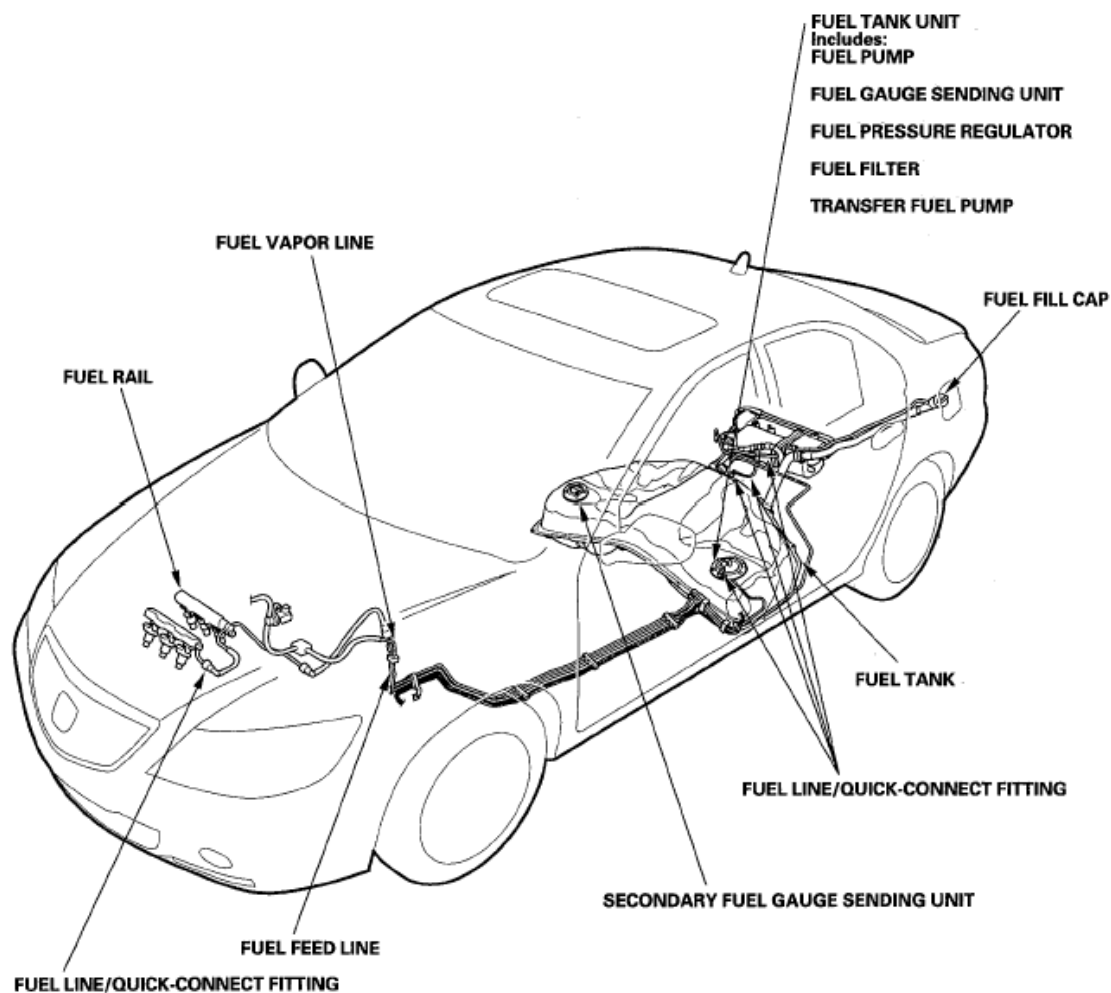


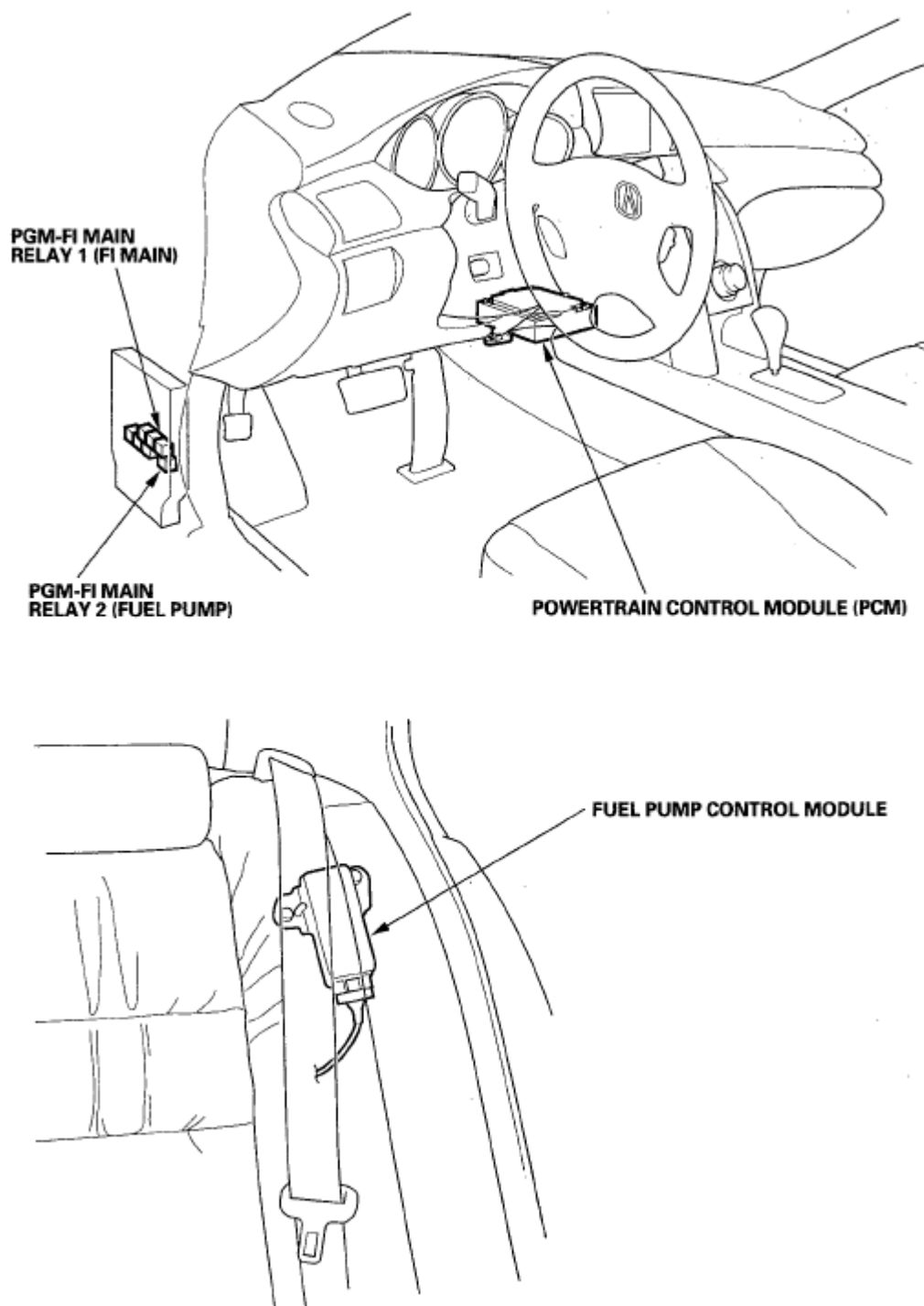
## 2005-08 ENGINE PERFORMANCE

### Fuel Supply System - RL

## COMPONENT LOCATION INDEX



**Fig. 1: Identifying Fuel Supply System Component Location (1 Of 2)**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.



**Fig. 2: Identifying Fuel Supply System Component Location (2 Of 2)**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

## DTC TROUBLESHOOTING

### DTC P0461: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT RANGE/PERFORMANCE PROBLEM

**NOTE:**

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

**snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION ).**

- **Because it requires 162 miles (260 km) of driving without refueling to complete this diagnosis, DTC P0461 cannot be duplicated during this troubleshooting.**

1. Test the fuel gauge sending unit (see FUEL GAUGE SENDING UNIT TEST ).

*Is the fuel gauge sending unit OK?*

**YES** - Check for poor connections or loose terminals at the fuel gauge sending unit and the gauge control module.

**NO** - Replace the fuel gauge sending unit (see FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT ), then go to step 2.

2. Turn the ignition switch ON (II).
3. Reset the PCM with the HDS.
4. Do the PCM idle learn procedure (see PCM IDLE LEARN PROCEDURE ).
5. Check for Temporary DTCs or DTCs with the HDS.

*Are any Temporary DTCs or DTCs indicated?*

**YES** - If DTC P0461 is indicated, check for poor connections or loose terminals at the fuel gauge sending unit and the gauge control module, then go to step 1. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

**NO** - Troubleshooting is complete.

## **DTC P0462: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT LOW VOLTAGE**

**NOTE:** **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see 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 P0462 indicated?*

**YES** - Go to step 4.

**NO** - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module, the fuel gauge sending unit, and the secondary fuel gauge sending unit.

4. Turn the ignition switch OFF.

5. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION** ).
6. Remove the access panel from the right side of the floor.
7. Disconnect the secondary fuel gauge sending unit 5P connector.
8. Turn the ignition switch ON (II).
9. Clear the DTC with the HDS, and wait 5 seconds.
10. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0463 indicated?*

**YES** - Check for secondary fuel gauge sending unit (see **SECONDARY FUEL GAUGE SENDING UNIT TEST** ), then go to step 31.

**NO** - Go to step 11.

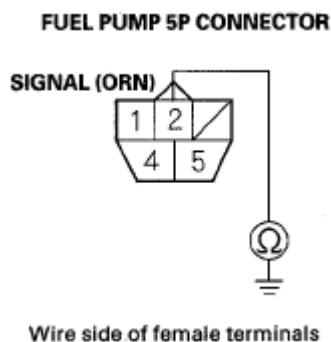
11. Turn the ignition switch OFF.
12. Remove the access panel from the leftside of the floor.
13. Disconnect the fuel pump 5P connector.
14. Turn the ignition switch ON (II).
15. Clear the DTC with the HDS, and wait 5 seconds.
16. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0463 indicated?*

**YES** - Go to step 17.

**NO** - Go to step 21.

17. Turn the ignition switch OFF.
18. Remove the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT** ).
19. Disconnect the gauge control module connector A (20P).
20. Check for continuity between fuel tank unit 5P connector terminal No. 2 and body ground.



**Fig. 3: Checking Continuity Between Fuel Tank Unit 5P Connector Terminal No. 2 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

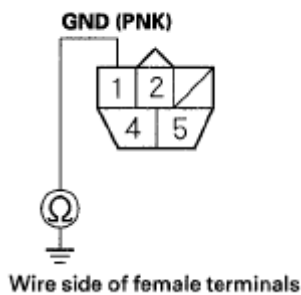
*Is there continuity?*

**YES** - Repair short in the wire between the gauge control module (signal line) and the fuel gauge sending unit, then go to step 31.

**NO** - Go to step 23.

21. Turn the ignition switch OFF.
22. Check for continuity between fuel tank unit 5P connector terminal No. 1 and body ground.

**FUEL PUMP 5P CONNECTOR**



**Fig. 4: Checking Continuity Between Fuel Tank Unit 5P Connector Terminal No. 1 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

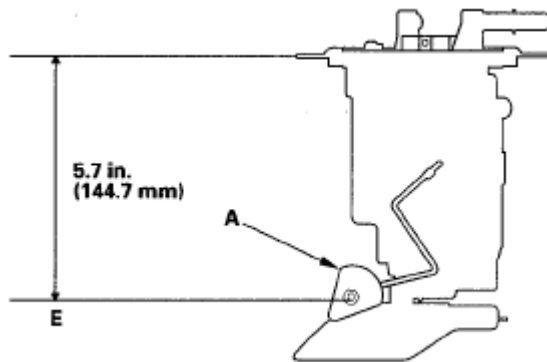
*Is there continuity?*

**YES** - Repair short in the wire between the fuel tank unit and the secondary fuel gauge sending unit, then go to step 31.

**NO** - Check for fuel gauge sending unit (see **FUEL GAUGE SENDING UNIT TEST** ).

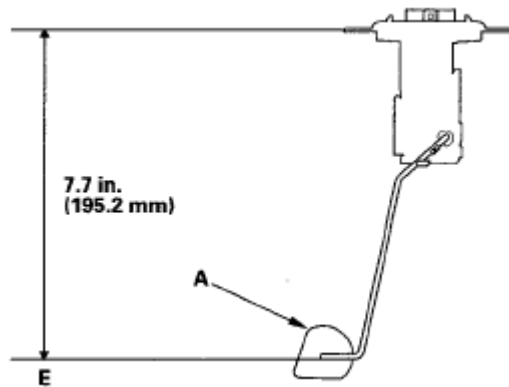
23. Reconnect the gauge control module connector A (20P).
24. Remove the fuel tank unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ) and the secondary fuel gauge sending unit (see **SECONDARY FUEL GAUGE SENDING UNIT REPLACEMENT** ).
25. Connect the fuel tank unit and secondary fuel gauge sending unit 5P connector.
26. Turn the ignition switch ON (II).
27. Clear the DTC with the HDS.
28. Set the float (A) to the E position.

