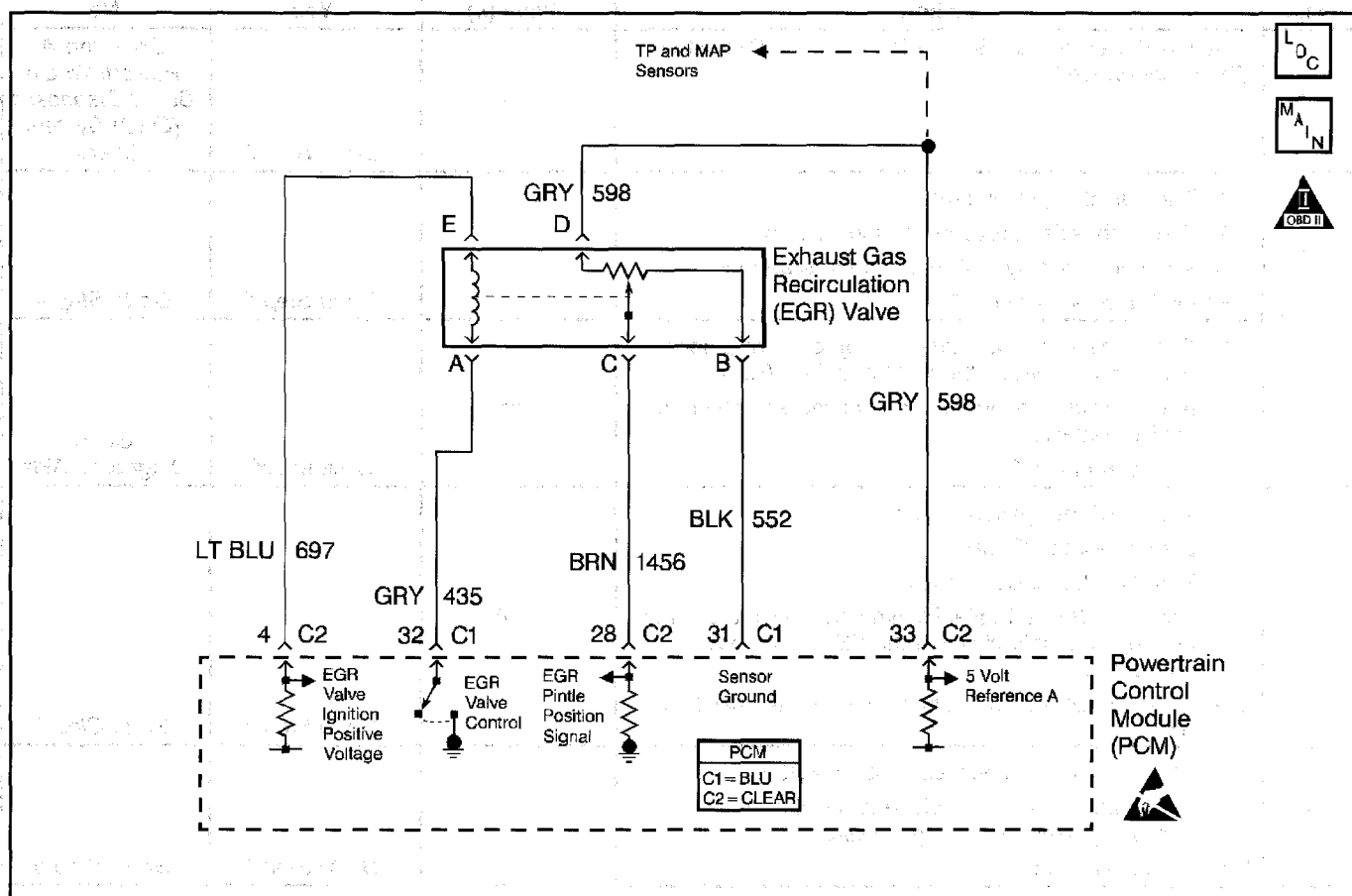


DTC P1404 Exhaust Gas Recirculation (EGR) Closed Position Performance



222140

Circuit Description

The PCM monitors the EGR valve pintle position input to ensure that the valve responds properly to commands from the PCM. When the ignition switch is turned ON, the PCM learns the EGR closed valve pintle position. The PCM compares the learned EGR closed valve pintle position to the Actual EGR position when the EGR valve is commanded closed. If the Actual EGR position indicates that the EGR valve is still open when the PCM is commanding the EGR valve closed, DTC P1404 will set.

Conditions for Running the DTC

- No TP, VSS, Misfire, IAT sensor, MAP sensor, Idle Speed, Fuel Injector, ECT, CKP, or MAF sensor DTCs are set.
- System voltage is between 10 volts and 16 volts.

Conditions for Setting the DTC

- EGR Feedback is 0.2 volt greater than the EGR Closed Valve Pintle Position when the Desired EGR Position is commanded to 0%
- The above condition is present for longer than 20 seconds.

Action Taken When the DTC Sets

- The PCM will illuminate the MIL during the second consecutive trip in which the diagnostic test has been run and failed.
- The PCM will disable EGR for the ignition cycle
- The PCM will store conditions which were present when the DTC set as Freeze Frame and Fail Records data.

Conditions for Clearing the MIL/DTC

- The PCM will turn the MIL OFF 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 Clear Info function or by disconnecting the PCM battery feed.

