

GENERIC · POWERTRAIN

P044B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P044B

EGR Sensor C Circuit Range/Performance

The powertrain control module monitors the exhaust gas recirculation (EGR) system and has detected that the signal from EGR Sensor C is outside its expected range or is not performing as designed. This sensor is typically a position or differential pressure sensor that reports how far the EGR valve has moved or how much exhaust gas is flowing, and the computer sets this code when the voltage or signal behavior does not match the commanded EGR position.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A slight hesitation or stumble during light-throttle acceleration when the EGR valve is commanded open
- Rough idle or idle surge that may come and go as the EGR system cycles
- Reduced fuel economy if the EGR system is stuck in one position
- Intermittent pinging or spark knock under load if too much or too little exhaust gas is recirculated
- Failed emissions inspection due to the EGR monitor not completing

Common causes, most likely first

- 1 Carbon buildup or sludge on the EGR valve pintle or sensor probe causing binding or false readings
- 2 A faulty EGR Sensor C (position or differential pressure sensor) sending an erratic signal
- 3 Damaged, chafed, or corroded wiring in the sensor circuit, especially near hot exhaust components
- 4 A loose or poor electrical connector at the EGR sensor or valve actuator
- 5 A sticking or partially seized EGR valve that does not follow the commanded position
- 6 A vacuum leak or exhaust leak affecting the pressure signal seen by the sensor
- 7 A failing EGR valve actuator or solenoid that prevents the valve from reaching the commanded position



How to diagnose and fix it

- 1 Connect a scan tool and record the freeze-frame data and EGR sensor voltage with key on, engine off, then compare to the manufacturer's specification
- 2 Visually inspect the EGR valve, sensor, and connector for carbon buildup, corrosion, or loose pins, and clean or repair as needed
- 3 Back-probe the sensor signal wire and ground circuit while commanding the EGR valve through its full range with the scan tool to check for smooth voltage changes
- 4 Check for vacuum leaks or exhaust leaks around the EGR tube and intake manifold that could skew the pressure reading
- 5 Remove the EGR valve and inspect the pintle and passages for carbon clogging, cleaning or replacing the valve if it does not move freely
- 6 If the sensor signal is erratic but the valve moves smoothly, replace EGR Sensor C and clear the code to verify the repair
- 7 Perform a road test with the scan tool monitoring EGR sensor data to confirm the monitor runs and the code does not return

What carbon buildup hides from the scan tool

- A sensor that reads correctly on a cold engine can fail only when hot exhaust gas raises its temperature, so always test the EGR system after the engine reaches operating temperature.
- Carbon holding the EGR valve slightly open often sets a range/performance code for the sensor rather than a valve-specific code, leading technicians to replace a good sensor.
- The EGR sensor circuit shares a five-volt reference and ground with other sensors on many engines, so a short in an unrelated sensor can pull down the reference and set this code.
- A restricted EGR passage in the intake manifold can make the valve appear to move correctly while the sensor reports insufficient flow, so passage cleaning is part of a complete diagnosis.
- After replacing the EGR valve or sensor, some vehicles require a relearn or adaptive reset before the monitor will pass, and skipping that step causes a false repeat code.

Can I keep driving with P044B?

You can usually continue driving to a repair shop, but avoid heavy acceleration and long uphill pulls because a malfunctioning EGR system can cause spark knock and higher combustion temperatures. If the check engine light begins flashing or the engine runs rough, stop driving and have it diagnosed promptly.



Tools that help

- OBD-II scan tool with live data and bidirectional control capability
- Digital multimeter with back-probe pins
- Hand vacuum pump with gauge
- Basic hand tools and Torx or hex bit set
- Carburetor or EGR cleaner and shop rags

Reading P044B

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
4B	The exact fault within that area.

Often seen with

P0401 EGR Flow Insufficient Detected · **P0402** EGR Flow Excessive Detected · **P0403** EGR Circuit Malfunction · **P0404** EGR Circuit Range/Performance · **P044C** EGR Sensor C Circuit Low

See it working

Watch the animated explainer [How an Elevator Works: Traction Lift in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p044b/>

