DTC P0446

Description

A restricted or blocked evaporative emission (EVAP) vent path is detected by the control module monitoring the fuel tank pressure (FTP) during normal operation. The control module commands the evaporative emission (EVAP) vent valve OFF, open, and the EVAP canister purge valve ON, open. The FTP should remain low as vacuum is drawn on the EVAP system. If the vent path is blocked or restricted, the vacuum level will increase and DTC P0446 will set.

Conditions for Running the DTC

- DTCs P0107, P0108, P0112, P0113, P0116, P0117, P0118, P0121, P0122, P0123, P0125, P0443, P0449, P0452, P0453, P1112, P1114, or P1120 are not set.
- The ignition voltage is between 10-18 volts.
- The barometric pressure (BARO) is more than 75 kPa.
- The fuel level is between 15-85 percent.
- The engine coolant temperature (ECT) is between 4-30°C (39-86°F).
- The intake air temperature (IAT) is between 4-30°C (39-86°F).
- The start-up ECT and IAT are within 9°C (16°F) of each other.
- The vehicle speed sensor (VSS) is less than 121 km/h (75 mph).

Conditions for Setting the DTC

- The FTP is less than -10 in. H2O.
- The condition is present for as long as 30 seconds.

Action Taken When the DTC Sets

- The control module illuminates the malfunction indicator lamp (MIL) when the diagnostic runs and fails.
- The control module records the operating conditions at the time the diagnostic fails. The control module stores this information in the Freeze Frame/Failure Records.

Conditions for Clearing the MIL/DTC

- The control module turns OFF the malfunction indicator lamp (MIL) after 3 consecutive ignition cycles that the diagnostic runs and does not fail.
- A current DTC, Last Test Failed, clears when the diagnostic runs and passes.
- A history DTC clears after 40 consecutive warm-up cycles, if no failures are reported by this or any other emission related diagnostic.
- Clear the MIL and the DTC with a scan tool.

Diagnostic Aids

An intermittent condition could be caused by a damaged EVAP vent housing, a temporary blockage at the EVAP vent valve inlet, or a pinched vent hose. A blockage in the vent system will also cause a poor fuel fill problem.

Test Description

The number below refers to the step number on the diagnostic table.

4. This test determines if the failure is present or intermittent.

Step	Action	Value(s)	Yes	No
Schematic Reference: Evaporative Emissions (EVAP) Hose Routing Diagram				
1	Did you perform the Diagnostic System Check-Engine Controls?	--	Go to Step 2	Go to Diagnostic System Check - Engine Controls
2	Did DTCs P0443, P0449, P0452, or P0453 set?	--	Go to Diagnostic Trouble Code (DTC) List	Go to Step 3
3	Inspect the EVAP system for the following conditions: • A damaged EVAP vent valve • A pinched EVAP vent hose Did you find and correct the condition?	--	Go to Step 12	Go to Step 4
4	1. With a scan tool, review and record the Freeze Frame/Failure Records data. 2. With a scan tool, clear the DTC codes. 3. Perform the Service Bay Test. Refer to Service Bay Test . Does the scan tool indicate that the Service Bay Test has passed?	--	Go to Diagnostic Aids	Go to Step 5
5	1. Disconnect the purge line from the EVAP purge valve. Refer to Evaporative Emission (EVAP) Canister Purge Valve Replacement . 2. Turn ON the ignition, with the engine OFF. 3. With a scan tool, observe the FTP parameter. Does the scan tool indicate fuel tank pressure near the specified value?	0 in H2O	Go to Step 6	Go to Step 10
	Important Always zero the EVAP pressure and vacuum (in H2O) gages on the EVAP pressure purge			

6	diagnostic station before proceeding with diagnosis. 1. Turn OFF the ignition. 2. Reconnect all previously disconnected hardware. 3. Install the J 41415-40 Fuel Fill Cap Adaptor. 4. Connect the J 41413 EVAP Pressure/Purge Diagnostic Station and the vehicle fuel fill cap to the J 41415-40 . 5. Turn ON the ignition, with the engine OFF. 6. With a scan tool, seal the EVAP system. 7. With the J 41413 , pressurize the EVAP system to the first specified value. 8. Rotate the J 41413 rotary switch to the OFF/HOLD position. 9. Disconnect the EVAP vent hose from the EVAP vent valve. Does the scan tool indicate that the FTP decreased?	5 in H2O	Go to Step 8	Go to Step 7
7	Disconnect the EVAP vapor pipe from the EVAP canister. Does the scan tool indicate that the FTP decreased?	--	Go to Step 11	Go to Step 9
8	Replace the EVAP vent valve. Refer to Evaporative Emission (EVAP) Canister Vent Valve Replacement . Did you complete the replacement?	--	Go to Step 12	--
9	Replace the EVAP canister. Refer to Evaporative Emission (EVAP) Canister Replacement . Did you complete the replacement?	--	Go to Step 12	--
10	Replace the FTP sensor. Refer to Fuel Tank Pressure Sensor Replacement . Did you complete the replacement?	--	Go to Step 12	--
11	Repair for a blockage in the EVAP vent hose. Did you complete the repair?	--	Go to Step 12	--
	1. Reconnect all of the EVAP hardware that was previously disconnected.			

12	2. Perform the Service Bay Test. Refer to Service Bay Test . Does the scan tool indicate that the Service Bay Test has passed?	--	Go to Step 13	Go to Step 3
13	With a scan tool, observe the stored information, Capture Info. Does the scan tool indicate any DTCs that have not been diagnosed?	--	Go to Diagnostic Trouble Code (DTC) List	System OK