2003-06 ENGINE PERFORMANCE

EVAP System - MDX

COMPONENT LOCATION INDEX

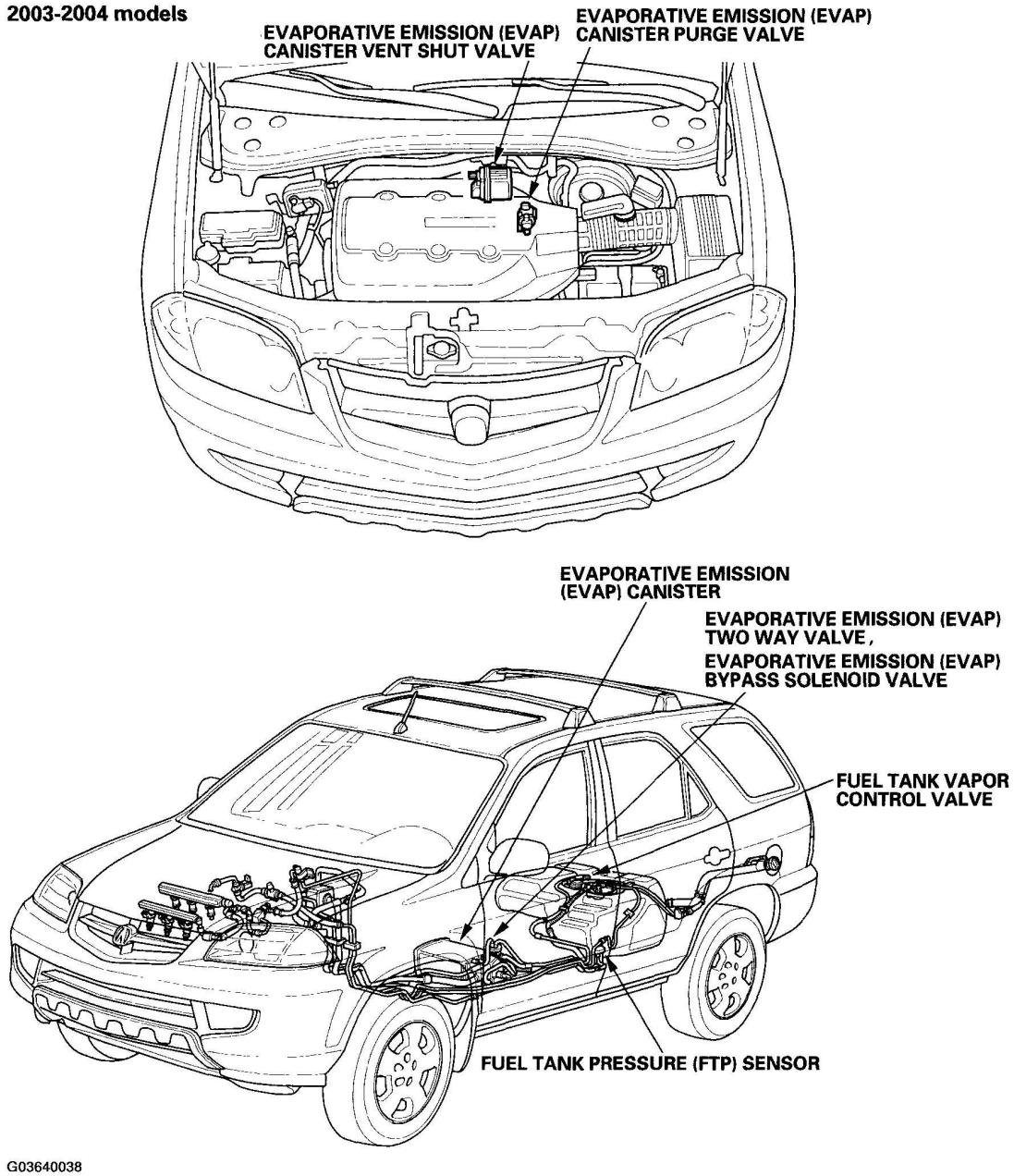


Fig. 1: Identifying Component Location Of EVAP System (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

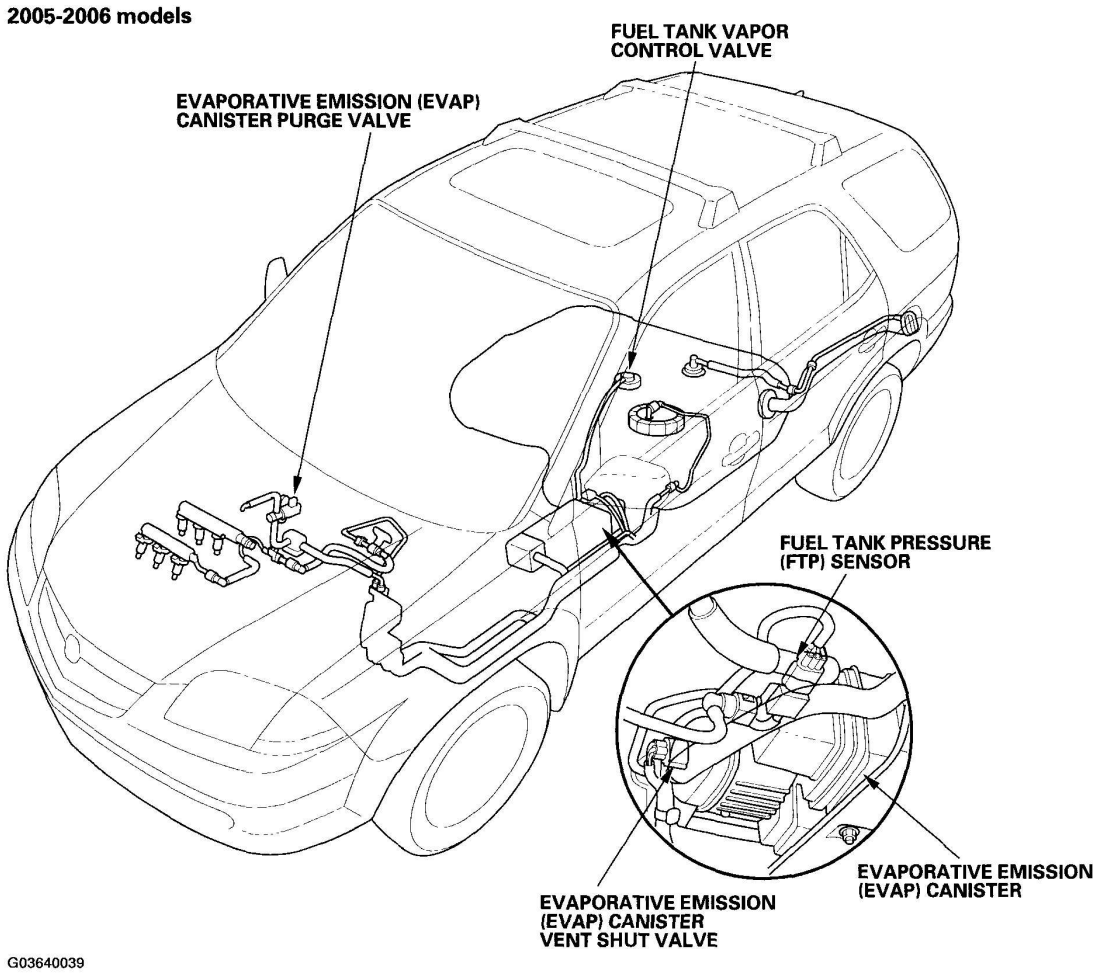


Fig. 2: Identifying Component Location Of EVAP System (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC CODES

DTC CHART

DTC	Description
DTC P0443	EVAP Canister Purge Valve Circuit Malfunction
DTC P0451	FTP Sensor Range/Performance Problem
DTC P0452	FTP Sensor Circuit Low Voltage
DTC P0453	FTP Sensor Circuit High Voltage
DTC P0455	EVAP System Large Leak Detected (2003-2004 models)
DTC P0455, P0456	EVAP System Large Leak Detected (2005-2006 models); EVAP System Very Small Leak Detected (2005-2006 models)
DTC P0456	EVAP System Very Small Leak Detected (2003-2004 models)
DTC P0457	EVAP System Leak Detected Fuel Fill Cap Loose or Missing

DTC P0496	EVAP System High Purge Flow
DTC P0497	EVAP System Low Purge Flow (2003-2004 models)
DTC P0497	EVAP System Low Purge Flow (2005-2006 models)
DTC P0498	EVAP Canister Vent Shut Valve Control Circuit Low Voltage
DTC P0499	EVAP Canister Vent Shut Valve Control Circuit High Voltage
DTC P1450	Two Way Valve Bypass Valve Control Circuit Low Voltage (2003-2004 models)
DTC P1451	Two Way Valve Bypass Valve Control Circuit High Voltage (2003-2004 models)
DTC P1454, P2422	FTP Sensor Range/Performance Problem; EVAP Canister Vent Shut Valve Close Malfunction

DTC TROUBLESHOOTING

DTC P0443: EVAP CANISTER PURGE VALVE CIRCUIT MALFUNCTION

Special Tools Required

- Vacuum pump/gauge, 0-30 in.Hg, Snap-on YA4000A or equivalent, commercially available
- Vacuum/pressure gauge, 0-4 in.Hg 07JAZ-001000B

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

   Is DTC P0443 indicated?

   YES - Go to step 5.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the EVAP canister purge valve and the PCM.
5. Turn the ignition switch OFF, and allow the engine to cool below 149 °F (65 °C).
6. Disconnect the vacuum hose (A) from the purge joint (B) in the engine compartment, and connect a vacuum pump/gauge, 0-30 in.Hg, to the hose.

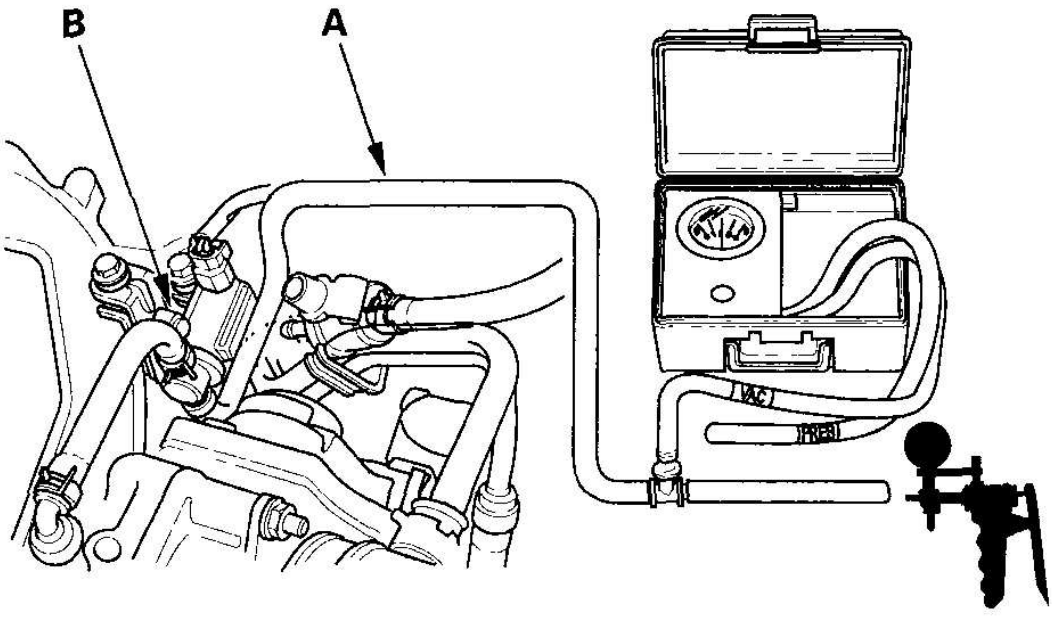


Fig. 3: Connecting Vacuum Pump/Gauge To Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Start the engine, and let it idle.

   Is there vacuum?

   YES - Go to step 8.
   NO - Go to step 15 .
8. Turn the ignition switch OFF.
9. Disconnect the EVAP canister purge valve 2P connector.
10. Check for continuity between EVAP canister purge valve 2P connector terminal No. 1 and body ground.

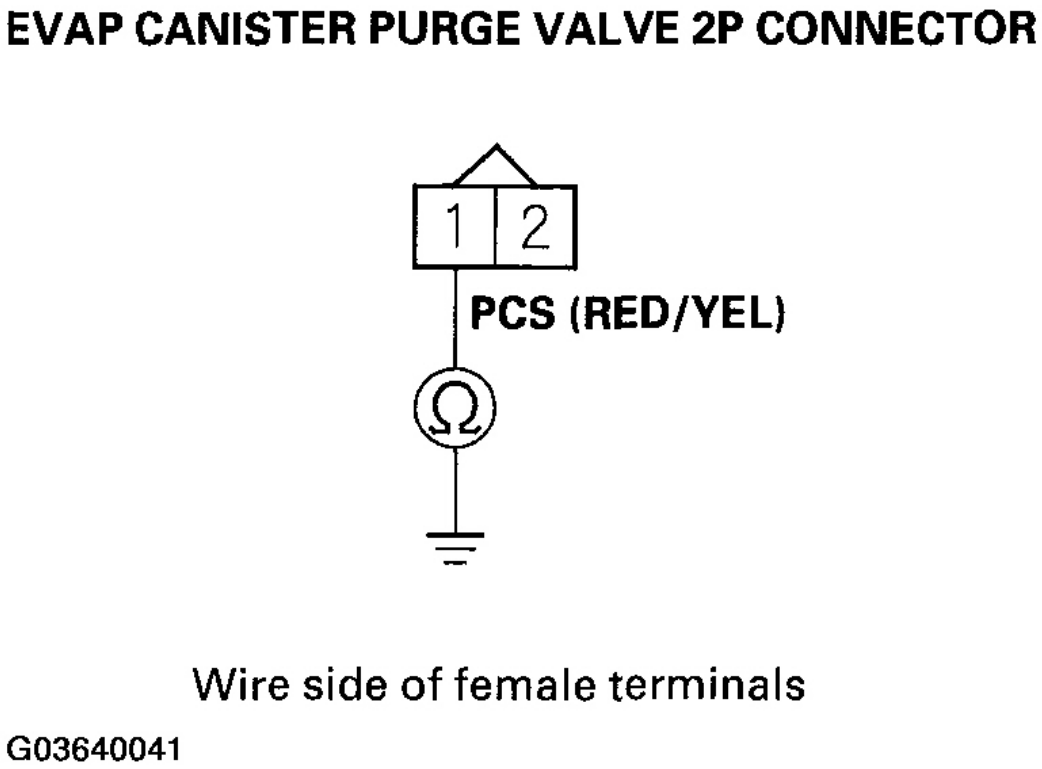


Fig. 4: Checking Continuity Between EVAP Canister Purge Valve 2P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

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

11. Turn the ignition switch OFF.
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector A (73P).
14. Check for continuity between EVAP canister purge valve 2P connector terminal No. 1 and body ground.

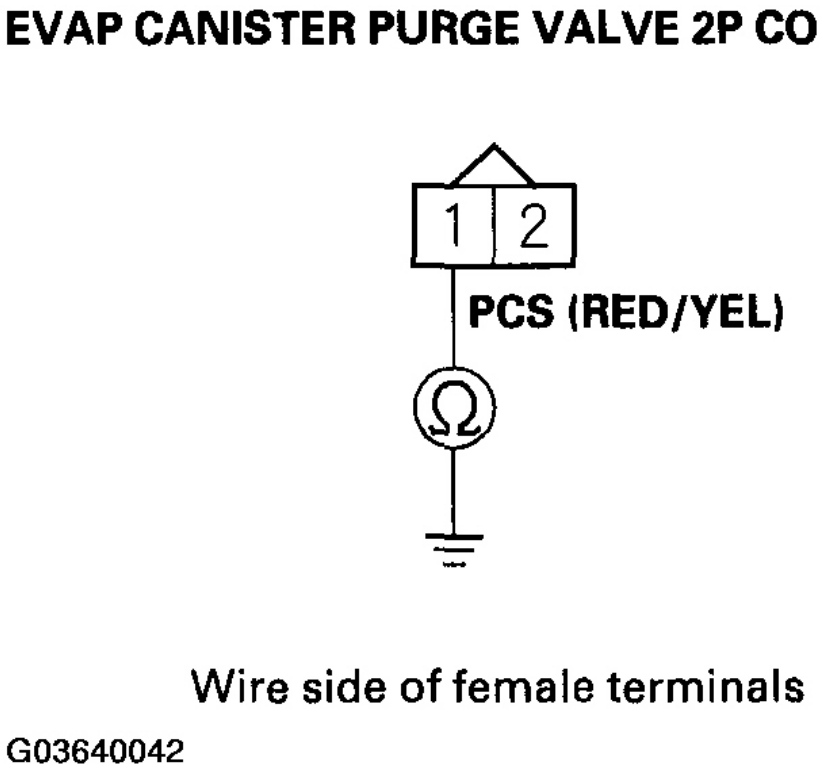


Fig. 5: Checking Continuity Between EVAP Canister Purge Valve 2P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the EVAP canister purge valve and the PCM (A16), then go to step 25 .

NO - Go to step 32 .

15. Turn the ignition switch OFF.
16. Disconnect the EVAP canister purge valve 2P connector.
17. Turn the ignition switch ON (II).
18. Measure voltage between EVAP canister purge valve 2P connector terminal No. 2 and body ground.

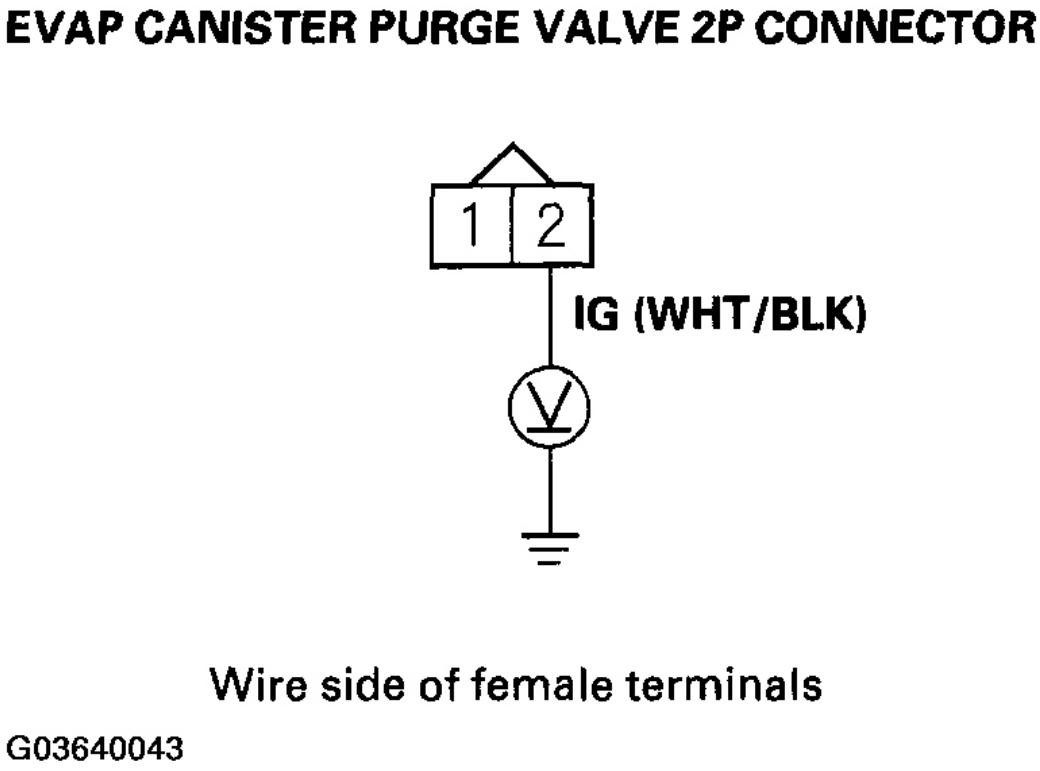


Fig. 6: Measuring Voltage Between EVAP Canister Purge Valve 2P Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 19.

NO - Repair open in the wire between the EVAP canister purge valve and the A/F sensor relay, then go to step 26

19. Turn the ignition switch OFF.
20. Jump the SCS line with the HDS.
21. Disconnect PCM connector A (73P).
22. Check for continuity between PCM connector terminal A16 and EVAP canister purge valve 2P connector terminal No. 1.

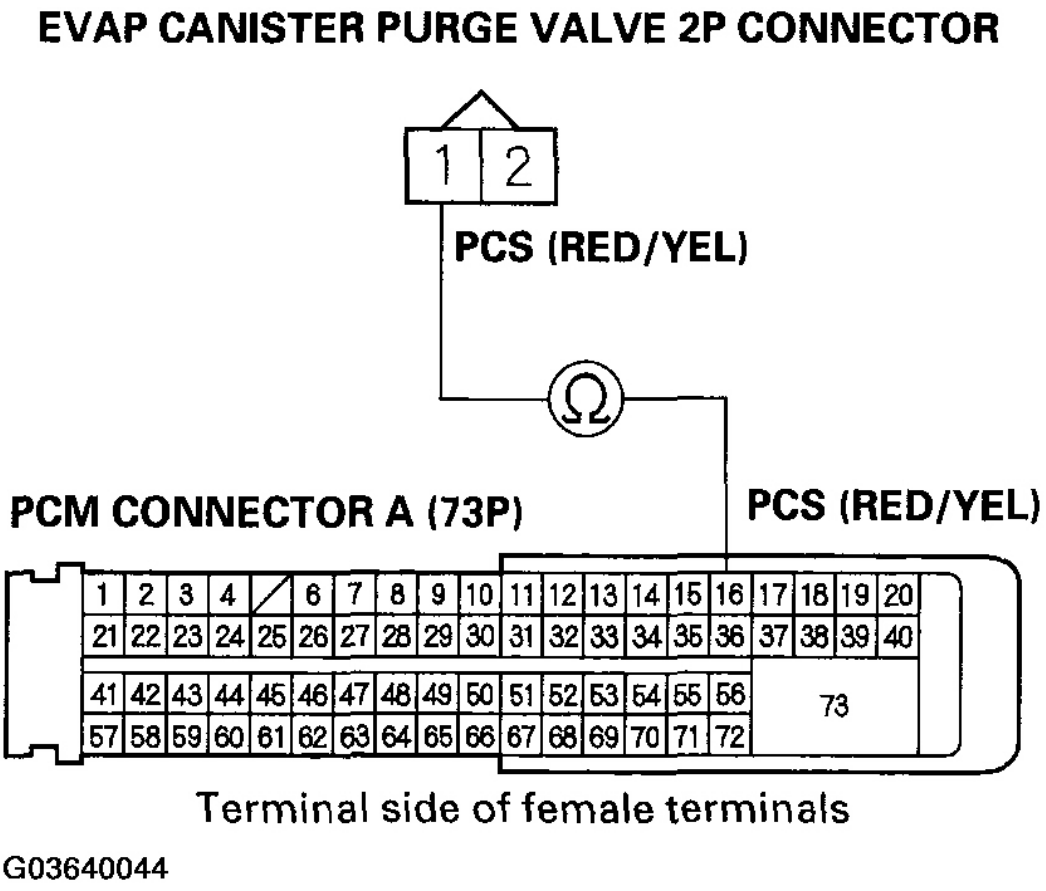


Fig. 7: Checking Continuity Between PCM Connector Terminal A16 And EVAP Canister Purge Valve 2P Connector Terminal No. 1
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 23.

NO - Repair open in the wire between the EVAP canister purge valve and the PCM (A16), then go to step 25 .

23. Measure resistance between EVAP canister purge valve 2P connector terminals No. 1 and No. 2.

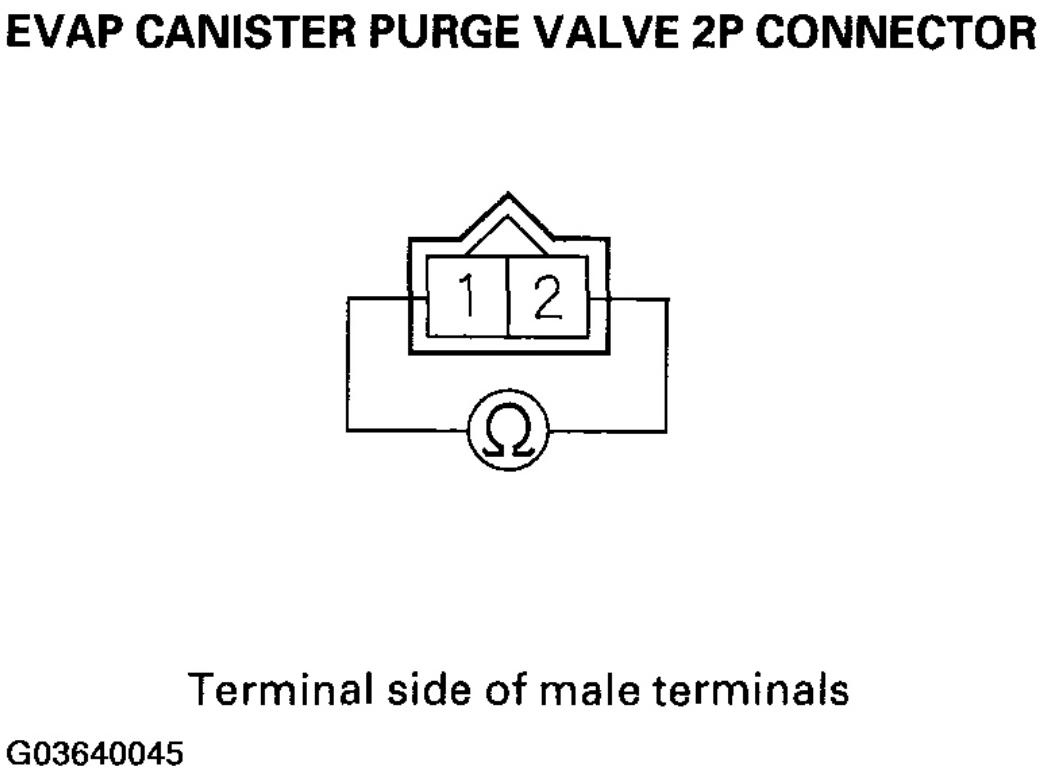


Fig. 8: Measuring Resistance Between EVAP Canister Purge Valve 2P Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 28 ohm at room temperature?

YES - Go to step 32 .
NO - Go to step 24.

24. Replace the EVAP canister purge valve (see **EVAP CANISTER PURGE VALVE REPLACEMENT**).
25. Reconnect PCM connector A (73P).
26. Reconnect the EVAP canister purge valve 2P connector.
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.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2413 is indicated, check for poor connections or loose terminals at the EVAP canister purge valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Troubleshooting is complete.

31. Monitor the OBD STATUS for DTC P0443 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the EVAP canister purge valve and the 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 29 and recheck.

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

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0443 is indicated, check for poor connections or loose terminals at the EVAP canister purge valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

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

DTC P0451: FTP SENSOR 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 P2422 is stored at the same time as DTC P0451, troubleshoot DTC P2422 first, then recheck for DTC P0451.**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine, and let it idle for 1 minute.
4. Monitor the OBD STATUS for DTC P0451 in the DTCs MENU with HDS.

Does the screen indicate FAILED?

YES - Go to step 5.

NO - If the screen indicates PASSED, intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor and the PCM. If the screen indicates NOT

COMPLETED, go to step 3 and recheck.

5. Turn the ignition switch OFF.
6. Replace the FTP sensor; 2003-2004 models (see **FTP SENSOR REPLACEMENT**), 2005-2006 models (see **FTP SENSOR REPLACEMENT**).
7. Turn the ignition switch ON (II).
8. Reset the PCM with the HDS.
9. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
10. Start the engine, and let it idle for 1 minute.
11. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P0451 is indicated, check for poor connections or loose terminals at the FTP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

    NO - Go to step 12.
12. Monitor the OBD STATUS for DTC P0451 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES - Troubleshooting is complete.

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

DTC P0452: FTP SENSOR CIRCUIT LOW VOLTAGE

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC P0651 is indicated at the same time as DTC P0452, troubleshoot DTC P0651 first, then recheck for DTC P0452.**
- **Information marked with an asterisk (*) applies to 2003-2004 models.**
- **Information marked with double asterisk (**) applies to 2005-2006 models**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch OFF.
4. Remove the fuel fill cap.
5. Turn the ignition switch ON (II).
6. Check the FTP SENSOR in the DATA LIST with the HDS.

Is about - 7.3 kPa (-2.16 in.Hg, - 55 mmHg), or 0.3 V or less indicated?

YES - Go to step 10 .

NO - Go to step 7.

7. Install the fuel fill cap.
8. Start the engine.
9. Monitor the OBD STATUS for DTC P0452 in the DTCs MENU with the HDS.

Does the screen indicate FAILED?

YES - Go to step 10.

NO - If the screen indicates PASSED, intermittent failure, system is OK at this time. If the screen indicates NOT COMPLETED, go to step 8 and recheck.

10. Turn the ignition switch OFF.
11. Disconnect the FTP sensor 3P connector.
12. Turn the ignition switch ON (II).
13. Check the FTP SENSOR in the DATA LIST with the HDS.

Is about 7.3 kPa (2.16 in.Hg, 55 mmHg), or 4.7 V or more indicated?

YES - Go to step 24 .

NO - Go to step 14.

14. Measure voltage between FTP sensor 3P connector terminal No. 1 and body ground.

2003-2004 models

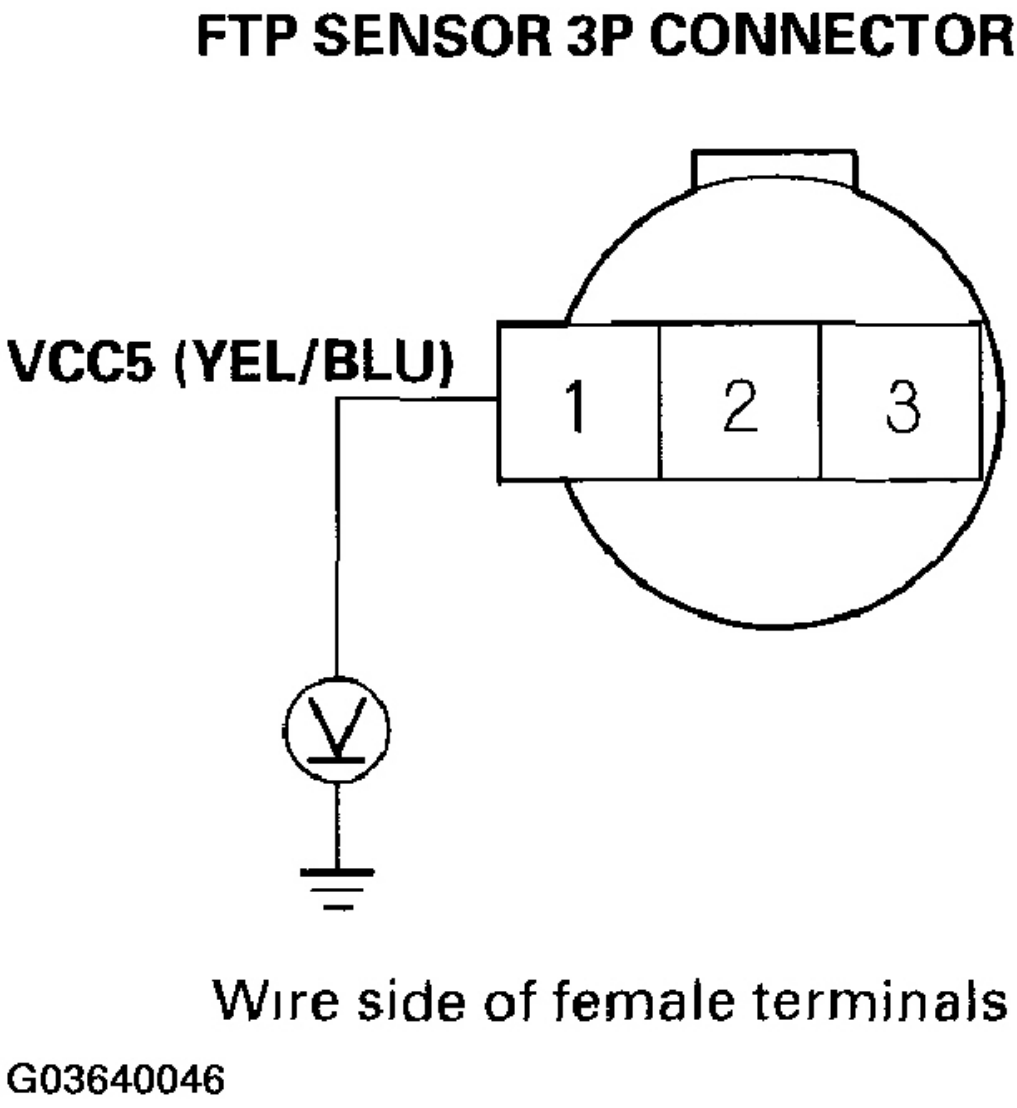


Fig. 9: Measuring Voltage Between FTP Sensor 3P Connector Terminal No. 1 And Body Ground (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

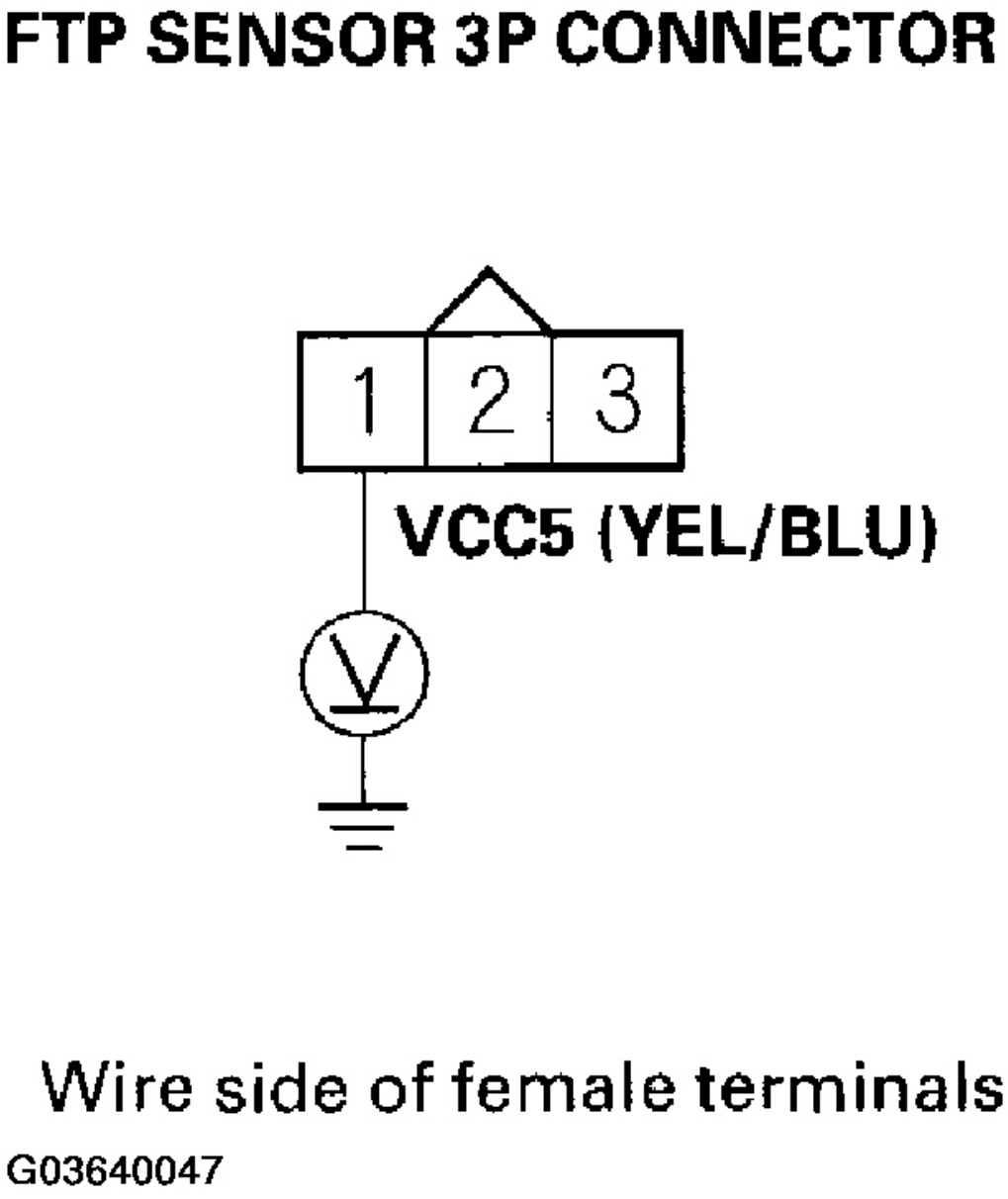


Fig. 10: Measuring Voltage Between FTP Sensor 3P Connector Terminal No. 1 And Body Ground (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 20 .

NO - Go to step 15.

15. Turn the ignition switch OFF.
16. Jump the SCS line with the HDS.
17. Disconnect PCM connector B (56P).
18. Connect FTP sensor 3P connector terminal No. 1 to body ground with a jumper wire.

2003-2004 models

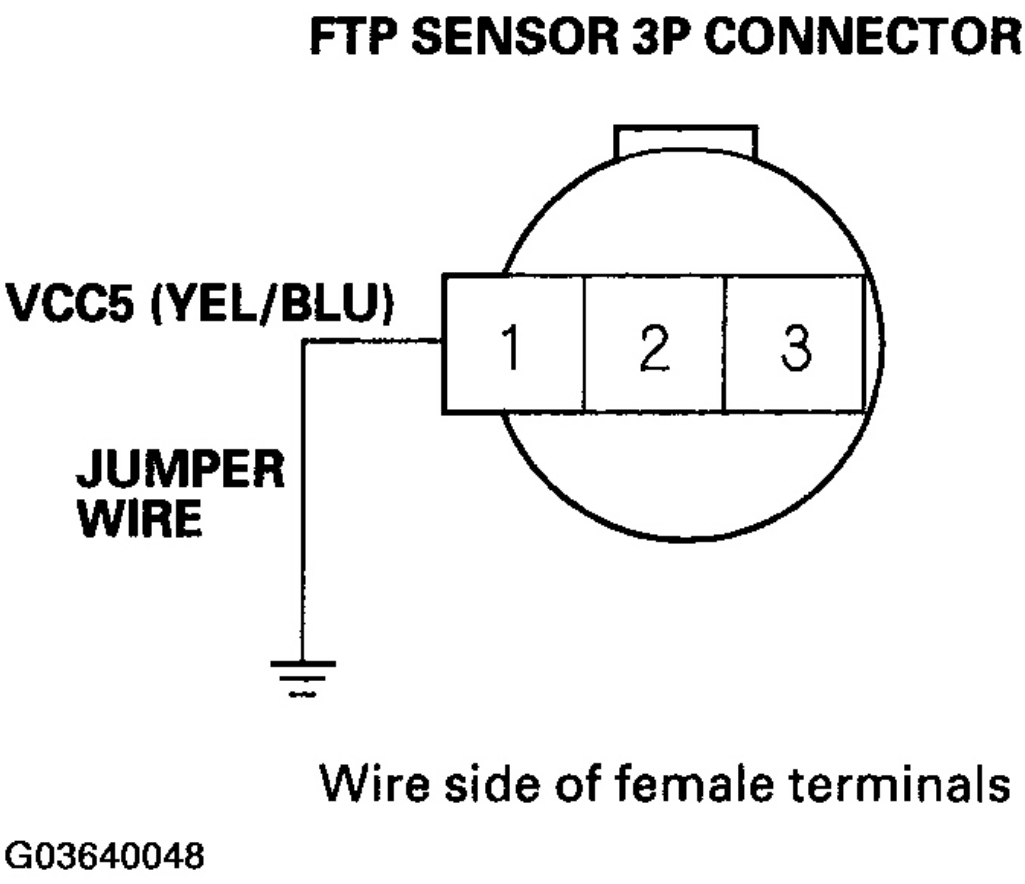


Fig. 11: Connecting FTP Sensor 3P Connector Terminal No. 1 To Body Ground With Jumper Wire (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

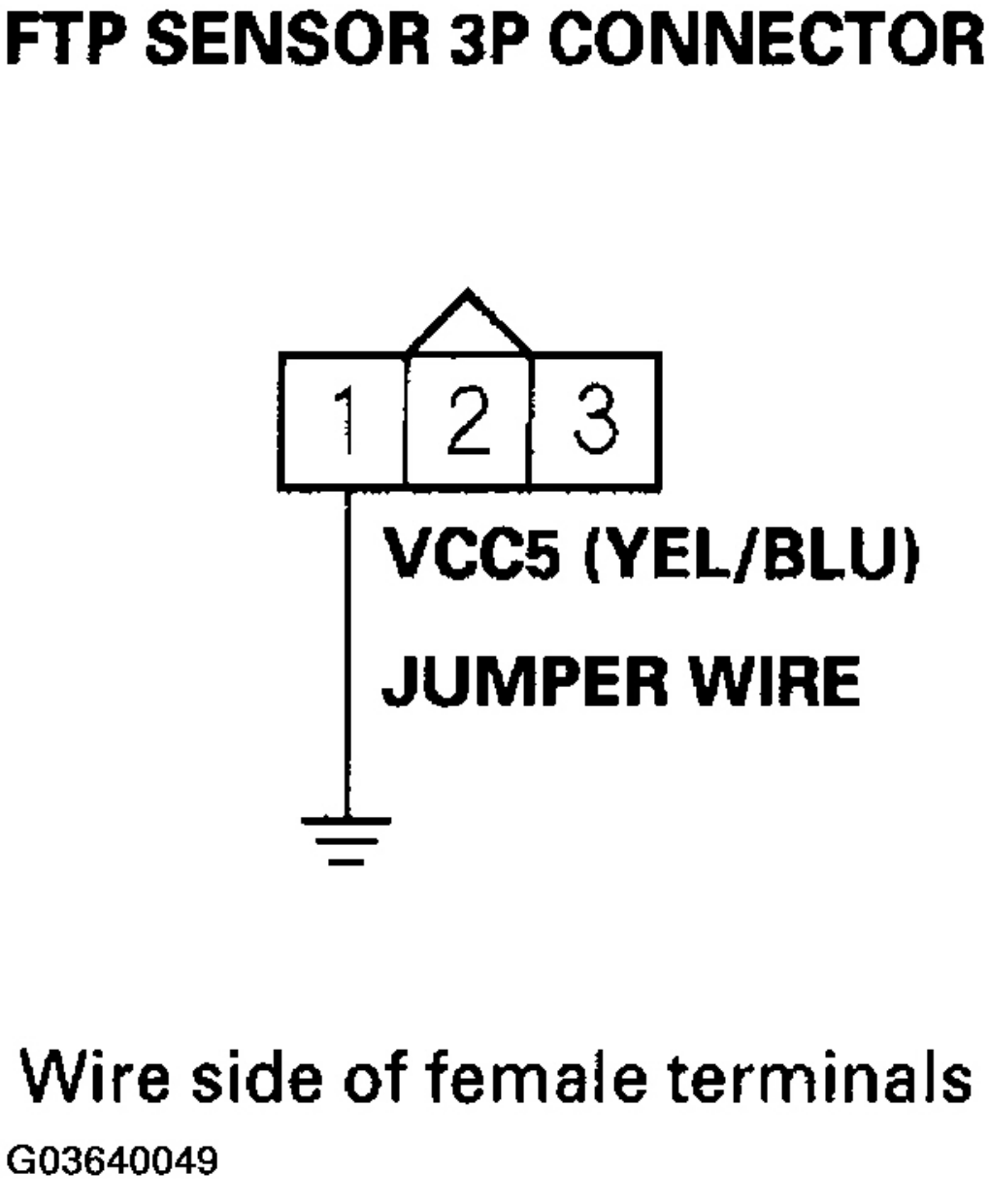


Fig. 12: Connecting FTP Sensor 3P Connector Terminal No. 1 To Body Ground With Jumper Wire (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Check for continuity between PCM connector terminal B46 and body ground.

