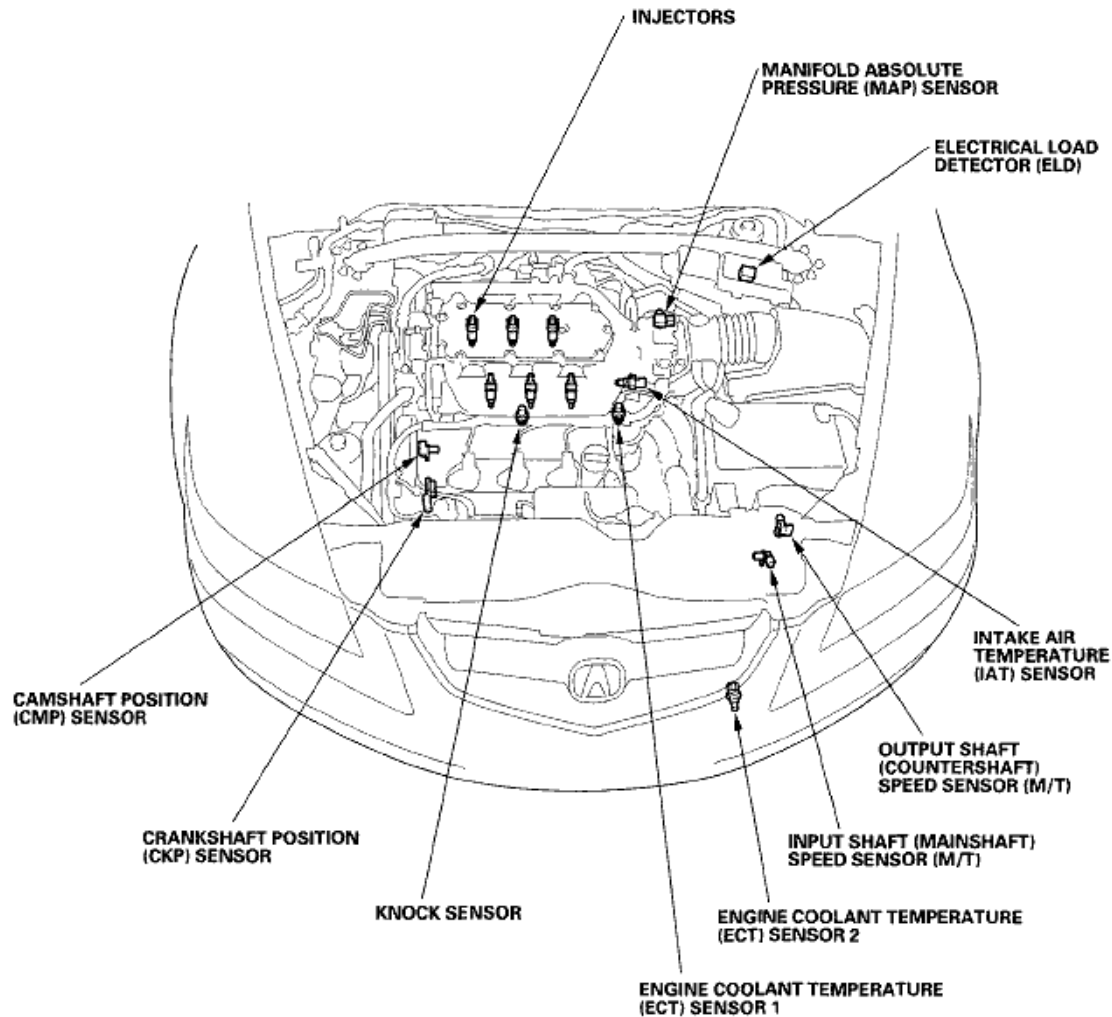


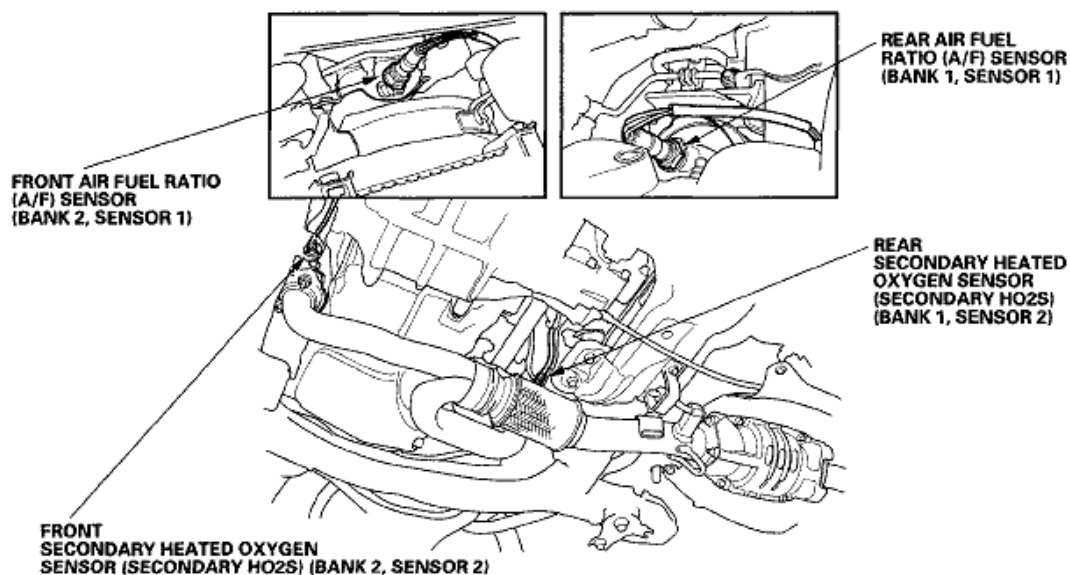
## 2007-08 ENGINE PERFORMANCE

## PGM-FI System - TL

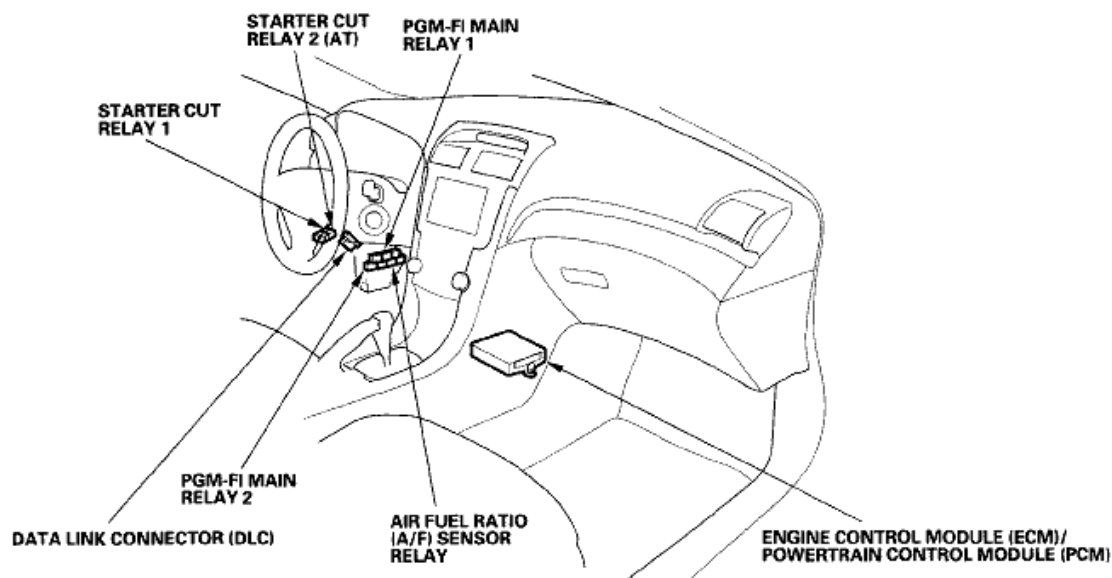
## COMPONENT LOCATION INDEX



**Fig. 1: PGM-FI System - Component Location Index (1 Of 3)**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.



**Fig. 2: PGM-FI System - Component Location Index (2 Of 3)**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.



**Fig. 3: PGM-FI System - Component Location Index (3 Of 3)**  
 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 ECM/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.

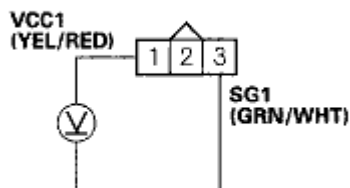
*Is about 3 kPa (1.0 in.Hg, 26 mmHg), or 0.23 V or less indicated?*

**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

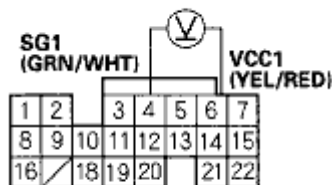
**Fig. 4: Measuring Voltage Between MAP Sensor 3P Connector Terminals No. 1 And No. 3**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 5 V?*

**YES** -Go to step 13.

**NO** -Go to step 8.

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

**ECM/PCM CONNECTOR C (22P)**

Wire side of female terminals

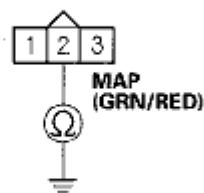
**Fig. 5: Measuring Voltage Between ECM/PCM Connector Terminals C4 And C6**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 5 V?*

**YES** -Repair open in the wire between the ECM/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 ECM/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. 6: 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 ECM/PCM (C5) and the MAP sensor, then go to step 15.

**NO** -Go to step 21.

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

*Is DTC P0107 indicated?*

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

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

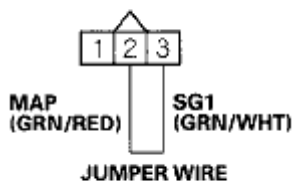
1. Turn the ignition switch ON (II).
2. Check the MAP SENSOR in the DATA LIST with the HDS.

*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 ECM/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. 7: Connecting MAP Sensor 3P Connector Terminals No. 2 And No. 3 With Jumper Wire**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

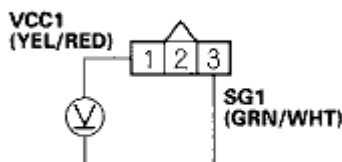
6. Turn the ignition switch ON (II).
7. Check the MAP SENSOR in the DATA LIST with the HDS.

*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 21.

8. Turn the ignition switch OFF.
9. Remove the jumper wire from MAP sensor 3P connector.
10. Turn the ignition switch ON (II).
11. Measure voltage between MAP sensor 3P connector terminals No. 1 and No. 3.

**MAP SENSOR 3P CONNECTOR**

Wire side of female terminals

**Fig. 8: Measuring Voltage Between MAP Sensor 3P Connector Terminals No. 1 And No. 3**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

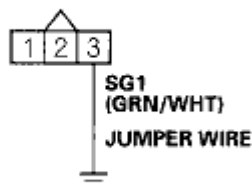
*Is there about 5 V?*

**YES** -Go to step 17.

**NO** -Go to step 12.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.

14. Disconnect ECM/PCM connector C (22P).
15. Connect MAP sensor 3P connector terminal No. 3 to body ground with a jumper wire.

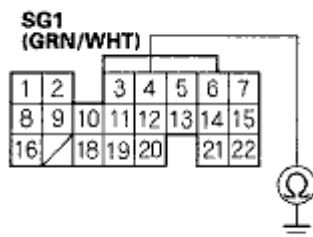
**MAP SENSOR 3P CONNECTOR**

Wire side of female terminals

**Fig. 9: Connecting MAP Sensor 3P Connector Terminal No. 3 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Check for continuity between ECM/PCM connector terminal C4 and body ground.

**ECM/PCM CONNECTOR C (22P)**

Wire side of female terminals

**Fig. 10: Checking Continuity Between ECM/PCM Connector Terminal C4 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 ECM/PCM (C4) and the MAP sensor, then go to step 23.

17. Turn the ignition switch OFF.
18. Connect ECM/PCM connector terminals C4 and C5 with a jumper wire.

**ECM/PCM CONNECTOR C (22P)**

Wire side of female terminals

**Fig. 11: Connecting ECM/PCM Connector Terminals C4 And C5 With Jumper Wire**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

19. Turn the ignition switch ON (II).
20. 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 28.

**NO** -Repair open in the wire between the ECM/PCM (C5) and the MAP sensor, then go to step 23.

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

*Is DTC P0108 indicated?*

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

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

28. Turn the ignition switch OFF.
29. Reconnect all connectors.
30. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
31. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0108 indicated?*

**YES** -Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE**

**ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 the ECT sensor 1/2 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 **MAP SENSOR REPLACEMENT** ).
3. Allow IAT sensor to cool to ambient temperature.
4. Note the ambient temperature.
5. Connect the IAT sensor to the 2P connector, but do not install in the intake manifold.
6. Turn the ignition switch ON (II).
7. Note the value of IAT SENSOR quickly in the DATA LIST with the HDS.
8. Compare the value of IAT SENSOR and the ambient temperature.

*Does the value of 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 the 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 45 °F (25 °C) (J32A3 engine) or 58 °F (32 °C) (J35A8 engine) 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 ECM/PCM.

**NO** -Go to step 13.

13. Turn the ignition switch OFF.
14. Replace the IAT sensor (see **MAP SENSOR REPLACEMENT** ).
15. Turn the ignition switch ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 more, or 0.08 V or less indicated?*

**YES** -Go to step 3.

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

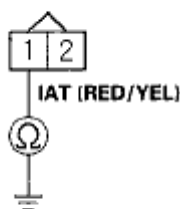
3. Turn the ignition switch OFF.
4. Disconnect the IAT sensor 2P connector.
5. Turn the ignition switch ON (II).
6. Check the IAT SENSOR in the DATA LIST with the HDS.

*Is about 356 °F (180 °C) or more, 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 ECM/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. 12: 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 ECM/PCM (A5), then go to step 13.

**NO** -Go to step 18.

11. Turn the ignition switch OFF.
12. Replace the IAT sensor (see **MAP SENSOR REPLACEMENT** ).
13. Reconnect all connectors.
14. Turn the ignition switch ON (II).
15. Reset the ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
20. 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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted,

replace the original ECM/PCM (see **ECM/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.

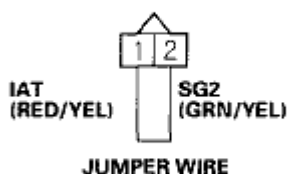
*Is about -40°F (-40 °C) or less, or 4.90 V or more indicated?*

**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 ECM/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. 13: 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?*

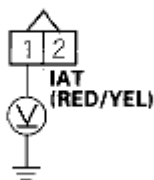
**YES** -Go to step 8.

**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. 14: Measuring Voltage Between IAT Sensor 2P Connector Terminal No. 1 And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

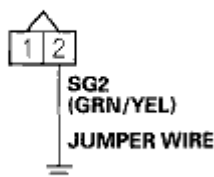
*Is there about 5 V?*

**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 ECM/PCM connector C (22P).
15. Connect IAT sensor 2P connector terminal No. 2 to body ground with a jumper wire.

**IAT SENSOR 2P CONNECTOR**

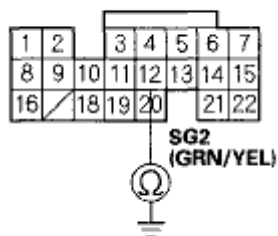


Wire side of female terminals

**Fig. 15: 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 ECM/PCM connector terminal C12 and body ground.

**ECM/PCM CONNECTOR C (22P)**

Wire side of female terminals

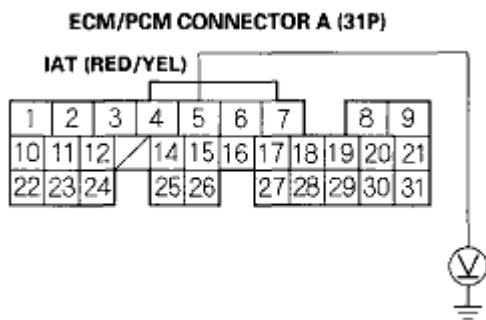
**Fig. 16: Checking Continuity Between ECM/PCM Connector Terminal C12 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 26.

**NO** -Repair open in the wire between the ECM/PCM (C12) and the IAT sensor, then go to step 20.

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



Wire side of female terminals

**Fig. 17: Measuring Voltage Between ECM/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 ECM/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 **MAP SENSOR REPLACEMENT** ).
20. Reconnect all connectors.
21. Turn the ignition switch ON (II).
22. Reset the ECM/PCM with the HDS.
23. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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. Turn the ignition switch OFF.
26. Reconnect all connectors.
27. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
28. 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 ECM/PCM. If the ECM/PCM was updated, substitutes known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 more, or 0.78 V or less indicated?*

**YES** -Go to step 6.

**NO** -Go to step 3.

3. Note the value of ECT SENSOR 1 in the DATA LIST with the HDS.
4. Start the engine. Hold the engine speed at 3,000 rpm without load (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 ECM/PCM.

**NO** -Go to step 11.

6. Note the value of ECT SENSOR 1 in the DATA LIST with the HDS.
7. Turn the ignition switch 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 ECM/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 ECM/PCM with the HDS.
15. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 more, or 0.08 V or less indicated?*

**YES** -Go to step 3.

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

3. Turn the ignition switch OFF.

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

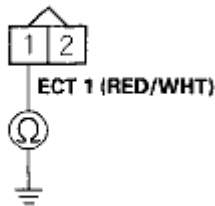
*Is about 356 °F (180 °C) or more, or 0.08 V or less indicated?*

**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 ECM/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. 18: 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 ECM/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 ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
20. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0117 indicated?*

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

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

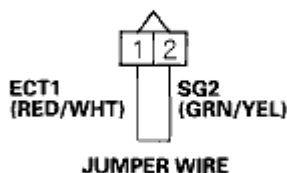
*Is about -40T (-40 °C) or less, or 4.90 V or more indicated?*

**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 ECM/PCM.

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

### **ECT SENSOR 1 2P CONNECTOR**



Wire side of female terminals

**Fig. 19: 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 the ECT SENSOR 1 in the DATA LIST with the HDS.

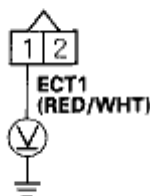
*Is about  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ ) or less, or 4.90 V or more indicated?*

**YES** -Go to step 8.

**NO** -Go to step 18.

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

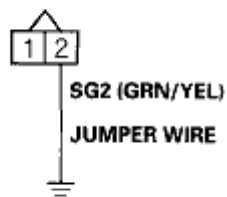
**Fig. 20: Measuring Voltage Between ECT Sensor 1 2P Connector Terminal No. 1 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*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 ECM/PCM connector C (22P).
15. Connect ECT sensor 1 2P connector terminal No. 2 to body ground with a jumper wire.

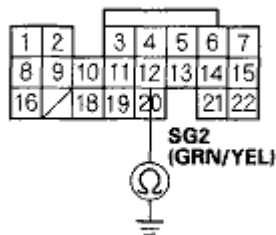
**ECT SENSOR 1 2P CONNECTOR**

Wire side of female terminals

**Fig. 21: 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 ECM/PCM connector terminal C12 and body ground.

**ECM/PCM CONNECTOR C (22P)**

Wire side of female terminals

**Fig. 22: Checking Continuity Between ECM/PCM Connector Terminal C12 And Body Ground**

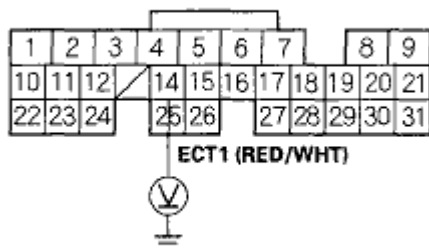
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 26.

**NO** -Repair open in the wire between the ECM/PCM (C12) and ECT sensor 1, then go to step 20.

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

**ECM/PCM CONNECTOR A (31P)**

Wire side of female terminals

**Fig. 23: Measuring Voltage Between ECM/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 ECM/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 ECM/PCM with the HDS.
23. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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. Turn the ignition switch OFF.
26. Reconnect all connectors.
27. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
28. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0118 indicated?*

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

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 for 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 ambient temperature.
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 36 °F (20 °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 18 °F (10 °C) (J32A3 engine) or 20 °F (11 °C) (J35A8 engine) or more?*

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

**NO** -Check the thermostat (see **THERMOSTAT 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 ECM/PCM with the HDS.
13. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
14. Allow the engine to cool to ambient temperature.
15. Start the engine, and let it idle for 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 ECM/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 ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 14.

## **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 radiator fan high speed circuit (see RADIATOR FAN HIGH SPEED CIRCUIT TROUBLESHOOTING ), and the radiator fan relay (see POWER RELAY TEST ). If the circuits and the relay are OK, go to step 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 36 °F (20 °C) or more from the recorded temperature.
11. Check ECT SENSOR 2 in the DATA LIST with the HDS.
12. Compare the value of recorded ECT SENSOR 2 and the value of present ECT SENSOR 2.

*Did temperature rise 18 °F (10 °C) (J32A3 engine) or 20 °F (11 °C) (J35A8 engine) or more?*

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

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

13. Turn the ignition switch ON (II).
14. Reset the ECM/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 ECM/PCM idle learn procedure (see ECM/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 the cooling system, 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 the cooling system, then go to step 1. If the screen indicates NOT COMPLETED, go to step 15.

20. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 21. If the ECM/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 ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 21. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 21.

**DTC P0153: FRONT A/F SENSOR (BANK 2, SENSOR 1) MALFUNCTION/SLOW RESPONSE****NOTE:**

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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 158 °F (70 °C)
  - A/T in D position (M/T in 3rd or 4th gear)
  - 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 P0153\* in the DTCs MENU with the HDS.

*Does the screen indicate FAILED?*

**YES** -Go to step 6.

**NO** -If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, 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 ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see ECM/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 158 °F (70 °C)
  - A/T in D position (M/T in 3rd or 4th gear)
  - Drive the vehicle at 25 mph (40 km/h) or less for 5 minutes, then drive at a steady speed between 26-81 mph (40-130 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 ECM/PCM, then go to step 1.

**NO** -Go to step 14.

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

*Does the screen indicate PASSED?*

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

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 11.

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

**NOTE:**

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

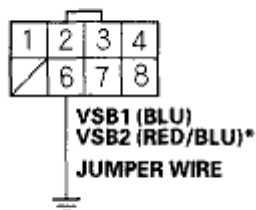
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

*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) and the ECM/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 ECM/PCM connector B (24P).
9. Connect A/F sensor (Sensor 1) 8P connector terminal No. 6 to body ground with a jumper wire.

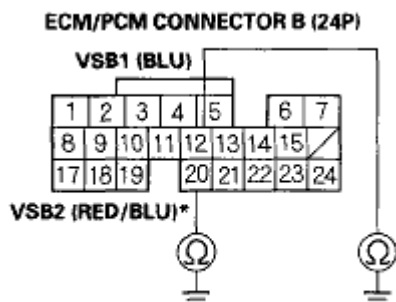
**A/F SENSOR (SENSOR 1) 8P CONNECTOR**

Wire side of female terminals

**Fig. 24: 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 ECM/PCM connector terminal B12 (B20)\* and body ground.



Wire side of female terminals

**Fig. 25: Checking Continuity Between ECM/PCM Connector Terminal B12 (B20)\* And Body Ground**

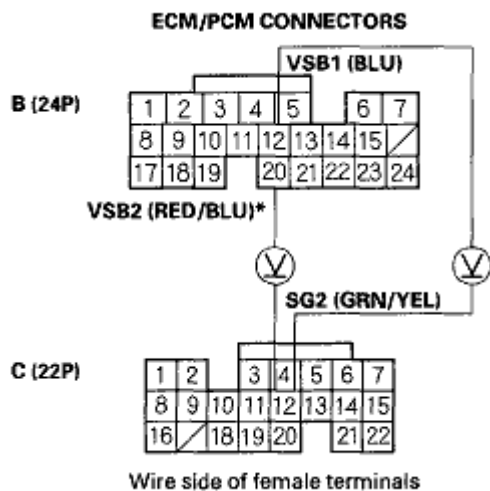
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 11.

**NO** -Repair open in the wire between the ECM/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 ECM/PCM connector B (24P).
12. Start the engine, and let it idle for 2 minutes.
13. Measure voltage between ECM/PCM connector terminals B12 (B20)\* and C12.



**Fig. 26: Measuring Voltage Between ECM/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 ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
19. 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) and the ECM/PCM, then go to step 1.

**NO** -Go to step 20.

20. 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 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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
24. Start the engine, and let it idle 2 minutes.
25. 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) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 24. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 26.

26. Monitor the OBD STATUS for DTC P0134 and/or P0154\* in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). 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 connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 24. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

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

**NOTE:**

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

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

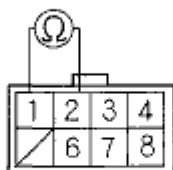
*Are any of the fuses blown?*

**YES** -Repair short in the wire between the A/F sensors, the A/F sensor relay, and the fuse(s), then replace the blown fuse(s), and go to step 23.

**NO** -Go to step 7.

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

**A/F SENSOR (SENSOR 1) 8P CONNECTOR**



Terminal side of male terminals

**Fig. 27: Measuring Resistance Between A/F Sensor (Sensor 1) 8P Connector Terminals No. 1 And No. 2**

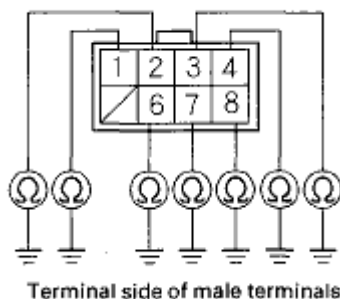
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there 2.5-3.2 ohms at room temperature?*

**YES** -Go to step 9.

**NO** -Go to step 22.

9. At the sensor side, 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. 28: Checking Continuity Between Each Terminal At A/F Sensor (Sensor 1) 8P Connector And Body Ground**

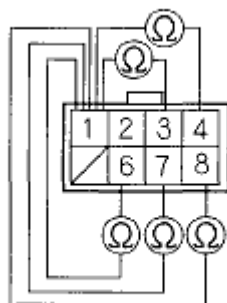
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 22.

**NO** -Go to step 10.

10. At the sensor side, 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. 29: Checking Continuity Between A/F Sensor (Sensor 1) 8P Connector Terminals No. 1 And No. 3, 4, 6, 7 And No. 8 Individually**

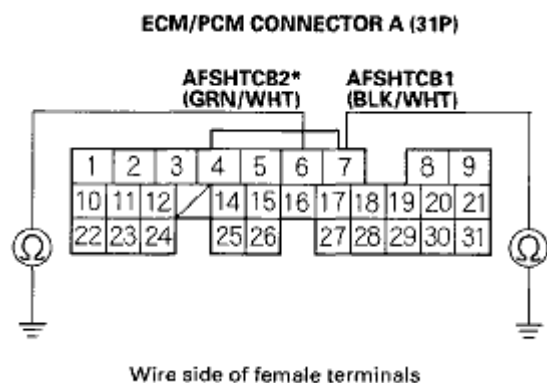
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 22.

**NO** -Go to step 11.

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



**Fig. 30: Checking Continuity Between ECM/PCM Connector Terminal A7 (A6)\* And Body Ground**

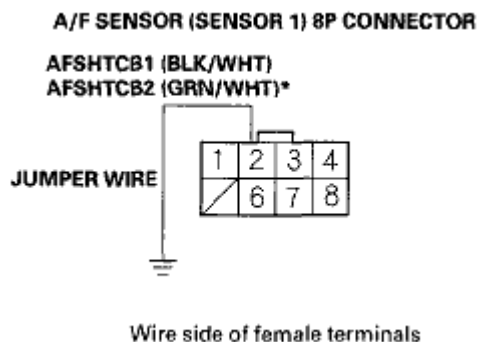
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

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

**NO** -Go to step 14.

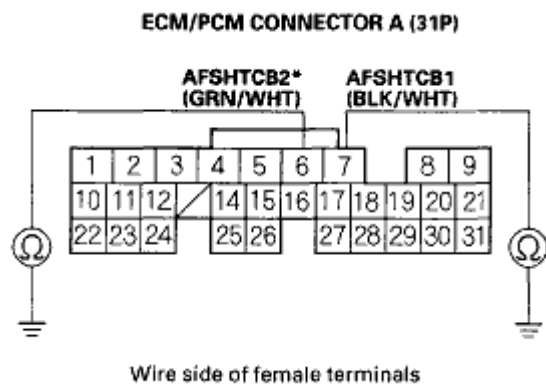
14. Connect A/F sensor (Sensor 1) 8P connector terminal No. 2 to body ground with a jumper wire.



**Fig. 31: 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 ECM/PCM connector terminal A7 (A6)\* and body ground.



**Fig. 32: Checking Continuity Between ECM/PCM Connector Terminal A7 (A6)\* And Body Ground**

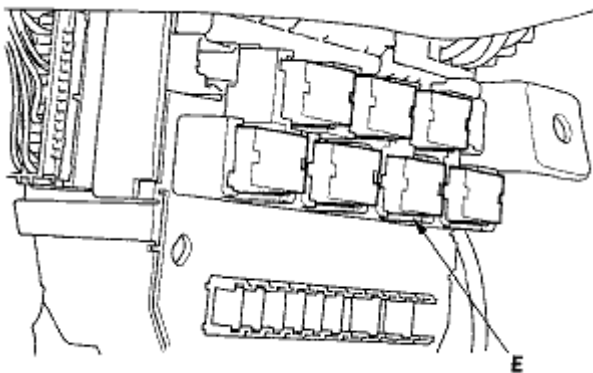
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 16.

