



### Troubleshooting DTC P1456 and P1457 (Supersedes 99-075, dated August 24, 1999)

This bulletin updates the troubleshooting procedures for DTC P1456 and DTC P1457. You should refer to this bulletin only after completing the procedure in bulletin, S/B 99-074, *Diagnosing DTC P1456 and DTC P1457*.

#### TROUBLESHOOTING PROCEDURE

##### NOTE:

- Make sure you have software version SN911 or later for your PGM Tester before performing this procedure.
- The symbol "■" indicates the end of troubleshooting.

1. Exit the Generic OBD II function of the PGM Tester, and choose HONDA SYSTEMS from the PROGRAM MENU screen.
2. Enter the car's information into the PGM Tester, then follow the prompts:
  - From the SYSTEM SELECT screen, choose 1: PGM-FI.
  - From the TEST MODE MENU screen, choose 2: DATA LIST.
  - From the DATA LIST MENU screen, choose 1: ALL DATA LIST.
  - Using the down arrow, scroll down to the FTP SENSOR line.

NOTE: If your PGM Tester is not configured to read the FTP SENSOR in voltage, do the following:

- Exit the ALL DATA LIST screen.
  - Exit the DATA LIST MENU screen.
  - From the TEST MODE MENU screen, choose 7: SETUP.
  - From the SETUP MENU screen, choose 3: UNIT CONVERSION to change the pressure reading to display in volts.
  - Return to the ALL DATA LIST screen.
3. Turn the ignition switch ON (II) (leave the engine OFF). Check the fuel gauge to see how much fuel is in the tank. If the fuel tank is full, drain 2 to 3 gallons from the tank so that the fuel tank pressure sensor can accurately read the pressure in the tank.

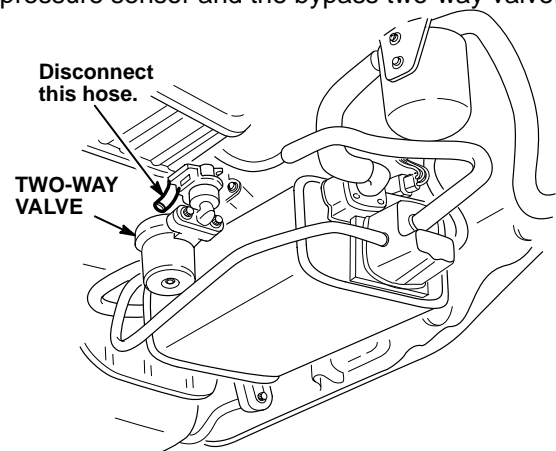
4. Remove the fuel fill cap, and monitor the fuel tank pressure sensor value.

*Does the voltage hold steady, without fluctuating, between 2.45 and 2.55 volts?*

**YES** – Go to step 6.

**NO** – Go to step 5.

5. Disconnect the hose between the fuel tank pressure sensor and the bypass two-way valve.



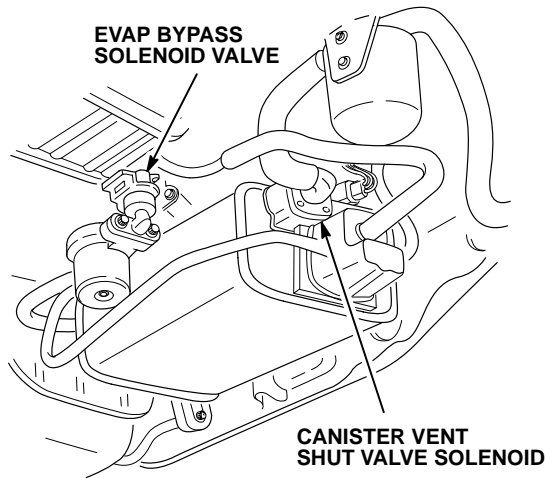
*Does the voltage hold steady, without fluctuating, between 2.45 and 2.55 volts?*

**YES** – Check for fuel or an obstruction in the hoses. If you find fuel in the hoses, replace the ORVR valve and any other components contaminated with fuel. Repeat step 4. ■