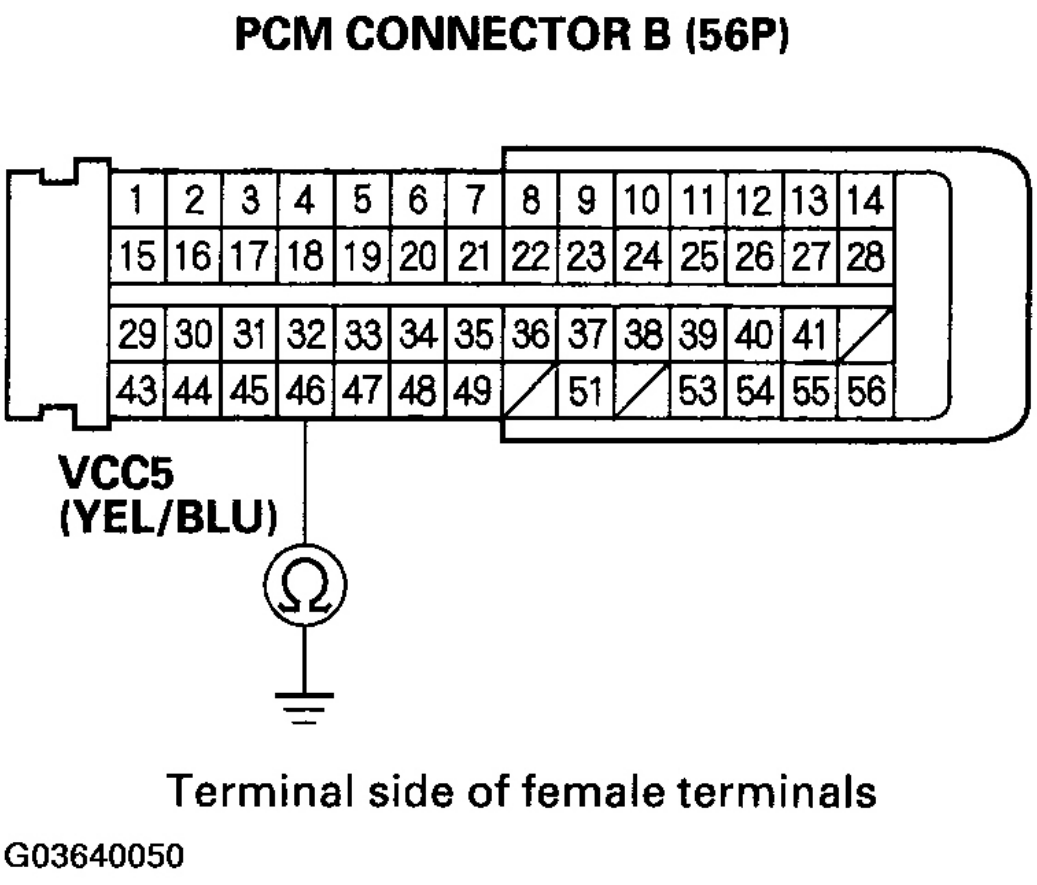


Fig. 13: Checking Continuity Between PCM Connector Terminal B46 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 33 .

NO - Repair open in the wire between the PCM (B46) and the FTP sensor, then go to step 26 .

20. Turn the ignition switch OFF.
21. Jump the SCS line with the HDS.
22. Disconnect PCM connector B (56P).
23. Check for continuity between FTP sensor 3P connector terminal No. 3* (No. 2)** and body ground.

2003-2004 models

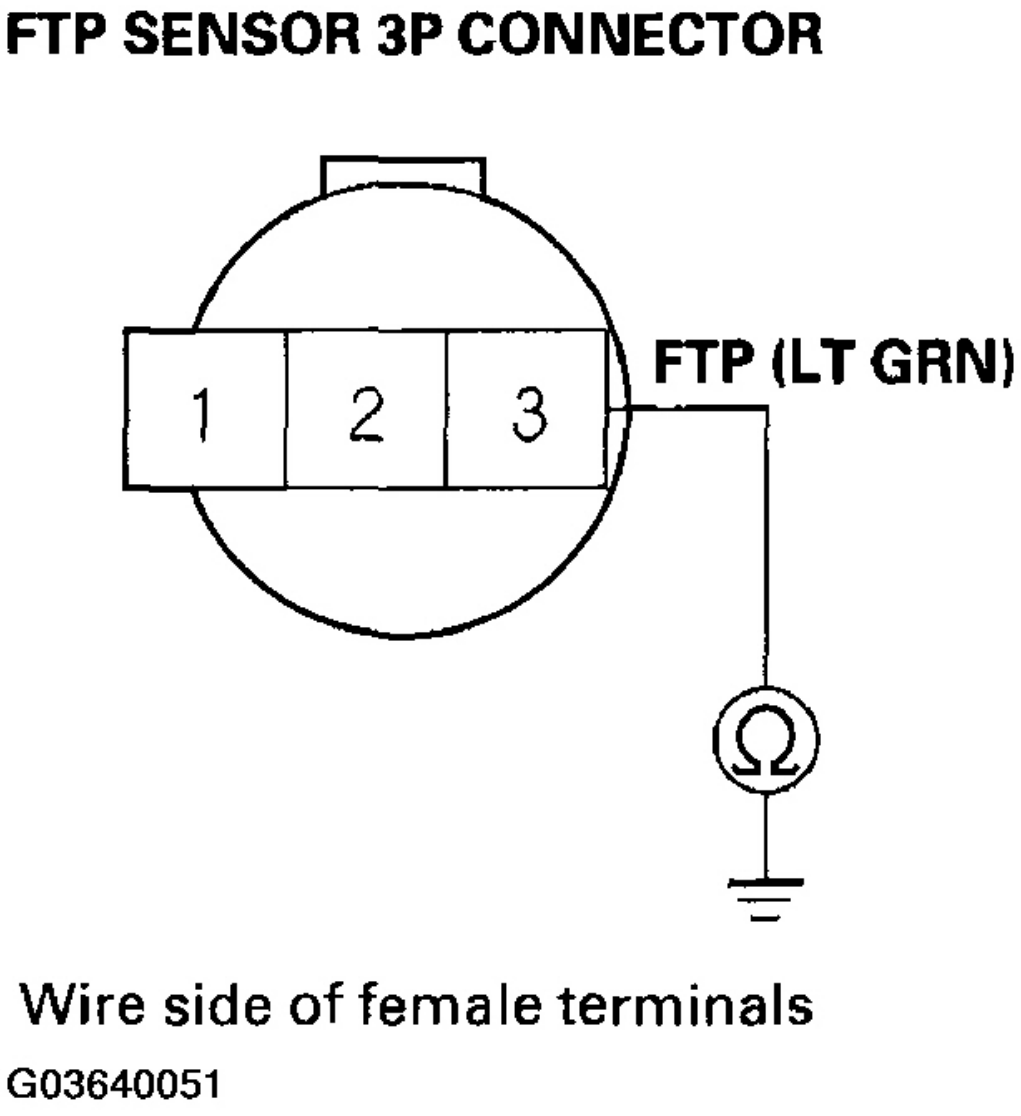


Fig. 14: Checking Continuity Between FTP Sensor 3P Connector Terminal No. 3* (No. 2) And Body Ground (2003-2004 Models)**
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

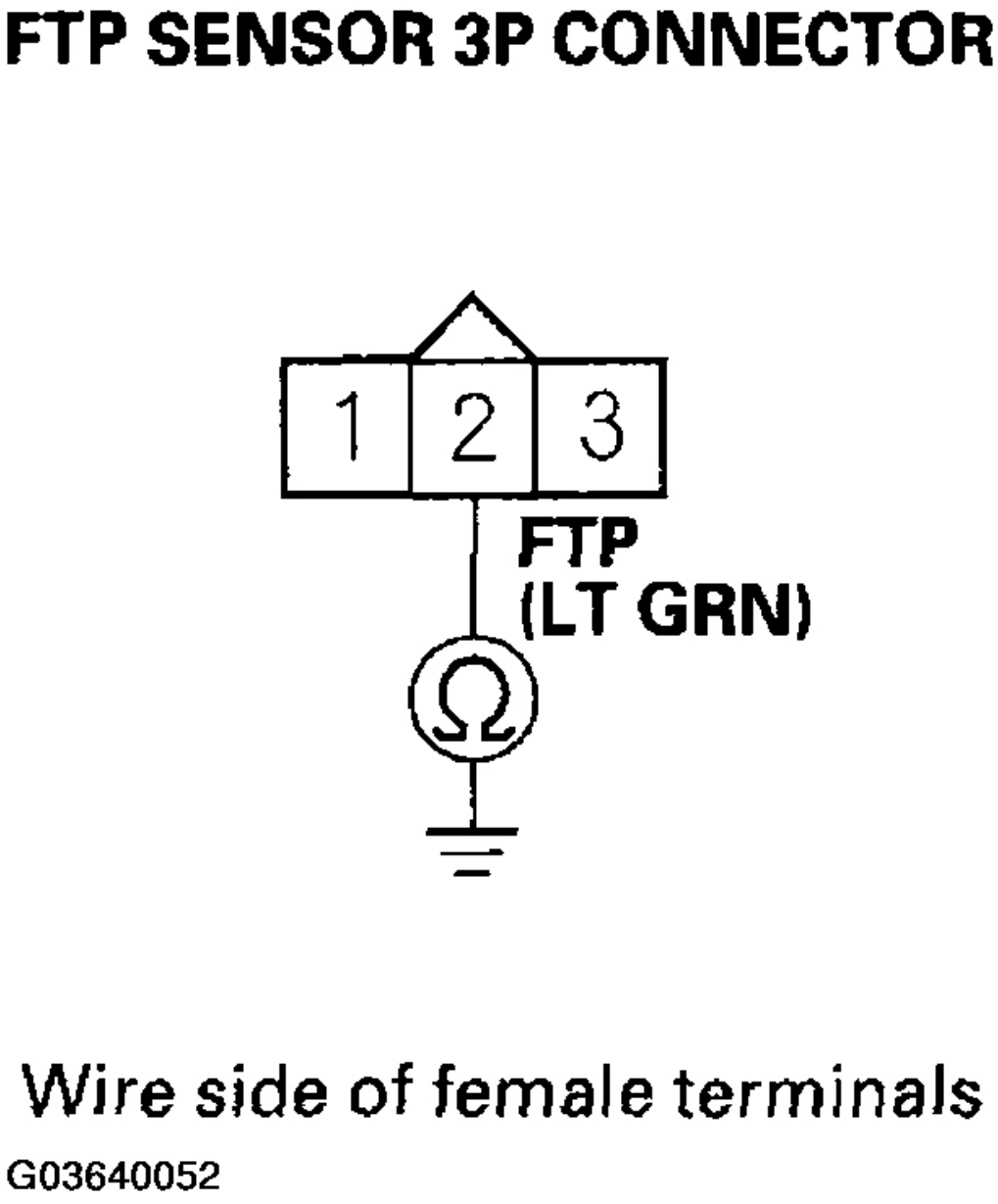


Fig. 15: Checking Continuity Between FTP Sensor 3P Connector Terminal No. 3* (No. 2) And Body Ground (2005-2006 Models)**
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (B47) and the FTP sensor, then go to step 26 .

NO - Go to step 33 .

24. Turn the ignition switch OFF.
25. Replace the FTP sensor; 2003-2004 models (see **FTP SENSOR REPLACEMENT**), 2005-2006 models (see **FTP SENSOR REPLACEMENT**).
26. Reconnect PCM connector B (56P).
27. Reconnect the FTP sensor 3P connector.
28. Turn the ignition switch ON (II).
29. Reset the PCM with the HDS.
30. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
31. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0452 is indicated, check for poor connections or loose terminals at the FTP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 32.

32. Monitor the OBD STATUS for DTC P0452 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 30 and recheck.

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

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0452 is indicated, check for poor connections or loose terminals at the FTP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

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

DTC P0453: FTP SENSOR CIRCUIT HIGH VOLTAGE

NOTE:

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

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

- **Information marked with an asterisk (*) applies to 2003-2004 models.**
- **Information marked with double asterisk (**) applies to 2005-2006 models**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch OFF.
4. Remove the fuel fill cap.
5. Turn the ignition switch ON (II).
6. Check the FTP SENSOR in the DATA LIST with the HDS.

Is about 7.3 kPa (2.16 in.Hg, 55 mmHg), or 4.7 V or more indicated?

YES - Go to step 10 .

NO - Go to step 7.

7. Install the fuel fill cap.
8. Start the engine.
9. Monitor the OBD STATUS for DTC P0453 in the DTCs MENU with the HDS.

Does the screen indicate FAILED?

YES - Go to step 10.

NO - If the screen indicates PASSED, intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor and the PCM. If the screen indicates NOT COMPLETED, go to step 6 and recheck.

10. Turn the ignition switch OFF.
11. Disconnect the FTP sensor 3P connector.
12. Connect FTP sensor 3P connector terminals No. 2 and No. 3 with a jumper wire.

2003-2004 models

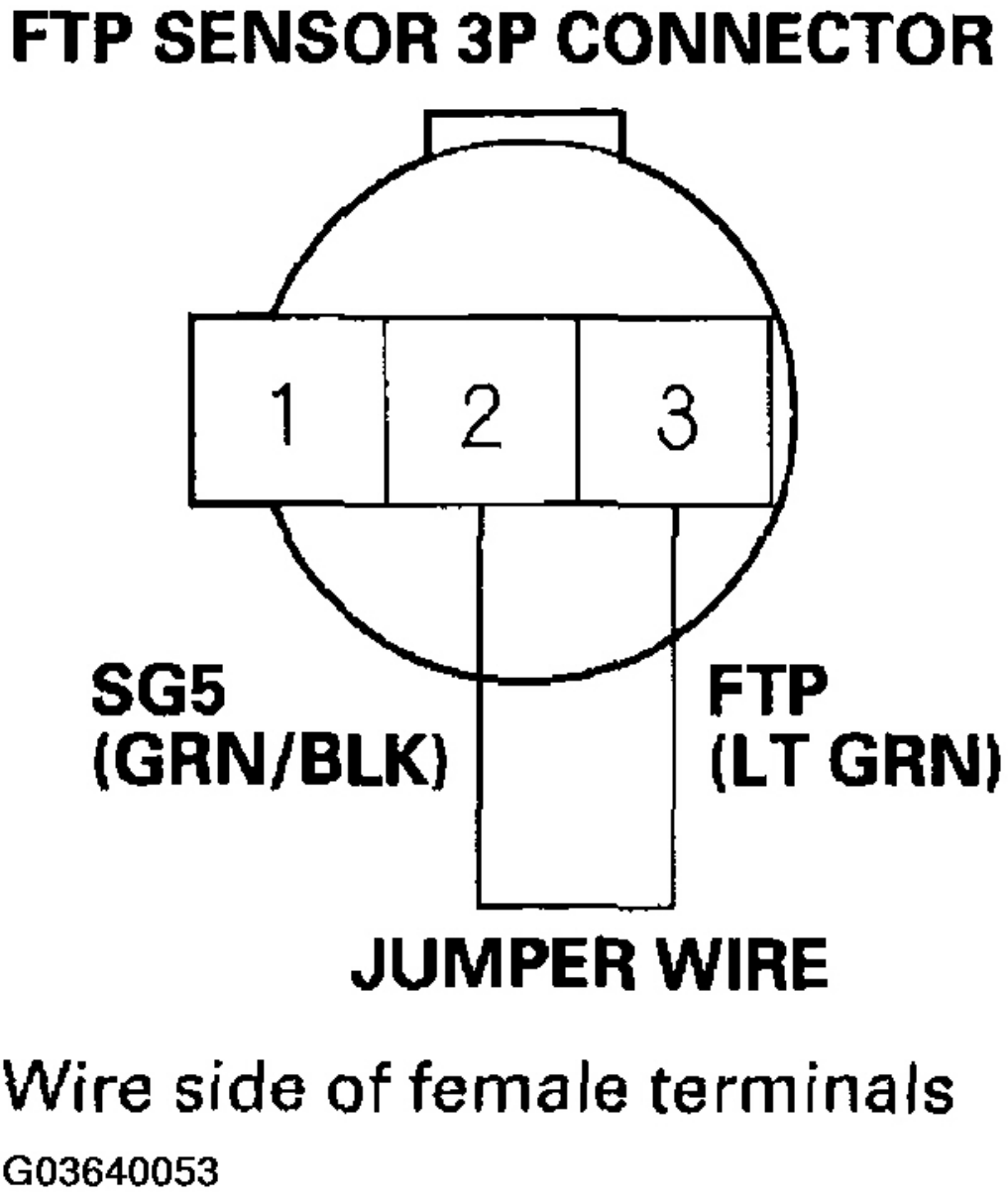


Fig. 16: Connecting FTP Sensor 3P Connector Terminals No. 2 And No. 3 With Jumper Wire (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

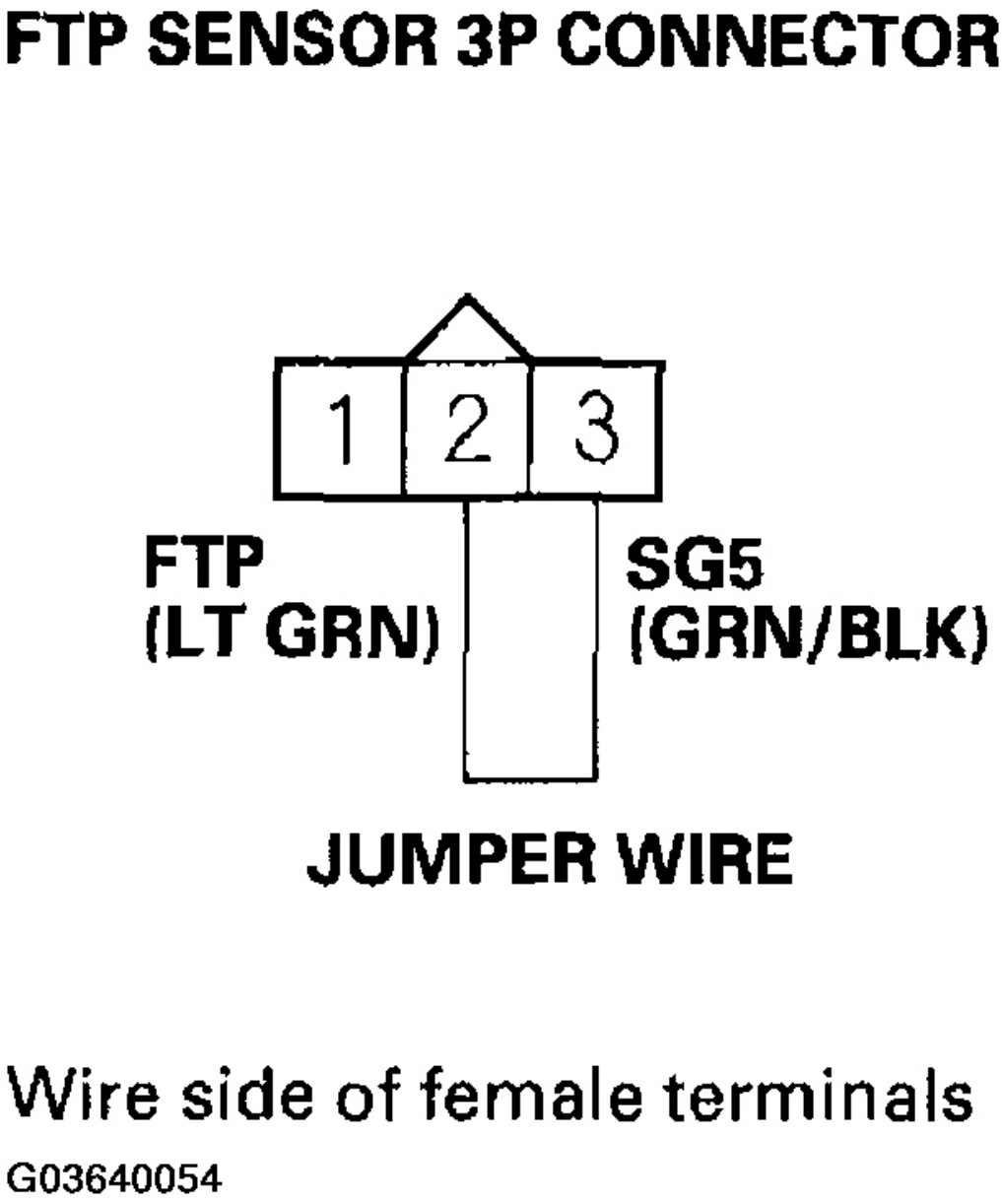


Fig. 17: Connecting FTP Sensor 3P Connector Terminals No. 2 And No. 3 With Jumper Wire (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

Is about 7.3 kPa (2.16 in.Hg, 55 mmHg), or 4.7 V or more indicated?

YES - Go to step 15.
NO - Go to step 27 .

15. Measure voltage between FTP sensor 3P connector terminals No. 1* (No. 1)** and No. 2* (No. 3)**.

2003-2004 models

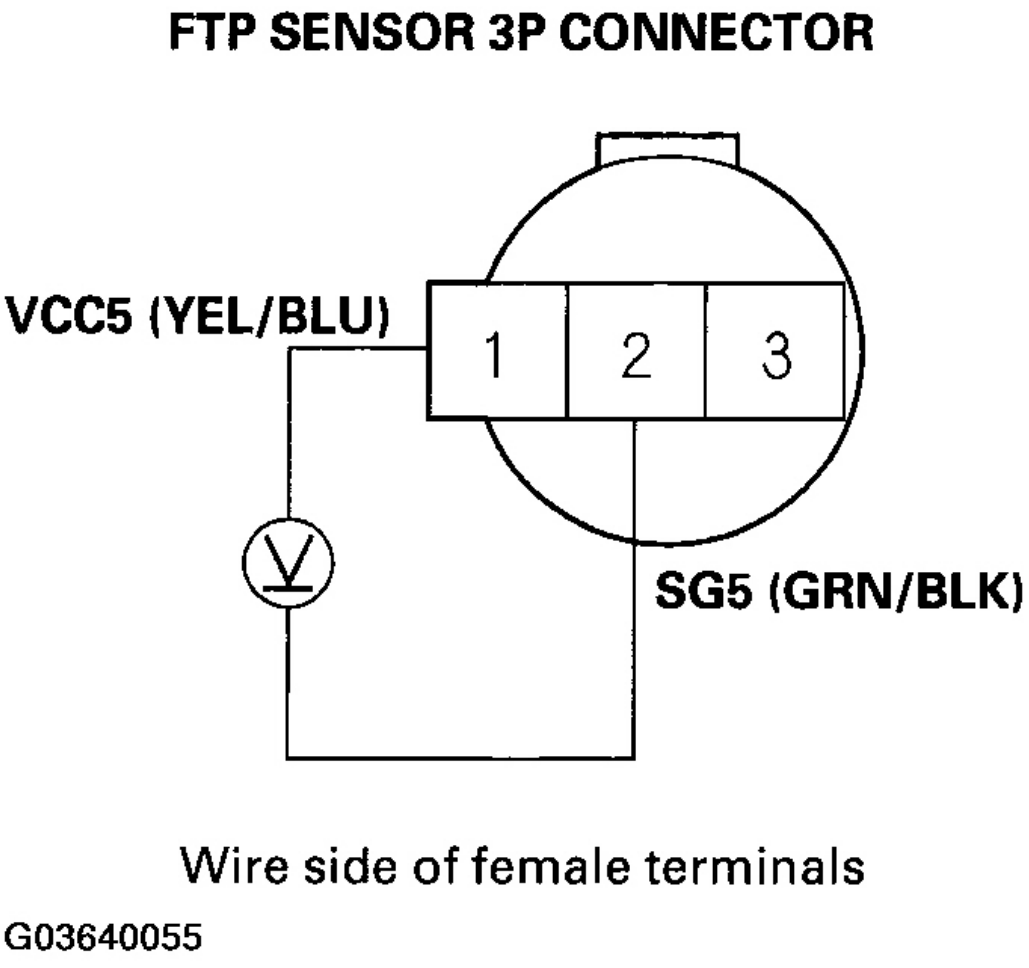


Fig. 18: Measuring Voltage Between FTP Sensor 3P Connector Terminals (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

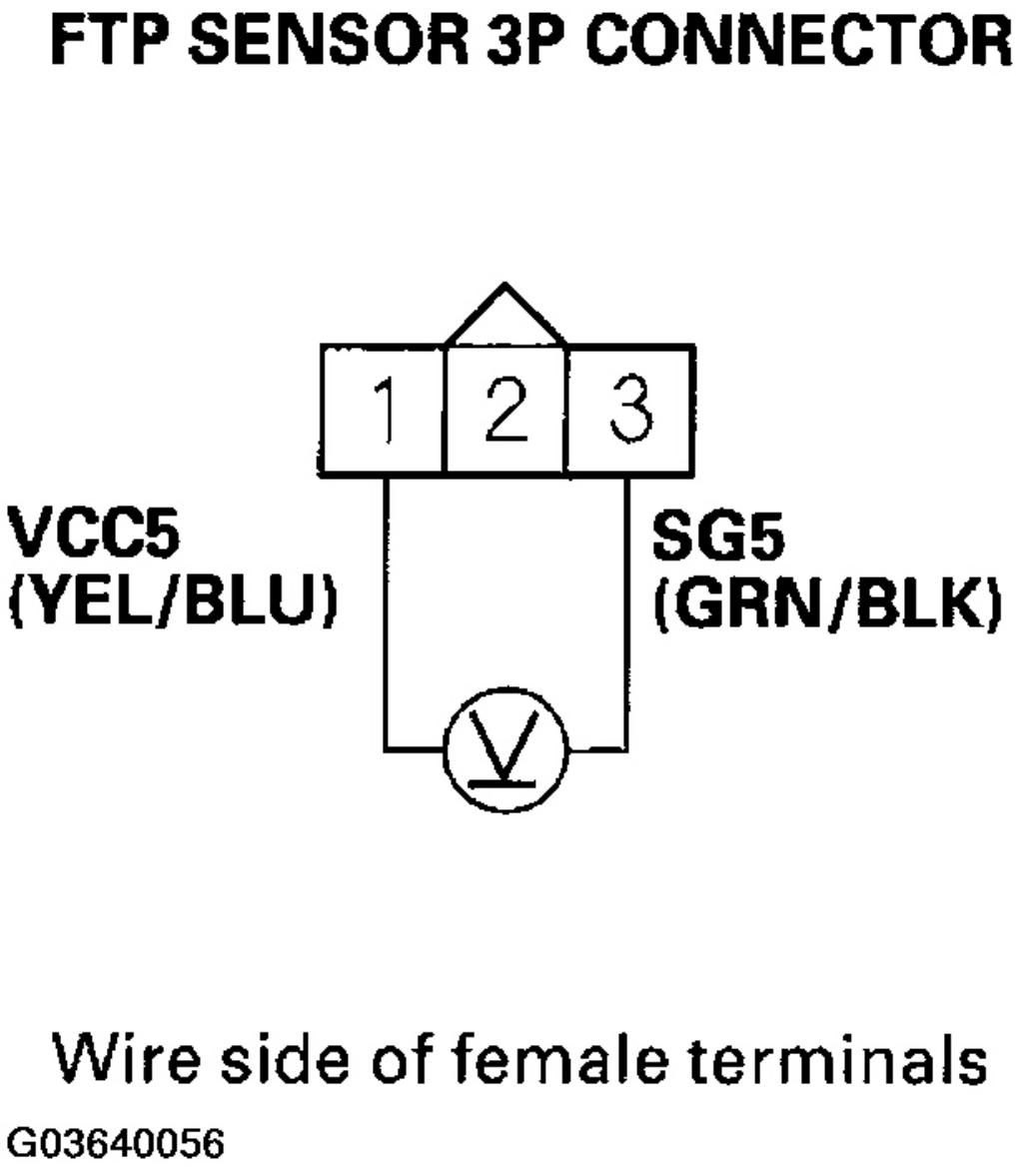


Fig. 19: Measuring Voltage Between FTP Sensor 3P Connector Terminals (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 21
NO - Go to step 16.

16. Turn the ignition switch OFF.
17. Jump the SCS line with the HDS.
18. Disconnect PCM connector B (56P).
19. Connect FTP sensor 3P connector terminal No. 2* (No. 3)** to body ground with a jumper wire.

2003-2004 models

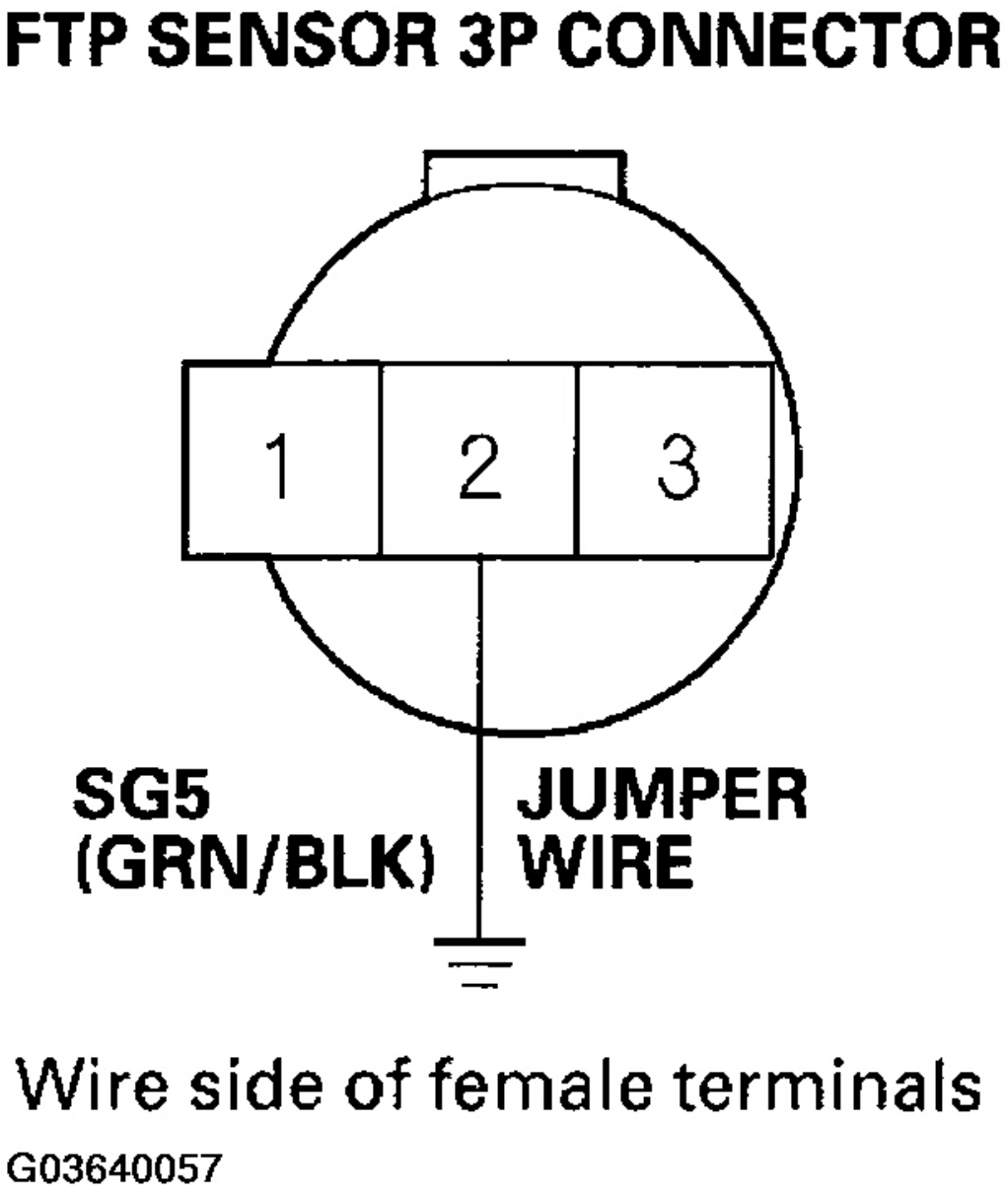


Fig. 20: Connecting FTP Sensor 3P Connector Terminal And Body Ground With Jumper Wire (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

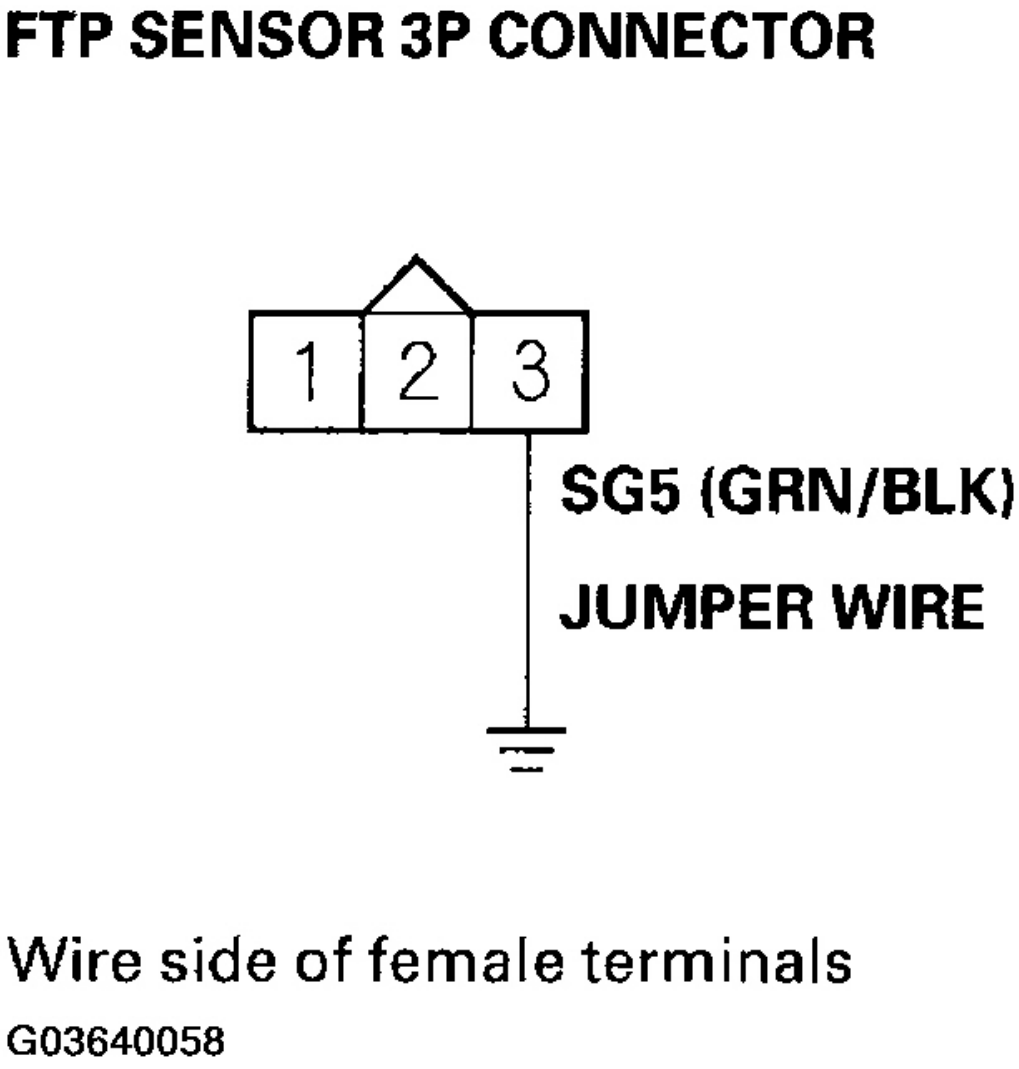


Fig. 21: Connecting FTP Sensor 3P Connector Terminal And Body Ground With Jumper Wire (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Check for continuity between PCM connector terminal B48 and body ground.

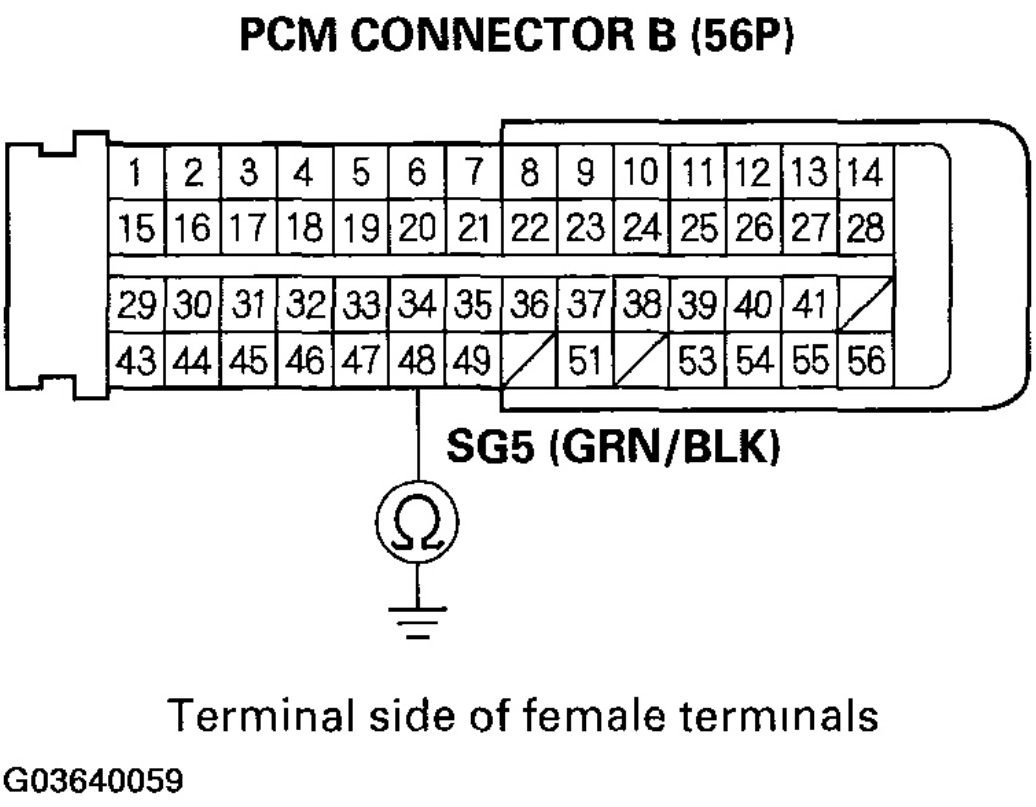


Fig. 22: Checking Continuity Between PCM Connector Terminal B48 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 34 .

NO - Repair open in the wire between the PCM (B48) and the FTP sensor, then go to step 28 .

21. Turn the ignition switch OFF.
22. Jump the SCS line with the HDS.
23. Disconnect PCM connector B (56P).
24. Connect FTP sensor 3P connector terminal No. 3* (No. 2)** to body ground with a jumper wire.

2003-2004 models

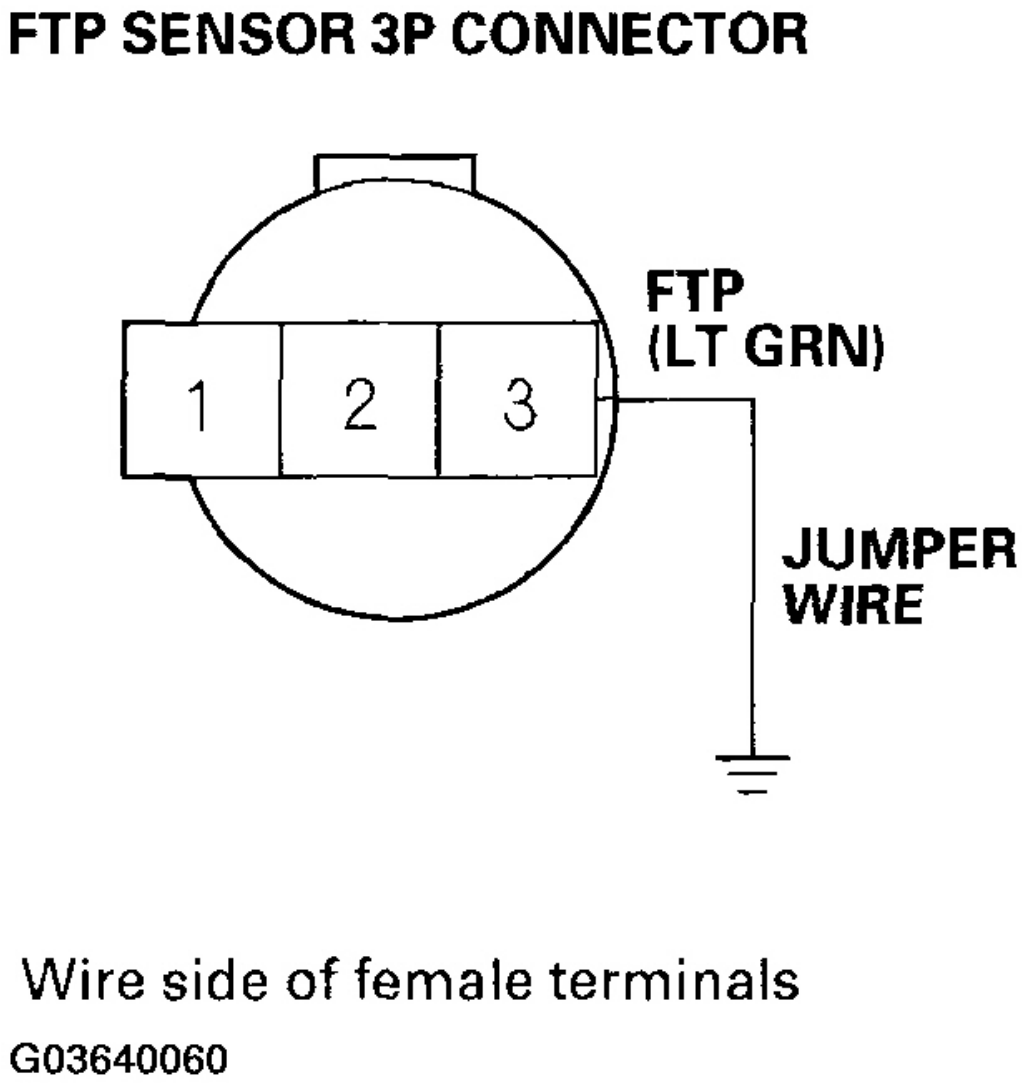


Fig. 23: Connecting FTP Sensor 3P Connector Terminal And Body Ground With Jumper Wire (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

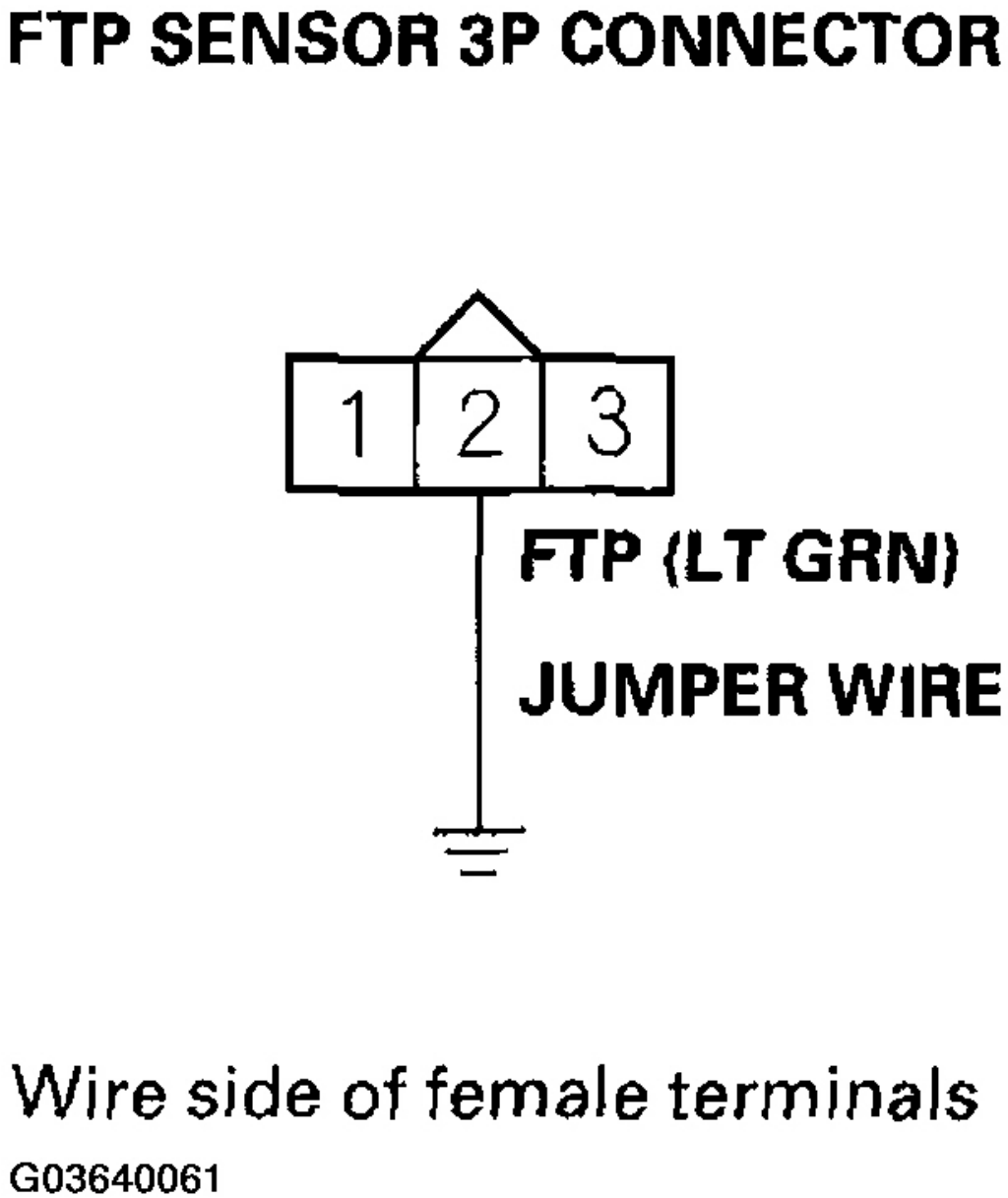


Fig. 24: Connecting FTP Sensor 3P Connector Terminal And Body Ground With Jumper Wire (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Check for continuity between PCM connector terminal B47 and body ground.