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

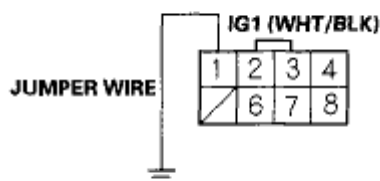
16. Remove the left kick panel (see **TRIM REMOVAL/INSTALLATION - DOOR AREAS** ), then remove the A/F sensor relay (E) from the under-dash fuse/relay box.



**Fig. 33: Identifying A/F Sensor Relay**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

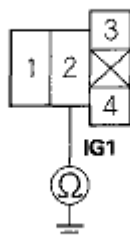
**A/F SENSOR (SENSOR 1) 8P CONNECTOR**

Wire side of female terminals

**Fig. 34: 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 4P connector terminal No. 2 and body ground.

**A/F SENSOR RELAY 4P CONNECTOR**

Terminal side of female terminals

**Fig. 35: Checking Continuity Between A/F Sensor Relay 4P Connector Terminal No. 2 And Body Ground**

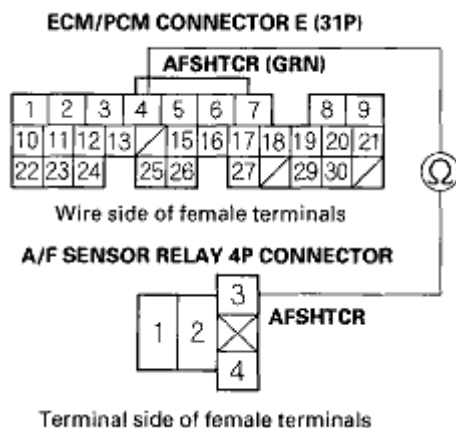
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*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, then go to step 23.

19. Disconnect ECM/PCM connector E (31P).  
 20. Check for continuity between ECM/PCM connector terminal E4 and A/F sensor relay 4P connector terminal No. 3.



**Fig. 36: Checking Continuity Between ECM/PCM Connector Terminal E4 And A/F Sensor Relay 4P Connector Terminal No. 3**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 21.

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

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

*Is the A/F sensor relay OK?*

**YES** -Go to step 29.

**NO** -Replace the A/F sensor relay, 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 ECM/PCM with the HDS.
26. Do the ECM/PCM idle learn procedure (see **ECM/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, and the ECM/PCM, then go to step 1.

**NO** -Go to step 28.

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

*Does the screen indicate PASSED?*

**YES** -Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 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, and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

29. Reconnect all connectors.
30. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
31. Start the engine, and let it idle.
32. 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, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 31. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 33.

33. 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 ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 A/F sensor (Sensor 1), the A/F sensor relay, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 31. If the ECM/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, and let it idle without load (in Park or neutral) until the radiator fan comes on.

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

*Does the voltage stay at 0.05 V or less?*

**YES** -Go to step 5.

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

5. Turn the ignition switch 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.

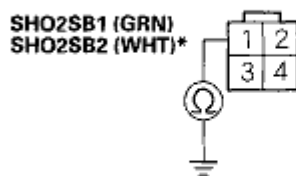
*Does the voltage stay at 0.05 V or less?*

**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 ECM/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. 37: 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 ECM/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 ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
19. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
20. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 4th gear)
  - Engine speed at 1,500-3,000 rpm
  - Drive at a steady speed for 1 minute or more
21. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0137 and/or P0157\* indicated?*

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

**NO** -Go to step 22.

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

*Does the screen indicate PASSED?*

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

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 19.

23. Reconnect all connectors.
24. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
25. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
26. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 4th gear)
  - Engine speed at 1,500-3,000 rpm
  - Drive at a steady speed for 1 minute or more
27. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0137 and/or P0157\* indicated?*

**YES** -Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the

ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 25. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 28.

28. Monitor the OBD STATUS for DTC P0135 and/or P0157\* in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 secondary HO2S (Sensor 2) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 25. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 25.

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

**NOTE:**

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

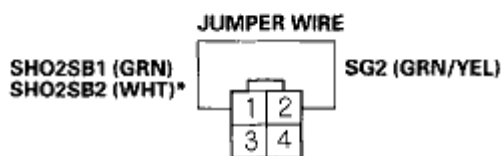
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
4. Check the HO2S S2 in the DATA LIST with the HDS.

*Does the voltage stay at 1.27 V or more?*

**YES** -Go to step 5.

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

5. Turn the ignition switch 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. 38: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminals No. 1 And 2 With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

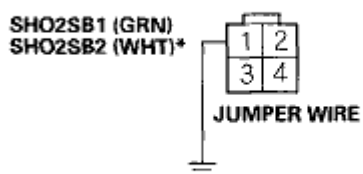
8. Turn the ignition switch ON (II).
9. Check the HO2S S2 in the DATA LIST with the HDS.

*Does the voltage stay at 1.27 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. 39: Connecting Secondary HO2S (Sensor 2) 4P Connector Terminal No. 1 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

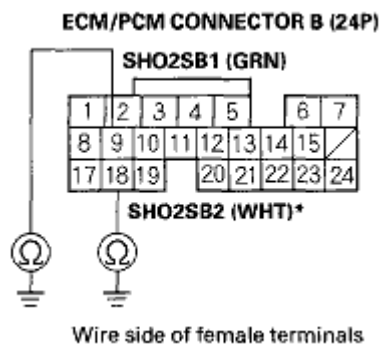
13. Turn the ignition switch ON (II).
14. Check the HO2S S2 in the DATA LIST with the HDS.

*Does the voltage stay at 1.27 V or more?*

**YES** -Go to step 15.

**NO** -Repair open in the wire between the ECM/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 ECM/PCM connector B (31P).
18. Check for continuity between PCM connector terminal B9 (B18)\* and body ground.



**Fig. 40: 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 ECM/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 ECM/PCM with the HDS.
24. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
25. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
26. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 4th gear)
  - Engine speed at 1,500-3,000 rpm
  - Drive at a steady speed 1 minute or more
27. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0138 and/or P0158\* indicated?*

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

**NO** -Go to step 28.

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

*Does the screen indicate PASSED?*

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

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 25.

29. Reconnect all connectors.
30. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
31. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
32. Test-drive under these conditions:
- Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 4th gear)
  - Engine speed at 1,500-3,000 rpm
  - Drive at a steady speed for 1 minute or more
33. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0138 and/or P0158\* indicated?*

**YES** -Check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 31. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 34.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). If any other Temporary DTCs or DTCs were indicated in step 33, 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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 31. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 31.

**DTC P0139: REAR SECONDARY HO2S (BANK 1, SENSOR 2) SLOW RESPONSE; DTC P0159: FRONT SECONDARY HO2S (BANK 2, SENSOR 2) SLOW RESPONSE**

**NOTE:**

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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, and let it idle without load (in Park or neutral) until the radiator fan comes on.
4. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 4th gear)
  - Vehicle speed at 35 mph (56 km/h) or more
  - Drive 24 seconds 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 ECM/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 ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see ECM/PCM IDLE LEARN PROCEDURE ).
11. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
12. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 4th gear)
  - Vehicle speed at 35 mph (56 km/h) or more
  - Drive 24 seconds 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 ECM/PCM, then go to step 1.

**NO** -Go to step 14.

14. Monitor the OBD STATUS for DTC P0139 and/or P0159\* in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

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

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the secondary HO2S (Sensor 2) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, 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) and the ECM/PCM.

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

*Are any of the fuses blown?*

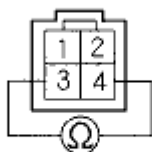
**YES** -Repair short in the wire between the secondary HO2S (sensor 2), the A/F sensor relay, and the fuse(s), then replace the blown fuse(s), and go to step 22.

**NO** -Go to step 7.

7. Disconnect the secondary HO2S (Sensor 2) 4P connector.

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

**SECONDARY HO2S (SENSOR 2) 4P CONNECTOR**



Terminal side of male terminals

**Fig. 41: Measuring Resistance Between Secondary HO2S (Sensor 2) 4P Connector Terminals No. 3 And 4**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

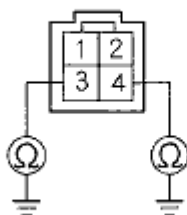
*Is there 5.4-7.3 ohms at room temperature?*

**YES** -Go to step 9.

**NO** -Go to step 21.

9. At the secondary HO2S (sensor 2) side, check for continuity between body ground and secondary HO2S (Sensor 2) 4P connector terminals No. 3 and No. 4 individually.

**SECONDARY HO2S (SENSOR 2) 4P CONNECTOR**



Terminal side of male terminals

**Fig. 42: Checking Continuity Between Body Ground And Secondary HO2S (Sensor 2) 4P Connector Terminals No. 3 And 4 Individually**

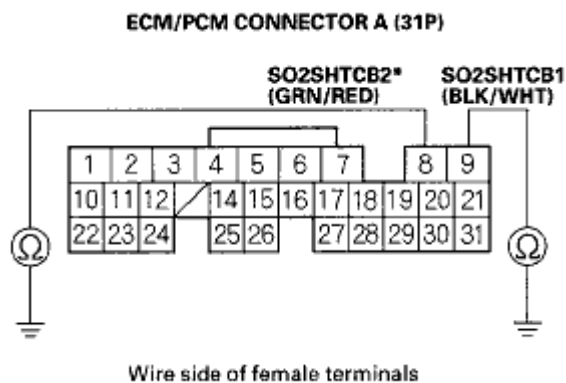
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 21.

**NO** -Go to step 10.

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



**Fig. 43: Checking Continuity Between ECM/PCM Connector Terminal A9 (A8)\* And Body Ground**

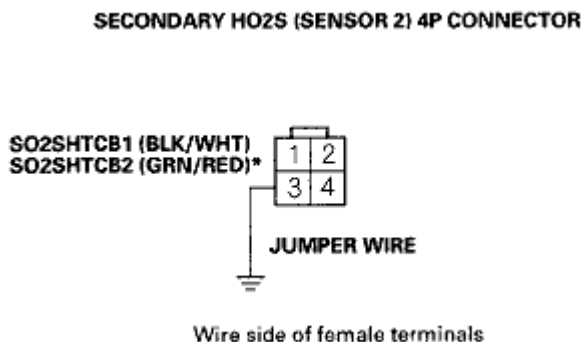
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (A9 (A8)\*) and the secondary HO2S (Sensor 2), then go to step 22.

**NO** -Go to step 13.

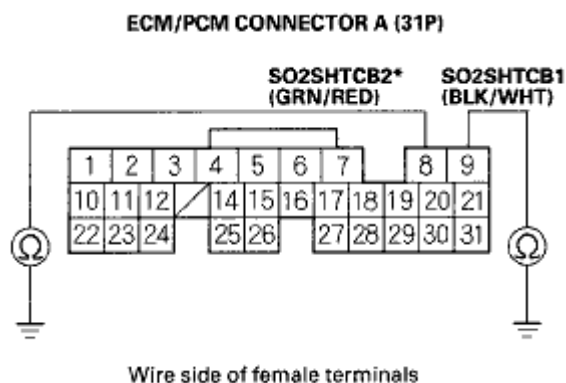
13. Connect secondary HO2S (Sensor 2) 4P connector terminal No. 3 to body ground with a jumper wire.



**Fig. 44: 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 ECM/PCM connector terminal A9 (A8)\* and body ground.



**Fig. 45: Checking Continuity Between ECM/PCM Connector Terminal A9 (A8)\* And Body Ground**

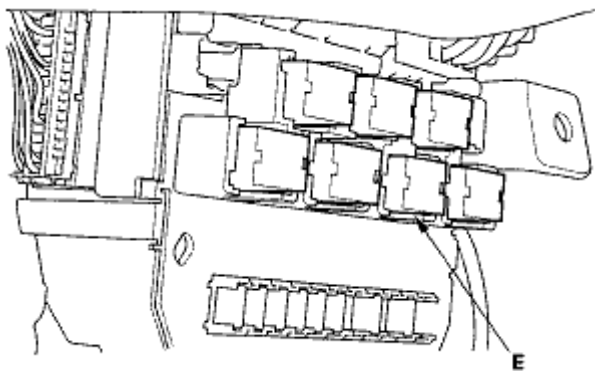
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 15.

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

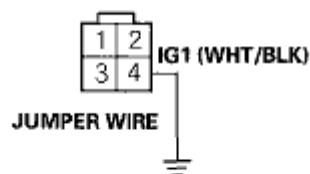
15. Remove the left kick panel (see **TRIM REMOVAL/INSTALLATION - DOOR AREAS** ), then remove the A/F sensor relay (E) from the under-dash fuse/relay box.



**Fig. 46: Identifying A/F Sensor Relay**

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.

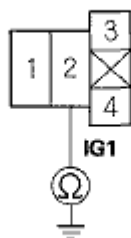
**SECONDARY HO2S (SENSOR 2) 4P CONNECTOR**

Wire side of female terminals

**Fig. 47: 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 4P connector terminal No. 2 and body ground.

**A/F SENSOR RELAY 4P CONNECTOR**

Terminal side of female terminals

**Fig. 48: Checking Continuity Between A/F Sensor Relay 4P Connector Terminal No. 2 And Body Ground**

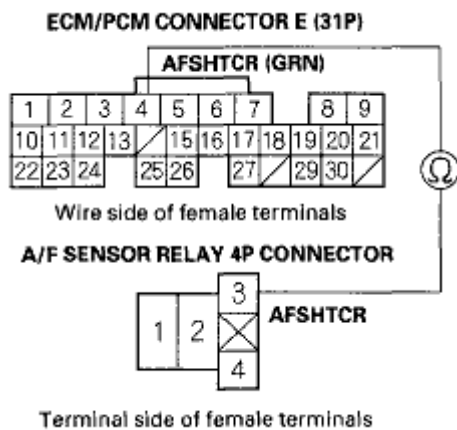
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 18.

**NO** -Repair open in the wire between the secondary HO2S (Sensor 2) and the A/F sensor relay, then go to step 22.

18. Disconnect ECM/PCM connector A (31P).
19. Check for continuity between ECM/PCM connector terminal E4 and A/F sensor relay 4P connector terminal No. 3.



**Fig. 49: Checking Continuity Between ECM/PCM Connector Terminal E4 And A/F Sensor Relay 4P Connector Terminal No. 3**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 20.

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

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

*Is the A/F sensor relay OK?*

**YES** -Go to step 28.

**NO** -Replace the A/F sensor relay, 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 ECM/PCM with the HDS.
25. Do the ECM/PCM idle learn procedure (see **ECM/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, and the ECM/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) and the ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

28. Reconnect all connectors.
29. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
30. Start the engine, and let it idle.
31. 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, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 30. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 32.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). If any other Temporary DTCs or DTCs were indicated in step 31, 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, and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 30. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

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

**NOTE:**

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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** -If you are troubleshooting DTC P0171 or P0174, go to step 2. If you are troubleshooting DTC P0172 or P0175, check the valve clearances and adjust if necessary. If the valve clearances are OK, replace the injectors (see **INJECTOR REPLACEMENT** ), then go to step 2.

**NO** -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, and the fuel feed pipe, then go to step 2.

2. Turn the ignition switch ON (II).
3. Reset the ECM/PCM with the HDS.
4. Do the ECM/PCM idle learn procedure (see **ECM/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)
  - A/T in D position (M/T in 5th gear)
  - 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 40 minutes of test driving to set. Using the HDS, monitor the long term fuel trim (LT FUEL TRIM). If the LT FUEL TRIM stays within 0.85-1.18, 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** -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 ANY COMBINATION OF THE FOLLOWING: DTC P0301: NO. 1 CYLINDER MISFIRE DETECTED; DTC P0302: NO. 2 CYLINDER MISFIRE DETECTED; DTC P0303: NO. 3 CYLINDER MISFIRE DETECTED; DTC P0304: NO. 4 CYLINDER MISFIRE DETECTED; DTC P0305: NO. 5 CYLINDER MISFIRE DETECTED; DTC P0306: NO. 6 CYLINDER MISFIRE DETECTED**

### **Special Tools Required**

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

### **NOTE:**

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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) (Because parts can sometimes fail without setting DTCs, you should also do a physical inspection of the below systems.):**

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

P0171, P0172, P0174, P0175: Fuel system P0335, P0339, P0385, P0389: Crankshaft position (CKP) sensor A/B

P0506, P0507: Idle control system

P0340, P0344: Camshaft position (CMP) sensor

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

1. 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).
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, then recheck.

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

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

**YES** -Go to step 9.

**NO** -Go to step 6.

6. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
  - ENGINE SPEED
  - VSS
  - REL TP SENSOR
  - CLV (calculated load value)
  - GEAR POSITION
  - ECT SENSOR 1
  - APP SENSOR
7. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

*Does the screen indicate FAILED?*

**YES** -Go to step 9.

**NO** -If the screen indicates PASSED, go to step 8. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 6 and recheck.

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

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

**YES** -Go to step 9.

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

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

*Is the quality good?*

**YES** -Go to step 11.

**NO** -Drain the tank, and fill it with a known-good fuel, then go to step 20.

11. Inspect the spark plugs (see **SPARK PLUG INSPECTION** ). If the spark plugs are fouled or worn, replace them.
12. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
  - ENGINE SPEED
  - VSS
  - REL TP SENSOR
  - CLV (calculated load value)
  - GEAR POSITION
  - ECT SENSOR 1
  - APP SENSOR
13. Check the CYL1 MISFIRE, CYL2 MISFIRE, CYL3 MISFIRE, CYL4 MISFIRE, CYL5 MISFIRE, and/or CYL6 MISFIRE in the DATA LIST for 10 minutes with the HDS.

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

**YES** -Go to step 14.

**NO** -Go to step 20.

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

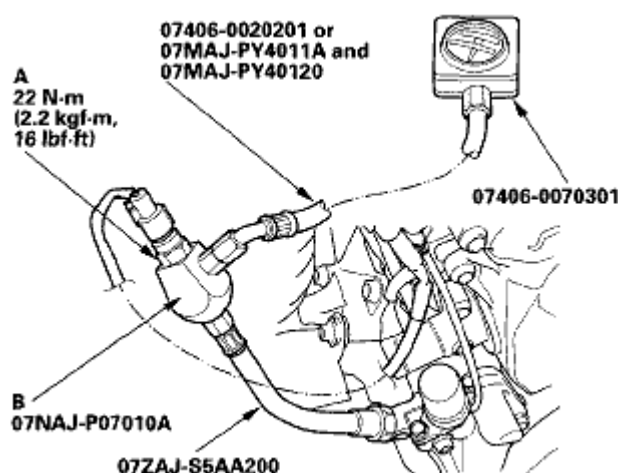
*Is the fuel pressure OK?*

**YES** -Go to step 15.

**NO** -

- If the pressure is too high, replace the fuel pressure regulator (see **FUEL PRESSURE REGULATOR REPLACEMENT** ), then go to step 20.
  - 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 20.
15. Turn the ignition switch OFF.
  16. Remove the rocker arm oil pressure switch (A), and install the special tools as shown, then install the rocker arm oil pressure switch in the pressure gauge adapter (B).

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



**Fig. 50: Identifying Rocker Arm Oil Pressure Switch With Torque Specifications**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

17. Reconnect the rocker arm oil pressure switch 2P connector.
18. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on.
19. Check the oil pressure at engine speeds of 1,000 and 2,000 rpm. Keep the measuring time as short as possible (less than 1 minute) because the engine is running without load.

*Is the oil pressure below 49 kPa (7 psi, 0.5 kgf/cm<sup>2</sup>) ?*

**YES** -Check for air in the fuel line, then go to step 20.

**NO** -Inspect the VTEC system (see **VTEC ROCKER ARM TEST** ), then go to step 20.

20. Turn the ignition switch ON (II).
21. Reset the ECM/PCM with the HDS.
22. Clear the CKP pattern with the HDS.
23. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
24. Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN** ).
25. 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
  - APP SENSOR
26. 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 ECM/PCM, then go to DTC P0301, P0302, P0303, P0304, P0305, or P0306 troubleshooting (see **DTC P0301: NO. 1 CYLINDER MISFIRE DETECTED; DTC P0302: NO. 2 CYLINDER MISFIRE DETECTED; DTC P0303: NO. 3 CYLINDER MISFIRE DETECTED; DTC P0304: NO. 4 CYLINDER MISFIRE DETECTED; DTC P0305: NO. 5 CYLINDER MISFIRE DETECTED; DTC P0306: NO. 6 CYLINDER MISFIRE DETECTED** ).

**NO** -Go to step 27.

27. 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 26, go to the indicated DTCs troubleshooting.

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the ignition coils, the injectors, and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 25.

**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. Clear the DTC with the HDS.
3. Start the engine, and let it idle without load (in Park or neutral).
4. Monitor the OBD STATUS for DTC P0301, P0302, P0303, P0304, P0305, or P0306 in the DTCs MENU with the HDS.

*Does the screen indicate FAILED?*

**YES** -Go to step 9.

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

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

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

**YES** -Go to step 9.

**NO** -Go to step 6.

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

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

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

*Does the screen indicate FAILED?*

**YES** -Go to step 9.

**NO** -If the screen indicates PASSED, go to step 8. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 6 and recheck.

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

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

**YES** -Go to step 9.

**NO** -Intermittent failure, the system is OK at this time. 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. Reconnect all connectors.

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

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

- APP SENSOR

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

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

**YES** -Go to step 14.

**NO** -Intermittent misfire due to poor contact at the ignition coil connector {no misfire at this time). Make sure the coil connections are secure.

14. 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 56.

**NO** -Go to step 15.

15. Turn the ignition switch OFF.
16. Exchange the spark plug from the problem cylinder with one from another cylinder.
17. Reconnect all connectors.
18. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

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

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

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

**YES** -Go to step 20.

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

20. Determine which cylinder had the misfire.

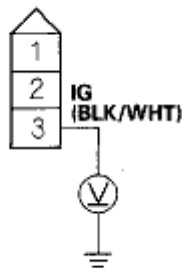
*Does the misfire occur in the cylinder where the spark plug was moved?*

**YES** -Replace the faulty spark plug, then go to step 56.

**NO** -Go to step 21.

21. Turn the ignition switch OFF.
22. Disconnect the ignition coil 3P connector from the problem cylinder.
23. Turn the ignition switch ON (II).
24. Measure voltage between ignition coil 3P connector terminal No. 3 and body ground.

**IGNITION COIL 3P CONNECTOR**



Wire side of female terminals

**Fig. 51: Measuring Voltage Between Ignition Coil 3P Connector Terminal No. 3 And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

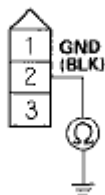
*Is there battery voltage?*

**YES** -Go to step 25.

**NO** -Repair open in the wire between the ignition coil and the ignition coil relay, then go to step 56.

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

**IGNITION COIL 3P CONNECTOR**



Wire side of female terminals

**Fig. 52: Checking Continuity Between Ignition Coil 3P Connector Terminal No. 2 And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

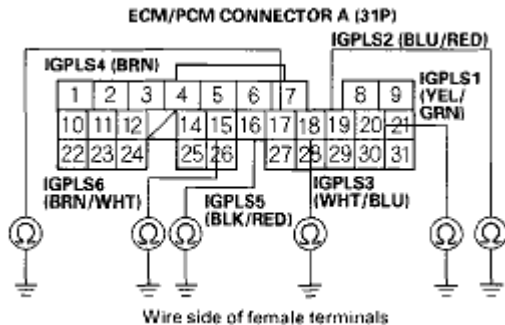
**YES** -Go to step 27.

**NO** -Repair open in the wire between the ignition coil and G101, then go to step 56.

27. Turn the ignition switch OFF.
28. Jump the SCS line with the HDS.
29. Disconnect ECM/PCM connector A (31P).
30. Check for continuity between body ground and the appropriate ECM/PCM connector terminal (see table).

#### ECM/PCM CONNECTOR TERMINAL DESCRIPTION

| PROBLEM CYLINDER | DTC   | ECM/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. 53: Checking Continuity Between Body Ground And Appropriate ECM/PCM Connector Terminal**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

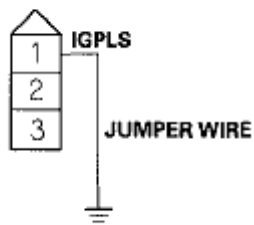
**YES** -Repair short in the wire between the ECM/PCM and the ignition coil, then go to step 56.

**NO** -Go to step 31.

31. Connect appropriate ignition coil 3P connector terminal No. 1 to body ground with a jumper wire (see table).

#### ECM/PCM TERMINAL DESCRIPTION

| PROBLEM CYLINDER | DTC   | ECM/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    |

**IGNITION COIL 3P CONNECTOR**

Wire side of female terminals

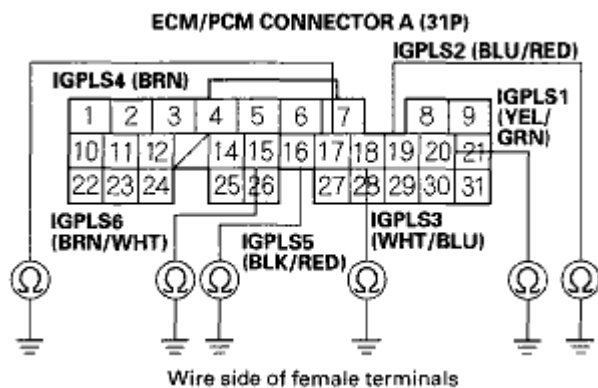
**Fig. 54: Connecting Appropriate Ignition Coil 3P Connector Terminal No. 1 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

32. Check for continuity between body ground and the appropriate ECM/PCM connector terminal (see table).

**ECM/PCM TERMINAL DESCRIPTION**

| PROBLEM CYLINDER | DTC   | ECM/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    |



Wire side of female terminals

**Fig. 55: Checking Continuity Between Body Ground And Appropriate ECM/PCM Connector Terminal**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 33.

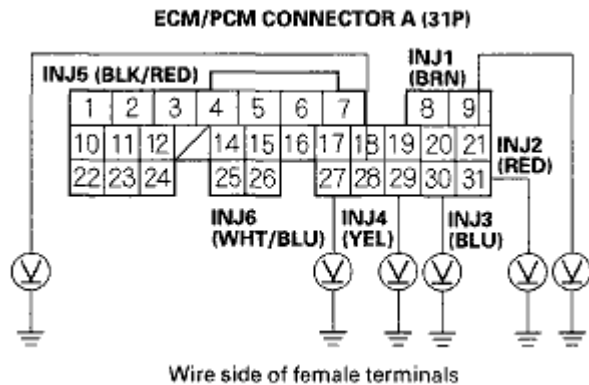
**NO** -Repair open in the wire between the ECM/PCM and the ignition coil, then go to step 56.

33. Turn the ignition switch ON (II).

34. Measure voltage between body ground and the appropriate ECM/PCM connector terminal (see table).

#### ECM/PCM TERMINAL DESCRIPTION

| PROBLEM CYLINDER | DTC   | ECM/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: Measuring Voltage Between Body Ground And Appropriate ECM/PCM Connector Terminal**

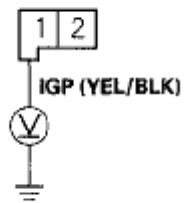
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** -Go to step 44.

**NO** -Go to step 35.

35. Turn the ignition switch OFF.
36. Remove the intake manifold (see **INTAKE MANIFOLD REMOVAL AND INSTALLATION** ).
37. Disconnect the injector 2P connector from the problem cylinder.
38. Turn the ignition switch ON (II).
39. Measure voltage between injector 2P connector terminal No. 1 and body ground.

**INJECTOR 2P CONNECTOR**

Wire side of female terminals

**Fig. 57: Measuring Voltage Between Injector 2P Connector Terminal No. 1 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

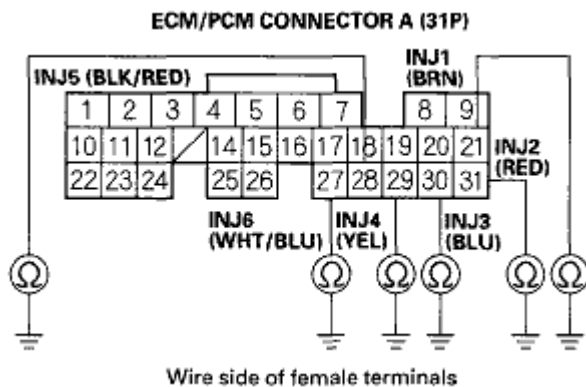
**YES** -Go to step 40.

**NO** -Repair open in the wire between the injector and PGM-FI main relay 1, then go to step 56.

40. Turn the ignition switch OFF.
41. Check for continuity between body ground and the appropriate ECM/PCM connector terminal (see table).

**ECM/PCM TERMINAL DESCRIPTION**

| PROBLEM CYLINDER | DTC   | ECM/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. 58: Checking Continuity Between Body Ground And Appropriate ECM/PCM Connector Terminal**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM and the injector, then go to step 56.

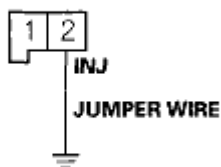
**NO** -Go to step 42.