**Fuel tank unit**



**Fig. 5: Setting Float To E Position (Fuel Tank Unit)**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

**Secondary fuel gauge sending unit**



**Fig. 6: Setting Float To E Position (Secondary Fuel Gauge Sending Unit)**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Check the fuel gauge.

*Does the gauge move to the empty position?*

**YES** - Go to step 37.

**NO** - Replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT** ), then go to step 30.

30. Turn the ignition switch OFF.
31. Install the parts in the reverse order of removal.
32. Reconnect all connectors.
33. Turn the ignition switch ON (II).
34. Reset the PCM with the HDS.
35. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE** ).
36. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0462 indicated?*

**YES** - Check for poor connections or loose terminals at the gauge control module, the fuel gauge sending unit, and the secondary fuel gauge sending unit, then go to step 1.

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

37. Turn the ignition switch OFF.
38. Install the parts in the reverse order of removal.
39. Turn the ignition switch ON (II).
40. Update the PCM if it does not have the latest software (see **UPDATING THE PCM** ), or substitute a known-good PCM (see **SUBSTITUTING THE PCM** ).
41. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0462 indicated?*

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

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

### **DTC P0463: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT HIGH VOLTAGE**

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

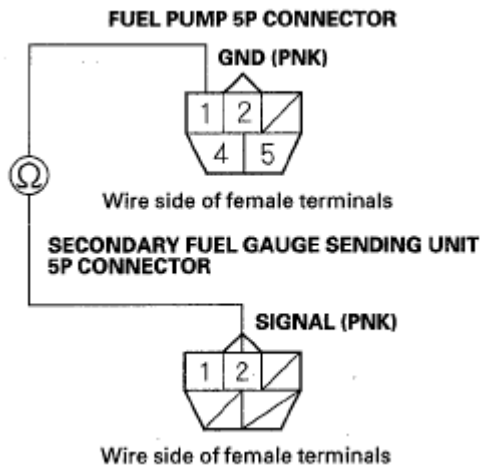
*Is DTC P0463 indicated?*

**YES** - Go to step 4.

**NO** - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module, the fuel gauge sending unit, and the secondary fuel gauge sending unit.

4. Turn the ignition switch OFF.
5. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION** ).
6. Remove the access panel from the left side of the floor.
7. Disconnect the fuel pump 5P connector.
8. Remove the access panel from the right side of the floor.

9. Disconnect the secondary fuel gauge sending unit 5P connector.
10. Check for continuity between fuel gauge sending unit 5P connector terminal No. 1 and the secondary fuel gauge sending unit 5P connector terminal No. 2.



**Fig. 7: Checking Continuity Between No. 1 And Secondary Fuel Gauge Sending Unit 5P Connector Terminal No. 2**

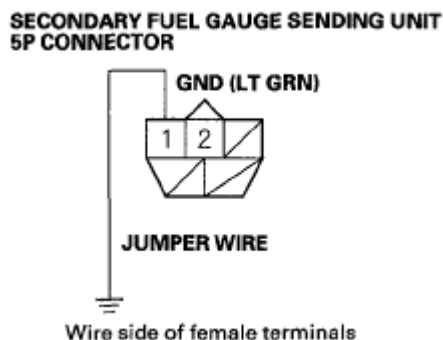
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** - Go to step 11.

**NO** - Repair open in the wire between the fuel gauge sending unit and the secondary fuel gauge sending unit, then go to step 25.

11. Remove the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT** ).
12. Disconnect gauge control module connector A (20P).
13. Connect secondary fuel gauge sending unit 5P connector terminal No. 1 to body ground with a jumper wire.



**Fig. 8: Connecting Secondary Fuel Gauge Sending Unit 5P Connector Terminal No. 1 To Body Ground With Jumper Wire**

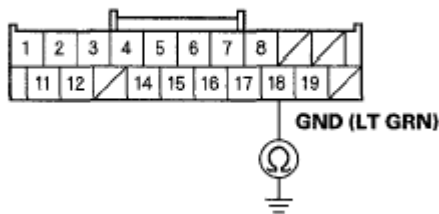
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Check for continuity between gauge control module connector A (20P) terminal No. 18 and body



ground.

**GAUGE CONTROL MODULE CONNECTOR A (20P)**



Wire side of female terminals

**Fig. 9: Checking Continuity Between Gauge Control Module Connector A (20P) Terminal No. 18 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

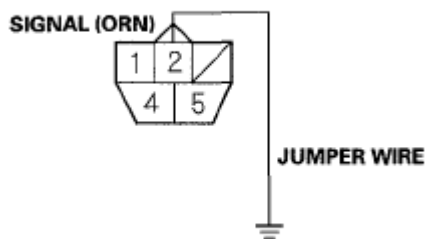
*Is there continuity?*

**YES** - Go to step 15.

**NO** - Repair open in the wire between the gauge control module and the secondary fuel gauge sending unit, then go to step 25.

15. Connect fuel pump 5P connector terminal No. 2 to body ground with a jumper wire.

**FUEL PUMP 5P CONNECTOR**



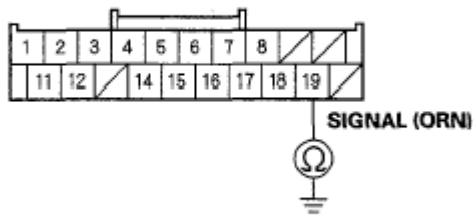
Wire side of female terminals

**Fig. 10: Connecting Fuel Pump 5P Connector Terminal No. 2 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Check for continuity between gauge control module connector A (20P) terminal No. 19 and body ground.

## GAUGE CONTROL MODULE CONNECTOR A (20P)



Wire side of female terminals

**Fig. 11: Checking Continuity Between Gauge Control Module Connector A (20P) Terminal No. 19 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 gauge control module and the fuel gauge sending unit, then go to step 25.

17. Disconnect the jumper wire from the fuel gauge sending unit 5P connector.
18. Remove the fuel tank unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ).
19. Test the fuel gauge sending unit (see **FUEL GAUGE SENDING UNIT TEST** ).

*Is the fuel gauge sending unit OK?*

**YES** - Go to step 20.

**NO** - Replace the fuel gauge sending unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ), then go to step 25.

20. Remove the secondary fuel gauge sending unit (see **SECONDARY FUEL GAUGE SENDING UNIT REPLACEMENT** ).
21. Test the secondary fuel gauge sending unit (see **SECONDARY FUEL GAUGE SENDING UNIT TEST** ).

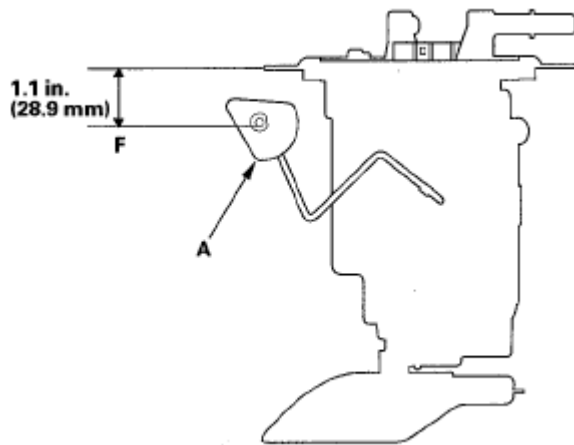
*Is the secondary fuel gauge sending unit OK?*

**YES** - Go to step 22.

**NO** - Replace the secondary fuel gauge sending unit (see **SECONDARY FUEL GAUGE SENDING UNIT REPLACEMENT** ), then go to step 25.

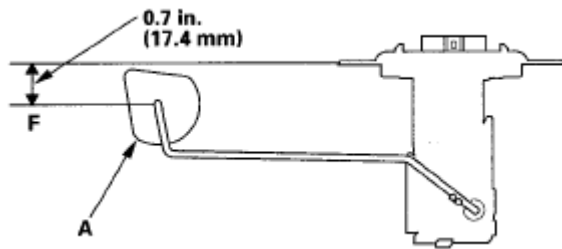
22. Set the float (A) to the F positions.

**Fuel tank unit**



**Fig. 12: Setting Float To F Positions (Fuel Tank Unit)**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

**Secondary fuel gauge sending unit**



**Fig. 13: Setting Float To F Positions (Secondary Fuel Gauge Sending Unit)**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Check the fuel gauge.

*Does the gauge move to the full position?*

**YES** - Go to step 31.

**NO** - Replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT** ), then go to step 24.

24. Turn the ignition switch OFF.
25. Install the parts in the reverse order of removal.
26. Reconnect all connectors.
27. Turn the ignition switch ON (II).
28. Reset the PCM with the HDS.
29. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE** ).
30. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0463 indicated?*

**YES** - Check for poor connections or loose terminals at the gauge control module, the fuel gauge

sending unit, and the secondary fuel gauge sending unit, then go to step 1.

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

31. Turn the ignition switch OFF.
32. Install the parts in the reverse order of removal.
33. Turn the ignition switch ON (II).
34. Update the PCM if it does not have the latest software (see **UPDATING THE PCM** ), or substitute a known-good PCM (see **SUBSTITUTING THE PCM** ).
35. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0463 indicated?*

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

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

## **DTC P0627: FUEL PUMP CONTROL MODULE 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 ignition switch to the START (III) position.

**NOTE:** This vehicle has an auto control mode starting system. It keeps the starter motor running after the ignition switch is released for 15 seconds, or until the engine starts.

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

*Is DTC P0627 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 fuel pump control module, PGM-FI main relay 2 (FUEL PUMP), the fuel pump, and the PCM.

5. Turn the ignition switch OFF.
6. Check the No. 19 FUEL PUMP (20 A) fuse in driver's under-dash fuse/relay box.

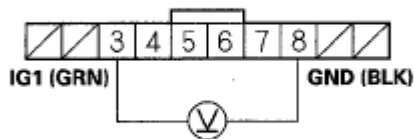
*Is the fuse blown?*

**YES** - Repair short in the wire between PGM-FI main relay 2 (FUEL PUMP) and the No. 19 FUEL PUMP (20 A) fuse. Also replace the No. 19 FUEL PUMP (20 A) fuse, then go to step 68.

**NO** - Go to step 7.

7. Disconnect the fuel pump control module 10P connector (see **FUEL PUMP CONTROL MODULE REPLACEMENT**).
8. Turn the ignition switch ON (II), and measure voltage between fuel pump control module 10P connector terminals No. 3 and No. 8 within 2 seconds.

**FUEL PUMP CONTROL MODULE 10P CONNECTOR**



Wire side of female terminals

**Fig. 14: Measuring Voltage Between Fuel Pump Control Module 10P Connector Terminals No. 3 And No. 8**

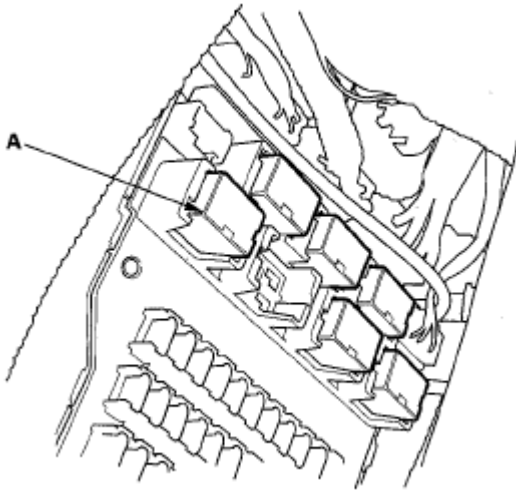
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** - Go to step 23.

**NO** - Go to step 9.

9. Turn the ignition switch OFF.
10. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS**), then remove PGM-FI main relay 2 (FUEL PUMP) (A) from the driver's under-dash fuse/relay box.



**Fig. 15: Identifying PGM-FI Main Relay**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Test PGM-FI main relay 2 (FUEL PUMP) (see **POWER RELAY TEST** ).

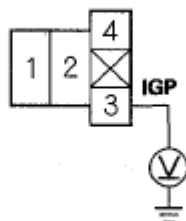
*Is PGM-FI main relay 2 (FUEL PUMP) OK?*

**YES** - Go to step 12.

**NO** - Replace PGM-FI main relay 2 (FUEL PUMP), then go to step 68.

12. Turn the ignition switch ON (II).
13. Measure voltage between PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 3 and body ground.

**PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR**



Terminal side of female terminals

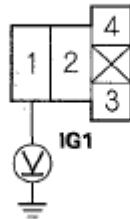
**Fig. 16: Measuring Voltage Between PGM-FI Main Relay 2 (Fuel Pump) 4P Connector Terminal No. 3 And Body Ground**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** - Go to step 14.

**NO** -

- Replace PGM-FI main relay 1 (FI MAIN), then go to step 68.
  - If needed, replace the driver's under-dash fuse/ relay box (see **DRIVER'S UNDER-DASH FUSE/RELAY BOX (MICU) REMOVAL/INSTALLATION** ), then go to step 68.
14. Measure voltage between PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 1 and body ground.

**PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR**

Terminal side of female terminals

**Fig. 17: Measuring Voltage Between PGM-FI Main Relay 2 (Fuel Pump) 4P Connector Terminal No. 1 And Body Ground**

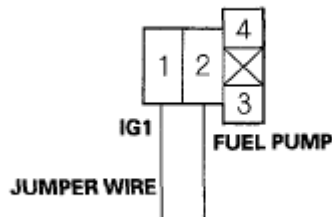
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** - Go to step 15.

**NO** - Replace the driver's under-dash fuse/relay box (see **DRIVER'S UNDER-DASH FUSE/RELAY BOX (MICU) REMOVAL/INSTALLATION** ), then go to step 68.

15. Turn the ignition switch OFF.
16. Connect PGM-FI main relay 2 (FUEL PUMP) 4P connector terminals No. 1 and No. 2 with a jumper wire.

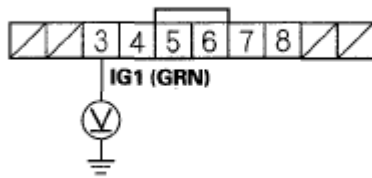
**PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR**

Terminal side of female terminals

**Fig. 18: Connecting PGM-FI Main Relay 2 (Fuel Pump) 4P Connector Terminals No. 1 And 2 With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Turn the ignition switch ON (II), and measure voltage between fuel pump control module 10P connector terminal No. 3 and body ground within 2 seconds.

**FUEL PUMP CONTROL MODULE 10P CONNECTOR**

Wire side of female terminals

**Fig. 19: Measuring Voltage Between Fuel Pump Control Module 10P Connector Terminal No. 3 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

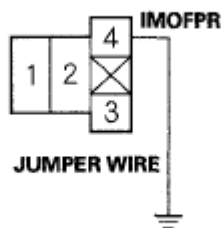
*Is there battery voltage?*

**YES** - Go to step 18.

**NO** -

- Repair open in the wire between the driver's under-dash fuse/relay box and the fuel pump control module, then go to step 68.
- If needed, replace the driver's under-dash fuse/ relay box (see **DRIVER'S UNDER-DASH FUSE/RELAY BOX (MICU) REMOVAL/INSTALLATION** ), then go to step 68.

18. Turn the ignition switch OFF.
19. Jump the SCS line with the HDS.
20. Disconnect PCM connector E (31P).
21. Connect PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 4 to body ground with a jumper wire.

**PGM-FI MAIN RELAY 2 (FUEL PUMP) 4P CONNECTOR**

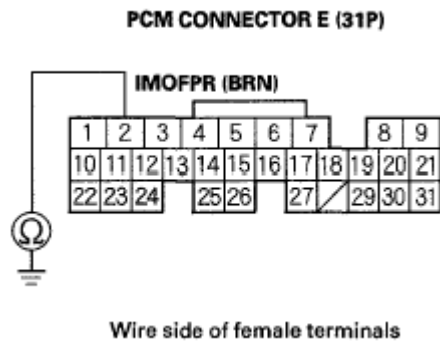
Terminal side of female terminals

**Fig. 20: Connecting PGM-FI Main Relay 2 (Fuel Pump) 4P Connector Terminal No. 4 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Check for continuity between PCM connector terminal E2 and body ground.





**Fig. 21: Checking Continuity Between PCM Connector Terminal E2 And Body Ground**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** - Go to step 74.

**NO** - Repair open in the wire between the PCM (E2) and PGM-FI main relay 2 (FUEL PUMP), then go to step 68.

23. Turn the ignition switch OFF.
24. Reconnect the fuel pump control module 10P connector (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ).
25. Turn the ignition switch ON (II).
26. Clear the DTC with the HDS.
27. Turn the ignition switch OFF.
28. Turn the ignition switch ON (II), and check for sound from the fuel pump within 2 seconds.

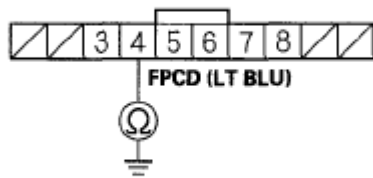
*Does the fuel pump operate?*

**YES** - Go to step 29.

**NO** - Go to step 48.

29. Turn the ignition switch OFF.
30. Disconnect the fuel pump control module 10P connector.
31. Check for continuity between fuel pump control module 10P connector terminal No. 4 and body ground.

**FUEL PUMP CONTROL MODULE 10P CONNECTOR**



Wire side of female terminals

**Fig. 22: Checking Continuity Between Fuel Pump Control Module 10P Connector Terminal No. 4 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

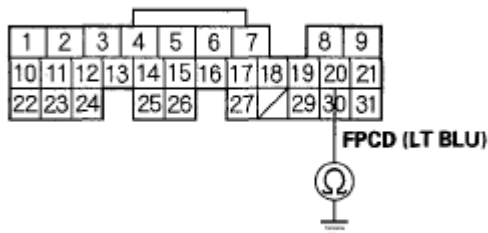
*Is there continuity?*

**YES** - Go to step 32.

**NO** - Go to step 35.

32. Jump the SCS line with the HDS.
33. Disconnect PCM connector E (31P).
34. Check for continuity between PCM connector terminal E20 and body ground.

**PCM CONNECTOR E (31P)**



Wire side of female terminals

**Fig. 23: Checking Continuity Between PCM Connector Terminal E20 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

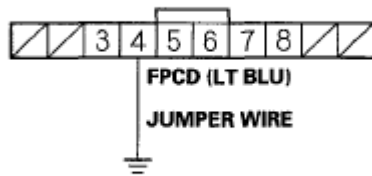
*Is there continuity?*

**YES** - Repair short in the wire between the PCM (E20) and the fuel pump control module, then go to step 68.

**NO** - Go to step 74.

35. Jump the SCS line with the HDS.
36. Disconnect PCM connector E (31P).
37. Connect fuel pump control module 10P connector terminal No. 4 to body ground with a jumper wire.

**FUEL PUMP CONTROL MODULE 10P CONNECTOR**

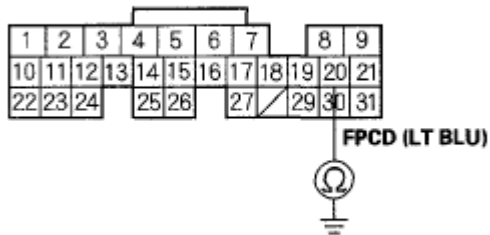


Wire side of female terminals

**Fig. 24: Checking Connect Fuel Pump Control Module 10P Connector Terminal No. 4 To Body Ground With Jumper Wire**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

38. Check for continuity between PCM connector terminal E20 and body ground.

**PCM CONNECTOR E (31P)**



Wire side of female terminals

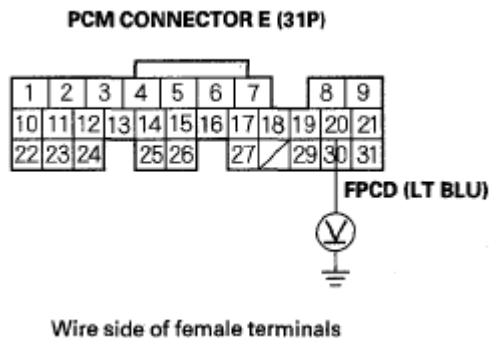
**Fig. 25: Checking Continuity Between PCM Connector Terminal E20 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** - Go to step 39.

**NO** - Repair open in the wire between the PCM (E20) and the fuel pump control module, then go to step 68.

39. Remove the jumper wire from the fuel pump control module 10P connector.
40. Reconnect the fuel pump control module 10P connector and PCM connector E (31P).
41. Turn the ignition switch ON (II).
42. Measure voltage between PCM connector terminal E20 and body ground.



**Fig. 26: Measuring Voltage Between PCM Connector Terminal E20 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

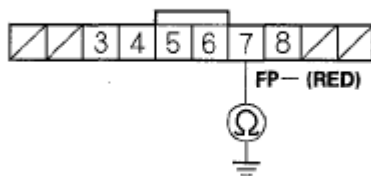
*Is there about 8 V or more?*

**YES** - Go to step 43.

**NO** - Replace the fuel pump control module (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ), then go to step 68.

43. Turn the ignition switch OFF.
44. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION** ).
45. Remove the access panel from the floor.
46. Disconnect the fuel pump 5P connector.
47. Check for continuity between fuel pump control module 10P connector terminal No. 7 and body ground.

**FUEL PUMP CONTROL MODULE 10P CONNECTOR**



**Fig. 27: Checking Continuity Between Fuel Pump Control Module 10P Connector Terminal No. 7 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

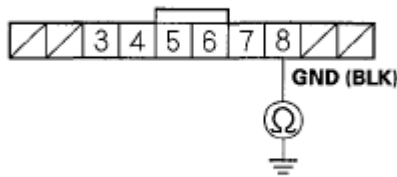
**YES** - Repair short in the wire between the fuel pump control module (FP-line) and the fuel pump, then go to step 68.

**NO** - Substitute a known-good fuel pump control module (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ), then go to step 68 and recheck. If DTC P0627 is not indicated, replace the original fuel pump control module (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ),

then go to step 68. If DTC P0627 is indicated, go to step 74.

48. Turn the ignition switch OFF.
49. Disconnect the fuel pump control module 10P connector (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ).
50. Check for continuity between fuel pump control module 10P connector terminal No. 8 and body ground.

**FUEL PUMP CONTROL MODULE 10P CONNECTOR**



Wire side of female terminals

**Fig. 28: Checking Continuity Between Fuel Pump Control Module 10P Connector Terminal No. 8 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

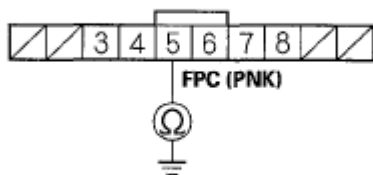
*Is there continuity?*

**YES** - Go to step 51.

**NO** - Repair open in the wire between the fuel pump control module (GND line) and G603, then go to step 68.

51. Check for continuity between fuel pump control module 10P connector terminal No. 5 and body ground.

**FUEL PUMP CONTROL MODULE 10P CONNECTOR**



Wire side of female terminals

**Fig. 29: Checking Continuity Between Fuel Pump Control Module 10P Connector Terminal No. 5 And Body Ground**

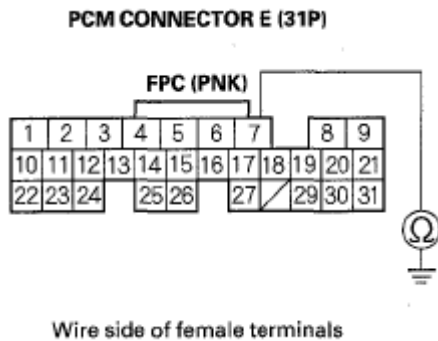
Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** - Go to step 52.

**NO** - Go to step 55.

52. Jump the SCS line with the HDS.
53. Disconnect PCM connector E (31P).
54. Check for continuity between PCM connector terminal E7 and body ground.



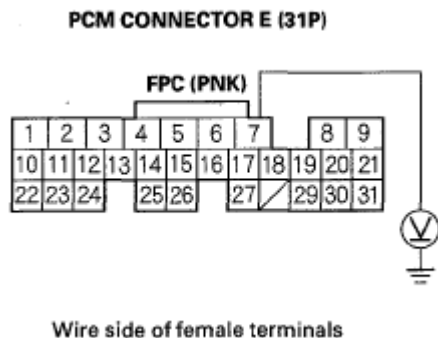
**Fig. 30: Checking Continuity Between PCM Connector Terminal E7 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?*

**YES** - Repair short in the wire between the PCM (E7) and the fuel pump control module, then go to step 68.

**NO** - Go to step 74.

55. Reconnect the fuel pump control module 10P connector.
56. Turn the ignition switch ON (II), and measure voltage between PCM connector terminal E7 and body ground within 2 seconds.



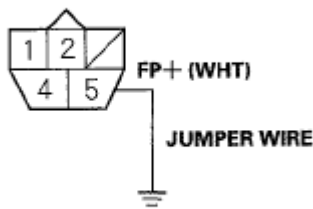
**Fig. 31: Measuring Voltage Between PCM Connector Terminal E7 And Body Ground**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** - Go to step 57.

**NO** - Replace the fuel pump control module (see **FUEL PUMP CONTROL MODULE REPLACEMENT**), then go to step 68.

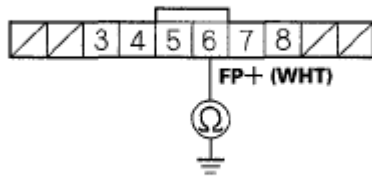
57. Turn the ignition switch OFF.
58. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION** ).
59. Remove the access panel from the floor.
60. Disconnect the fuel pump 5P connector.
61. Disconnect the fuel pump control module 10P connector (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ).
62. Connect between fuel pump 5P connector terminal No. 5 to body ground with a jumper wire.

