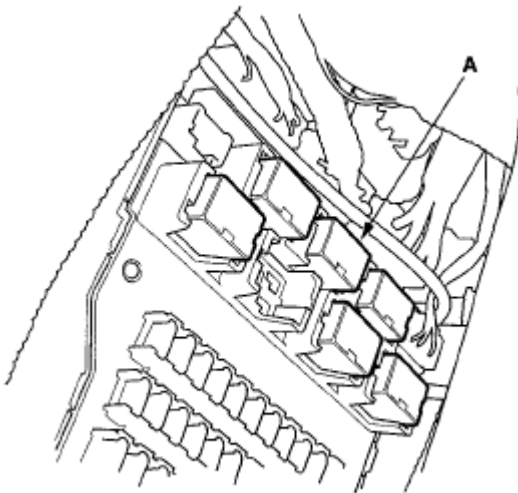
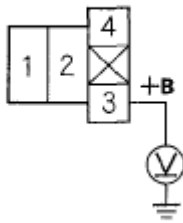


Fig. 156: Identifying PGM-FI Main Relay 1 (FI MAIN)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. Measure voltage between PGM-FI main relay 1 (FI MAIN) 4P connector terminal No. 3 and body ground.

**PGM-FI MAIN RELAY 1 (FI MAIN)
4P CONNECTOR**



Terminal side of female terminals

Fig. 157: Measuring Voltage Between PGM-FI Main Relay 1 (FI Main) 4P Connector Terminal No. 3 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

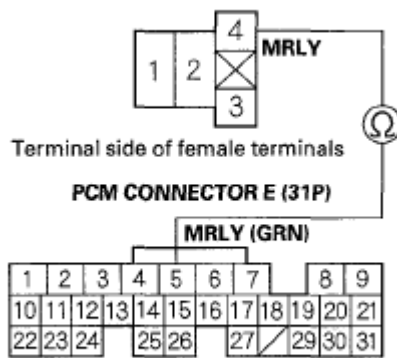
Is there battery voltage?

YES - Go to step 37.

NO - Repair open in the wire between the No. 8 FI ECU (PCM) (15A) fuse and PGM-FI main relay 1 (FI MAIN)

37. Jump the SCS line with the HDS.
38. Disconnect PCM connector E (31P).
39. Check for continuity between PGM-FI main relay 1 (FI MAIN) 4P connector terminal No. 4 and PCM connector terminal E5.

PGM-FI MAIN RELAY 1 (FI MAIN) 4P CONNECTOR



Terminal side of female terminals

PCM CONNECTOR E (31P)

MRLY (GRN)

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | | | | |

Wire side of female terminals

Fig. 158: Checking Continuity Between PGM-FI Main Relay 1 (FI Main) 4P Connector Terminal 4 And PCM Terminal E5

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Test PGM-FI main relay 1 (FI MAIN) (see **POWER RELAY TEST**). If the relay is OK, update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), 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 PGM-FI main relay 1 (FI MAIN) and the PCM (E5)

40. Turn the ignition switch ON (II).
41. Measure voltage between body ground and PCM connector terminal A4.

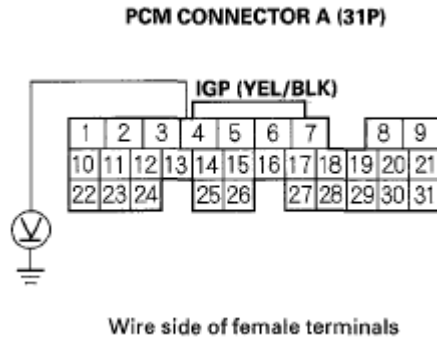


Fig. 159: Measuring Voltage Between Body Ground And PCM Connector Terminal A4
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 50.

NO - Go to step 42.

42. Turn the ignition switch OFF.
43. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS**). Then remove PGM-FI main relay 1 (FI MAIN) (A) from the driver's under-dash fuse/relay box.

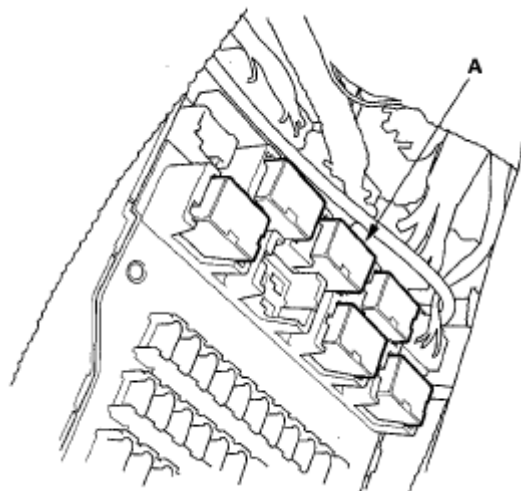
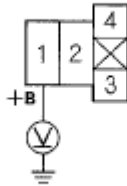


Fig. 160: Identifying PGM-FI Main Relay 1 (FI MAIN)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

44. Turn the ignition switch ON (II).
45. Measure voltage between PGM-FI main relay 1 (FI MAIN) 4P connector terminal No. 1 and body ground.

PGM-FI MAIN RELAY 1 (FI MAIN)
4P CONNECTOR



Terminal side of female terminals

Fig. 161: Measuring Voltage Between PGM-FI Main Relay 1 (FI Main) 4P Connector Terminal 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

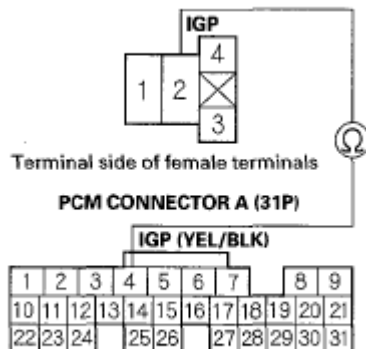
Is there battery voltage?

YES - Go to step 46.

NO - Repair open in the wire between the No. 8 FI ECU (PCM) (15A) fuse and PGM-FI main relay 1 (FI MAIN)

46. Turn the ignition switch OFF.
47. Jump the SCS line with the HDS.
48. Disconnect PCM connector A (31P).
49. Check for continuity between PGM-FI main relay 1 (FI MAIN) 4P connector terminal No. 2 and PCM connector terminal A4.

PGM-FI MAIN RELAY 1 (FI MAIN) 4P CONNECTOR



Wire side of female terminals

Fig. 162: Checking Continuity Between PGM-FI Main Relay 1 (FI Main) 4P Connector Terminal 2 And PCM Connector Terminal A4
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Replace PGM-FI main relay 1 (FI MAIN)

NO - Repair open in the wire between PGM-FI main relay 1 (FI MAIN) and the PCM (A4)

50. Measure voltage between body ground and PCM connector terminals A1, A2, A3, and B15

individually.

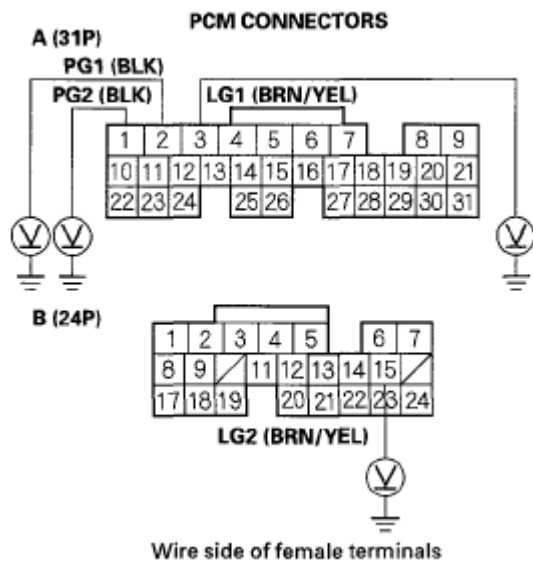


Fig. 163: Measuring Voltage Between Body Ground And PCM Connector Terminals A1, A2, A3, And B15

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there more than 0.2 V?

YES - Repair open in the wire(s) that had more than 0.2 V between G101 and the PCM (A1, A2, A3, and B15)

NO - Go to step 51.

51. Measure voltage between body ground and PCM connector terminal C6.

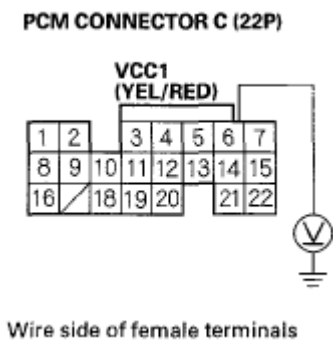


Fig. 164: Measuring Voltage Between Body Ground And PCM Connector Terminal C6

Courtesy of AMERICAN HONDA MOTOR CO., INC.

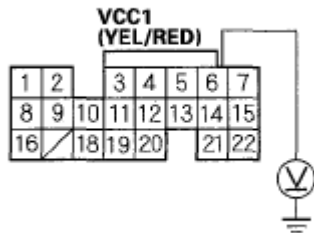
Is there about 5 V?

YES - Go to step 59.

NO - Go to step 52.

52. Turn the ignition switch OFF.
53. Disconnect the connector from each of the following sensors, one at a time, and measure voltage between body ground and PCM connector terminal C6 with the ignition switch ON (II).
 - Manifold absolute pressure (MAP) sensor
 - Output shaft (countershaft) speed sensor

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 165: Measuring Voltage Between Body Ground And PCM Connector Terminal C6 With Ignition Switch

Courtesy of AMERICAN HONDA MOTOR CO., INC.