42. Connect appropriate injector 2P connector terminal No. 2 to body ground with a jumper wire (see table).

#### DTC

| 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

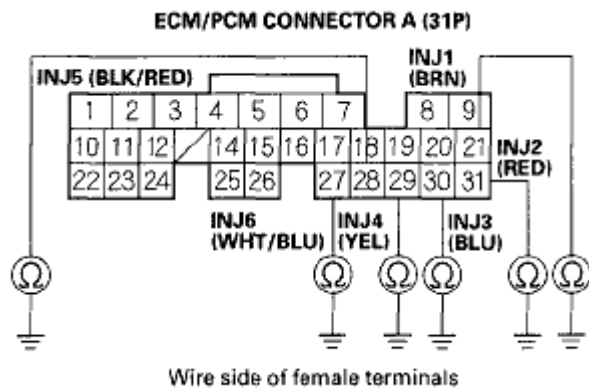
**Fig. 59: Connecting Appropriate Injector 2P Connector Terminal No. 2 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

43. Check for continuity between body ground and the appropriate ECM/PCM connector terminal (see table).

#### ECM/PCM TERMINAL DESCRIPTION

| PROBLEM CYLINDER | DTC   | ECM/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. 60: Checking Continuity Between Body Ground And Appropriate ECM/PCM Connector Terminal**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

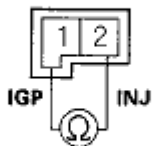
*Is there continuity?*

**YES** -Go to step 44.

**NO** -Repair open in the wire between the ECM/PCM and the injector, then go to step 56.

44. At the injector side, measure resistance between injector 2P connector terminals No. 1 and No. 2.

#### INJECTOR 2P CONNECTOR



Terminal side of male terminals

**Fig. 61: 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 45.

**NO** -Replace the injector (see **INJECTOR REPLACEMENT** ), then go to step 56.

45. Exchange the injector from the problem cylinder with one from the another cylinder.
46. Reconnect all connectors, and install the intake manifold (see **INSTALLATION** ).
47. Turn the ignition switch ON (II).
48. Clear the DTCs with the HDS.
49. Start the engine, and let it idle without load (in Park or neutral) for 2 minutes.
50. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:

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

51. 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 52.

**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.

52. 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 56.

**NO** -Go to step 53.

53. Turn the ignition switch OFF.  
54. Do an engine compression and a cylinder leakdown test.

*Did the engine pass both tests?*

**YES** -Go to step 55.

**NO** -Repair the engine, then go to step 56.

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

*Did the engine pass the test?*

**YES** -Go to step 66.

**NO** -Repair the VTEC rocker arm, then go to step 56.

56. Reconnect all connectors.  
57. Turn the ignition switch ON (II).  
58. Reset the ECM/PCM with the HDS.  
59. Clear the CKP pattern with the HDS.

60. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
61. Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN** ).
62. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
  - ENGINE SPEED
  - VSS
  - REL TP SENSOR
  - CLV (calculated load value)
  - ECT SENSOR 1
  - GEAR POSITION
  - APP SENSOR
63. 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 ECM/PCM, then go to DTC P0301, P0302, P0303, P0304, P0305, or P0306 troubleshooting (see **DTC P0300: RANDOM MISFIRE AND ANY COMBINATION OF THE FOLLOWING: DTC P0301: NO. 1 CYLINDER MISFIRE DETECTED; DTC P0302: NO. 2 CYLINDER MISFIRE DETECTED; DTC P0303: NO. 3 CYLINDER MISFIRE DETECTED; DTC P0304: NO. 4 CYLINDER MISFIRE DETECTED; DTC P0305: NO. 5 CYLINDER MISFIRE DETECTED; DTC P0306: NO. 6 CYLINDER MISFIRE DETECTED** ).

**NO** -Go to step 64.

64. 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 coils, the injectors, and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 62.

65. Reconnect all connectors.
66. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
67. Test-drive the vehicle for several minutes in the range of these recorded freeze data parameters:
  - ENGINE SPEED
  - VSS
  - REL TP SENSOR
  - CLV (calculated load value)
  - ECT SENSOR 1

- GEAR POSITION
- APP SENSOR

68. 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 injectors, the ignition coils, and the ECM/PCM, then go to step 1. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 67. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 69.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). If any other Temporary DTCs or DTCs were indicated in step 68, 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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 67. If the ECM/PCM was substituted, go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, 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** ).

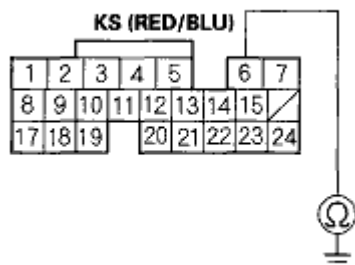
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Hold the engine speed at 3,000-4,000 rpm for at least 10 seconds.
5. Check for Temporary 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 ECM/PCM.

6. Turn the ignition switch OFF.
7. Jump the SCS line with the HDS.
8. Disconnect the knock sensor subharness IP connector.
9. Disconnect ECM/PCM connector B (24P).
10. Check for continuity between ECM/PCM connector terminal B6 and body ground.

**ECM/PCM CONNECTOR B (24P)**

Wire side of female terminals

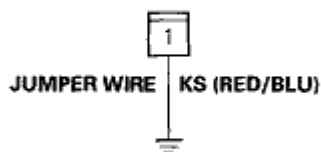
**Fig. 62: Checking Continuity Between ECM/PCM Connector Terminal B6 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (B6) and the knock sensor subharness, then go to step 19.

**NO** -Go to step 11.

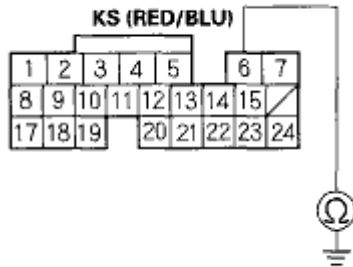
11. Connect the engine wire harness 1P connector (C154) terminal to body ground with a jumper wire.

**ENGINE WIRE HARNESS 1P CONNECTOR (C154)**

Wire side of female terminals

**Fig. 63: Connecting Engine Wire Harness 1P Connector (C154) Terminal To Body Ground With Jumper Wire**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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

**ECM/PCM CONNECTOR B (24P)**

Wire side of female terminals

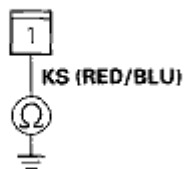
**Fig. 64: Checking Continuity Between ECM/PCM Connector Terminal B6 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 13.

**NO** -Repair open in the wire between the ECM/PCM (B6) and the knock sensor subharness, then go to step 19.

13. Remove the intake manifold (see **INTAKE MANIFOLD REMOVAL AND INSTALLATION** ), and injector base (see **INJECTOR BASE REMOVAL AND INSTALLATION** ).
14. Disconnect the knock sensor 1P connector.
15. Check for continuity between the knock sensor subharness IP connector terminal and body ground.

**KNOCK SENSOR SUBHARNESS 1P CONNECTOR**

Wire side of female terminals

**Fig. 65: Checking Continuity Between Knock Sensor Subharness IP Connector Terminal And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the knock sensor subharness, then go to step 18.

**NO** -Go to step 16.

16. Check for an open in the knock sensor subharness.

*Is the harness OK?*

**YES** -Go to step 17.

**NO** -Repair open in the knock sensor subharness, then go to step 19.

17. Replace the knock sensor (see **KNOCK SENSOR REPLACEMENT** ).
18. Install the injector base (see **INJECTOR BASE REMOVAL AND INSTALLATION** ) and the intake manifold (see **INSTALLATION** ).
19. Reconnect all connectors.
20. Turn the ignition switch ON (II).
21. Reset the ECM/PCM with the HDS.
22. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
23. Hold the engine speed at 3,000-4,000 rpm for at least 10 seconds.
24. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0325 indicated?*

**YES** -Check for poor connections or loose terminals at the knock sensor and the ECM/PCM, then go to step 26.

**NO** -Go to step 25.

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

*Does the screen Indicate PASSED?*

**YES** -Troubleshooting is complete. 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 knock sensor and the ECM/PCM, go to step 1. If the screen indicates NOT COMPLETED, go to step 23.

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

*Is DTC P0325 indicated?*

**YES** -Check for poor connections or loose terminals at the knock sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 27. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 30.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 knock sensor and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 28. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 28.

## **DTC P0335: CKP SENSOR 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.

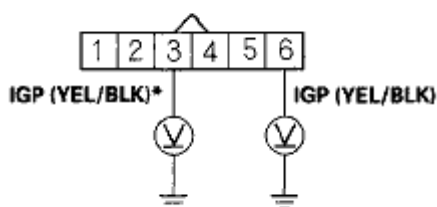
*Is DTC P0335 and/or P0385\* indicated?*

**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 ECM/PCM.

5. Turn the ignition switch OFF.
6. Disconnect the 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. 66: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminal No. 6 (No. 3)\* And Body Ground**

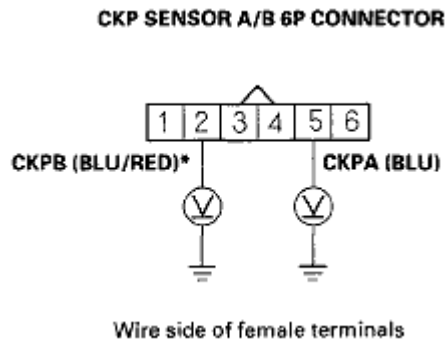
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*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, then go to step 18.

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



**Fig. 67: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminal No. 5 (No. 2)\* And Body Ground**

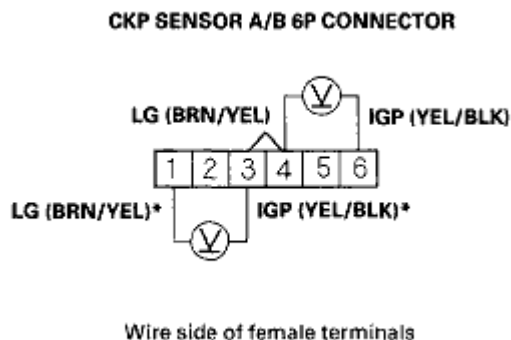
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*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 terminal No. 4 (No. 1)\* and No. 6 (No. 3)\*.



**Fig. 68: Measuring Voltage Between CKP Sensor A/B 6P Connector Terminal No. 4 (No. 1)\* And No. 6 (No. 3)\***

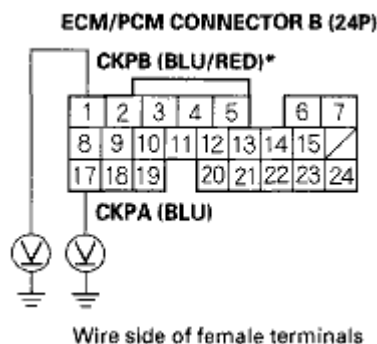
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*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 ECM/PCM connector terminal B17 (B1)\* and body ground.



**Fig. 69: Measuring Voltage Between ECM/PCM Connector Terminal B17 (B1)\* And Body Ground**

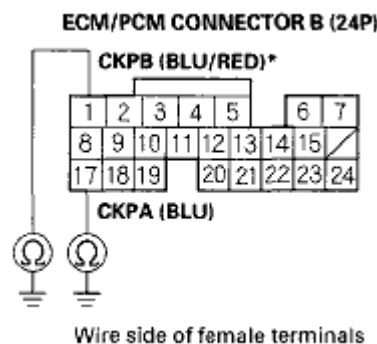
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 5 V?*

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



**Fig. 70: Checking Continuity Between ECM/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 ECM/PCM (B17 (B1)\*) and CKP sensor A/B, then go to step 18.

**NO** -Go to step 25.

16. Turn the ignition switch OFF.
17. Replace CKP sensor (see **CKP SENSOR REPLACEMENT** ).
18. Reconnect all connectors.
19. Turn the ignition switch ON (II).
20. Reset the ECM/PCM with the HDS.
21. Clear the CKP pattern with the HDS.
22. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 10 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 ECM/PCM.

5. Check for poor or loose connections at these connectors and terminals:

- CKP sensor A/B
- ECM/PCM
- Engine ground
- Body ground

*Are the connections OK?*

**YES** -Go to step 6.

**NO** -Reconnect or 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.

- Turn the ignition switch OFF.
- Replace the CKP sensor (see **CKP SENSOR REPLACEMENT** ).
- Turn the ignition switch ON (II).
- Reset the ECM/PCM with the HDS.
- Clear the CKP pattern with the HDS.
- Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
- Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN** ).
- Test-drive the vehicle for 10 minutes in the range of these recorded freeze data parameters:
  - ENGINE SPEED
  - VSS
- 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 ECM/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.

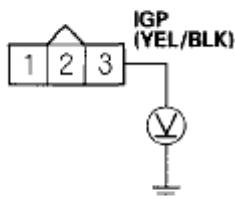
*Is DTC P0340 indicated?*

**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 ECM/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. 71: Measuring Voltage Between CMP Sensor 3P Connector Terminal No. 3 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

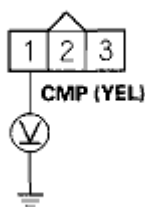
*Is there battery voltage?*

**YES** -Go to step 9.

**NO** -Repair open in the wire between the CMP sensor and PGM-FI main relay 1, then go to step 19.

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

**CMP SENSOR 3P CONNECTOR**



Wire side of female terminals

**Fig. 72: Measuring Voltage Between CMP Sensor 3P Connector Terminal No. 1 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

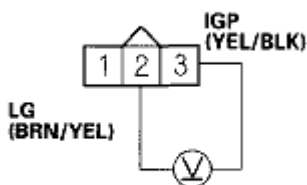
*Is there about 5 V?*

**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. 73: Measuring Voltage Between CMP Sensor 3P Connector Terminals No. 2 And No. 3**

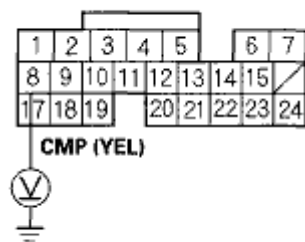
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*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 19.

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

**ECM/PCM CONNECTOR B (24P)**

Wire side of female terminals

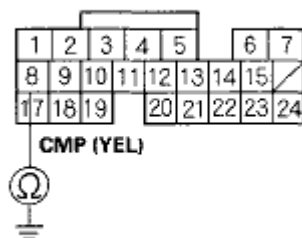
**Fig. 74: Measuring Voltage Between ECM/PCM Connector Terminal B8 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 5 V?*

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

**ECM/PCM CONNECTOR B (24P)**

Wire side of female terminals

**Fig. 75: Checking Continuity Between ECM/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 ECM/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 ECM/PCM with the HDS.

21. Clear the CKP pattern with the HDS.
22. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

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

## **DTC P0344: CMP SENSOR CIRCUIT INTERMITTENT INTERRUPTION**

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

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle for 10 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 P0344 indicated?*

**YES** -Go to step 5.

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

5. Check for poor or loose connections at these connectors and terminals:

- CMP sensor
- ECM/PCM
- Engine ground
- Body ground

*Are the connections OK?*

**YES** -Go to step 6.

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

6. Check for damage to the CMP sensor pulse projection on the front camshaft pulley (see **CMP SENSOR REPLACEMENT** ).

*Is there damage?*

**YES** -Replace the front camshaft pulley (see **CMP SENSOR REPLACEMENT** ), then go to step 9.

**NO** -Go to step 7.

7. Turn the ignition switch OFF.

8. Replace the CMP sensor (see **CMP SENSOR REPLACEMENT** ).

9. Turn the ignition switch ON (II).

10. Reset the ECM/PCM with the HDS.

11. Clear the CKP pattern with the HDS.

12. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).

13. Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN** ).

14. Test-drive the vehicle for 10 minutes in the range of these recorded freeze data parameters:

- ENGINE SPEED
- VSS

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

*Is DTC P0344 indicated?*

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

**NO** -Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated 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/C switch on
  - 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 ECM/PCM with the HDS.
9. Do the ECM/PCM idle learn procedure (see ECM/PCM IDLE LEARN PROCEDURE ).
10. Start the engine.
11. Check under these conditions:
  - A/C switch on
  - 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: ECM/PCM POWER SOURCE CIRCUIT UNEXPECTED VOLTAGE

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

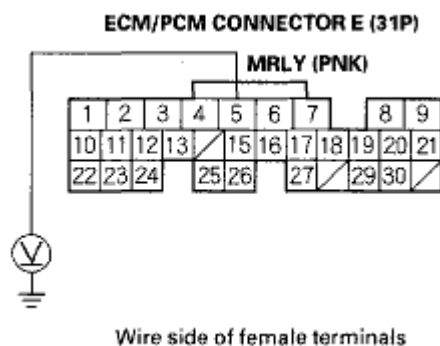
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch OFF.
4. Wait 10 seconds.
5. Turn the ignition switch ON (II).
6. Check for Temporary DTCs or DTCs with the HDS.

*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 and the No. 8 FI ECU (ECM/PCM) (15 A) fuse in the under-hood fuse/relay box and the ECM/PCM.

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



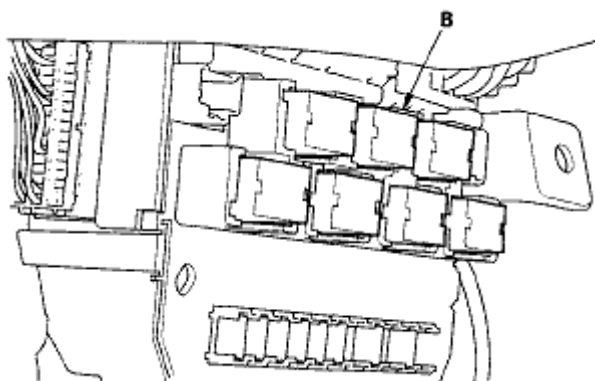
**Fig. 76: Measuring Voltage Between ECM/PCM Connector Terminal E5 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** -Go to step 13.

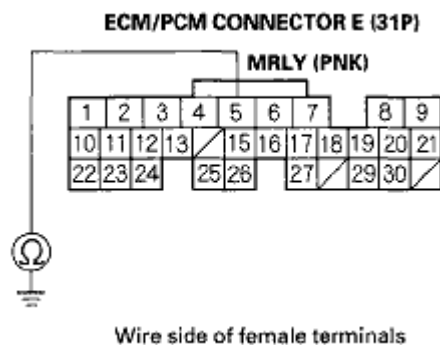
**NO** -Go to step 11.

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



**Fig. 77: Identifying PGM-FI Main Relay 1**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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



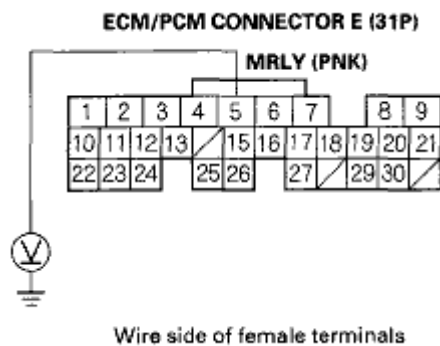
**Fig. 78: Checking Continuity Between ECM/PCM Connector Terminal E5 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

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

**NO** -Go to step 19.

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



**Fig. 79: Measuring Voltage Between ECM/PCM Connector Terminal E5 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

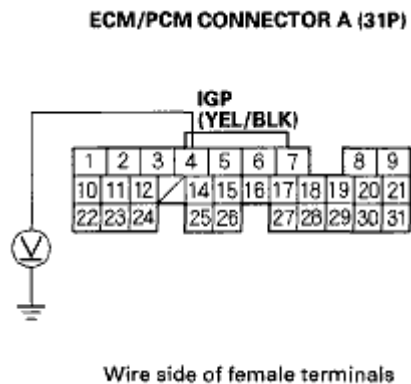
*Is there battery voltage?*

**YES** -Go to step 15.

**NO** -Go to step 28.

15. Disconnect ECM/PCM connector A (31P).

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



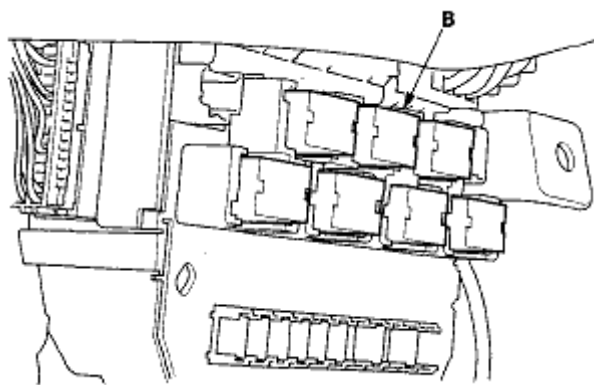
**Fig. 80: Measuring Voltage Between ECM/PCM Connector Terminal A4 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Go to step 17.

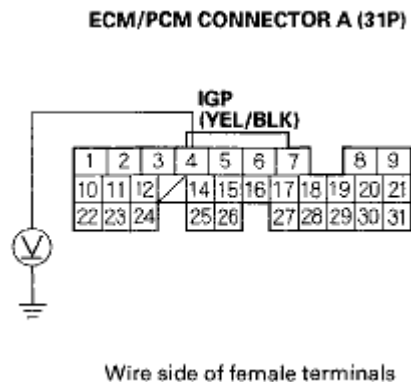
**NO** -Go to step 28.

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



**Fig. 81: Identifying PGM-FI Main Relay 1**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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



**Fig. 82: Measuring Voltage Between ECM/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 ECM/PCM (A4) and PGM-FI main relay 1, then go to step 20.

**NO** -Go to step 19.

19. Test PGM-FI main relay 1 (see **POWER RELAY TEST** ).

*Is PGM-FI main relay 1 OK?*

**YES** -Go to step 29.

**NO** -Replace PGM-FI main relay 1, then go to step 20.

20. Reconnect all connectors.  
 21. Turn the ignition switch ON (II).  
 22. Reset the ECM/PCM with the HDS.  
 23. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).

24. Turn the ignition switch OFF.
25. Wait 10 seconds.
26. Turn the ignition switch ON (II).
27. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0563 indicated?*

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

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

28. Turn the ignition switch OFF.
29. Reconnect all connectors.
30. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
31. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0563 indicated?*

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

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

## **DTC P0602: ECM/PCM PROGRAMMING ERROR**

### **NOTE:**

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION** ).
- This DTC is indicated when a ECM/PCM update is not completed.
- Do not turn the ignition switch OFF while updating the ECM/PCM. If you turn the ignition switch OFF before completion, the ECM/PCM can be damaged.

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

*Is DTC P0602 indicated?*

**YES** -Replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ).

**NO** -The update is complete.

**DTC P0615: STARTER CUT RELAY STRLD 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.
4. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0615 indicated?*

**YES** -Go to step 5.

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

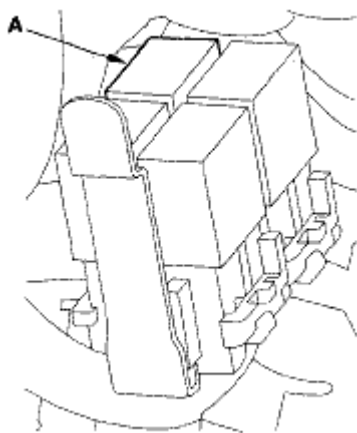
5. Turn the ignition switch OFF.
6. Check the No. 35 STRLD (7.5 A) fuse in the auxiliary under-dash fuse holder.

*Is the fuse OK?*

**YES** -Go to step 7.

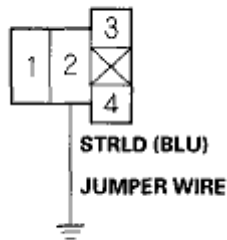
**NO** -Replace the No. 35 STRLD (7.5 A) fuse, then go to step 12.

7. Jump the SCS line with the HDS.
8. Disconnect PCM connector D (17P).
9. Remove starter cut relay 1 (A).



**Fig. 83: Identifying Starter Cut Relay 1**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

10. Connect starter cut relay 1 4P connector terminal No. 2 to body ground with a jumper wire.

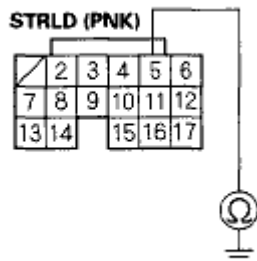
**STARTER CUT RELAY 1 4P CONNECTOR**

Terminal side of female terminals

**Fig. 84: Connecting Starter Cut Relay 1 4P Connector Terminal No. 2 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Check for continuity between PCM connector terminal D5 and body ground.

**PCM CONNECTOR D (17P)**

Wire side of female terminals

**Fig. 85: Checking Continuity Between PCM Connector Terminal D5 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 (D5) and starter cut relay 1, then go to step 12.

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 **ECM/PCM IDLE LEARN PROCEDURE** ).
16. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0615 indicated?*

**YES** -Check for poor connections or loose terminals at starter cut 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.

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

*Is DTC P0615 indicated?*

**YES** -Check for poor connections or loose terminals at starter cut relay 1 and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE ECM/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 **ECM/PCM REPLACEMENT** ). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

## **DTC P062F: ECM/PCM INTERNAL CONTROL MODULE KEEP ALIVE MEMORY (KAM) ERROR**

**NOTE:**        **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
5. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P062F indicated?*

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

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 ECM/PCM does not have the VIN information of the vehicle. Use the HDS to input the missing VIN information.

1. Turn the ignition switch ON (II).
2. Check the VIN with the HDS.

*Does the HDS show the vehicle's VIN?*

**YES** -Go to step 5.

**NO** -Go to step 3.

3. Input the VIN to the ECM/PCM with the HDS.

*Does the screen show COMPLETE?*

**YES** -Go to step 5.

**NO** -Go to step 4.

4. Check for DTCs with the HDS.

*Is DTC P062F indicated?*

**YES** -Go to the **DTC P062F TROUBLESHOOTING**.

**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 P0630 indicated?*

**YES** -Go to step 9.

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

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

*Is DTC P0630 indicated?*

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

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

## **DTC P0685: ECM/PCM POWER CONTROL CIRCUIT/ INTERNAL CIRCUIT MALFUNCTION**

### **NOTE:**

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION** ).**
- **If the problem doesn't return after you clear the DTC, or if this DTC is stored intermittently, check for loose terminals at the IGP line connectors before you replace the ECM/PCM.**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, then let it idle for 30 seconds.
4. Turn the ignition switch OFF.
5. Start the engine, then let it idle for 30 seconds.
6. Turn the ignition switch OFF.
7. Turn the ignition switch ON (II).
8. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0685 indicated?*

**YES** -Go to step 9.

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

9. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
10. Start the engine, then let it idle for 30 seconds.
11. Turn the ignition switch OFF.
12. Start the engine, then let it idle for 30 seconds.
13. Turn the ignition switch OFF.
14. Turn the ignition switch ON (II).
15. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0685 indicated?*

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

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted,

replace the original ECM/PCM (see **ECM/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 P0715: INPUT SHAFT (MAINSHAFT) SPEED SENSOR CIRCUIT MALFUNCTION

### NOTE:

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

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

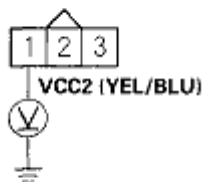
*Is any input shaft (mainshaft) speed indicated?*

**YES** -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and the ECM.

**NO** -Go to step 3.

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

**INPUT SHAFT (MAINSHAFT)  
SPEED SENSOR 3P CONNECTOR**



Wire side of female terminals

**Fig. 86: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor 3P Connector Terminal No. 1 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

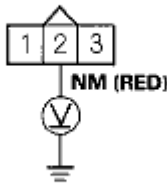
*Is there about 5 V?*

**YES** -Go to step 7.

**NO** -Repair open in the wire between the ECM (C14) and the input shaft (mainshaft) speed sensor, then go to step 16.

7. Measure voltage between input shaft (mainshaft) speed sensor 3P connector terminal No. 2 and body ground.

**INPUT SHAFT (MAINSHAFT)  
SPEED SENSOR 3P CONNECTOR**



Wire side of female terminals

**Fig. 87: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor 3P Connector Terminal No. 2 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

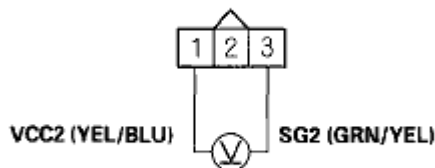
*Is there about 5 V?*

**YES** -Go to step 8.

**NO** -Go to step 9.

8. Measure voltage between input shaft (mainshaft) speed sensor 3P connector terminals No. 1 and No. 3.

**INPUT SHAFT (MAINSHAFT)  
SPEED SENSOR 3P CONNECTOR**



Wire side of female terminals

**Fig. 88: Measuring Voltage Between Input Shaft (Mainshaft) Speed Sensor 3P Connector Terminals No. 1 And 3**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

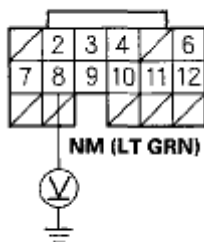
*Is there about 5 V?*

**YES** -Go to step 14.

**NO** -Repair open in the wire between the ECM (C12) and the input shaft (mainshaft) speed sensor, then go to step 16.

9. Measure voltage between ECM connector terminal D8 and body ground.

**ECM CONNECTOR D (17P)**



Wire side of female terminals

**Fig. 89: Measuring Voltage Between ECM Connector Terminal D8 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

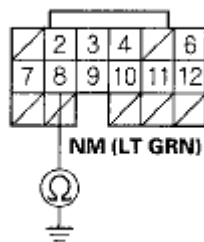
*Is there about 5 V?*

**YES** -Repair open in the wire between the ECM (D8) and the input shaft (mainshaft) speed sensor, then go to step 16.

**NO** -Go to step 10.

10. Turn the ignition switch OFF.
11. Jump the SCS line with the HDS.
12. Disconnect ECM connector D (17P).
13. Check for continuity between ECM connector terminal D8 and body ground.