**FUEL PUMP 5P CONNECTOR**

Wire side of female terminals

**Fig. 32: Connecting Between Fuel Pump 5P Connector Terminal No. 5 To Body Ground With Jumper Wire****Courtesy of AMERICAN HONDA MOTOR CO., INC.**

63. Check for continuity between fuel pump control module 10P connector terminal No. 6 and body ground.

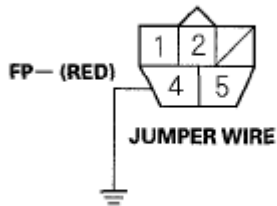
**FUEL PUMP CONTROL MODULE 10P CONNECTOR**

Wire side of female terminals

**Fig. 33: Checking Continuity Between Fuel Pump Control Module 10P Connector Terminal No. 6 And Body Ground****Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there continuity?***YES** - Go to step 64.**NO** - Repair open in the wire between the fuel pump control module (FP+ line) and the fuel pump, then go to step 68.

64. Connect between fuel pump 5P connector terminal No. 4 to body ground with a jumper wire.

FUEL PUMP 5P CONNECTOR



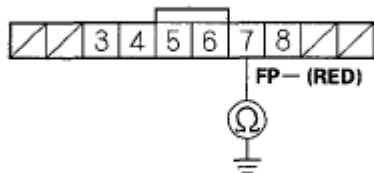
Wire side of female terminals

**Fig. 34: Connecting Between Fuel Pump 5P Connector Terminal No. 4 To Body Ground With Jumper Wire**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

65. Check for continuity between fuel pump control module 10P connector terminal No. 7 and body ground.

FUEL PUMP CONTROL MODULE 10P CONNECTOR



Wire side of female terminals

**Fig. 35: Checking Continuity Between Fuel Pump Control Module 10P Connector Terminal No. 7 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

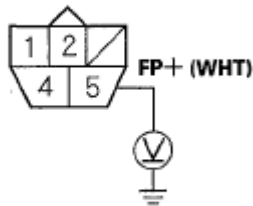
*Is there continuity?*

**YES** - Go to step 66.

**NO** - Repair open in the wire between the fuel pump control module (FP-line) and the fuel pump, then go to step 68.

66. Reconnect the fuel pump control module 10P connector.
67. Turn the ignition switch ON (II), and measure voltage between fuel pump 5P connector terminal No. 5 and body ground within 2 seconds.



**FUEL PUMP 5P CONNECTOR**

Wire side of female terminals

**Fig. 36: Measuring Voltage Between Fuel Pump 5P Connector Terminal No. 5 And Body Ground**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there battery voltage?*

**YES** - Replace the fuel pump (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ), then go to step 68.

**NO** - Substitute a known-good fuel pump control module (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ), then go to step 68 and recheck. If DTC P0627 is not indicated, replace the original fuel pump control module (see **FUEL PUMP CONTROL MODULE REPLACEMENT** ), then go to step 68. If DTC P0627 is indicated, go to step 74.

68. Turn the ignition switch OFF.
69. Reconnect all connectors.
70. Turn the ignition switch ON (II).
71. Reset the PCM with the HDS.
72. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE** ).
73. Check for Temporary DTCs or DTCs with the HDS.

*Is DTC P0627 indicated?*

**YES** - Check for poor connections or loose terminals at the fuel pump control module, PGM-FI main relay 2 (FUEL PUMP), the fuel pump, 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.

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

*Is DTC P0627 indicated?*

**YES** - Check for poor connections or loose terminals at the fuel pump control module, PGM-FI main relay 2 (FUEL PUMP), the fuel pump, and the PCM. If the PCM was updated, substitute a known-good PCM (see **SUBSTITUTING THE PCM** ), then recheck. If the PCM was substituted, go to step 1.

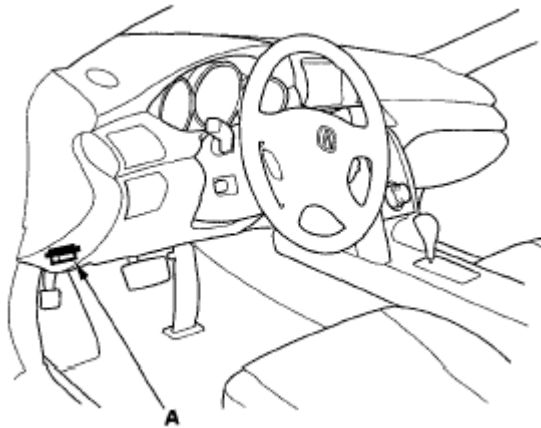
**NO** - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT** ). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

## FUEL PRESSURE RELIEVING

Before disconnecting fuel lines or hoses, relieve pressure from the system by stopping the fuel pump and disconnecting the fuel tube/quick connect fitting in the engine compartment.

### WITH THE HDS

1. Make sure you have the anti-theft codes for the audio system and the navigation system.
2. Turn the ignition switch OFF.
3. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



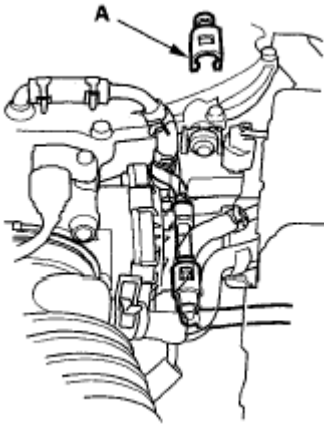
**Fig. 37: Identifying Data Link Connector Location**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Turn the ignition switch ON (II).
5. Make sure the HDS communicates with the PCM and other vehicle systems. If it doesn't, go to DLC circuit troubleshooting (see **DLC CIRCUIT TROUBLESHOOTING** ).
6. Remove the fuel fill cap.
7. From the INSPECTION MENU of the HDS, select Fuel Pump OFF, then start the engine, and let it idle until it stalls.
8. Turn the ignition switch OFF.

#### NOTE:

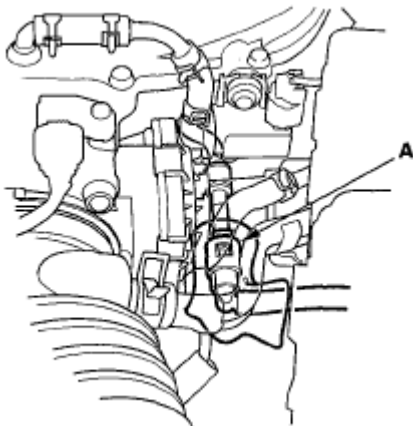
- Do not allow the engine to idle above 1,000 rpm or the PCM will continue to operate the fuel pump.
- A DTC or a Temporary DTC may be set during this procedure. Check for DTCs, and clear them as needed (see **DTC CLEAR** ).

9. Disconnect the negative cable from the battery.
10. Remove the quick-connect fitting cover (A).



**Fig. 38: Identifying Quick-Connect Fitting Cover**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Check the fuel quick-connect fitting for dirt, and clean it if needed.
12. Place a rag or shop towel over the quick-connect fitting (A).

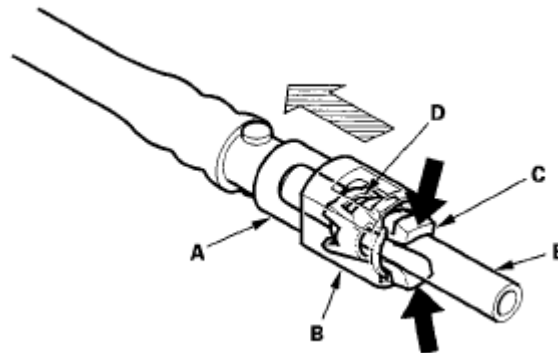


**Fig. 39: Identifying Quick-Connect Fitting**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Disconnect the quick-connect fitting (A): Hold the connector (B) with one hand, and squeeze the retainer tabs (C) with the other hand to release them from the locking tabs (D). Pull the connector off.

**NOTE:**

- Be careful not to damage the line (E) or other parts.
- Do not use tools.
- If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.
- Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.

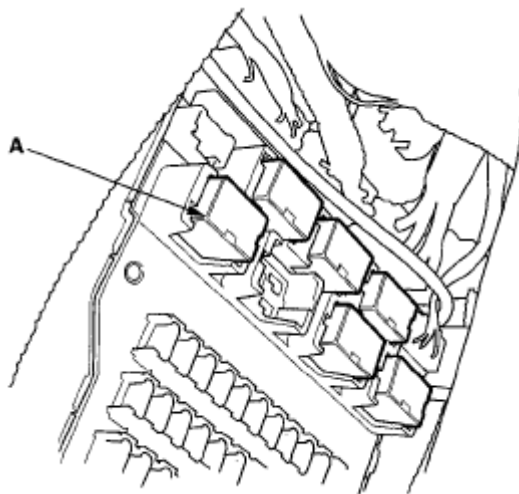


**Fig. 40: Identifying Quick-Connect Fitting, Locking Retainer Tabs**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. After disconnecting the quick-connect fitting, check it for dirt or damage (see step 4 ).
15. Reconnect the negative cable to the battery, and do these items:
  - Power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT** ).
  - Enter the anti-theft codes for the audio system and the navigation system.
  - Steering column memorization (see **STEERING COLUMN POSITION MEMORIZATION** ).

## WITHOUT THE HDS

1. Make sure you have the anti-theft codes for the audio system and the navigation system.
2. Remove the left kick panel (see step 3 under **TRIM REMOVAL/INSTALLATION - DOOR AREAS** ), then remove PGM-FI main relay 2 (FUEL PUMP) (A) from the under-dash fuse/relay box.

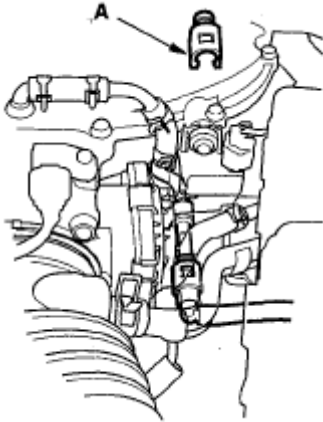


**Fig. 41: Identifying PGM-FI Main Relay**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Start the engine, and let it idle until it stalls.

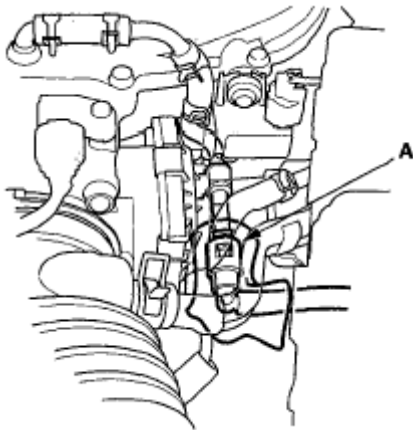
**NOTE:** If any DTCs are stored, clear and ignore them.

4. Turn the ignition switch OFF.
5. Remove the fuel fill cap.
6. Disconnect the negative cable from the battery.
7. Remove the quick-connect fitting cover (A). A.



**Fig. 42: Identifying Quick-Connect Fitting Cover**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Check the fuel quick-connect fitting for dirt, and clean it if needed.
9. Place a rag or shop towel over the quick-connect fitting (A).



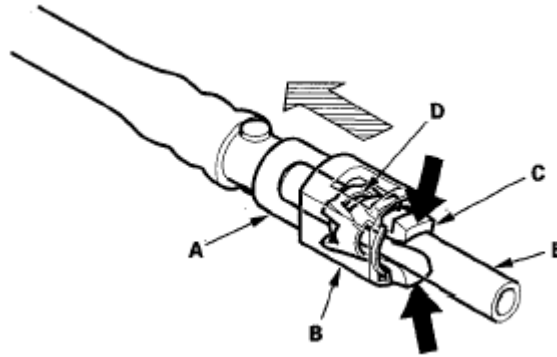
**Fig. 43: Identifying Quick-Connect Fitting**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Disconnect the quick-connect fitting (A): Hold the connector (B) with one hand, and squeeze the retainer tabs (C) with the other hand to release them from the locking tabs (D). Pull the connector off.

**NOTE:**

- Be careful not to damage the line (E) or other parts.
- Do not use tools.
- If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.

- Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.



**Fig. 44: Identifying Quick-Connect Fitting, Retainer And Locking Tabs**

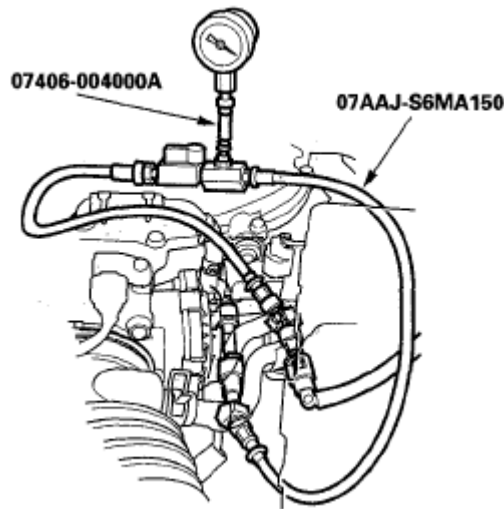
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

11. After disconnecting the quick-connect fitting, check it for dirt or damage (see step 4 ).
12. Reconnect the negative cable to the battery, and do these items:
  - Power window control unit reset procedure (see **RESETTING THE POWER WINDOW CONTROL UNIT** ).
  - Enter the anti-theft codes for the audio system and the navigation system.
  - PCM reset procedure (see **PCM RESET** ).
  - Steering column memorization (see **STEERING COLUMN POSITION MEMORIZATION** ).