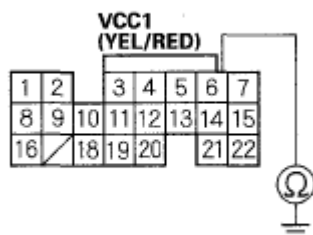
Is there about 5 V?

YES - Replace the sensor that restored 5 V when disconnected

NO - Go to step 54.

54. Turn the ignition switch OFF.
55. Jump the SCS line with the HDS.
56. Disconnect the connectors from these sensors:
 - Manifold absolute pressure (MAP) sensor
 - Output shaft (countershaft) speed sensor
57. Disconnect PCM connector C (22P).
58. Check for continuity between PCM connector terminal C6 and body ground.

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 166: Checking Continuity Between PCM Connector Terminal C6 And Body Ground

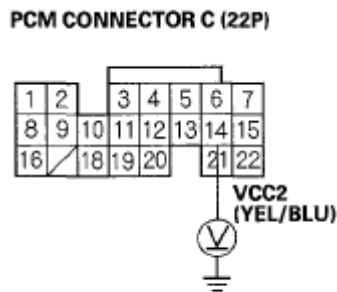
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (C6) and the MAP sensor or the output shaft (countershaft) speed sensor

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

59. Measure voltage between body ground and PCM connector terminal C14.



Wire side of female terminals

Fig. 167: Measuring Voltage Between Body Ground And PCM Connector Terminal C14
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

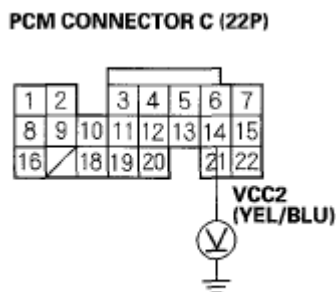
YES - Go to step 67.

NO - Go to step 60.

60. Turn the ignition switch OFF.

61. Disconnect the connector from each of the following sensors, one at a time, while measuring voltage between body ground and PCM connector terminal C14 with the ignition switch ON (II).

- Intake manifold tuning (IMT) actuator
- Exhaust gas recirculation (EGR) valve
- Input shaft (mainshaft) speed sensor



Wire side of female terminals

Fig. 168: Measuring Voltage Between Body Ground And PCM Connector Terminal C14

With Ignition Switch**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

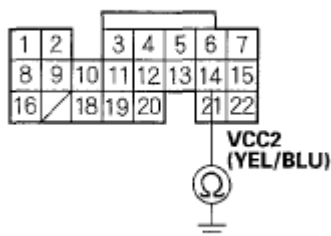
Is there about 5 V?

YES - Replace the part that restored 5 V when disconnected

NO - Go to step 62.

62. Turn the ignition switch OFF.
63. Jump the SCS line with the HDS.
64. Disconnect the connectors from these parts:
 - Intake manifold tuning (IMT) actuator
 - Exhaust gas recirculation (EGR) valve
 - Input shaft (mainshaft) speed sensor
65. Disconnect PCM connector C (22P).
66. Check for continuity between PCM connector terminal C14 and body ground.

PCM CONNECTOR C (22P)



Wire side of female terminals

Fig. 169: Checking Continuity Between PCM Connector Terminal C14 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

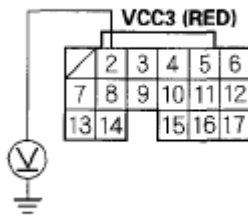
Is there continuity?

YES - Repair short in the wire between the PCM (C14) and the IMT actuator, the EGR valve, or the input shaft (mainshaft) speed sensor

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

67. Measure voltage between body ground and PCM connector terminal D2.

PCM CONNECTOR D (17P)



Wire side of female terminals

Fig. 170: Measuring Voltage Between Body Ground And PCM Connector Terminal D2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

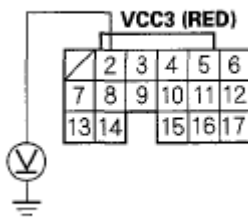
Is there about 5 V?

YES - Go to step 75.

NO - Go to step 68.

68. Turn the ignition switch OFF.
69. Disconnect the APP sensor 6P connector, and measure voltage between body ground and PCM connector terminal D2 with the ignition switch ON (II).

PCM CONNECTOR D (17P)



Wire side of female terminals

Fig. 171: Measuring Voltage Between Body Ground And PCM Connector Terminal D2 With Ignition Switch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Replace the accelerator pedal module (see ACCELERATOR PEDAL MODULE REMOVAL/INSTALLATION)

NO - Go to step 70.

70. Turn the ignition switch OFF.
71. Jump the SCS line with the HDS.
72. Disconnect the APP sensor 6P connector.
73. Disconnect PCM connector D (17P).

74. Check for continuity between PCM connector terminal D2 and body ground.

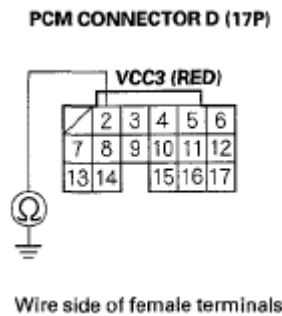


Fig. 172: Checking Continuity Between PCM Connector Terminal D2 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (D2) and the APP sensor

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

75. Measure voltage between PCM connector terminal E12 and body ground.

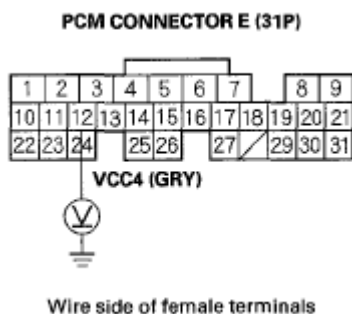


Fig. 173: Measuring Voltage Between PCM Connector Terminal E12 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

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

NO - Go to step 76.

76. Turn the ignition switch OFF.
77. Disconnect the connector, from each of the following sensors, one at a time, and measure voltage between body ground and PCM connector terminal E12 with the ignition switch ON (II).

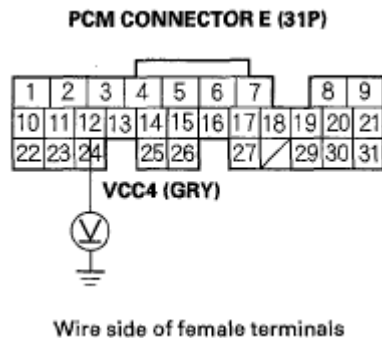


Fig. 174: Measuring Voltage Between Body Ground And PCM Connector Terminal E12 With Ignition Switch

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Repair the sensor that restored 5 V when disconnected

NO - Go to step 78.

78. Turn the ignition switch OFF.
79. Jump the SCS line with the HDS.
80. Disconnect the connectors from these sensors:
 - Accelerator pedal position (APP)
 - Fuel tank pressure (FTP) sensor
81. Disconnect PCM connector E (31P).
82. Check for continuity between PCM connector terminal E12 and body ground.

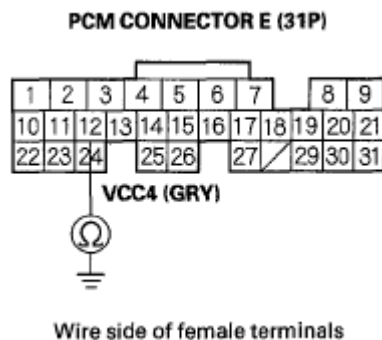


Fig. 175: Checking Continuity Between PCM Connector Terminal E12 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

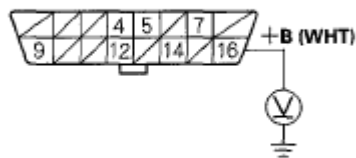
YES - Repair short in the wire between the PCM (E12) and the APP sensor or the FTP sensor

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

REPLACEMENT)**DLC CIRCUIT TROUBLESHOOTING****'05-07 MODELS****NOTE:**

- If the PCM does not communicate with the HDS, 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.

DATA LINK CONNECTOR (DLC)

Terminal side of female terminals

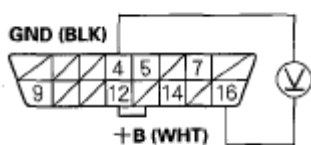
Fig. 176: Measuring Voltage Between DLC Terminal No. 16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 2.

NO - Repair open in the wire between DLC terminal No. 16 and the No. 8 FI ECU (PCM) (15A) fuse in the under-hood fuse/relay box

2. Measure voltage between DLC terminals No. 4 and No. 16.

DATA LINK CONNECTOR (DLC)

Terminal side of female terminals

Fig. 177: Measuring Voltage Between DLC Terminals No. 4 And No. 16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

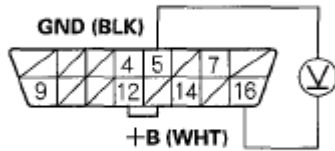
Is there battery voltage?

YES - Go to step 3.

NO - Repair open in the wire between DLC terminal No. 4 and body ground (G501)

3. Measure voltage between DLC terminals No. 5 and No. 16.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 178: Measuring Voltage Between DLC Terminals No. 5 And No. 16
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

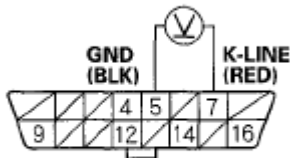
Is there battery voltage?

YES - Go to step 4.

