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Document ID# 846539
2003 Chevrolet Blazer - 4WD

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DTC P0446

System Description

This DTC tests the evaporative emission (EVAP) system for a restricted or blocked EVAP vent path. The control module commands the EVAP canister purge solenoid Open and the EVAP canister vent solenoid Closed. This allows vacuum to be applied to the EVAP system. Once a calibrated vacuum level has been reached, the control module commands the EVAP canister purge solenoid Closed and the EVAP canister vent solenoid Open. The control module monitors the fuel tank pressure (FTP) sensor for a decrease in vacuum. If the vacuum does not decrease to near 0 inches H₂O in a calibrated time, this DTC sets.

The following table illustrates the relationship between the ON and OFF states, and the Open or Closed states of the EVAP canister purge and vent valves.

Control Module Command	EVAP Canister Purge Solenoid	EVAP Canister Vent Solenoid
ON	Open	Closed
OFF	Closed	Open

Conditions for Running the DTC

- DTC P0106, P0107, P0108, P0112, P0113, P0116, P0117, P0118, P0120, P0121, P0122, P0123, P0125, P0131, P0132, P0133, P0134, P0135, P0137, P0138, P0140, P0141, P0147, P0151, P0152, P0153, P0154, P0155, P0157, P0158, P0160, P0161, P0167, P0220, P0442, P0443, P0449, P0452, P0453, P0455, P0502, P0503, P1111, P1112, P1114, P1115, 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.

Conditions for Setting the DTC

- The fuel tank pressure sensor is less than - 10 inches 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) on the second consecutive ignition cycle that the diagnostic runs and fails.
- The control module records the operating conditions at the time the diagnostic fails. The first time the diagnostic fails, the control module stores this information in the Failure Records. If the

diagnostic reports a failure on the second consecutive ignition cycle, the control module records the operating conditions at the time of the failure. The control module writes the operating conditions to the Freeze Frame and updates the 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 evaporative emission (EVAP) vent housing, a temporary blockage at the EVAP vent solenoid inlet, or a pinched vent hose. A blockage in the vent system will also cause a poor fuel fill problem.
- For intermittent conditions, refer to [Intermittent Conditions](#) .

Test Description

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

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

Step	Action	Values	Yes	No
<i>Schematic Reference: Emission Hose Routing Diagram</i>				
1	Did you perform the Diagnostic System Check-Engine Controls?	--	Go to Step 2	Go to Diagnostic System Check - Engine Controls
2	Inspect the evaporative emission (EVAP) system for the following conditions: <ul style="list-style-type: none"> • A damaged EVAP vent solenoid--Refer to Evaporative Emission (EVAP) Canister Vent Valve Replacement . • A pinched EVAP vent hose • A damaged EVAP canister--Refer to Evaporative Emission (EVAP) Canister Replacement . Did you find and correct the condition?	--	Go to Step 12	Go to Step 3
3	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Disconnect the purge line from the EVAP purge solenoid. Refer to Evaporative Emission (EVAP) Canister Purge Valve Replacement . 3. Turn ON the ignition, with the engine 	-1 to +1 in H2O		

	OFF. Is the fuel tank pressure sensor parameter within the specified range?		Go to Step 4	Go to Step 8
4	<p>Important</p> <p>DO NOT exceed the specified value in this step. Exceeding the specified value may produce incorrect test results.</p> <ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Connect the EVAP purge pipe. 3. Connect the J 41413-200 Evaporative Emissions System Tester (EEST) power supply clips to a known good 12-volt source. 4. Install the J 41415-40 Fuel Tank Cap Adapter to the fuel fill pipe. 5. Connect the fuel fill cap to the J 41415-40. 6. Connect the J 41413-200 nitrogen/smoke supply hose to the J 41415-40. 7. Turn ON the ignition, with the engine OFF 8. Command the EVAP vent solenoid closed with a scan tool. 9. Turn the nitrogen/smoke valve on the J 41413-200 control panel to NITROGEN. 10. Use the remote switch to pressurize the EVAP system to the first specified value. 11. Observe the fuel tank pressure sensor in H2O with a scan tool. 12. Command the EVAP vent solenoid open with a scan tool. <p>Is the fuel tank pressure sensor parameter less than the second specified value?</p>	5 in H2O 1 in H2O	Go to Diagnostic Aids	Go to Step 5
5	Disconnect the EVAP vent hose from the EVAP vent solenoid. Is the fuel tank pressure sensor parameter less than the specified value?	1 in H2O	Go to Step 10	Go to Step 6
6	Disconnect the EVAP vent hose from the EVAP canister. Is the fuel tank pressure sensor parameter less than the specified value?	1 in H2O	Go to Step 7	Go to Step 11
7	Repair the pinched or restricted EVAP vent hose. Did you complete the repair?	--	Go to Step 12	--

8	<p>Test for poor connections at the harness connector of the fuel tank pressure (FTP) sensor. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	--	Go to Step 12	Go to Step 9
9	<p>Replace the FTP sensor. Refer to Fuel Tank Pressure Sensor Replacement .</p> <p>Did you complete the replacement?</p>	--	Go to Step 12	--
10	<p>Replace the EVAP vent solenoid. Refer to Evaporative Emission (EVAP) Canister Vent Valve Replacement .</p> <p>Did you complete the replacement?</p>	--	Go to Step 12	--
11	<p>Replace the EVAP canister. Refer to Evaporative Emission (EVAP) Canister Replacement .</p> <p>Did you complete the replacement?</p>	--	Go to Step 12	--
12	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Disconnect the purge line from the EVAP purge solenoid. Refer to Evaporative Emission (EVAP) Canister Purge Valve Replacement . 3. Turn ON the ignition, with the engine OFF. <p>Is the fuel tank pressure sensor parameter within the specified range?</p>	-1 to +1 in H2O	Go to Step 13	Go to Step 2
13	<p>Important</p> <p>DO NOT exceed the specified value in this step. Exceeding the specified value may produce incorrect test results.</p> <ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Reconnect all disconnected components. 3. Connect the J 41413-200 to the fuel fill pipe. 4. Turn ON the ignition, with the engine OFF 5. Command the EVAP vent solenoid closed with a scan tool. 6. Turn the nitrogen/smoke valve on the J 41413-200 control panel to NITROGEN. 7. Use the remote switch to pressurize the EVAP system to the first specified value. 8. Observe the fuel tank pressure sensor in 	5 in H2O 1 in H2O		

	H2O with a scan tool. 9. Command the EVAP vent solenoid open with a scan tool.			
	Is the fuel tank pressure sensor parameter less than the second specified value?		Go to Step 14	Go to Step 2
14	Observe the Capture Info with a scan tool. Are there any DTCs that have not been diagnosed?	--	Go to Diagnostic Trouble Code (DTC) List	System OK

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