## FUEL PRESSURE TEST

### Special Tools Required

- Fuel pressure gauge 07406-004000A
  - Fuel pressure gauge attachment set 07AAJ-S6MA150
1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING** ).
  2. Disconnect the quick-connect fitting. Attach the fuel pressure gauge set and the fuel pressure gauge.



**Fig. 45: Attaching Fuel Pressure Gauge Set And Fuel Pressure Gauge**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Start the engine, and let it idle.
  - If the engine starts, go to step 5.
  - If the engine does not start, go to step 4.
4. Check to see if the fuel pump is running: Listen to the fuel filler port with the fuel fill cap removed. The fuel pump should run for 2 seconds when the ignition switch is first turned on.
  - If the pump runs, go to step 5.
  - If the pump does not run, refer to the **DTC TROUBLESHOOTING**.
5. Read the fuel pressure gauge. The pressure should be 380-430 kPa (3.9-4.4 kgf/cm<sup>2</sup> , 55-63 psi).
  - If the pressure is OK, the test is complete.
  - If the pressure is out of specification, replace the fuel pressure regulator (see **FUEL PRESSURE REGULATOR REPLACEMENT** ) and the fuel filter (see **FUEL FILTER REPLACEMENT** ), then recheck the fuel pressure.

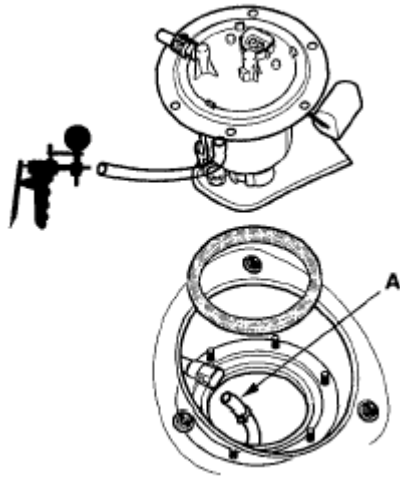
## TRANSFER FUEL PUMP TEST

### Special Tools Required

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

**NOTE:** If the fuel tank is full, drain the fuel (see **FUEL TANK DRAINING** ).

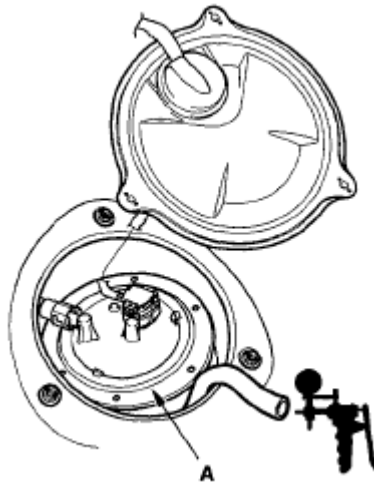
1. Remove the fuel tank unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ).
2. Disconnect the transfer tube (A), then connect a vacuum pump/gauge, 0-30 in.Hg, to the fuel tank unit.



**Fig. 46: Identifying Transfer Tube**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Connect the fuel pump 5P connector.
4. Lower the fuel tank unit (A) into the fuel tank until the pick up screen is submerged in the fuel.

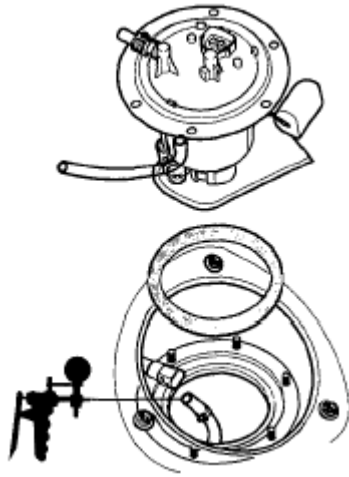


**Fig. 47: Identifying Fuel Tank Unit**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Turn the ignition switch ON (II).
6. From the INSPECTION MENU of the HDS, select Fuel Pump ON.
7. Read the vacuum pump/gauge, 0-30 in.Hg. The vacuum should be 4.0 kPa (1.2 in.Hg, 30 mmHg).
  - If the vacuum is OK, go to step 8.
  - If the vacuum is out of specification, replace the fuel tank unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ), then recheck the fuel vacuum.
8. Connect a vacuum pump/gauge, 0-30 in.Hg, to the transfer tube.





**Fig. 48: Connecting Vacuum Pump/Gauge To Transfer Tube**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

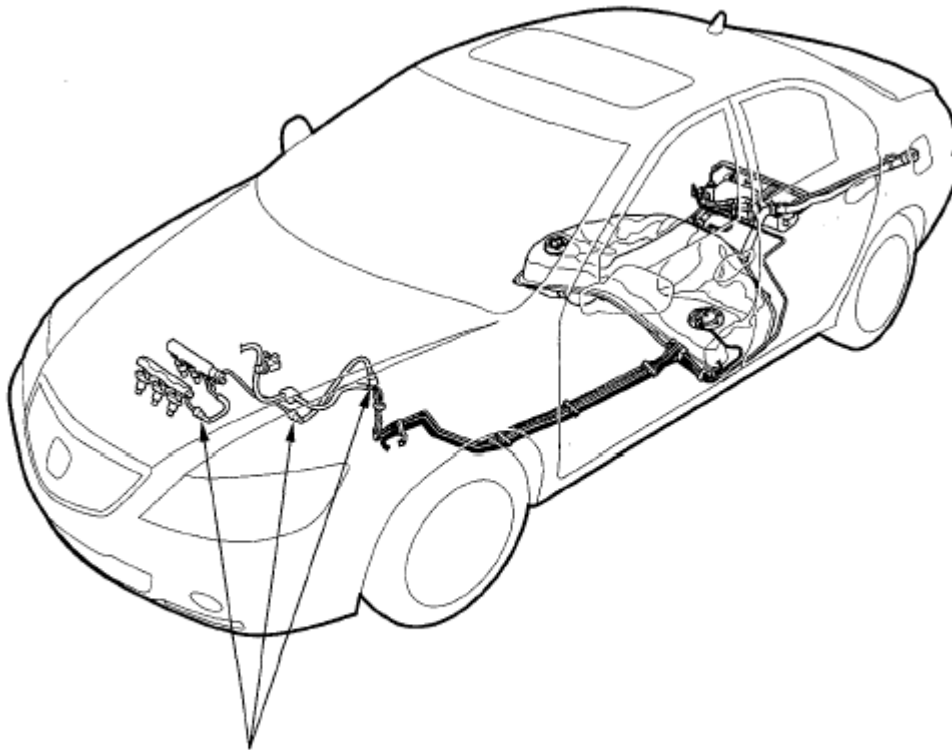
9. Apply vacuum to the transfer tube.
  - If the vacuum holds, replace the fuel tank (see **FUEL TANK REPLACEMENT** ).
  - If the vacuum does not hold, the transfer fuel pump and the transfer tube are OK.

## FUEL TANK DRAINING

1. Remove the secondary fuel gauge sending unit (see **SECONDARY FUEL GAUGE SENDING UNIT REPLACEMENT** ).
2. Using a hand pump, a hose, and a container suitable for fuel, draw the fuel from the secondary fuel gauge sending unit side of the tank.
3. Remove the fuel tank unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ).
4. Using a hand pump, a hose, and a container suitable for fuel, draw the fuel from the fuel tank unit side of the tank.

## FUEL LINE INSPECTION

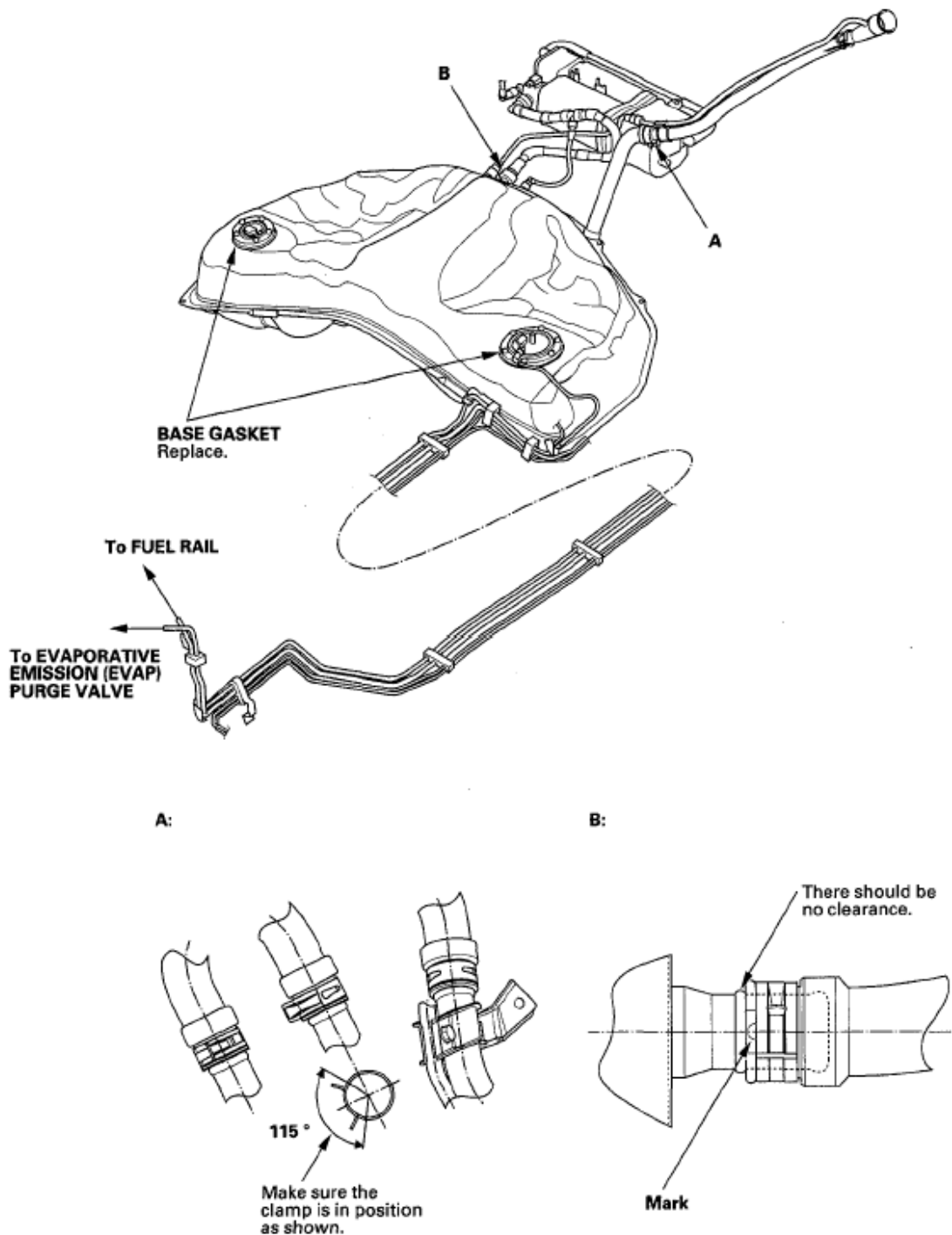
Check the fuel system lines, hoses, and fuel filter for damage, leaks, or deterioration. Replace any damaged parts.



Make sure the connections are secure and the quick-connect fitting covers are firmly locked in place.

**Fig. 49: Identifying Fuel Lines**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Check all clamps, and reposition any if necessary.