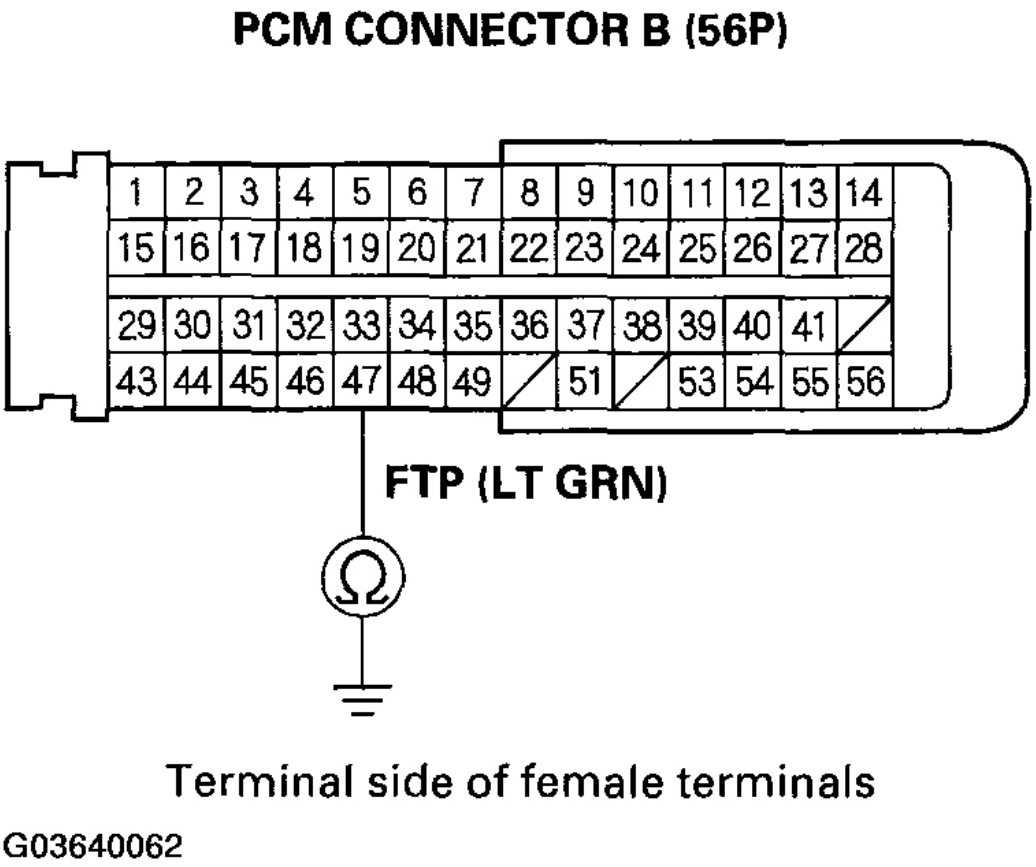


Fig. 25: Checking Continuity Between PCM Connector Terminal B47 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 34 .

NO - Repair open in the wire between the PCM (B47) and the FTP sensor, then go to step 28 .

26. Turn the ignition switch OFF.
27. Replace the FTP sensor; 2003-2004 models (see **FTP SENSOR REPLACEMENT**), 2005-2006 models (see **FTP SENSOR REPLACEMENT**).
28. Reconnect all connectors.
29. Turn the ignition switch ON (II).
30. Reset the PCM with the HDS.
31. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
32. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0453 is indicated, check for poor connections or loose terminals at the FTP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

NO - Go to step 33.

33. Monitor the OBD STATUS for DTC P0453 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 30 and recheck.

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

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0453 is indicated, check for poor connections or loose terminals at the FTP sensor and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

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

DTC P0455: EVAP SYSTEM LARGE LEAK DETECTED (2003-2004 MODELS)

Special Tools Required

- Vacuum pump/gauge, 0-30 in.Hg, Snap-on YA4000A or equivalent, commercially available
- Vacuum/pressure gauge, 0-4 in.Hg 07JAZ-001000B

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC P0461 is stored at the same time as DTC P0455, troubleshoot P0461 first, then recheck for DTC P0455.**

1. Check the fuel fill cap installation.

Is the correct fuel fill cap installed and properly tightened?

YES - Go to step 2.

NO - Properly install and tighten the cap 3 clicks, then go to step 61 .

2. Check the fuel fill cap seal (A) and the fuel fill pipe mating surface (B).

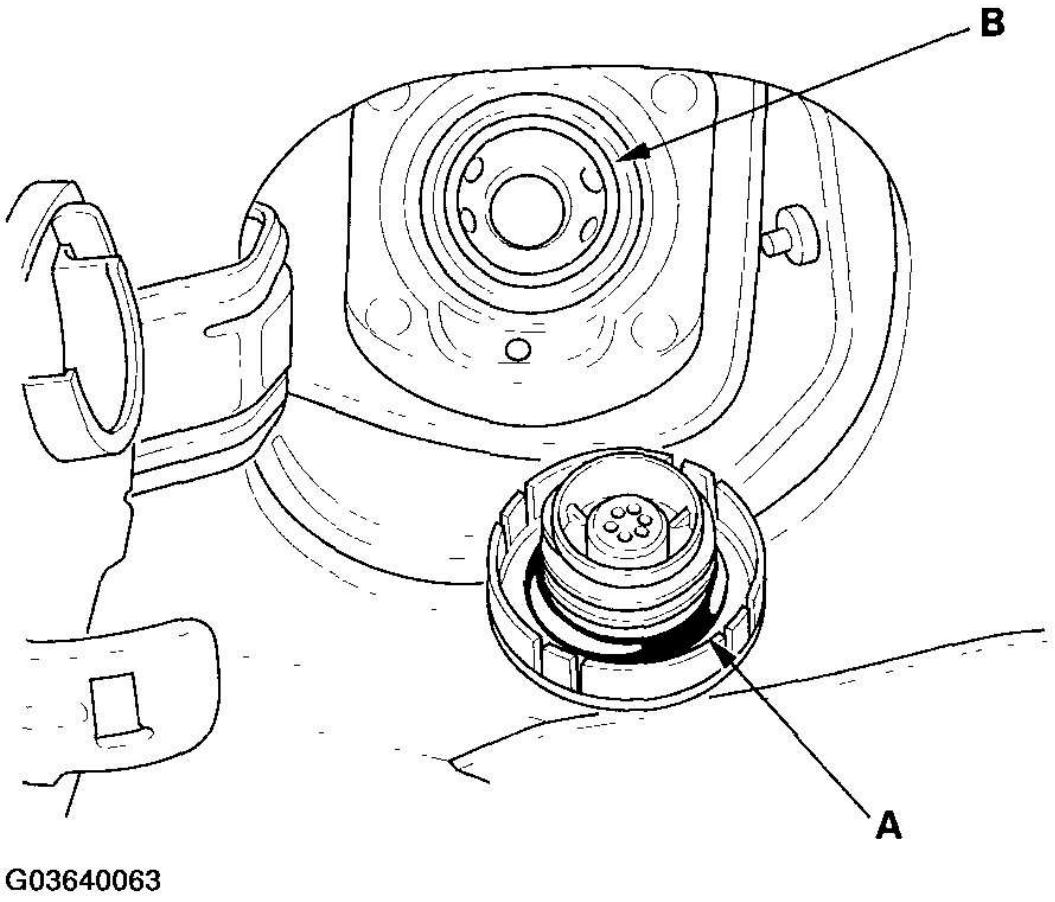


Fig. 26: Checking Fuel Fill Cap Seal And Fuel Fill Pipe Mating Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the fuel fill cap seal missing or damaged, or is the fuel fill pipe damaged?

YES - Replace the fuel fill cap or the fuel fill pipe, then go to step 61 .
NO - Go to step 3.

3. Turn the ignition switch ON (II).
4. Clear the DTC with the HDS.
5. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the EVAP SYSTEM normal?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP bypass solenoid valve, the EVAP canister purge valve, or the EVAP canister vent shut valve and the PCM.

NO - Go to step 6.

6. Go to the appropriate step based on the tester's display.
   - If "Small leak is detected in Canister" is indicated, go to step 7.
   - If "Small leak is detected in Tank" is indicated, go to step 28 .
   - If another result is indicated, go to step 37 .
7. Turn the ignition switch OFF.
8. Disconnect the two vapor hoses (A) from the EVAP two way valve (B).

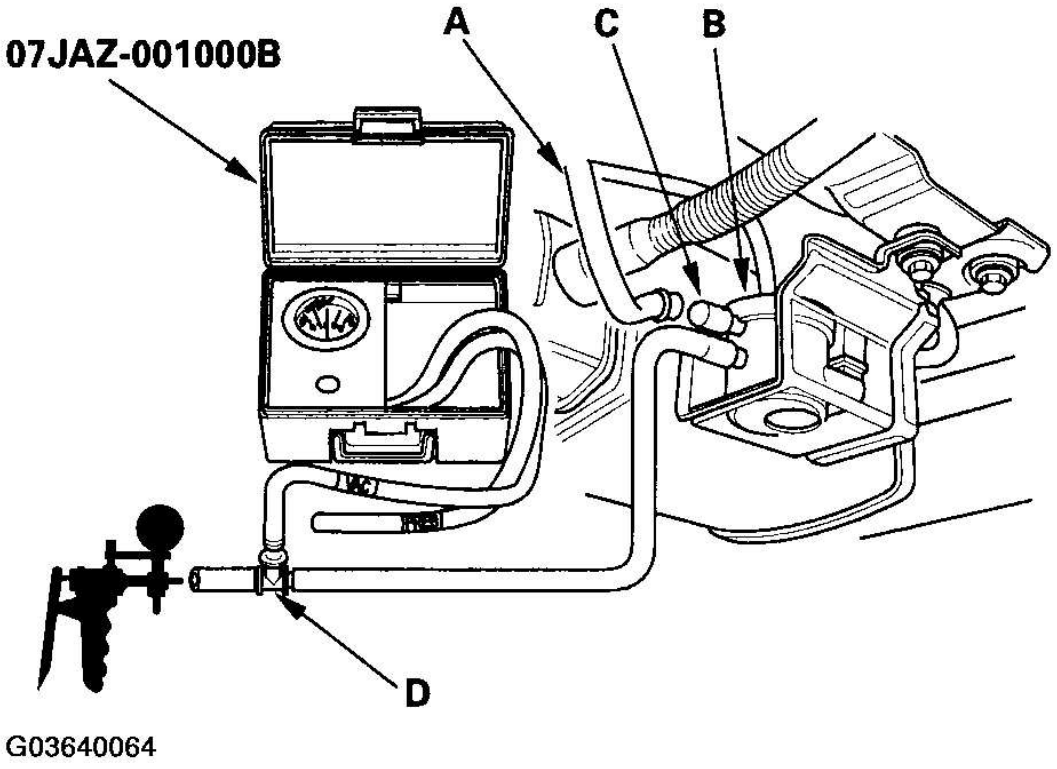


Fig. 27: Disconnecting Two Vapor Hoses From EVAP Two Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Plug the tank side port (C) of the EVAP two way valve.
10. Connect a T-fitting (D) from the vacuum gauge and the vacuum pump to the EVAP two way valve.
11. Turn the ignition switch ON (II).
12. Do the EVAP BPS ON in the INSPECTION MENU with the HDS.

13. Slowly apply 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the hose.

    Does it hold vacuum for about 20 seconds?

    YES - Go to step 14.

    NO - Replace the EVAP two way valve or O-ring, then go to step 61 .

14. Reconnect the fuel tank side vapor hose (A) to the EVAP two way valve (B) and plug the canister side vacuum hose (C).

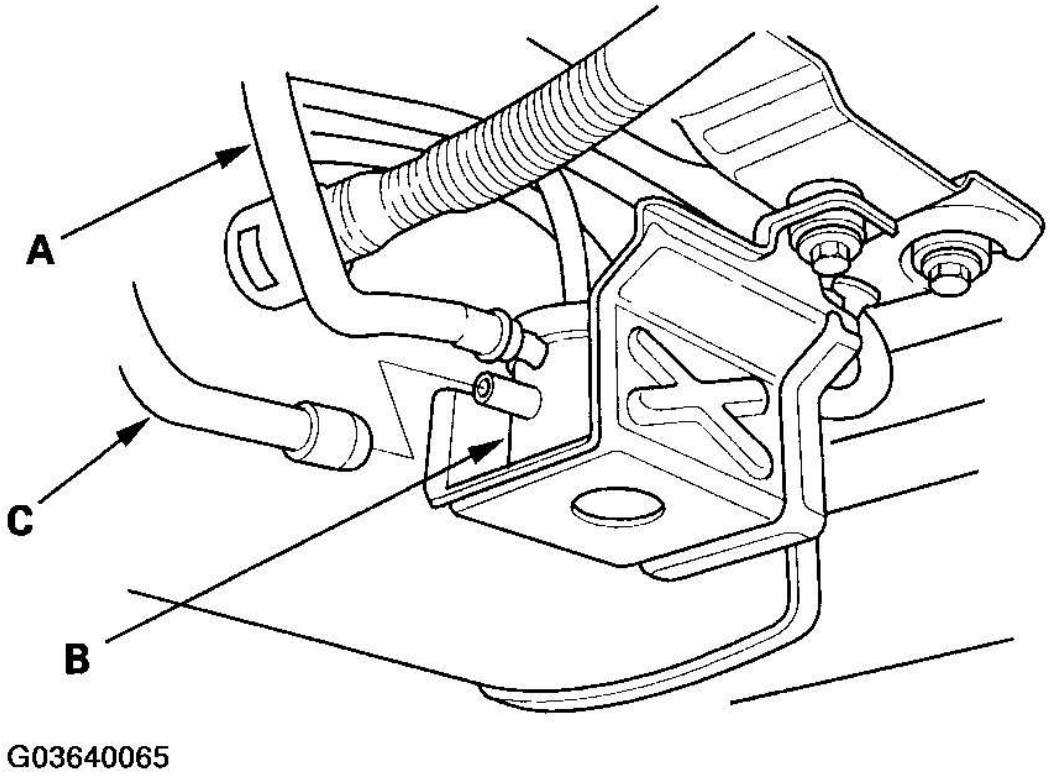


Fig. 28: Reconnecting Fuel Tank Side Vapor Hose To EVAP Two Way Valve And Plug Canister Side Vacuum Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Check the connection of the fuel tank vapor control valve vent hose and quick-connect fitting.

    Is the hose connected properly?

    YES - Go to step 16.

    NO - Repair the fuel tank vapor control valve vent hose or the quick-connect fitting, then go to step

61 .

16. Disconnect the fuel tank vapor control valve vent hose (A) from the EVAP canister (B) and plug the canister port (C).

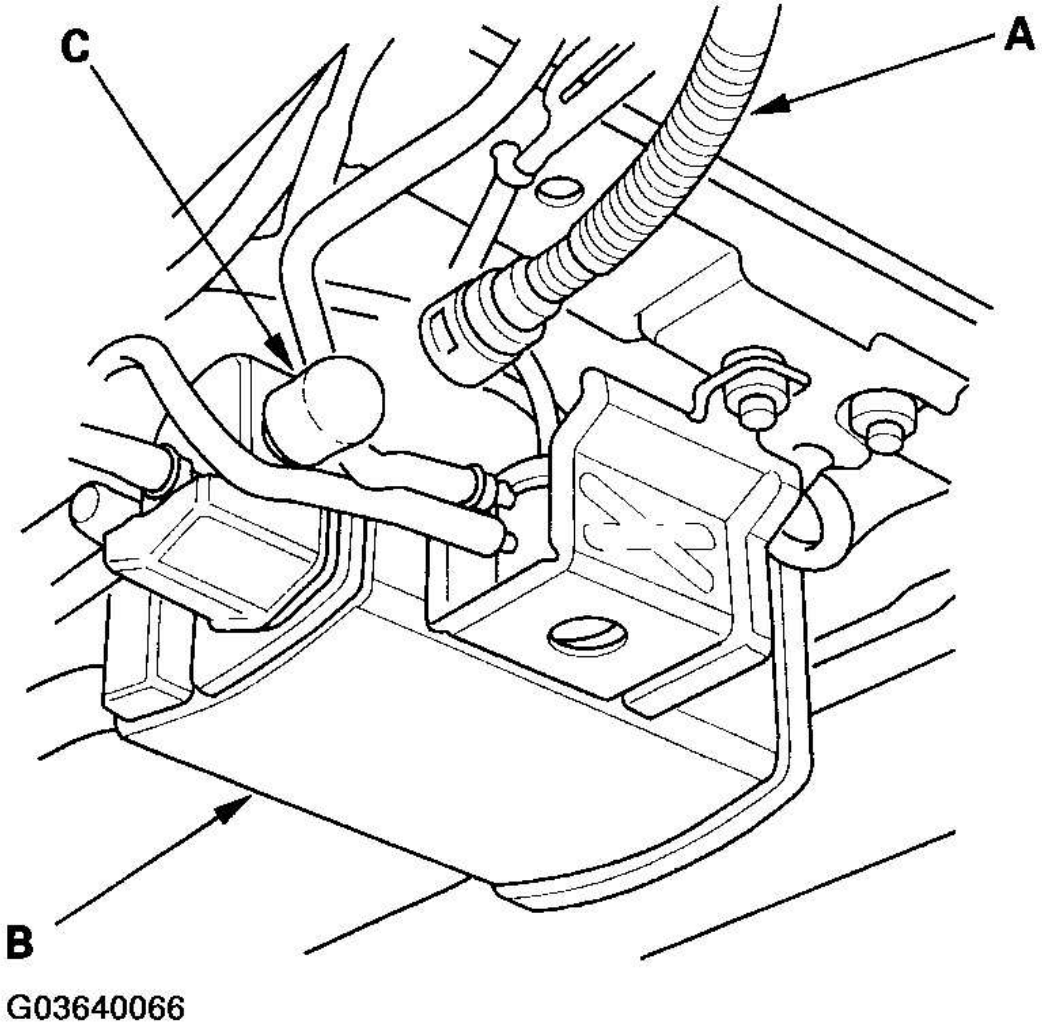


Fig. 29: Disconnecting Fuel Tank Vapor Control Valve Vent Hose From EVAP Canister And Plug Canister Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Disconnect the vacuum hose (A) between the EVAP canister and the EVAP canister purge valve (B) from the EVAP canister purge valve side.

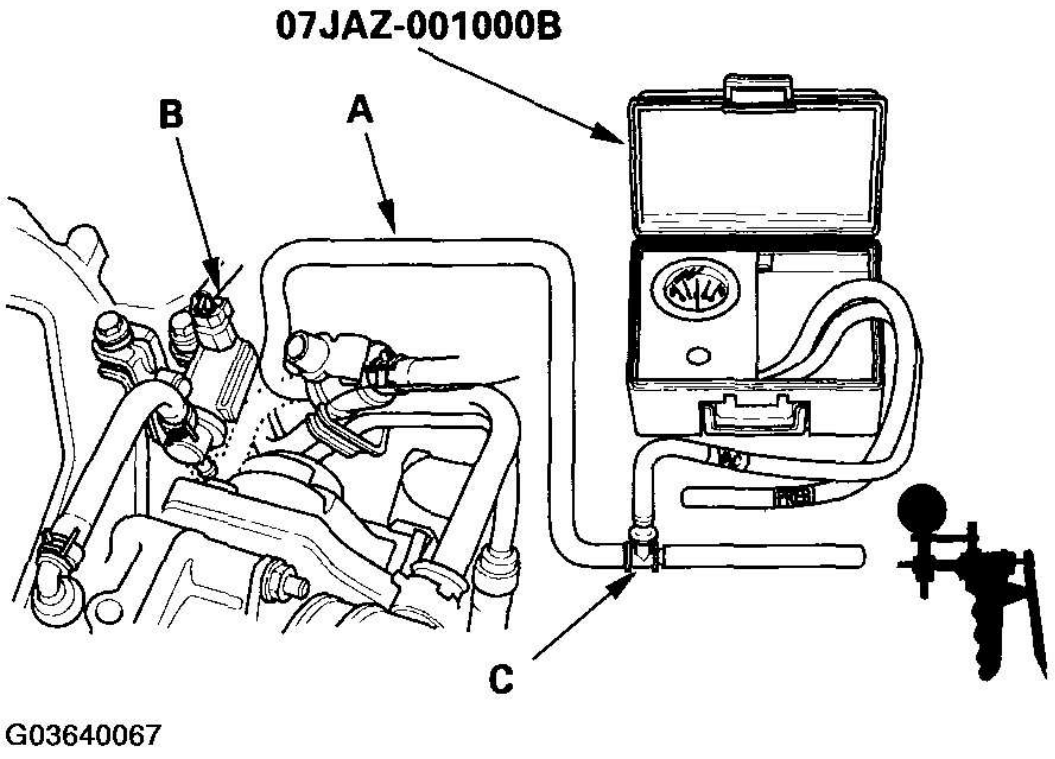


Fig. 30: Disconnecting Vacuum Hose Between EVAP Canister And EVAP Canister Purge Valve From EVAP Canister Purge Valve Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Connect a T-fitting (C) from the vacuum gauge and the vacuum pump to the vacuum hose.
19. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum for 1 minute?

YES - Inspect the fuel tank vapor control valve vent hose. If OK, replace the fuel tank, then go to step 61 .

NO - Go to step 20.

20. Disconnect all drain hoses from the EVAP canister vent shut valve, and plug their ports.
21. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum for 1 minute?

YES - Replace the EVAP canister vent shut valve, then go to step 61 .

NO - Go to step 22.

22. Disconnect the vacuum hose (VSV line) (A) between the EVAP canister (B) and EVAP canister vent shut

valve from the EVAP canister side, and plug the EVAP canister port (C).

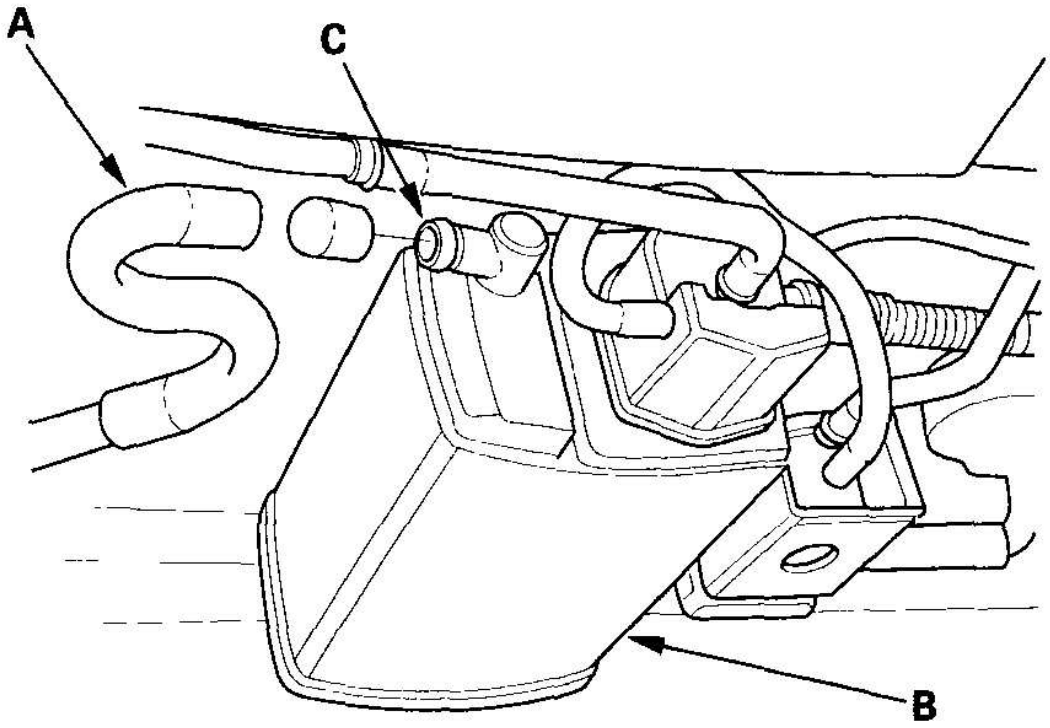


Fig. 31: Disconnecting Vacuum Hose (VSV Line)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

    Does it hold vacuum for 1 minute?

    YES - Check the hose between the EVAP canister vent shut valve and the EVAP canister. If the hose is OK, replace the EVAP canister vent shut valve, then go to step 61 .

    NO - Go to step 24.

24. Reconnect the vacuum hose to the EVAP canister purge valve.
25. Disconnect the vacuum hose (A) between the EVAP canister (B) and the EVAP canister purge valve from the EVAP canister side.

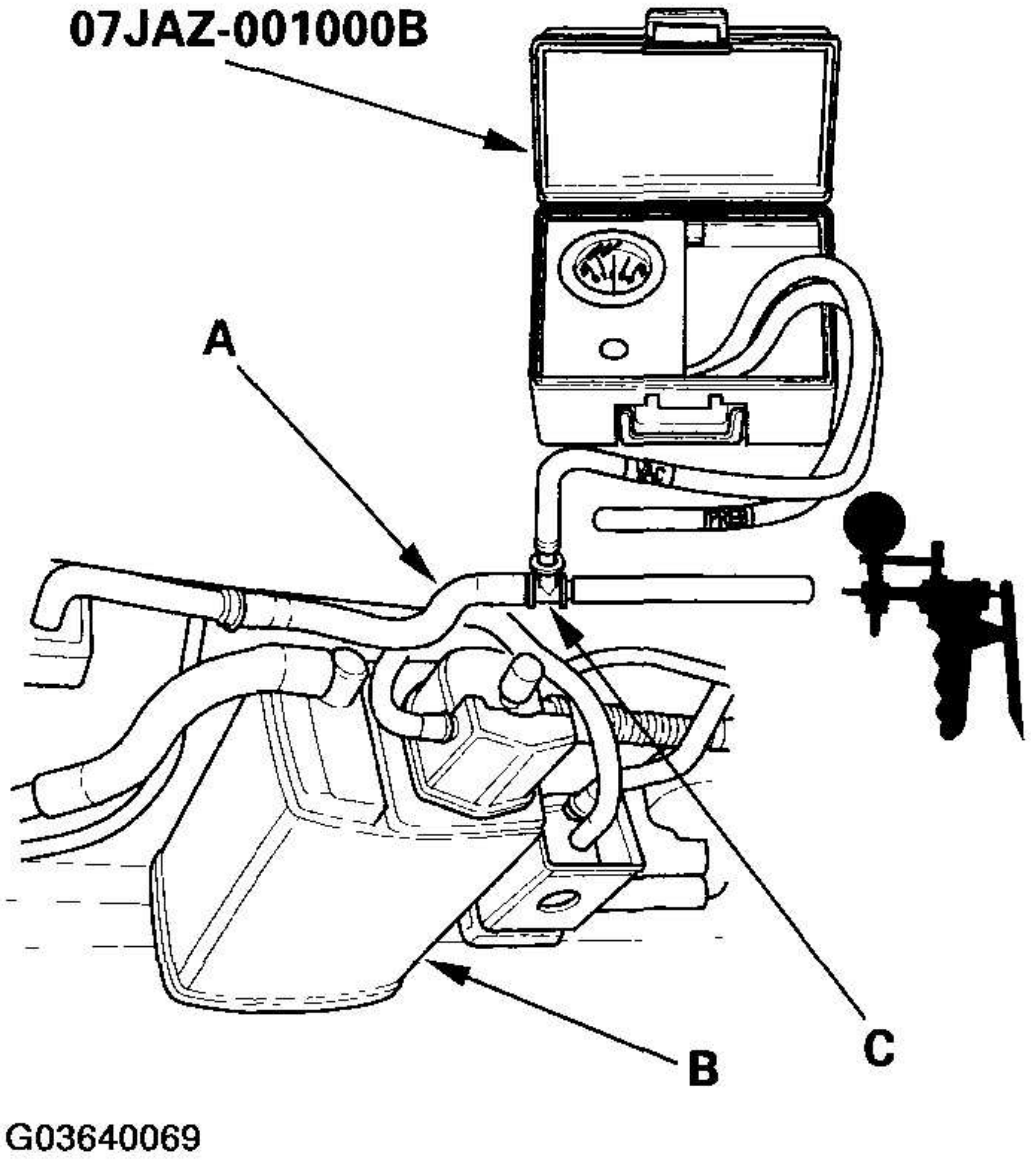


Fig. 32: Disconnecting Vacuum Hose Between EVAP Canister And EVAP Canister Purge Valve From EVAP Canister Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. Connect a T-fitting (C) from the vacuum gauge and the vacuum pump to the vacuum hose.
27. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum?

YES - Check for a cracked or damaged of the EVAP canister. If the EVAP canister is OK, go to step 61 .

NO - Check the hose between the EVAP canister purge valve and EVAP canister. If the hose is OK, replace the EVAP canister purge cut valve, then go to step 61 .

28. Turn the ignition switch OFF.
29. Disconnect the two vapor hoses (A) from the EVAP two way valve (B).

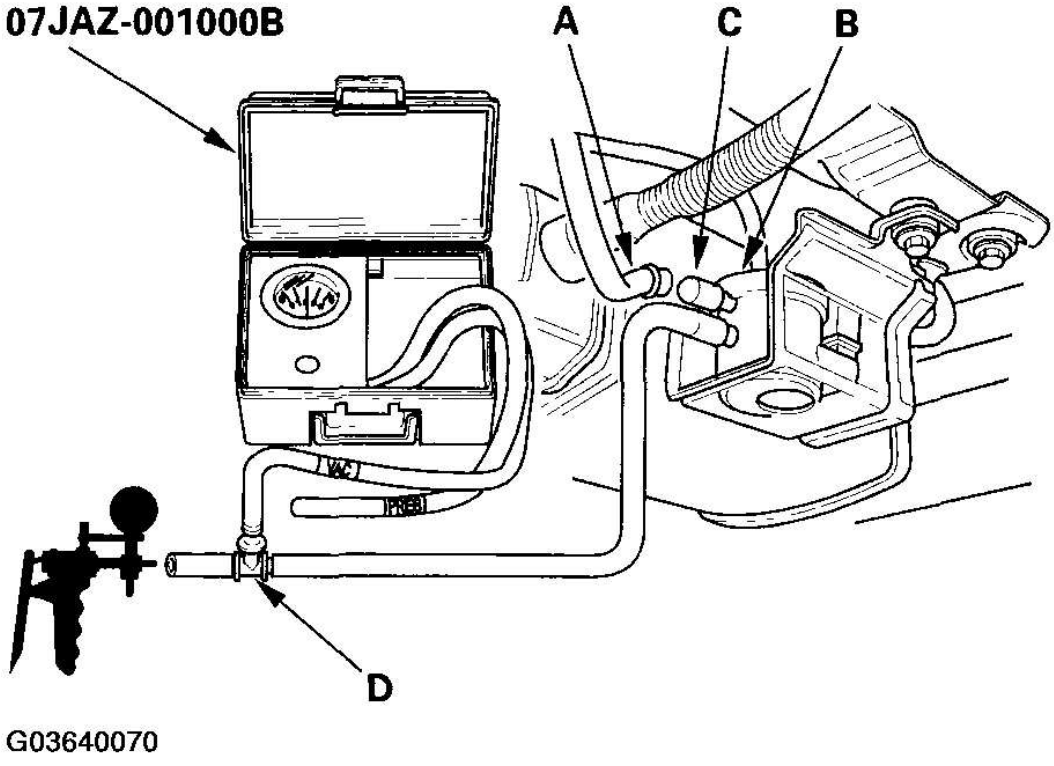


Fig. 33: Disconnecting Two Vapor Hoses From EVAP Two Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Plug the tank side port (C) of the EVAP two way valve.
31. Connect a T-fitting (D) from the vacuum gauge and the vacuum pump to the EVAP two way valve.
32. Turn the ignition switch ON (II).
33. Do the EVAP BPS ON in the INSPECTION MENU with the HDS.
34. Slowly apply 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the hose.

Does it hold vacuum for about 20 seconds?

YES - Go to step 35.

NO - Replace the EVAP two way valve or O-ring, then go to step 61 .

35. Test the fuel tank vapor control valve (see **FUEL TANK VAPOR CONTROL VALVE TEST**).

Is the fuel tank vapor control valve OK?

YES - Go to step 36.

NO - Replace the fuel tank vapor control valve, then go to step 61 .

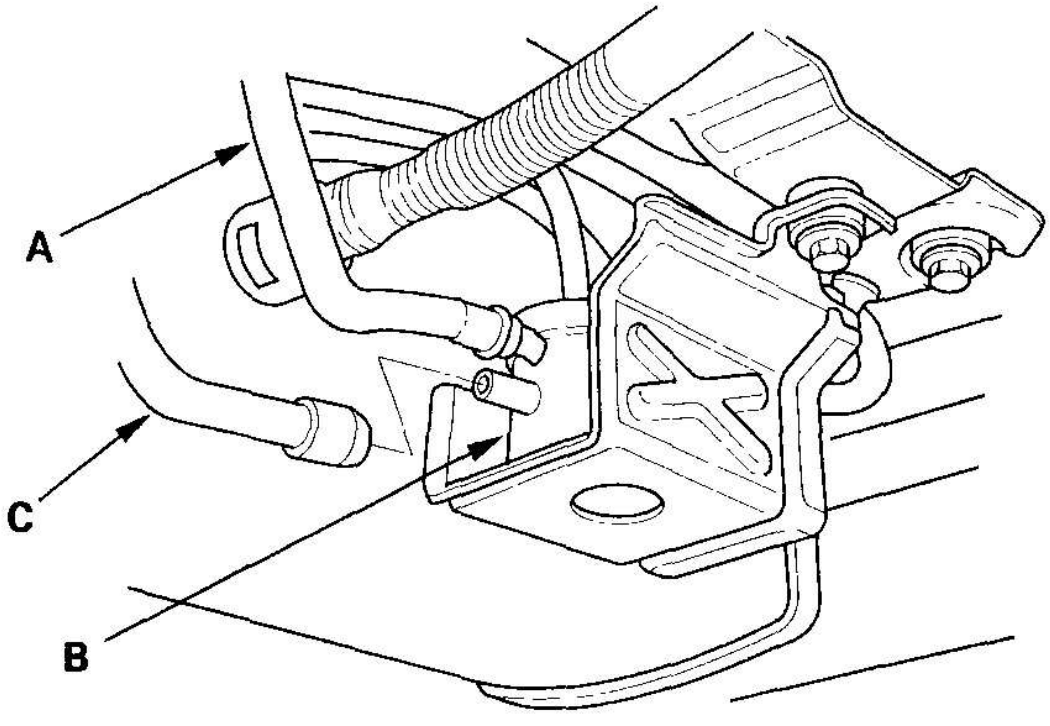
36. Check for poor connections at the fuel tank vapor tube, fuel tank vapor recirculation tube, fuel tank vapor signal tube, FTP sensor hoses, and the vapor line between the EVAP two way valve and the fuel tank.

Are the all connections OK?

YES - Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**), and check its seal and mating surface, then go to step 61 .

NO - Reconnect or replace the loose hose, then go to step 61 .

37. Turn the ignition switch OFF.
38. Reconnect the fuel tank side vapor hose (A) to the EVAP two way valve (B), and plug the canister side vacuum hose (C).



G03640071

Fig. 34: Reconnecting Fuel Tank Side Vapor Hose To EVAP Two Way Valve, And Plug Canister Side Vacuum Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

39. Check the connection of the fuel tank vapor control valve vent hose and quick-connect fitting.

    Is the hose connected properly?

    YES - Go to step 40.

    NO - Replace the fuel tank vapor control valve vent hose or the quick-connect fitting, then go to step 61 .

40. Disconnect the fuel tank vapor control valve vent hose (A) from the EVAP canister (B) and plug the canister port (C).

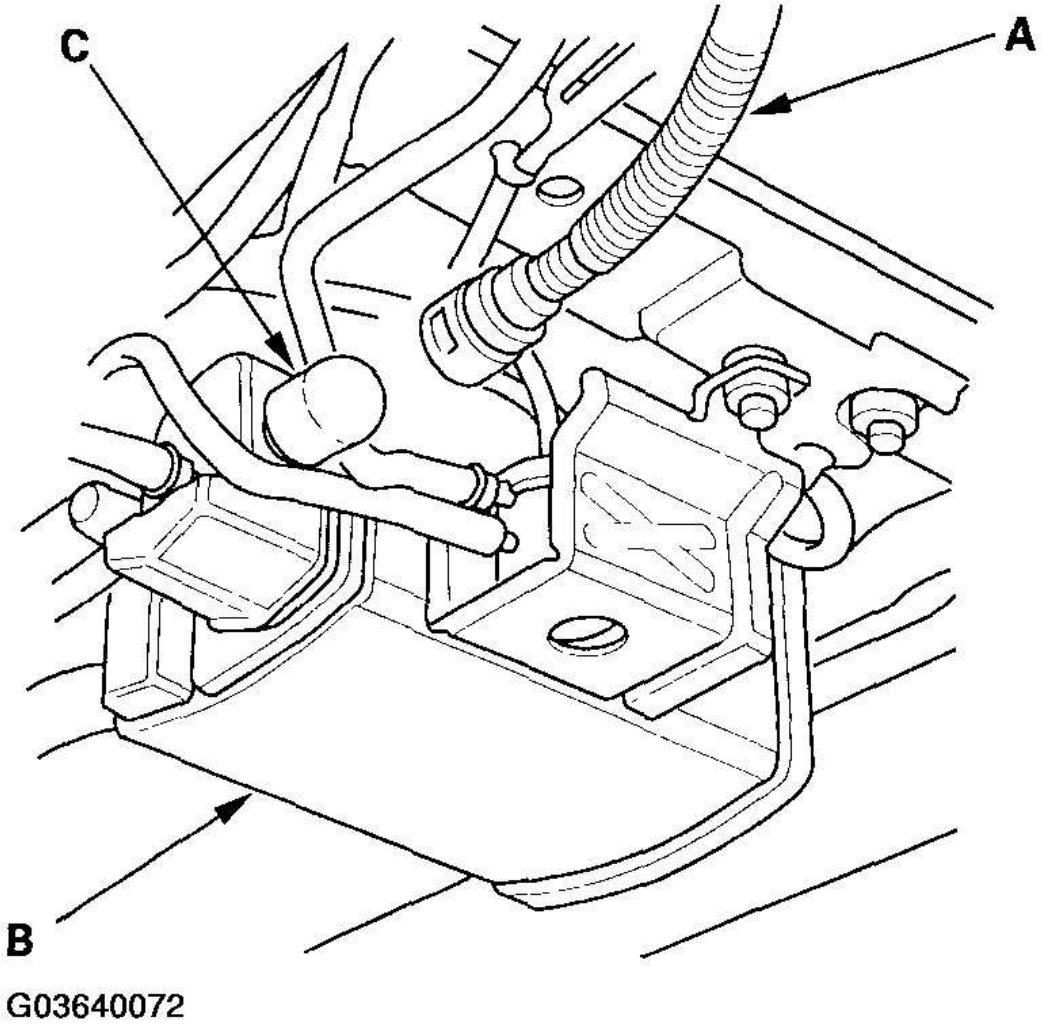


Fig. 35: Disconnecting Fuel Tank Vapor Control Valve Vent Hose From EVAP Canister And Plug Canister Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

41. Disconnect the vacuum hose (A) between the EVAP canister and the EVAP canister purge valve (B) from the EVAP canister purge valve side.

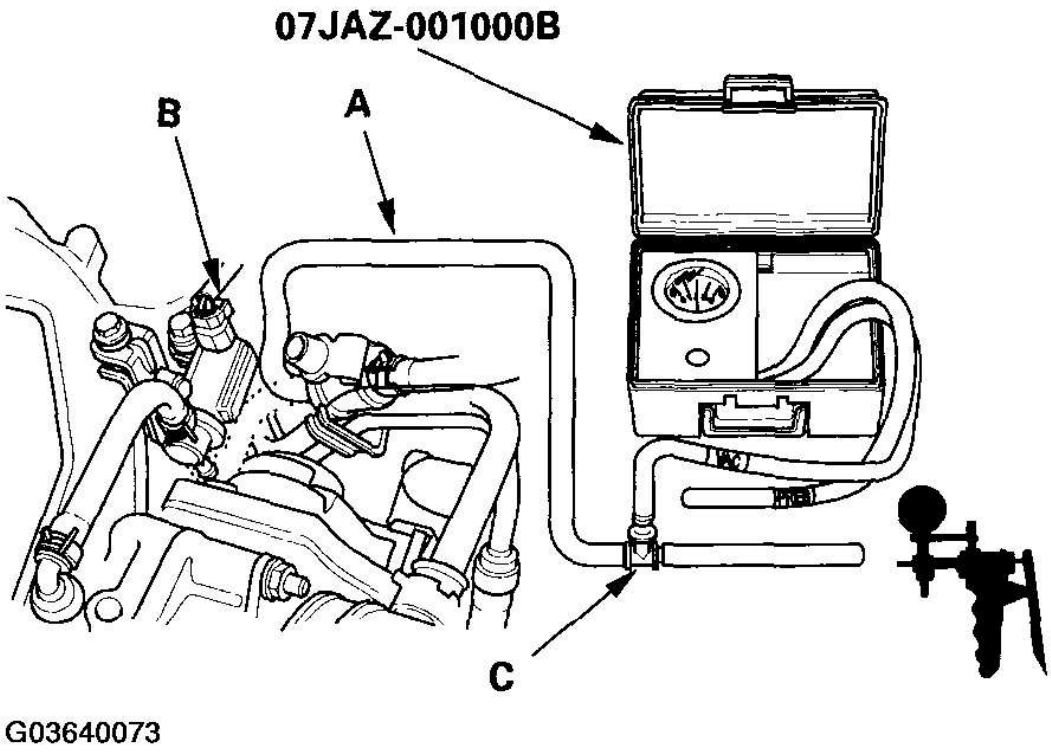


Fig. 36: Disconnecting Vacuum Hose Between EVAP Canister And EVAP Canister Purge Valve From EVAP Canister Purge Valve Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

42. Connect a T-fitting (C) from the vacuum gauge and the vacuum pump to the vacuum hose.
43. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum for 1 minute?

YES - Inspect the fuel tank vapor control valve vent hose. If OK, replace the fuel tank vapor control valve, then go to step 61 .

NO - Go to step 44.

44. Disconnect all drain hoses from the EVAP canister vent shut valve, and plug their ports.
45. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum for 1 minute?

YES - Replace the EVAP canister vent shut valve, then go to step 61 .

NO - Go to step 46.

46. Disconnect the vacuum hose (VSV line) (A) between the EVAP canister (B) and EVAP canister vent shut

valve from the EVAP canister side, and plug the EVAP canister port (C).

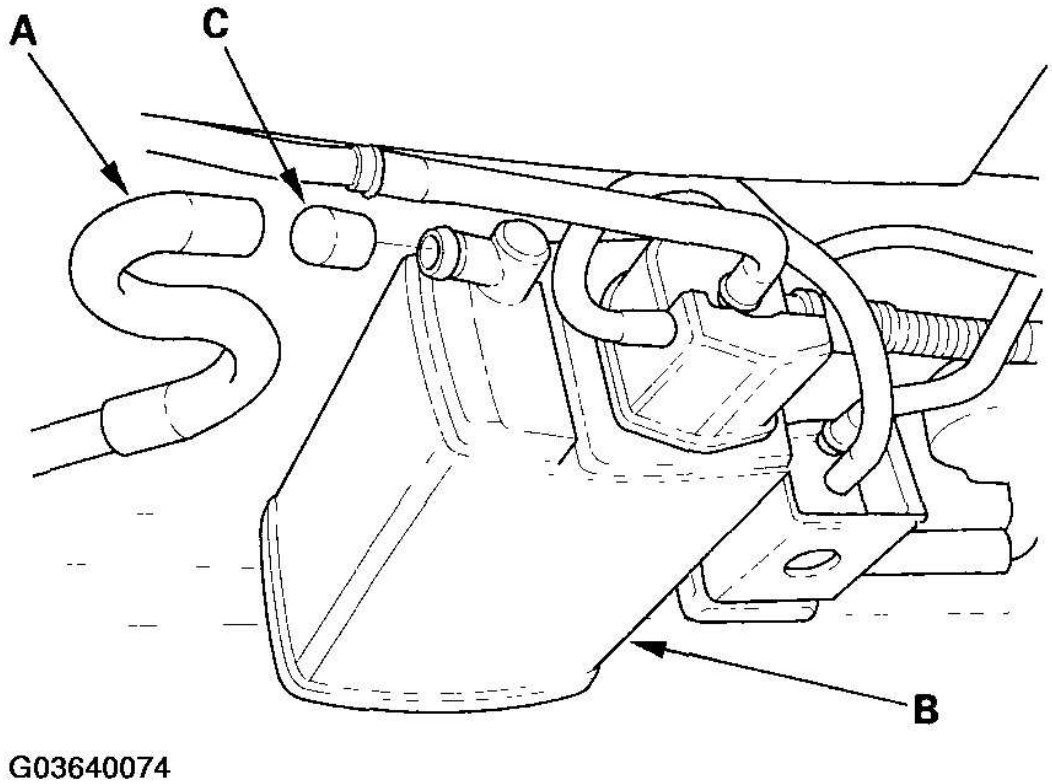


Fig. 37: Disconnecting Vacuum Hose (VSV Line) Between EVAP Canister And EVAP Canister Vent Shut Valve From EVAP Canister Side, And Plug EVAP Canister Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

47. Slowly apply vacuum to hose (A) with 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

    Does it hold vacuum for 1 minute?