NO - Repair open in the wire between DLC terminal No. 5 and body ground (G501)

4. Turn the ignition switch ON (II).
5. Measure voltage between DLC terminals No. 5 and No. 7.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 179: Measuring Voltage Between DLC Terminals No. 5 And No. 7
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 8.5 V or more?

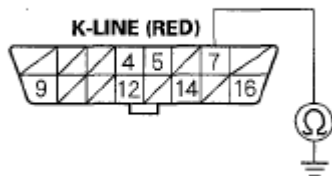
YES - Go to step 11.

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Jump the SCS line with the HDS.
8. Disconnect PCM connector E (31P).

9. Check for continuity between DLC terminal No. 7 and body ground.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 180: Checking Continuity Between DLC Terminal No. 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 (E14). After repairing the wire, check for a DTC with the HDS and go to the indicated DTCs troubleshooting

NO - Go to step 10.

10. Check for continuity between DLC terminal No. 7 and PCM connector terminal E14.

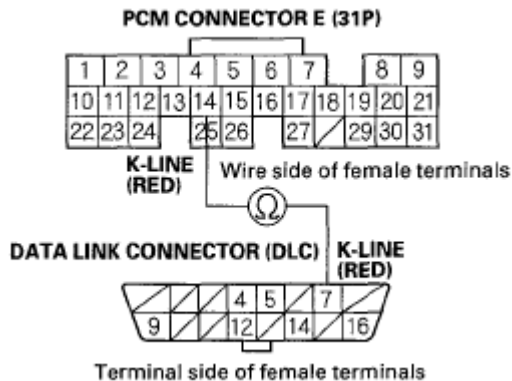


Fig. 181: Checking Continuity Between DLC Terminal No. 7 And PCM Connector Terminal E14

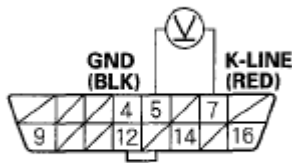
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), 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 (E14). After repairing the wire, check for Temporary DTCs or DTCs with the HDS and go to the indicated DTCs troubleshooting

11. Turn the ignition switch OFF.
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector E (31P).
14. Turn the ignition switch ON (II).
15. Measure voltage between DLC terminals No. 5 and No. 7.

DATA LINK CONNECTOR (DLC)

Terminal side of female terminals

Fig. 182: Measuring Voltage Between DLC Terminals No. 5 And No. 7
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0 V?

YES - Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), 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 (E14). After repairing the wire, check for Temporary DTCs or DTCs with the HDS, and go to the indicated DTCs troubleshooting.

'08 MODEL

NOTE: Make sure the HDS and the DLC cable of the HDS is normal.

1. Turn the ignition switch OFF.
2. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION**).

NOTE: Make sure the HDS is properly connected to the DLC.

3. Turn the ignition switch ON (II), and read the HDS.

Does the HDS identify the vehicle?

YES - Go to step 4.

NO - Go to step 21.

4. Check for Temporary DTCs or DTCs in the PGM-FI system with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - Go to the indicated DTCs troubleshooting

NO - Go to step 5.

5. Turn the ignition switch OFF.
6. Turn the ignition switch ON (II), and watch the SRS indicator.

Does the SRS indicator stay on?

YES - Go to the SRS system's general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**)

NO - Go to step 7.

7. Turn the ignition switch OFF.
8. Turn the ignition switch ON (II), and watch the VSA indicator.

Does the VSA indicator stay on?

YES - Go to the VSA system's general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**)

NO - Go to step 9.

9. Turn the ignition switch OFF.
10. Turn the ignition switch ON (II), and watch the immobilizer indicator.

Does the immobilizer indicator stay on or flash?

YES - Go to the immobilizer system's troubleshooting (see **SYMPTOM TROUBLESHOOTING**)

NO - Go to step 11.

11. Turn the ignition switch OFF.
12. Turn the ignition switch ON (II), and watch the SH-AWD indicator.

Does the SH-AWD indicator stay on?

YES - Go to the SH-AWD system's general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**)

NO - Go to step 13.

13. Do the gauge self-diagnostic function (see **SELF-DIAGNOSTIC FUNCTION**) to make sure the gauge is known-good. If the function test is OK, go to step 14.
14. Check for B-CAN system DTCs without the HDS (see **GENERAL TROUBLESHOOTING INFORMATION**).

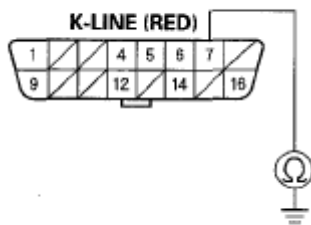
Are any B-CAN DTCs indicated?

YES - Go to the indicated DTCs troubleshooting

NO - Go to step 15.

15. Turn the ignition switch OFF.
16. Disconnect the HDS from the DLC.
17. Check for continuity between DLC terminal No. 7 and body ground.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 183: Checking Continuity Between DLC Terminal No. 7 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 5 ohms or less?

YES - Go to step 18.

NO - Go to step 19.

18. Continue to check for continuity between DLC terminal No. 7 and body ground, while disconnecting these parts, one at a time:
 - SRS unit connector A (28P)
 - VSA modulator-control unit 46P connector
 - SH-AWD control unit connector A (26P)
 - TPMS control unit connector B (20P)
 - MICU connector P (30P)
 - ACC unit 20P connector

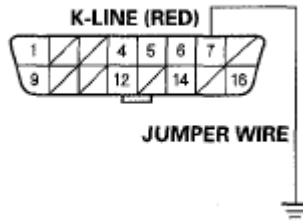
Does continuity go away when one of the above components is disconnected?

YES - Replace the part that caused an open when it was disconnected

NO - Repair short in the wire between the DLC (K-line) and the VSA modulator-control unit, the SH-AWD control unit, the TPMS control unit, or the ACC unit

19. Connect DLC terminal No. 7 to body ground with a jumper wire.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 184: Connecting DLC Terminal No. 7 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Check for continuity between body ground and these connector terminals:

CONNECTOR TERMINAL REFERENCE

| Connector | Terminal |
|--------------------------------|----------------|
| SRS unit A (28P) | No. 24 (RED) |
| VSA modulator-control unit 46P | No. 11 (LTBLU) |
| SH-AWD control unit A (26P) | No. 15 (LTBLU) |
| TPMS control unit B (20P) | No. 9 (LTBLU) |
| MICU 30P | No. 6 (RED) |
| ACC unit 20P | No. 8 (RED) |

Is there continuity between the DLC terminal and each of the terminals in the chart?

YES - Replace the unit that does not communicate with the HDS

NO - Repair open in the wire between the DLC (K-line) and the appropriate connector

21. Do the gauge self-diagnostic function (see **SELF-DIAGNOSTIC FUNCTION**) to make sure the gauge is known-good. If the function test is OK, go to step 22.
22. Check for B-CAN system DTCs without the HDS (see **GENERAL TROUBLESHOOTING INFORMATION**).

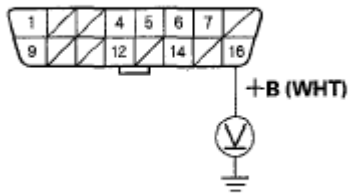
Is DTC B1168, B1169, and/or B1178 indicated?

YES - Go to step 35.

NO - Go to step 23.

23. Turn the ignition switch OFF.
24. Disconnect the HDS from the DLC.
25. Measure voltage between DLC terminal No. 16 and body ground.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 185: Measuring Voltage Between DLC Terminal No. 16 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

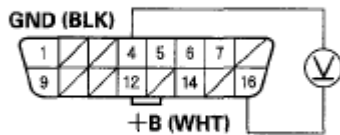
Is there battery voltage?

YES - Go to step 26.

NO - Repair open in the wire between DLC terminal No. 16 and the No. 8 FI ECU (PCM) (15A) fuse in the under-hood fuse/relay box

26. Measure voltage between DLC terminals No. 4 and No. 16.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 186: Measuring Voltage Between DLC Terminals No. 4 And No. 16
Courtesy of AMERICAN HONDA MOTOR CO., INC.

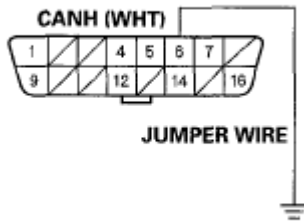
Is there battery voltage?

YES - Go to step 27.

NO - Repair open in the wire between DLC terminal No. 4 and G501

27. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION**).
28. Jump the SCS line with the HDS.
29. Disconnect PCM connector E (31P).
30. Disconnect the HDS from the DLC.
31. Connect DLC terminal No. 6 to body ground with a jumper wire.

DATA LINK CONNECTOR (DLC)

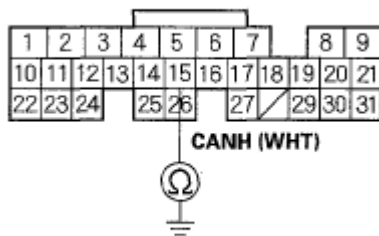


Terminal side of female terminals

Fig. 187: Connecting DLC Terminal No. 6 To Body Ground With Jumper Wire
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

32. Check for continuity between PCM connector terminal E15 and body ground.

PCM CONNECTOR E (31P)



Terminal side of female terminals

Fig. 188: Checking Continuity Between PCM Connector Terminal E15 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

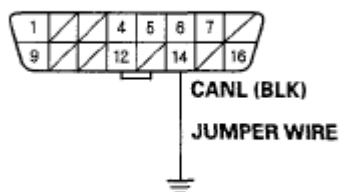
Is there continuity?