**ECM CONNECTOR D (17P)**



Wire side of female terminals

**Fig. 90: Checking Continuity Between ECM Connector Terminal D8 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between the ECM (D8) and the input shaft (mainshaft) speed sensor, then go to step 16.

**NO** -Go to step 22.

14. Turn the ignition switch OFF.
15. Replace the input shaft (mainshaft) speed sensor (see **CKP SENSOR REPLACEMENT** ).
16. Reconnect all connectors.
17. Turn the ignition switch ON (II).
18. Reset the ECM with the HDS.
19. Do the ECM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
20. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - Transmission in 3rd gear
  - Engine speed at 2,000-3,000 rpm
  - Drive for several minutes
21. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0715 indicated?*

**YES** -Check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and the ECM, then go to step 1.

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

22. Reconnect all connectors.
23. Update the PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good PCM (see **SUBSTITUTING THE ECM/PCM** ).
24. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - Transmission in 3rd gear
  - Engine speed at 2,000-3,000 rpm
  - Drive for several minutes
25. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0715 indicated?*

**YES** -Check for poor connections or loose terminals at the input shaft (mainshaft) speed sensor and the ECM. If the ECM was updated, substitute a known-good ECM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 24. If the ECM was substituted, go to step 1.

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

## **DTC P0720: OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR CIRCUIT MALFUNCTION**

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

**TROUBLESHOOTING INFORMATION ).**

1. Start the engine. Hold the engine speed at 3,000 rpm without load (in neutral) until the radiator fan comes on, then let it idle.
2. Test-drive the vehicle several miles.
3. Check the C SHAFT SPD in the DATA LIST with the HDS.

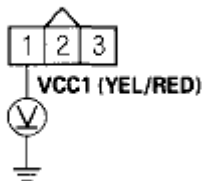
*Is any vehicle speed indicated?*

**YES** -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the output shaft (countershaft) speed sensor and the ECM.

**NO** -Go to step 4.

4. Turn the ignition switch OFF.
5. Disconnect the output shaft (countershaft) speed sensor 3P connector.
6. Turn the ignition switch ON (II).
7. Measure voltage between output shaft (countershaft) speed sensor 3P connector terminal No. 1 and body ground.

**OUTPUT SHAFT (COUNTERSHAFT)  
SPEED SENSOR 3P CONNECTOR**



Wire side of female terminals

**Fig. 91: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor 3P Connector Terminal No. 1 And Body Ground**

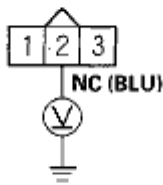
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 5 V?*

**YES** -Go to step 8.

**NO** -Repair open in the wire between the ECM (C6) and the output shaft (countershaft) speed sensor, then go to step 17.

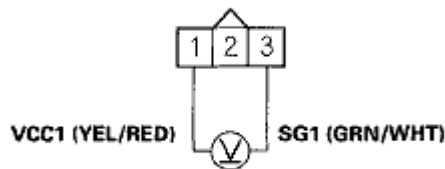
8. Measure voltage between output shaft (countershaft) speed sensor 3P connector terminal No. 2 and body ground.

**OUTPUT SHAFT (COUNTERSHAFT)  
SPEED SENSOR 3P CONNECTOR**

Wire side of female terminals

**Fig. 92: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor 3P Connector Terminal No. 2 And Body Ground****Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there about 5 V?***YES** -Go to step 9.**NO** -Go to step 10.

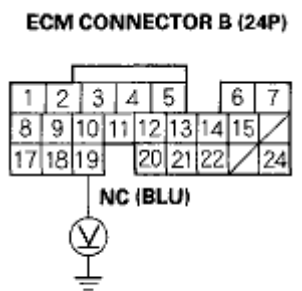
9. Measure voltage between output shaft (countershaft) speed sensor 3P connector terminals No. 1 and No. 3.

**OUTPUT SHAFT (COUNTERSHAFT)  
SPEED SENSOR 3P CONNECTOR**

Wire side of female terminals

**Fig. 93: Measuring Voltage Between Output Shaft (Countershaft) Speed Sensor 3P Connector Terminals No. 1 And 3****Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there about 5 V?***YES** -Go to step 15.**NO** -Repair open in the wire between the ECM (C4) and the output shaft (countershaft) speed sensor, then go to step 17.

10. Measure voltage between ECM connector terminal B19 and body ground.



Wire side of female terminals

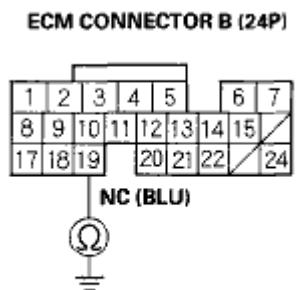
**Fig. 94: Measuring Voltage Between ECM Connector Terminal B19 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 5 V?*

**YES** -Repair open in the wire between the ECM (B19) and the output shaft (countershaft) speed sensor, then go to step 17.

**NO** -Go to step 11.

11. Turn the ignition switch OFF.
12. Jump the SCS line with the HDS.
13. Disconnect ECM connector B (24P).
14. Check for continuity between ECM connector terminal B19 and body ground.



Wire side of female terminals

**Fig. 95: Checking Continuity Between ECM Connector Terminal B19 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short in the wire between the ECM (B19) and the output shaft (countershaft) speed sensor, then go to step 17.

**NO** -Go to step 24.

15. Turn the ignition switch OFF.
16. Replace the output shaft (countershaft) speed sensor (see **KNOCK SENSOR REPLACEMENT** ).
17. Reconnect all connectors.

18. Turn the ignition switch ON (II).
19. Reset the ECM with the HDS.
20. Do the ECM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
21. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - Transmission in 5th gear
  - Engine speed at 2,000-3,000 rpm
  - Drive for several minutes, then decelerate (with the throttle fully closed) for 8 seconds
22. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0720 indicated?*

**YES** -Check for poor connections or loose terminals at the output shaft (countershaft) speed sensor and the ECM, then go to step 1.

**NO** -Go to step 23.

23. Monitor the OBD STATUS for DTC P0720 in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

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

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the output shaft (countershaft) speed sensor and the ECM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 21.

24. Reconnect all connectors.
25. Update the ECM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM (see **SUBSTITUTING THE ECM/PCM** ).
26. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - Transmission in 5th gear
  - Engine speed at 2,000-3,000 rpm
  - Drive for several minutes, then decelerate (with the throttle fully closed) for 8 seconds
27. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0720 indicated?*

**YES** -Check for poor connections or loose terminals at the output shaft (countershaft) speed sensor and the ECM. If the ECM was updated, substitute a known-good ECM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 26. If the ECM was substituted, go to step 1.

**NO** -Go to step 28.

28. Monitor the OBD STATUS for DTC P0720 in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -If the ECM was updated, troubleshooting is complete. If the ECM was substituted, replace the original ECM (see **ECM/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 output shaft (countershaft) speed sensor and the ECM. If the ECM was updated, substitute a known-good ECM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 26. If the ECM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 26.

### **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 ECM/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.

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

*Is DTC P1109 indicated?*

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

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

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 for 10 minutes.
5. Check ECT SENSOR 1 in the DATA LIST with the HDS.

*Is about 118 °F (48 °C) (J32A3 engine) or 131 °F (55 °C) (J35A8 engine) or less 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 ambient temperature.
10. Note the ambient temperature.
11. Connect ECT sensor 1 to the 2P connector, but do not install it on 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 ambient 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 ECM/PCM.

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

*Is about 118 °F (48 °C) (J32A3 engine) or 131 °F (55 °C) (J35A8 engine) or less 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 for 10 minutes.
18. Check ECT SENSOR 2 in the DATA LIST with the HDS.

*Is about 111 °F (44 °C) or less indicated?*

**YES** -Replace ECT sensor 2 (see **ECT SENSOR 1 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 1 REPLACEMENT** ).
22. Allow the sensors to cool to ambient temperature.
23. Note the ambient temperature.
24. Connect ECT sensor 1 and ECT sensor 2 to their 2P connectors, but do not install them.
25. Note the value of ECT SENSOR 1 and ECT SENSOR 2 quickly in the DATA LIST with the HDS.
26. Compare the value of ECT SENSOR 1 and the ambient temperature, and the value of ECT SENSOR 2 and the ambient temperature individually.

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

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

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

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

*Is DTC P1116 indicated?*

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

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

**NOTE:**

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION ).**
- **Also, before you troubleshoot, check for poor connections or a blockage at the intake air duct.**

1. Inspect the air cleaner element (see AIR CLEANER ELEMENT INSPECTION/REPLACEMENT ).
2. Turn the ignition switch ON (II).
3. 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 8.

**NO** -Go to step 4.

4. Clear the DTC with the HDS.
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)
  - Engine speed between 1,400 and 6,500 rpm
  - A/T in D position (M/T in 3rd gear)
  - Vehicle speed accelerated from 16 mph (25 km/h) to 31 mph (50 km/h) under half throttle
7. Monitor the OBD STATUS for DTC P1128 in the DTCs MENU with the HDS.

*Does the screen indicate FAILED?*

**YES** -Go to step 8.

**NO** -If the screen indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the MAP sensor and the ECM/PCM. If the screen indicates NOT COMPLETED, go to step 5 and recheck.

8. Turn the ignition switch OFF.
9. Replace the MAP sensor (see MAP SENSOR REPLACEMENT ).
10. Turn the ignition switch ON (II).
11. Reset the ECM/PCM with the HDS.
12. Do the ECM/PCM idle learn procedure (see ECM/PCM IDLE LEARN PROCEDURE ).
13. 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.
14. 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

- A/T in D position (M/T in 3rd gear)
- Vehicle speed accelerated from 16 mph (25 km/h) to 31 mph (50 km/h) under half throttle

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

*Is DTC P1128 indicated?*

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

**NO** -Go to step 16.

16. 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 15, 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 ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, go to step 14.

## **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 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 1,200 and 5,900 rpm
  - A/T in D position (M/T in 5th gear)
  - Maintain a vehicle speed of 55-75 mph (88-121 km/h) for 10 seconds
  - During the drive, decelerate (with 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 ECM/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 ECM/PCM with the HDS.
11. Do the ECM/PCM idle learn procedure (see **ECM/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 1,200 and 5,900 rpm
  - A/T in D position (M/T in 5th gear)
  - Maintain a vehicle speed of 55-75 mph (88 - 121 km/h) for 10 seconds
  - During the drive, decelerate (with 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 ECM/PCM, then go to step 1.

**NO** -Go to step 15.

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

*Does the screen indicate PASSED?*

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

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

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

**NOTE:**

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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 ECM/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 ECM/PCM with the HDS.
9. Do the ECM/PCM idle learn procedure (see ECM/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 ECM/PCM, then go to step 1.

**NO** -Go to step 12.

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

*Does the screen indicate PASSED?*

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

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep idling until a result comes on. If the screen indicates OUT OF CONDITION, go to step 10.

## **DTC P1297: ELD CIRCUIT LOW VOLTAGE**

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

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

*Is 72 A or more indicated?*

**YES** -Go to step 3.

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

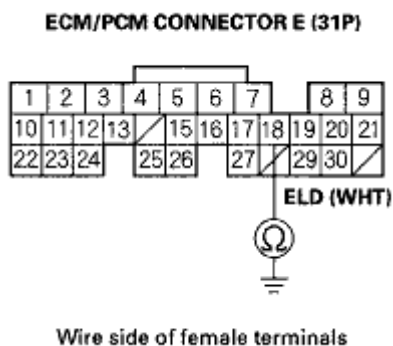
3. Turn the ignition switch OFF.
4. Disconnect the ELD 3P connector.
5. Turn the ignition switch ON (II).
6. Check the ELD in the DATA LIST with the HDS.

*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 ECM/PCM connector E (31P).
10. Check for continuity between ECM/PCM connector terminal E18 and body ground.



**Fig. 96: Checking Continuity Between ECM/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 ECM/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 ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see **ECM/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 and the ECM/PCM, then go to step 1.

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

20. Reconnect all connectors.
21. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE**

**ECM/PCM** ), then go to step 22. If the ECM/PCM was substituted, go to step 1.

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

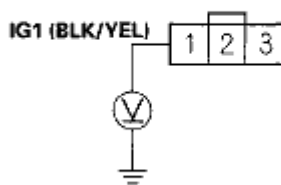
*Is 0.2 A or less indicated?*

**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 ECM/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. 97: Measuring Voltage Between ELD 3P Connector Terminal No. 1 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

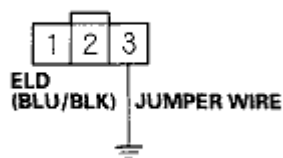
**YES** -Go to step 7.

**NO** -Repair open in the wire between the No. 18 IG ACG (15 A) 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

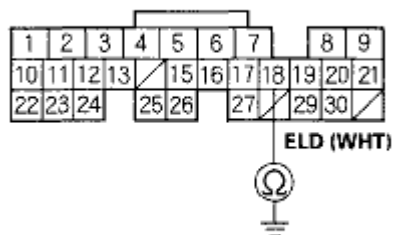


Wire side of female terminals

**Fig. 98: 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 ECM/PCM connector E (31P).
11. Check for continuity between ECM/PCM connector terminal E18 and body ground.

#### ECM/PCM CONNECTOR E (31P)



Wire side of female terminals

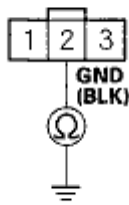
**Fig. 99: Checking Continuity Between ECM/PCM Connector Terminal E18 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 12.

**NO** -Repair open in the wire between the ECM/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**

Wire side of female terminals

**Fig. 100: 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 G302, 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 ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
18. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P1298 indicated?*

**YES** -Check for poor connections or loose terminals at the ELD and the ECM/PCM, then go to step 19.

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

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

*Is DTC P1298 indicated?*

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

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

**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 switch 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 ECM/PCM with the HDS.
9. Do the ECM/PCM idle learn procedure (see ECM/PCM IDLE LEARN PROCEDURE ).
10. Start the engine.
11. Check under these conditions:
  - A/C switch 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/C switch on
  - 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 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 (+B line).

*Are the connections and terminals OK?*

**YES** -Go to step 8.

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

8. Check for an open in the wire between the alternator and under-hood fuse/relay box at the 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 ECM/PCM with the HDS.
11. Do the ECM/PCM idle learn procedure (see ECM/PCM IDLE LEARN PROCEDURE ).

12. Start the engine.
13. Check under these conditions:
  - A/C switch on
  - Temperature control at 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 or loose terminals at the alternator 4P connector.

*Are the connections and terminals OK?*

**YES** -Go to step 2.

**NO** -Repair the connections or terminals, then go to step 20.

2. Check the alternator mounting surface for corrosion.

*Is the mounting surface corroded?*

**YES** -Remove the alternator (see ALTERNATOR REMOVAL AND INSTALLATION ). Clean all mounting surfaces, and reinstall the alternator, then go to step 20.

**NO** -Go to step 3.

3. Turn the ignition switch ON (II).
4. Clear the DTC with the HDS.
5. Start the engine.
6. Check under these conditions:
  - A/C switch on

- Temperature control at maximum cool
  - Blower fan at maximum speed
  - Rear window defogger on
  - Headlights on high beam
7. Hold the engine speed at 2,000 rpm (in Park or neutral) for 1 minute.
  8. Check for Temporary DTCs or DTCs with the HDS.

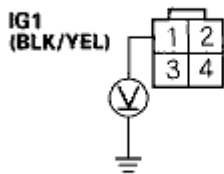
*Is DTC P16BC indicated?*

**YES** -Go to step 9.

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

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

#### **ALTERNATOR 4P CONNECTOR**



Wire side of female terminals

**Fig. 101: Measuring Voltage Between Alternator 4P Connector Terminal No. 1 And Body Ground**

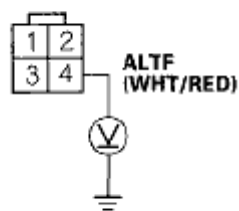
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Go to step 13.

**NO** -Repair open in the wire between the alternator (IG1 line) and the No. 18 IG ACG (15 A) fuse in under-dash fuse/relay box, then go to step 19.

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

**ALTERNATOR 4P CONNECTOR**

Wire side of female terminals

**Fig. 102: Measuring Voltage Between Alternator 4P Connector Terminal No. 4 And Body Ground**

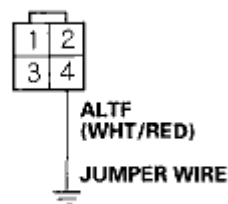
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 5 V?*

**YES** -Replace the alternator (see **ALTERNATOR REMOVAL AND INSTALLATION** ), then go to step 19.

**NO** -Go to step 14.

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

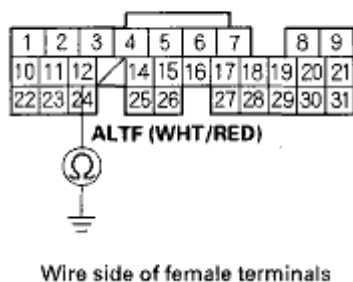
**ALTERNATOR 4P CONNECTOR**

Wire side of female terminals

**Fig. 103: Connecting Alternator 4P Connector Terminal No. 4 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Check for continuity between ECM/PCM connector terminal A12 and body ground.

**ECM/PCM CONNECTOR A (31P)**

**Fig. 104: Checking Continuity Between ECM/PCM Connector Terminal A12 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 28.

**NO** -Repair open in the wire between the ECM/PCM (A12) and the alternator, then go to step 20.

19. Turn the ignition switch OFF.
20. Reconnect all connectors.
21. Turn the ignition switch ON (II).
22. Reset the ECM/PCM with the HDS.
23. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
24. Start the engine.
25. Check under these conditions:
  - A/C switch on
  - Temperature control at maximum cool
  - Blower fan at maximum speed
  - Rear window defogger on
  - Headlights on high beam
26. Hold the engine speed at 2,000 rpm {in Park or neutral} for 1 minute.
27. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P16BC indicated?*

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

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

28. Reconnect all connectors.
29. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
30. Start the engine.

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

*Is DTC P16BC indicated?*

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

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

#### **DTC P16BD: STARTER CUT 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 cut relay 2 and the PCM.

4. Replace starter cut relay 2.
5. Reset the PCM with the HDS.
6. Do the PCM idle learn procedure (see **ECM/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 cut 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 CUT 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 cut relay 1 and the PCM.

4. Replace starter cut relay 1.
5. Reset the PCM with the HDS.
6. Do the PCM idle learn procedure (see ECM/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 cut 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 CUT 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 ).

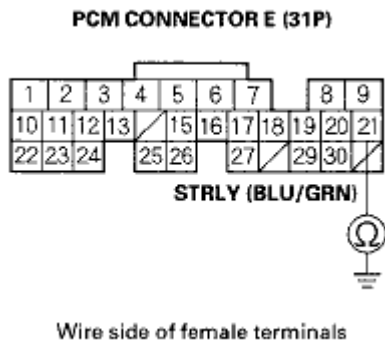
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS and wait 5 seconds.
3. Check for Temporary DTCs or DTCs with the HDS.

*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 cut relay 1, starter cut relay 2, and the PCM.

4. Turn the ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Remove starter cut relay 1 and starter cut relay 2.
7. Disconnect PCM connector E (31P).
8. Check for continuity between PCM connector terminal E21 and body ground.



**Fig. 105: 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 cut relay 1 or starter cut 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 **ECM/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 cut relay 1, starter cut 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 ECM/PCM** ), or substitute a known-good PCM (see **SUBSTITUTING THE ECM/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 ECM/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 **ECM/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 for 10 minutes.
5. Check ECT SENSOR 2 in the DATA LIST with the HDS.

*Is about 111 °F (44 °C) or less indicated?*

**YES** -Replace ECT sensor 2 (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 2 (see **ECT SENSOR 1 REPLACEMENT** ).
9. Allow ECT sensor 2 to cool to ambient temperature.
10. Note the ambient temperature.
11. Connect ECT sensor 2 to the 2P connector, but do not install it.

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 ambient temperature.

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

**YES** -Replace ECT sensor 2 (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 ECM/PCM.

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

*Is about 118 °F (48 °C) (J32A3 engine), or 131 °F (55 °C) (J35A8 engine) or less 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 for 10 minutes.
18. Check ECT SENSOR 2 in the DATA LIST with the HDS.

*Is about 111 °F (44 °C) or less indicated?*

**YES** -Replace ECT sensor 2 (see **ECT SENSOR 1 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 1 REPLACEMENT** ).
22. Allow the sensors to cool to ambient temperature.
23. Note the ambient temperature.
24. Connect ECT sensor 1 to the 2P connector, and ECT sensor 2 to the 2P connector, but do not install them.
25. Note the value of ECT SENSOR 1 and ECT SENSOR 2 quickly in the DATA LIST with the HDS.
26. Compare the value of ECT SENSOR 1 and the ambient temperature, and the value of ECT SENSOR 2 and the ambient temperature individually.

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

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

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

at ECT sensor 1, ECT sensor 2, and the ECM/PCM.

27. Turn the ignition switch ON (II).
28. Reset the ECM/PCM with the HDS.
29. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 more, or 0.08 V or less indicated?*

**YES** -Go to step 3.

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

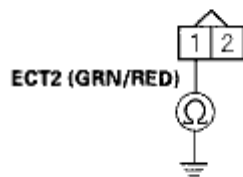
3. Turn the ignition switch OFF.
4. Disconnect the ECT sensor 2 2P connector.
5. Turn the ignition switch ON (II).
6. Check ECT SENSOR 2 in the DATA LIST with the HDS.

*Is about 356 °F (180 °C) or more, 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 ECM/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. 106: 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 ECM/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 1 REPLACEMENT** ).
13. Reconnect all connectors.
14. Turn the ignition switch ON (II).
15. Reset the ECM/PCM with the HDS.
16. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 connections.
19. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted,

replace the original ECM/PCM (see **ECM/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.

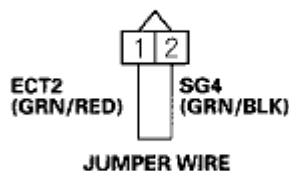
*Is about - 40 °F ( -40 °C) or less, or 4.90 V or more indicated?*

**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 ECM/PCM.

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

### ECT SENSOR 2 2P CONNECTOR



Wire side of female terminals

**Fig. 107: 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?*

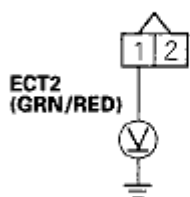
**YES** -Go to step 8.

**NO** -Go to step 18.

8. Turn the ignition switch OFF.
9. Remove the jumper wire from the 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. 108: Measuring Voltage Between ECT Sensor 2 2P Connector Terminal No. 1 And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

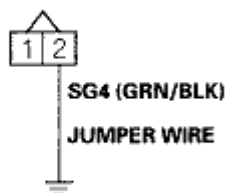
*Is there about 5 V?*

**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 ECM/PCM connector E (31P).
15. Connect ECT sensor 2 2P connector terminal No. 2 to body ground with a jumper wire.

**ECT SENSOR 2 2P CONNECTOR**

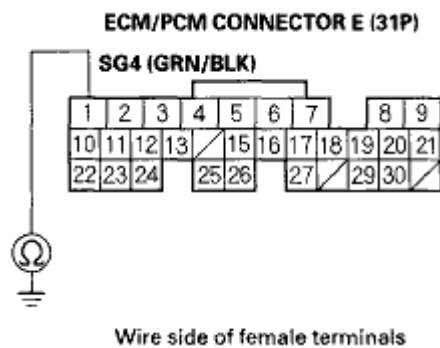


Wire side of female terminals

**Fig. 109: 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 ECM/PCM connector terminal E1 and body ground.



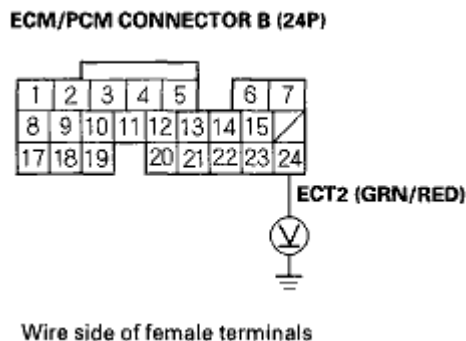
**Fig. 110: Checking Continuity Between ECM/PCM Connector Terminal E1 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 26.

**NO** -Repair open in the wire between the ECM/PCM (E1) and ECT sensor 2, then go to step 20.

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



**Fig. 111: Measuring Voltage Between ECM/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 ECM/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 1 REPLACEMENT** ).
20. Reconnect all connectors.
21. Turn the ignition switch ON (II).
22. Reset the ECM/PCM with the HDS.
23. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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. Turn the ignition switch OFF.
26. Reconnect all connectors.
27. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
28. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2185 indicated?*

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

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 them first then recheck for DTC P2195 and/or P2197\*.

1. Check the installation of the A/F sensor (Sensor 1).

*Is the A/F sensor loose or disconnected from the exhaust pipe?*

**YES** -Go to step 6.

**NO** -Go to step 2.

2. Turn the ignition switch ON (II).

3. Clear the DTC with the HDS.
4. Start the engine, and let it idle for 2 minutes.
5. Check for Temporary DTCs or DTCs with the HDS.

*Are any Temporary DTCs or DTCs indicated?*

**YES** -If DTC P2195 and/or P2197\* is indicated, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 13. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

**NO** -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

6. Turn the ignition switch OFF.
7. Reinstall the A/F sensor (Sensor 1) (see **A/F SENSOR REPLACEMENT** ).
8. Turn the ignition switch ON (II).
9. Reset the ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
11. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2195 and/or P2197\* indicated?*

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

**NO** -Go to step 12.

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

*Does the screen indicate PASSED?*

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

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

13. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
14. Start the engine, and let it idle for 2 minutes.
15. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2195 and/or P2197\* indicated?*

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

**ECM/PCM** ), then go to step 14. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 16.

16. Monitor the OBD STATUS for DTC P2195 in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). If any other Temporary DTCs or DTCs were indicated in step 15, 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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 14. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

## **DTC P2227: BARO SENSOR CIRCUIT RANGE/ PERFORMANCE PROBLEM**

### **NOTE:**

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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** -Go to step 7.

3. Clear the DTC with the HDS.
4. Start the engine. Hold the engine speed at 3,000 rpm without load (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)
  - A/T in D position (M/T in 4th gear)
  - REL TP SENSOR between 14 deg and 30 deg for 3 seconds
6. Monitor the OBD STATUS for DTC P2227 in the DTCs MENU with the HDS.

*Does the screen indicate FAILED?*

**YES** -Go to step 7.

**NO** -If the screen indicates PASSED, intermittent failure, the system is OK at this time. If the screen indicates NOT COMPLETED, go to step 4 and recheck.

7. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
8. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
9. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 4th gear)
  - REL TP SENSOR between 14 deg and 30 deg for 3 seconds
10. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2227 indicated?*

**YES** -Check for poor connections or loose terminals at the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 8. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 11.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). If any other Temporary DTCs or DTCs were indicated in step 10, go to the indicated DTCs troubleshooting.

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 8. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, go to step 8.

## **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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 higher indicated?*

**YES** -Go to step 3.

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

3. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

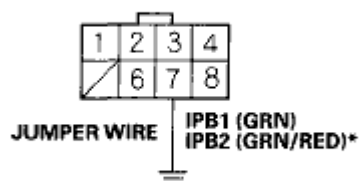
*Is DTC P2237 and/or P2240\* indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect ECM/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

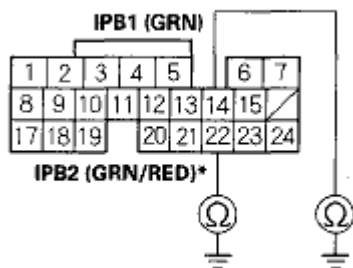


Wire side of female terminals

**Fig. 112: 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 ECM/PCM connector terminal B14 (B22)\* and body ground.

#### ECM/PCM CONNECTOR B (24P)



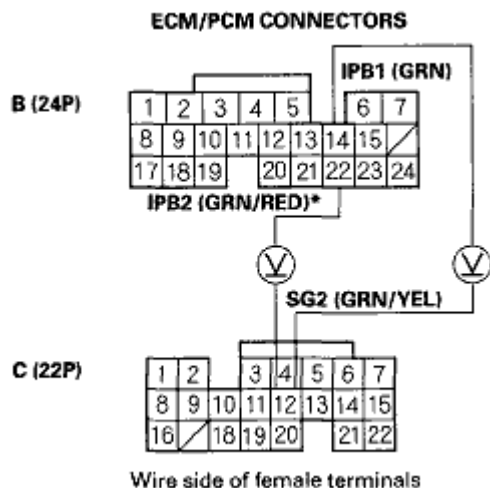
Wire side of female terminals

**Fig. 113: Checking Continuity Between ECM/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 ECM/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 ECM/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 for 2 minutes.
13. Measure voltage between ECM/PCM connector terminals B14 (B22)\* and C12.