**Fig. 50: Identifying Fuel Line Clamps**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

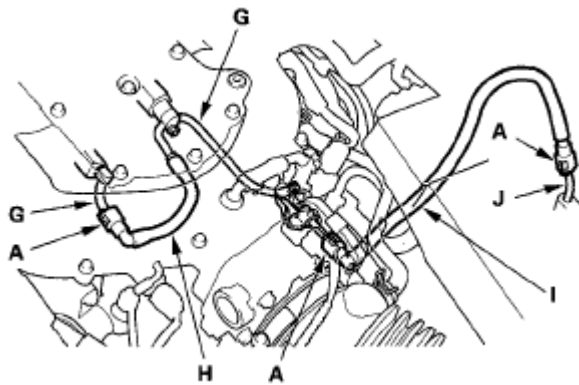
## FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS

The fuel line/quick-connect fittings (A), (B), (C), (D), (E), and (F) connect the fuel rail (G) to the fuel feed hose (H), the fuel feed hose to the fuel feed hose (I), the fuel feed hose to the fuel line (J), and the fuel line (K) to the fuel tank unit (L), the fuel vapor line (M) to the EVAP canister (N), the fuel tank (O) to the fuel tank vapor recirculation tube (P), the fuel tank vapor recirculation tube to the fuel fill pipe (Q), and the fuel tank to the fuel tank vapor control line (R). When removing or installing the fuel feed hose, the fuel tank

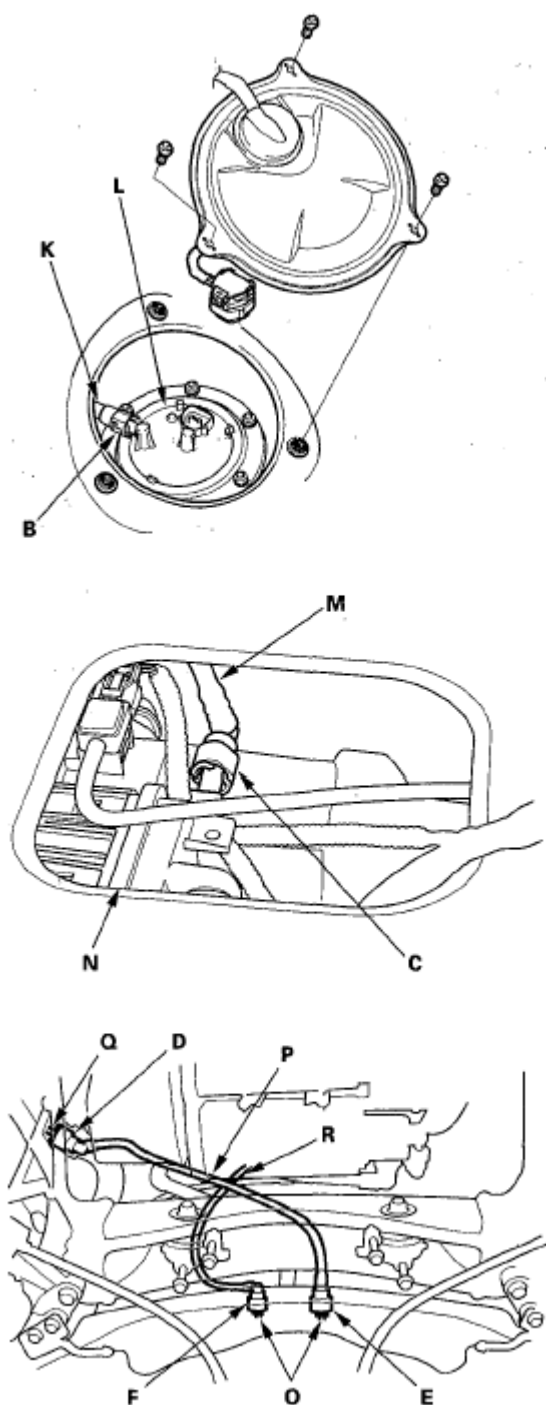
unit, or the fuel tank, it is necessary to disconnect or connect the quick-connect fittings.

Pay attention to the following:

- The fuel feed hoses, fuel lines, and quick-connect fittings are not heat-resistant; be careful not to damage them during welding or other heat-generating procedures.
- The fuel feed hoses, fuel lines, and quick-connect fittings are not acid-proof; do not touch them with a shop towel that was used for wiping battery electrolyte. Replace them if they came into contact with electrolyte or something similar.
- When connecting or disconnecting the fuel feed hoses, fuel lines, and quick-connect fittings, be careful not to bend or twist them excessively. Replace them if they are damaged.



**Fig. 51: Identifying Fuel Line/Quick-Connect Fittings**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.



**Fig. 52: Identifying Fuel Tank Unit, Fuel Line And Fuel Line/Quick-Connect Fittings**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

A disconnected quick-connect fitting can be reconnected, but the retainer on the mating line cannot be reused once it has been removed from the line. Replace the retainer when:

- replacing the fuel rail.
- replacing the fuel line.
- replacing the fuel pump.
- replacing the fuel filter.

## 2007 Acura RL

### 2005-08 ENGINE PERFORMANCE Fuel Supply System - RL

- replacing the fuel gauge sending unit.
- it has been removed from the line.
- it is damaged.

#### RETAINER COLOR REFERENCE CHART

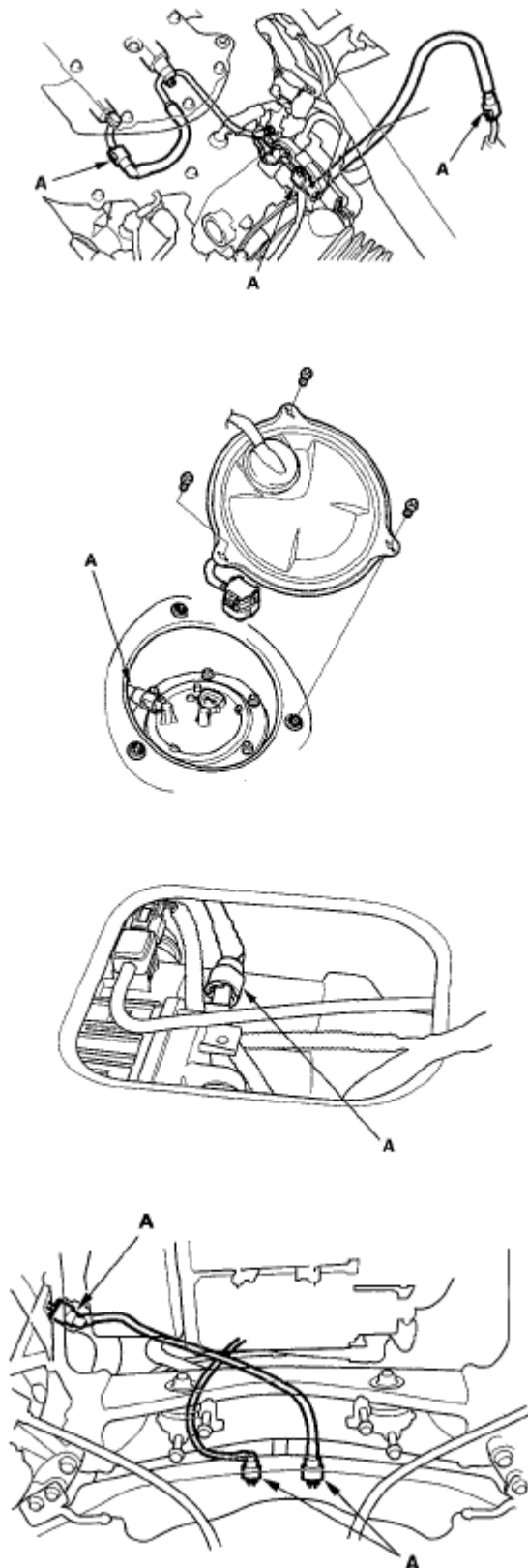
Location	Manufacturer	Retainer color	Line diameter
A	Tokai	Blue green	0.3 in. (8 mm)
B	Sanoh	White	0.4 in. (9.5 mm)
C	Sanoh	White	0.4 in. (9.5 mm)
D	Tokai	Natural	0.5 in. (11.8 mm)
E	Tokai	Green	0.5 in. (11.8 mm)
F	Tokai	Green	0.2 in. (6.3 mm)

**NOTE:** When replacing a retainer, use the same size and manufacturer.

#### FUEL LINE/QUICK-CONNECT FITTING REMOVAL

**NOTE:** Before you work on the fuel lines and fittings, read the "Fuel Line/Quick-Connect Fitting Precautions" (see FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS ).

1. Relieve the fuel pressure (see FUEL PRESSURE RELIEVING ).
2. Check the fuel quick-connect fittings (A) for dirt, and clean them if needed.



**Fig. 53: Identifying Fuel Quick-Connect Fittings**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

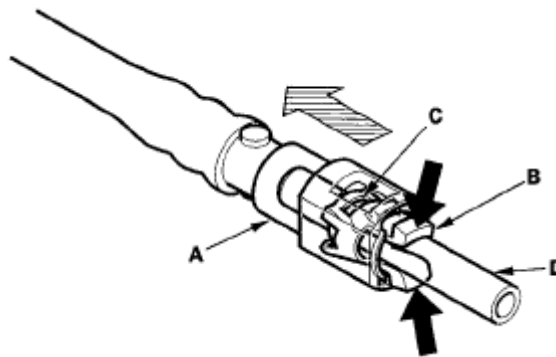
3. Place a rag or shop towel over the quick-connect fitting. Hold the connector (A) with one hand, and squeeze the retainer tabs (B) with the other hand to release them from the locking tabs (C). Pull the

connector off.

Hold the connector (A) with one hand, and squeeze the retainer tabs (B) with the other hand to release them from the locking tabs (C). Pull the connector off.

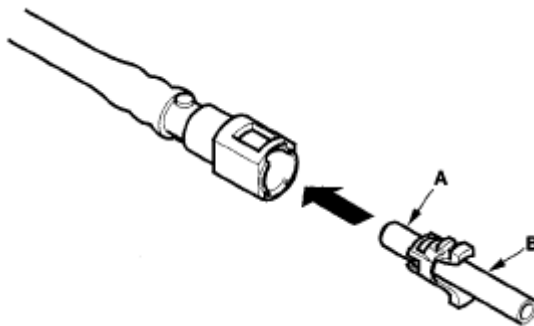
**NOTE:**

- Be careful not to damage the line (D) or other parts. Do not use tools.
- If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.
- Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.



**Fig. 54: Pressing Retainer Tabs**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Check the contact area (A) of the line (B) for dirt or damage.
  - If it is dirty, clean it.
  - If it is rusty or damaged, replace the fuel pump, fuel filter, or fuel feed line.



**Fig. 55: Identifying Contact Area Of Line**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

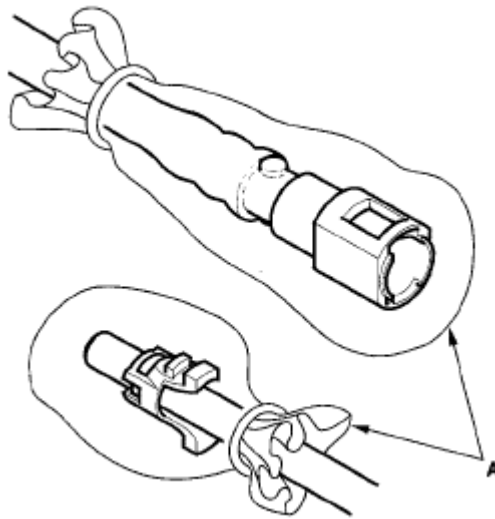
5. To prevent damage and keep foreign matter out, cover the disconnected connector and line ends with plastic bags (A).

**NOTE:**

The retainer cannot be reused once it has been removed from the line.  
Replace the retainer when:



- replacing the fuel rail.
- replacing the fuel feed line.
- replacing the fuel pump.
- replacing the fuel filter.
- replacing the fuel gauge sending unit.
- it has been removed from the line.
- it is damaged.

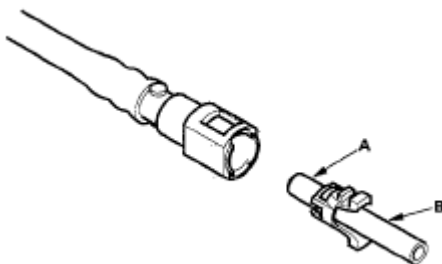


**Fig. 56: Covering Fuel Quick-Connect Fittings In Plastic Bag**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

## FUEL LINE/QUICK-CONNECT FITTING INSTALLATION

**NOTE:** Before you work on the fuel lines and fittings, read the "Fuel Line/Quick-Connect Fitting Precautions" (see FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS ).

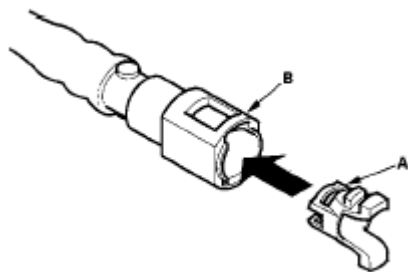
1. Check the contact area (A) of the line (B) for dirt or damage, and clean it if needed.



**Fig. 57: Identifying Contact Area Of Line**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

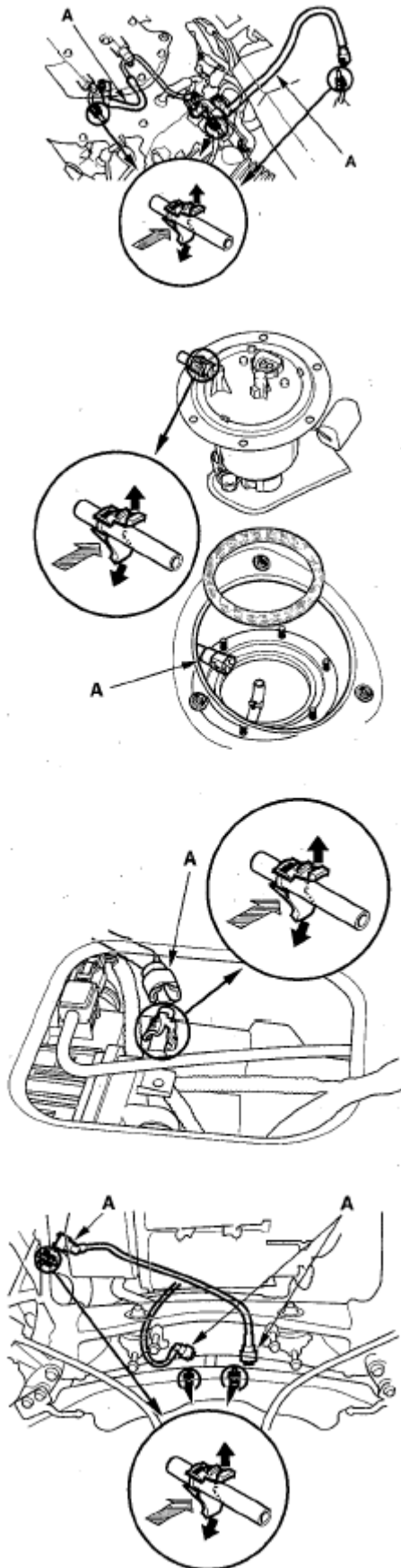
2. Insert a new retainer (A) into the connector (B) if the retainer is damaged, or after:

- replacing the fuel rail.
- replacing the fuel feed line.
- replacing the fuel pump.
- replacing the fuel filter.
- replacing the fuel gauge sending unit.
- removing the retainer from the line.



