

P0406 - EGR POSITION SENSOR HIGH

When Monitored and Set Condition:

P0406 - EGR POSITION SENSOR HIGH

When Monitored: With the ignition on. Battery voltage greater than 10 volts.

Set Condition: EGR position sensor signal is greater than 4.89. One trip Fault.

Possible Causes

- EGR POSITION SENSOR SIGNAL CIRCUIT OPEN
- EGR POSITION SENSOR SWEEP
- INTERMITTENT CONDITION
- EGR POSITION SENSOR SIGNAL CIRCUIT SHORTED TO 5 VOLT SUPPLY CIRCUIT
- EGR POSITION SENSOR SIGNAL CIRCUIT SHORTED TO BATTERY VOLTAGE
- EGR SOLENOID ASSEMBLY INTERNAL FAILURE
- SENSOR GROUND CIRCUIT OPEN
- PCM

Diagnostic Procedure

DIAGNOSTIC PROCEDURES CHART - P0406 - EGR POSITION SENSOR HIGH

TEST	ACTION	APPLICABILITY
1	Start the engine. With the DRBIII®, read the EGR Position Sensor voltage. Is the voltage above 4.5 volts? Yes --> Go To 2 No --> Go To 8	All
2	Turn the ignition off. Disconnect the EGR Solenoid harness connector. Disconnect the PCM harness connector. Measure the resistance between the EGR Position Sensor Signal circuit and the 5 Volt Supply circuit in the EGR Solenoid harness connector. Is the resistance below 100 ohms? Yes --> Repair the EGR Position Sensor Signal circuit for a short to the 5 Volt Supply circuit. Perform <u>POWERTRAIN VERIFICATION TEST VER -</u>	All

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	<p>5. No --> Go To 3</p>	
3	<p>Turn the ignition off. Disconnect the EGR Solenoid harness connector. Disconnect the PCM harness connector.</p> <p>CAUTION: DO NOT PROBE THE PCM HARNESS CONNECTORS. PROBING THE PCM HARNESS CONNECTORS WILL DAMAGE THE PCM TERMINALS RESULTING IN POOR TERMINAL TO PIN CONNECTION. INSTALL MILLER SPECIAL TOOL #8815 TO PERFORM DIAGNOSIS.</p> <p>Measure the resistance of the EGR Position Sensor Signal circuit from the EGR Solenoid harness connector to the appropriate terminal of special tool #8815. Is the resistance below 5.0 ohms? Yes --> Go To 4 No --> Repair the open in the EGR Position Sensor Signal circuit. Perform <u>POWERTRAIN VERIFICATION TEST VER - 5.</u></p>	All
4	<p>Turn the ignition off. Disconnect the EGR Solenoid harness connector. Turn the ignition on. Measure the voltage of the EGR Sensor Signal circuit in the EGR Position Sensor harness connector. Is the voltage above 5.2 volts? Yes --> Repair the short to battery voltage in the EGR Position Sensor Signal circuit. Perform <u>POWERTRAIN VERIFICATION TEST VER - 5.</u> No --> Go To 5</p>	All
5	<p>Turn the ignition off.</p>	All

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	<p>Disconnect the EGR Solenoid harness connector. Connect a jumper wire between the EGR Position Sensor Signal circuit and the Sensor ground circuit. With the DRBIII®, monitor the EGR Position Sensor voltage. Turn the ignition on. Is the voltage below 0.5 of a volt? Yes --> Replace the EGR Solenoid Assembly. Perform <u>POWERTRAIN VERIFICATION TEST VER - 5.</u> No --> Go To 6</p>	
<p align="center">6</p>	<p>Turn the ignition off. Disconnect the EGR Solenoid harness connector. Disconnect the PCM harness connector.</p> <p>CAUTION: DO NOT PROBE THE PCM HARNESS CONNECTORS. PROBING THE PCM HARNESS CONNECTORS WILL DAMAGE THE PCM TERMINALS RESULTING IN POOR TERMINAL TO PIN CONNECTION. INSTALL MILLER SPECIAL TOOL #8815 TO PERFORM DIAGNOSIS.</p> <p>Measure the resistance of the Sensor ground circuit from the EGR Solenoid harness connector to the appropriate terminal of special tool #8815. Is the resistance below 30 ohms? Yes --> Go To 7 No --> Repair the open in the Sensor ground circuit. Perform <u>POWERTRAIN VERIFICATION TEST VER - 5.</u></p>	<p align="center">All</p>
<p align="center">7</p>	<p>NOTE: Before continuing, check the PCM harness connector</p>	<p align="center">All</p>

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	<p>terminals for corrosion, damage, or terminal push out. Repair as necessary.</p> <p>If there are no possible causes remaining, view repair.RepairReplace and program the Powertrain Control Module in accordance with the Service Information.Perform <u>POWERTRAIN VERIFICATION TEST VER - 5.</u></p>	
<p align="center">8</p>	<p>NOTE:</p> <p>The engine will run rough and possibly stall in the following test. Feather the accelerator pedal to keep the engine from stalling.</p> <p>Start the engine. With the DRBIII®, enter Engine System Test and then EGR System Test. Push the 4=VARIABLE function.Monitor the EGR voltage while slowly pushing the up arrow.Is the voltage change smooth?Yes --> Refer to the <u>INTERMITTENT CONDITION</u> symptom in the Driveability category.Perform <u>POWERTRAIN VERIFICATION TEST VER - 5.</u>No --> Replace the EGR Solenoid Assembly.Perform <u>POWERTRAIN VERIFICATION TEST VER - 5.</u></p>	<p align="center">All</p>