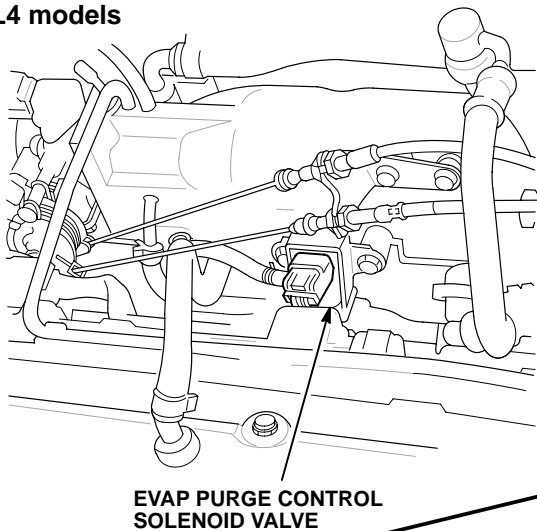
**NO** – Replace the fuel tank pressure sensor. ■

6. Activate the EVAP Control Canister Vent Shut Valve Solenoid (CVS), the EVAP Bypass Solenoid Valve (BPS), and the EVAP Purge Control Solenoid Valve (PCS) with the PGM Tester:
  - From the Program Menu screen, choose HONDA SYSTEMS.
  - From the SYSTEM SELECT screen, choose 1: PGM-FI.
  - From the TEST MODE MENU screen, choose 6: INSPECTION.
  - From the INSPECTION MENU screen, choose 2: EVAP TEST.
  - From the EVAP TEST MENU screen, choose 1: SINGLE SOLENOIDS.

7. At the SINGLE SOLENOIDS MENU screen, activate each solenoid. Listen for a click and feel for a light tap from each solenoid as you activate each one.

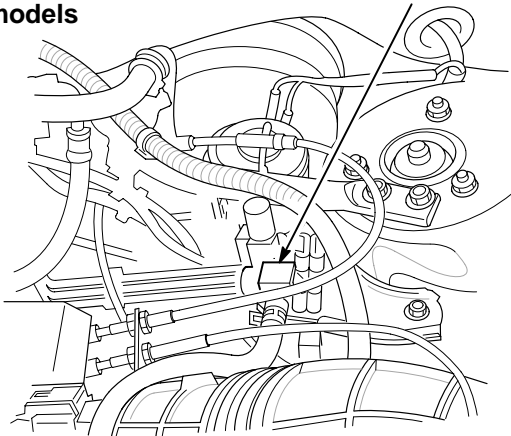


**L4 models**



**EVAP PURGE CONTROL SOLENOID VALVE**

**V6 models**



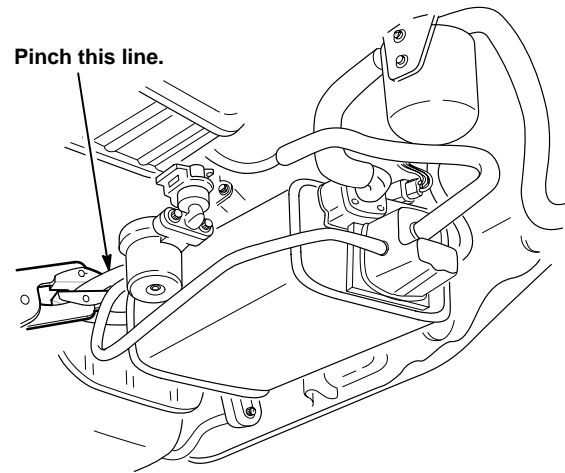
*Do all three solenoids work properly?*

**YES** – Go to step 8.

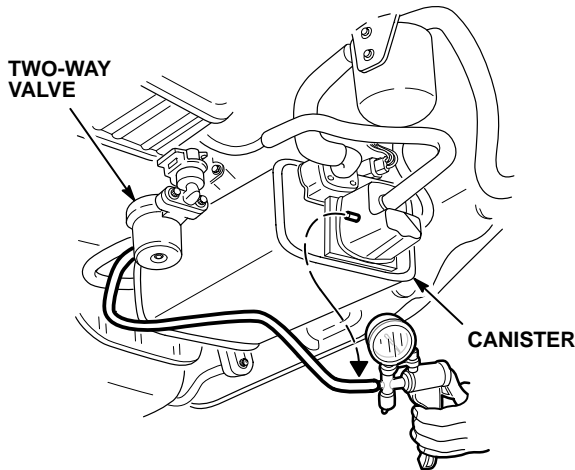
**NO** – Replace the faulty solenoid and/or repair the faulty circuit. Retest the solenoids following the procedure in this step. ■

8. Prepare the car:

- For DTC P1456, make sure the fuel tank is at least half full (but not completely full), and install the fuel fill cap, making sure the cap is tight. Go to step 9.
- For DTC P1457, pinch the hose between the 2-way valve and the fuel tank. Leave the fuel fill cap off. Go to step 11.