**Fig. 58: Inserting Retainer Into Connector**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

3. Before connecting a new fuel tube/quick-connect fitting assembly (A), remove the old retainer from the mating line.



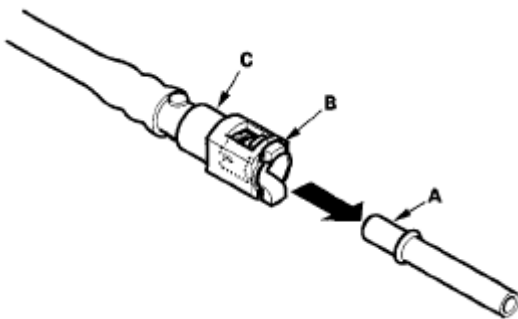
**Fig. 59: Identifying Fuel Tube/Quick-Connect Fitting Assembly**

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

4. Align the quick-connect fittings with the line (A), and align the retainer locking tabs (B) with the connector grooves (C). Then press the quick-connect fittings onto the line until both retainer tabs lock with a clicking sound.

**NOTE:** If it is hard to connect, put a small amount of new engine oil on the line end.

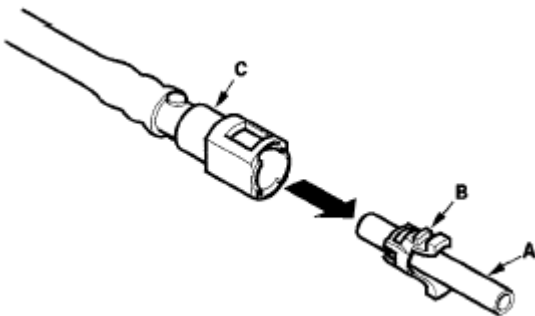
#### **Connection with new retainer**



**Fig. 60: Identifying Connection With Retainer**

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

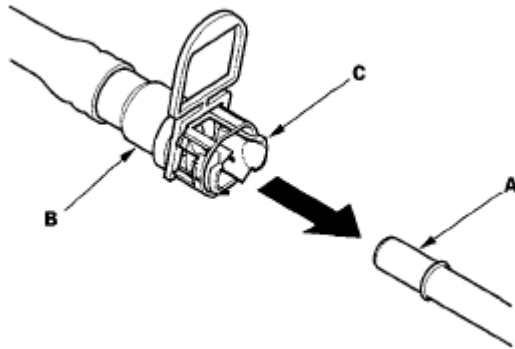
#### **Reconnection to existing retainer**



**Fig. 61: Identifying Reconnection To Existing Retainer**

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

#### **Connection to new fuel line**



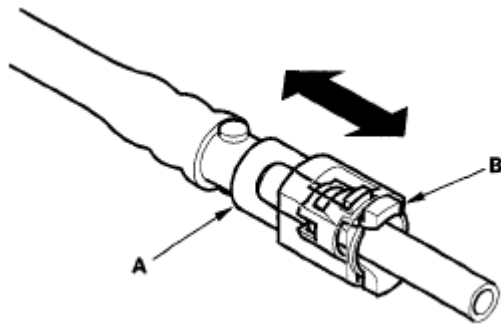
**Fig. 62: Identifying Connection To Fuel Line**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. When you reconnect the connector with the old retainer, make sure the connection is secure and the tabs (A) are firmly locked into place; check visually and also by pulling the connector (B). When you replace the fuel line with a new one, make sure you remove the ring pull (C) upwards after you confirm the connection is secure.

**NOTE:** Before you remove the ring pull, make sure the fuel line connection is secure. If the connection is not secure, the ring pull could break when you try to remove it.

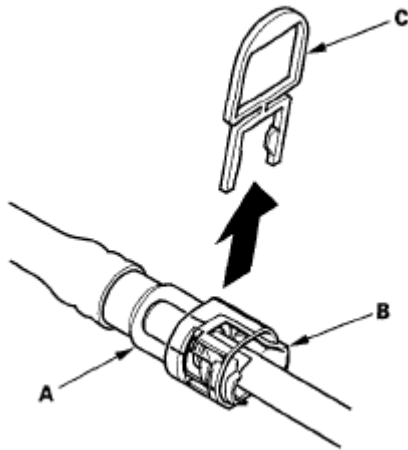
#### Reconnection to existing retainer



**Fig. 63: Identifying Reconnection To Existing Retainer**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

#### Connection to new fuel line



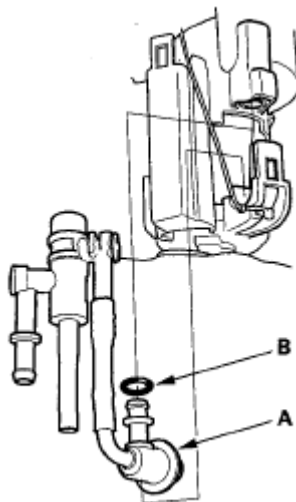
**Fig. 64: Identifying Connection To Fuel Line**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Reconnect the negative cable to the battery, and turn the ignition switch ON (II). The fuel pump will run for about 2 seconds, and fuel pressure will rise. Repeat this two or three times, and check that there is no leakage in the fuel supply system.

## FUEL PRESSURE REGULATOR REPLACEMENT

**NOTE:** If the fuel tank is full, drain the fuel (see FUEL TANK DRAINING ).

1. Remove the fuel tank unit (see FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT ).
2. Remove the fuel pressure regulator (A).



**Fig. 65: Identifying Fuel Pressure Regulator**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the parts in the reverse order of removal with a new O-ring (B).

**NOTE:** Coat the O-rings with clean engine oil. Do not use any other type of oil

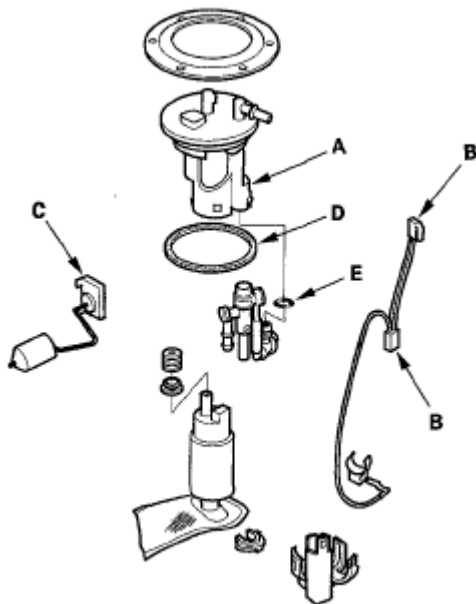
or fluid. Do not pinch the O-rings during installation.

## FUEL FILTER REPLACEMENT

The fuel filter should be replaced whenever the fuel pressure drops below the specified value (see **FUEL PRESSURE TEST** ), after making sure that the fuel pump and the fuel pressure regulator are OK.

**NOTE:** If the fuel tank is full, drain the fuel (see **FUEL TANK DRAINING** ).

1. Remove the fuel tank unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ).
2. Remove the fuel filter set (A).

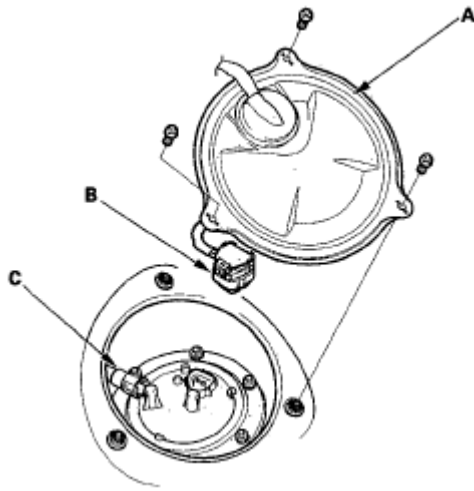


**Fig. 66: Identifying Fuel Tank Unit And Fuel Filter Set**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check these items before installing the fuel tank unit:
  - When connecting the wire harness, make sure the connection is secure and the connectors (B) are firmly locked into place.
  - When installing the fuel gauge sending unit (C), make sure the connection is secure and the connector is firmly locked into place. Be careful not to bend or twist it excessively.
4. Install the parts in the reverse order of removal with a new base gasket (D) and a new O-ring (E).

## FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT

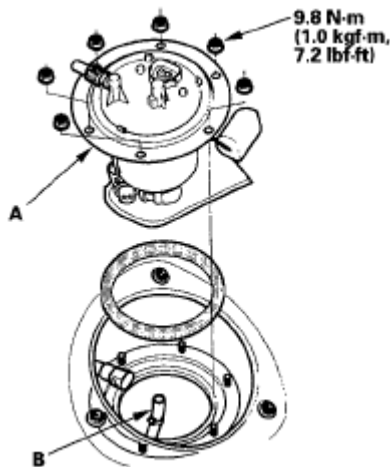
1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING** ).
2. Remove the fuel cap.
3. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION** ).
4. Remove the access panel (A) from the left side of the floor.



**Fig. 67: Identifying Access Panel And Fuel Pump 5P Connector**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Disconnect the fuel pump 5P connector (B).
6. Disconnect the quick-connect fitting (C) from the fuel tank unit.
7. Remove the fuel tank unit (A), and disconnect the transfer tube (B).

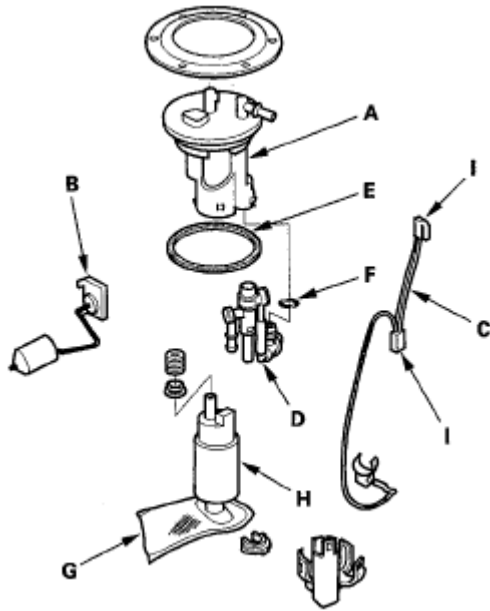
**NOTE:** If the fuel tank is full, drain the fuel (see **FUEL TANK DRAINING** ).



**Fig. 68: Identifying Transfer Tube And Fuel Tank Unit With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the strainer case (A), the fuel gauge sending unit (B), the wire harness (C), and the fuel pressure regulator (D).



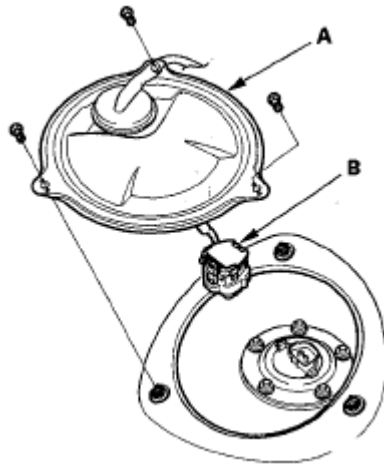


**Fig. 69: Identifying Fuel Pressure Regulator And Fuel Gauge Sending Unit**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the parts in the reverse order of removal with a new base gasket (E) and a new O-ring (F), then check these items:
  - Make sure the connection is secure and the suction filter (G) is firmly connected to the fuel pump (H).
  - Connect the transfer tube.
  - When connecting the wire harness, make sure the connection is secure and the connectors (I) are firmly locked into place.
  - When installing the fuel gauge sending unit, make sure the connection is secure and the connector is firmly locked into place. Be careful not to bend or twist it excessively.

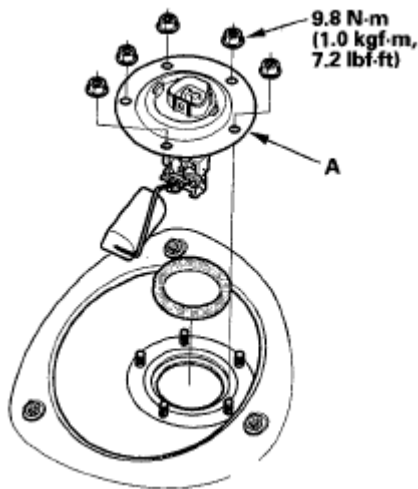
## SECONDARY FUEL GAUGE SENDING UNIT REPLACEMENT

1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING** ).
2. Remove the fuel cap.
3. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION** ).
4. Remove the access panel (A) from the right side of the floor.