**Fig. 114: Measuring Voltage Between ECM/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 ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see ECM/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 ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).  
 24. Start the engine, and let it idle.  
 25. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2237 and/or P2240\* indicated?*

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

**NO** -Go to step 26.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). 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 connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 24. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

**DTC P2238: REAR A/F SENSOR (BANK 1, SENSOR DIP CIRCUIT LOW VOLTAGE; DTC P2241: FRONT A/F SENSOR (BANK 2, SENSOR 1) IP CIRCUIT LOW VOLTAGE**

**NOTE:**

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

**GENERAL TROUBLESHOOTING INFORMATION ).**

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

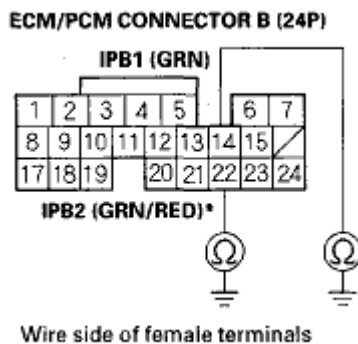
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2238 and/or P2241\* indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect ECM/PCM connector B (24P).
9. Check for continuity between ECM/PCM connector terminal B14 (B22)\* and body ground.



**Fig. 115: Checking Continuity Between ECM/PCM Connector Terminal B14 (B22)\* And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

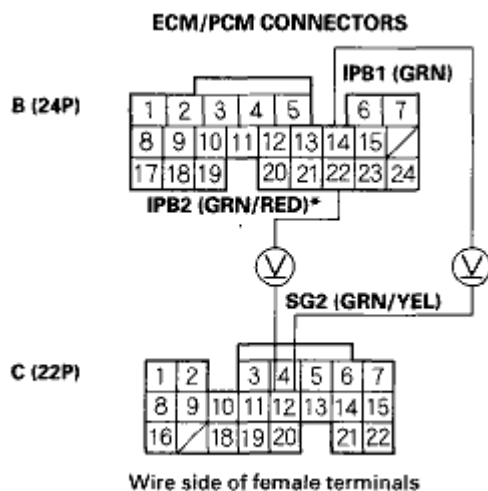
*Is there continuity ?*

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

**NO** -Go to step 10.

10. Reconnect ECM/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 for 2 minutes.

12. Measure voltage between ECM/PCM connector terminals B14 (B22)\* and C12.



**Fig. 116: Measuring Voltage Between ECM/PCM Connector Terminal 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 ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/PCM, then go to step 1.

**NO** -Go to step 19.

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

*Does the screen indicate PASSED?*

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

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

idling until a result comes on.

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

*Is DTC P2238 and/or P2241\* indicated?*

**YES** -Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 23. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 25.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

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

**NOTE:**

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

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

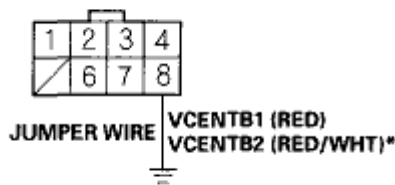
*Is DTC P2243 and/or P2247\* indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect ECM/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**

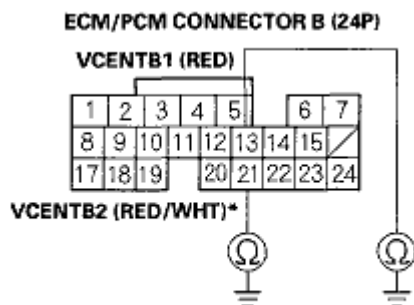


Wire side of female terminals

**Fig. 117: 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 ECM/PCM connector terminal B13 (B21)\* and body ground.



Wire side of female terminals

**Fig. 118: Checking Continuity Between ECM/PCM Connector Terminal B13 (B21)\* And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

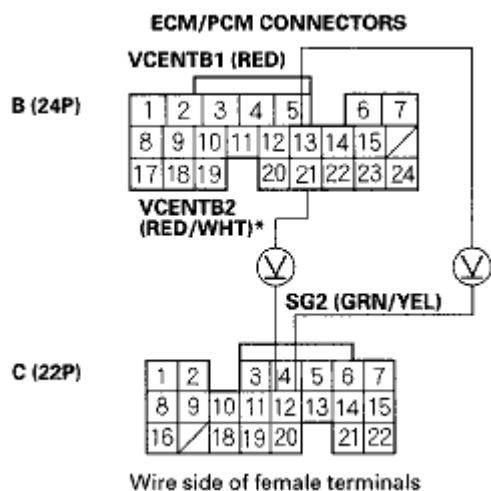
**YES** -Go to step 11.

**NO** -Repair open in the wire between the ECM/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 ECM/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 for 2 minutes.

13. Measure voltage between ECM/PCM connector terminals B13 (B21)\* and C12.



**Fig. 119: Measuring Voltage Between ECM/PCM Connector Terminal 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 ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
24. Start the engine, and let it idle.
25. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2243 and/or P2247\* indicated?*

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

**NO** -Go to step 26.

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

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). 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 connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 24. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

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

**NOTE:**

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

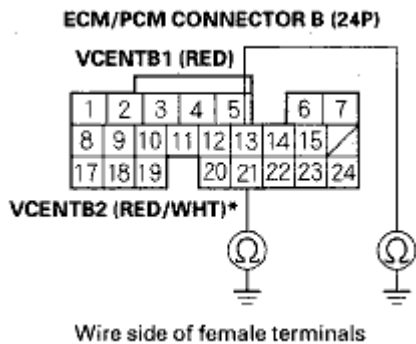
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2245 and/or P2249\* indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect ECM/PCM connector B (24P).
9. Check for continuity between ECM/PCM connector terminal B13 (B21)\* and body ground.



**Fig. 120: Checking Continuity Between ECM/PCM Connector Terminal B13 (B21)\* And Body Ground**

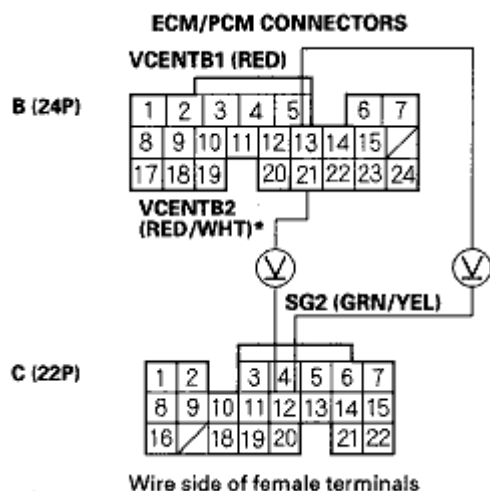
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (B13 (B21)\*) and the A/F sensor (Sensor 1), then go to step 14.

**NO** -Go to step 10.

10. Reconnect ECM/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.
12. Measure voltage between ECM/PCM connector terminals B13 (B21)\* and C12.



**Fig. 121: Measuring Voltage Between ECM/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 ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/PCM, then go to step 1.

**NO** -Go to step 19.

19. Monitor the OBD STATUS for DTC P2245 and/or P22491 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 ECM/PCM, then go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

20. Turn the ignition switch OFF.

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

*Is DTC P2245 and/or P2249\* indicated?*

**YES** -Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 23. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 25.

25. Monitor the OBD STATUS for DTC P2245 and/or P2249\* in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

**DTC P2251: REAR A/F SENSOR (BANK 1, SENSOR 1) VS CIRCUIT HIGH VOLTAGE; DTC P2254: FRONT A/F SENSOR (BANK 2, SENSOR 1) VS CIRCUIT HIGH VOLTAGE**

**NOTE:**

- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION** ).
- If DTC P2251 and/or P2254\* is stored at the same time as DTC P0134 and/or P0154\*, troubleshoot DTC P2251 and/or P2254\* first, then recheck for P0134 and/or P0154\*.
- Information marked with an asterisk (\*) applies to the front bank (Bank 2).

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

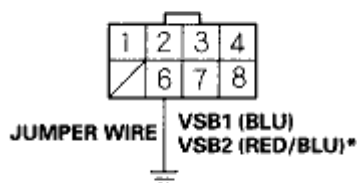
*Is DTC P2251 and/or P2254\* indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect ECM/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**

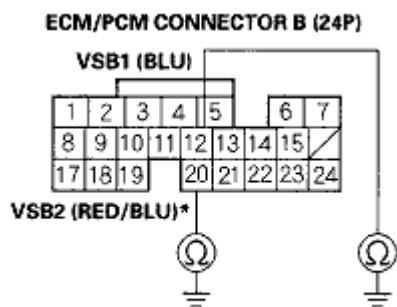


Wire side of female terminals

**Fig. 122: 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 ECM/PCM connector terminal B12 (B20)\* and body ground.



Wire side of female terminals

**Fig. 123: Checking Continuity Between ECM/PCM Connector Terminal B12 (B20)\* And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

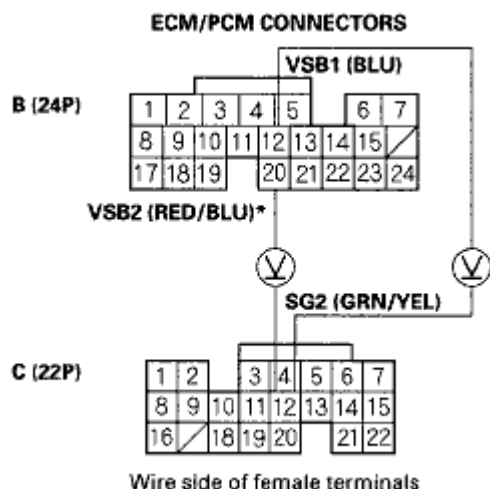
**YES** -Go to step 11.

**NO** -Repair open in the wire between the ECM/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 ECM/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 for 2 minutes.

13. Measure voltage between ECM/PCM connector terminals B12 (B20)\* and C12.



**Fig. 124: Measuring Voltage Between ECM/PCM Connector Terminal 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 (Sensor 1) (see **A/F SENSOR REPLACEMENT** ).
15. Reconnect all connectors.
16. Turn the ignition switch ON (II).
17. Reset the ECM/PCM with the HDS.
18. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
24. Start the engine, and let it idle.
25. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2251 and/or P2254\* indicated?*

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

**NO** -Go to step 26.

26. Monitor the OBD STATUS for DTC P2251 and/or P2254\* in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). 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 connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 24. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

#### **DTC P2252: REAR A/F SENSOR (BANK 1, SENSOR 1) VS CIRCUIT LOW VOLTAGE; DTC P2255: FRONT A/F SENSOR (BANK 2, SENSOR 1) VS CIRCUIT LOW VOLTAGE**

##### **NOTE:**

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

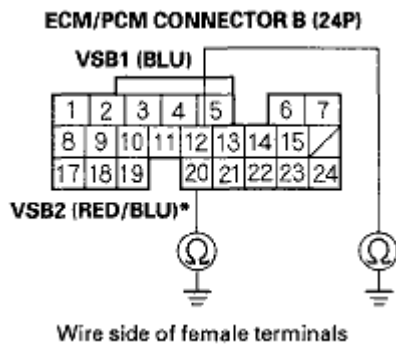
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2252 and/or P2255\* indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the A/F sensor (Sensor 1) 8P connector.
8. Disconnect ECM/PCM connector B (24P).
9. Check for continuity between ECM/PCM connector terminal B12 (B20)\* and body ground.



**Fig. 125: Checking Continuity Between ECM/PCM Connector Terminal B12 (B20)\* And Body Ground**

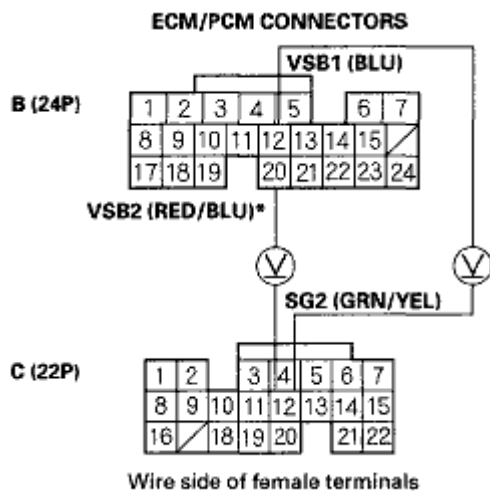
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (B12 (B20)\*) and the A/F sensor (Sensor 1), then go to step 14.

**NO** -Go to step 10.

10. Reconnect ECM/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 for 2 minutes.
12. Measure voltage between ECM/PCM connector terminals B12 (B20)\* and C12.



**Fig. 126: Measuring Voltage Between ECM/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 ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/PCM, then go to step 1.

**NO** -Go to step 19.

19. Monitor the OBD STATUS for DTC P2252 and/or P2255\* in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

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

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

20. Turn the ignition switch OFF.

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

*Is DTC P2252 and/or P2255\* indicated?*

**YES** -Check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 23. If the ECM/PCM was substituted, go to step 1.

**NO** -Go to step 25.

25. Monitor the OBD STATUS for DTC P2252 in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then go to step 23. If the ECM/PCM was substituted, go to step 1. If the screen indicates NOT COMPLETED, keep idling until a result comes on.

**DTC 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, and let it idle without load (in Park or neutral) until the radiator fan comes on.
4. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - Vehicle speed at 35 mph (56 km/h) or more for at least 40 seconds
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 ECM/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 ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
11. Start the engine, and let it idle without load (in Park or neutral) until the radiator fan comes on.
12. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - Vehicle speed at 35 mph (56 km/h) or more for at least 40 seconds
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 ECM/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 ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 11.

## **DTC P2610: ECM/PCM IGNITION OFF INTERNAL TIMER MALFUNCTION**

**NOTE:**      **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ).
5. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2610 indicated?*

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

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

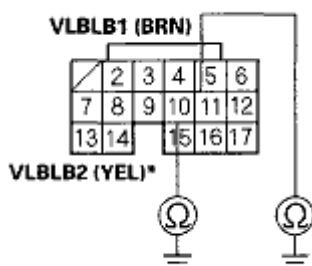
1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2627 and/or P2630\* indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect ECM/PCM connector D (17P).
8. Check for continuity between ECM/PCM connector terminal D11 (D10)\* and body ground.

**ECM/PCM CONNECTOR D (17P)**

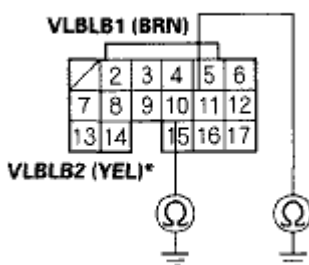
Wire side of female terminals

**Fig. 127: Checking Continuity Between ECM/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 ECM/PCM connector terminal D11 (D10)\* and body ground.

**ECM/PCM CONNECTOR D (17P)**

Wire side of female terminals

**Fig. 128: Checking Continuity Between ECM/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 ECM/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 ECM/PCM with the HDS.
15. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

**NO** -If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/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 for 2 minutes.
4. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P2628 and/or P2631\* indicated?*

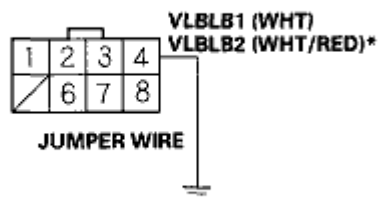
**YES** -Go to step 5.

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



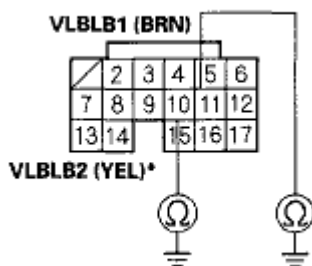
Wire side of female terminals

**Fig. 129: 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 ECM/PCM connector terminal D11 (D10)\* and body ground.

**ECM/PCM CONNECTOR D (17P)**



Wire side of female terminals

**Fig. 130: Checking Continuity Between ECM/PCM Connector Terminal D11 (D10)\* And Body Ground**

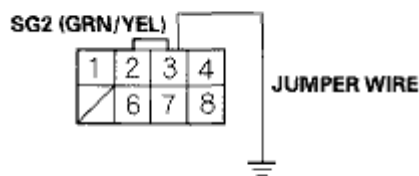
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 11.

**NO** -Repair open in the wire between the ECM/PCM (D11 (D10)\*) 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.
12. Disconnect ECM/PCM connector C (22P).
13. Connect A/F sensor (Sensor 1) 8P connector terminal No. 3 to body ground with a jumper wire.

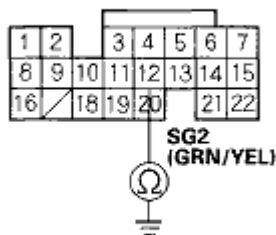
**A/F SENSOR (SENSOR 1) 8P CONNECTOR**

Wire side of female terminals

**Fig. 131: 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 ECM/PCM connector terminal C12 and body ground.

**ECM/PCM CONNECTOR C (22P)**

Wire side of female terminals

**Fig. 132: Checking Continuity Between ECM/PCM Connector Terminal C12 And Body Ground**

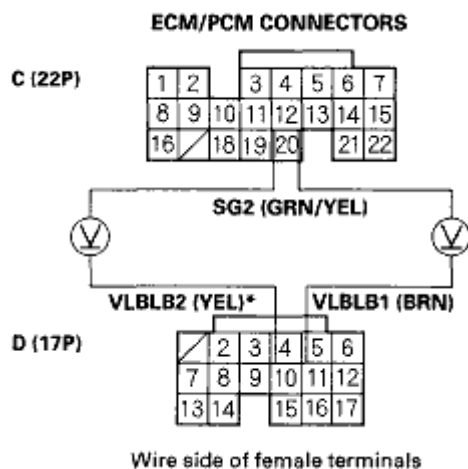
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 15.

**NO** -Repair open in the wire between the ECM/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 ECM/PCM connectors C (22P) and D (17P).
16. Turn the ignition switch ON (II).
17. Measure voltage between ECM/PCM connector terminals D11 (D10)\* and C12.



**Fig. 133: Measuring Voltage Between ECM/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 ECM/PCM with the HDS.
22. Do the ECM/PCM idle learn procedure (see **ECM/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 ECM/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 ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/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 ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the ECM/PCM was substituted, go to step 1.

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

**DTC P2A00: REAR A/F SENSOR (BANK 1, SENSOR 1) CIRCUIT 1 RANGE/PERFORMANCE PROBLEM; DTC P2A03: FRONT A/F SENSOR (BANK 2, SENSOR 1) CIRCUIT 1 RANGE/PERFORMANCE PROBLEM**

**NOTE:**

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

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 3rd gear)
  - Vehicle speed between 25-55 mph (40 - 88 km/h) for 5 minutes
  - Drive at a steady speed between 55-75 mph (88-120 km/h) for 10 seconds, then decelerate (with throttle fully closed) for at least 6 seconds.
5. Monitor the OBD STATUS for DTC P2A00 and/or P2A03\* in the DTCs MENU with the HDS.

*Does the screen indicate FAILED?*

**YES** -Go to step 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 A/F sensor (Sensor 1) and the ECM/PCM. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, 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 ECM/PCM with the HDS.
10. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
11. Test-drive under these conditions:
  - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
  - A/T in D position (M/T in 3rd gear)
  - Vehicle speed between 25-55 mph (40-88 km/h) for 5 minutes
  - Drive at a steady speed between 55-75 mph (88-120 km/h) for 10 seconds, then decelerate (with

throttle fully closed) for at least 6 seconds.

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

*Is DTC P2A00 and/or P2A03\* indicated?*

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

**NO** -Go to step 13.

13. Monitor the OBD STATUS for DTC P2A00 and/or P2A03\* in the DTCs MENU with the HDS.

*Does the screen indicate PASSED?*

**YES** -Troubleshooting is complete. If any other Temporary DTCs or DTCs were indicated in step 12, go to the indicated DTCs troubleshooting.

**NO** -If the screen indicates FAILED, check for poor connections or loose terminals at the A/F sensor (Sensor 1) and the ECM/PCM, then go to step 1. If the screen indicates EXECUTING, keep driving until a result comes on. If the screen indicates OUT OF CONDITION, go to step 11.

#### **DTC U0073: F-CAN MALFUNCTION (BUS-OFF)**

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

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

*Is DTC U0073 indicated?*

**YES** -Go to step 4.

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

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

*Is DTC U0073 indicated?*

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

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

**DTC U0122: F-CAN MALFUNCTION (ECM/PCM-VSA MODULATOR-CONTROL UNIT)****NOTE:**

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

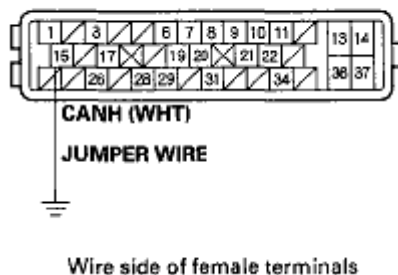
4. Check for DTCs in the DTCs MENU with the HDS.

*Is VSA system DTC 86 indicated?*

**YES** -Go to step 5.

**NO** -Go to step 13.

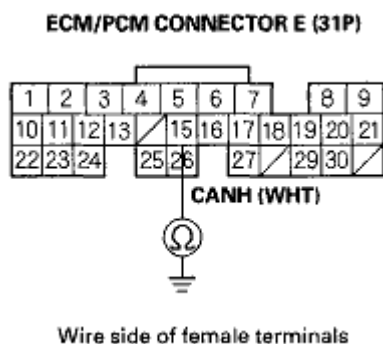
5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Disconnect the VSA modulator-control unit 37P connector (see VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION ).
8. Disconnect ECM/PCM connector E (31P).
9. Connect VSA modulator-control unit 37P connector terminal No. 15 to body ground with a jumper wire.

**VSA MODULATOR-CONTROL UNIT 37P CONNECTOR**

**Fig. 134: Connecting VSA Modulator-Control Unit 37P Connector Terminal No. 15 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between ECM/PCM connector terminal E15 and body ground.



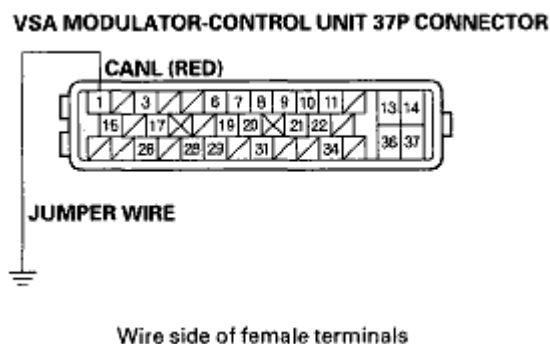
**Fig. 135: Checking Continuity Between ECM/PCM Connector Terminal E15 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 11.

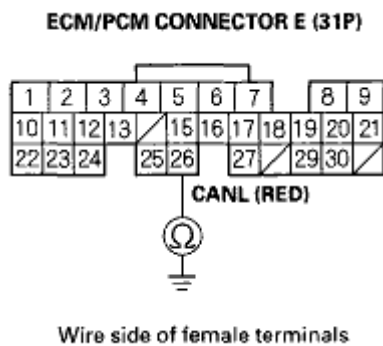
**NO** -Repair open in the wire between the ECM/PCM (E15) and the VSA modulator-control unit, then go to step 20.

11. Connect VSA modulator-control unit 37P connector terminal No. 1 to body ground with a jumper wire.



**Fig. 136: Connecting VSA Modulator-Control Unit 37P Connector Terminal No. 1 To Body Ground With Jumper Wire**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Check for continuity between ECM/PCM connector terminal E26 and body ground.



**Fig. 137: Checking Continuity Between ECM/PCM Connector Terminal E26 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 20 and recheck. If DTC U0122 is not indicated, replace the original VSA modulator-control unit, then go to step 20.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the VSA modulator-control unit, then go to step 20.

13. Check for poor connections or loose terminals at the VSA modulator-control unit 37P connector.

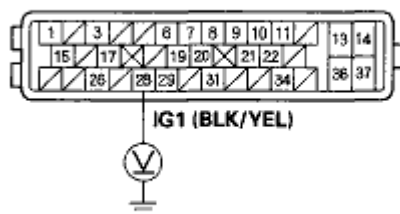
*Are the connections and terminals OK?*

**YES** -Go to step 14.

**NO** -Repair the connections or terminals, then go to step 21.

14. Turn the ignition switch OFF.
15. If not already done, disconnect the VSA modulator-control unit 37P connector.
16. Turn the ignition switch ON (II).
17. Measure voltage between VSA modulator-control unit 37P connector terminal No. 28 and body ground.

**VSA MODULATOR-CONTROL UNIT 37P CONNECTOR**



**Fig. 138: Measuring Voltage Between VSA Modulator-Control Unit 37P Connector Terminal No. 28 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

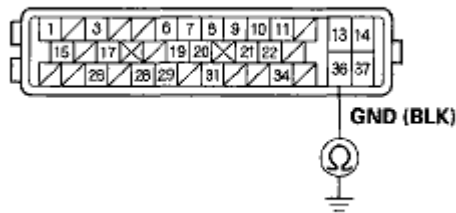
*Is there battery voltage?*

**YES** -Go to step 18.

**NO** -Check the No. 18 (15 A) fuse in the under-dash fuse/relay box. If the fuse is OK, repair open in the wire between the No. 18 (15 A) fuse and the VSA modulator-control unit, then go to step 20.

18. Turn the ignition switch OFF.
19. Check for continuity between VSA modulator-control unit 37P connector terminal No. 36 and body ground.

#### VSA MODULATOR-CONTROL UNIT 37P CONNECTOR



Wire side of female terminals

**Fig. 139: Checking Continuity Between VSA Modulator-Control Unit 37P Connector Terminal No. 36 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Substitute a known-good VSA modulator-control unit (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION** ), then go to step 15 and recheck. If DTC U0122 is not indicated, replace the original VSA modulator-control unit (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION** ), then go to step 20.

**NO** -Repair open in the wire between the VSA modulator-control unit and G203, then go to step 15.

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

*Is DTC U0122 indicated?*

**YES** -Check for poor connections or loose terminals at the VSA modulator-control unit, and the ECM/PCM, then go to step 1.

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

**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 U0155 indicated?*

**YES** -Go to step 4.

**NO** -Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module and the ECM/PCM.

4. Check for body electrical DTCs in the DTCs MENU with the HDS.

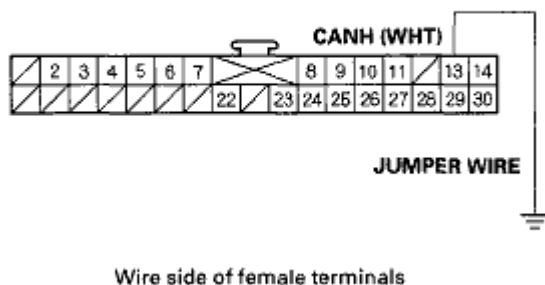
*Is DTC B1168, B1169, and/or B1178 indicated?*

**YES** -Go to step 5.

**NO** -Do the gauge control module input test (see GAUGE CONTROL MODULE INPUT TEST ).

5. Turn the ignition switch OFF.
6. Jump the SCS line with the HDS.
7. Remove the gauge control module (see GAUGE CONTROL MODULE REPLACEMENT ).
8. Disconnect gauge control module connector A (30P).
9. Disconnect ECM/PCM connector E (31P).
10. Connect gauge control module connector terminal A13 to body ground with a jumper wire.

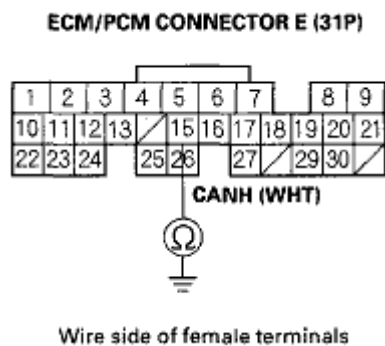
**GAUGE CONTROL MODULE CONNECTOR A (30P)**



**Fig. 140: Connecting Gauge Control Module Connector Terminal A13 To Body Ground With Jumper Wire**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

11. Check for continuity between ECM/PCM connector terminal E15 and body ground.



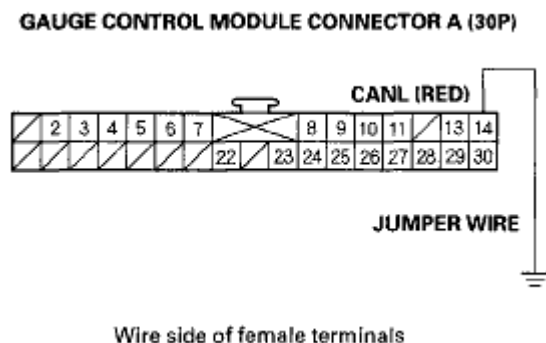
**Fig. 141: Checking Continuity Between ECM/PCM Connector Terminal E15 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 12.

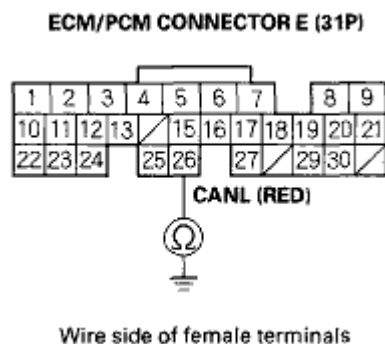
**NO** -Repair open in the wire between the ECM/PCM (E15) and the gauge control module, then go to step 14.

12. Connect gauge control module connector terminal A14 to body ground with a jumper wire.



**Fig. 142: Connecting Gauge Control Module Connector Terminal A14 To Body Ground With Jumper Wire**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

13. Check for continuity between ECM/PCM connector terminal E26 and body ground.



**Fig. 143: Checking Continuity Between ECM/PCM Connector Terminal E26 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Substitute a known-good gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT** ), then go to step 14 and recheck. If DTC U0155 is not indicated, replace the original gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT** ), then go to step 14.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the gauge control module, then go to step 14.

