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**Document ID# 1242134
2004 Chevrolet Blazer - 4WD**

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DTC P0122

Circuit Description

The throttle position (TP) sensor is used by the powertrain control module (PCM) in order to determine the throttle plate angle for various engine management systems. The TP sensor is a potentiometer type sensor with 3 circuits:

- A 5-volt reference circuit
- A low reference circuit
- A TP sensor signal circuit

The PCM provides the TP sensor with 5 volts on the 5-volt reference circuit and a ground on the low reference circuit. Rotation of the TP sensor rotor from the closed throttle position to the wide open throttle (WOT) position provides the PCM with a signal voltage from less than 1 volt to more than 4 volts through the TP sensor signal circuit. If the PCM detects an excessively low signal voltage, DTC P0122 sets.

Conditions for Running the DTC

The ignition is ON.

Conditions for Setting the DTC

The PCM detects that the TP sensor voltage is less than 0.1 volt for more than 2 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.

Step	Action	Values	Yes	No
Schematic Reference: Engine Controls Schematics				
Connector End View Reference: Engine Controls Connector End Views or Powertrain Control Module (PCM) Connector End Views				
1	Did you perform the Diagnostic System Check-Engine Controls?	--	Go to Step 2	Go to Diagnostic System Check - Engine Controls
2	<ol style="list-style-type: none"> 1. Turn ON the ignition, with the engine OFF. 2. Monitor the Diagnostic Trouble Code (DTC) information with the scan tool. Is DTC P0641 also set?	--	Go to DTC P0641	Go to Step 3
3	Observe the TP Sensor parameter with the scan tool. Is the voltage less than the specified value?	0.1 V	Go to Step 5	Go to Step 4
4	<ol style="list-style-type: none"> 1. Observe the Freeze Frame/Failure Records for this DTC. 2. Turn OFF the ignition for 30 seconds. 3. Start the engine. 4. Operate the vehicle within the conditions for running the DTC. You may also operate the vehicle within the conditions that you observed from the Freeze Frame/Failure Records. Did the DTC fail this ignition?	--	Go to Step 5	Go to DTC P1122
5	Test for an intermittent and for a poor connection at the throttle position (TP) sensor. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?		Go to Step 13	Go to Step 6
6	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Disconnect the TP sensor. 3. Turn ON the ignition, with the engine OFF. 4. Measure the voltage from the 5-volt reference circuit of the TP sensor to a good ground, with a DMM. Is the voltage more than the specified value?	4.8 V	Go to Step 7	Go to Step 8
7	<ol style="list-style-type: none"> 1. Connect a 3-amp fused jumper wire between the 5-volt reference circuit of the TP sensor and the signal circuit of the TP sensor. 2. Observe the TP sensor parameter with a scan tool. 	4.9 V		

	Is the voltage more than the specified value?		Go to Step 11	Go to Step 9
8	Test the 5-volt reference circuit between the powertrain control module (PCM) and the TP sensor for an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 13	Go to Step 10
9	Test the TP sensor signal circuit between the PCM and the TP sensor for a short to ground or an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 13	Go to Step 10
10	Test for an intermittent and for a poor connection at the PCM. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 13	Go to Step 12
11	Replace the TP sensor. Refer to Throttle Position (TP) Sensor Replacement . Did you complete the replacement?	--	Go to Step 13	--
12	Replace the PCM. Refer to Powertrain Control Module (PCM) Replacement . Did you complete the replacement?	--	Go to Step 13	--
13	<ol style="list-style-type: none"> 1. Clear the DTCs with a scan tool. 2. Turn OFF the ignition for 30 seconds. 3. Start the engine. 4. Operate the vehicle within the conditions for running the DTC. You may also operate the vehicle within the conditions that you observed from the Freeze Frame/Failure Records. Did the DTC fail this ignition?	--	Go to Step 2	Go to Step 14
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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