    YES - Check the hose between the EVAP canister vent shut valve and EVAP canister. If the hose is OK, replace the EVAP canister vent shut valve, then go to step 61 .

    NO - Go to step 48.

48. Reconnect the vacuum hose to the EVAP canister purge valve.
49. Disconnect the vacuum hose (A) between the EVAP canister (B) and the EVAP canister purge valve from the EVAP canister side.

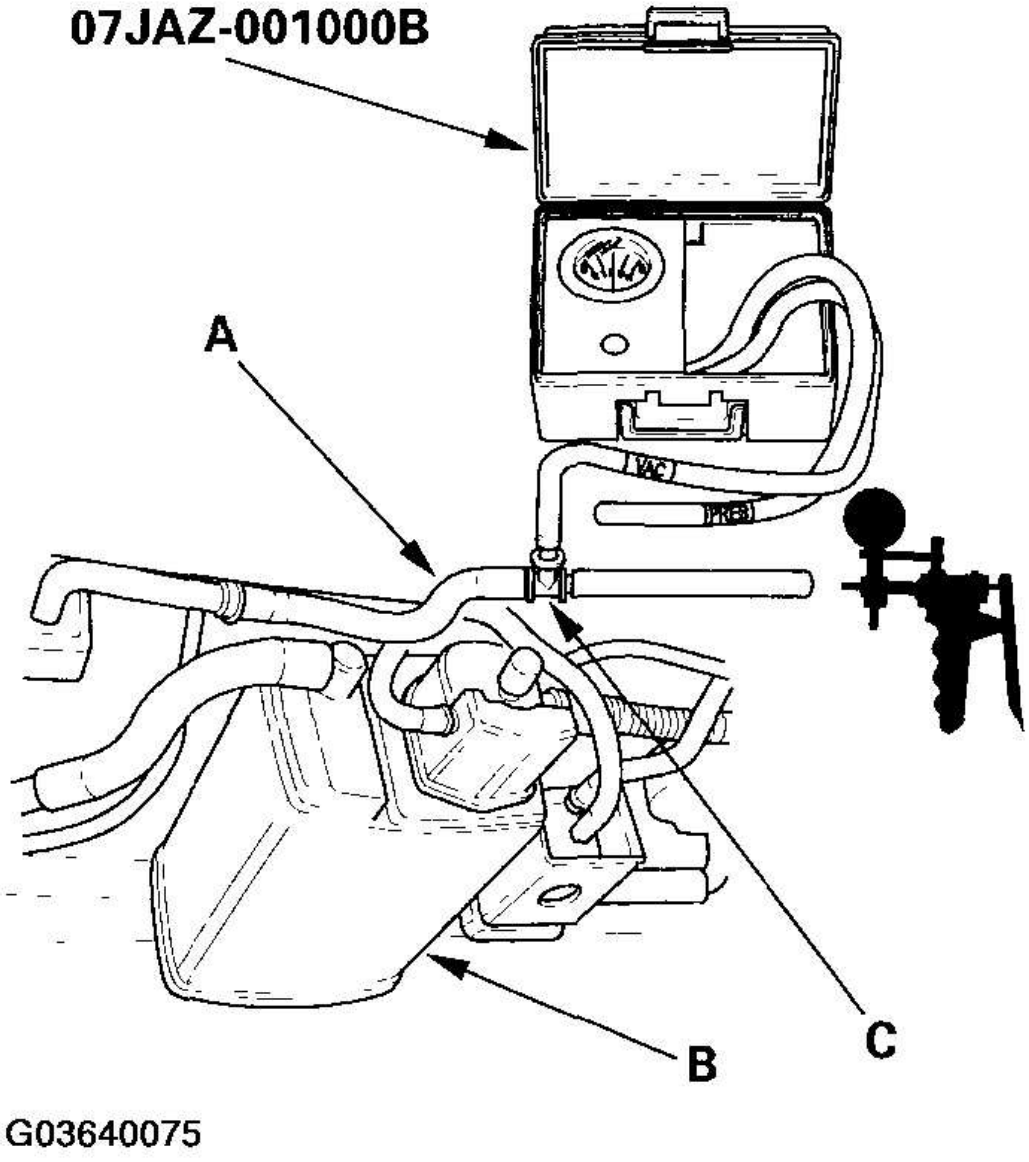


Fig. 38: Disconnecting Vacuum Hose Between EVAP Canister And EVAP Canister Purge Valve From EVAP Canister Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

50. Connect a T-fitting (C) from the vacuum gauge and the vacuum pump to the vacuum hose.
51. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum?

YES - Check for a cracked or damaged of the EVAP canister. If the EVAP canister is OK, go to step 52.

NO - Check the hose between the EVAP canister purge valve and EVAP canister. If the hose is OK, replace the EVAP canister purge valve, then go to step 61 .

52. Turn the ignition switch OFF.
53. Disconnect the two vapor hoses (A) from the EVAP two way valve (B).

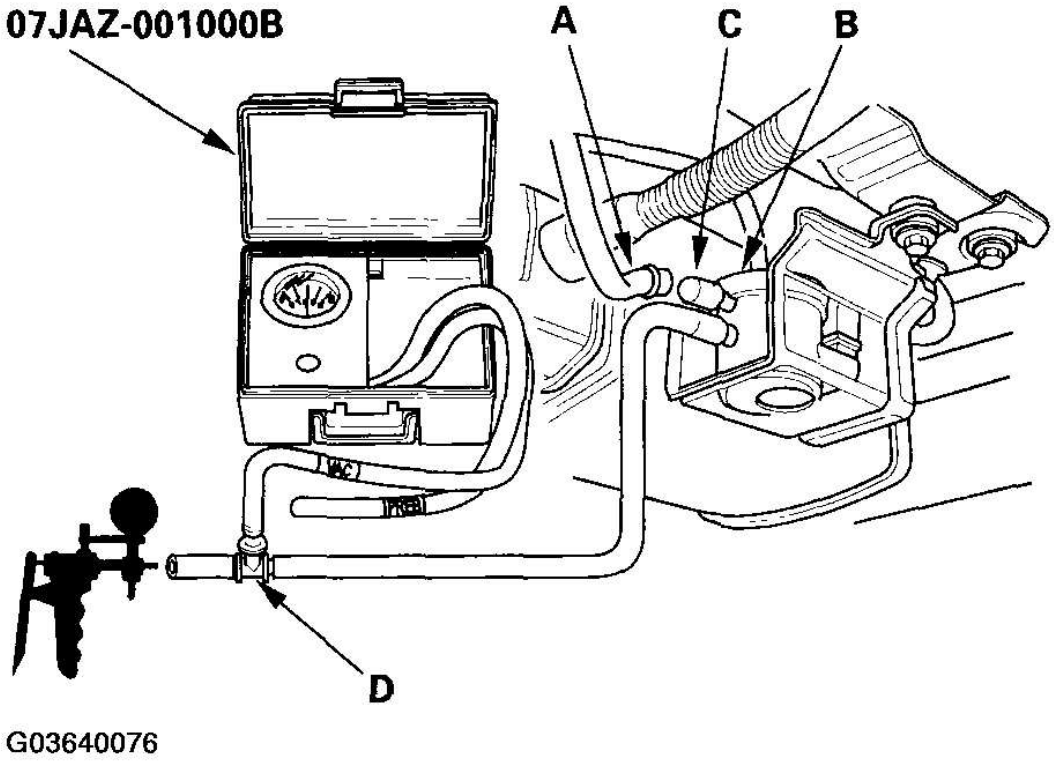


Fig. 39: Disconnecting Two Vapor Hoses From EVAP Two Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

54. Plug the tank side port (C) of the EVAP two way valve.
55. Connect a T-fitting (D) from the vacuum gauge and the vacuum pump to the EVAP two way valve.
56. Turn the ignition switch ON (II).
57. Do the EVAP BPS ON in the INSPECTION MENU with the HDS.
58. Slowly apply 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the hose.

Does it hold vacuum for about 20 seconds?

YES - Go to step 59.

NO - Replace the EVAP two way valve or O-ring, then go to step 61 .

59. Test the fuel tank vapor control valve (see **FUEL TANK VAPOR CONTROL VALVE TEST**).

Is the fuel tank vapor control valve OK?

YES - Go to step 60.

NO - Replace the fuel tank vapor control valve, then go to step 61 .

60. Check for poor connections at the fuel tank vapor tube, fuel tank vapor recirculation tube, fuel tank vapor signal tube, FTP sensor hoses, and the vapor line between the EVAP two way valve and the fuel tank.

Are the all connections OK?

YES - Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**), and check its seal and mating surface, then go to step 61.

NO - Reconnect or replace the loose hose, then go to step 61.

61. Reconnect all hoses and connectors.
62. Turn the ignition switch ON (II).
63. Reset the PCM with the HDS.
64. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
65. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the EVAP SYSTEM normal?

YES - Troubleshooting is complete.

NO - Check for poor connections or loose terminals at the FTP sensor, the EVAP bypass solenoid valve, the EVAP canister vent shut valve, or the EVAP canister purge valve and the PCM, then go to step 1 .

DTC P0455, P0456: EVAP SYSTEM LARGE LEAK DETECTED (2005-2006 MODELS); EVAP SYSTEM VERY SMALL LEAK DETECTED (2005-2006 MODELS)

NOTE: **The fuel system is designed to allow specified maximum vacuum and pressure conditions. Do not deviate from the vacuum and pressure tests as indicated in these procedures. Excessive pressure/vacuum would damage the EVAP components or cause eventual fuel tank failure.**

Special Tools Required

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

NOTE:

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

- **Fresh fuel has a higher volatility that will create greater pressure/vacuum. The optimum condition for testing is less than a full tank of fresh fuel, If possible, to assist in leak detection, add 1 gallon of fresh fuel to the tank (as long as it will not fill the tank), just before starting these procedures.**

1. Check the fuel fill cap installation.

   Is the correct fuel fill cap installed and properly tightened?

   YES - Go to step 2.

   NO - Properly install and tighten the cap 3 clicks, then go to step 22 .
2. Check the fuel fill cap seal (A) and the fuel fill pipe mating surface (B).

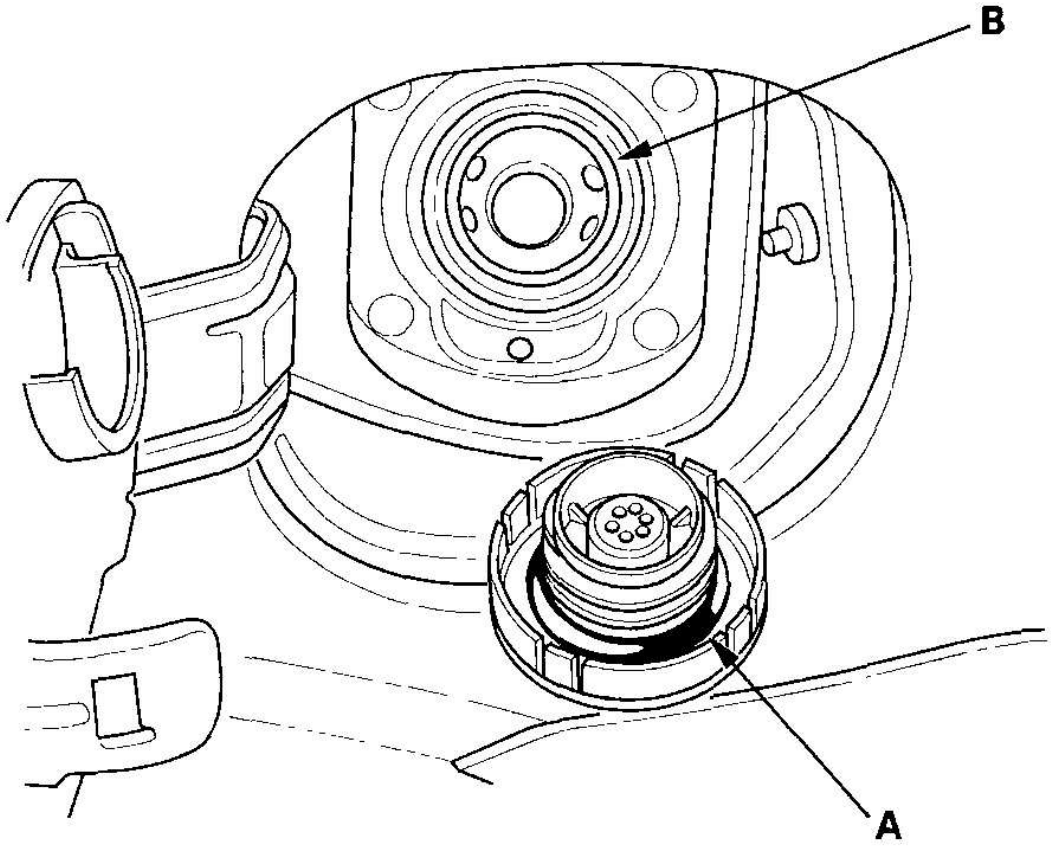


Fig. 40: Checking Fuel Fill Cap Seal And Fuel Fill Pipe Mating Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the fuel fill cap seal missing or damaged, is the fuel fill pipe damaged?

YES - Replace the fuel fill cap or the fuel fill pipe, then go to step 22 .

NO - Go to step 3.

3. Turn the ignition switch ON (II).
4. Clear the DTC with the HDS.
5. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, or the EVAP canister vent shut valve and the PCM.

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Turn the ignition switch ON (II).
8. Check for a poor connection or damage at the fuel tank vapor recirculation tube.

Is the tube OK?

YES - Go to step 9.

NO -

- Replace the fuel tank vapor recirculation tube, then go to step 22 .
- If necessary, replace the fuel tank (see **FUEL TANK REPLACEMENT**), then go to step 22 .

9. Disconnect the fuel tank vapor recirculation tube (A) from the EVAP canister (B), and plug the EVAP canister port (C).

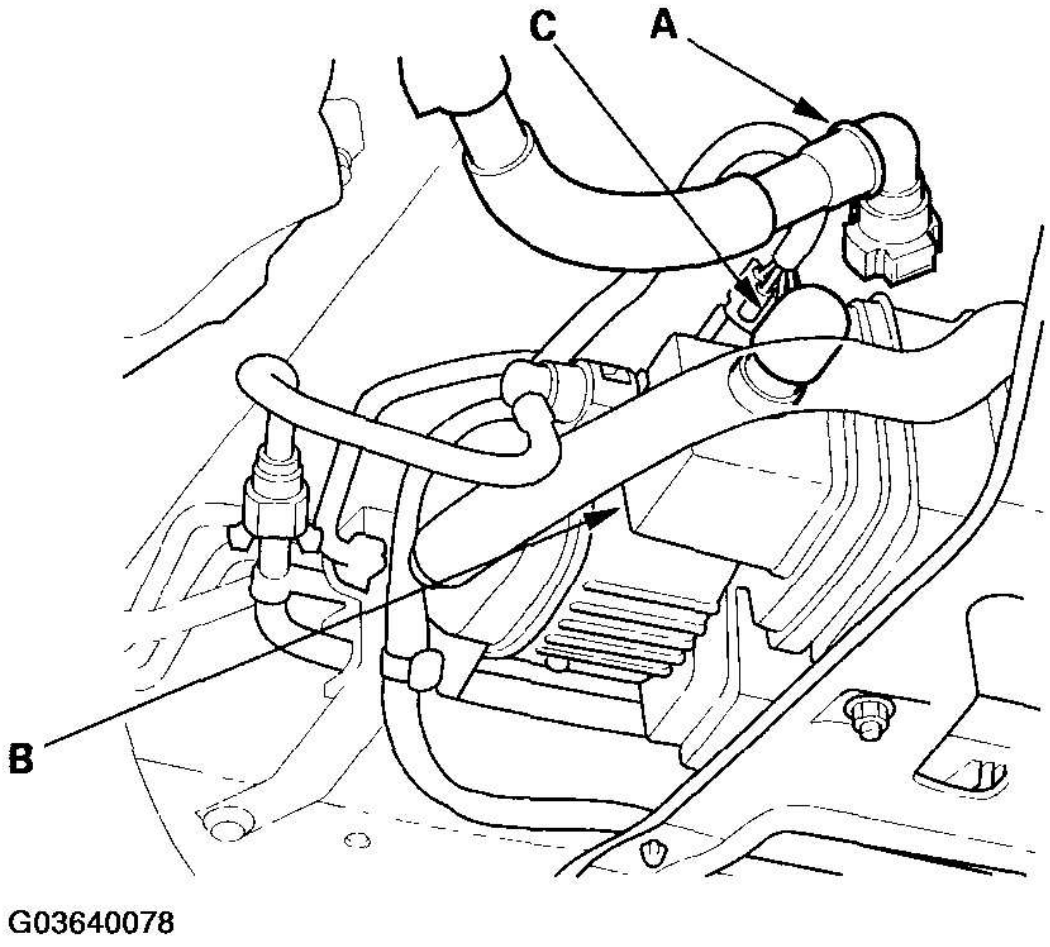


Fig. 41: Disconnecting Fuel Tank Vapor Recirculation Tube From EVAP Canister, And Plug EVAP Canister Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Disconnect the vacuum hose (purge line) from the EVAP canister purge valve (A) in the engine compartment, and connect a vacuum pump/gauge, 0-30 in.Hg, to the hose.

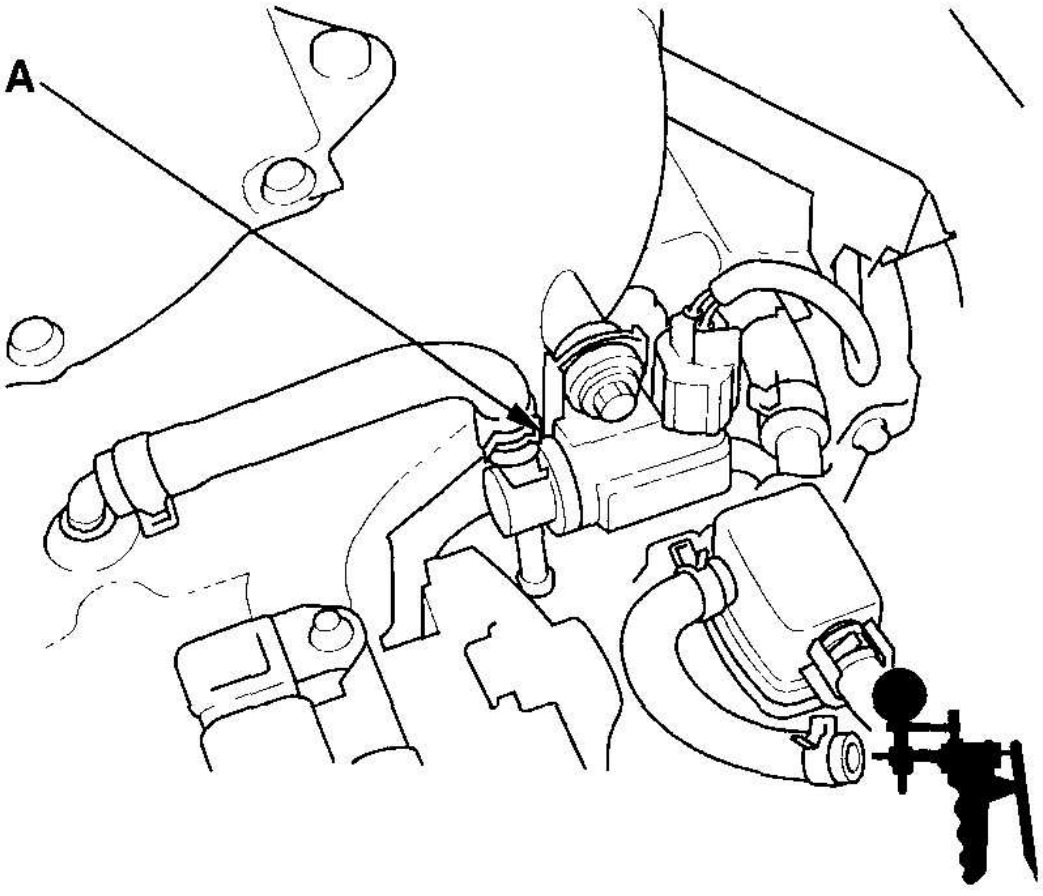


Fig. 42: Disconnecting Vacuum Hose (Purge Line) From EVAP Canister Purge Valve In Engine Compartment
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
12. Apply vacuum to the hose until the FTP reads 1.90 V or -2.0 kPa (-0.59 in.Hg, -15.1 mmHg).
13. Monitor the FTP SENSOR in the DATA LIST for 1 minute with the HDS.

Does the voltage increase more than 0.2 V or 0.07 kPa (0.02 in.Hg, 0.5 mmHg)?

YES - Go to step 14.
NO - Go to step 19 .

14. Do the EVAP CVS OFF in the INSPECTION MENU with the HDS.
15. Disconnect the fresh air hoses (A) from the EVAP canister vent shut valve (B), and plug the EVAP

canister vent shut valve ports (C).

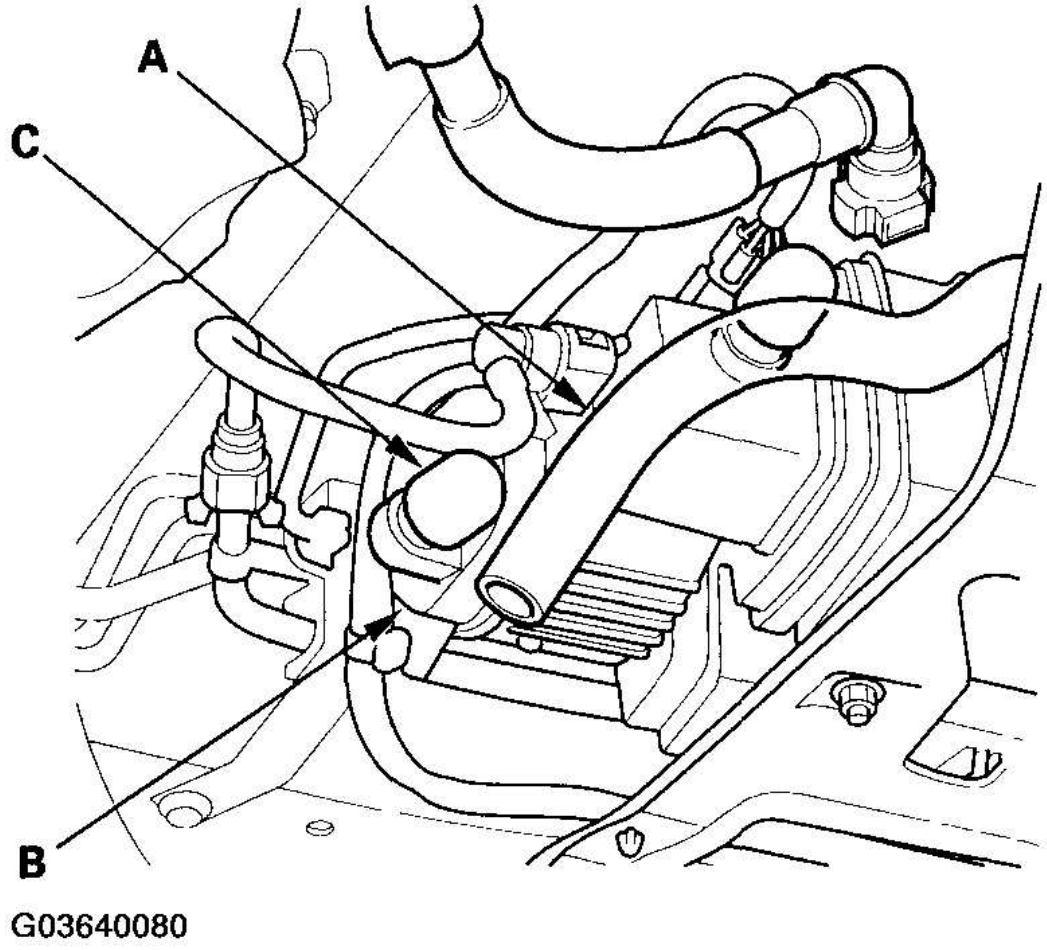


Fig. 43: Disconnecting Fresh Air Hoses From EVAP Canister Vent Shut Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Apply vacuum to the EVAP system until the FTP reads 1.90 V or -2.0 kPa (-0.59 in.Hg, -15.1 mmHg).
17. Monitor the FTP SENSOR in the DATA LIST for 1 minute with the HDS.

Does the voltage increase more than 0.2 V or 0.07 kPa (0.02 in.Hg, 0.5 mmHg)?

YES - Go to step 18.
NO - Replace the EVAP canister vent shut valve, then go to step 21 .

18. Check for a loose or damaged PCS line between the EVAP canister and the EVAP canister purge valve.

Is the line OK?

YES - Replace the these parts, then go to step 21 .

- FTP sensor O-ring
- EVAP canister vent shut valve case and O-ring
- EVAP canister

NO - Reconnect or repair the PCS hose, then go to step 21 .

19. Do the EVAP CVS OFF in the INSPECTION MENU with the HDS.
20. Check these parts for looseness or damage.
    - Fuel fill pipe
    - Fuel vapor return pipe

Are the parts OK?

YES - Check the fuel tank unit base gasket (see **FUEL TANK UNIT REMOVAL/INSTALLATION**), and check the fuel tank, then go to step 21.

NO - Repair or replace the damaged parts, then go to step 21.

21. Reconnect all hoses and connectors.
22. Turn the ignition switch ON (II).
23. Reset the PCM with the HDS.
24. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
25. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Troubleshooting is complete.

NO - Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, or the EVAP canister vent shut valve and the PCM, then go to step 1 .

DTC P0456: EVAP SYSTEM VERY SMALL LEAK DETECTED (2003-2004 MODELS)

Special Tools Required

- Vacuum pump/gauge, 0-30 in.Hg, Snap-on YA4000A or equivalent, commercially available
- Vacuum pump/gauge, 0-4 in.Hg 07JAZ-001000B

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **If DTC P0461 is stored at the same time as DTC P0456, troubleshoot DTC P0461 first, then recheck for DTC P0456.**

1. Check the fuel fill cap installation.

   Is the correct fuel fill cap installed and properly tightened?

   YES - Go to step 2.
   NO - Properly install and tighten the cap 3 clicks, then go to step 37 .
2. Check the fuel fill cap seal (A) and the fuel fill pipe mating surface (B).

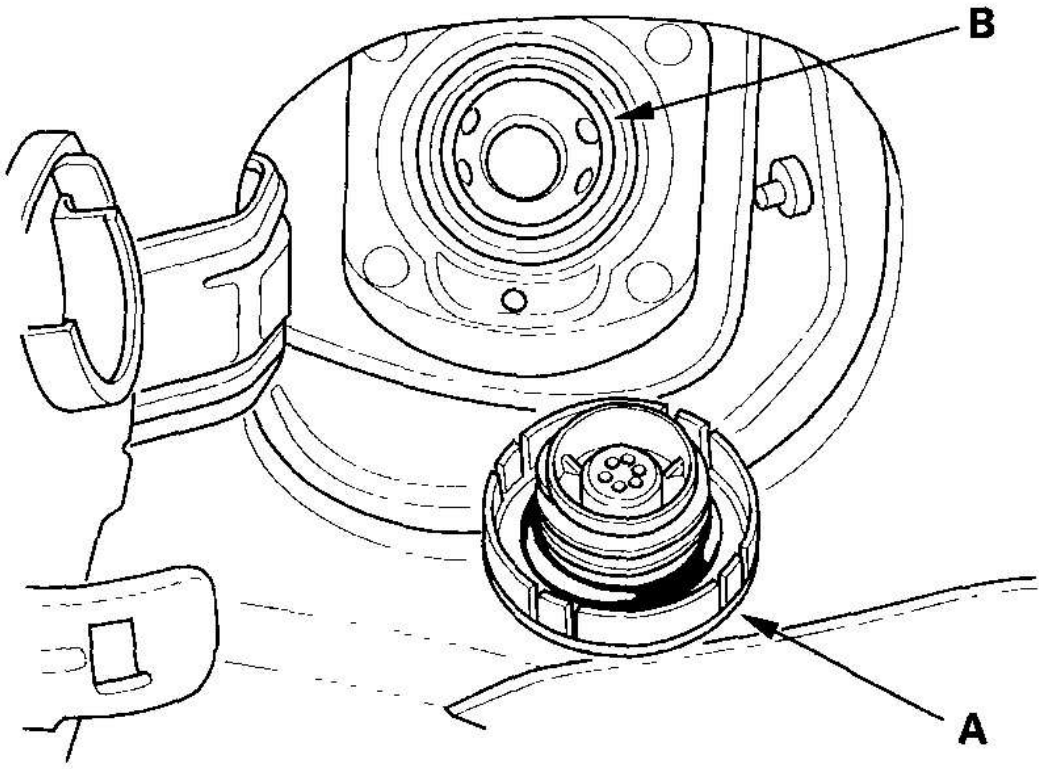


Fig. 44: Checking Fuel Fill Cap Seal And Fuel Fill Pipe Mating Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the fuel fill cap seal missing or damaged, or is the fuel fill pipe damaged?

YES - Replace the fuel fill cap or the fuel fill pipe, then go to step 37 .
NO - Go to step 3.

3. Turn the ignition switch ON (II).
4. Clear the DTC with the HDS.

5. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

   Is the EVAP SYSTEM normal?

   YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor and the EVAP bypass solenoid valve, or at the EVAP canister vent shut valve, the EVAP canister purge valve, and the PCM.

   NO - Go to step 6.
6. If "Small leak is detected in Canister" is indicated, go to step 7.

   If "Small leak is detected in Tank" is indicated, go to step 28 .

7. Turn the ignition switch OFF.
8. Disconnect the two vapor hoses (A) from the EVAP two way valve (B).

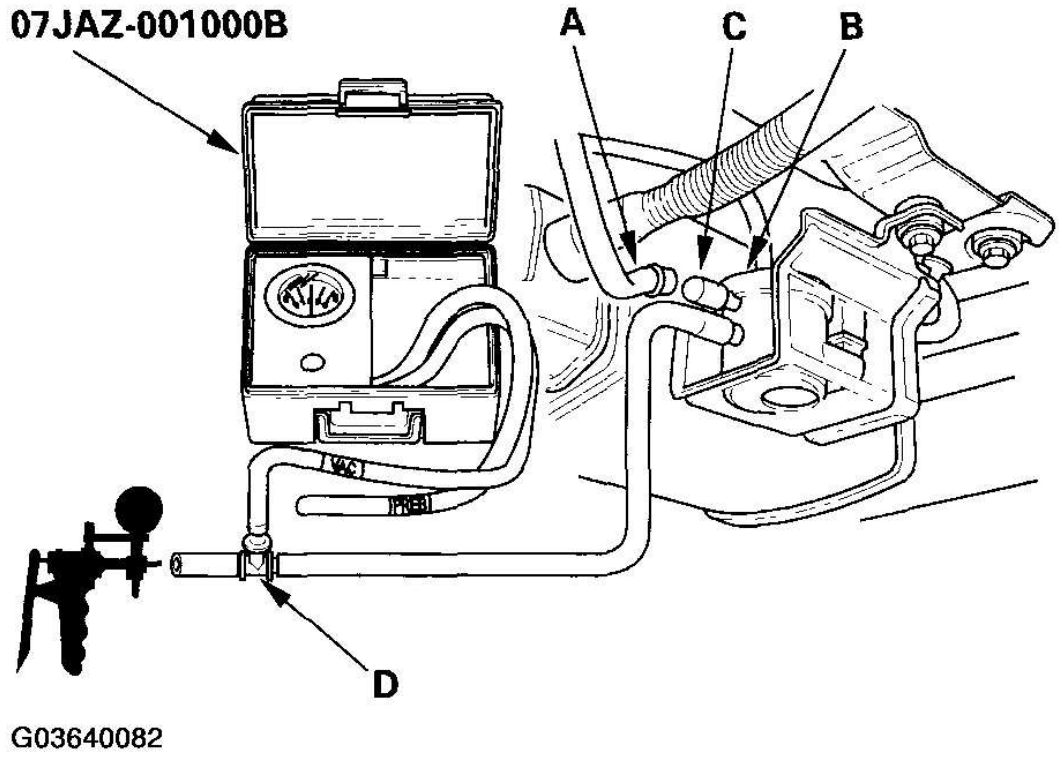


Fig. 45: Disconnecting Two Vapor Hoses From EVAP Two Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Plug the tank side port (C) of the EVAP two way valve.
10. Connect a T-fitting (D) from the vacuum gauge and the vacuum pump to the EVAP two way valve.

11. Turn the ignition switch ON (II).
12. Do the EVAP BPS ON in the INSPECTION MENU with the HDS.
13. Slowly apply 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the hose.

Does it hold vacuum for about 20 seconds?

YES - Go to step 14.

NO - Replace the EVAP two way valve or O-ring, then go to step 37 .

14. Reconnect the fuel tank side vapor hose (A) to the EVAP two way valve (B) and plug the canister side vacuum hose (C).

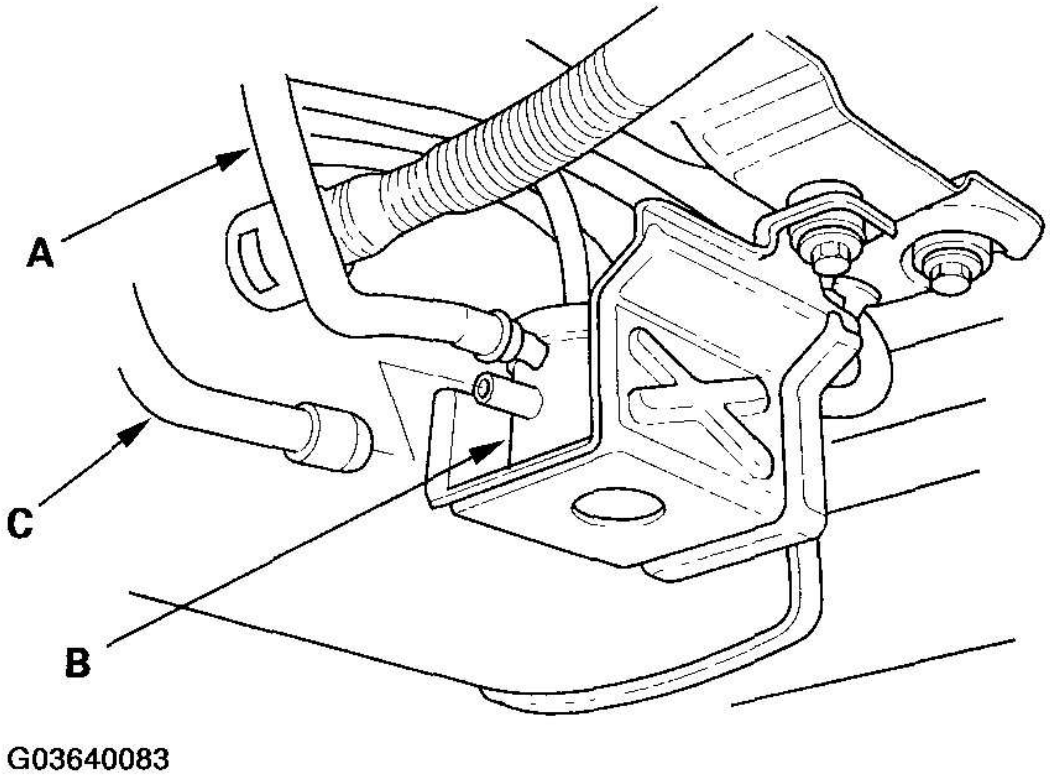


Fig. 46: Reconnecting Fuel Tank Side Vapor Hose To EVAP Two Way Valve And Plug Canister Side Vacuum Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Check the connection of the fuel tank vapor control valve vent hose and quick-connect fitting.

Is the hose connected properly?

YES - Go to step 16.

NO - Reconnect the fuel tank vapor control valve vent hose or the quick-connect fitting, then go to step 37 .

16. Disconnect the fuel tank vapor control valve vent hose (A) from the EVAP canister (B) and plug the canister port (C).

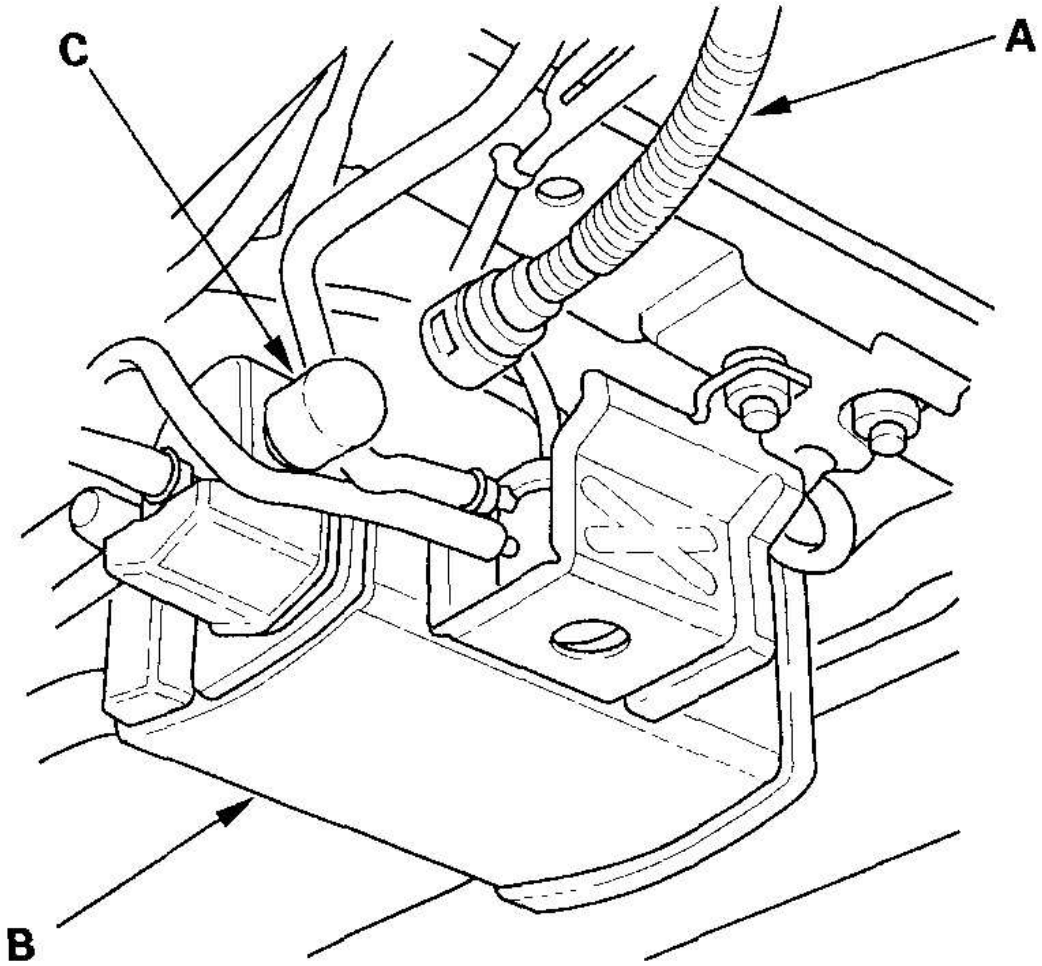


Fig. 47: Disconnecting Fuel Tank Vapor Control Valve Vent Hose From EVAP Canister And Plug Canister Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Disconnect the vacuum hose (A) between the EVAP canister and the EVAP canister purge valve (B) from the EVAP canister purge valve side.

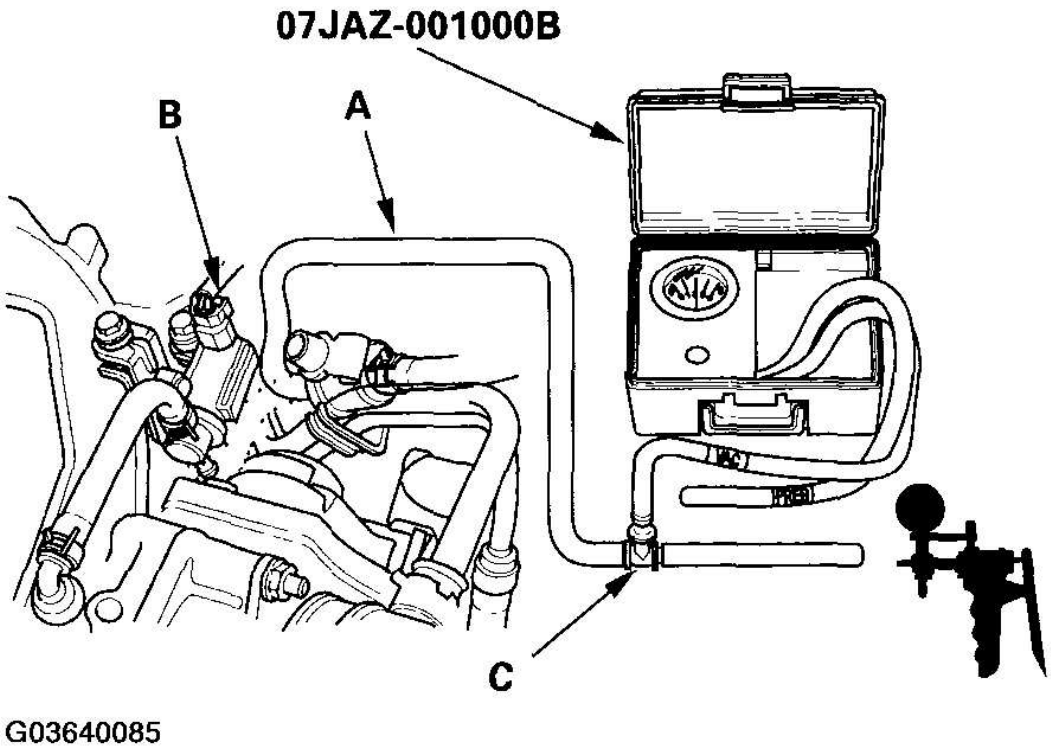


Fig. 48: Disconnecting Vacuum Hose Between EVAP Canister And EVAP Canister Purge Valve From EVAP Canister Purge Valve Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Connect a T-fitting (C) from the vacuum gauge and the vacuum pump to the vacuum hose.
19. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum for 1 minute?

YES - Inspect the fuel tank vapor control valve vent hose. If OK, replace the fuel tank vapor control valve, then go to step 37 .

NO - Go to step 20.

20. Disconnect all drain hoses from the EVAP canister vent shut valve, and plug their ports.
21. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum for 1 minute?

YES - Replace the EVAP canister vent shut valve, then go to step 37 .

NO - Go to step 22.

22. Disconnect the vacuum hose (VSV line) (A) between the EVAP canister (B) and EVAP canister vent shut

valve from the EVAP canister side, and plug the EVAP canister port (C).

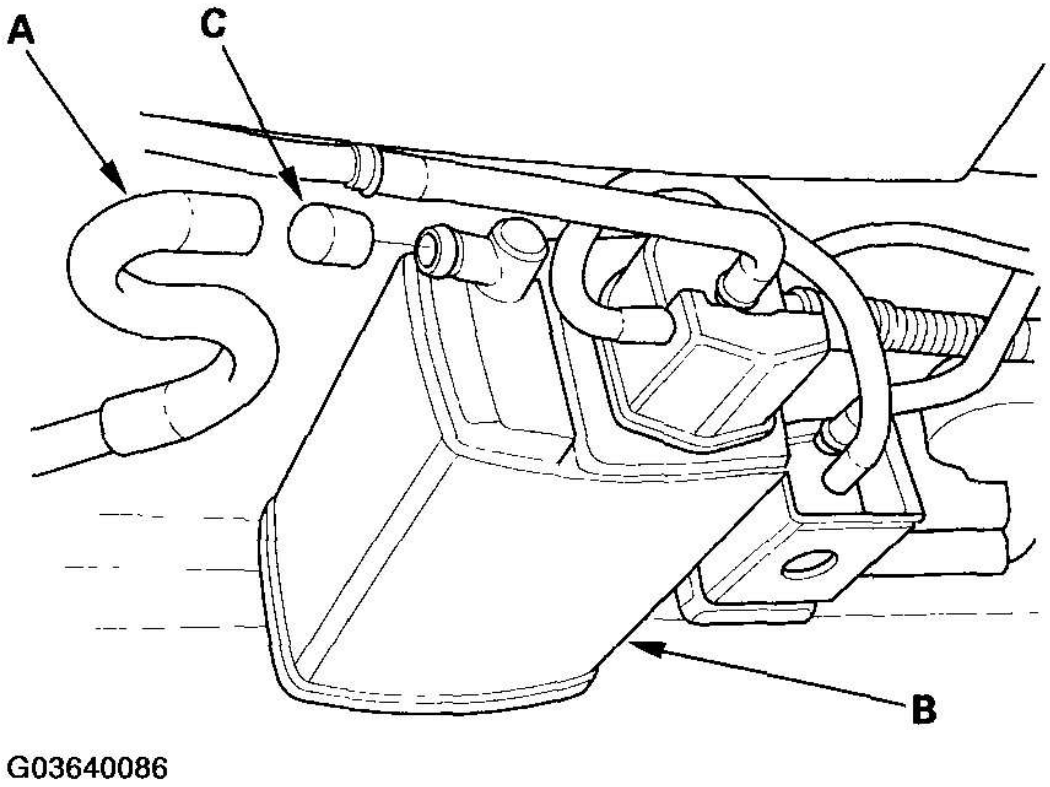


Fig. 49: Disconnecting Vacuum Hose (VSV Line) Between EVAP Canister
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

    Does it hold vacuum for 1 minute?

