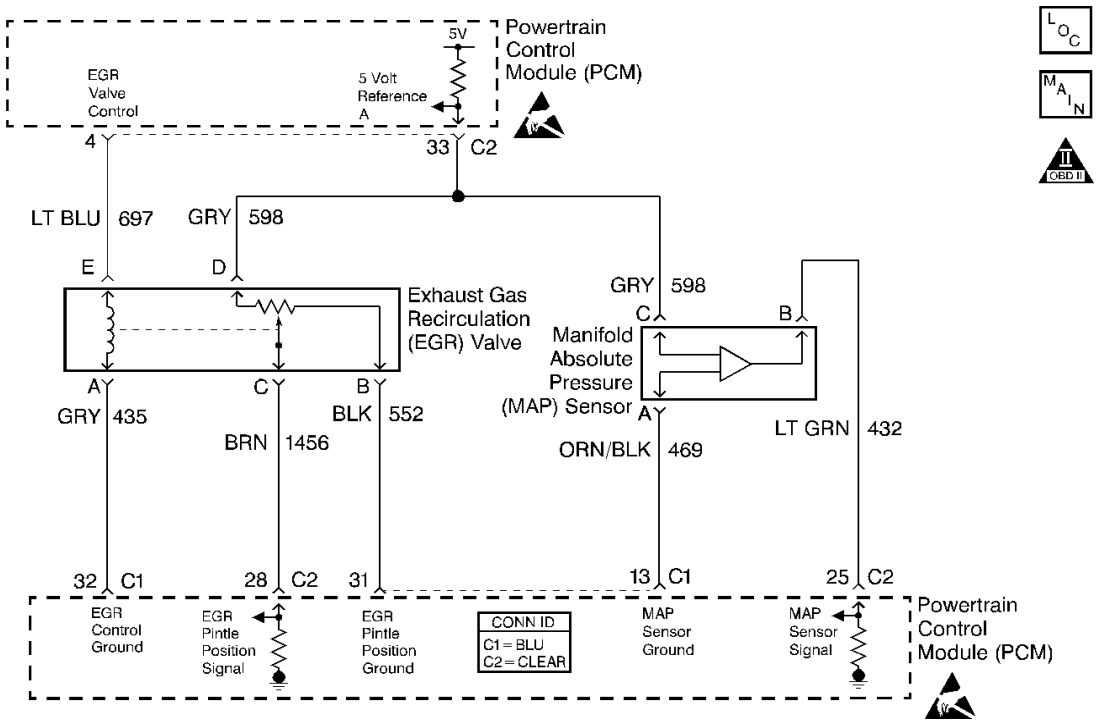
DTC P1635 5 Volt Reference Circuit



Circuit Description

The PCM uses the 5 Volt Reference A circuit as a sensor feed to the following sensors:

- The MAP sensor.
- The EGR Valve Pintle Position sensor.

The PCM monitors the voltage on the 5 Volt Reference A circuit. If the voltage is out of tolerance, the PCM will set DTC P1635.

Conditions for Setting the DTC

The engine is running.

Conditions for Setting the DTC

- The PCM detects a voltage out of tolerance condition on the 5 Volt Reference A circuit.
- The above condition is present for longer than 10 seconds.

Action Taken When the DTC Sets

- The PCM will illuminate the malfunction indicator lamp (MIL) during the second consecutive trip

in which the diagnostic test has been run and failed.
- The PCM will store conditions which were present when the DTC set as Freeze Frame and Failure Records data.

Conditions for Clearing the MIL/DTC

- The PCM will turn OFF the MIL during the third consecutive trip in which the diagnostic has been run and passed.
- The History DTC will clear after 40 consecutive warm-up cycles have occurred without a malfunction.
- The DTC can be cleared by using the scan tool.

Diagnostic Aids

Important:

Be sure to inspect PCM and engine grounds for being secure and clean.

Check for the following conditions:

- Poor connection at PCM - Inspect harness connectors for the following items:
  - Backed out terminals
  - Improper mating
  - Broken locks
  - Improperly formed or damaged terminals
  - Poor terminal to wire connections
- Damaged harness - Inspect the wiring harness for damage.
- If the harness appears to be OK, observe the MAP display on the scan tool with the ignition ON, engine not running while moving connectors and wiring harnesses related to the following sensors. A change in the MAP display will indicate the location of the fault.
  - The MAP sensor
  - The EGR valve

Review the Freeze Frame/Fail Records vehicle mileage since the diagnostic test last failed. This may help determine how often the condition that caused the DTC to be set occurs.

Test Description

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

4. This step isolates the 5.0 volt reference circuit from the sensor signal circuit.

DTC P1635 5 Volt Reference (A) Circuit

Step	Action	Value (s)	Yes	No
1	Did you perform the Powertrain On-Board Diagnostic (OBD) System Check?	--	Go to Step 2	Go to Powertrain On Board Diagnostic (OBD) System Check
2	1. Turn OFF the ignition. 2. Disconnect the PCM. 3. Turn ON the ignition, with the engine OFF. 4. Probe the PCM connector 5 volt reference circuit using a J 39200 Digital Multimeter that is connected to a good ground.	5.1 V		

	Does the voltage measure more than the specified value?		Go to Step 4	Go to Step 3
3	1. Turn OFF the ignition. 2. Turn ON the ignition, with the engine OFF. 3. Probe the 5 volt reference circuit using a J 34142-B Test Lamp that is connected to a good ground. Does the test lamp illuminate?	--	Go to Step 5	Go to Diagnostic Aids
4	1. Disconnect the EGR and MAP sensors. 2. Probe the 5 volt reference circuit at the PCM connector using a DMM that is connected to a good ground. Does the voltage measure more than the specified value?	5.1 V	Go to Step 8	Go to Step 6
5	1. Disconnect the EGR and MAP sensors. 2. Probe the 5 volt reference circuit at the PCM connector using a test lamp that is connected to B+. Does the test lamp illuminate?	--	Go to Step 9	Go to Step 7
6	1. Turn ON the ignition, with the engine OFF. 2. Measure the voltage on the signal circuit at the EGR and MAP sensor using a DMM that is connected to a good ground. Does the voltage measure more than the specified value?	0.0 V	Go to Step 10	Go to Step 12
7	1. Turn ON the ignition, with the engine OFF. 2. Probe the signal circuit at the EGR and MAP sensor using a test lamp that is connected to B+. Does the test lamp illuminate?	--	Go to Step 11	Go to Step 12
8	Repair the short to voltage on the 5 volt reference circuit. Refer to Wiring Repairs . Did you complete the repair?	--	Go to Step 13	--
9	Repair the short to ground on the 5 volt reference circuit. Refer to Wiring Repairs . Did you complete the repair?	--	Go to Step 13	--
10	Repair the short to voltage on the appropriate sensor signal circuit. Refer to Wiring Repairs . Did you complete the repair?	--	Go to Step 13	--
11	Repair the short to ground on the appropriate sensor signal circuit. Refer to Wiring Repairs . Did you complete the repair?	--	Go to Step 13	--
	Important:			

12	The replacement PCM must be programmed. Refer to PCM Replacement/Programming . Replace the PCM. Did you complete the replacement?	--	Go to Step 13	--
13	1. Use the scan tool in order to record Fail Records and clear the DTCs . 2. Operate the vehicle within the Fail Record conditions. Does the DTC reset?	--	Go to Step 2	Go to Step 14
14	Does the scan tool indicate any DTCs set that you have not diagnosed?	--	Go to applicable DTC table	System OK