14. Reconnect all connectors.
15. Turn the ignition switch ON (II).
16. Reset the ECM/PCM with the HDS.
17. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).
18. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC U0155 indicated?*

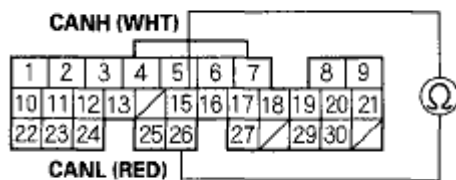
**YES** -Check for poor connections or loose terminals at the gauge control module and the ECM/PCM, then go to step 1.

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

## F-CAN CIRCUIT TROUBLESHOOTING

1. Turn the ignition switch OFF.
2. Jump the SCS line with the HDS.
3. Disconnect ECM/PCM connector E (31P), then disconnect the HDS.
4. Measure resistance between ECM/PCM connector terminals E15 and E26.

**ECM/PCM CONNECTOR E (31P)**



Wire side of female terminals

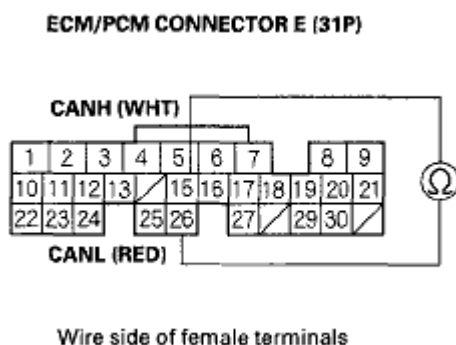
**Fig. 144: Measuring Resistance Between ECM/PCM Connector Terminals E15 And E26**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 34-42 ohms?*

**YES** -Go to step 44.

**NO** -Go to step 5.

5. Disconnect gauge control module connector A (30P) (see **GAUGE CONTROL MODULE REPLACEMENT** ).
6. Disconnect the VSA modulator-control unit 37P connector (see **VSA MODULATOR-CONTROL UNIT REMOVAL AND INSTALLATION** ).
7. Disconnect SRS unit connector A (28P) (see **SRS UNIT REPLACEMENT** ).
8. Disconnect TPMS control unit connector B (20P) (see **TPMS CONTROL UNIT REPLACEMENT** ).
9. With navigation system: Disconnect navigation unit connector A (20P) (see **NAVIGATION UNIT REMOVAL/INSTALLATION** ).
10. With Acura Link system: Disconnect Acura Link control unit (XM receiver) connector A (20P) (see **ACURALINK CONTROL UNIT (XM RECEIVER) REMOVAL/INSTALLATION** ).
11. Check for continuity between ECM/PCM connector terminals E15 and E26.



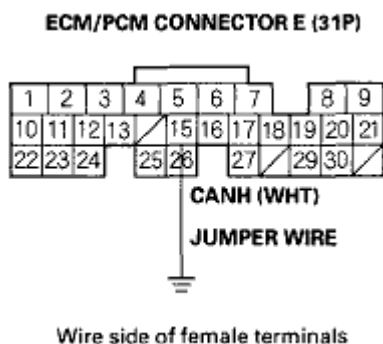
**Fig. 145: Checking Continuity Between ECM/PCM Connector Terminals E15 And E26**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wires between ECM/PCM connector terminals E15 and E26.

**NO** -Go to step 12.

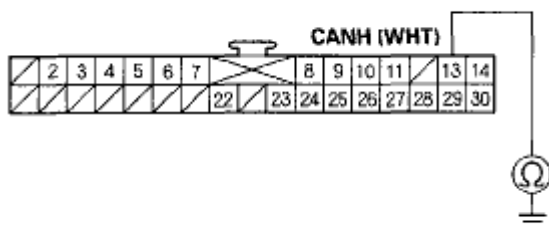
12. Connect ECM/PCM connector terminal E15 to body ground with a jumper wire.



**Fig. 146: Connecting ECM/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 terminal A13 and body ground.

**GAUGE CONTROL MODULE CONNECTOR A (30P)**



Wire side of female terminals

**Fig. 147: Checking Continuity Between Gauge Control Module Connector Terminal A13 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

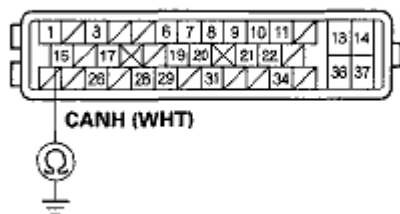
*Is there continuity?*

**YES** -Go to step 14.

**NO** -Repair open in the wire between the ECM/PCM (E15) and the gauge control module.

14. Check for continuity between VSA modulator-control unit 37P connector terminal No. 15 and body ground.

**VSA MODULATOR-CONTROL UNIT 37P CONNECTOR**



Wire side of female terminals

**Fig. 148: Checking Continuity Between VSA Modulator-Control Unit 37P Connector Terminal No. 15 And Body Ground**

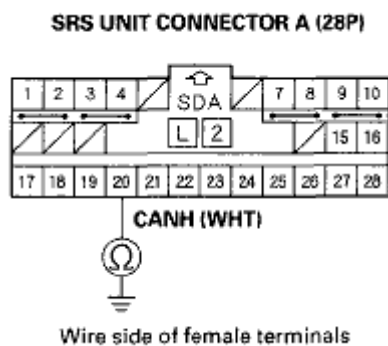
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 15.

**NO** -Repair open in the wire between the ECM/PCM (E15) and the VSA modulator-control unit.

15. Check for continuity between SRS unit connector terminal A20 and body ground.



**Fig. 149: Checking Continuity Between SRS Unit Connector Terminal A20 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

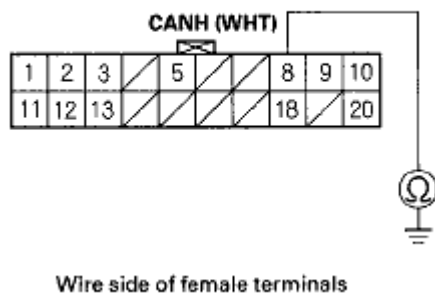
**YES -**

- With Navigation system: Go to step 16.
- Without Navigation system: Go to step 17.

**NO** -Repair open in the wire between the ECM/PCM (E15) and the SRS unit.

16. Check for continuity between navigation unit connector terminal A8 and body ground.

**NAVIGATION UNIT CONNECTOR A (20P)**



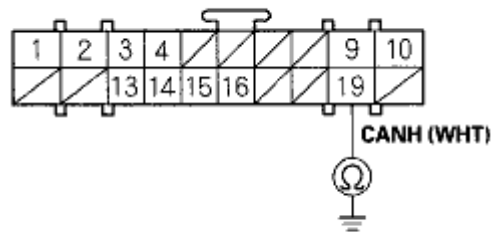
**Fig. 150: Checking Continuity Between Navigation Unit Connector Terminal A8 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 17.

**NO** -Repair open in the wire between the ECM/PCM (E15) and the navigation unit.

17. Check for continuity between TPMS control unit connector terminal B19 and body ground.

**TPMS CONTROL UNIT CONNECTOR B (20P)**

Wire side of female terminals

**Fig. 151: Checking Continuity Between TPMS Control Unit Connector Terminal B19 And Body Ground**

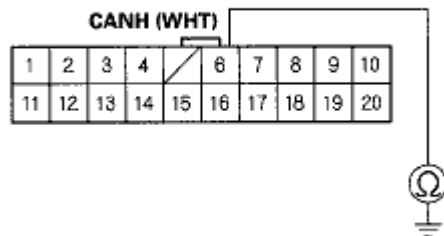
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES -**

- With AcuraLink system: Go to step 18.
- Without AcuraLink system: Go to step 19.

**NO** -Repair open in the wire between the ECM/PCM (E15) and the TPMS control unit.

18. Check for continuity between AcuraLink control unit (XM receiver) connector terminal A6 and body ground.

**ACURALINK CONTROL UNIT (XM RECEIVER) CONNECTOR A (20P)**

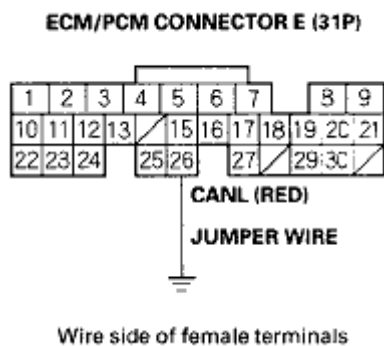
Wire side of female terminals

**Fig. 152: Checking Continuity Between Acuralink Control Unit (XM Receiver) Connector Terminal A6 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

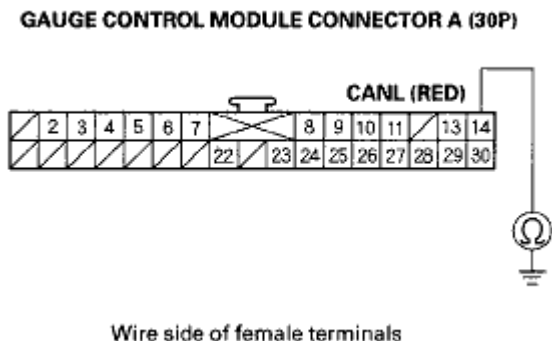
*Is there continuity?***YES** -Go to step 19.**NO** -Repair open in the wire between the ECM/PCM (E15) and the AcuraLink control unit (XM receiver).

19. Remove the jumper wire from ECM/PCM connector E (31P).
20. Connect ECM/PCM connector terminal E26 to body ground with a jumper wire.



**Fig. 153: Connecting ECM/PCM Connector Terminal E26 To Body Ground With Jumper Wire**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Check for continuity between gauge control module connector terminal A14 and body ground.



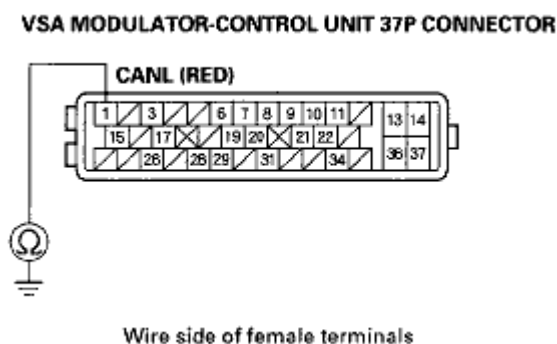
**Fig. 154: Checking Continuity Between Gauge Control Module Connector Terminal A14 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 22.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the gauge control module.

22. Check for continuity between VSA modulator-control unit 37P connector terminal No. 1 and body ground.



**Fig. 155: Checking Continuity Between VSA Modulator-Control Unit 37P Connector Terminal**

**No. 1 And Body Ground**

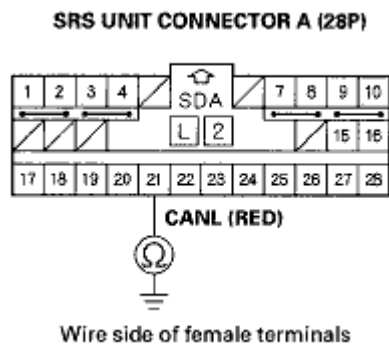
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 23.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the VSA modulator-control unit.

23. Check for continuity between SRS unit connector terminal A21 and body ground.



**Fig. 156: Checking Continuity Between SRS Unit Connector Terminal A21 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

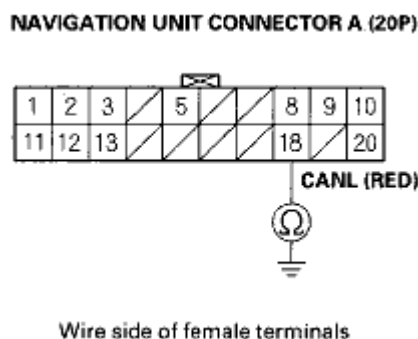
*Is there continuity?*

**YES** -

- With Navigation system: Go to step 24.
- Without Navigation system: Go to step 25.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the SRS unit.

24. Repair open in the wire between navigation unit connector terminal A18 and body ground



**Fig. 157: Checking Continuity Between Navigation Unit Connector Terminal A18 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

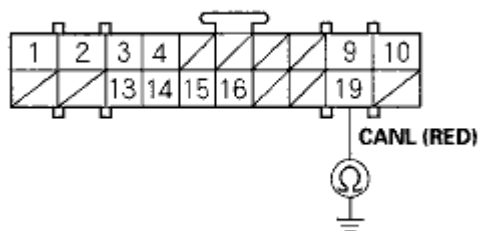
*Is there continuity?*

**YES** -Go to step 25.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the navigation unit.

25. Check for continuity between TPMS control unit connector terminal B19 and body ground.

**TPMS CONTROL UNIT CONNECTOR B (20P)**



Wire side of female terminals

**Fig. 158: Checking Continuity Between TPMS Control Unit Connector Terminal B19 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

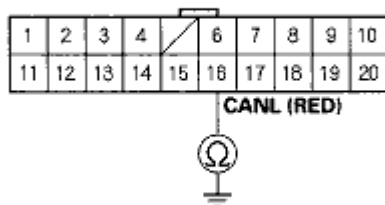
**YES** -

- With AcuraLink system: Go to step 26.
- Without AcuraLink system: Go to step 27.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the TPMS unit.

26. Check for continuity between AcuraLink control unit (XM receiver) connector terminal A16 and body ground.

**ACURALINK CONTROL UNIT (XM RECEIVER) CONNECTOR A (20P)**



Wire side of female terminals

**Fig. 159: Checking Continuity Between Acuralink Control Unit (XM Receiver) Connector Terminal A16 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

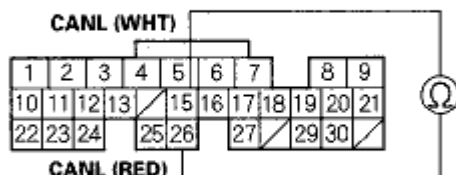
*Is there continuity?*

**YES** -Go to step 27.

**NO** -Repair open in the wire between the ECM/PCM (E26) and the AcuraLink control unit (XM receiver).

27. Reconnect gauge control module connector A (30P).
28. Measure resistance between ECM/PCM connector terminals E15 and E26\*.

**ECM/PCM CONNECTOR E (31P)**



Wire side of female terminals

**Fig. 160: Measuring Resistance Between ECM/PCM Connector Terminals E15 And E26\***  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

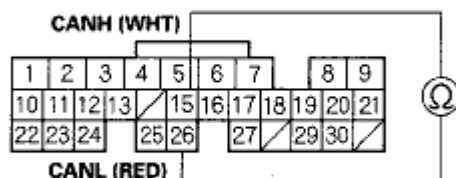
*Is there about 2.34-2.86 kohms?*

**YES** -Go to step 29.

**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**).

29. Disconnect gauge control module connector A (30P).
30. Reconnect the VSA modulator-control unit 37P connector.
31. Measure resistance between ECM/PCM connector terminals E15 and E26\*.

**ECM/PCM CONNECTOR E (31P)**



Wire side of female terminals

**Fig. 161: Measuring Resistance Between ECM/PCM Connector Terminals E15 And E26\***  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 108-132 ohms?*

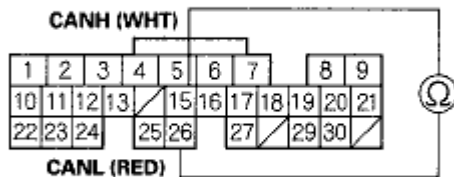
**YES** -Go to step 32.

**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** ).

32. Disconnect the VSA modulator-control unit 37P connector.
33. Reconnect SRS unit connector A (28P).
34. Measure resistance between ECM/PCM connector terminals E15 and E26\*.

**ECM/PCM CONNECTOR E (31P)**



Wire side of female terminals

**Fig. 162: Measuring Resistance Between ECM/PCM Connector Terminals E15 And E26\***  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

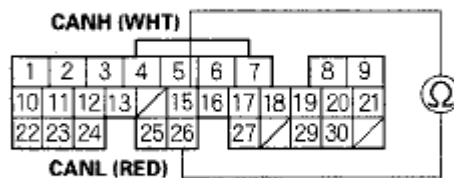
*Is there about 108-132 ohms?*

**YES** -Go to step 29.

**NO** -Substitute a known-good SRS unit (see **SRS UNIT REPLACEMENT** ). If the HDS identifies the vehicle, replace the original SRS unit (see **SRS UNIT REPLACEMENT** ).

35. Disconnect SRS unit connector A (28P).
36. Reconnect TPMS control unit connector B (20P).
37. Measure resistance between ECM/PCM connector terminals E15 and E26\*.

**ECM/PCM CONNECTOR E (31P)**



Wire side of female terminals

**Fig. 163: Measuring Resistance Between ECM/PCM Connector Terminals E15 And E26\***  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

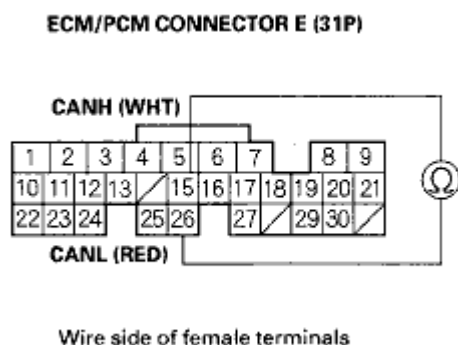
*Is there about 108-132 ohms?*

**YES** -

- With Navigation system: Go to step 38.
- Without Navigation system: Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ).

**NO** -Substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT** ). If the HDS identifies the vehicle, replace the original TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT** ).

38. Disconnect TPMS control unit connector B (20P).
39. Reconnect navigation unit connector A (20P)
40. Measure resistance between ECM/PCM connector terminals E15 and E26\*.



**Fig. 164: Measuring Resistance Between ECM/PCM Connector Terminals E15 And E26\***  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

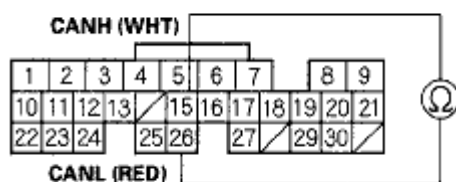
*Is there about 2.34-2.86 kohms?*

**YES -**

- With AcuraLink system: Go to step 38.
- Without AcuraLink system: Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the symptom/ indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ).

**NO** -Substitute a known-good navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION** ). If the HDS identifies the vehicle, replace the original navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION** ).

41. Disconnect navigation unit connector A (20P)
42. Reconnect AcuraLink control unit (XM receiver) connector A (20P)
43. Measure resistance between ECM/PCM connector terminals E15 and E26\*.

**ECM/PCM CONNECTOR E (31P)**

Wire side of female terminals

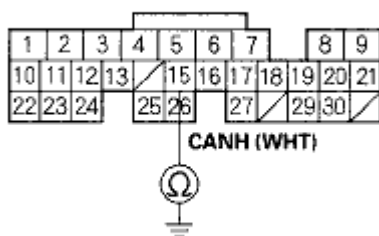
**Fig. 165: Measuring Resistance Between ECM/PCM Connector Terminals E15 And E26\***  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 2.34-2.86 kohms?*

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

**NO** -Substitute a known-good AcuraLink control unit (see ACURALINK CONTROL UNIT (XM RECEIVER) REMOVAL/INSTALLATION ). If the HDS identifies the vehicle, replace the original AcuraLink control unit (see ACURALINK CONTROL UNIT (XM RECEIVER) REMOVAL/INSTALLATION ).

44. Disconnect gauge control module connector A (30P).
45. Disconnect the VSA modulator-control unit 37P connector.
46. Disconnect SRS unit connector A (28P).
47. Disconnect TPMS control unit connector B (20P).
48. With navigation system: Disconnect navigation unit connector A (20P) (see NAVIGATION UNIT REMOVAL/INSTALLATION ).
49. With AcuraLink system: Disconnect AcuraLink control unit (XM receiver) connector A (20P) (see ACURALINK CONTROL UNIT (XM RECEIVER) REMOVAL/INSTALLATION ).
50. Check for continuity between ECM/PCM connector terminal E15 and body ground.

**ECM/PCM CONNECTOR E (31P)**

Wire side of female terminals

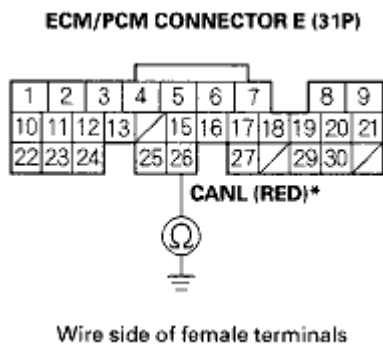
**Fig. 166: Checking Continuity Between ECM/PCM Connector Terminal E15 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between ECM/PCM connector terminal E15 and the gauge control module, the VSA modulator-control unit, the SRS unit, the TPMS control unit, the navigation unit (with navigation system), the AcuraLink control unit (XM receiver) (with AcuraLink system), or the DLC.

**NO** -Go to step 51.

51. Check for continuity between ECM/PCM connector terminal E26\* and body ground.



**Fig. 167: Checking Continuity Between ECM/PCM Connector Terminal E26\* And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short in the wire between ECM/PCM connector terminal E26 and the gauge control module, the VSA modulator-control unit, the SRS unit, the TPMS control unit, the navigation unit (with navigation system), the AcuraLink control unit (XM receiver) (with AcuraLink system), or the DLC.

**NO** -Go to step 52.

52. Reconnect all connectors.
53. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION** ).
54. Disconnect gauge control module connector A (30P).
55. 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 56.

56. Turn the ignition switch OFF.
57. Reconnect gauge control module connector A (30P).
58. Disconnect the VSA modulator-control unit 37P connector.
59. 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 60.

60. Turn the ignition switch OFF.
61. Reconnect the VSA modulator-control unit 37P connector.
62. Disconnect SRS unit connector A (28P).
63. Turn the ignition switch ON (II), and read the HDS.

*Does the HDS identify the vehicle?*

**YES** -Replace the SRS unit (see **SRS UNIT REPLACEMENT** ).

**NO** -Go to step 64.

64. Turn the ignition switch OFF.
65. Reconnect SRS unit connector A (28P).
66. Disconnect TPMS control unit connector B (20P).
67. Turn the ignition switch ON (II), and read the HDS.

*Does the HDS identify the vehicle?*

**YES** -Replace the TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT** ).

**NO** -

- With Navigation system: Go to step 68.
- Without Navigation system: Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ).

68. Turn the ignition switch OFF.
69. Reconnect TPMS control unit connector B (20P).
70. Disconnect navigation unit connector A (20P).
71. Turn the ignition switch ON (II), and read the HDS.

*Does the HDS identify the vehicle?*

**YES** -Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION** ).

**NO** -

- With AcuraLink system: Go to step 72.

- Without AcuraLink system: Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the symptom/ indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ).

72. Turn the ignition switch OFF.
73. Reconnect the navigation unit.
74. Disconnect AcuraLink control unit (XM receiver) connector A (20P).
75. Turn the ignition switch ON (II), and read the HDS.

*Does the HDS identify the vehicle?*

**YES** -Replace the AcuraLink control unit (see **ACURALINK CONTROL UNIT (XM RECEIVER) REMOVAL/INSTALLATION** ).

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

## MIL CIRCUIT TROUBLESHOOTING

1. Turn the ignition switch ON (II).
2. Do the gauge self-diagnostic function (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 (see **GAUGE CONTROL MODULE REPLACEMENT** ).

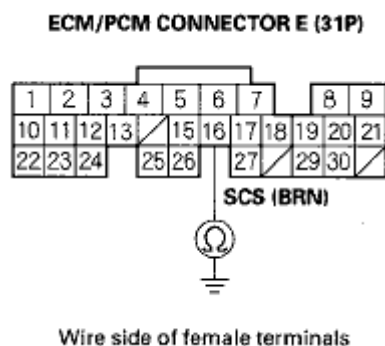
3. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION** ).
4. Check the SCS in the DATA LIST with the HDS.

*Is a short indicated?*

**YES** -Go to step 5.

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

5. Turn the ignition switch OFF.
6. Disconnect ECM/PCM connector E (31P), then disconnect the HDS.
7. Check for continuity between ECM/PCM connector terminal E16 and body ground.



**Fig. 168: Checking Continuity Between ECM/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 ECM/PCM (E16) and the SRS unit, the DLC.

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

**NOTE:**        **Before you begin, make sure the HDS and its DLC cable are working properly.**

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 20.

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 TPMS indicator.

*Does the TPMS indicator stay on?*

**YES** -Go to the TPMS 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 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 11.

11. Turn the ignition switch OFF.
12. 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 USING THE IMMOBILIZER INDICATOR LIGHTING PATTERN** ).

**NO** -Go to step 13.

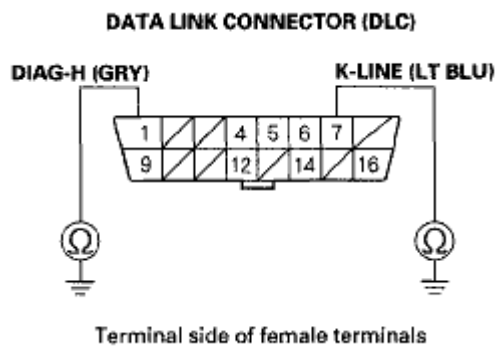
13. Check for B-CAN system DTCs without the HDS (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE 1 AND TEST MODE 2 (WITHOUT THE HDS)** ).

*Are any B-CAN DTCs indicated?*

**YES** -Go to the indicated DTCs troubleshooting.

**NO** -Go to step 14.

14. Turn the ignition switch OFF.
15. Disconnect the HDS from the DLC.
16. Check for continuity between body ground and DLC terminals No. 1 and No. 7 individually.



**Fig. 169: Checking Continuity Between Body Ground And DLC Terminals No. 1 And No. 7 Individually**

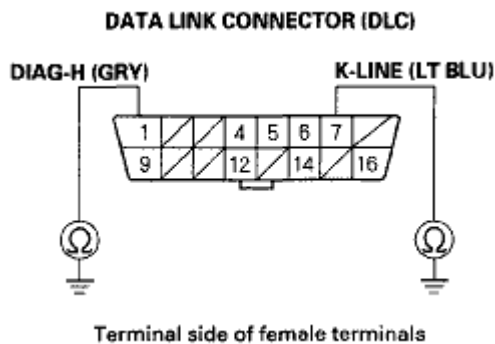
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 17.

**NO** -Go to step 18.

17. Continue to check for continuity between DLC terminals No. 1 and No. 7 and body ground individually, while disconnecting these parts, one at a time:
  - SRS unit connector A (28P)
  - VSA modulator-control unit 37P connector
  - Immobilizer control unit 7P connector
  - TPMS control unit connector B (20P)



**Fig. 170: Checking Continuity Between DLC Terminals No. 1 And No. 7 And Body Ground**

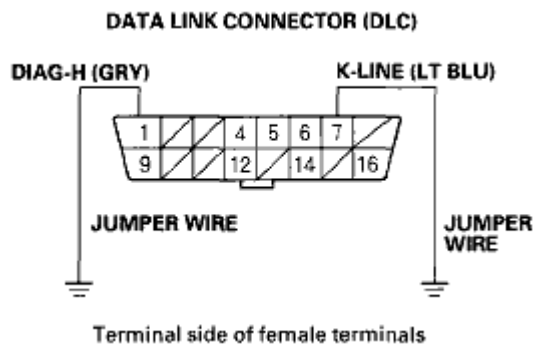
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Does continuity go away when one of the above components is disconnected?*

**YES** -Replace the part that caused an open when it was disconnected.

**NO** -Repair short in the wire between the DLC No. 7 (K-line) and the VSA modulator-control unit, the SRS unit, the audio unit, or the TPMS control unit or DLC No. 1 (DIAG-H line) and the immobilizer control unit.

18. Connect DLC terminals No. 1 and No. 7 to body ground with a jumper wire.



**Fig. 171: Connecting DLC Terminals No. 1 And No. 7 To Body Ground With Jumper Wire**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

19. Check for continuity between body ground and these connector terminals:

#### DLC TERMINAL DESCRIPTION

| Connector                         | Unit Terminal   | DLC Terminal   |
|-----------------------------------|-----------------|----------------|
| VSA modulator-control unit 37P    | No. 26 (LT BLU) | No. 7 (LT BLU) |
| SRS unit connector A 28P          | No. 24 (LT BLU) | No. 7 (LT BLU) |
| TPMS control unit connector B 20P | No. 9 (LT BLU)  | No. 7 (LT BLU) |
| Immobilizer control unit 7P       | No. 3 (GRY)     | No. 1 (GRY)    |

*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 or DIAG-H line) and the appropriate connector.

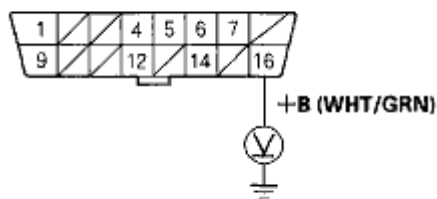
20. Check for B-CAN system DTCs without the HDS (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE 1 AND TEST MODE 2 (WITHOUT THE HDS)** ).

*Is DTC B1168, B1169, and/or B1178 indicated?*

**YES** -Go to step 34.

**NO** -Go to step 21.

21. Turn the ignition switch OFF.  
 22. Disconnect the HDS from the DLC.  
 23. Measure voltage between DLC terminal No. 16 and body ground.

**DATA LINK CONNECTOR (DLC)**

Terminal side of female terminals

**Fig. 172: 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 24.

**NO** -Repair open in the wire between DLC terminal No. 16 and the No. 8 FI ECU (ECM/PCM) (15 A) fuse in the under-hood fuse/relay box.