    YES - Check the hose between the EVAP canister vent shut valve and the EVAP canister. If the hose is OK, replace the EVAP canister vent shut valve, then go to step 37 .

    NO - Go to step 24.

24. Reconnect the vacuum hose to the EVAP canister purge valve.
25. Disconnect the vacuum hose (A) between the EVAP canister (B) and the EVAP canister purge valve from the EVAP canister side.

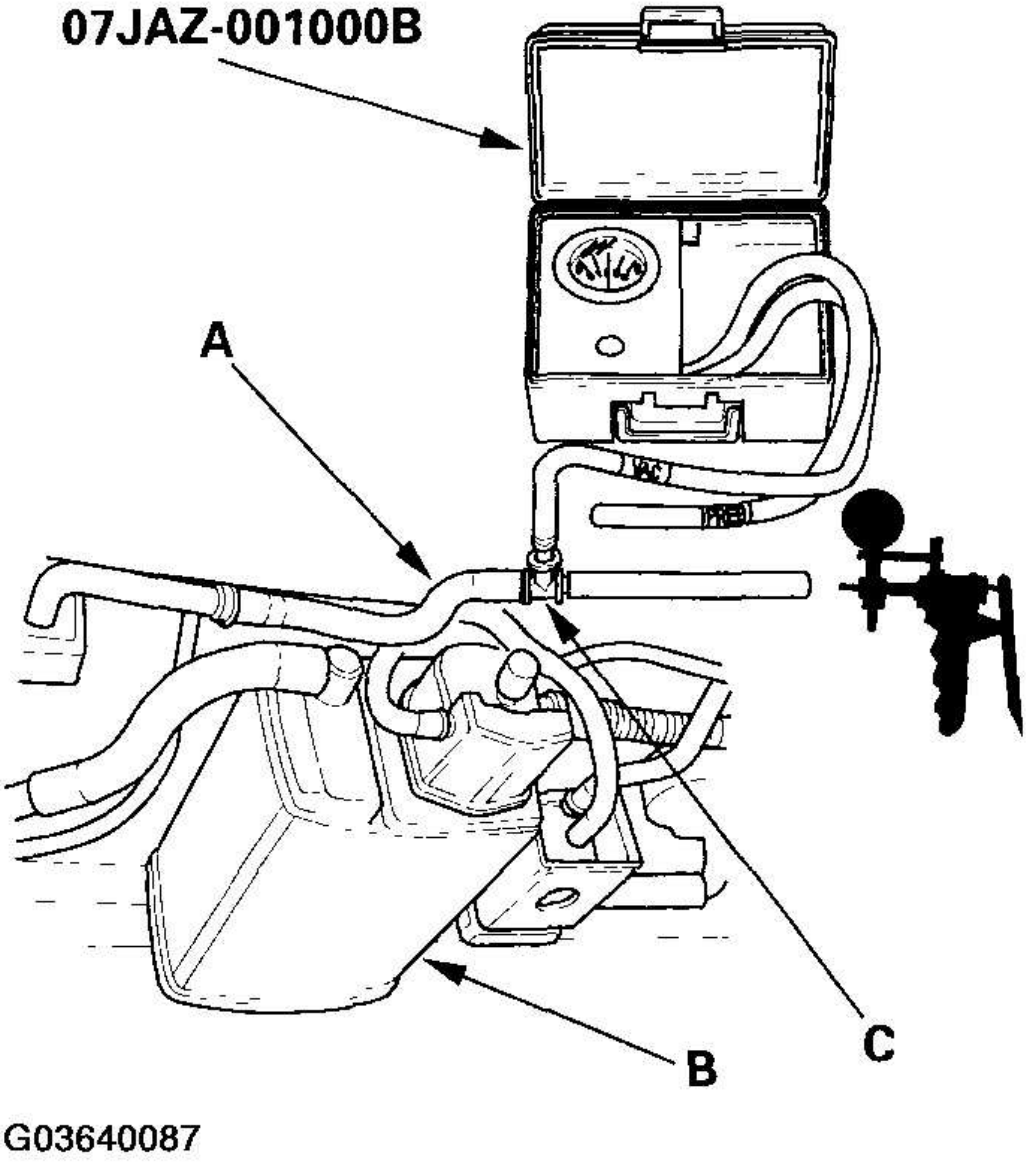


Fig. 50: Disconnecting Vacuum Hose Between EVAP Canister And EVAP Canister Purge Valve From EVAP Canister Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. Connect a T-fitting (C) from the vacuum gauge and the vacuum pump to the vacuum hose.
27. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum?

YES - Check for a cracked or damaged EVAP canister. If the EVAP canister is OK, go to step 40 .

NO - Check the hose between the EVAP canister purge cut valve and the EVAP canister. If the hose is OK, replace the EVAP canister purge cut valve, then go to step 37 .

28. Turn the ignition switch OFF.
29. Disconnect the two vapor hoses (A) from the EVAP two way valve (B).

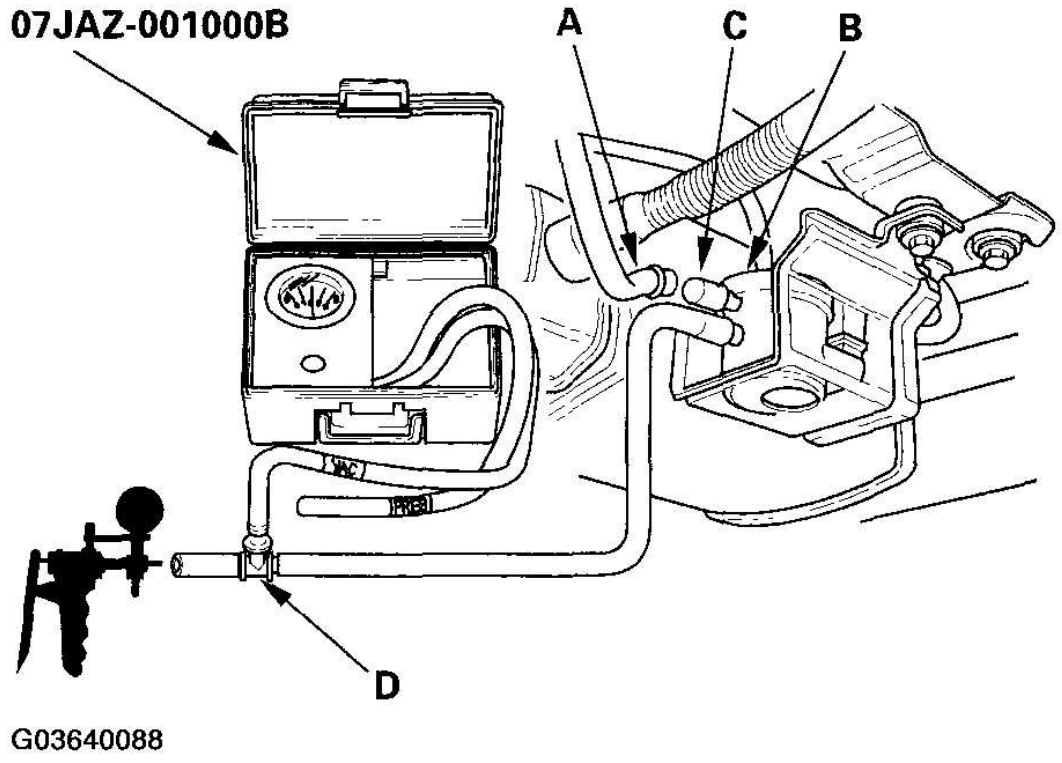


Fig. 51: Disconnecting Two Vapor Hoses From EVAP Two Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

30. Plug the tank side port (C) of the EVAP two way valve.
31. Connect a T-fitting (D) from the vacuum gauge and the vacuum pump to the EVAP two way valve.
32. Turn the ignition switch ON (II).
33. Do the EVAP BPS ON in the INSPECTION MENU with the HDS.
34. Slowly apply 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the hose.

Does it hold vacuum for about 20 seconds?

YES - Go to step 35.

NO - Replace the EVAP two way valve or O-rings, then go to step 37 .

35. Test the fuel tank vapor control valve (see **FUEL TANK VAPOR CONTROL VALVE TEST**).

    Is the fuel tank vapor control valve OK?

    YES - Go to step 36.

    NO - Replace the fuel tank vapor control valve, then go to step 37 .

36. Check for poor connection of the fuel tank vapor tube, fuel tank vapor recirculation tube, fuel tank vapor signal tube, FTP sensor hoses, and the vapor line between the EVAP two way valve and the fuel tank.

    Are all the connections OK ?

    YES - Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**), and check its seal and mating surface, then go to step 37.

    NO - Reconnect or replace the loose hose, then go to step 38 .

37. Reconnect all hoses and connectors.
38. Turn the ignition switch ON (II).
39. Reset the PCM with the HDS.
40. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
41. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

    Is the EVAP SYSTEM normal?

    YES - Troubleshooting is complete.

    NO - Check for poor connections or loose terminals at the FTP sensor, the EVAP bypass solenoid valve, the EVAP canister vent shut valve, or the EVAP canister purge valve and the PCM, then go to step 1 .

DTC P0457: EVAP SYSTEM LEAK DETECTED FUEL FILL CAP LOOSE OR MISSING

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

1. Check the fuel fill cap installation.

   Is the fuel fill cap installed and properly tightened?

   YES - Go to step 2.

   NO - Properly install and tighten the cap 3 clicks, then go to step 19 .

2. Check the fuel fill cap seal (A) and the fuel fill pipe mating surface (B).

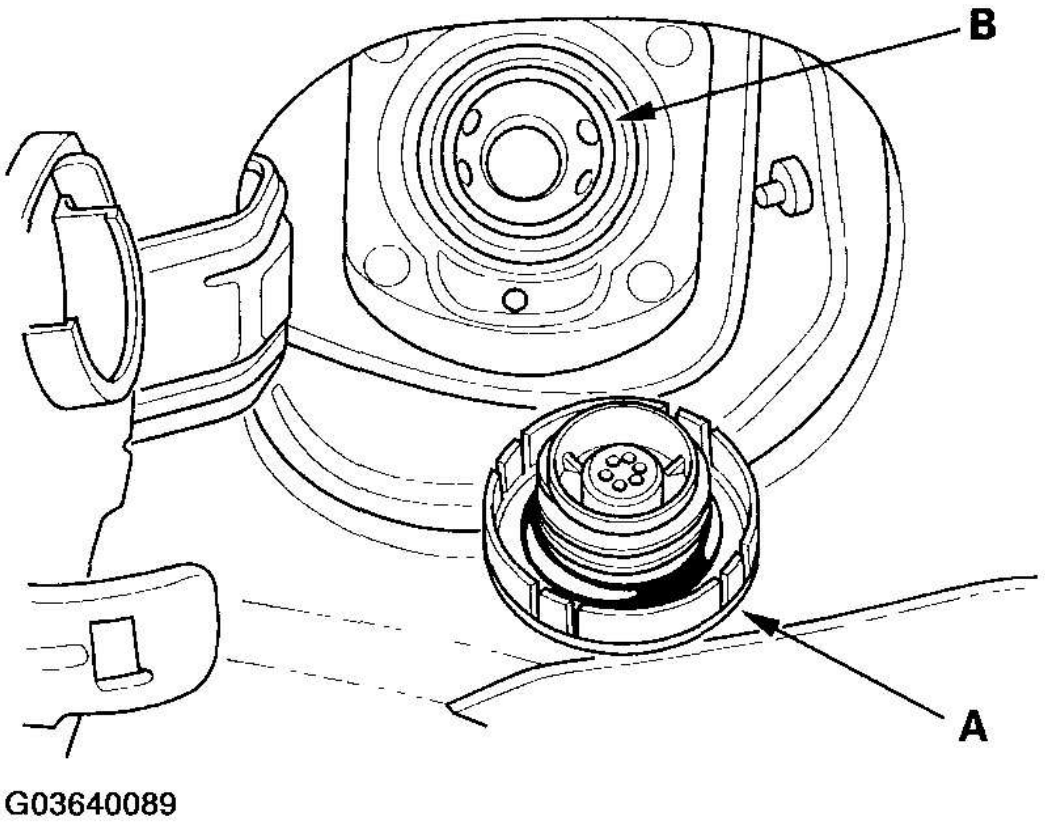


Fig. 52: Checking Fuel Fill Cap Seal And Fuel Fill Pipe Mating Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the fuel fill cap seal missing or damaged, is the fuel fill pipe damaged?

YES - Replace the fuel fill cap or the fuel fill pipe, then go to step 19 .

NO - Go to step 3.

3. Turn the ignition switch ON (II).
4. Clear the DTC with the HDS.
5. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, or the EVAP canister vent shut valve and the PCM.

NO - Go to step 6.

6. Turn the ignition switch OFF.

7. Remove the EVAP canister vent shut valve from the EVAP canister; 2003-2004 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), 2005-2006 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**).
8. Connect the 2P connector to the EVAP canister vent shut valve.
9. Turn the ignition switch ON (II).
10. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
11. Check the EVAP canister vent shut valve (A) operation.

2003-2004 models

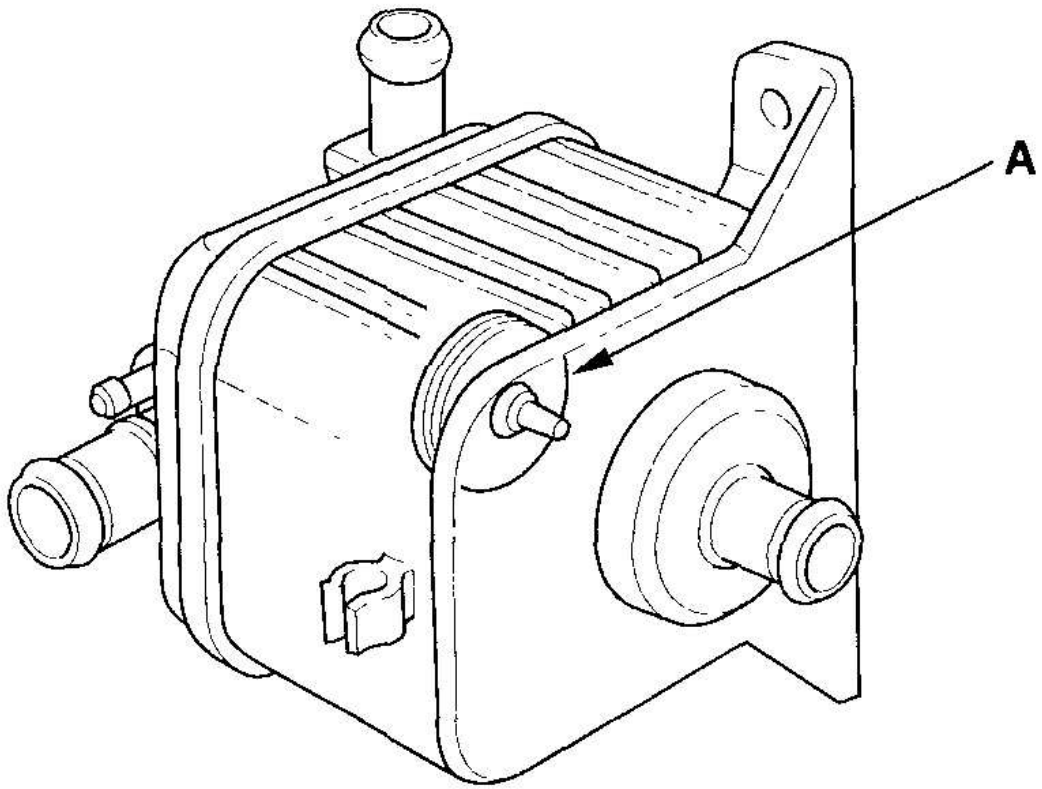


Fig. 53: Checking EVAP Canister Vent Shut Valve Operation (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2003-2006 models

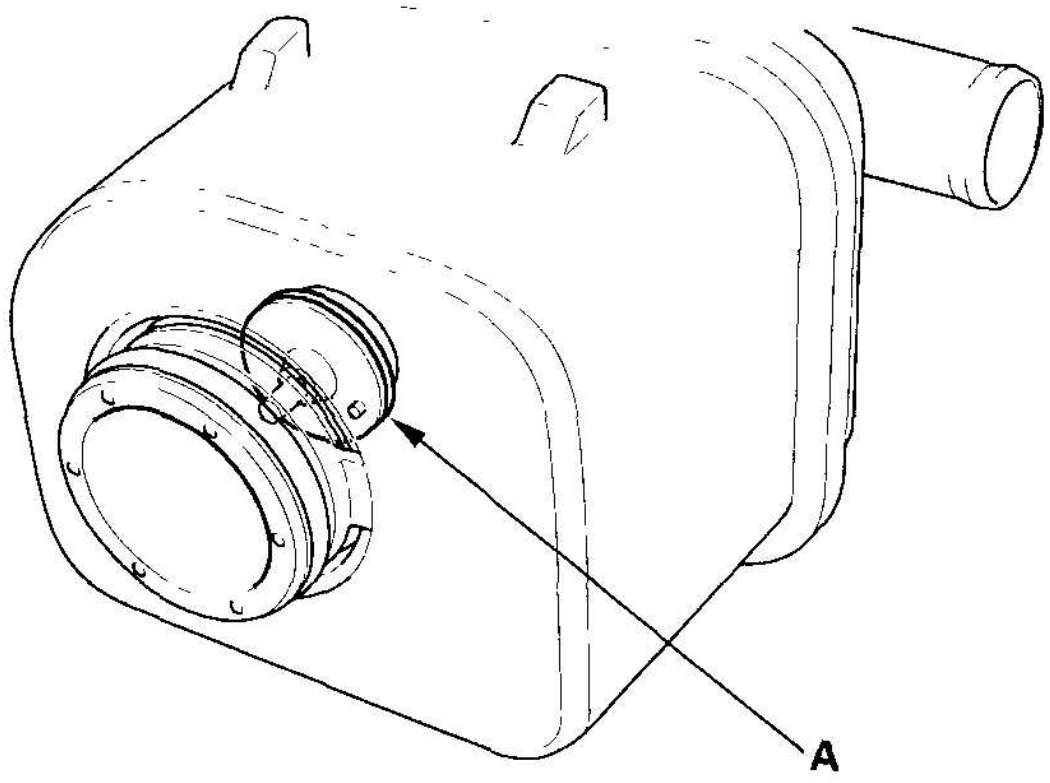


Fig. 54: Checking EVAP Canister Vent Shut Valve Operation (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the valve operate?

YES - Check the routing of the EVAP canister vent tube, then go to step 18 .

NO - Go to step 12.

12. Turn the ignition switch OFF.
13. Replace the EVAP canister vent shut valve; 2003-2004 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), 2005-2006 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**).
14. Turn the ignition switch ON (II).
15. Reset the PCM with the HDS.
16. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
17. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Troubleshooting is complete.

NO - Check for poor connections or loose terminals at the FTP sensor, or the EVAP canister vent shut valve and the PCM, then go to step 1 .

18. Reinstall the EVAP canister vent shut valve.
19. Turn the ignition switch ON (II).
20. Reset the PCM with the HDS.
21. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
22. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Troubleshooting is complete.

NO - Check for poor connections or loose terminals at the FTP sensor, or the EVAP canister vent shut valve and the PCM, then go to step 1 .

DTC P0496: EVAP SYSTEM HIGH PURGE FLOW

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. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, or the EVAP canister vent shut valve and the PCM.

NO - Go to step 4.

4. Turn the ignition switch OFF.
5. Replace the EVAP canister purge valve (see **EVAP CANISTER PURGE VALVE REPLACEMENT**).
6. Turn the ignition switch ON (II).
7. Reset the PCM with the HDS.
8. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
9. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Troubleshooting is complete.

NO - Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge

valve, or at the EVAP canister vent shut valve and the PCM, then go to step 1 .

DTC P0497: EVAP SYSTEM LOW PURGE FLOW (2003-2004 MODELS)

Special Tools Required

- Vacuum pump/gauge, 0-30 in.Hg, Snap-on YA4000A or equivalent, commercially available
- Vacuum/pressure gauge, 0-4 in.Hg 07JAZ-001000B

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

1. Check the fuel fill cap (the cap must say "If not tightened 3 clicks, check engine light may come on").

   Is the correct fuel fill cap installed and properly tightened?

   YES - Go to step 2.

   NO - Replace or tighten the fuel fill cap, then go to step 33 .
2. Turn the ignition switch ON (II).
3. Clear the DTC with the HDS.
4. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

   Is the EVAP SYSTEM normal?

   YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP bypass solenoid valve, and the EVAP canister purge valve, or at the EVAP canister vent shut valve and the PCM.

   NO - Go to step 5.
5. Check for looseness or damage on PCS line between the intake manifold and the EVAP canister purge valve.

   Is the line OK?

   YES - Go to step 6.

   NO - Reconnect or repair the PCS line, then go to step 33 .
6. Disconnect the PCS hose at the purge joint (A), and connect a vacuum pump to the PCS hose (B).

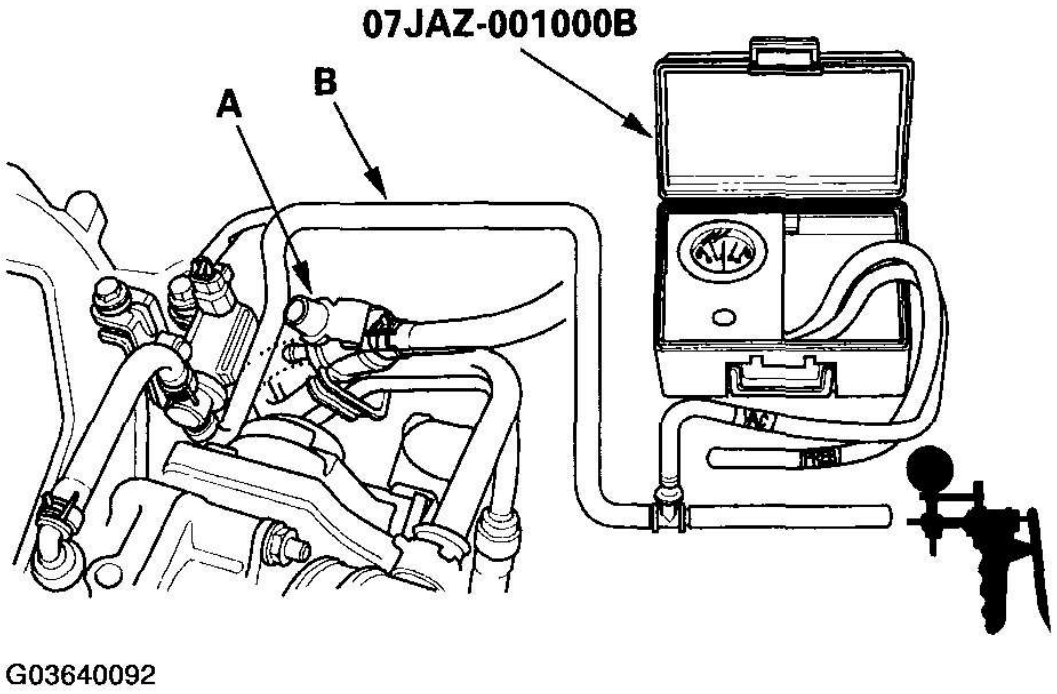


Fig. 55: Disconnecting PCS Hose At Purge Joint, And Connect Vacuum Pump To PCS Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the PCS hose.
8. Do the EVAP PCS ON in the INSPECTION MENU with the HDS.

Does it hold vacuum?

YES - Go to step 9.

NO - Check for leakage on the PCS line between the intake manifold and the EVAP canister purge valve. If the vacuum hose is OK, replace the EVAP canister purge valve, then go to step 33 .

9. Keep about 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum in the hose.
10. Reconnect the PCS hose to the EVAP canister purge valve.
11. Do the EVAP PCS ON in the INSPECTION MENU with the HDS.

Does It change to atmospheric pressure?

YES - Go to step 12.

NO - Check for blockage on the PCS line between the intake manifold and the EVAP canister purge valve. If the vacuum hose is OK, replace the EVAP canister purge valve, then go to step 33 .

12. Disconnect the PCS hose (A) from the EVAP canister purge valve (B).

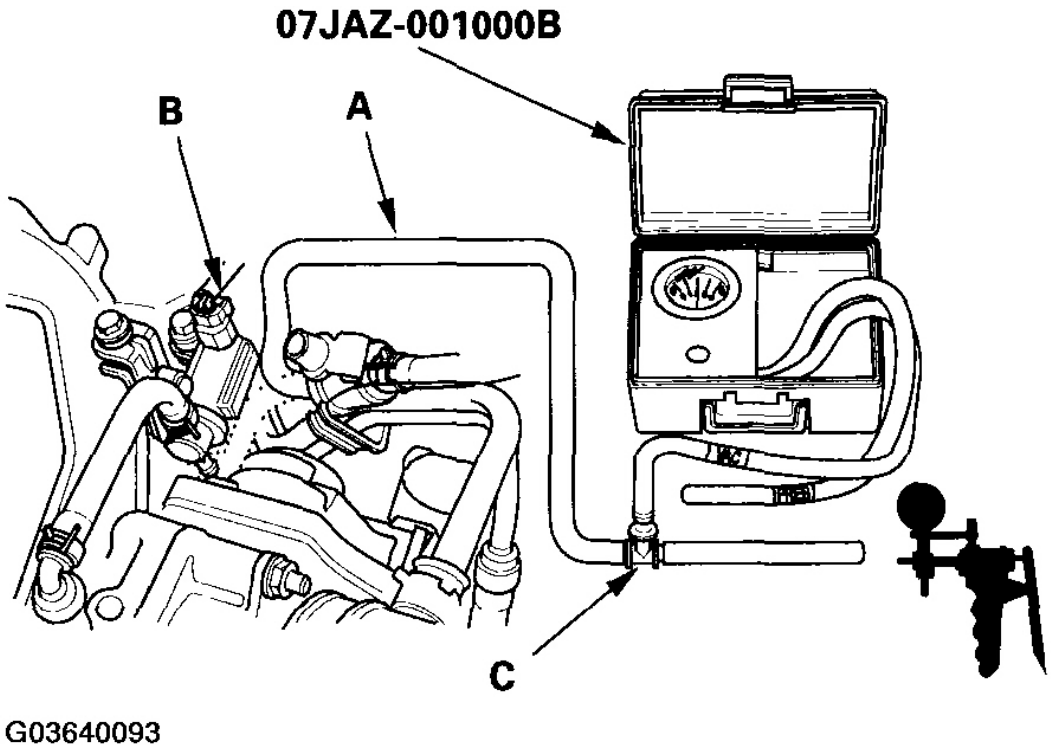


Fig. 56: Disconnecting PCS Hose From EVAP Canister Purge Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Connect a T-fitting (C) from the vacuum gauge and the vacuum pump to the PCS hose.
14. Do the EVAP PCS OFF in the INSPECTION MENU with the HDS.
15. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the PCS hose.

Does it hold vacuum?

YES - Go to step 16.

NO - Check for a looseness or damage on PCS line between the EVAP canister purge valve and the EVAP canister, then go to step 33 .

16. Do the EVAP PCS ON in the INSPECTION MENU with the HDS.

Does it change to atmospheric pressure?

YES - Go to step 17.

NO - Check for a clogged PCS line between the EVAP canister purge valve and the EVAP canister, then go to step 33 .

17. Disconnect the vacuum hose (A) from the FTP sensor (B).

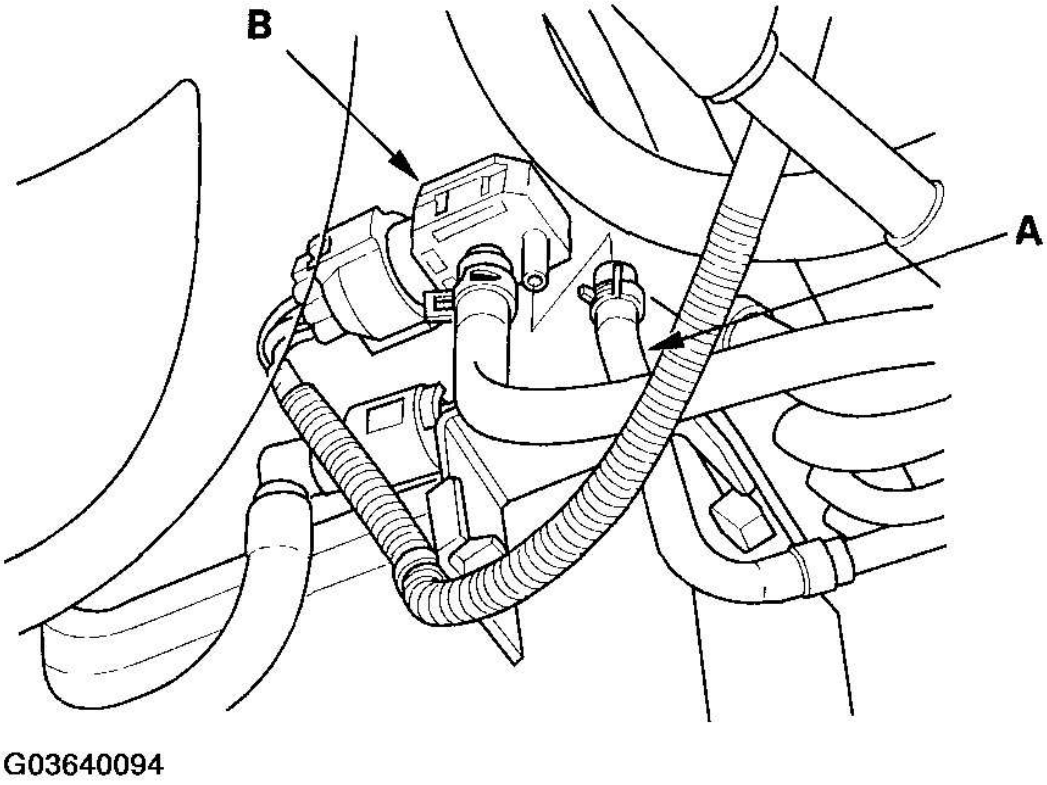


Fig. 57: Disconnecting Vacuum Hose From FTP Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Disconnect the vacuum hose (A) between the EVAP canister (B) and the EVAP two way valve (C) at EVAP canister side.

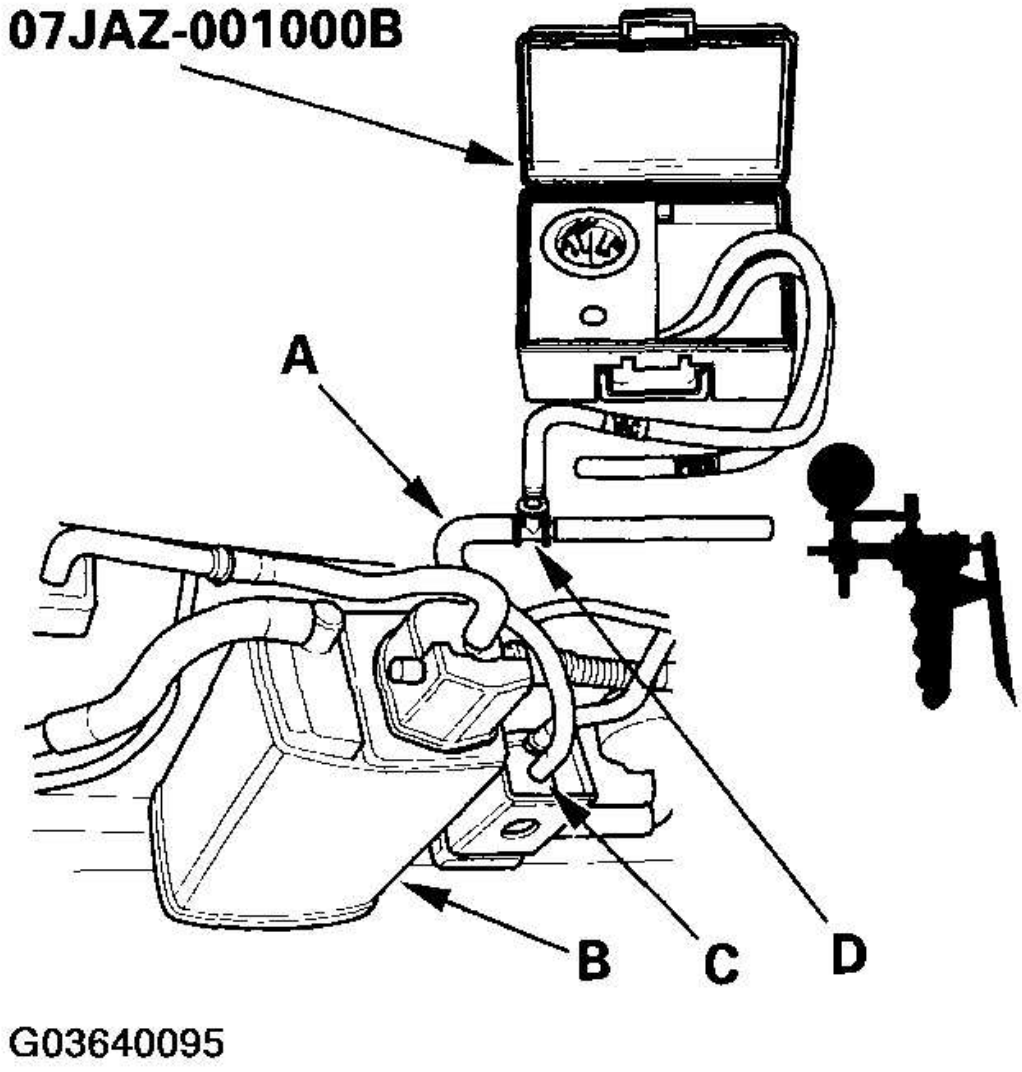


Fig. 58: Disconnecting Vacuum Hose Between EVAP Canister And EVAP Two Way Valve At EVAP Canister Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Connect a T-fitting (D) from the vacuum gauge and the vacuum pump to the vacuum hose.
20. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum?

YES - Go to step 21.

NO - Reconnect or repair the vacuum hose between the EVAP canister and the EVAP two way valve, then go to step 33 .

21. Do the EVAP BPS ON in the INSPECTION MENU with the HDS.

Does it change to atmospheric pressure?

YES - Go to step 22.

NO - Check for a clogged vacuum hose (BPS line) between the EVAP canister and the EVAP two way valve, and between the EVAP two way valve and the FTP sensor. If the vacuum hoses are OK, replace the EVAP two way valve, then go to step 33 .

22. Connect a vacuum pump to the hose previously disconnected from the FTP sensor on step 14 .
23. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose disconnected from the FTP sensor.

Does it hold vacuum?

YES - Go to step 24.

NO - Reconnect or repair the vacuum hose between the EVAP two way valve and the FTP sensor, then go to step 33 .

24. Connect a T-fitting (A) from the vacuum gauge and the vacuum pump to the FTP sensor (B) as shown.

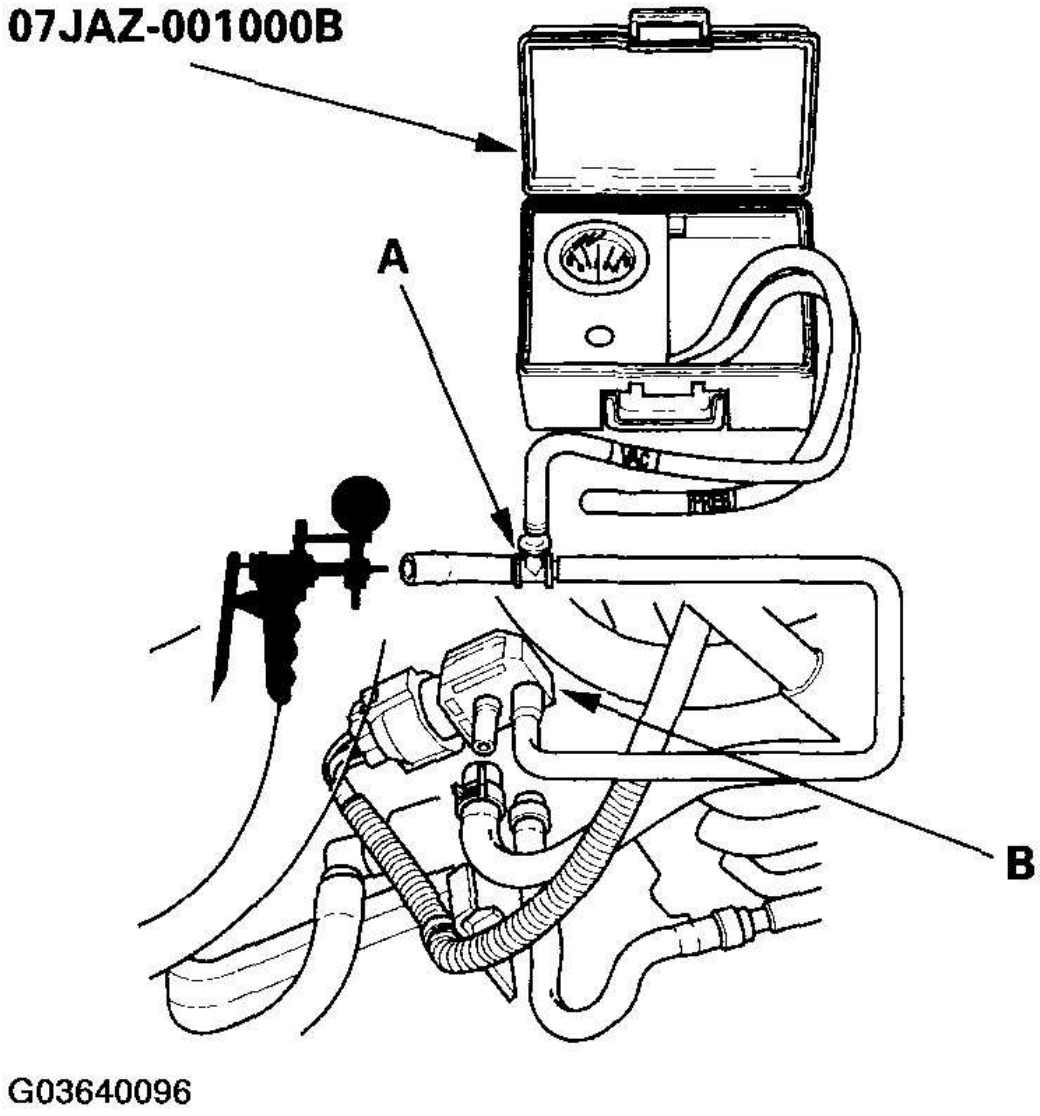


Fig. 59: Connecting T-Fitting From Vacuum Gauge And Vacuum Pump To FTP Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Slowly apply 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the FTP sensor (B).
26. Check the FTP SENSOR in the DATA LIST with the HDS.

Is the difference 1.1 kPa (0.31 in.Hg, 8 mmHg) or more?

YES - Go to step 27.
NO - Replace the FTP sensor, then go to step 33 .

27. Disconnect the vacuum hose (A) to the EVAP two way valve (B) at the EVAP canister (C) side, and plug the EVAP canister port (D).

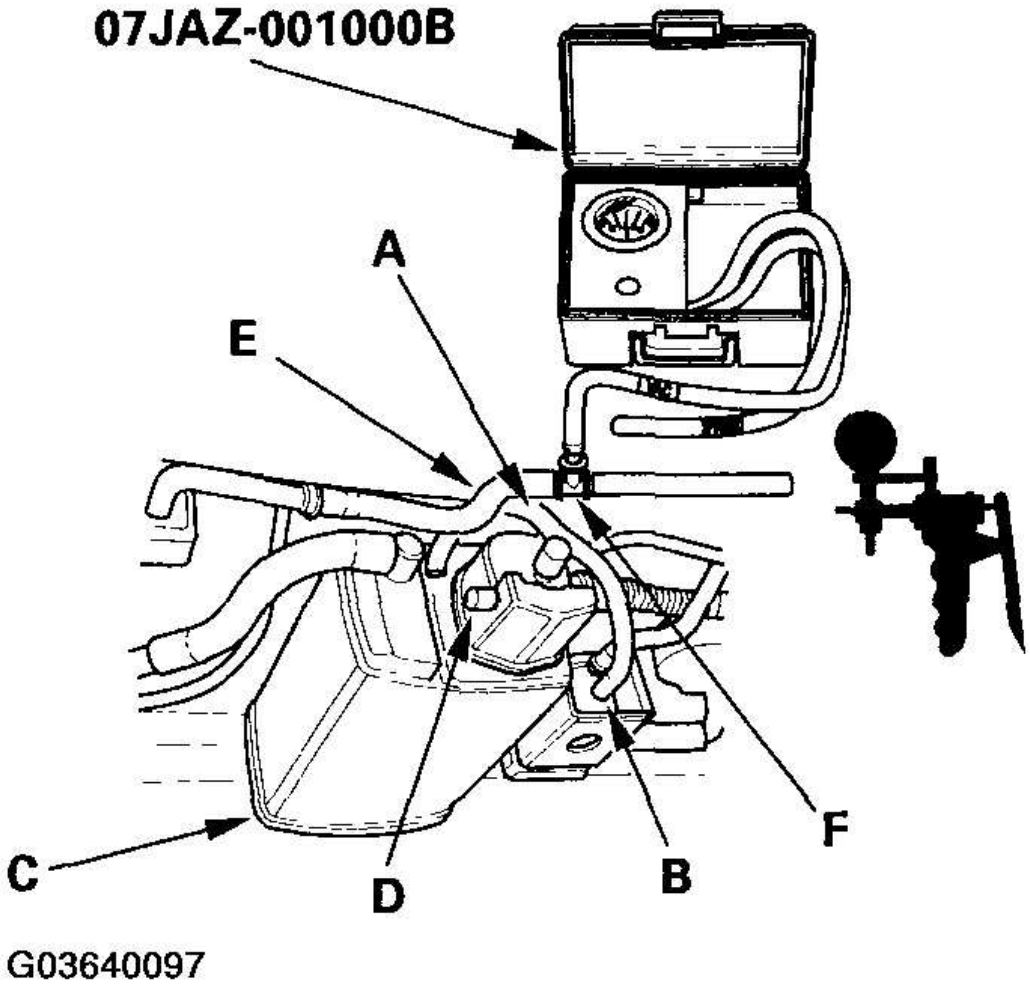


Fig. 60: Disconnecting Vacuum Hose To EVAP Two Way Valve At EVAP Canister Side, And Plug EVAP Canister Port
Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. Disconnect the PCS hose (E) from the EVAP canister.
29. Connect a T-fitting (F) from the vacuum gauge and the vacuum pump to the PCS hose.
30. Do the EVAP PCS OFF in the INSPECTION MENU with the HDS.
31. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
32. Slowly apply 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the PCS hose.

Does it hold vacuum?

YES - Check for a clogged the EVAP canister port, then go to step 33.

NO - Replace the EVAP canister vent shut valve, then go to step 33.

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. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the EVAP SYSTEM normal?

YES - Troubleshooting is complete.

NO - Reconnect or repair the fuel tank vapor control vent tube and the hose between the EVAP vent shut valve and the EVAP canister, if the tube and hose are OK, check for poor connections or loose terminals at the FTP sensor, the EVAP bypass solenoid valve, the EVAP canister purge valve, or the EVAP canister vent shut valve and the PCM, then go to step 1 .

DTC P0497: EVAP SYSTEM LOW PURGE FLOW (2005-2006 MODELS)

Special Tools Required

- Vacuum pump/gauge, 0-30 in.Hg, Snap-on YA4000A or equivalent, commercially available
- Vacuum/pressure gauge, 0-4 in.Hg 07JAZ-001000B

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

1. Check the fuel fill cap installation.

Is the fuel fill cap installed and properly tightened?

YES - Go to step 2.

NO - Properly install and tighten the fuel fill cap 3 clicks, then go to step 24 .

2. Turn the ignition switch ON (II).
3. Clear the DTC with the HDS.
4. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, or the EVAP canister vent shut valve and the PCM.

NO - Go to step 5.

5. Check for a loose or damaged in the PCS line between the intake manifold and the EVAP canister purge valve.

   Is the line OK?

   YES - Go to step 6.

   NO - Reconnect or repair the PCS line, then go to step 24 .

6. Disconnect the vacuum hose (A) from the EVAP canister purge valve service port (B) in the engine compartment, and connect a vacuum pump/gauge, 0-30 in.Hg, to the hose.