YES - Go to step 33.

NO - Repair open in the wire between the PCM (E15) and DLC terminal No. 6

33. Connect DLC terminal No. 14 to body ground with a jumper wire.

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 189: Connecting DLC Terminal No. 14 To Body Ground With Jumper Wire
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

34. Check for continuity between PCM connector terminal E26 and body ground.

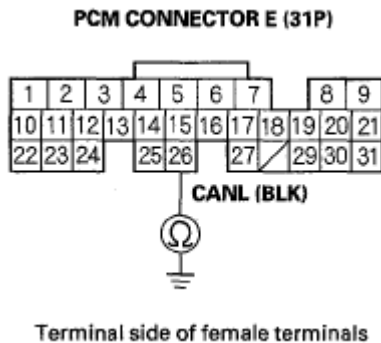


Fig. 190: Checking Continuity Between PCM Connector Terminal E26 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), 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 the PCM (E26) and DLC terminal No. 14

35. Try to start the engine.

Does the engine start and idle smoothly?

YES - Go to **F-CAN CIRCUIT TROUBLESHOOTING**

NO - Go to step 36.

36. Turn the ignition switch OFF.
 37. Check the No. 23 +B IG MAIN (50A) fuse in the under-hood fuse box.

Is the fuse OK?

YES - Repair open in the wire between the No. 23 +B IG MAIN (50A) fuse and the ignition switch. If the wire is OK, go to step 38.

NO - Repair short in the wire between the No. 23 +B IG MAIN (50A) fuse and the under-hood fuse box. Also replace the No. 23 +B IG MAIN (50A) fuse

38. Inspect the No. 23 IGP (7.5A) fuse in the driver's under-hood fuse/relay box.

Is the fuse OK?

YES - Go to step 44.

NO - Go to step 39.

39. Remove the blown No. 23 IGP (7.5A) fuse from the driver's under-hood fuse/relay box.
40. Jump the SCS line with the HDS.
41. Disconnect PCM connector A (31P).
42. Check for continuity between PCM connector terminal A4 and body ground.

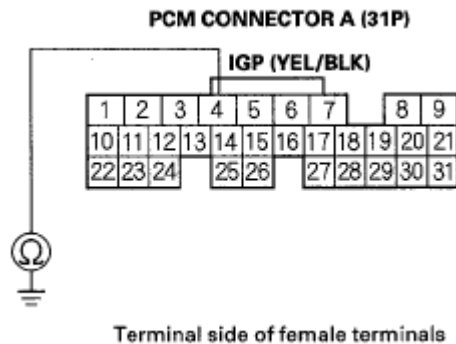


Fig. 191: Checking Continuity Between PCM Connector Terminal A4 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 43.

NO - Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **HOW TO TROUBLESHOOT CIRCUITS AT THE PCM CONNECTORS**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**). Also replace the No. 23 IGP (7.5A) fuse in the driver's under-hood fuse/relay box

43. Disconnect each of the components or connectors below, one at a time, and check for continuity between PCM connector terminal A4 and body ground.
 - Each injector 2P connector
 - Camshaft position (CMP) sensor 3P connector
 - Crankshaft position (CKP) sensor 6P connector
 - Driver's under-dash fuse/relay box 39P connector

Does continuity go away when one of the above components is disconnected?

YES - Replace the component that made the short to body ground go away when disconnected. If the item is the PCM, update the PCM if it does not have the latest software (see **SUBSTITUTING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**). Also replace the No. 23 IGP (7.5A) fuse

NO - Repair short in the wire between the PCM (A4) and the injector, the CMP sensor, the CKP sensor, or the driver's under-dash fuse/relay box. Also replace the No. 23 IGP (7.5A) fuse in the driver's under-hood fuse/relay box

44. Inspect the No. 19 FUEL PUMP (20A) fuse in the driver's under-dash fuse/relay box.

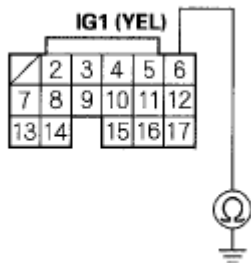
Is the fuse OK?

YES - Go to step 51.

NO - Go to step 45.

45. Remove the blown No. 19 FUEL PUMP (20A) fuse in the driver's under-dash fuse/relay box.
46. Jump the SCS line with the HDS.
47. Disconnect PCM connector B (49P).
48. Check for continuity between PCM connector terminal D6 and body ground.

PCM CONNECTOR D (17P)



Terminal side of female terminals

Fig. 192: Checking Continuity Between PCM Connector Terminal D6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 49.

NO - Replace the No. 19 FUEL PUMP (20A) fuse in the driver's under-dash fuse/relay box, and update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**)

49. Remove PGM-FI main relay 2 (A) from the driver's under-dash fuse/relay box.

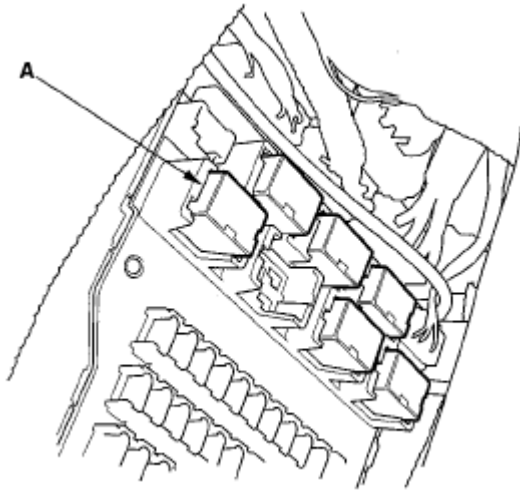
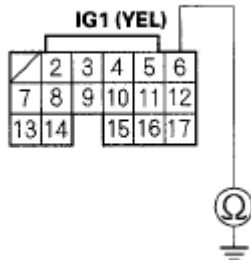


Fig. 193: Identifying PGM-FI Main Relay
Courtesy of AMERICAN HONDA MOTOR CO., INC.

50. Check for continuity between PCM connector terminal D6 and body ground.

PCM CONNECTOR D (17P)



Terminal side of female terminals

Fig. 194: Checking Continuity Between PCM Connector Terminal D6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

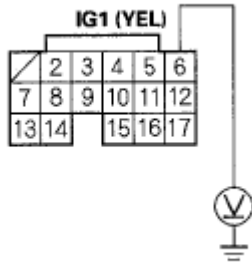
Is there continuity?

YES - Repair short in the wire between the No. 19 FUEL PUMP (20A) fuse and the PCM (D6), between the No. 19 FUEL PUMP (20A) fuse and PGM-FI main relay 2, or between the No. 21 METER (10A) fuse and the imoes unit. Also replace the No. 19 FUEL PUMP (20A) fuse in the driver's under-dash fuse/relay box

NO - Go to step 51.

51. Jump the SCS line with the HDS.
52. Disconnect PCM connectors D (17P) and E (31P).
53. Turn the ignition switch ON (II).
54. Measure voltage between PCM connector terminal D6 and body ground.

PCM CONNECTOR D (17P)



Terminal side of female terminals

Fig. 195: Measuring Voltage Between PCM Connector Terminal D6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

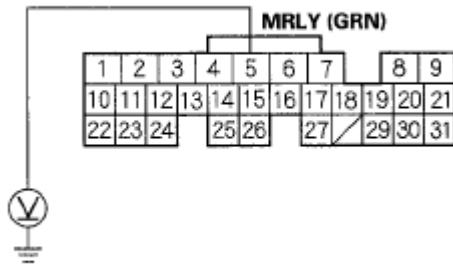
Is there battery voltage?

YES - Go to step 55.

NO - Repair open in the wire between the No. 19 FUEL PUMP (20A) fuse and the PCM (D6)

55. Measure voltage between PCM connector terminal E5 and body ground.

PCM CONNECTOR E (31P)



Terminal side of female terminals

Fig. 196: Measuring Voltage Between PCM Connector Terminal E5 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 59.

NO - Go to step 56.

56. Turn the ignition switch OFF.

57. Disconnect the driver's under-dash fuse/relay box 39P connector.

58. Check for continuity between PCM connector terminal E5 and driver's under-dash fuse/relay box 39P connector terminal No. 1.

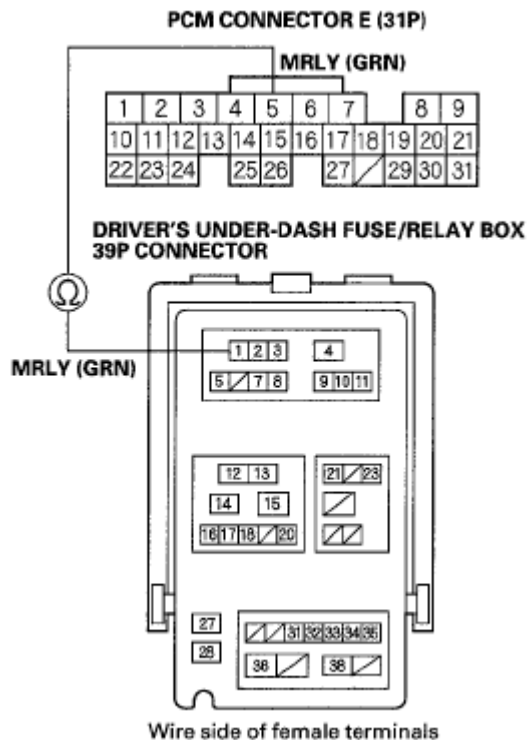


Fig. 197: Checking Continuity Between PCM Connector Terminal E5 And Driver's Under-Dash Fuse/Relay Box 39P Terminal 1

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -

- Replace the driver's under-dash fuse/relay box.
- Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), 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 the PCM (E5) and the driver's under-dash fuse/relay box

59. Turn the ignition switch OFF.
60. Disconnect the driver's under-dash fuse/relay box 39 P connector.
61. Check for continuity between PCM connector terminal A4 and driver's under-dash fuse/relay box 39P connector terminal No. 31.