24. Measure voltage between DLC terminals No. 4 and No. 16.

**DATA LINK CONNECTOR (DLC)**

Terminal side of female terminals

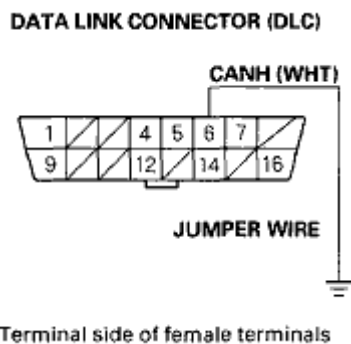
**Fig. 173: Measuring Voltage Between DLC Terminals No. 4 And No. 16**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Go to step 25.

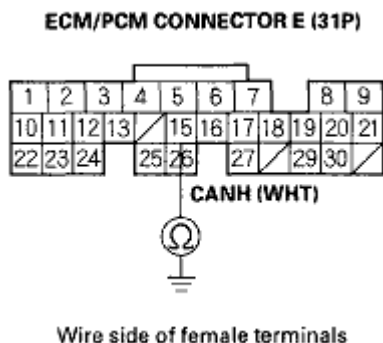
**NO** -Repair open in the wire between DLC terminal No. 4 and G501.

25. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION** ).
26. Jump the SCS line with the HDS.
27. Disconnect ECM/PCM connector E (31P).
28. Disconnect the HDS from the DLC.
29. Connect DLC terminal No. 6 to body ground with a jumper wire.



**Fig. 174: Connecting DLC Terminal No. 6 To Body Ground With Jumper Wire**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Check for continuity between ECM/PCM connector terminal E15 and body ground.



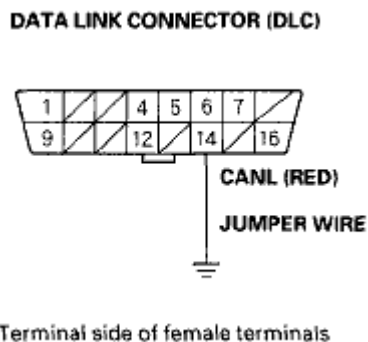
**Fig. 175: Checking Continuity Between ECM/PCM Connector Terminal E15 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Go to step 31.

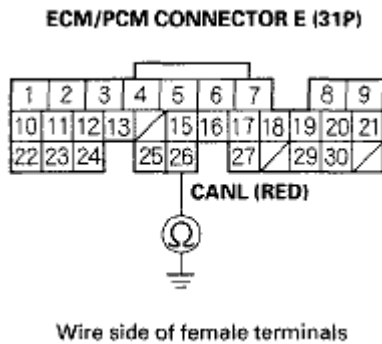
**NO** -Repair open in the wire between the ECM/PCM (E15) and DLC terminal No. 6.

31. Disconnect the jumper wire.  
 32. Connect DLC terminal No. 14 to body ground with a jumper wire.



**Fig. 176: Connecting DLC Terminal No. 14 To Body Ground With Jumper Wire**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

33. Check for continuity between ECM/PCM connector terminal E26 and body ground.



**Fig. 177: Checking Continuity Between ECM/PCM Connector Terminal E26 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

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

**NO** -Repair open in the wire between the ECM/PCM (E26) and DLC terminal No. 14.

34. Try to start the engine.

*Does the engine start and idle smoothly?*

**YES** -Go to the F-CAN circuit troubleshooting (see F-CAN CIRCUIT TROUBLESHOOTING ).

**NO** -Go to step 35.

35. Turn the ignition switch OFF.  
 36. Check the No. 23 +B IG1 MAIN (50 A) fuse in the under-hood fuse/relay box.

*Is the fuse OK?*

**YES** -Repair open in the wire between the No. 23 +B IG1 MAIN (50 A) fuse and the ignition switch. If the wire is OK, go to DLC circuit troubleshooting (part 2) (see DLC CIRCUIT TROUBLESHOOTING (PART 2) ).

**NO** -Repair short in the wire between the No. 23 +B IG1 MAIN (50 A) fuse and the ignition switch. Also replace the No. 23 +B IG1 MAIN (50 A) fuse.

## DLC CIRCUIT TROUBLESHOOTING (PART 2)

1. Inspect the No. 8 FI ECU (ECM/PCM) (15 A) fuse in the under-hood fuse/relay box.

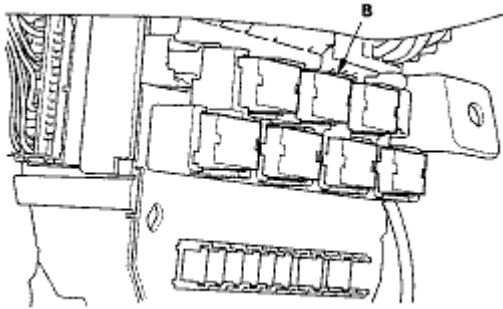
*Is the fuse OK?*

**YES -**

- J32A3 engine: Go to step 8.
- J35A8 engine: Go to step 18.

**NO -**Go to step 2.

2. Remove the blown No. 8 FI ECU (ECM/PCM) (15 A) fuse from the under-hood fuse/relay box.
3. Remove the left kick panel (see **TRIM REMOVAL/INSTALLATION - DOOR AREAS** ), then remove PGM-FI main relay 1 (B) from the under-dash fuse/relay box.

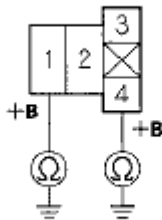


**Fig. 178: Identifying PGM-FI Main Relay 1**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Check for continuity between body ground and PGM-FI main relay 1 4P connector terminals No. 1 and No. 4 individually.

**PGM-FI MAIN RELAY 1 4P CONNECTOR**



Terminal side of female terminals

**Fig. 179: Checking Continuity Between Body Ground And PGM-FI Main Relay 1 4P Connector Terminals No. 1 And No. 4**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

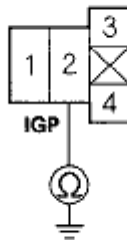
**YES** -Repair short in the wire between the No. 8 FI ECU (ECM/PCM) (15 A) and PGM-FI main relay 1. Also replace the No. 8 FI ECU (ECM/PCM) (15 A) fuse.

**NO** -Go to step 5.

5. Disconnect each of the components or connectors below, one at a time, and check for continuity between PGM-FI main relay 1 4P connector terminal No. 2 and body ground.

- PGM-FI main relay 2
- ECM/PCM connector A (31P)
- Each injector 2P connector
- Camshaft position (CMP) sensor 3P connector
- Crankshaft position (CKP) sensor A/B 6P connector
- Throttle actuator control module relay

**PGM-FI MAIN RELAY 1 4P CONNECTOR**



Terminal side of female terminals

**Fig. 180: Checking Continuity Between PGM-FI Main Relay 1 4P Connector Terminal No. 2 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Does continuity go away when one of the above components is disconnected?*

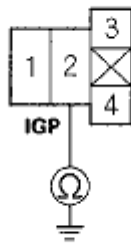
**YES** -Replace the component that made the short to body ground go away when disconnected. If the item is the ECM/PCM, update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ). Also replace the No. 8 FI ECU (ECM/PCM) (15 A) fuse.

**NO** -Go to step 6.

6. Disconnect the connectors from these components:

- PGM-FI main relay 2
- ECM/PCM connector A (31P)
- Injectors
- Camshaft position (CMP) sensor
- Crankshaft position (CKP) sensor A/B
- Throttle actuator control module relay

7. Check for continuity between PGM-FI main relay 1 4P connector terminal No. 2 and body ground.

**PGM-FI MAIN RELAY 1 4P CONNECTOR**

Terminal side of female terminals

**Fig. 181: Checking Continuity Between PGM-FI Main Relay 1 4P Connector Terminal No. 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 and each item. Also replace the No. 8 FI ECU (ECM/PCM) (15 A) fuse.

**NO** -Replace PGM-FI main relay 1. Also replace the No. 8 FI ECU (ECM/PCM) (15 A) fuse.

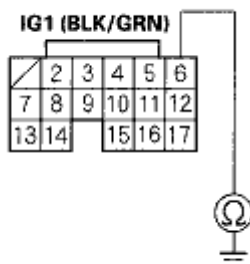
8. Inspect the No. 19 IG FUEL PUMP (15 A) fuse in the under-dash fuse/relay box.

*Is the fuse OK?*

**YES** -Go to step 18.

**NO** -Go to step 9.

9. Remove the blown No. 19 IG FUEL PUMP (15 A) fuse in the under-dash fuse/relay box.
10. Jump the SCS line with the HDS.
11. Disconnect ECM/PCM connector D (17P).
12. Check for continuity between ECM/PCM connector terminal D6 and body ground.

**ECM/PCM CONNECTOR D (17P)**

Wire side of female terminals

**Fig. 182: Checking Continuity Between ECM/PCM Connector Terminal D6 And Body Ground**

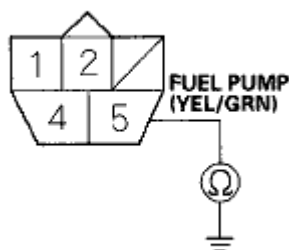
*Is there continuity?*

**YES** -Repair short in the wire between the No. 19 IG FUEL PUMP (15 A) fuse, and the ECM/PCM (D6) or between the No. 19 IG FUEL PUMP (15 A) fuse and PGM-FI main relay 2 (FUEL PUMP). Also replace the No. 19 IG FUEL PUMP fuse.

**NO** -Go to step 13.

13. Remove the trunk floor trim panel (see **TRIM REMOVAL/INSTALLATION - TRUNK AREA** ).
14. Remove the access panel from the floor.
15. Disconnect the fuel pump 5P connector.
16. Check for continuity between fuel pump 5P connector terminal No. 5 and body ground.

**FUEL PUMP 5P CONNECTOR**



Wire side of female terminals

**Fig. 183: Checking Continuity Between Fuel Pump 5P Connector Terminal No. 5 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between the fuel pump and PGM-FI main relay 2. Also replace the No. 19 IG FUEL PUMP (15 A) fuse.

**NO** -Go to step 17.

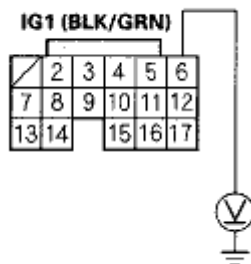
17. Test PGM-FI main relay 2 (see **POWER RELAY TEST** ).

*Is the relay OK?*

**YES** -Check the fuel pump, and replace it if necessary (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ). Also replace the No. 19 IG FUEL PUMP (15 A) fuse.

**NO** -Replace PGM-FI main relay 2. Also replace the No. 19 IG FUEL PUMP (15 A) fuse.

18. Jump the SCS line with the HDS.
19. Disconnect ECM/PCM connector D (17P).
20. Turn the ignition switch ON (II).
21. Measure voltage between ECM/PCM connector terminal D6 and body ground.

**ECM/PCM CONNECTOR D (17P)**

Wire side of female terminals

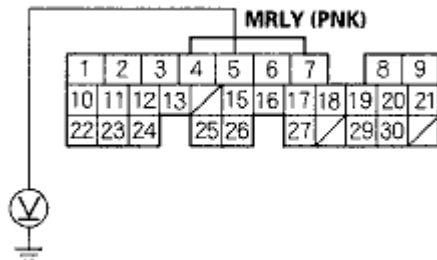
**Fig. 184: Measuring Voltage Between ECM/PCM Connector Terminal D6 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** -Go to step 22.

**NO** -Repair open in the wire between the No. 19 IG FUEL PUMP (15 A) fuse and the ECM/PCM (D6).

22. Measure voltage between ECM/PCM connector terminal E5 and body ground.

**ECM/PCM CONNECTOR E (31P)**

Wire side of female terminals

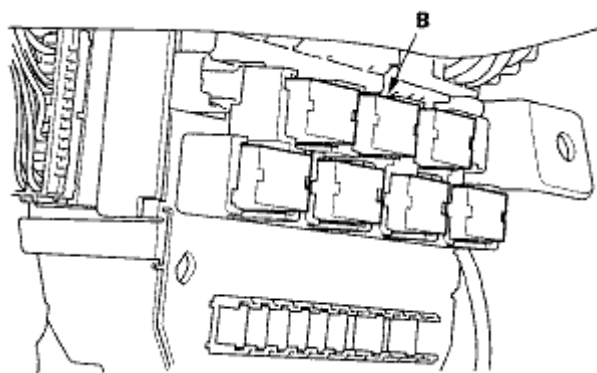
**Fig. 185: Measuring Voltage Between ECM/PCM Connector Terminal E5 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** -Go to step 27.

**NO** -Go to step 23.

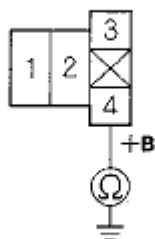
23. Turn the ignition switch OFF.
24. Remove the left kick panel (see **TRIM REMOVAL/INSTALLATION - DOOR AREAS** ). Then remove PGM-FI main relay 1 (B) from the under-dash fuse/relay box.



**Fig. 186: Identifying PGM-FI Main Relay 1**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

25. Measure voltage between PGM-FI main relay 1 4P connector terminal No. 4 and body ground.

**PGM-FI MAIN RELAY 1 4P CONNECTOR**



Terminal side of female terminals

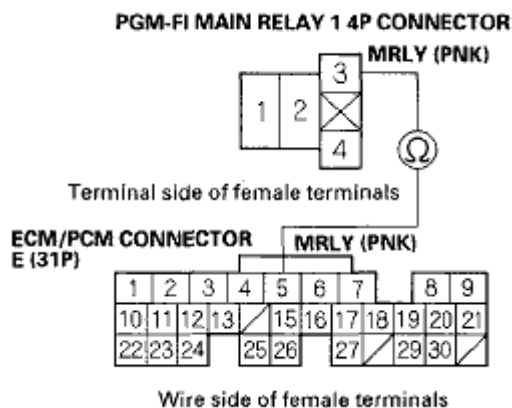
**Fig. 187: Measuring Voltage Between PGM-FI Main Relay 1 4P Connector Terminal No. 4 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Go to step 26.

**NO** -Repair open in the wire between the No. 8 FI ECU (ECM/PCM) (15 A) fuse and PGM-FI main relay 1.

26. Check for continuity between PGM-FI main relay 1 4P connector terminal No. 3 and ECM/PCM connector terminal E5.



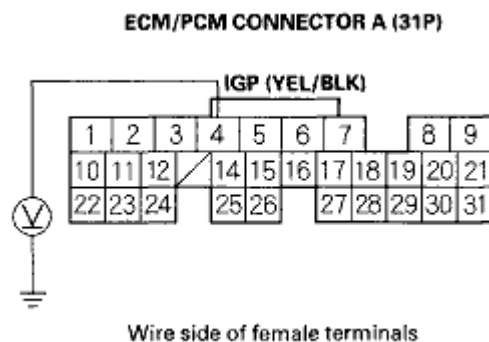
**Fig. 188: Checking Continuity Between PGM-FI Main Relay 1 4P Connector Terminal No. 3 And ECM/PCM Connector Terminal E5**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Test PGM-FI main relay 1 (see **POWER RELAY TEST** ). If the relay is faulty, replace it. If the relay is OK, update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ).

**NO** -Repair open in the wire between PGM-FI main relay 1 and the ECM/PCM (E5).

27. Turn the ignition switch OFF.
28. Reconnect ECM/PCM connector D (17P).
29. Turn the ignition switch ON (II).
30. Measure voltage between body ground and ECM/PCM connector terminal A4.



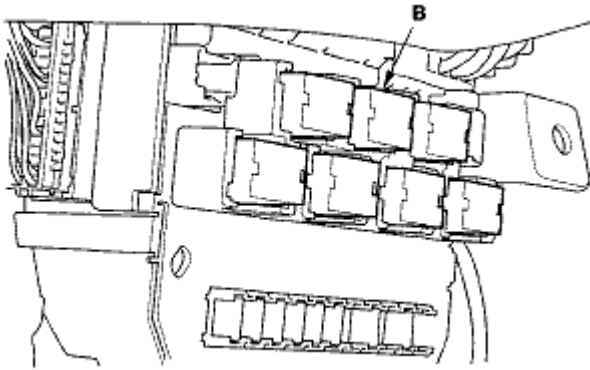
**Fig. 189: Measuring Voltage Between Body Ground And ECM/PCM Connector Terminal A4**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** -Go to step 37.

**NO** -Go to step 31.

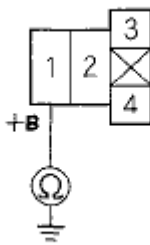
31. Turn the ignition switch OFF.
32. Remove the left kick panel (see **TRIM REMOVAL/INSTALLATION - DOOR AREAS** ). Then remove PGM-FI main relay 1 (B) from the under-dash fuse/relay box.



**Fig. 190: Identifying PGM-FI Main Relay 1**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

33. Turn the ignition switch ON (II).
34. Measure voltage between PGM-FI main relay 1 4P connector terminal No. 1 and body ground.

**PGM-FI MAIN RELAY 1 4P CONNECTOR**



Terminal side of female terminals

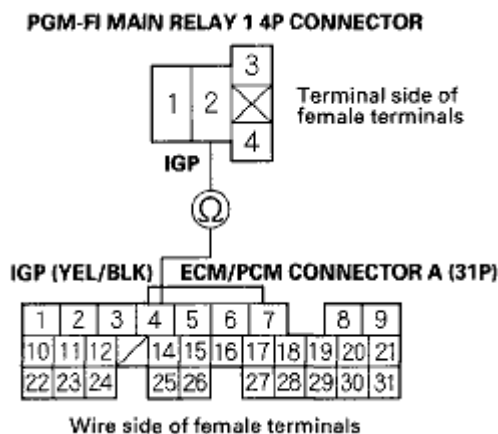
**Fig. 191: Measuring Voltage Between PGM-FI Main Relay 1 4P Connector Terminal No. 1 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** -Go to step 35.

**NO** -Repair open in the wire between the No. 8 FI ECU (ECM/PCM) (15 A) fuse and PGM-FI main relay 1.

35. Turn the ignition switch OFF.
36. Check for continuity between PGM-FI main relay 1 4P connector terminal No. 2 and ECM/PCM connector terminal A4.



**Fig. 192: Checking Continuity Between PGM-FI Main Relay 1 4P Connector Terminal No. 2 And ECM/PCM Connector Terminal A4**

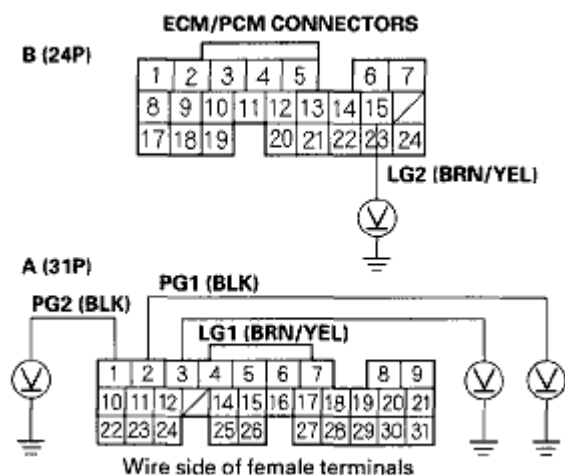
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Test PGM-FI main relay 1 (see **POWER RELAY TEST** ). If the relay is faulty, update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM** ), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT** ).

**NO** -Repair open in the wire between PGM-FI main relay 1 and the ECM/PCM (A4).

37. Measure voltage between body ground and ECM/PCM connector terminals A1, A2, A3, and B15 individually.



**Fig. 193: Measuring Voltage Between Body Ground And ECM/PCM Connector Terminals A1, A2, A3, And B15 Individually**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there more than 0.2 V?*

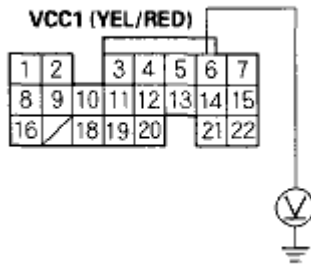
**YES** -Repair open in the wire(s) that had more than 0.2 V between G101 and the ECM/PCM (B15,

A1, A2, A3).

**NO** -Go to step 38.

38. Measure voltage between ECM/PCM connector terminal C6 and body ground.

**ECM/PCM CONNECTOR C (22P)**



Wire side of female terminals

**Fig. 194: Measuring Voltage Between ECM/PCM Connector Terminal C6 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 5 V?*

**YES** -Go to step 46.

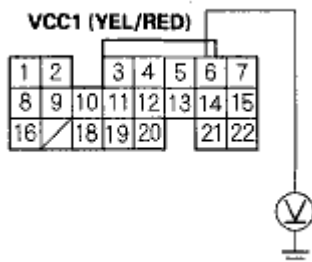
**NO** -Go to step 39.

39. Turn the ignition switch OFF.

40. Disconnect the connector from each of these sensors, one at a time, and measure voltage between ECM/PCM connector terminal C6 and body ground with the ignition switch ON (II).

- MAP sensor
- Output shaft (countershaft) speed sensor

**ECM/PCM CONNECTOR C (22P)**



Wire side of female terminals

**Fig. 195: Measuring Voltage Between ECM/PCM Connector Terminal C6 And Body Ground With Ignition Switch On (II)**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

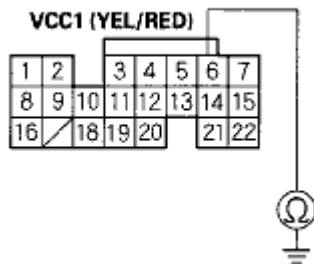
*Is there about 5 V?*

**YES** -Replace the sensor that restored 5 V when disconnected.

**NO** -Go to step 41.

41. Turn the ignition switch OFF.
42. Jump the SCS line with the HDS.
43. Disconnect the connectors from these sensors:
  - MAP sensor
  - Output shaft (countershaft) speed sensor
44. Disconnect ECM/PCM connector C (22P).
45. Check for continuity between ECM/PCM connector terminal C6 and body ground.

**ECM/PCM CONNECTOR C (22P)**



Wire side of female terminals

**Fig. 196: Checking Continuity Between ECM/PCM Connector Terminal C6 And Body Ground**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

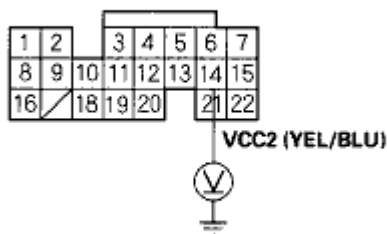
*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (C6) and the MAP sensor, or the output shaft (countershaft) speed sensor.

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

46. Measure voltage between ECM/PCM connector terminal C14 and body ground.

**ECM/PCM CONNECTOR C (22P)**



Wire side of female terminals

**Fig. 197: Measuring Voltage Between ECM/PCM Connector Terminal C14 And Body Ground**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

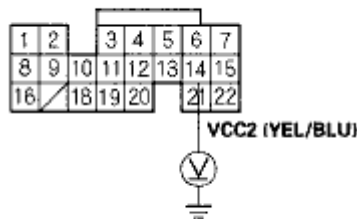
*Is there about 5 V?*

**YES** -Go to step 54.

**NO** -Go to step 47.

47. Turn the ignition switch OFF.
48. Disconnect the connector from each of these parts, one at a time, and measure voltage between ECM/PCM connector terminal C14 and body ground with the ignition switch ON (II).
  - APP sensor B
  - Input shaft (mainshaft) speed sensor
  - IMT actuator assembly
  - EGR valve position sensor

**ECM/PCM CONNECTOR C (22P)**



Wire side of female terminals

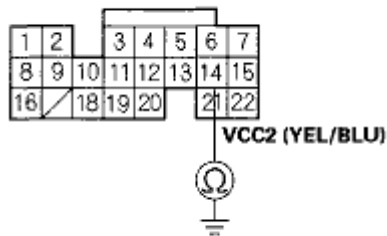
**Fig. 198: Measuring Voltage Between ECM/PCM Connector Terminal C14 And Body Ground With Ignition Switch On (II)**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 5 V?*

**YES** -Replace the part that restored 5 V when disconnected.

**NO** -Go to step 49.

49. Turn the ignition switch OFF.
50. Jump the SCS line with the HDS.
51. Disconnect the connectors from these parts:
  - APP sensor
  - Input shaft (mainshaft) speed sensor
  - IMT actuator assembly
  - EGR valve
52. Disconnect ECM/PCM connector C (22P).
53. Check for continuity between ECM/PCM connector terminal C14 and body ground.

**ECM/PCM CONNECTOR C (22P)**

Wire side of female terminals

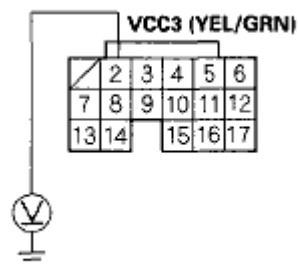
**Fig. 199: Checking Continuity Between ECM/PCM Connector Terminal C14 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (C14) and APP sensor B, the input shaft (mainshaft) speed sensor, the IMT actuator assembly, or the EGR valve position sensor.

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

54. Measure voltage between ECM/PCM connector terminal D2 and body ground.

**ECM/PCM CONNECTOR D (17P)**

Wire side of female terminals

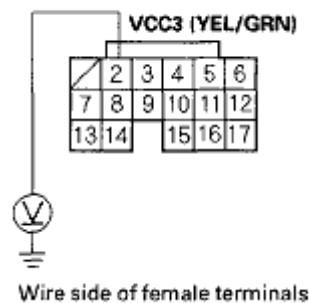
**Fig. 200: Measuring Voltage Between ECM/PCM Connector Terminal D2 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 5 V?*

**YES** -Go to step 61.

**NO** -Go to step 55.

55. Turn the ignition switch OFF.
56. Disconnect the APP sensor 6P connector, and measure voltage between ECM/PCM connector terminal D2 and body ground with the ignition switch ON (II).

**ECM/PCM CONNECTOR D (17P)**

**Fig. 201: Measuring Voltage Between ECM/PCM Connector Terminal D2 And Body Ground With Ignition Switch On (II)**

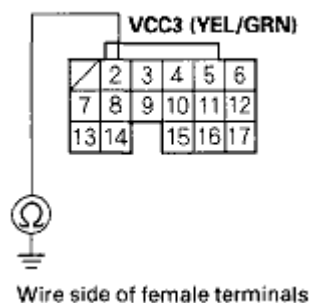
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there about 5 V?*

**YES** -Replace the APP sensor (see **APP SENSOR REPLACEMENT** ).

**NO** -Go to step 57.

57. Turn the ignition switch OFF.
58. Jump the SCS line with the HDS.
59. Disconnect ECM/PCM connector D (17P).
60. Check for continuity between ECM/PCM connector terminal D2 and body ground.

**ECM/PCM CONNECTOR D (17P)**

**Fig. 202: Checking Continuity Between ECM/PCM Connector Terminal D2 And Body Ground**

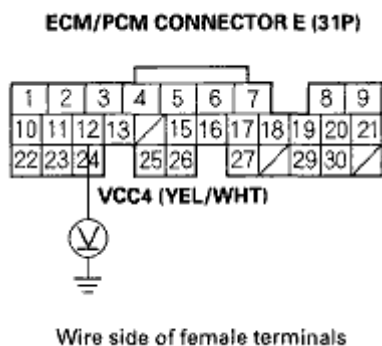
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (D2) and APP sensor A.

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

61. Measure voltage between ECM/PCM connector terminal E12 and body ground.



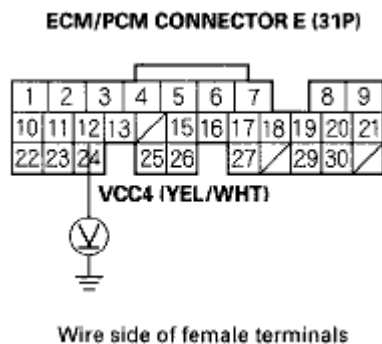
**Fig. 203: Measuring Voltage Between ECM/PCM Connector Terminal E12 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 5 V?*

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

**NO** -Go to step 62.

62. Turn the ignition switch OFF.
63. Disconnect the FTP sensor 3P connector, and measure voltage between ECM/PCM connector terminal E12 and body ground with the ignition switch ON (II).