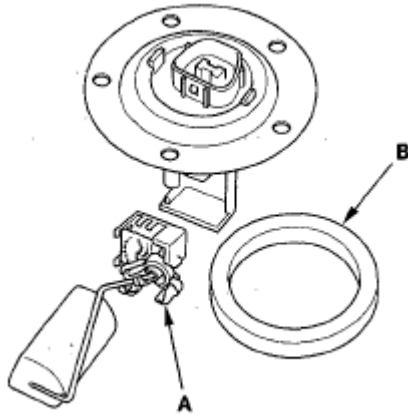
**Fig. 70: Identifying Secondary Fuel Gauge Sending Unit 5P Connector And Access Panel**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Disconnect the secondary fuel gauge sending unit 5P connector (B).
6. Remove the secondary fuel gauge sending unit (A).



**Fig. 71: Identifying Secondary Fuel Gauge Sending Unit With Torque Specifications**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the fuel gauge sending unit (A).



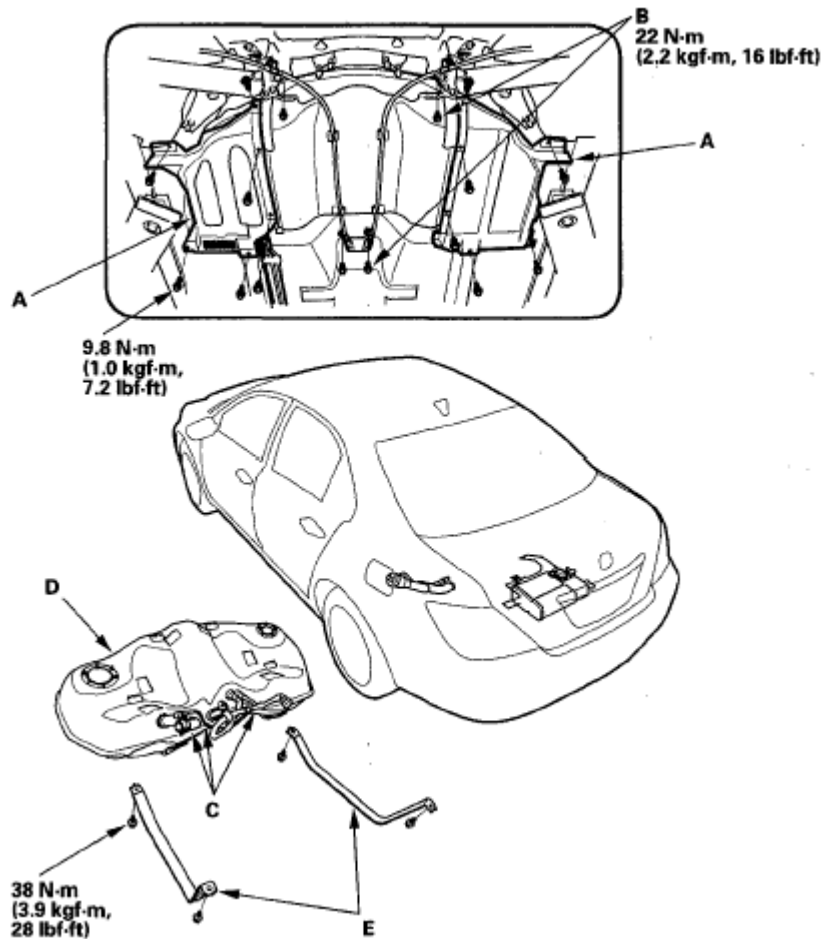
**Fig. 72: Identifying Fuel Gauge Sending Unit**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Install the parts in the reverse order of removal with a new base gasket (B).

**NOTE:** When installing the fuel gauge sending unit, make sure the connection is secure and the connector is firmly locked into place. Be careful not to bend or twist it excessively.

## FUEL TANK REPLACEMENT

1. Drain the fuel tank (see **FUEL TANK DRAINING** ).
2. Reinstall the fuel tank unit.
3. Remove the propeller shaft (see **PROPELLER SHAFT REMOVAL** ).
4. Remove the rear differential (see **REAR DIFFERENTIAL REMOVAL** ).
5. Jack up the vehicle, and support it with jackstands.
6. Remove the fuel tank covers (A) and parking brake cable bolts (B).



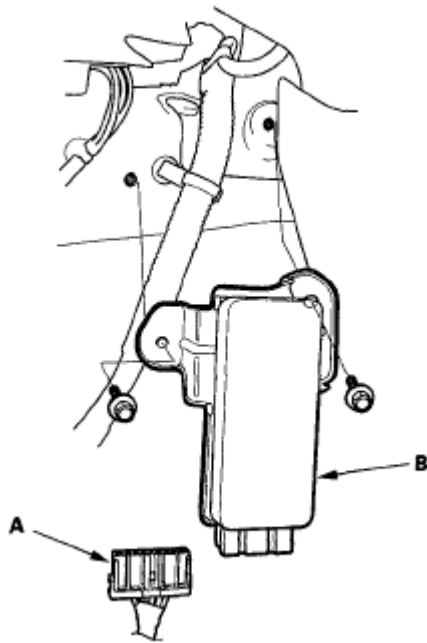
**Fig. 73: Identifying Fuel Tank Covers And Parking Brake Cable Bolts With Torque Specifications**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Disconnect the hoses (C). Slide back the clamps, then twist the hoses as you pull to avoid damaging them.
8. Place a jack, or other support, under the tank (D).
9. Remove the strap bolts, and let the straps (E) fall free.
10. Remove the fuel tank. If it sticks to the undercoat on its mount, carefully pry it off the mount.
11. Install the parts in the reverse order of removal.

## FUEL PUMP CONTROL MODULE REPLACEMENT

1. Remove the seat-back (see **REAR SEAT REMOVAL/INSTALLATION** ).
2. Disconnect the fuel pump control module connector (A).



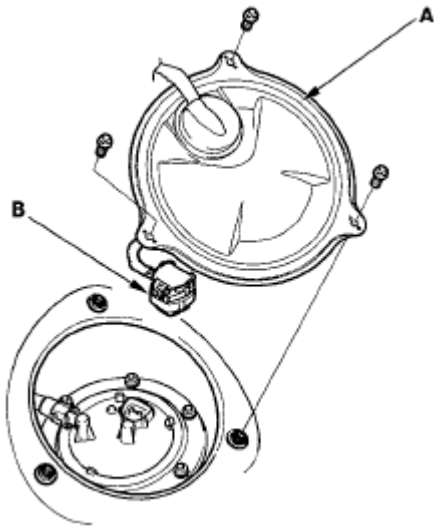
**Fig. 74: Identifying Fuel Pump Control Module And Connector**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the fuel pump control module (B).
4. Install the parts in the reverse order of removal.

## FUEL GAUGE SENDING UNIT TEST

**NOTE:** For the fuel gauge system circuit diagram, refer to the Gauges Circuit Diagram (see CIRCUIT DIAGRAM ).

1. Do multiplex integrated control system troubleshooting test mode A (see TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A ).
  - If no problem is found, go to step 2.
  - If DTC B1175 is indicated, go to the DTC B1175 troubleshooting (see DTC B1175: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT OPEN ).
2. Check the No. 21 METER (10 A) fuse in the driver's under-dash fuse/relay box.
3. Do the gauge drive circuit check (see THE GAUGE DRIVE CIRCUIT CHECK ).
  - If the fuel gauge needle sweeps from the minimum to maximum position and then returns to minimum, the gauge is OK. Go to step 4.
  - If the fuel gauge needle does not sweep correctly, replace the gauge control module and retest.
4. Turn the ignition switch OFF.
5. Remove the rear seat cushion (see REAR SEAT REMOVAL/INSTALLATION ).
6. Remove the access panel (A) from the left side of the floor.



**Fig. 75: Identifying Fuel Pump 5P Connector And Access Panel**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Disconnect the fuel pump 5P connector (B).
8. Remove the fuel tank unit from the fuel tank (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ).

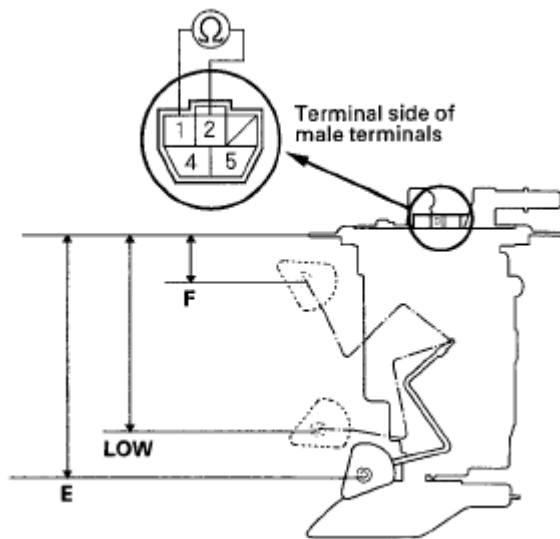
**NOTE:** If the fuel tank is full, drain the fuel (see **FUEL TANK DRAINING** ).

9. Measure resistance between the No. 1 and No. 2 terminals of the fuel pump 5P connector with the float at E (EMPTY), LOW (LOW FUEL INDICATOR), and F (FULL) positions.
  - If you do not get the following readings, replace the fuel gauge sending unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT** ).
  - If the fuel gauge sending unit test is OK, do the secondary fuel gauge sending unit test (see **SECONDARY FUEL GAUGE SENDING UNIT TEST** ).

#### **FLOAT POSITION CHART**

Float Position	F 1.1 in. (28.9 mm)	LOW 4.7 in. (118.1 mm)	E 5.7 in. (144.7 mm)
Resistance (ohms)	9 to 11	217.2 to 243	284.1 to 294.1

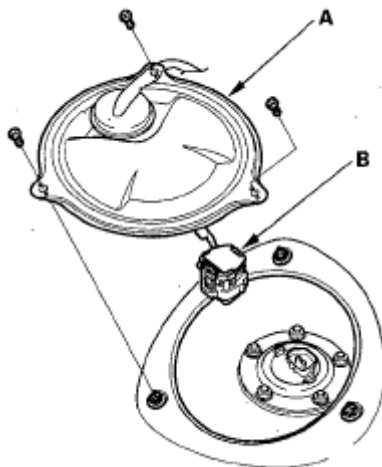
**NOTE:** Remove the No. 15 BACK UP (40 A) fuse from the under-hood fuse/relay box for at least 30 seconds after completing troubleshooting, otherwise it may take up to 20 minutes for the fuel gauge to indicate the correct fuel level.



**Fig. 76: Measuring Resistance Between No. 1 And No. 2 Terminals Of Fuel Pump 5P Connector**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

## SECONDARY FUEL GAUGE SENDING UNIT TEST

1. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION** ).
2. Remove the access panel (A) from the right side of the floor.



**Fig. 77: Identifying Secondary Fuel Gauge Sending Unit 5P Connector And Access Panel**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

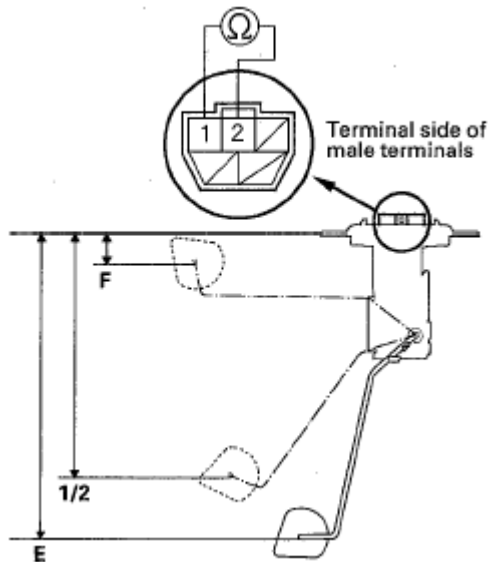
3. Disconnect the secondary fuel gauge sending unit 5P connector (B).
4. Remove the secondary fuel gauge sending unit from the fuel tank (see **SECONDARY FUEL GAUGE SENDING UNIT REPLACEMENT** ).
5. Measure resistance between the No. 1 and No. 2 terminals of the fuel pump 5P connector with the float at E (EMPTY), 1/2 (HALF FULL), and F (FULL) positions.

### FLOAT POSITION CHART

Float Position	F 0.3 in. (7.4 mm)	1/2 6.1 in. (155.9 mm)	E 7.7 in. (195.2 mm)

Resistance (ohms)	9 to 11	397.6 to 407.6	485.9 to 495.9
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**NOTE:** Remove the No. 15 BACK UP (40 A) fuse from the under-hood fuse/relay box for at least 10 seconds after completing troubleshooting, otherwise it may take up to 20 minutes for the fuel gauge to indicate the correct fuel level.



**Fig. 78: Measuring Resistance Between No. 1 And No. 2 Terminals Of Fuel Pump 5P Connector**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

## LOW FUEL INDICATOR TEST

- Do the gauge drive circuit check (see **THE GAUGE DRIVE CIRCUIT CHECK** ).
  - If the low fuel indicator flashes, go to step 2.
  - If the low fuel indicator does not flash, replace the gauge control module assembly.
- Do multiplex integrated control system troubleshooting test mode A (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A** ).
  - If any DTCs are indicated, go to the indicated DTC's troubleshooting.
  - If no DTCs are indicated, go to step 3.
- Do the fuel gauge sending unit test (see **FUEL GAUGE SENDING UNIT TEST** ), and secondary fuel gauge sending unit test (see **SECONDARY FUEL GAUGE SENDING UNIT TEST** ).