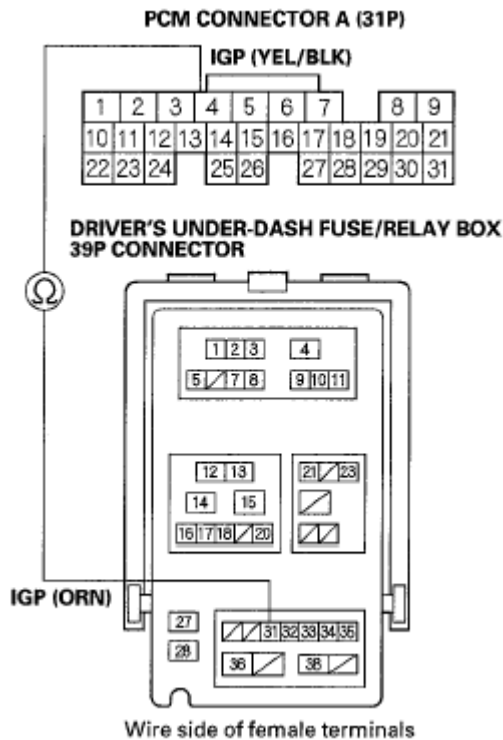


Fig. 198: Checking Continuity Between PCM Connector Terminal A4 And Driver's Under-Dash Fuse/Relay Box 39P Terminal 31

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 62.

NO - Repair open in the wire between the PCM (A4) and the driver's under-dash fuse/relay box.

62. Test PGM-FI main relay 1 in the driver's under-dash fuse/relay box (see **POWER RELAY TEST**).

Is PGM-FI main relay 1 OK?

YES - Go to step 63.

NO - Replace PGM-FI main relay 1.1

63. Disconnect PCM connector B (24P).
64. Check for continuity between body ground and PCM connector terminals A1, A2, A3, and B15 individually.

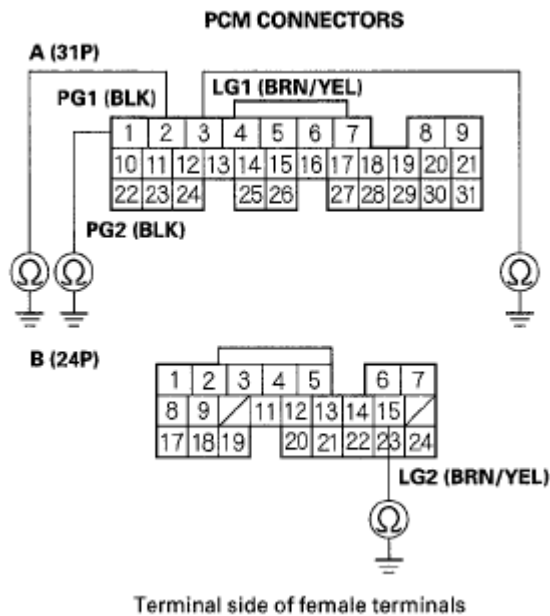


Fig. 199: Checking Continuity Between Body Ground And PCM Connector Terminals A1, A2, A3, And B15

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 65.

NO - Repair open in the wire between the PCM (A1, A2, A3, B15) and G101

65. Disconnect PCM connector C (22P).

66. Check for continuity between PCM connector terminal C6 and body ground.

PCM CONNECTOR C (22P)

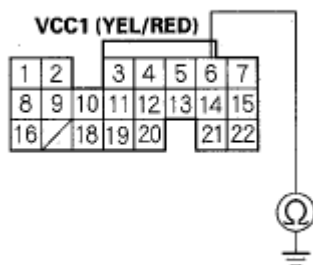


Fig. 200: Checking Continuity Between PCM Connector Terminal C6 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 67.

NO - Go to step 68.

67. Continue to check for continuity between PCM connector terminal C6 and body ground, while disconnecting these parts, one at a time:

- MAP sensor 3P connector
- Output shaft (countershaft) speed sensor 3P connector

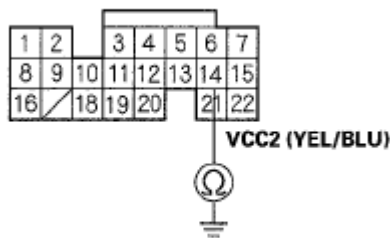
Does continuity go away when one of the above components is disconnected?

YES - Replace the part that caused an open when it was disconnected

NO - Repair short in the wire between the PCM (C6) and the MAP sensor, the output shaft (countershaft) speed sensor

68. Check for continuity between PCM connector terminal C14 and body ground.

PCM CONNECTOR C (22P)



Terminal side of female terminals

Fig. 201: Checking Continuity Between PCM Connector Terminal C14 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 69.

NO - Go to step 70.

69. Continue to check for continuity between PCM connector terminal C14 and body ground, while disconnecting these parts, one at a time:

- EGR valve 6P connector
- Input shaft (mainshaft) speed sensor 3P connector
- IMT actuator 5P connector

Does continuity go away when one of the above components is disconnected ?

YES - Replace the part that caused an open when it was disconnected

NO - Repair short in the wire between the PCM (C14) and the EGR valve, the input shaft (mainshaft) speed sensor, or the IMT actuator

70. Check for continuity between PCM connector terminal D2 and body ground.

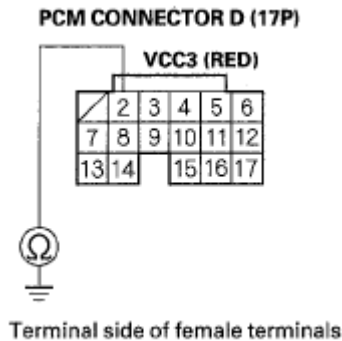


Fig. 202: Checking Continuity Between PCM Connector Terminal D2 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 71.

NO - Go to step 72.

71. Continue to check for continuity between PCM connector terminal D2 and body ground, while disconnecting the APP sensor 6P connector.

Is there continuity?

YES - Repair short in the wire between the PCM (D2) and APP sensor A

NO - Replace the accelerator pedal module (see **ACCELERATOR PEDAL MODULE REMOVAL/INSTALLATION**)

72. Check for continuity between PCM connector terminal E12 and body ground.

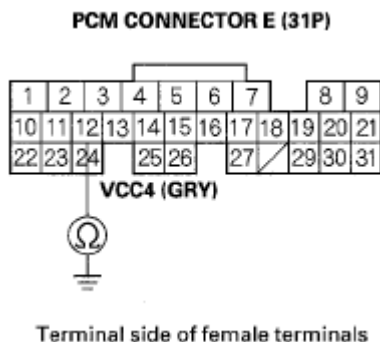


Fig. 203: Checking Continuity Between PCM Connector Terminal E12 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 73.

NO - Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or

substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the symptom/indication goes away with a known-good PCM, replace the original PCM (see **PCM REPLACEMENT**)

73. Continue to check for continuity between PCM connector terminal E12 and body ground, while disconnecting these connectors one at a time.
- APP sensor 6P connector
 - FTP sensor 3P connector

Does continuity go away when one of the above components is disconnected?

YES - Replace the part that caused an open when it was disconnected

NO - Repair short in the wire between the PCM (E12) and the APP sensor B or the FTP sensor

INJECTOR REPLACEMENT

1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING**).
2. Remove the intake manifold (see **REMOVAL**).
3. Disconnect the connectors from the injectors (A).