**Fig. 204: Measuring Voltage Between ECM/PCM Connector Terminal E12 And Body Ground**  
**With Ignition Switch On (II)**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

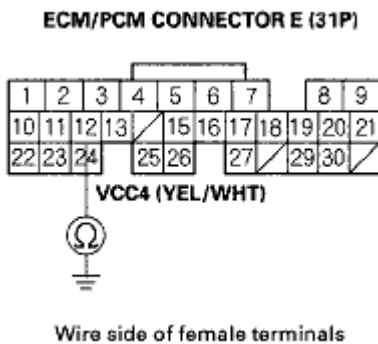
*Is there about 5 V?*

**YES** -Replace the FTP sensor (see FTP SENSOR REPLACEMENT ).

**NO** -Go to step 64.

64. Turn the ignition switch OFF.
65. Jump the SCS line with the HDS.
66. Disconnect ECM/PCM connector E (31P).

67. Check for continuity between ECM/PCM connector terminal E12 and body ground.



**Fig. 205: Checking Continuity Between ECM/PCM Connector Terminal E12 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

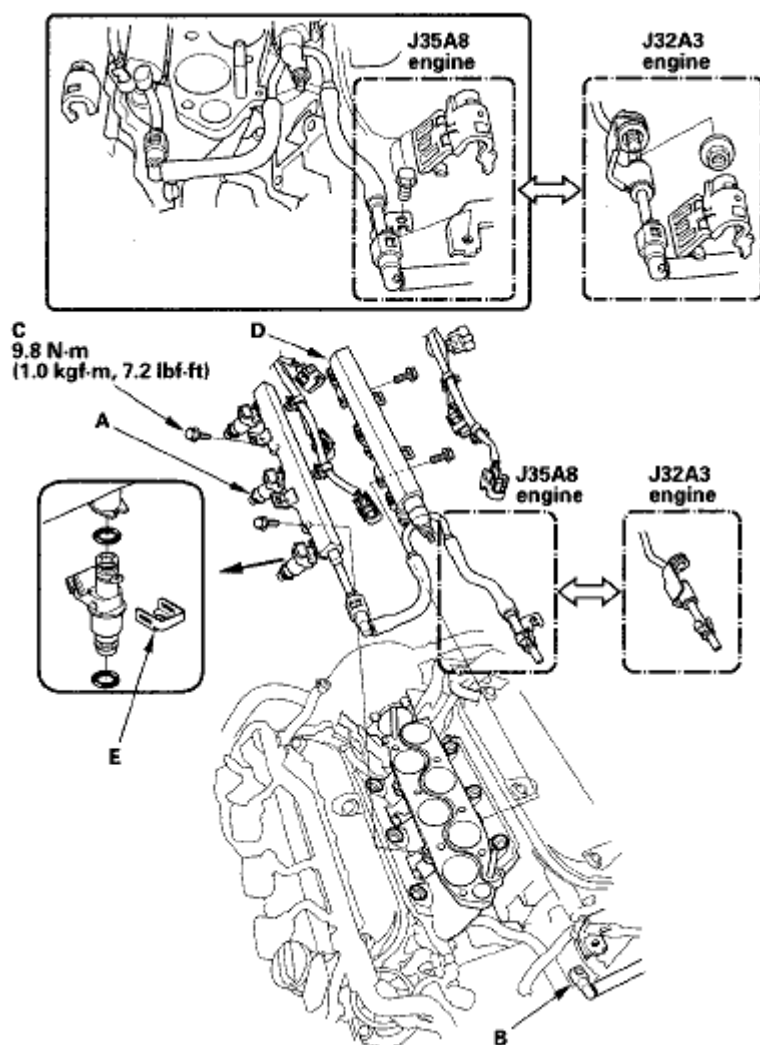
*Is there continuity?*

**YES** -Repair short in the wire between the ECM/PCM (E12) and the FTP sensor.

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

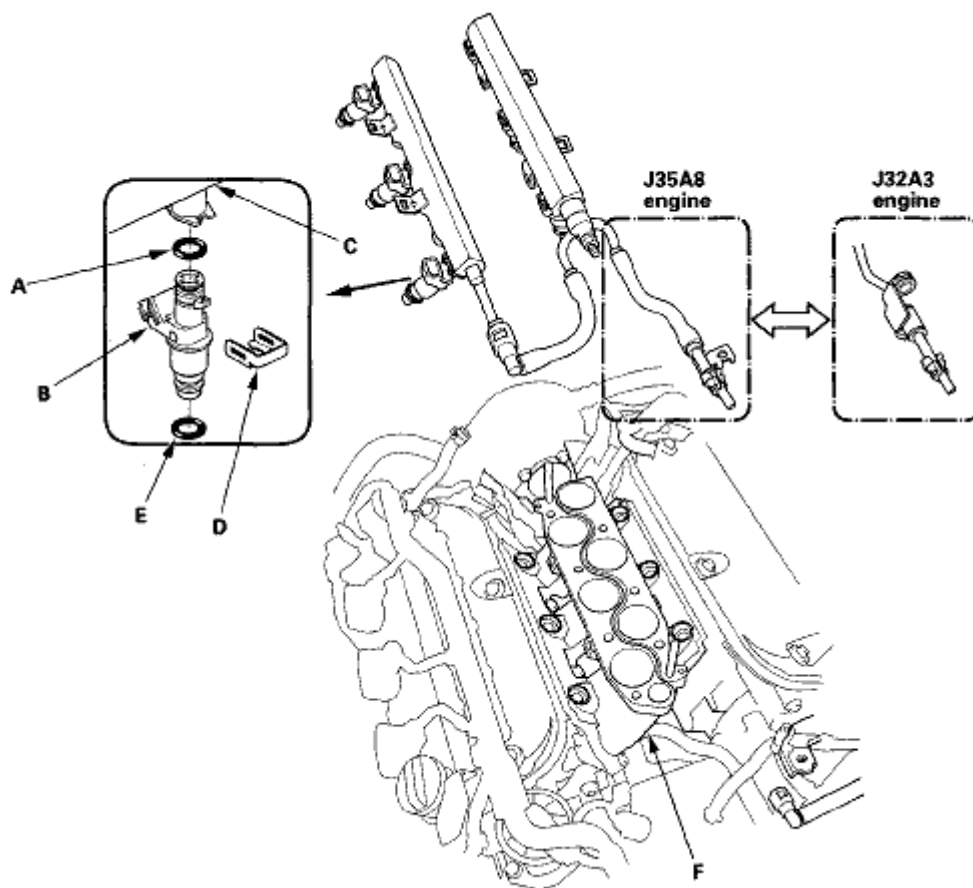
## INJECTOR REPLACEMENT

1. Relieve fuel pressure (see **FUEL PRESSURE RELIEVING** ).
2. Remove the intake manifold (see **INTAKE MANIFOLD REMOVAL AND INSTALLATION** ).
3. Disconnect the connectors from the injectors (A).



**Fig. 206: Identifying Injectors With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Disconnect the quick-connect fitting (B).
5. Remove the fuel rail mounting bolts (C) from the fuel rail (D).
6. Remove the injector clips (E) 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).



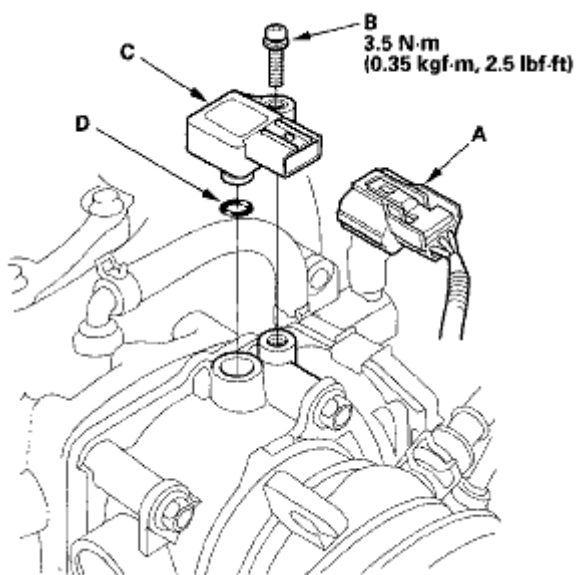
**Fig. 207: Identifying Injectors**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the injector clips (D).
10. Coat the new 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 (see **FUEL LINE/QUICK-CONNECT FITTING INSTALLATION** ).
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** ).

## MAP SENSOR REPLACEMENT

1. Remove the engine cover (see step 1 on **REMOVAL** ).
2. Disconnect the MAP sensor 3P connector (A).

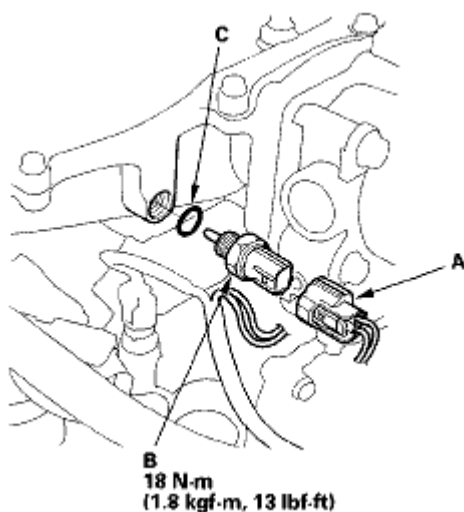


**Fig. 208: Identifying MAP Sensor 3P Connector With Torque Specifications**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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).

## IAT SENSOR REPLACEMENT

1. Remove the engine cover (see step 1 on **REMOVAL** ).
2. Disconnect the IAT sensor 2P connector (A).

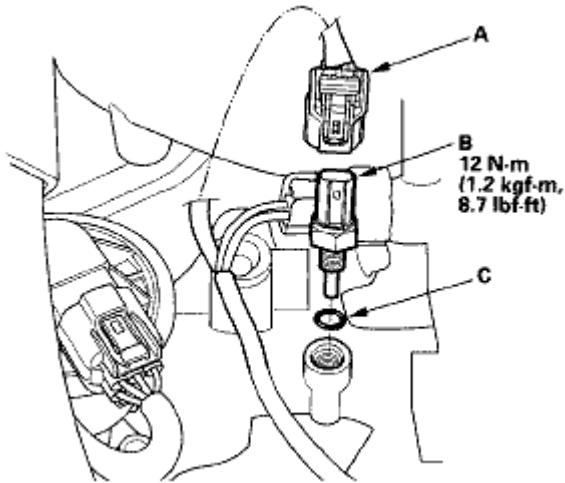


**Fig. 209: Identifying IAT Sensor 2P Connector With Torque Specifications**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

3. Remove the IAT sensor (B).
4. Install the parts in the reverse order of removal with a new O-ring (C).

## ECT SENSOR 1 REPLACEMENT

1. Drain the engine coolant (see **COOLANT CHECK** ).
2. Remove the air cleaner (see **AIR CLEANER REMOVAL/INSTALLATION** ).
3. Disconnect the ECT sensor 1 2P connector (A).

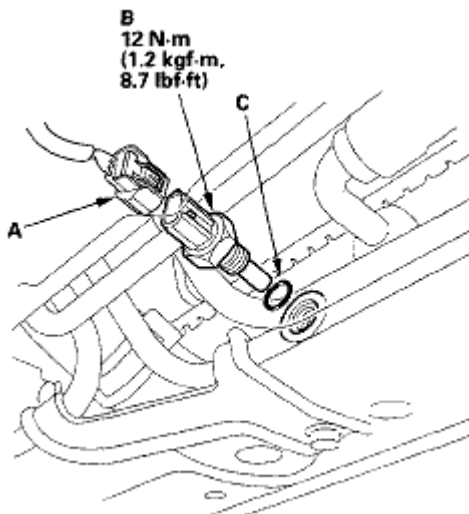


**Fig. 210: Identifying ECT Sensor 1 2P Connector With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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. Drain the engine coolant (see **COOLANT CHECK** ).
2. Remove the splash shield.
3. Disconnect the ECT sensor 2 2P connector (A).



**Fig. 211: Identifying ECT Sensor 2 2P Connector With Torque Specifications**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

4. Remove ECT sensor 2 (B).
5. Install the parts in the reverse order of removal with a new O-ring (C), then refill the radiator with engine coolant (see **COOLANT CHECK** ).

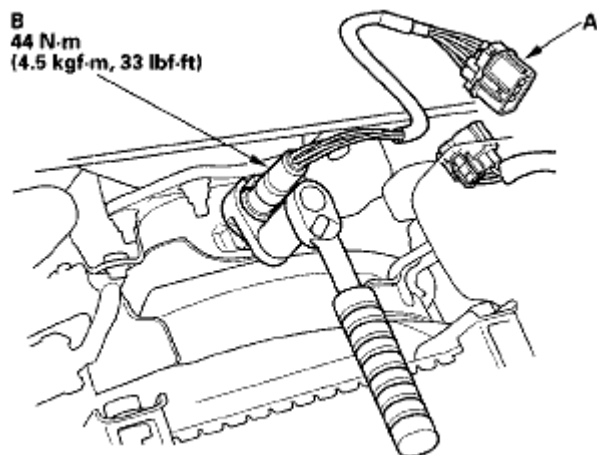
## **A/F SENSOR REPLACEMENT**

### **Special Tools Required**

O2 sensor socket wrench, Snap-on YA8875 or SWR2, or equivalent, commercially available

### **FRONT BANK (BANK 2)**

1. Disconnect the front A/F sensor 8P connector (A), then remove the A/F sensor (B).

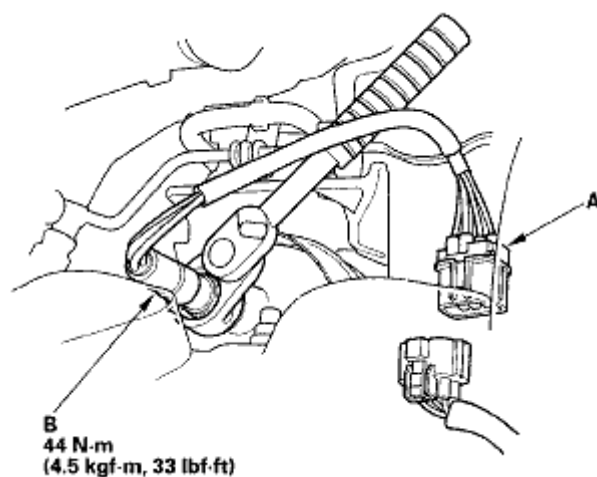


**Fig. 212: Removing A/F Sensor With Torque Specifications**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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).



**Fig. 213: Removing A/F Sensor With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the parts in the reverse order of removal.

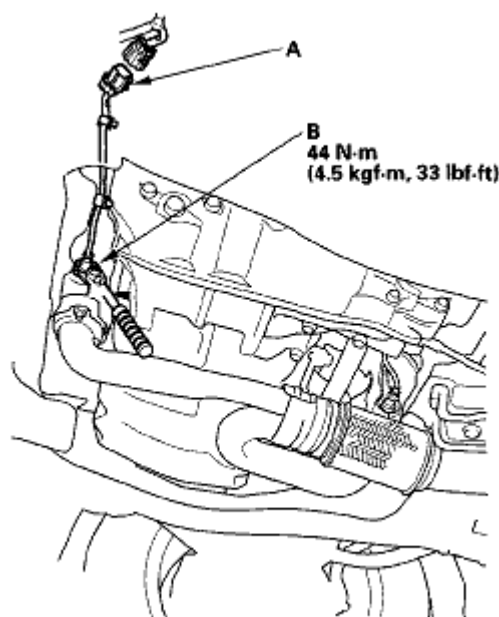
## SECONDARY HO2S REPLACEMENT

### 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).

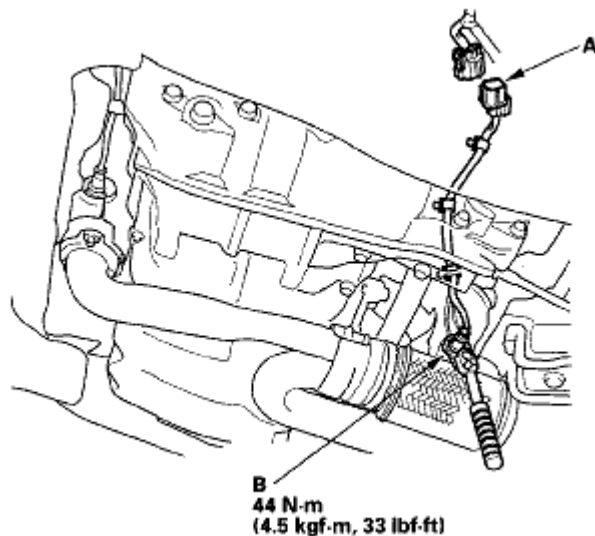


**Fig. 214: Removing Front Secondary HO2S With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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).

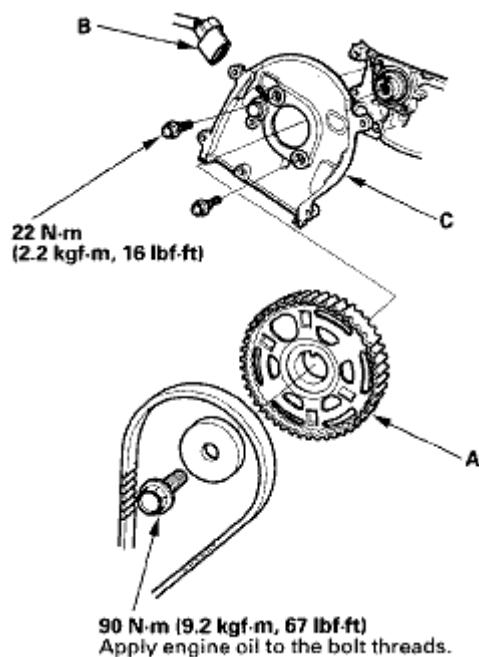


**Fig. 215: Removing Front Secondary HO2S With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the parts in the reverse order of removal.

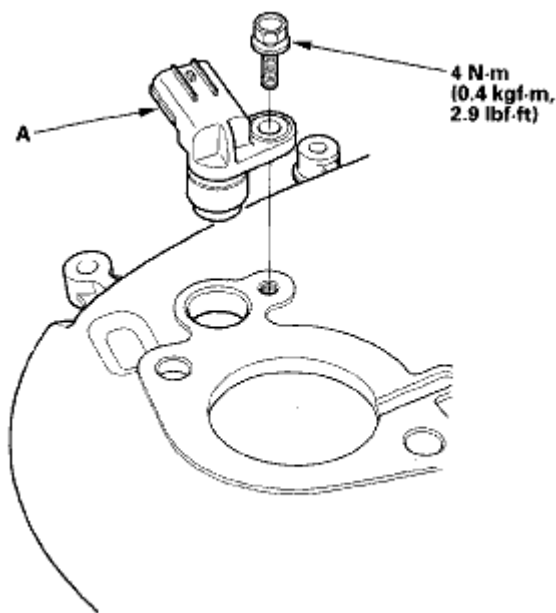
## CMP SENSOR REPLACEMENT

1. Set the No. 1 piston at top dead center (see step 3 on VALVE CLEARANCE ADJUSTMENT ).
2. Remove the crankshaft pulley (see CRANKSHAFT PULLEY REMOVAL AND INSTALLATION ).
3. Remove the upper (see step 10 on TIMING BELT REMOVAL ) and lower (see step 11 on TIMING BELT REMOVAL ) front covers from the engine.
4. To hold the timing belt adjuster in its current position, thread in the battery clamp bolt hand-tight (see step 13 on TIMING BELT REMOVAL ).
5. Loosen the idler pulley bolt about five or six turns, then remove the timing belt from the front camshaft pulley (see step 16 on TIMING BELT REMOVAL ).
6. Remove the front camshaft pulley (A).



**Fig. 216: Identifying Front Camshaft Pulley With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Disconnect the CMP sensor 3P connector (B), then remove the back cover (C).
8. Remove the CMP sensor (A) from the back cover.

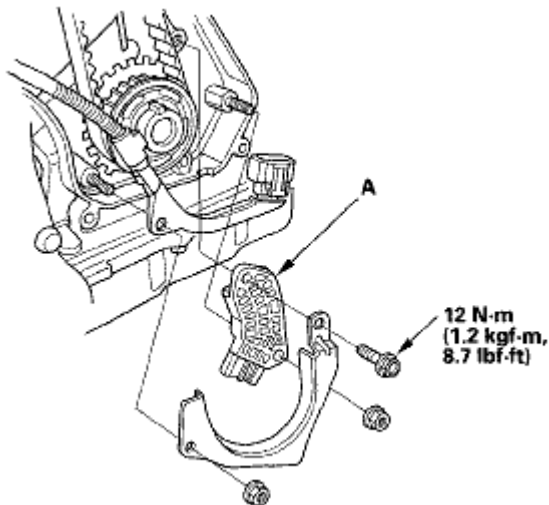


**Fig. 217: Identifying CMP Sensor With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the parts in the reverse order of removal, then install the timing belt (see **TIMING BELT INSTALLATION** ).
10. Do the CKP pattern clear/pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN** ).

## CKP SENSOR REPLACEMENT

1. Remove the crankshaft pulley (see **CRANKSHAFT PULLEY REMOVAL AND INSTALLATION** ).
2. Remove the drive belt auto-tensioner (see **DRIVE BELT AUTO-TENSIONER REPLACEMENT** ).
3. Remove the upper cover (see step 10 on **TIMING BELT REMOVAL** ) and lower (see step 11 on **TIMING BELT REMOVAL** ) front covers from the engine.
4. Remove the CKP sensor (A) from the oil pump.



**Fig. 218: Identifying CKP Sensor With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

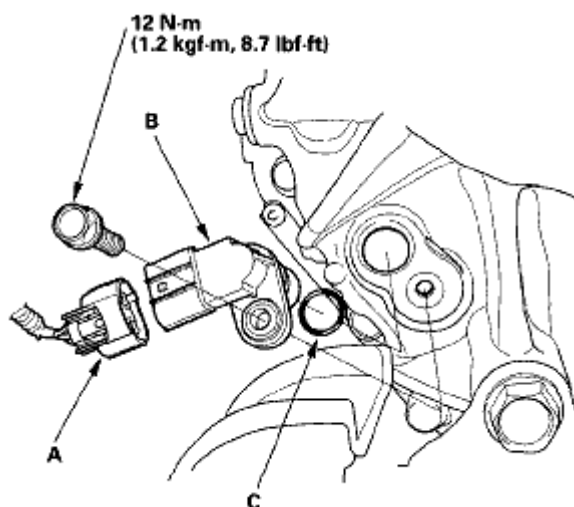
5. Install the parts in the reverse order of removal.
6. Do the CKP pattern clear/CKP pattern learn procedure with the HDS (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN** ).

## INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT

**NOTE:** For A/T models (see **INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT** ).

M/T

1. Disconnect the input shaft (mainshaft) speed sensor 3P connector (A).



**Fig. 219: Identifying Input Shaft (Mainshaft) Speed Sensor 3P Connector With Torque Specifications**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

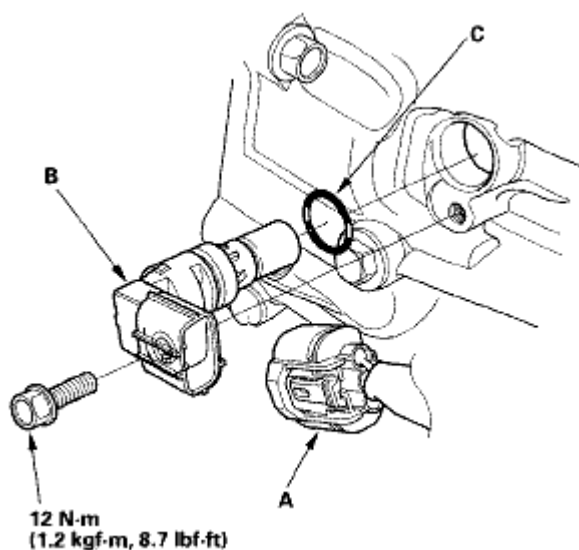
2. Remove the input shaft (mainshaft) speed sensor (B).
3. Install the parts in the reverse order of removal with a new O-ring (C).

## OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR REPLACEMENT

**NOTE:** For A/T models (see INPUT SHAFT (MAINSHAFT) SPEED SENSOR REPLACEMENT).

M/T

1. Disconnect the output shaft (countershaft) speed sensor 3P connector (A).



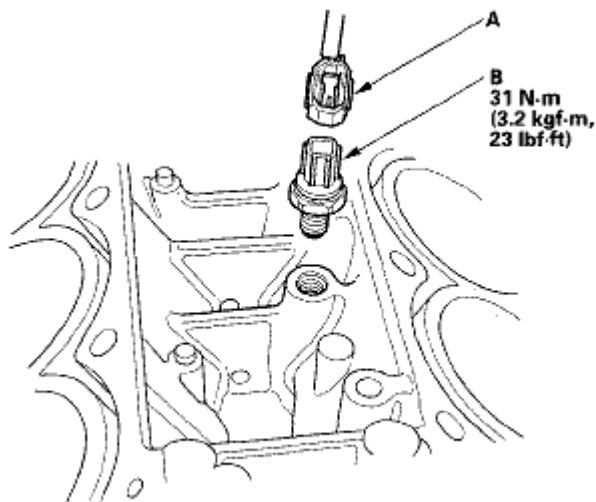
**Fig. 220: Identifying Output Shaft (Countershaft) Speed Sensor 3P Connector With Torque Specifications**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the output shaft (countershaft) speed sensor (B).
3. Install the parts in the reverse order of removal with a new O-ring (C).

## KNOCK SENSOR REPLACEMENT

1. Remove the engine cover (see step 1 on **REMOVAL** ).
2. Remove the fuel rails and the injector base (see **INJECTOR BASE REMOVAL AND INSTALLATION** ).
3. Disconnect the knock sensor IP connector (A), then remove the knock sensor (B).



**Fig. 221: Identifying Knock Sensor With Torque Specifications**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the parts in the reverse order of removal.

## ECM/PCM REPLACEMENT

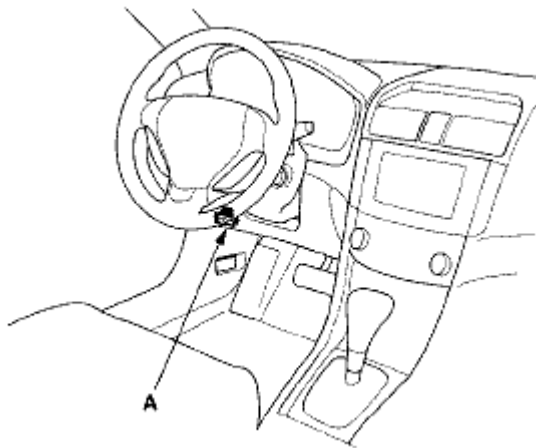
### Special Tools Required

- Honda diagnostic system (HDS) tablet tester
- Honda interface module (HIM) and an iN workstation with HDS and CM update software
- HDS pocket tester
- GNA-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 ECM/PCM after substituting a known-good ECM/PCM, reinstall the original ECM/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. 222: Identifying Data Link Connector**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it does not, go to the DLC circuit troubleshooting (see **DLC CIRCUIT TROUBLESHOOTING (PART 2)**). If you are returning from DLC circuit troubleshooting, skip steps 4 through 7 and 18 through 20, and do the following procedure after replacing the ECM/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.

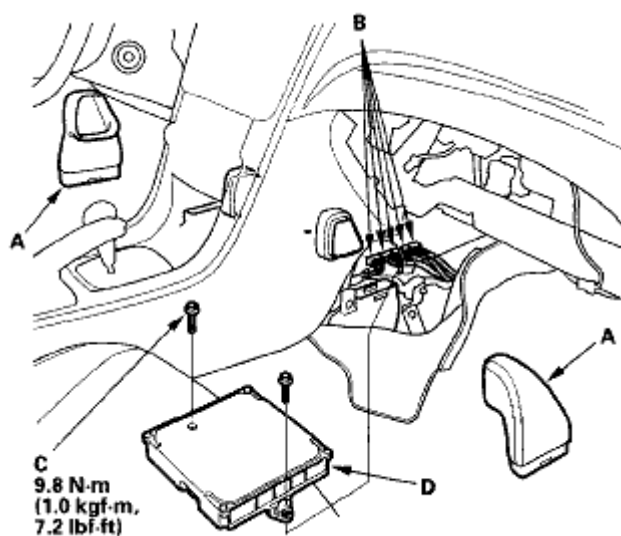
**NOTE:** If the TP POSITION CHECK indicates FAILED, continue with this procedure.

7. Select the REPLACE ECM/PCM MENU, then select READ DATA, and follow the screen prompts.

**NOTE:**

- Doing this step copies (READS) the engine oil life data from the original ECM/PCM so you can later download (WRITES) it into the new ECM/PCM.
- If READ DATA indicates FAILED, continue with this procedure.

8. Turn the ignition switch OFF.
9. Jump the SCS line with the HDS.
10. Pull back the carpet.
11. Remove the ducts (A).



**Fig. 223: Identifying ECM/PCM With Torque Specifications**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

12. Disconnect the ECM/PCM connectors (B).
13. Remove the bolts (C), then remove the ECM/PCM (D).
14. Install the parts in the reverse order of removal.
15. Open the SCS line with the HDS.
16. Turn the ignition switch ON (II).
17. Manually input the VIN into the ECM/PCM with the HDS.

**NOTE:**        **DTC P0630 "VIN Not Programmed or Mismatch" may be stored because the VIN has not been programmed into the ECM/PCM; ignore it, and continue this procedure.**

18. If the READ DATA (engine oil life) failed in step 7, go to step 21. Otherwise, go to step 19.
19. Select the PGM-FI system with the HDS.
20. Select the REPLACE ECM/PCM MENU, then WRITE DATA and follow the screen prompt.

**NOTE:**        **If the WRITE DATA indicates FAILED, continue with this procedure.**

21. Select IMMOBI system with the HDS.
22. Enter the immobilizer code with the ECM/PCM replacement procedure in the HDS; it allows you to start the engine.
23. If the TP POSITION CHECK failed in step 6, clean the throttle body (see **THROTTLE BODY CLEANING** ), then go to step 24.
24. If the READ DATA failed in step 7 or the WRITE DATA failed in step 20, replace the engine oil (see **ENGINE OIL REPLACEMENT** ), and engine oil filter (see **ENGINE OIL FILTER REPLACEMENT** ), then go to step 25.
25. Select PGM-FI system, and reset the ECM/PCM with the HDS.
26. Update the ECM/PCM if it does not have the latest software (see **UPDATING THE ECM/PCM** ).
27. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE** ).

28. Do the CKP pattern learn procedure (see **CRANK (CKP) PATTERN CLEAR/CRANK (CKP) PATTERN LEARN** ).