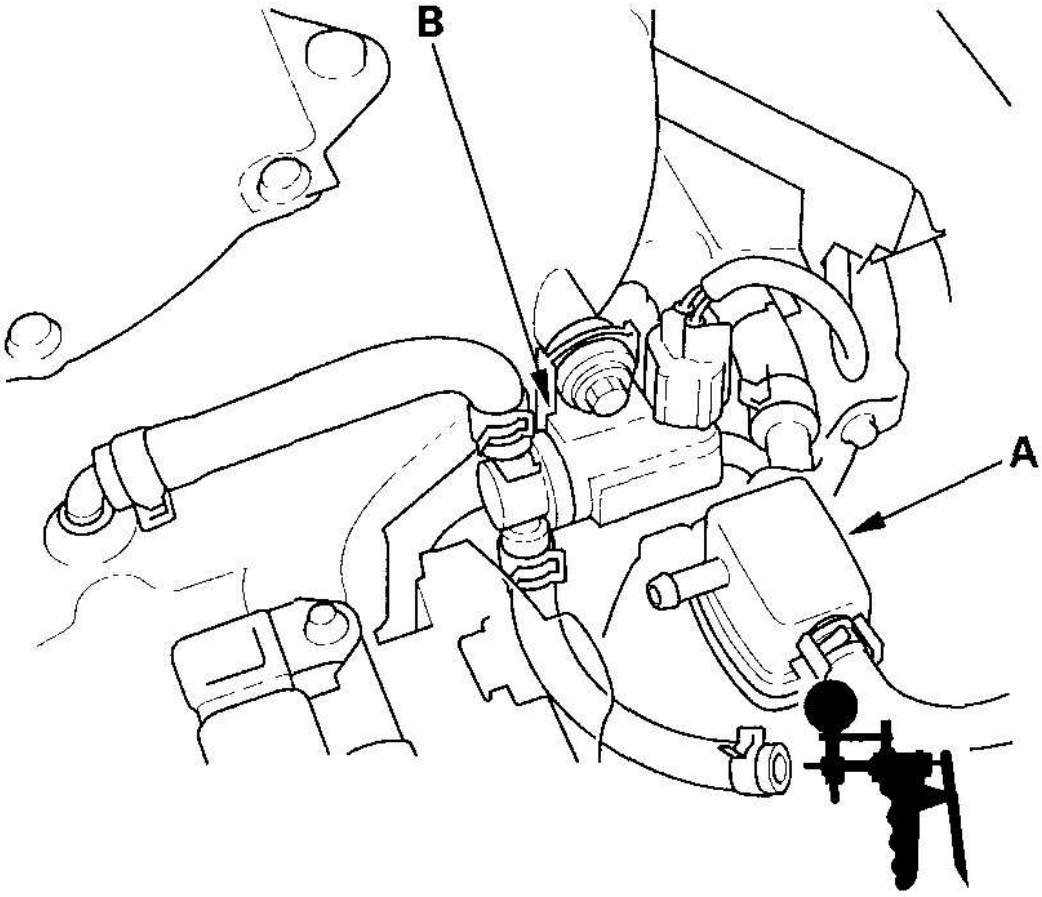


Fig. 61: Disconnecting Vacuum Hose From EVAP Canister Purge Valve Service Port In Engine Compartment
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Do the EVAP PCS ON in the INSPECTION MENU with the HDS.
8. Slowly apply about 2.0 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum?

YES - Replace the EVAP canister purge valve, then go to step 24 .
NO - Go to step 9.

9. Reconnect the vacuum hose to the EVAP service port.
10. Disconnect the vacuum hose from the PCS line (at the EVAP canister side), and connect a vacuum pump/gauge, 0-30 in.Hg, to the hose.

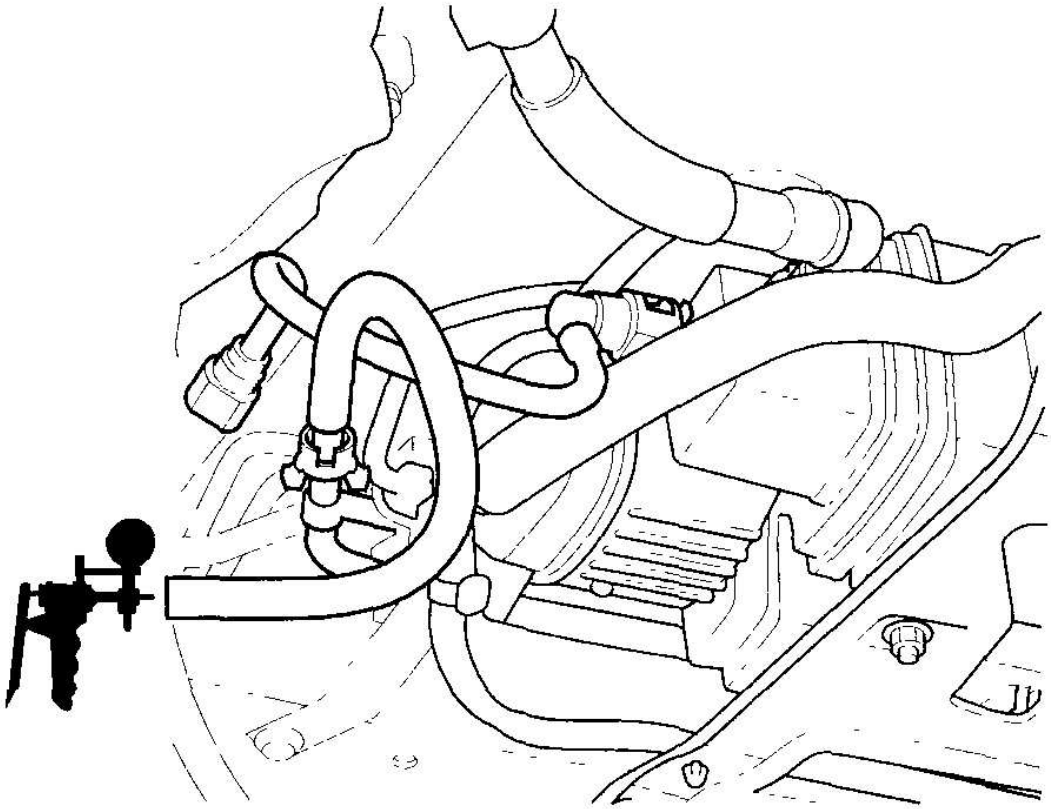


Fig. 62: Disconnecting Vacuum Hose From PCS Line
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Do the EVAP PCS ON in the INSPECTION MENU with the HDS.
12. Slowly apply about 2 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does it hold vacuum?

YES - Check for a restricted PCS line between the EVAP canister purge valve and the EVAP canister, then go to step 23 .

NO - Go to step 13.

13. Remove the FTP sensor with its connector connected; 2003-2004 models (see **FTP SENSOR REPLACEMENT**), 2005-2006 models (see **FTP SENSOR REPLACEMENT**).
14. Connect a T-fitting (A) from the vacuum gauge and a vacuum pump/gauge, 0-30 in.Hg, to the FTP sensor (B) as shown.

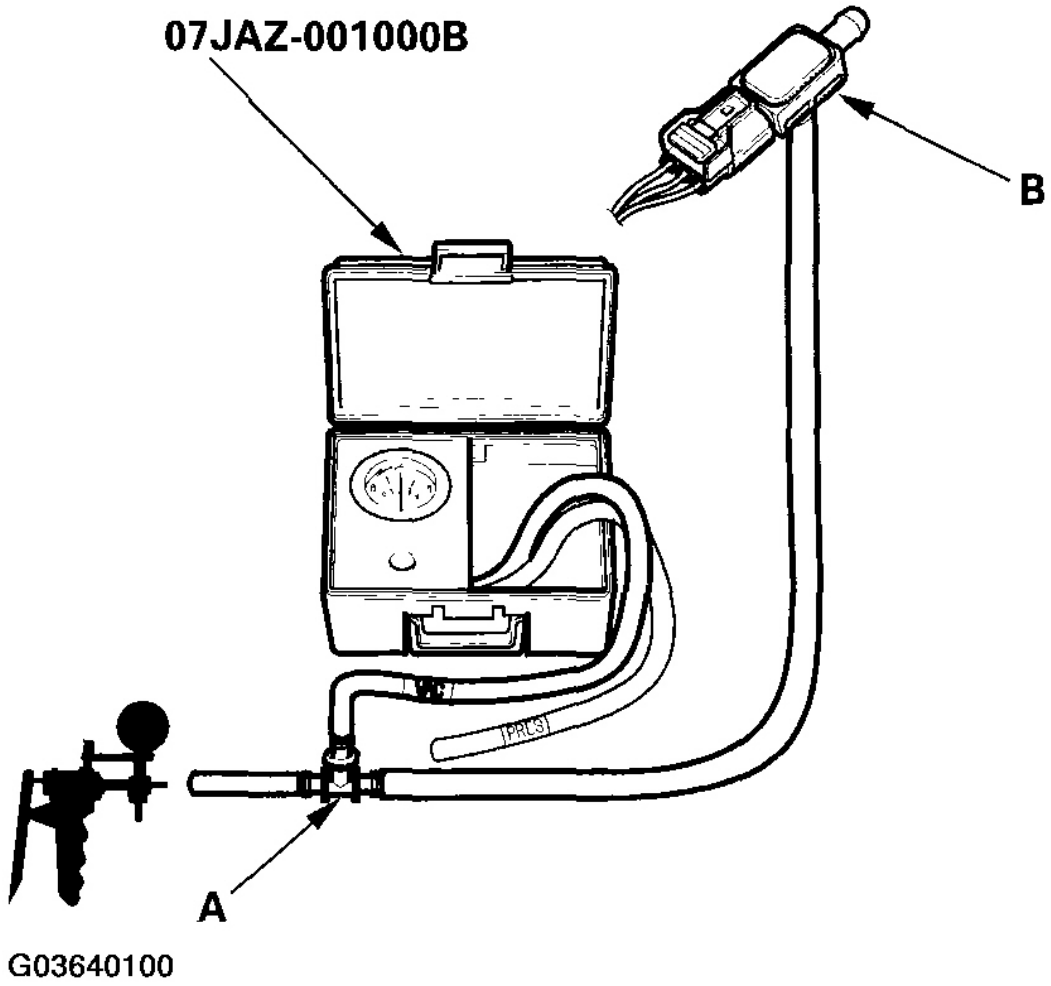


Fig. 63: Connecting T-Fitting From Vacuum Gauge And Vacuum Pump/Gauge
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Check and record the FTP SENSOR reading in the DATA LIST with the HDS.

16. Slowly apply about 1.3 kPa (0.4 in.Hg, 10 mmHg) of vacuum to the hose.
17. Check the FTP SENSOR in the DATA LIST with the HDS.

Is the difference more than 1.1 kPa (0.31 in.Hg, 8 mmHg) before and after applying vacuum?

YES - Go to step 18.

NO - Replace the FTP sensor; 2003-2004 models (see **FTP SENSOR REPLACEMENT**), 2005-2006 models (see **FTP SENSOR REPLACEMENT**), then go to step 23 .

18. Reconnect the vacuum hoses to the PCS line (EVAP canister side), and reinstall the FTP sensor.
19. Disconnect the vacuum hose (A) from the EVAP canister purge valve (B), and connect a vacuum pump/gauge, 0-30 in.Hg, to the hose.

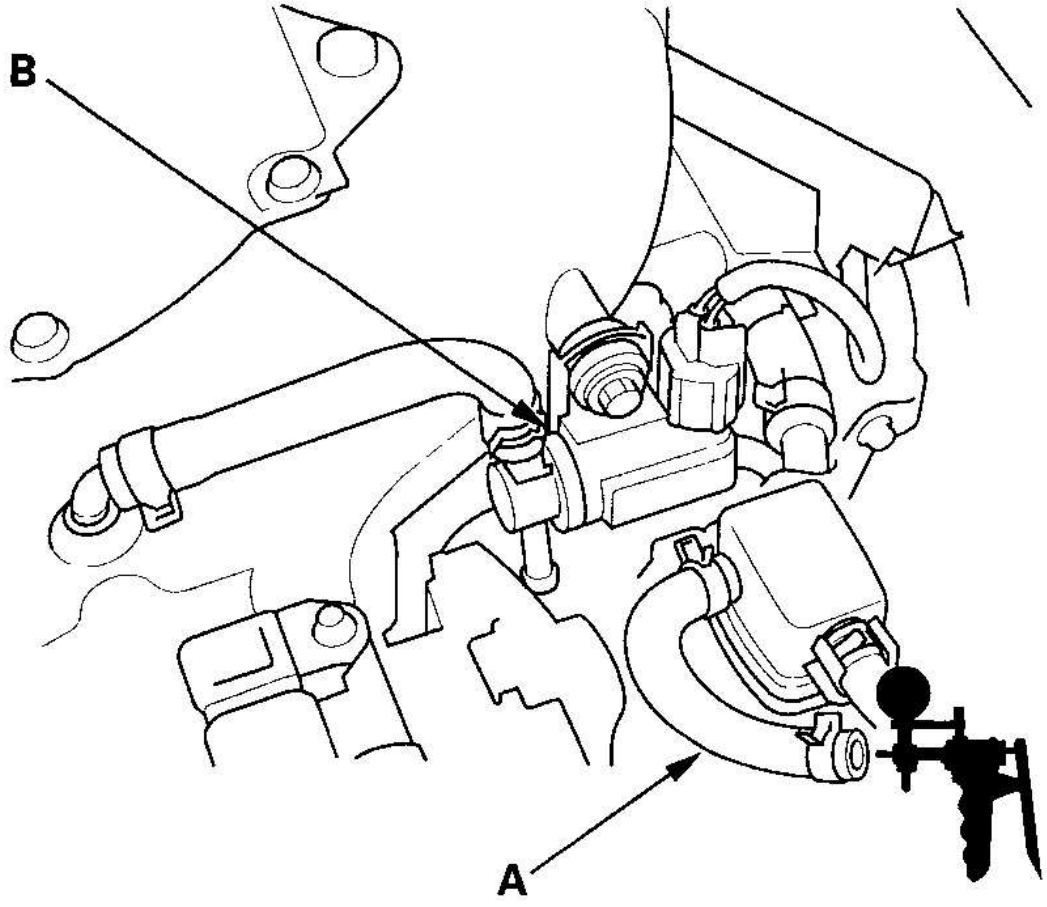


Fig. 64: Disconnecting Vacuum Hose From EVAP Canister Purge Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
21. Slowly apply about 2 kPa (0.6 in.Hg, 15 mmHg) of vacuum to the hose.

Does the hose hold vacuum?

YES - Check for blockage on the EVAP canister port, then go to step 22.

NO - Replace the EVAP canister vent shut valve; 2003-2004 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), 2005-2006 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), then go to step 22.

22. Install the FTP sensor; 2003-2004 models (see page 11 -415), 2005-2006 models (see **FTP SENSOR REPLACEMENT**).
23. Reconnect all hoses.
24. Turn the ignition switch ON (II).
25. Reset the PCM with the HDS.
26. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
27. Do the EVAP FUNCTION TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Troubleshooting is complete.

NO - Check for poor connections or loose terminals at the FTP sensor, the EVAP canister purge valve, or the EVAP canister vent shut valve and the PCM, then go to step 1 .

DTC P0498: EVAP CANISTER VENT SHUT VALVE CONTROL 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. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0498 indicated?

YES - Go to step 6 .

NO - Go to step 4.

4. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
5. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0498 indicated?

YES - Go to step 6.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the EVAP canister vent shut valve and the PCM.

6. Turn the ignition switch OFF.
7. Disconnect the EVAP canister vent shut valve 2P connector.
8. Turn the ignition switch ON (II).
9. Measure voltage between EVAP canister vent shut valve 2P connector terminal No. 2 and body ground.

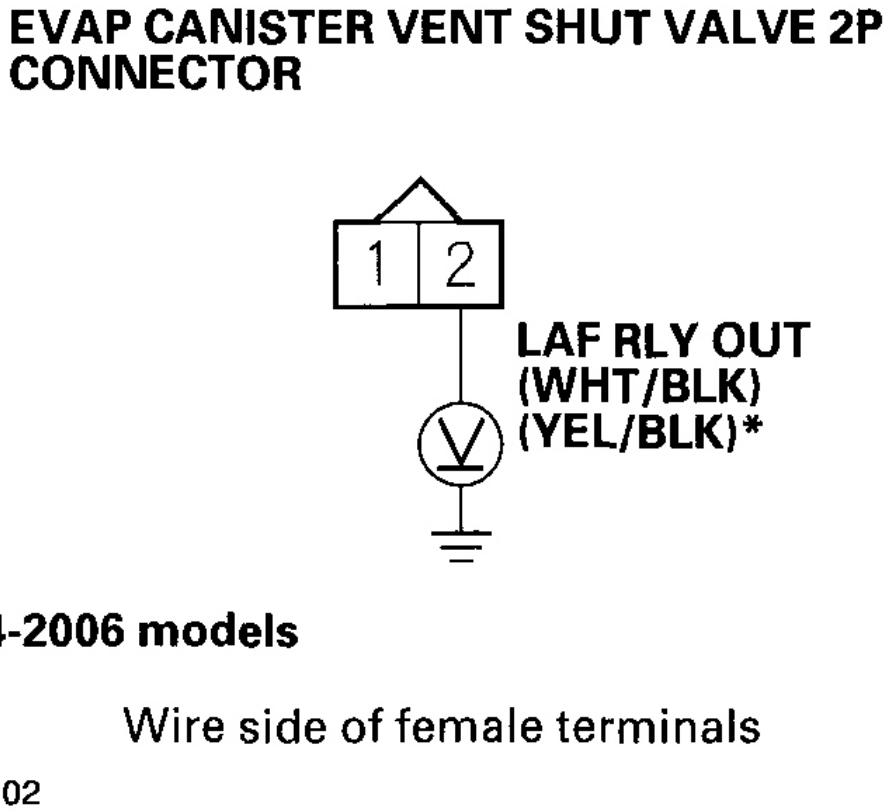


Fig. 65: Measuring Voltage Between EVAP Canister Vent Shut Valve 2P Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 10.

NO - Repair open in the wire between the EVAP canister vent shut valve and the A/F sensor relay, then go to step 19 .

10. Turn the ignition switch OFF.
11. Measure resistance between EVAP canister vent shut valve 2P connector terminals No. 1 and No. 2.

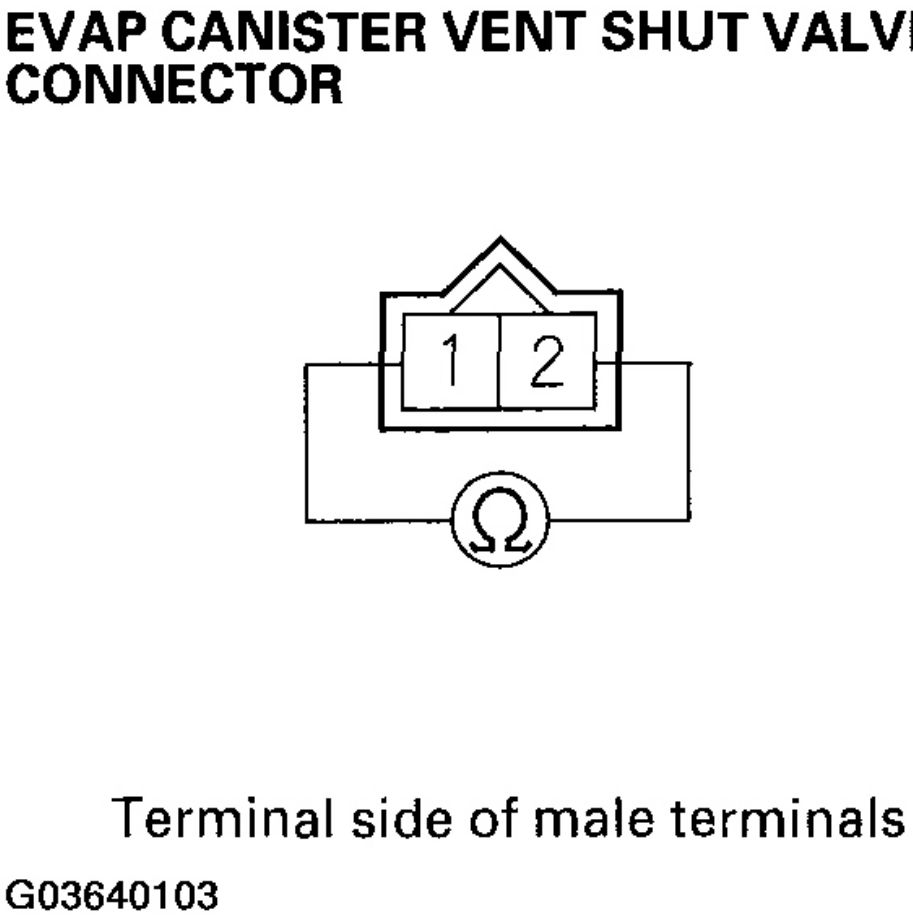


Fig. 66: Measuring Resistance Between EVAP Canister Vent Shut Valve 2P Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 25-30 ohm at room temperature?

YES - Go to step 12.
NO - Go to step 17 .

12. Jump the SCS line with the HDS.
13. Disconnect PCM connector B (56P).

14. Check for continuity between PCM connector terminal B8 and body ground.

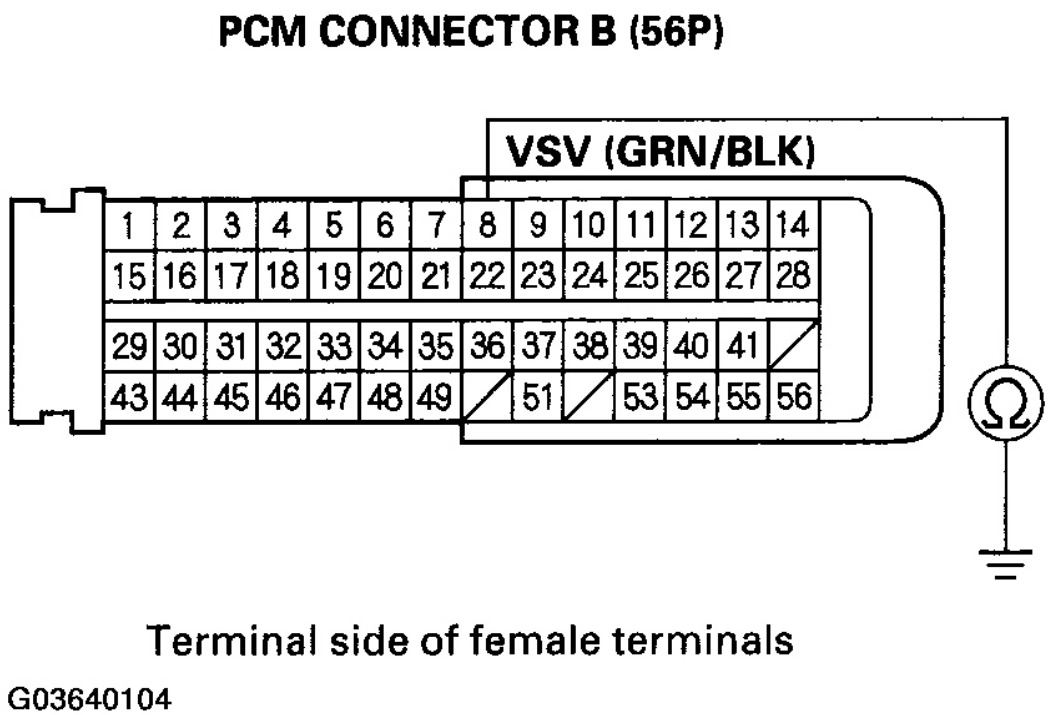


Fig. 67: Checking Continuity Between PCM Connector Terminal B8 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the EVAP canister vent shut valve and the PCM (B8), then go to step 18 .

NO - Go to step 15.

15. Connect EVAP canister vent shut valve 2P connector terminal No. 1 to body ground with a jumper wire.

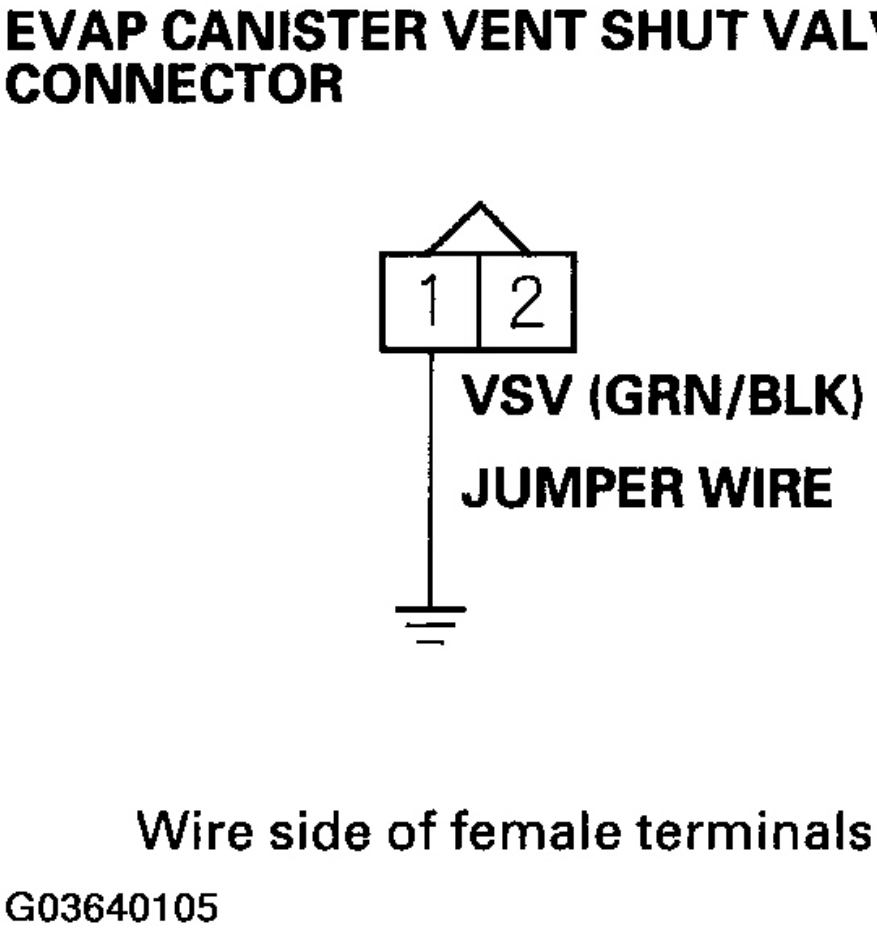


Fig. 68: Connecting EVAP Canister Vent Shut Valve 2P Connector Terminal No. 1 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Check for continuity between PCM connector terminal B8 and body ground.

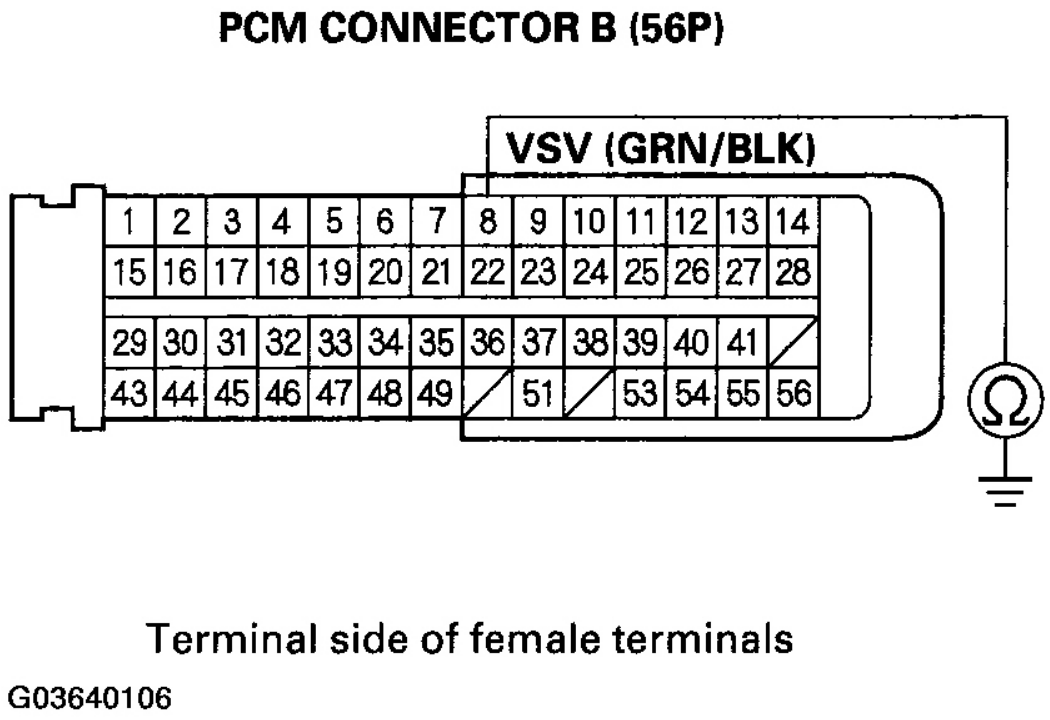


Fig. 69: Checking Continuity Between PCM Connector Terminal B8 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 25 .

NO - Repair open in the wire between the EVAP canister vent shut valve and the PCM (B8), then go to step 18 .

17. Replace the EVAP canister vent shut valve; 2003-2004 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), 2005-2006 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**).
18. Reconnect PCM connector B (56P).
19. Reconnect the EVAP canister vent shut valve 2P connector.
20. Turn the ignition switch ON (II).
21. Reset the PCM with the HDS.
22. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
23. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
24. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0498 is indicated, check for poor connections or loose terminals at the EVAP canister vent shut valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - Troubleshooting is complete.

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

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0498 is indicated, check for poor connections or loose terminals at the EVAP canister vent shut valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

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

DTC P0499: EVAP CANISTER VENT SHUT VALVE CONTROL 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.
3. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
4. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P0499 indicated?

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

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

DTC P1450: TWO WAY VALVE BYPASS VALVE CONTROL CIRCUIT LOW VOLTAGE (2003-2004 MODELS)

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

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Do the BPS CLOSE in the INSPECTION MENU with the HDS.
4. Wait 5 seconds.
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P1450 indicated?

   YES - Go to step 8 .

   NO - Go to step 6.
6. Do the EVAP BPS ON in the INSPECTION MENU with the HDS.
7. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P1450 Indicated?

   YES - Go to step 8.

   NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the EVAP bypass solenoid valve and the PCM.
8. Turn the ignition switch OFF, then disconnect the EVAP bypass solenoid valve 2P connector.
9. At the EVAP bypass solenoid valve side, measure resistance between EVAP bypass solenoid valve 2P connector terminals No. 1 and No. 2.

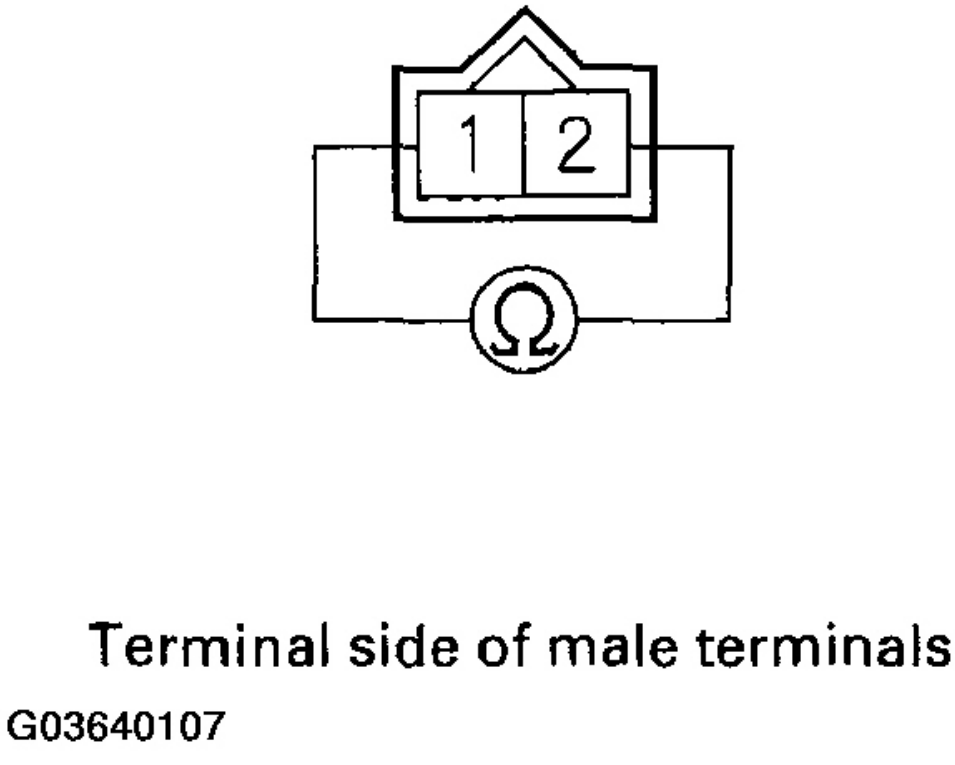


Fig. 70: Measuring Resistance Between EVAP Bypass Solenoid Valve 2P Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 30 - 34 ohm (at room temperature)?

YES - Go to step 10.
NO - Go to step 17 .

10. Measure voltage between EVAP bypass solenoid valve 2P connector terminal No. 1 and body ground.

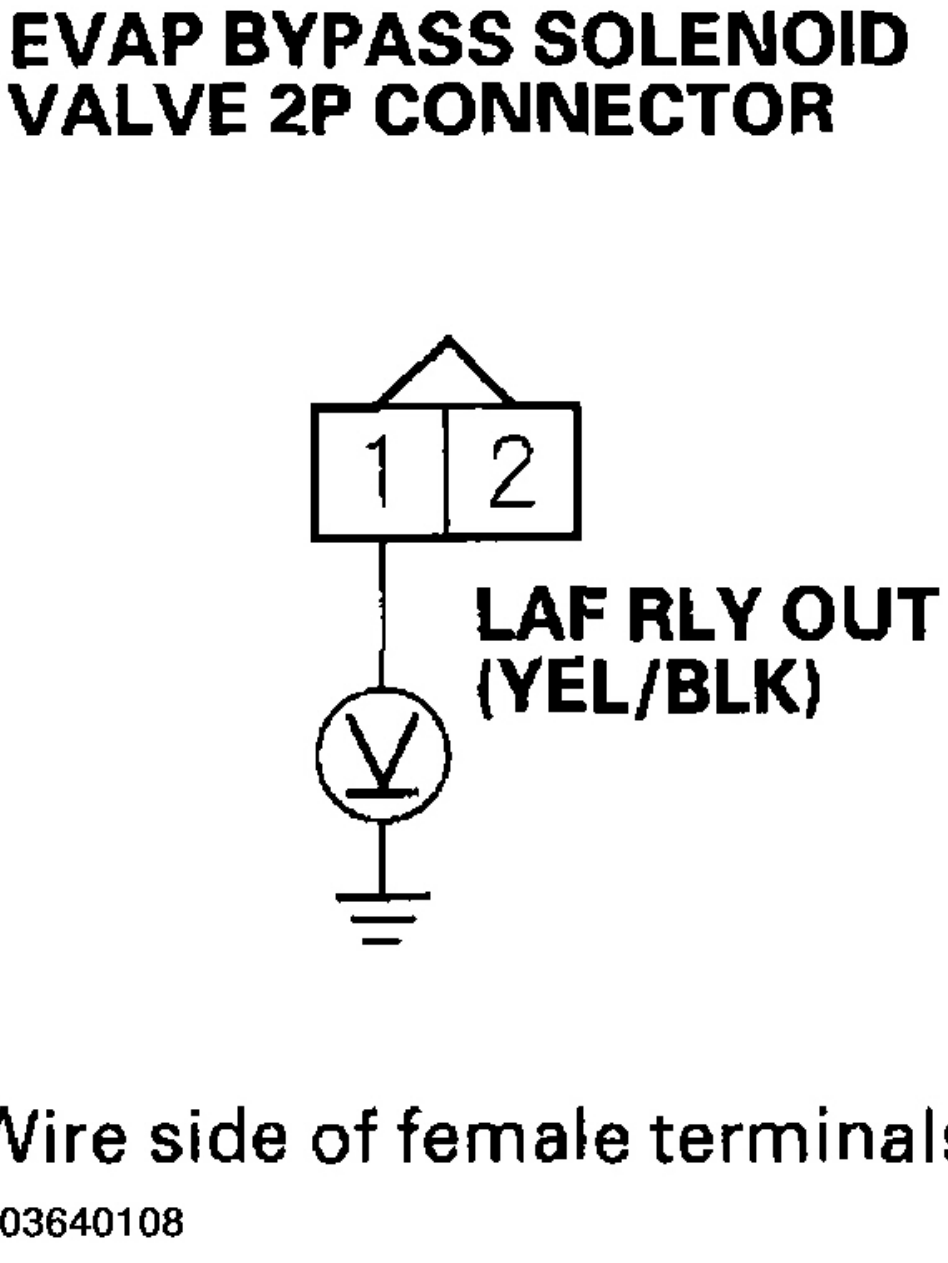


Fig. 71: Measuring Voltage Between EVAP Bypass Solenoid Valve 2P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 11.

NO - Repair open in the wire between the EVAP bypass solenoid valve and the A/F sensor relay, then go to step 19 .

11. Turn the ignition switch OFF.
12. Jump the SCS line with the HDS.
13. Disconnect PCM connector B (56P).
14. Check for continuity between PCM connector terminal B7 and body ground.

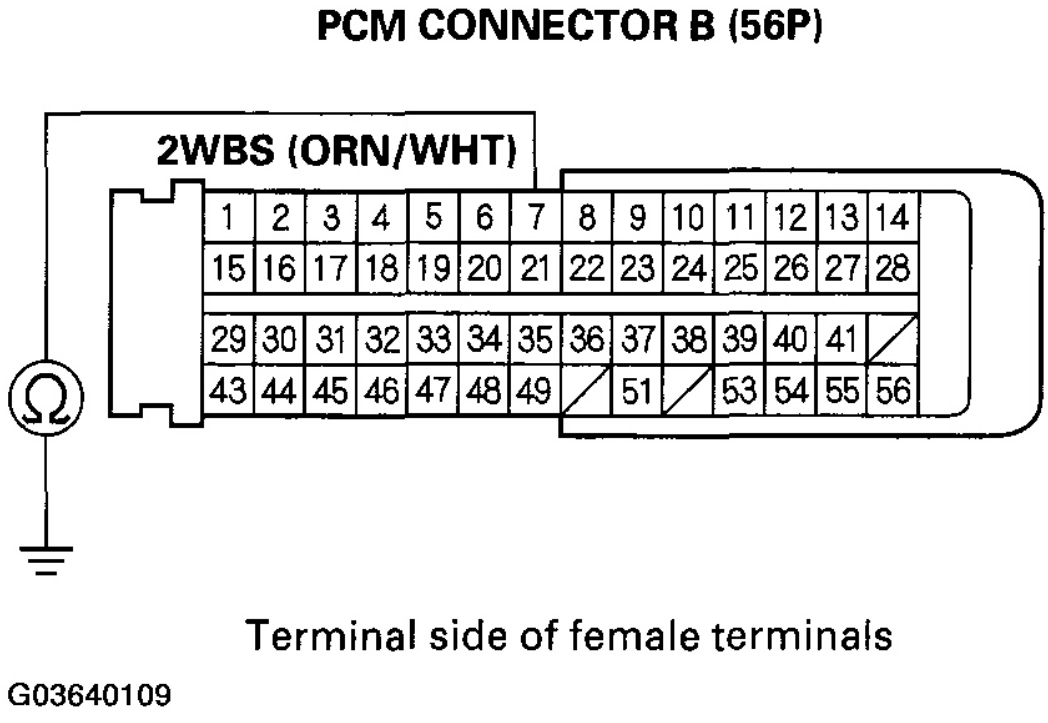


Fig. 72: Checking Continuity Between PCM Connector Terminal B7 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the EVAP bypass solenoid valve and the PCM, then go to step 18 .

NO - Go to step 15.

15. Connect EVAP bypass solenoid valve 2P connector terminal No. 2 to body ground with a jumper wire.

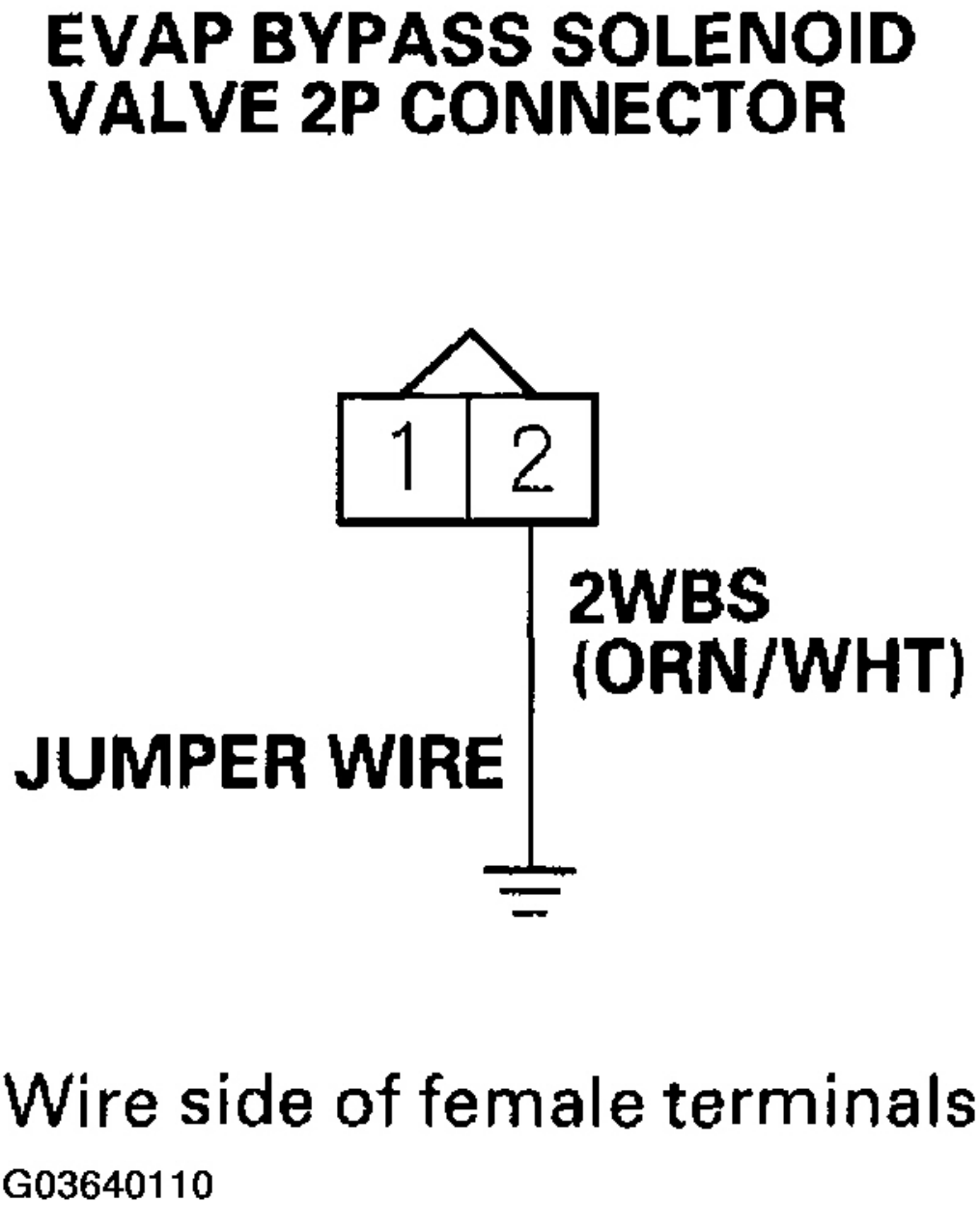


Fig. 73: Connecting EVAP Bypass Solenoid Valve 2P Connector Terminal No. 2 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Check for continuity between PCM connector terminal B7 and body ground.