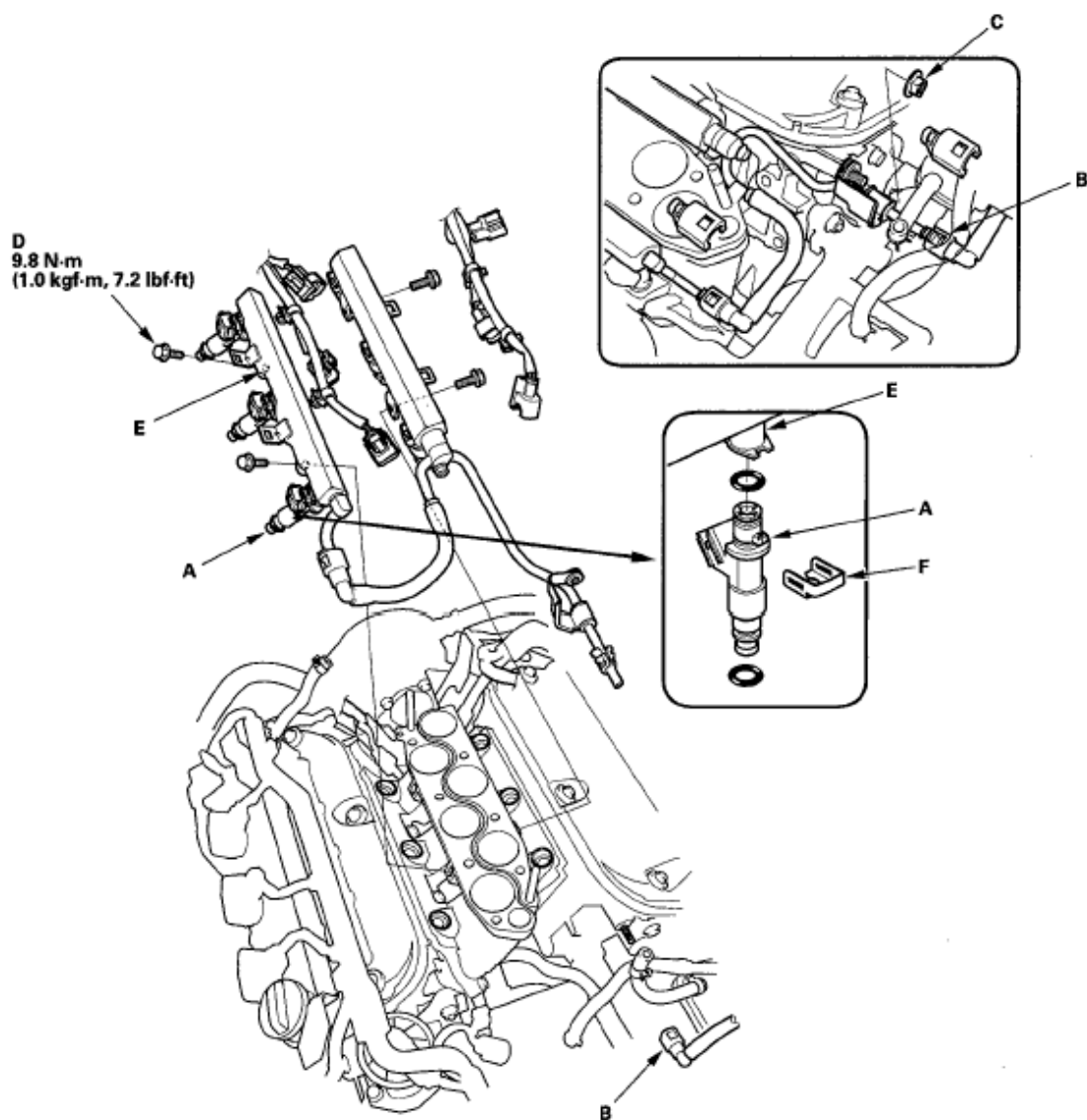


Fig. 204: Identifying Injector, Fuel Rail, Injector Clips And Fuel Rail Mounting Bolts With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Disconnect the quick-connect fitting (B), and remove the nut (C).
5. Remove the fuel rail mounting bolts (D) from the fuel rail (E).
6. Remove the injector clips (F) from the injectors.
7. Remove the injectors from the fuel rail.
8. Coat the new O-rings (A) with clean engine oil, and insert the injectors (B) into the fuel rail (C).

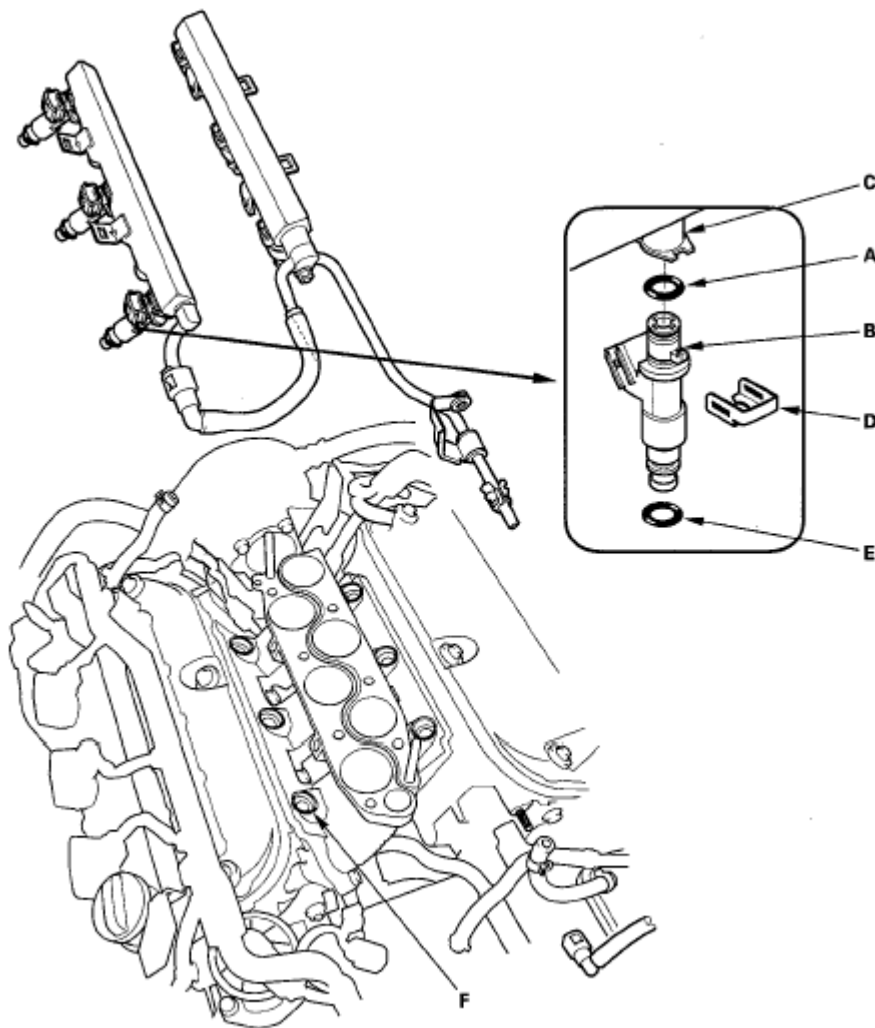


Fig. 205: Identifying O-Rings, Injectors And Fuel Rail
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the injector clips (D).
10. Coat the injector O-rings (E) with clean engine oil.
11. Install the injectors in the injector base (F).
12. Install the fuel rail mounting nuts.
13. Connect the connectors on the injectors.
14. Connect the quick-connect fittings.
15. Turn the ignition switch ON (II), but do not operate the starter. After the fuel pump runs for about 2 seconds, the fuel rail will be pressurized. Repeat this two or three times, then check for fuel leakage.
16. Install the intake manifold (see **INSTALLATION**).

A/F SENSOR REPLACEMENT

Special Tools Required

O2 sensor socket wrench. Snap-on YA8875, SP Tools 93750, or equivalent, commercially available

FRONT BANK (BANK 2)

1. Disconnect the front A/F sensor 8P connector (A), then remove the A/F sensor (B) with an 02 sensor socket wrench.

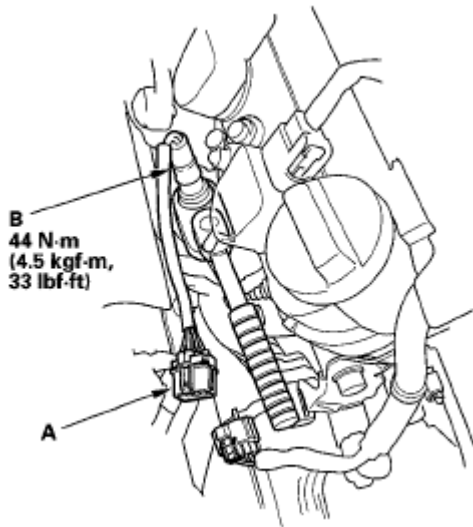


Fig. 206: Identifying Front A/F Sensor 8P Connector And A/F Sensor With Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the parts 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) with an 02 sensor socket wrench.

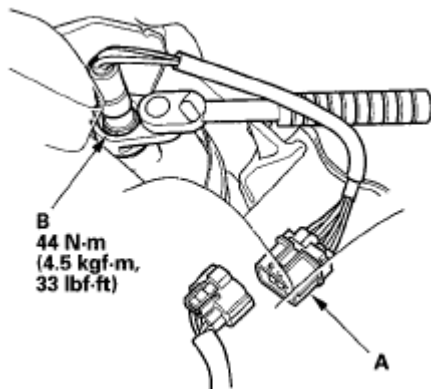


Fig. 207: Identifying Rear A/F Sensor 8P Connector And Rear A/F Sensor With Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the parts in the reverse order of removal.

SECONDARY HO2S REPLACEMENT

Special Tools Required

O2 sensor socket wrench, Snap-on YA8875 or SWR2, or equivalent, commercially available

FRONT BANK (BANK 2)

1. Disconnect the front secondary HO2S 4P connector (A), then remove the front secondary HO2S (B) with an O2 sensor socket wrench.

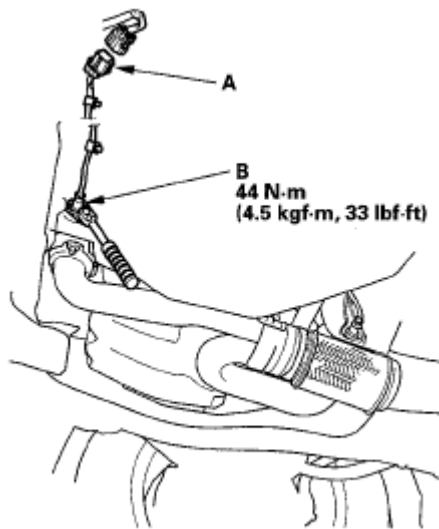


Fig. 208: Identifying Front Secondary HO2S 4P Connector And Front Secondary HO2S With Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the parts in the reverse order of removal.