9. While still at the SINGLE SOLENOIDS MENU screen, turn on the evap bypass solenoid valve, then disconnect the hose between the two-way valve and the canister at the canister. Connect a vacuum pump to the hose, and apply vacuum until the fuel tank pressure sensor value drops to 2.1 V.

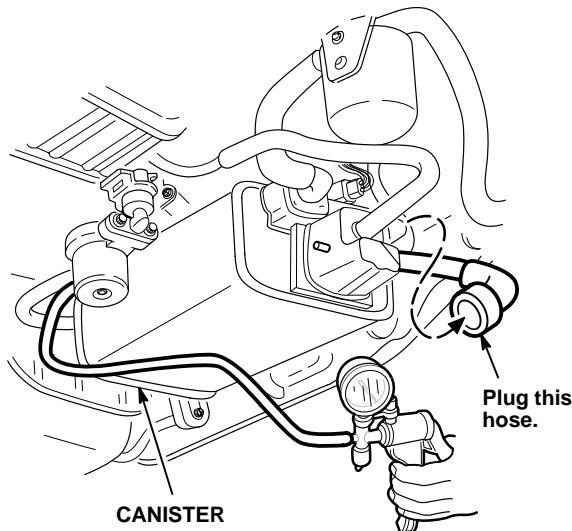


*Does the voltage drop and stay at a voltage below 2.15 V for at least 20 seconds?*

**YES** – The system is OK. Return the car to the customer, and explain that a loose gas cap causes the Check Engine light to come on. ■

**NO** – Go to step 10.

10. With the vacuum pump still connected, disconnect the hose between the ORVR valve and the canister, then plug the hose. This hose uses a quick-disconnect fitting. Apply vacuum until the fuel tank pressure sensor value drops to 2.1 V.



*Does the voltage drop and stay at a voltage below 2.15 V for at least 20 seconds?*

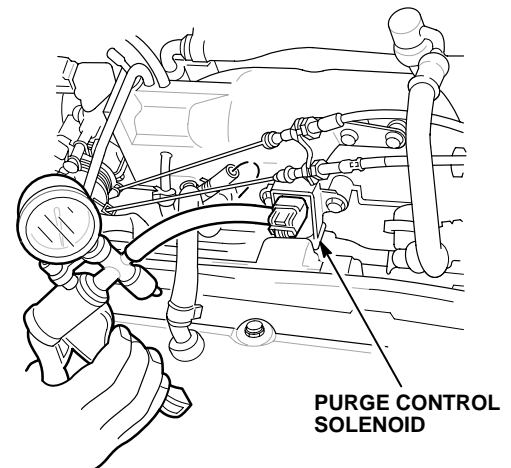
**YES** – Replace the ORVR valve, and retest the system following the procedure in step 9. ■

**NO** – Inspect for and repair a leak at the fuel tank, the filler hoses, the fuel fill cap, or the O-ring between the evap bypass solenoid valve and the two-way valve. ■

11. Activate the EVAP Control Canister Vent Shut Valve solenoid (CVS), the EVAP Bypass Solenoid Valve (BPS), and the EVAP Purge Control Solenoid Valve (PCS) using the MULTIPLE SOLENOIDS function on the PGM Tester:

- From the Program Menu screen, choose HONDA SYSTEMS.
- From the SYSTEM SELECT screen, choose 1: PGM-FI.
- From the TEST MODE MENU screen, choose 6: INSPECTION.
- From the INSPECTION MENU screen, choose 2: EVAP TEST.
- From the EVAP TEST MENU screen, choose 2: MULTIPLE SOLENOIDS.
- From the MULTIPLE SOLENOIDS screen, choose 1: PCS ON, CVS ON, and BPS ON.

12. Disconnect the hose between the intake manifold and the purge control solenoid. Attach a vacuum hose and a vacuum pump to the solenoid, and apply vacuum until the fuel tank pressure sensor value drops to 1.5 V.