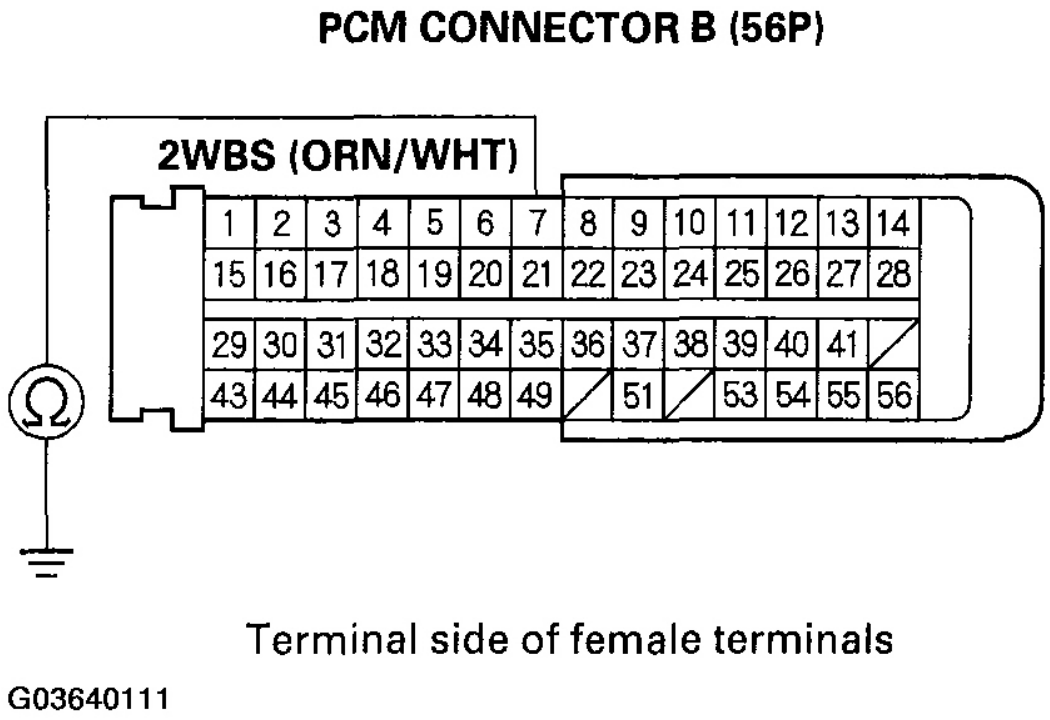


Fig. 74: Checking Continuity Between PCM Connector Terminal B7 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 23 .

NO - Repair open in the wire between the PCM and the EVAP bypass solenoid valve, then go to step 17.

17. Replace the EVAP bypass solenoid valve (see **EVAP BYPASS SOLENOID VALVE REPLACEMENT**).
18. Reconnect PCM connector B (56P) and the EVAP bypass solenoid 2P connector.
19. Turn the ignition switch ON (II).
20. Reset the PCM with the HDS.
21. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
22. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P1450 is indicated, check for poor connections or loose terminals at the EVAP bypass solenoid valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are

indicated, go to the indicated DTCs troubleshooting.

NO - Go to step 25 .

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

Are any Temporary DTCs or DTCs indicated?

YES - If DTC Pi 450 is indicated, check for poor connections or loose terminals at the EVAP bypass solenoid valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (seepage 11-240).

25. Monitor the OBD STATUS for DTC PI 450 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

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

DTC P1451:TWO WAY VALVE BYPASS VALVE CONTROL CIRCUIT HIGH VOLTAGE (2003-2004 MODELS)

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

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Do the EVAP BPS CLOSE in the INSPECTION MENU with the HDS.
4. Wait 5 seconds.
5. Check for Temporary DTCs or DTCs with the HDS.

Is DTC P1451 indicated?

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

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

DTC P1454, P2422: FTP SENSOR RANGE/PERFORMANCE PROBLEM; EVAP CANISTER VENT SHUT VALVE CLOSE 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 OFF.
4. Remove the fuel fill cap, and wait 1 minute.
5. Check the FTP SENSOR in the DATA LIST with the HDS.

   Is it between - 0.67 kPa and 0.67 kPa (- 0.2 and 0.2 in.Hg, -5 and 5 mmHg), or 2.4-2.6 V?

   YES - Go to step 6.

   NO - Go to step 17 .
6. Install the fuel fill cap.
7. Clear the DTC with the HDS.
8. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park on neutral) until the radiator fan comes on, then let it idle.
9. Monitor the OBD STATUS for DTC P1454 in the DTCs MENU with the HDS.

   Does the screen indicate FAILED?

   YES - Go to step 10.

   NO - If the screen indicates PASSED, intermittent failure, system is OK at this time, check for a poor connections or loose terminals at the FTP sensor, or the EVAP canister vent shut valve and the PCM. If the screen indicates NOT COMPLETED, go to step 7 and recheck.
10. Clear the DTC with the HDS.
11. Turn the ignition switch OFF.
12. Remove the EVAP canister vent shut valve; 2003-2004 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), 2005-2006 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**).
13. Connect the 2P connector to the EVAP canister vent shut valve.
14. Turn the ignition switch ON (II).
15. Do the EVAP CVS ON in the INSPECTION MENU with the HDS.
16. Check the EVAP canister vent shut valve (A) operation.

    2003-2004 models

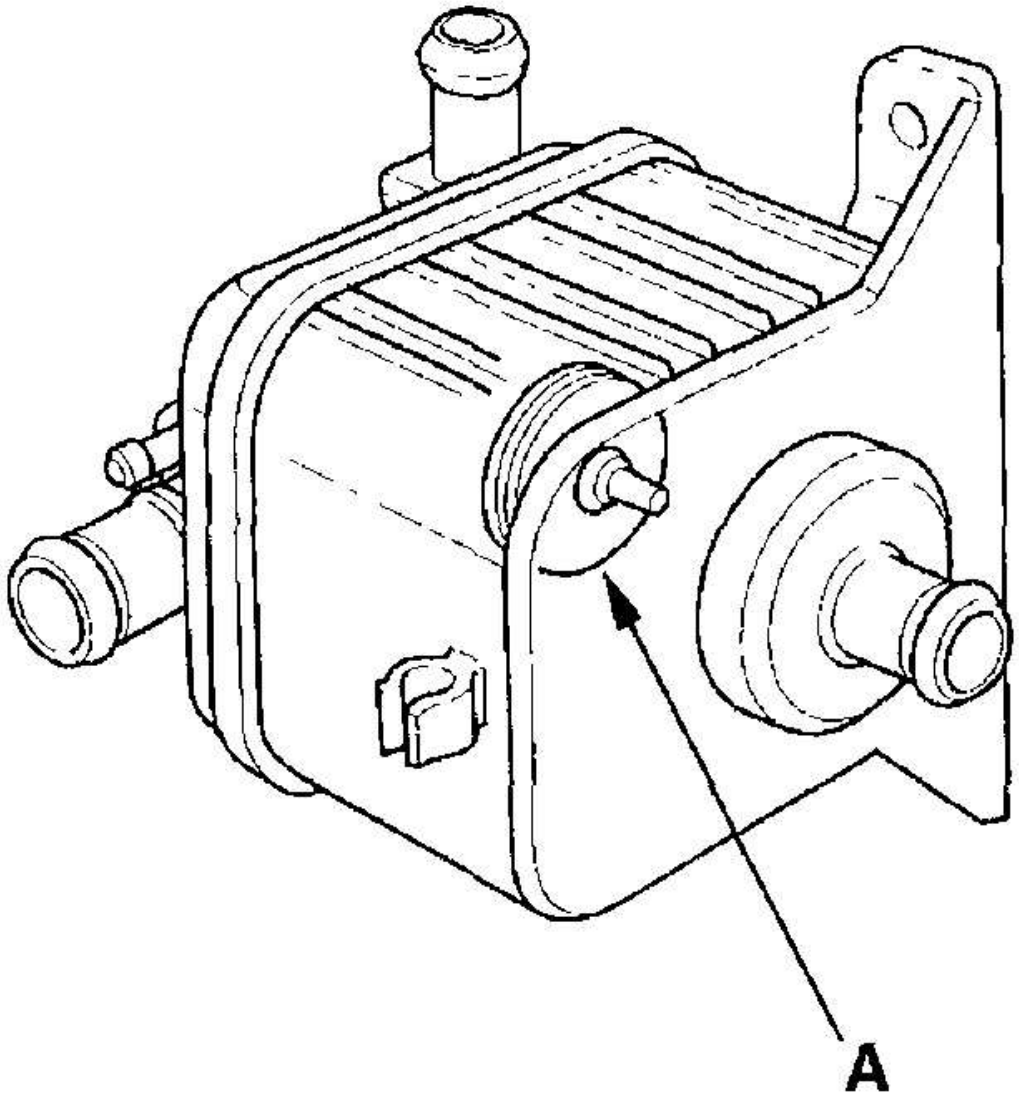


Fig. 75: Checking EVAP Canister Vent Shut Valve Operation (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

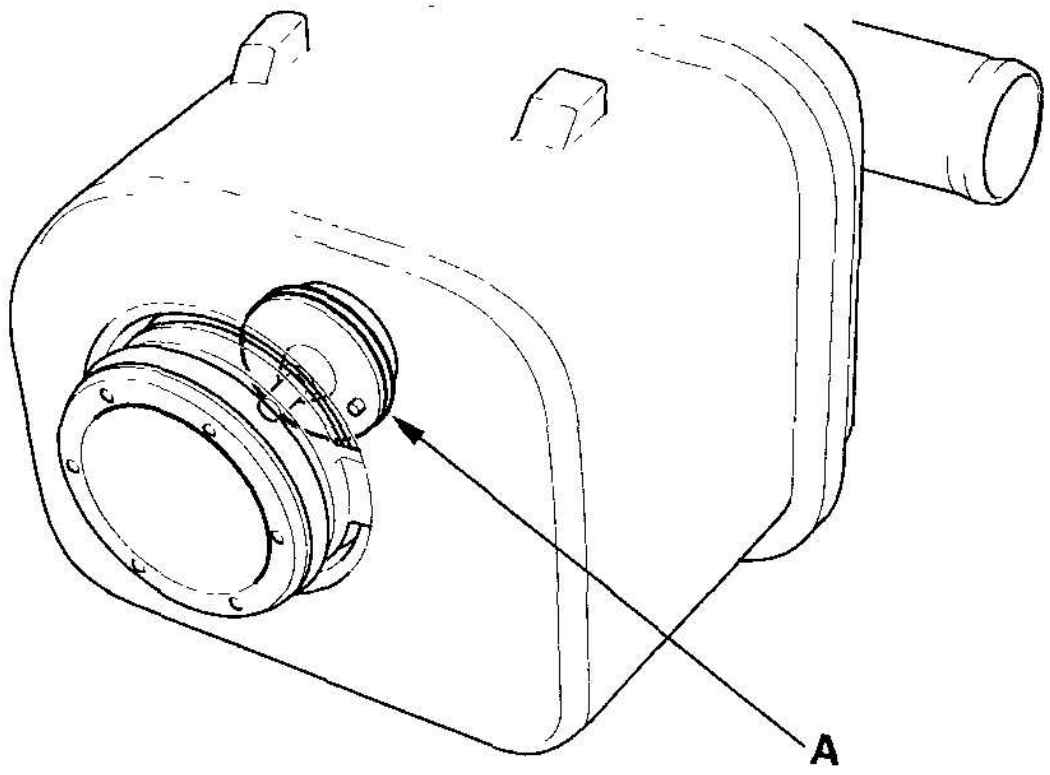


Fig. 76: Checking EVAP Canister Vent Shut Valve Operation (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the valve operate?

YES - Check for a blockage in the EVAP canister, or canister filter, then install EVAP canister vent shut valve, and go to step 23 .

NO - Replace the EVAP canister vent shut valve; 2003-2004 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), 2005-2006 models (see **EVAP CANISTER VENT SHUT VALVE REPLACEMENT**), then go to step 23 .

17. Disconnect the air tube (A) from the FTP sensor (B).

2003-2004 models

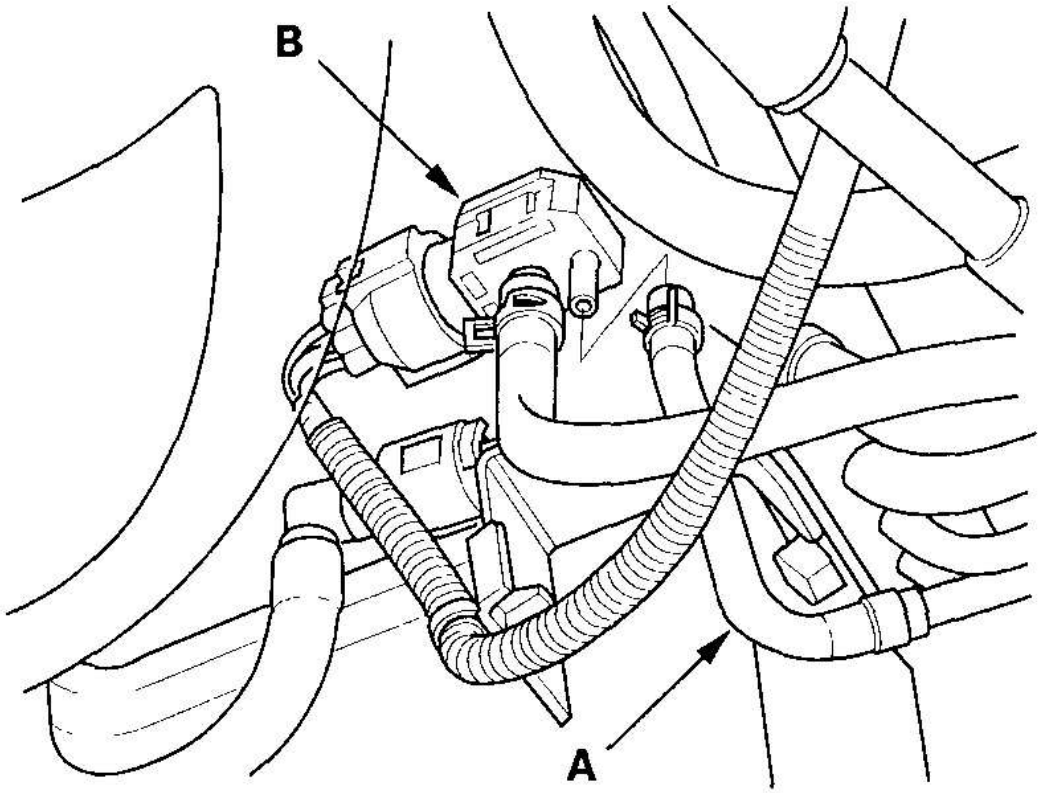


Fig. 77: Disconnecting Air Tube From FTP Sensor (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

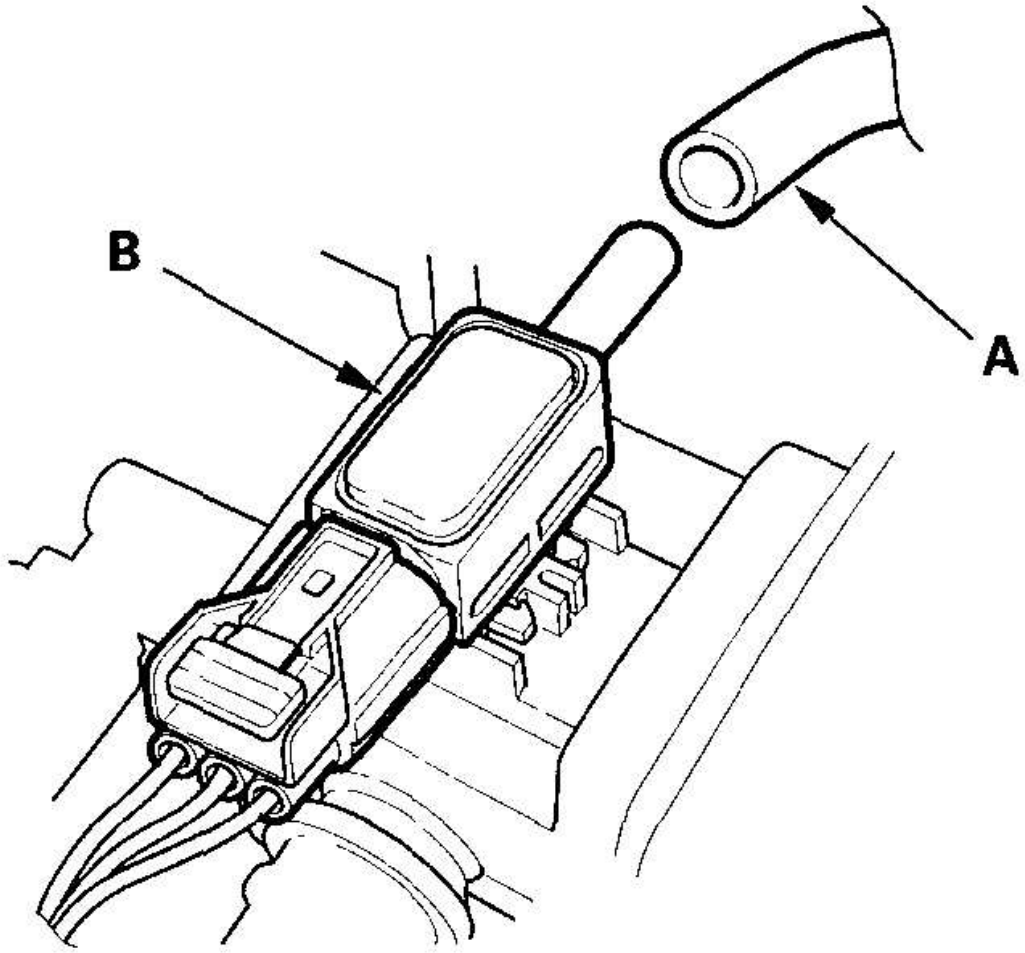


Fig. 78: Disconnecting Air Tube From FTP Sensor (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Check the FTP SENSOR in the DATA LIST with the HDS.

    Is it between - 0.67 kPa and 0.67 kPa (- 0.2 and 0.2 in.Hg, -5 and 5 mmHg), or 2.4- 2.6 V?

    YES - Check for a blockage in the FTP sensor air tube, then go to step 23 .
    NO - Go to step 19.
19. Turn the ignition switch OFF.
20. 2003-2004 models: Disconnect the tube (A) from the FTP sensor (B) with its connector connected. 2005-

2006 models: Remove the FTP sensor (A) from the EVAP canister with its connector connected (see **FTP SENSOR REPLACEMENT**).

2003-2004 models

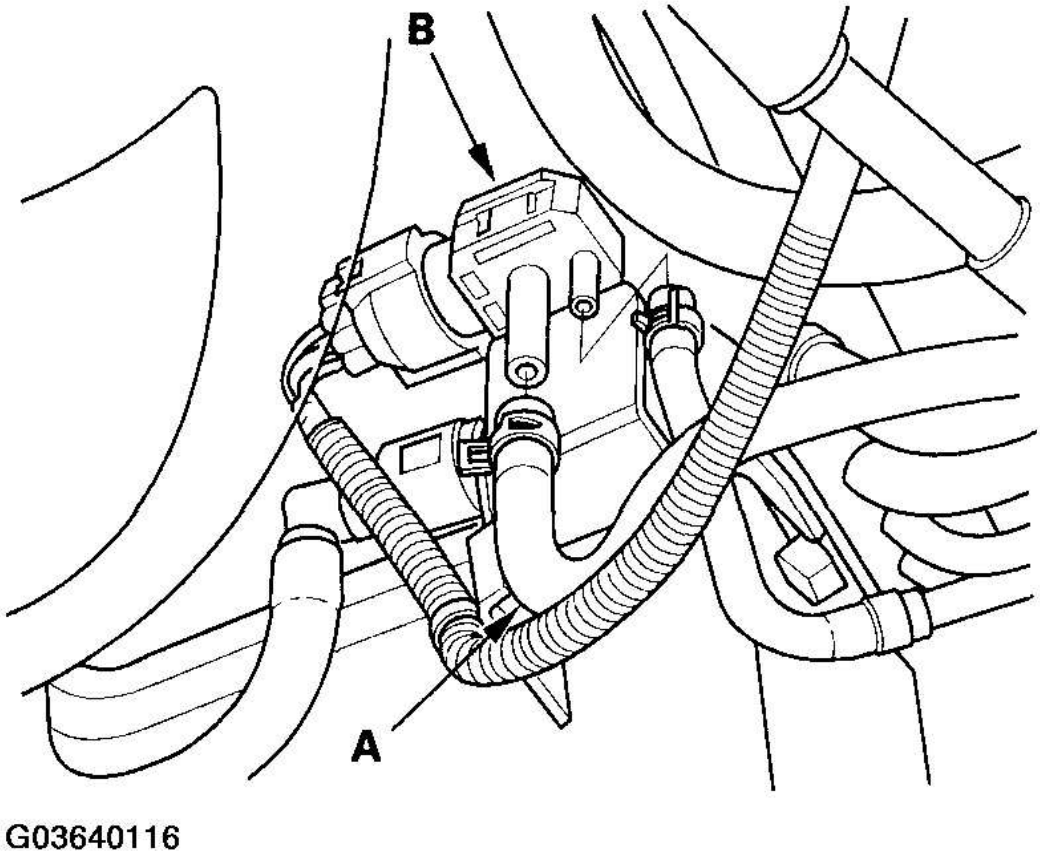


Fig. 79: Disconnecting Tube From FTP Sensor With Its Connector Connected (2003-2004 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2005-2006 models

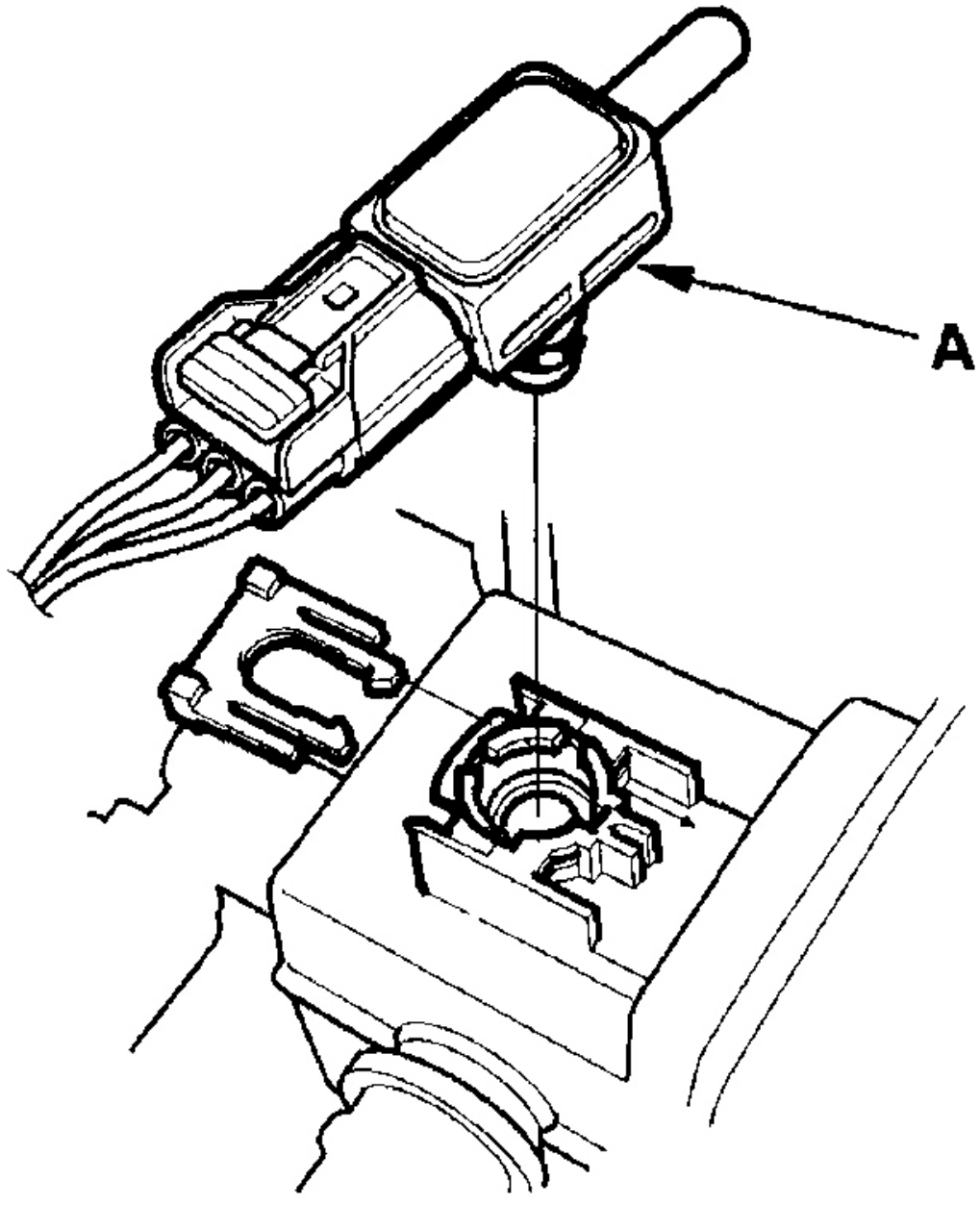


Fig. 80: Disconnecting Tube From FTP Sensor With Its Connector Connected (2005-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Turn the ignition switch ON (II).
22. Check the FTP SENSOR in the DATA LIST with the HDS.

    Is it between - 0.67 kPa and 0.67 kPa (- 0.2 and 0.2in.Hg, - 5 and 5 mmHg), or 2.4-2.6 V?

    YES - Check for debris or clogging at the EVAP canister, and the FTP sensor port, then go to step 23.

    NO - Replace the FTP sensor; 2003-2004 models (see **FTP SENSOR REPLACEMENT**), 2005-2006 models (see **FTP SENSOR REPLACEMENT**), then go to step 23.
23. Turn the ignition switch ON (II).
24. Reset the PCM with the HDS.
25. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
26. 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.
27. Check for Temporary DTCs or DTCs with the HDS.

    Are any Temporary DTCs or DTCs indicated?

    YES - If DTC P1454 and/or P2422 is indicated, check for poor connections or loose terminals at the FTP sensor, or the EVAP canister vent shut valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

    NO - Go to step 28.
28. Monitor the OBD STATUS for DTC P1454 in the DTCs MENU with the HDS.

    Does the screen indicate PASSED?

    YES - Troubleshooting is complete.

    NO - If the screen indicates FAILED, check for poor connections or loose terminals at the FTP sensor, or the EVAP canister vent shut valve and the PCM, then go to step 1 . If the screen indicates NOT COMPLETED, go to step 26 and recheck.

FUEL TANK VAPOR CONTROL VALVE TEST

Special Tools Required

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

2003-2004 MODELS

Float Test

1. Make sure the fuel tank is less than half full.
2. Remove the fuel fill cap to relieve fuel tank pressure, then reinstall the cap.

3. Disconnect the fuel tank vapor recirculation tube (A), and connect a vacuum pump to the vapor recirculation hose.

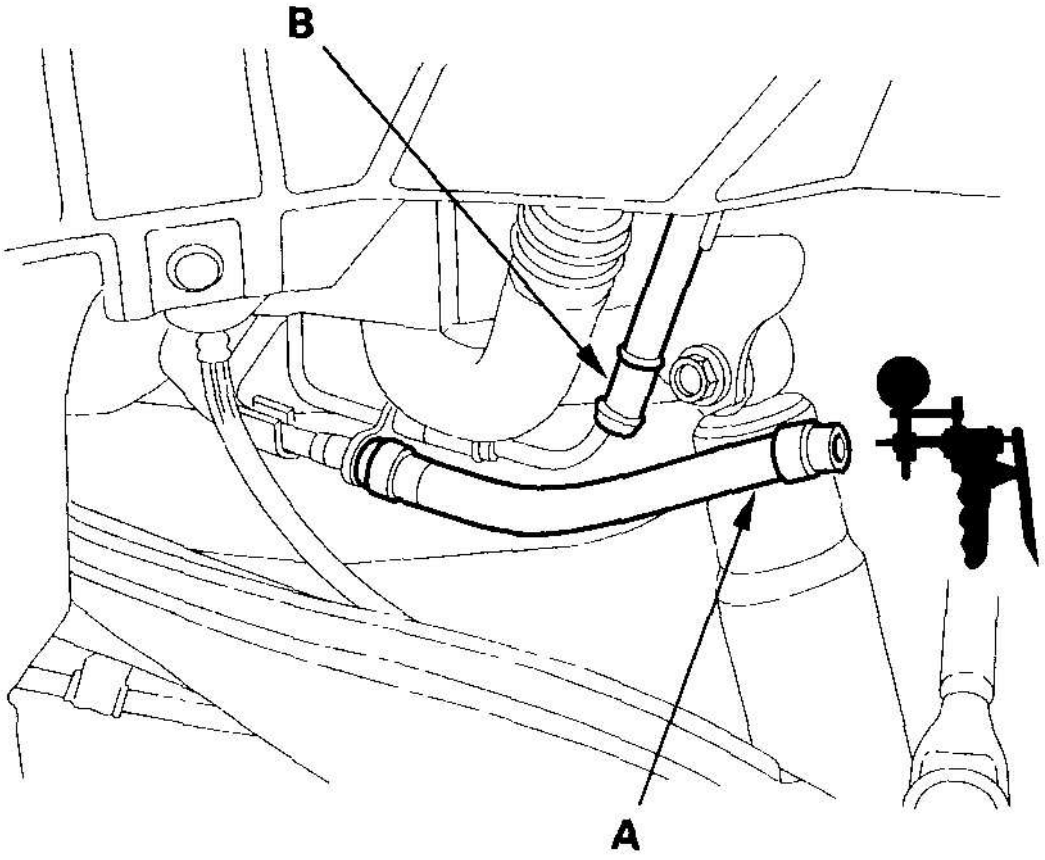


Fig. 81: Disconnecting Fuel Tank Vapor Recirculation Tube, And Connect Vacuum Pump To Vapor Recirculation Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Plug the pipe (B).
5. Apply vacuum to the fuel tank vapor recirculation tube.
   - If the vacuum holds, replace the fuel tank (see page 11-324).
   - If the vacuum does not hold, the float is OK. Do the valve test.

Valve Test

1. Make sure the fuel tank is less than half full.

2. Remove the fuel fill cap.
3. Disconnect the fuel tank vapor signal tube (A).

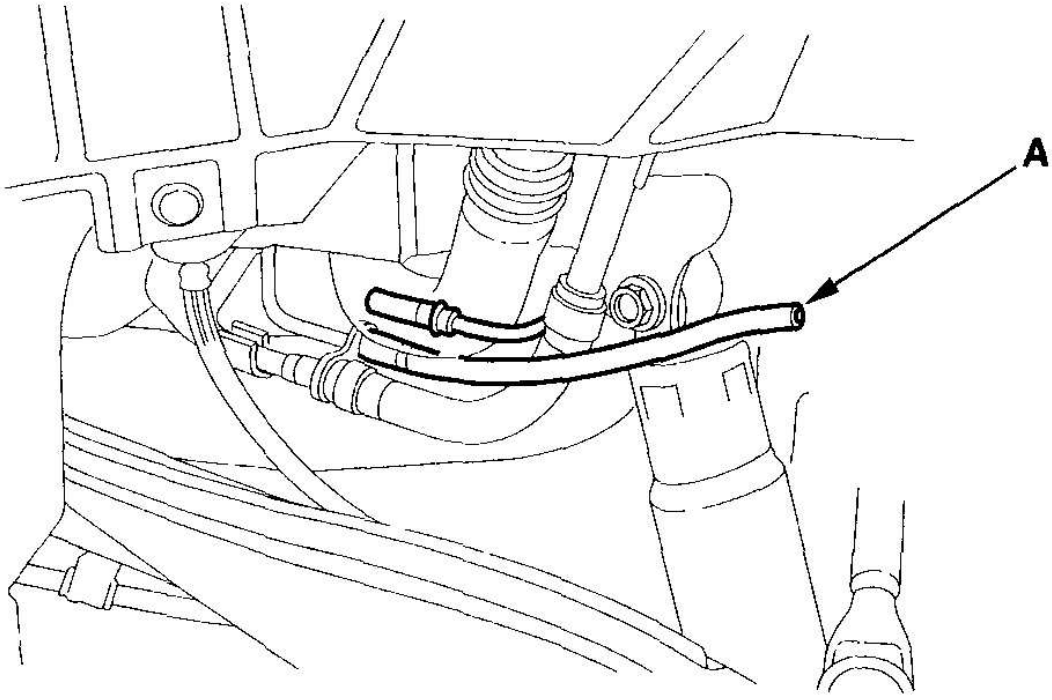


Fig. 82: Disconnect Fuel Tank Vapor Signal Tube
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Disconnect the vacuum hoses (A) from the EVAP canister (B), then plug the ports with plugs (C).

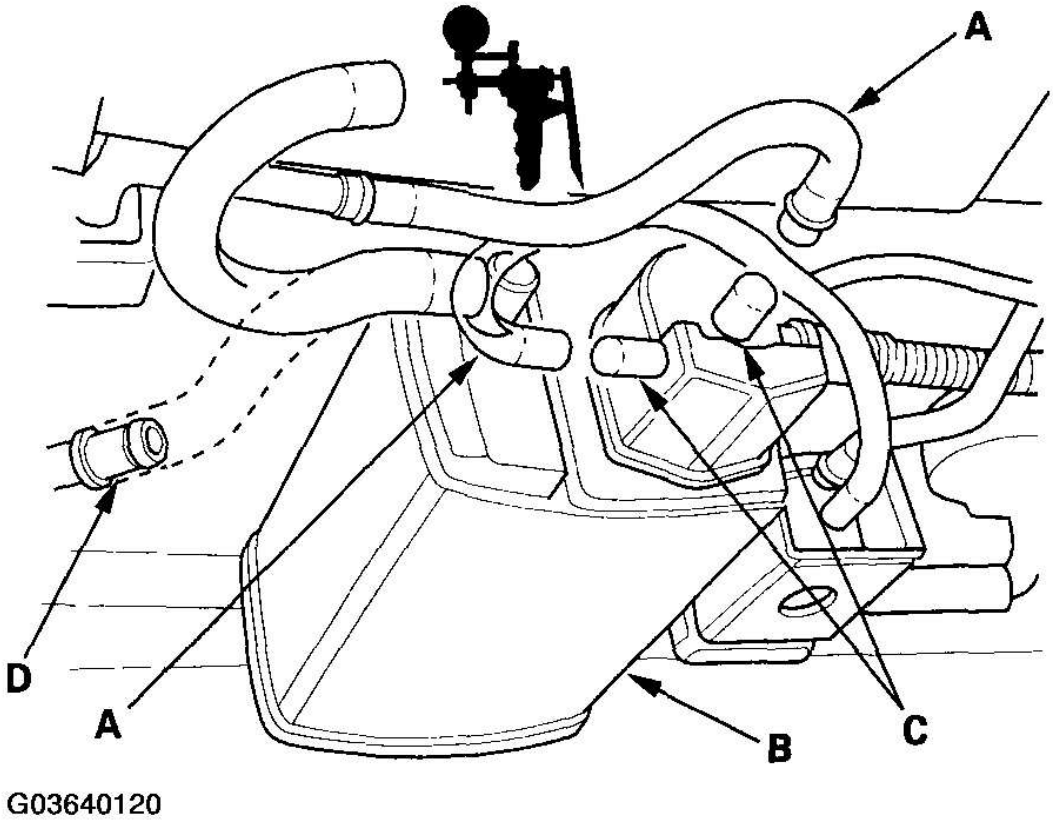


Fig. 83: Disconnecting Vacuum Hoses From EVAP Canister
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Disconnect the vacuum hose (D), and connect a vacuum pump to the EVAP canister.
6. Pump the vacuum pump about 80 times.
    - If the vacuum holds, go to step 7.
    - If the vacuum does not hold, go to step 10 .
7. Connect a second vacuum pump to the fuel tank vapor signal tube (A).

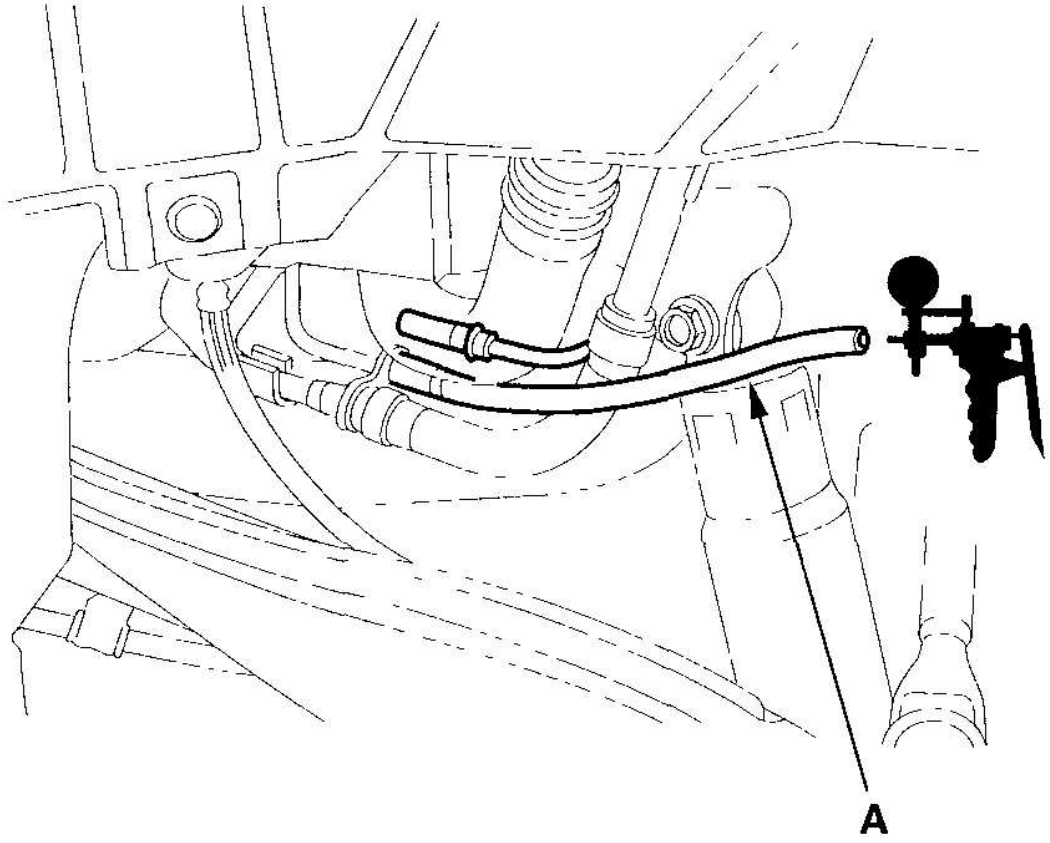


Fig. 84: Connecting Second Vacuum Pump To Fuel Tank Vapor Signal Tube
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Apply vacuum (1 pump) to the fuel tank vapor signal tube, then check the vacuum on the pump in step 6 .
   - If the vacuum holds, replace the fuel tank (see page 11-324).
   - If the vacuum is released, the fuel tank vapor control valve is OK. Go to step 9.
9. Fill the fuel tank with fuel, then check for fuel in the two way valve and fuel tank vapor recirculation hose.

NOTE: At either location, tiny droplets of fuel are normal.

- If fuel runs out of the hoses at either location, replace the fuel tank vapor control valve.
- If the fuel does not run out of the hoses at either location, the fuel tank vapor system function is normal.

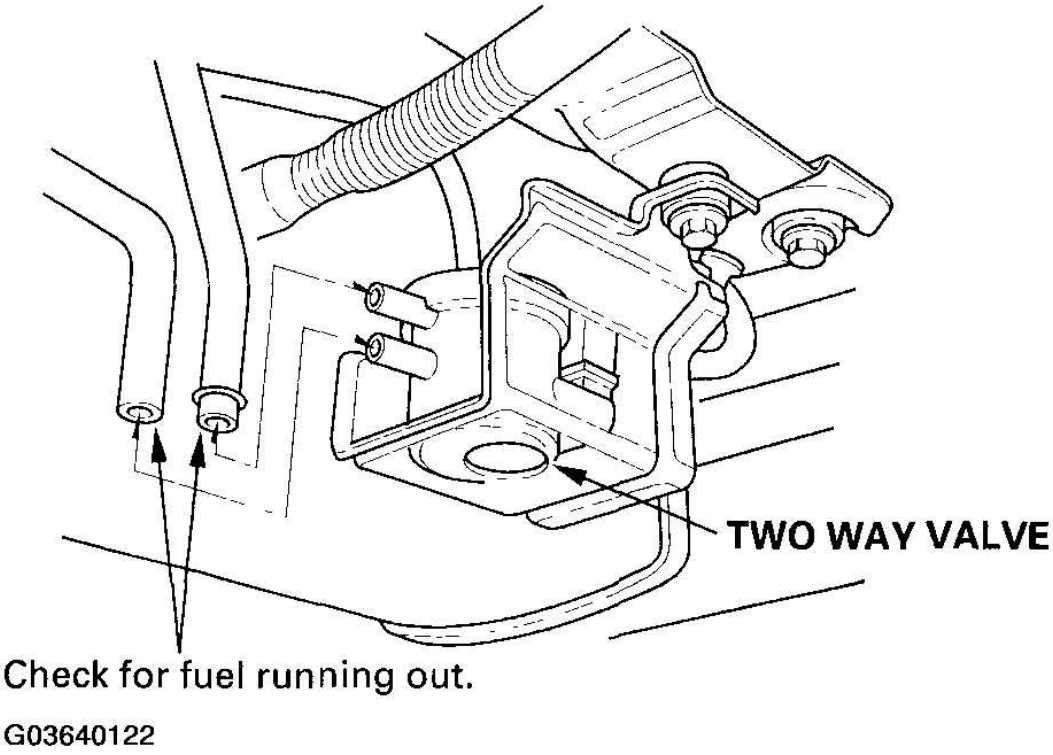


Fig. 85: Checking Fuel In Two Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

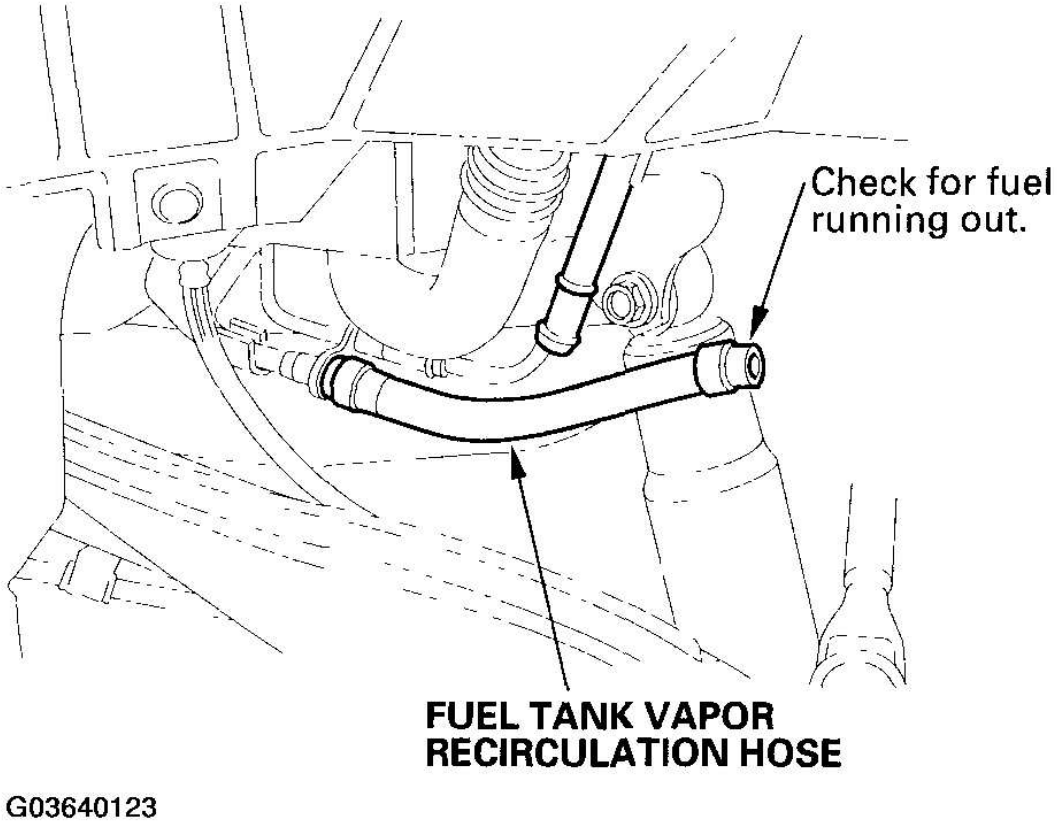


Fig. 86: Checking Fuel Tank Vapor Recirculation Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Disconnect the fuel tank vapor quick disconnect from the EVAP canister, then plug the port on the canister. Reapply vacuum (80 pumps).
    - If the vacuum holds, replace the fuel tank (see **FUEL TANK REPLACEMENT**).
    - If the vacuum does not hold, inspect the EVAP canister vent shut valve O-ring. If the O-ring is OK, replace the EVAP canister and repeat step 4 .