REAR BANK (BANK 1)

1. Disconnect the rear secondary HO2S 4P connector (A), then remove the rear secondary HO2S (B) with an O2 sensor socket wrench.

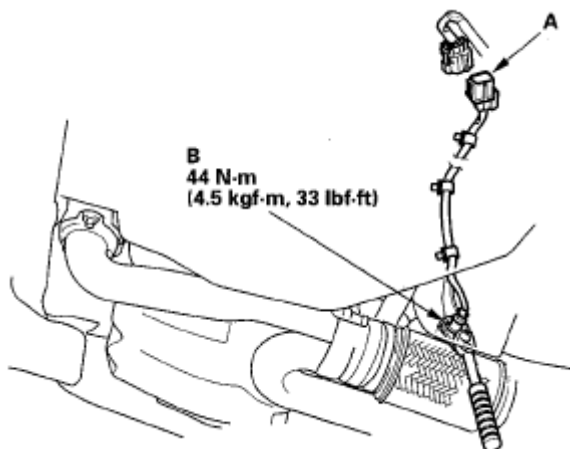


Fig. 209: Identifying Rear Secondary HO2S 4P Connector And Rear Secondary HO2S With

Torque Specifications**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. Install the parts in the reverse order of removal.

ECT SENSOR 1 REPLACEMENT

1. Remove the engine cover (see step 1 under **INTAKE MANIFOLD REMOVAL AND INSTALLATION**).
2. Remove the air cleaner (see **AIR CLEANER REMOVAL/INSTALLATION**).
3. Disconnect the ECT sensor 1 connector (A).

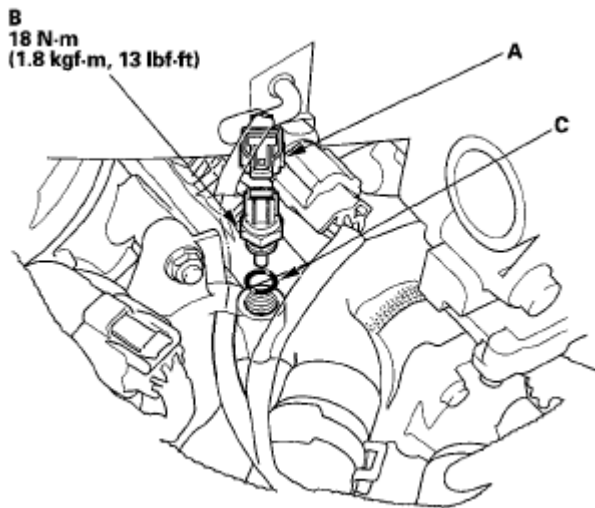


Fig. 210: Identifying ECT Sensor 1 Connector And ECT Sensor With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove ECT sensor 1 (B).
5. Install the parts in the reverse order of removal with a new O-ring (C). Then refill the radiator with engine coolant (see **COOLANT CHECK**).

ECT SENSOR 2 REPLACEMENT

1. Remove the throttle body (see **THROTTLE BODY REMOVAL/INSTALLATION**).
2. Disconnect the ECT sensor 2 connector (A).

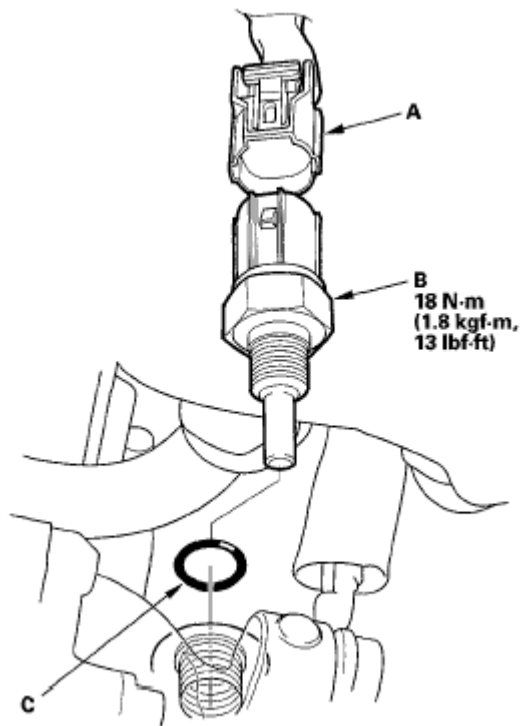


Fig. 211: Identifying ECT Sensor Connector And ECT Sensor With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove ECT sensor 2 (B).
4. Install the parts in the reverse order of removal with a new O-ring (C), then refill the radiator with engine coolant (see **COOLANT CHECK**).

CKP SENSOR REPLACEMENT

1. Move the auto-tensioner to remove tension from the drive belt, then remove the belt (see **TIMING BELT REMOVAL**).
2. Remove the crankshaft pulley (see **CRANKSHAFT PULLEY REMOVAL AND INSTALLATION**).
3. Remove the upper and lower timing belt covers from the engine (see **TIMING BELT REMOVAL**).
4. Remove CKP sensor A/B (A) from the oil pump.

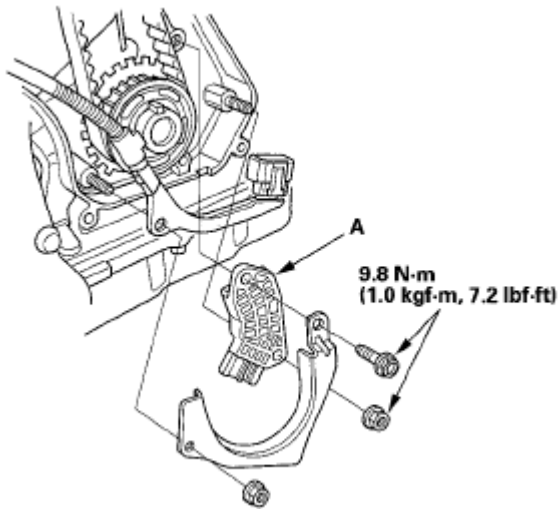


Fig. 212: Identifying CKP Sensor A/B With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the parts in the reverse order of removal.
6. Clear the CKP pattern with the HDS.
7. Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN**).

KNOCK SENSOR REPLACEMENT

1. Remove the intake manifold (see **REMOVAL**).
2. Remove the fuel rails and the intake runner base.
3. Disconnect the knock sensor connector (A), then remove the knock sensor (B).

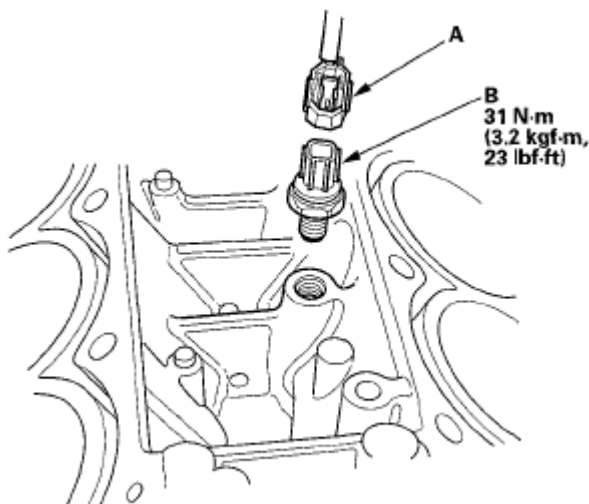


Fig. 213: Identifying Knock Sensor Connector And Knock Sensor With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the parts in the reverse order of removal.

CMP SENSOR REPLACEMENT

1. Set the No. 1 piston at top dead center (see **TIMING BELT REMOVAL**).
2. Remove the upper covers from the engine (see step 10 under **TIMING BELT REMOVAL**).
3. To hold the timing belt adjuster in its current position, thread in the battery clamp bolt hand-tight (see step 14 under **TIMING BELT REMOVAL**).
4. Loosen the idler pulley bolt about five or six turns, then remove the timing belt from the front camshaft pulley (see step 16 under **TIMING BELT REMOVAL**).
5. Remove the front camshaft pulley (A).

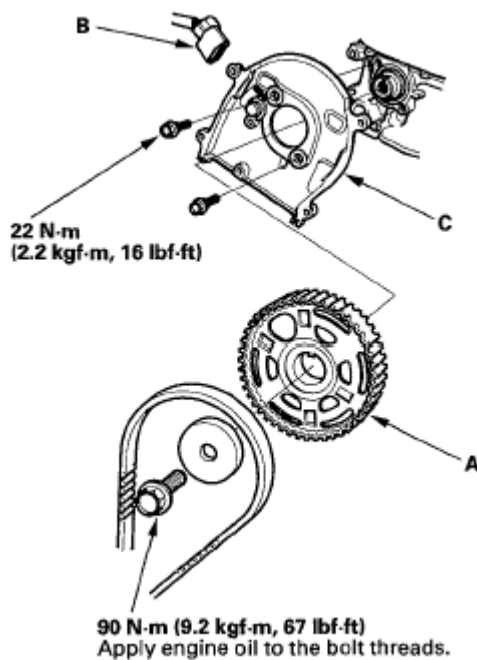


Fig. 214: Identifying Front Camshaft Pulley, CMP Sensor Connector And CMP Sensor With Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Disconnect the CMP sensor connector (B), then remove the back cover (C).
7. Remove the CMP sensor (A) from the back cover.