Diagnostic Aids

Check for the following condition(s):

- Excessive deposits on the EGR valve pintle or seat.
Remove the EGR valve and check for deposits that may interfere with the EGR valve pintle extending completely or cause the pintle to stick.
- Poor connections at PCM or EGR valve.
Inspect harness connectors for backed out terminals, improper mating, broken locks, improperly formed or damaged terminals, and poor terminal to wire connection.
- Damaged harness.
Inspect the wiring harness for damage. If the wiring appears to be OK, connect J 39200 DMM and check circuit continuity while moving connectors and wiring harnesses related to the EGR valve. A change in the DMM display will indicate the location of the malfunction.

Test Description

Number(s) below refer to the step number(s) on the Diagnostic Table:

2. Verifies that the malfunction is present.
4. If DTC P1404 will only set under certain conditions, the malfunction may be intermittent; refer to DTC P1404 Diagnostic Aids. If an intermittent wiring problem is not present, check for a poor connection at the PCM or the EGR valve. If the connections are OK and DTC P1404 continues to set, replace the EGR valve. Refer to *EGR Valve Replacement*.
14. This vehicle is equipped with a PCM which utilizes an Electrically Erasable Programmable Read Only Memory (EEPROM). When the PCM is being replaced, the new PCM must be programmed.

DTC P1404 Exhaust Gas Recirculation (EGR) Closed Position Performance

Step	Action	Value(s)	Yes	No
1	Was the Powertrain On-Board Diagnostic (OBD) System Check performed?	—	Go to Step 2	Go to the A Powertrain On Board Diagnostic (OBD) System Check
2	Important: If DTC P0403 is set, diagnose the other DTC first. With the engine idling, observe Actual EGR Position display on the scan tool. Is Actual EGR Position at the specified value?	0%	Go to Step 3	Go to Step 5
3	1. Turn ON the ignition switch. 2. Select the scan tool EGR valve output control function. 3. Increment the EGR valve through all positions while comparing Desired EGR Position to Actual EGR Position. Does Desired EGR Position remain close to Actual EGR Position at all commanded positions?	—	Go to Step 4	Go to Step 6
4	1. Review and record scan tool Fail Records data. 2. Operate the vehicle within Fail Records conditions. 3. Using a scan tool, monitor Specific DTC info for DTC P1404 until the DTC P1404 test runs. Does the scan tool indicate DTC P1404 failed this ign?	—	Go to Step 5	Go to Diagnostic Aids
5	1. Disconnect the EGR valve electrical connector. 2. Observe Actual EGR Position on the scan tool. Is Actual EGR Position at the specified value?	0%	Go to Step 6	Go to Step 7
6	Probe the EGR pintle position sensor ground circuit at the EGR valve harness connector with a J 34142-B test lamp to B+. Is the test lamp ON?	—	Go to Step 9	Go to Step 8
7	1. Turn OFF the ignition switch. 2. Disconnect the PCM. 3. Turn ON the ignition switch. 4. Measure voltage between the EGR valve pintle position signal circuit and ground. Is the measured voltage near the specified value?	0V	Go to Step 12	Go to Step 11

DTC P1404 Exhaust Gas Recirculation (EGR) Closed Position Performance (cont'd)

Step	Action	Value(s)	Yes	No
8	1. Check the EGR pintle position sensor ground circuit for an open between the PCM and the EGR valve. 2. If a problem is found, repair as necessary. Refer to <i>Wiring Repairs</i> . Was a problem found?	—	Go to Step 15	Go to Step 13
9	1. Check for poor terminal connections at the EGR valve. 2. If a problem is found, repair as necessary. Refer to <i>Wiring Repairs</i> . Was a problem found?	—	Go to Step 15	Go to Step 10
10	Replace the EGR valve. Refer to <i>EGR Valve Replacement</i> . Notice: If the EGR valve shows signs of excessive heat, check the exhaust system for blockage (possibly a plugged converter) using the procedure found on the restricted exhaust system check. If the exhaust system is restricted, repair the cause; one of which might be an injector which is open due to one of the following reasons: <ul style="list-style-type: none"> • Stuck • Grounded driver circuit • Possible faulty Control Module. If this condition is found, the oil should be checked for possible fuel contamination. Is action complete?	—	Go to Step 15	—
11	Locate and repair short to voltage in the EGR pintle position signal circuit. Refer to <i>Wiring Repairs</i> . Is action complete?	—	Go to Step 15	—
12	1. Check for the following conditions: <ul style="list-style-type: none"> • The EGR valve pintle position signal circuit for a short to the 5 volt reference circuit. • The EGR valve pintle position signal circuit for a short to the EGR valve control circuit. 2. If a problem is found, repair as necessary. Refer to <i>Wiring Repairs</i> . Was a problem found?	—	Go to Step 15	Go to Step 14
13	1. Check the circuits related to the EGR valve for poor terminal connections at the PCM. 2. If a problem is found, repair as necessary. Refer to <i>Wiring Repairs</i> . Was a problem found?	—	Go to Step 15	Go to Step 14
14	Important: The replacement PCM must be programmed. Refer to <i>PCM Replacement/Programming</i> . Replace the PCM. Is action complete?	—	Go to Step 15	—
15	1. Review and record scan tool Fail Records data. 2. Clear DTCs. 3. Operate the vehicle within Fail Records conditions. 4. Using a scan tool, monitor Specific DTC info for DTC P1404. Does the scan tool indicate DTC P1404 failed this ignition?	—	Go to Step 2	System OK