EVAP CANISTER PURGE VALVE REPLACEMENT

1. Disconnect the hoses (A) and EVAP canister purge valve 2P connector (B).

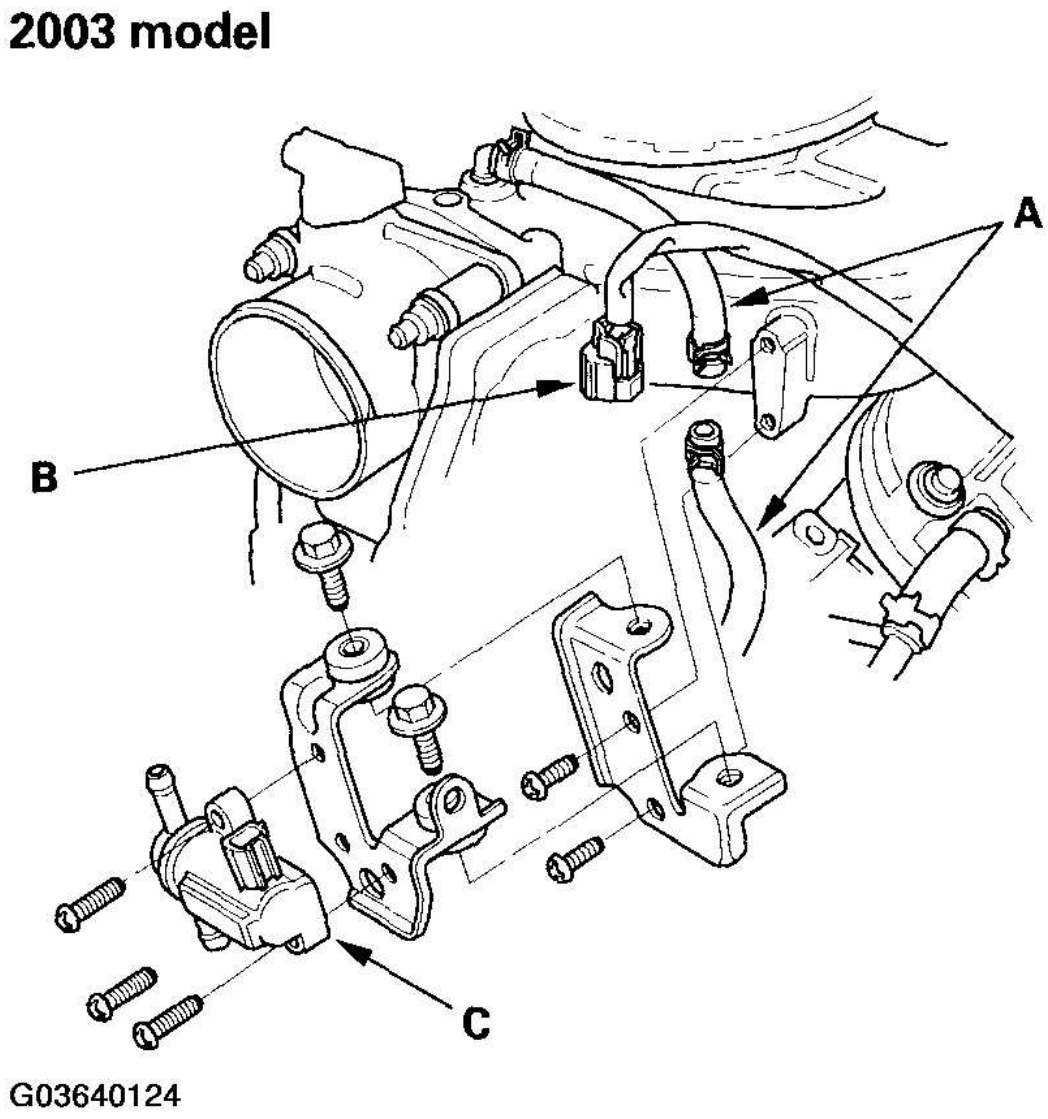


Fig. 87: Disconnecting Hoses And EVAP Canister Purge Valve 2P Connector (2003 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

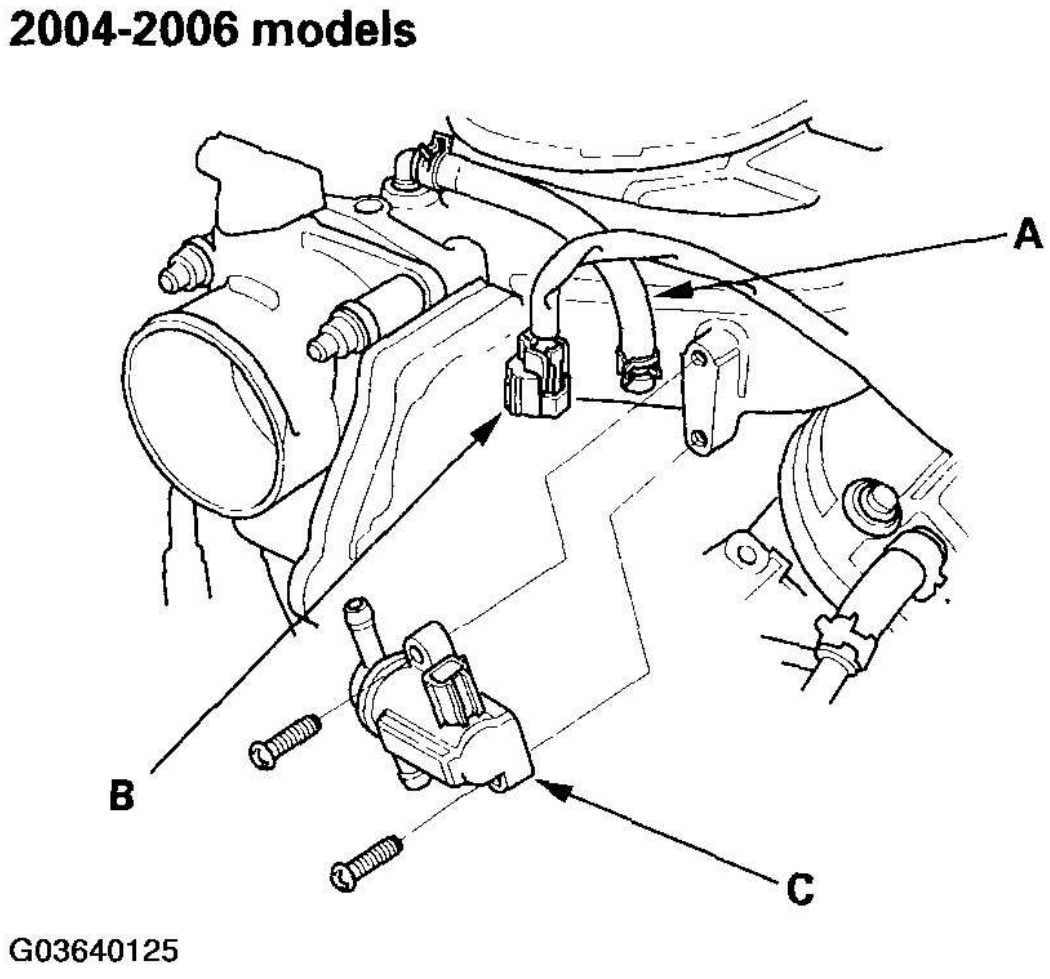


Fig. 88: Disconnecting Hoses And EVAP Canister Purge Valve 2P Connector (2004-2006 Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the screws and EVAP canister purge valve (C).
3. Install the valve in the reverse order of removal.

EVAP CANISTER VENT SHUT VALVE REPLACEMENT

2003-2004 MODELS

1. Remove the 2P connector (A) from the EVAP vent shut valve (B).

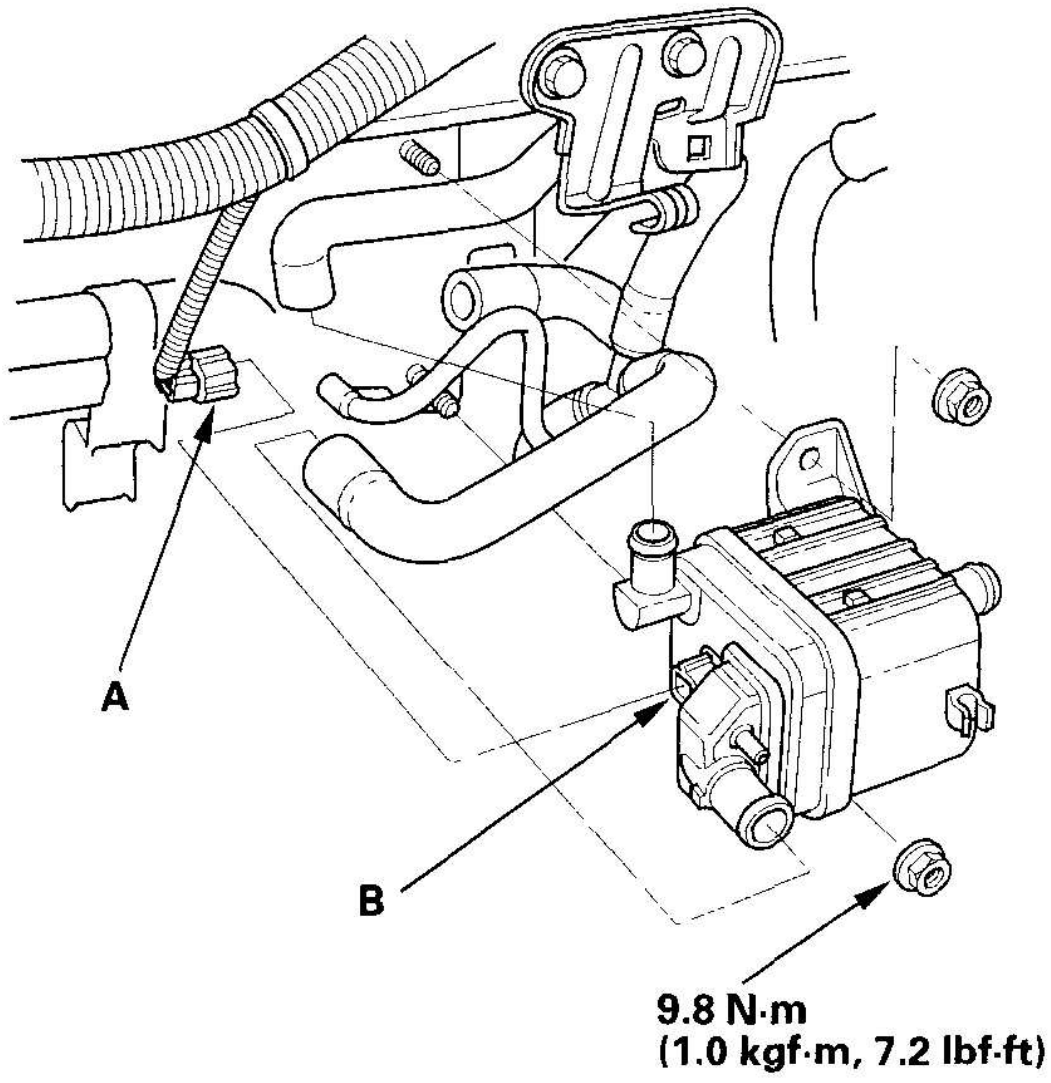


Fig. 89: Removing 2P Connector From EVAP Vent Shut Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the vapor and vacuum hoses.
3. Remove the nuts and the EVAP canister vent shut valve.
4. Install the valve in the reverse order of removal.

2005-2006 MODELS

1. Remove the EVAP canister (see **EVAP CANISTER REPLACEMENT**).

2. Open the stopper (A) and then remove the EVAP canister vent shut valve (B).

NOTE: Be careful not to damage the lock tabs.

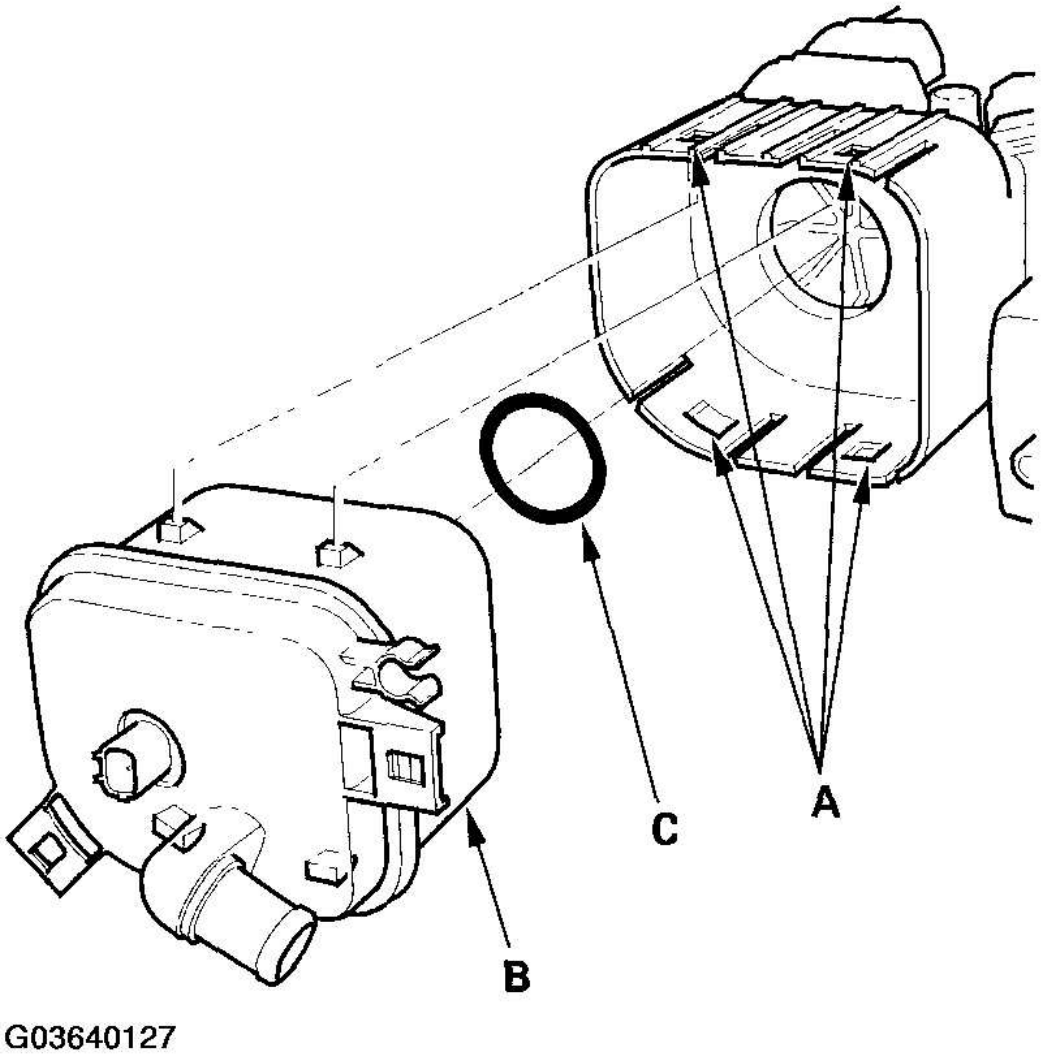


Fig. 90: Removing EVAP Canister Vent Shut Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

NOTE: Do not coat the O-ring with oil.

FTP SENSOR REPLACEMENT

2003-2004 MODELS

1. Remove the FTP sensor 3P connector (A) from the FTP sensor (B).

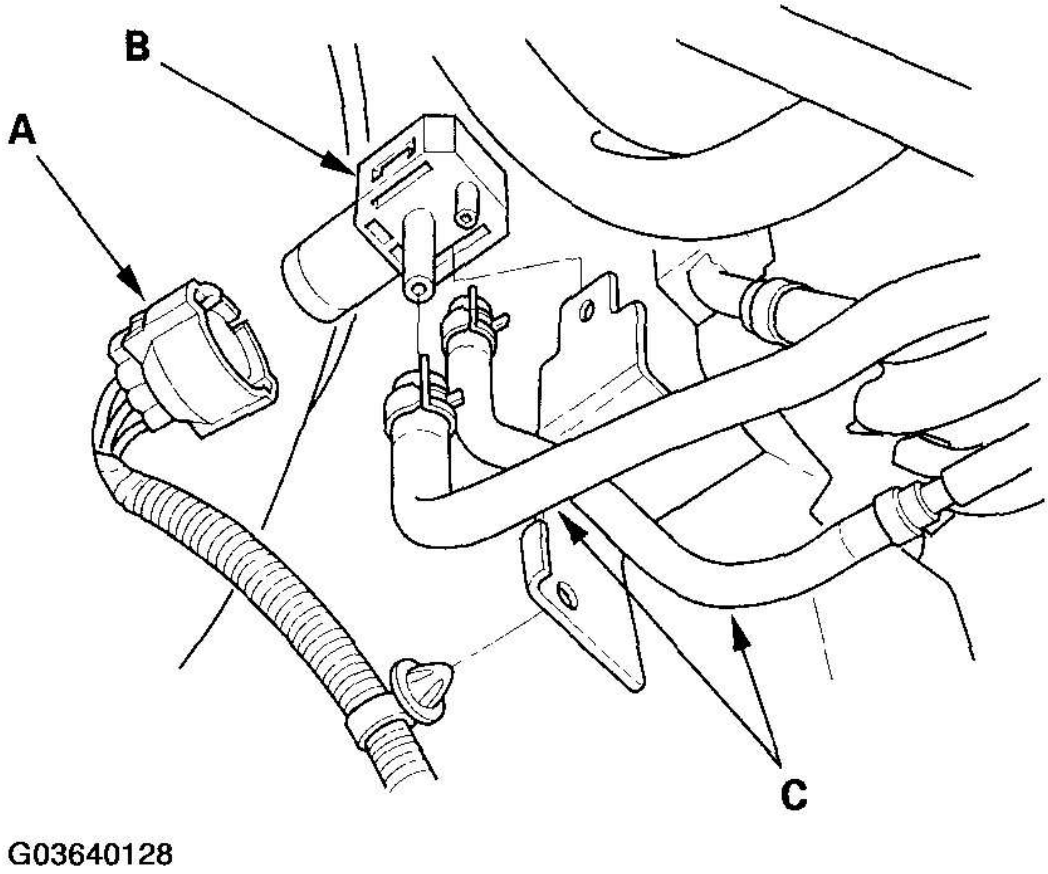


Fig. 91: Removing FTP Sensor 3P Connector From FTP Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Disconnect the hoses (C) from the FTP sensor.
3. Remove the FTP sensor.
4. Install the sensor in the reverse order of removal.

2005-2006 MODELS

1. Remove the EVAP canister (see **EVAP CANISTER REPLACEMENT**).

2. Remove the FTP sensor (A).

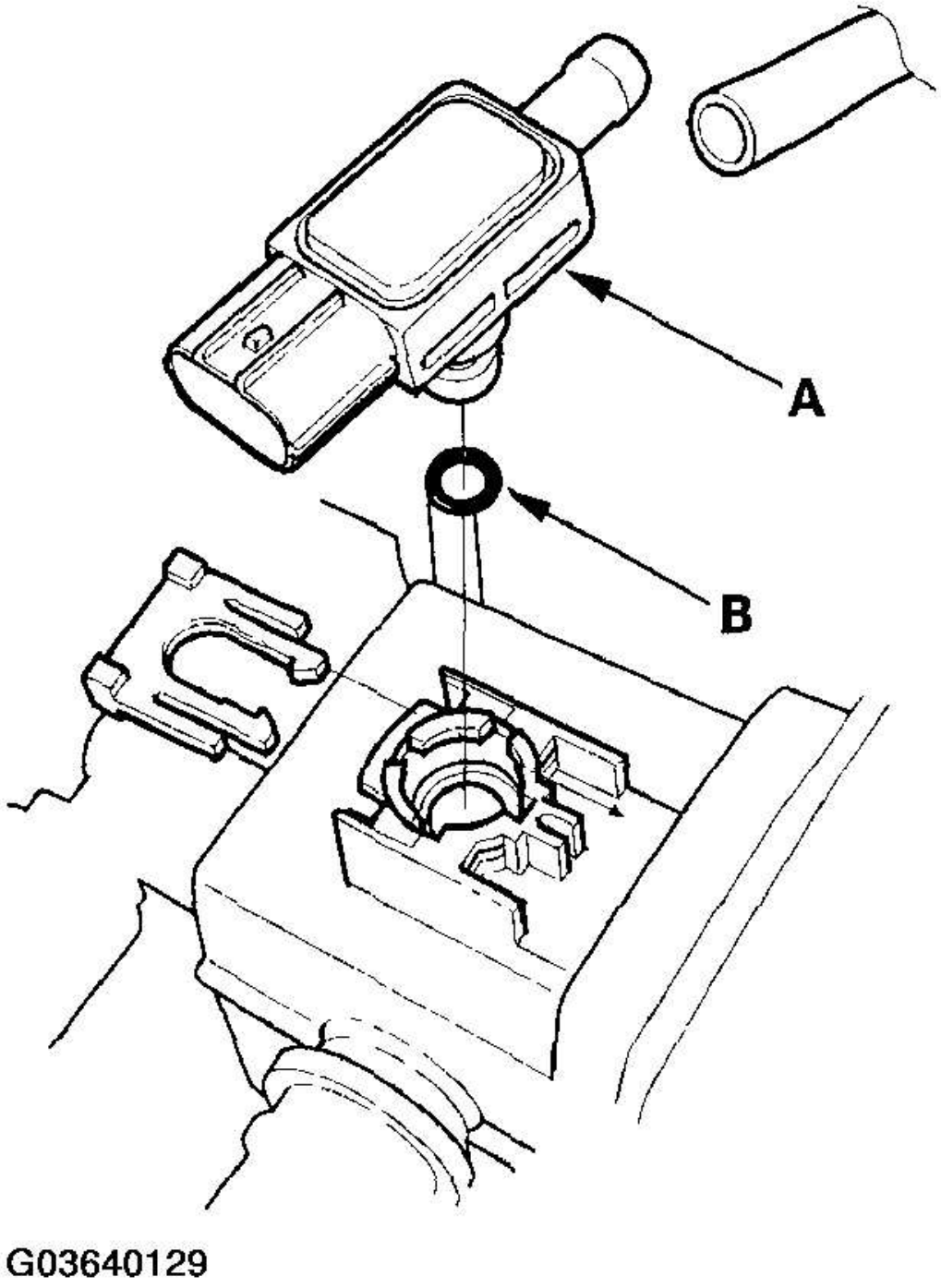


Fig. 92: Removing FTP Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

EVAP CANISTER REPLACEMENT

2003-2004 MODELS

1. Remove the bolts and the EVAP canister cover (A).

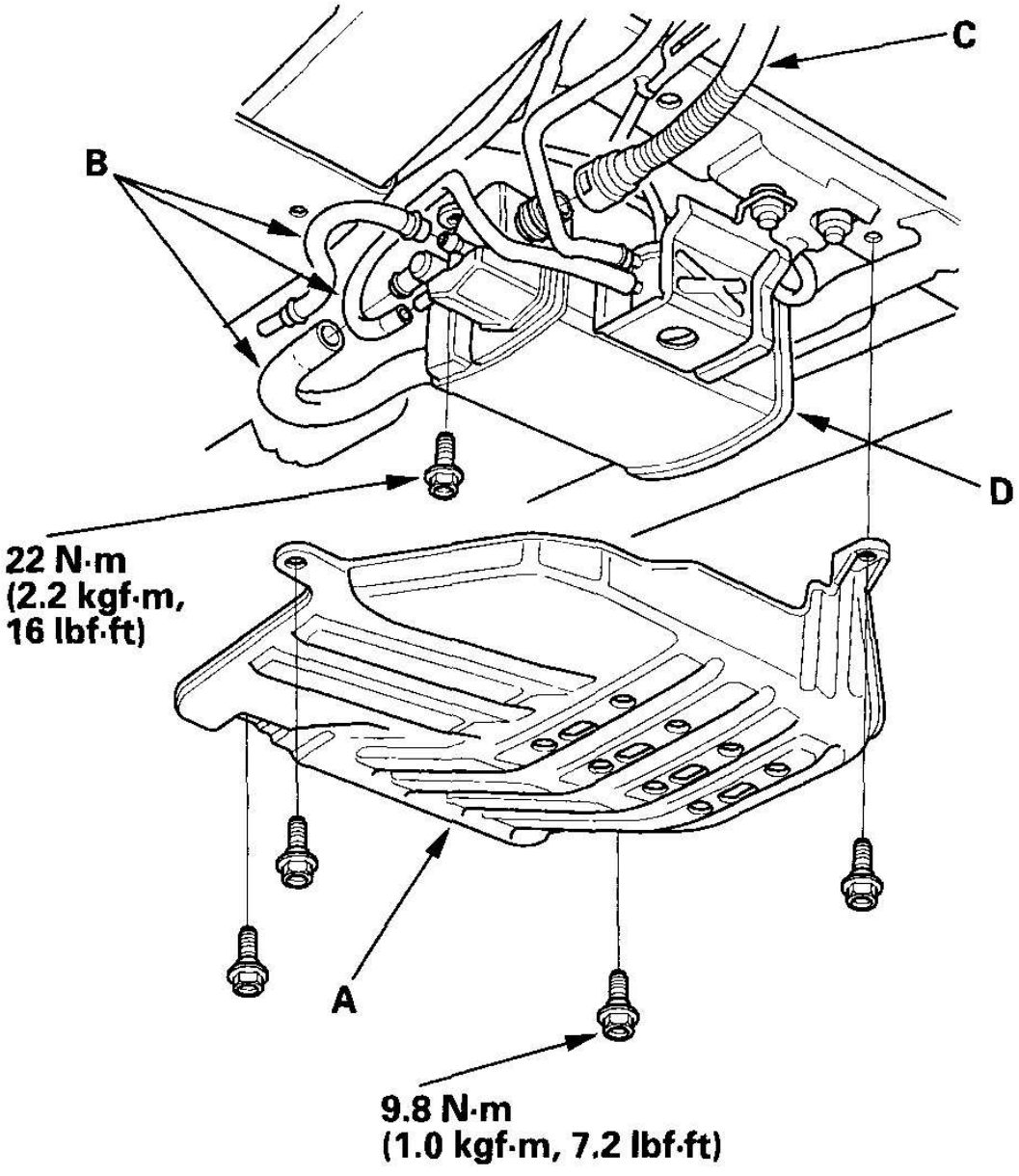


Fig. 93: Removing Bolts And EVAP Canister Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Disconnect the drain and purge hoses (B).
3. Disconnect the quick-connect fitting (C).
4. Remove the bolt and the EVAP canister (D).

5. Install the canister in the reverse order of removal.

2005-2006 MODELS

1. Remove the EVAP canister cover (A).

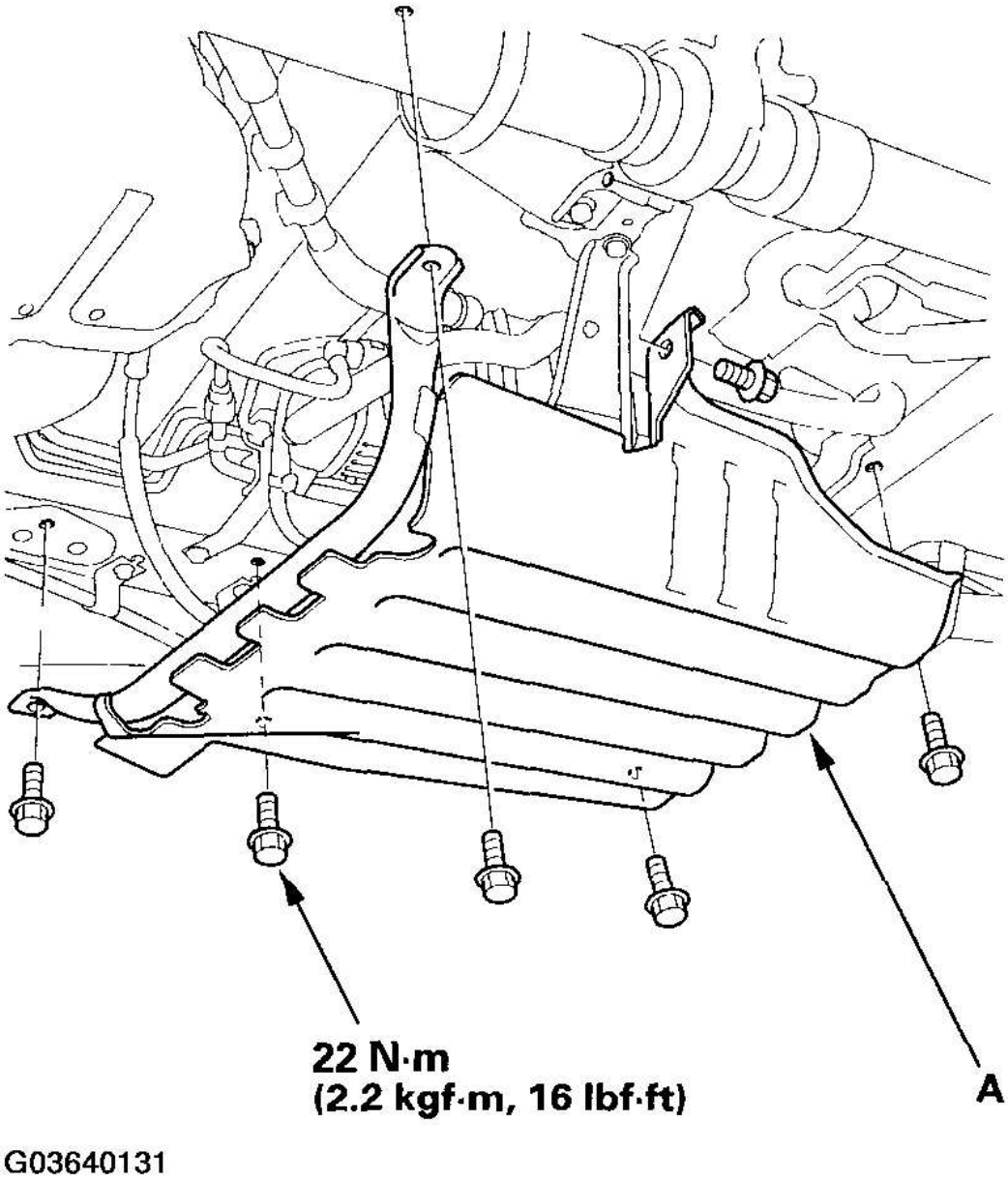


Fig. 94: Removing EVAP Canister Cover

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the hoses (A), the FTP sensor 3P connector (B), and the EVAP canister vent shut valve 2P connector (C).

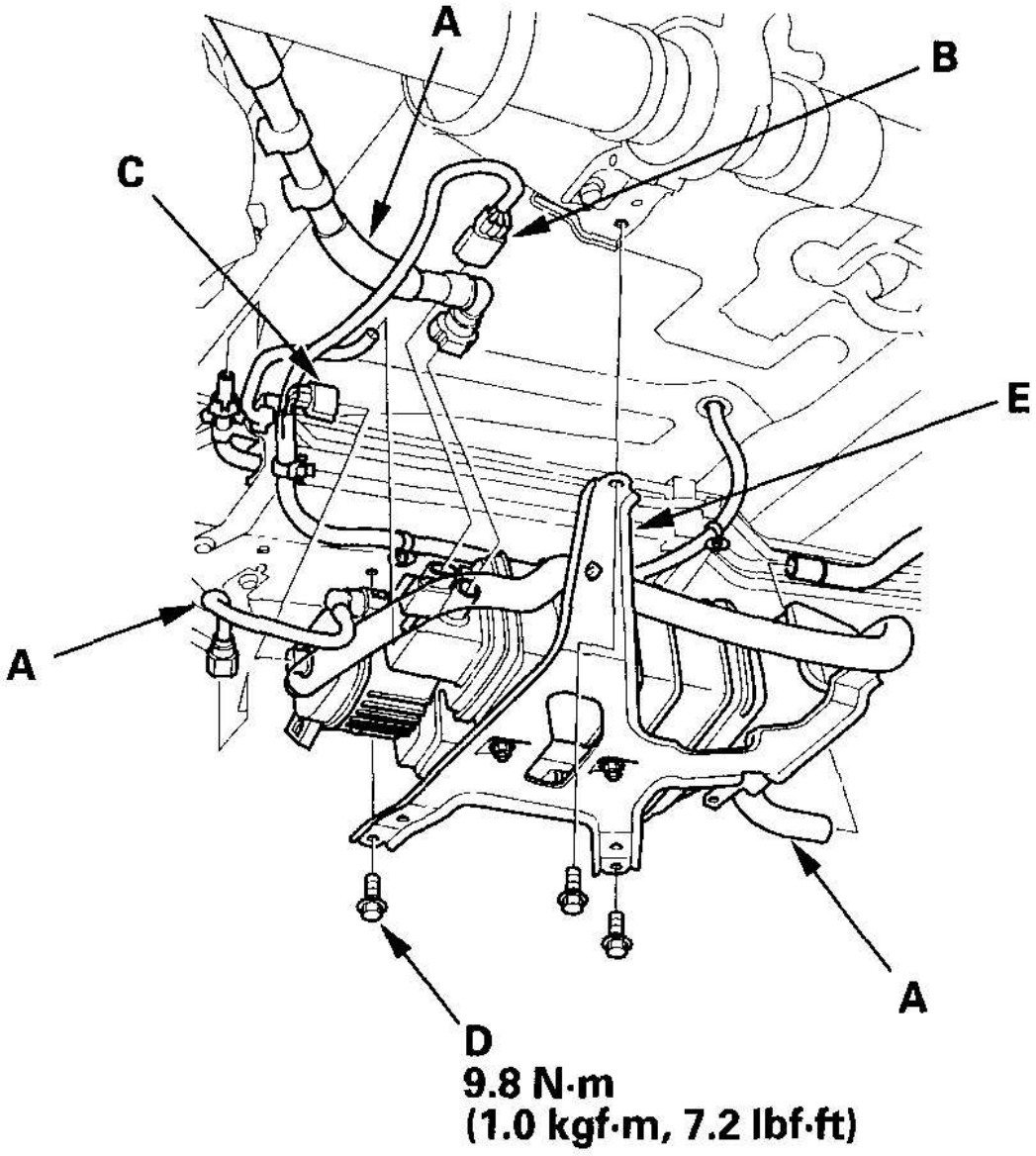


Fig. 95: Removing Hoses, FTP Sensor 3P Connector, And EVAP Canister Vent Shut Valve 2P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the bolt (D).
4. Remove the EVAP canister assembly (E).
5. Remove the EVAP canister bracket (A).

NOTE: The canister filter remains on the bracket.

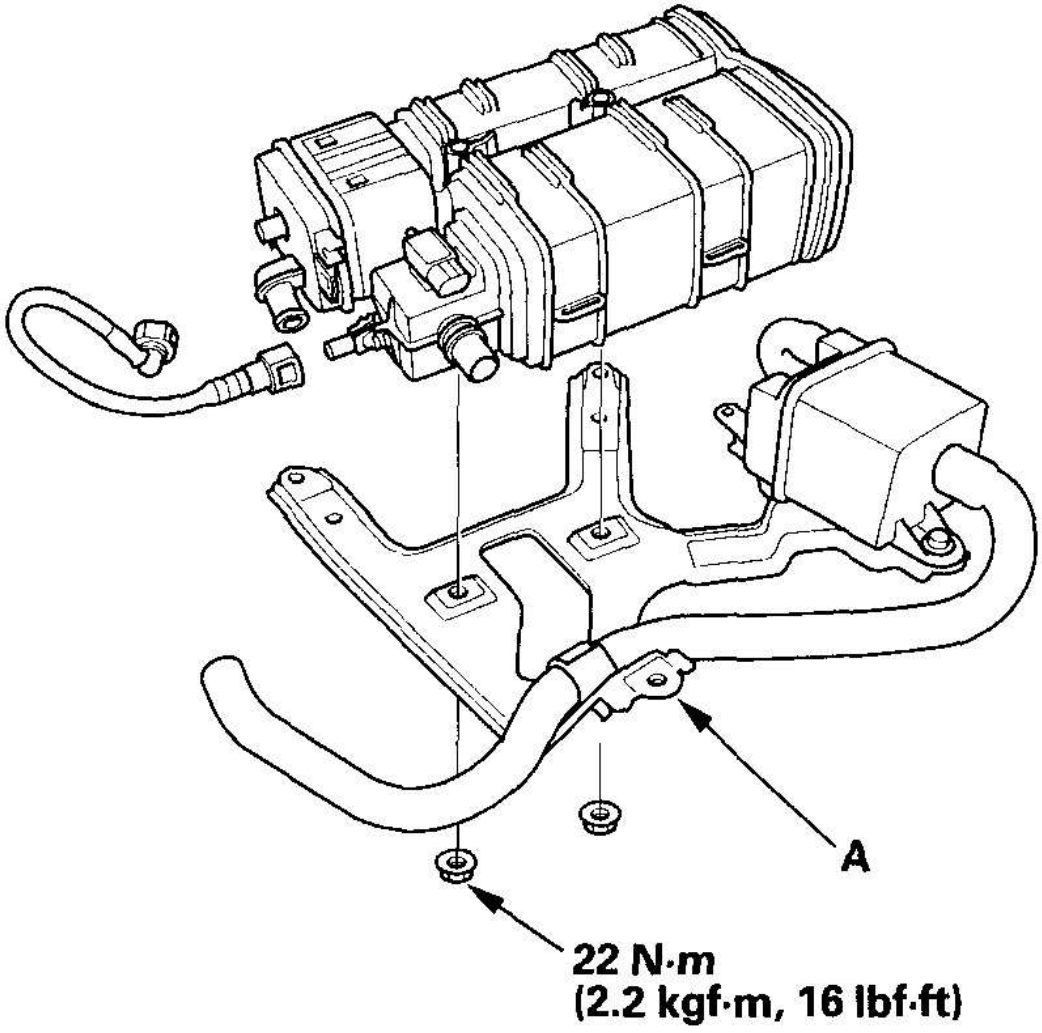


Fig. 96: Removing EVAP Canister Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the canister in the reverse order of removal.

EVAP BYPASS SOLENOID VALVE REPLACEMENT

2003-2004 MODELS

1. Remove the bolts and the EVAP canister cover.
2. Disconnect the hoses from the EVAP two way valve (A).

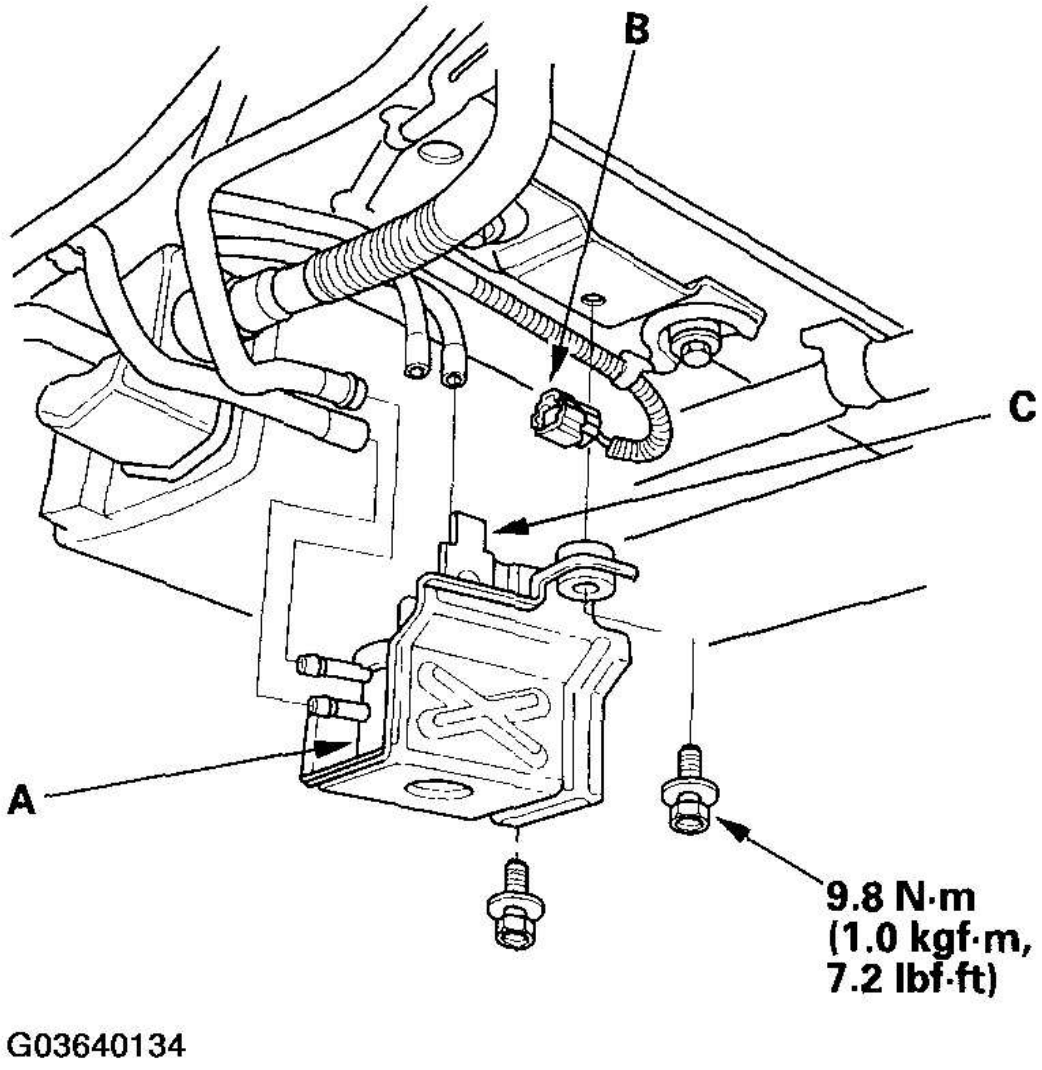


Fig. 97: Disconnecting Hoses From EVAP Two Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Disconnect the 2P connector (B) from the EVAP bypass solenoid valve (C).

4. Remove the bolts and the EVAP bypass solenoid valve/two way valve as an assembly.
5. Remove the screws and separate the EVAP two way valve (A) and EVAP bypass solenoid valve (B).

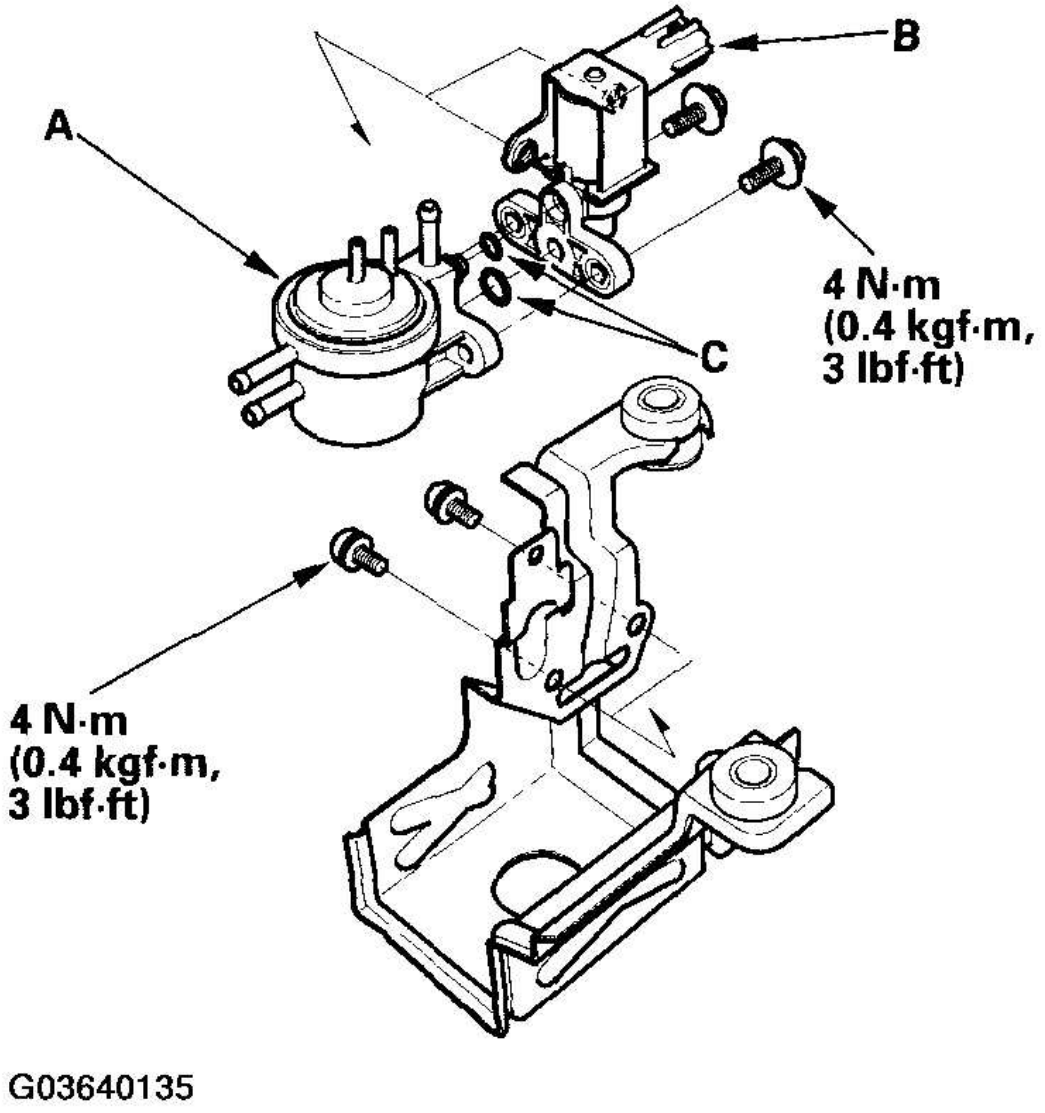


Fig. 98: Removing Screws And Separate EVAP Two Way Valve And EVAP Bypass Solenoid Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install new O-rings (C) to the EVAP two way valve.
7. Install the valve in the reverse order of removal.