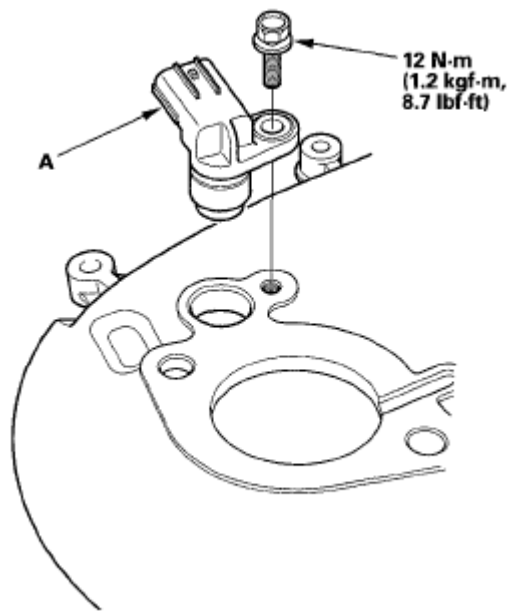


Fig. 215: Identifying CMP Sensor With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Install the parts in the reverse order of removal. Reinstall the timing belt (see **TIMING BELT INSTALLATION**) and other removed parts.
9. Do the CKP pattern clear/CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN**).

IAT SENSOR REPLACEMENT

1. Remove the engine cover (see step 1 under **INTAKE MANIFOLD REMOVAL AND INSTALLATION**).
2. Disconnect the IAT sensor connector (A).

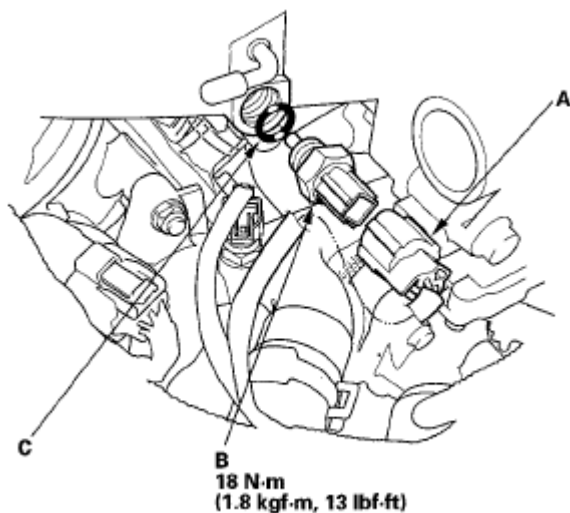


Fig. 216: Identifying IAT Sensor Connector And IAT Sensor With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the IAT sensor (B).
4. Install the parts in the reverse order of removal with a new O-ring (C).

MAP SENSOR REPLACEMENT

1. Remove the engine cover (see step 1 under **INTAKE MANIFOLD REMOVAL AND INSTALLATION**).
2. Disconnect the MAP sensor connector (A).

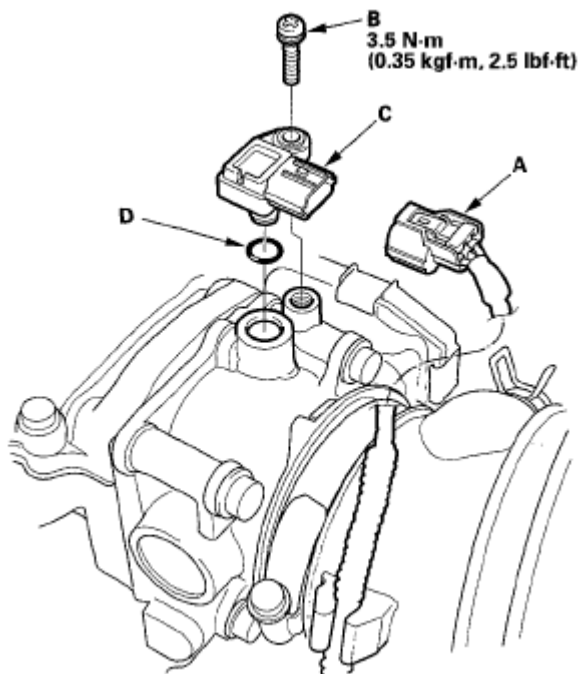


Fig. 217: Identifying MAP Sensor Connector And Screw With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the screw (B).
4. Remove the MAP sensor (C).
5. Install the parts in the reverse order of removal with a new O-ring (D).

PCM REPLACEMENT

Special Tools Required

- Honda diagnostic system (HDS) tablet tester
- Honda interface module (HIM) and an iN workstation with HDS and CM update software
- HDS pocket tester
- GIMA-600 and an iN workstation with HDS and CM update software

NOTE:

- **Make sure the HDS is loaded with the latest software version.**
- **If you are replacing the PCM after substituting a known-good PCM,**

reinstall the original PCM, then do this procedure.

- During the procedure, if any **READ DATA**, **WRITE DATA**, or other data checks fail, note the failure, then continue.

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

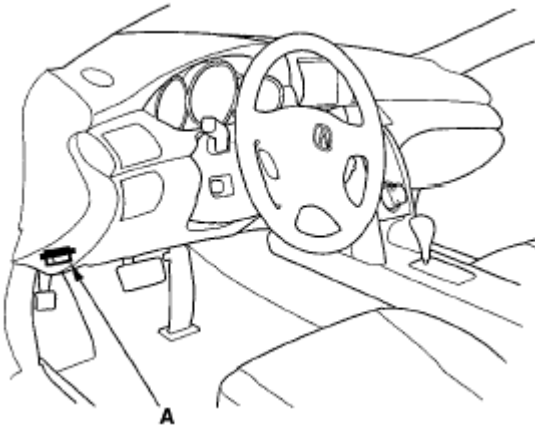


Fig. 218: Identifying HDS To Data Link Connector (DLC)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the PCM and other vehicle systems. If it doesn't, go to the **DLC CIRCUIT TROUBLESHOOTING** . If you are returning from DLC circuit troubleshooting, skip steps 4 through 9, 16 through 18, 21, and 22, then do this after replacing the PCM:
 - Replace the engine oil (see **ENGINE OIL REPLACEMENT**) and the engine oil filter (see **ENGINE OIL FILTER REPLACEMENT**).
 - Clean the throttle body (see **THROTTLE BODY CLEANING**),
4. Select the PGM-FI system with the HDS.
5. Select the INSPECTION MENU with the HDS.
6. Select the ETCS TEST, then select the TP POSITION CHECK, and follow the screen prompts.

NOTE: If the TP POSITION CHECK indicates **FAILED**, continue with this procedure.

7. Select the REPLACE PCM MENU, then select READ DATA and follow the screen prompts.

NOTE:

- Doing this step copies (READS) the engine oil life data from the original PCM so you can later download (WRITE) it into the new PCM.
- If READ DATA indicates **FAILED**, continue with this procedure.

8. Turn the ignition switch OFF.
9. Jump the SCS line with the HDS.
10. Remove the panels (A) (see step 5 under **CENTER CONSOLE REMOVAL/INSTALLATION**).

and pull back the carpet.

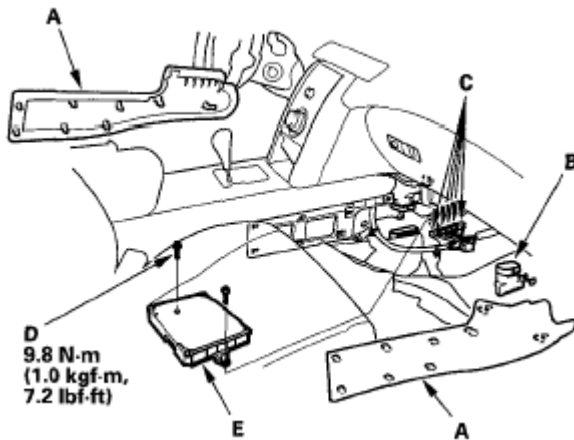


Fig. 219: Identifying Panels, PCM Connectors, Ducts And Bolts With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Remove the ducts (B).
12. Disconnect the PCM connectors (C).
13. Remove the bolts (D), then remove the PCM (E).
14. Install the parts in the reverse order of removal.
15. Turn the ignition switch ON (II).
16. Manually input the VIN to the PCM with the HDS.

NOTE: DTC P0630 "VIN Not Programmed or Mismatch" may be stored because the VIN has not been programmed into the PCM, ignore it, and continue this procedure.

17. If the READ DATA (engine oil life) failed in step 7, go to step 20. Otherwise, go to step 18.
18. Select the PGM-FI system with the HDS.
19. Select the REPLACE PCM MENU, then select WRITE DATA and follow the screen prompts.

NOTE: If the WRITE DATA indicates FAILED, continue this procedure.

20. Select IMMOBI system with the HDS.
21. Enter the immobilizer code with the PCM replacement procedure in the HDS, it allows you to start the engine.
22. If the TP POSITION CHECK failed in step 6, clean the throttle body (see **THROTTLE BODY CLEANING**), then go to step 23.
23. If the READ DATA failed in step 7 or the WRITE DATA failed in step 19, replace the engine oil (see **OIL PRESSURE TEST**) and engine oil filter (see **ENGINE OIL FILTER REPLACEMENT**), then go to step 24.
24. Select PGM-FI system, and reset the PCM with the HDS.
25. Update the PCM if it does not have the latest software (see **UPDATING THE PCM**).
26. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).

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27. Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN**).