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2001 Chevrolet/Geo Corvette

DTC B0361

Circuit Description

The HVAC control module commands the left air temperature actuator to move by controlling the voltage supplied on the control circuit. A low voltage of 0 volts moves door toward full cold. A voltage of 2.5 volts stops the door. A high voltage of 5 volts moves the door toward full hot. The HVAC control module determines the current position of the actuator by monitoring the voltage on the signal circuit. The feedback potentiometer is a function of the motor position. A high voltage of 4-5 volts indicates full cold door position. A low voltage of less than 1 volt indicates full hot door position. The HVAC control module controls the left air temperature actuator door positions in order to maintain the selected air temperature.

Conditions for Running the DTC

The ignition is turned ON.

Conditions for Setting the DTC

The HVAC control module detects the signal circuit is less than 5 counts (0.09 V).

Action Taken When the DTC Sets

A default value will be used for the sensor data by the HVAC control module in an attempt to maintain the air temperature selected by the driver. This default value will be displayed on the scan tool.

Conditions for Clearing the DTC

- The DTC will become history if the HVAC control module no longer detects a failure.
- The history DTC will clear after 100 fault free ignition cycles.
- The DTC can be cleared with a scan tool.

Diagnostic Aids

Check the following conditions:

A disconnected or broken door may also set this DTC by allowing the left air temperature actuator to travel to its internal stops, an overtravel condition. If condition not present, refer to Testing for Intermittent and Poor Connections in Wiring Systems.

Test Description

The numbers below refer to the step numbers on the diagnostic table.

3. Tests for a default setting viewed by the scan tool.

4. Tests for the proper operation of the circuit in the high voltage range.
5. Tests for the proper operation of the circuit in the low voltage range. If the fuse in the jumper opens when you perform this test, the signal circuit is shorted to voltage.
6. Tests for a short to ground in the 5 volt reference circuit.

Step	Action	Values	Yes	No
Schematic Reference: HVAC Schematics				
1	Did you perform the HVAC Diagnostic System Check?	--	Go to Step 2	Go to Diagnostic System Check - HVAC Systems - Automatic
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. With a scan tool, observe the LH Mix Mtr Position Feedback parameter in the Heating and Air Conditioning data list. Does the scan tool indicate that the LH Mix Mtr Position Feedback parameter is within the specified range?	5-250 counts	Go to Step 3	Go to Step 4
3	Place the air temperature switch from the warmest position to the coldest position. Does the scan tool indicate that the value of the LH Mix Mtr Position Feedback parameter remains near the specified value?	127 counts	Go to Step 4	Go to Diagnostic Aids
4	1. Turn OFF the ignition. 2. Disconnect the left air temperature actuator. 3. Turn ON the ignition, with the engine OFF. 4. Measure the voltage from the signal circuit of the left air temperature actuator to a good ground. Is the voltage greater than the specified value?	4.90 volts	Go to Step 5	Go to Step 9
5	1. Turn OFF the ignition 2. Connect a 3 amp fused jumper wire between the signal circuit of the left air temperature actuator and the low reference circuit of the left air temperature actuator. 3. Turn ON the ignition, with the engine OFF. 4. Measure the voltage from the jumper wire to a good ground. Is the voltage less than the specified value?	0.09 volts	Go to Step 6	Go to Step 10
	1. Turn OFF the ignition. 2. Disconnect the fused jumper wire.			

6	3. Turn ON the ignition, with the engine OFF. 4. Measure the voltage from the 5 volt reference circuit at the left air temperature actuator connector to a good ground. Is the voltage greater than the specified value?	4.90 volts	Go to Step 8	Go to Step 7
7	Test the 5 volt reference circuit of the left air temperature actuator 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 16	Go to Step 13
8	Test the 5 volt reference circuit of the left air temperature actuator for a short to voltage, a high resistance, or an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 16	Go to Step 12
9	Test the signal circuit of the left air temperature actuator 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 16	Go to Step 13
10	Test the signal circuit of the left air temperature actuator for a short to voltage, a high resistance, or an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 16	Go to Step 11
11	Test the low reference circuit of the left air temperature actuator for a high resistance or an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 16	Go to Step 13
12	Inspect for poor connections at the harness connector of the left air temperature actuator. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 16	Go to Step 14
13	Inspect for poor connections at the harness connector of the HVAC control module. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 16	Go to Step 15

14	**Important** Perform the recalibration procedure for the left air temperature actuator. Replace the left air temperature actuator. Refer to Air Temperature Actuator Replacement - Left . Did you complete the replacement?	--	Go to Step 16	--
15	**Important** Perform the recalibration procedure for the HVAC control module. Replace the HVAC control module. Refer to HVAC Control Module Replacement . Did you complete the replacement?	--	Go to Step 16	--
16	1. Use the scan tool in order to clear the DTCs. 2. Operate the vehicle within the Conditions for Running the DTC as specified in the supporting text. Does the DTC reset?	--	Go to Step 2	System OK