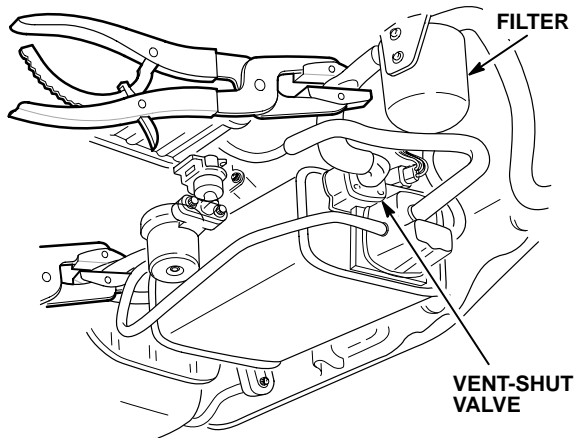


*Does the voltage drop and stay at a voltage below 1.55 V for at least 20 seconds?*

**YES** – The system is OK. Return the car to the customer. ■

**NO** – Go to step 13.

13. With the vacuum pump still attached to the purge control solenoid, pinch the hose between the canister vent shut valve and the canister filter. Apply vacuum until the fuel tank pressure sensor value drops to 1.5 V.

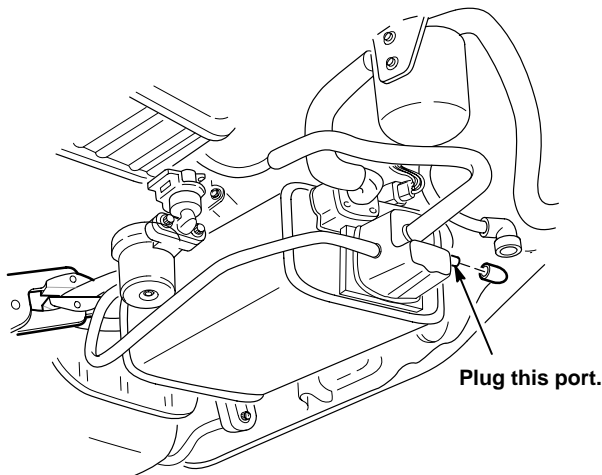


*Does the voltage drop and stay at a voltage below 1.55 V for at least 20 seconds?*

**YES** – Replace the canister vent shut valve, and repeat step 12. ■

**NO** – Go to step 14.

14. With the vacuum pump still connected to the purge control solenoid, disconnect the hose between the ORVR valve and the canister at the canister, then plug the canister.

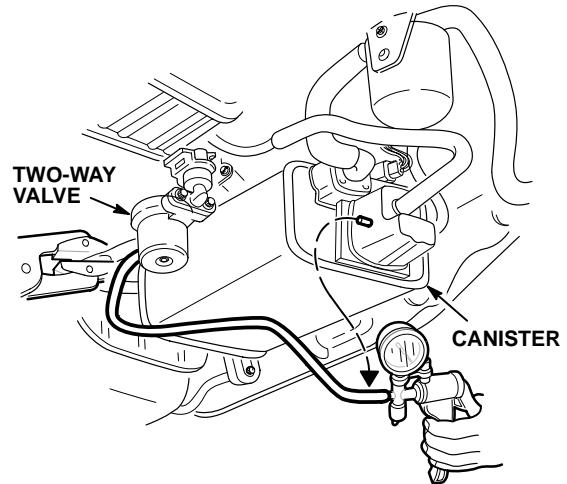


*Does the voltage drop and stay at a voltage below 1.55 V for at least 20 seconds?*

**YES** – Replace the ORVR valve, and repeat step 12. ■

**NO** – Go to step 15.

15. Remove the vacuum pump from the purge control solenoid, and reconnect the hose.
16. Disconnect the hose between the two-way valve and the canister at the canister. Attach a vacuum pump to the hose, and *slowly* apply vacuum to the hose until the fuel tank pressure sensor value drops to 1.5 V.



*Does the voltage drop and stay at a voltage below 1.55 V for at least 20 seconds?*

**YES** – Replace the canister, and repeat step 12. ■

**NO** – Replace the bypass solenoid/two-way valve assembly, and repeat step 12. ■