

GENERIC · POWERTRAIN

P04E6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04E6

EGR Temperature Sensor D Circuit Range/Performance

P04E6 indicates that the powertrain control module (PCM) has detected an out-of-range or performance fault in the electrical circuit for the EGR temperature sensor D, which monitors the temperature of the exhaust gas recirculation (EGR) flow. The PCM compares the sensor signal against expected values under specific operating conditions and sets the code when the signal is implausible, stuck, or inconsistent with other engine parameters.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or slight hesitation during acceleration if the EGR system is affected
- Reduced fuel economy due to improper EGR operation
- Intermittent engine stumble or surge at steady cruise speeds
- Failed emissions test because the EGR monitor does not complete

Common causes, most likely first

- 1 Faulty EGR temperature sensor D, such as an open or shorted internal element
- 2 Damaged or corroded wiring harness and connector at the sensor or PCM
- 3 Exhaust gas recirculation passage clogged with carbon, causing abnormal temperature readings
- 4 Failed EGR valve or cooler that prevents proper flow and skews sensor readings
- 5 PCM software calibration issue or internal driver fault (less common)
- 6 Poor electrical ground connection affecting sensor reference voltage



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data to see when the code sets and what sensor values are present.
- 2 Visually inspect the EGR temperature sensor D, its connector, and wiring for damage, corrosion, or loose pins.
- 3 Measure the sensor resistance with a multimeter and compare to the manufacturer's temperature-resistance chart.
- 4 Check reference voltage and ground at the sensor connector with the key on, engine off.
- 5 Test the EGR valve operation and inspect the EGR passages for carbon blockage; clean or repair as needed.
- 6 If wiring and sensor test good, perform a wiggle test on the harness while monitoring sensor data to find intermittent faults.
- 7 Replace the EGR temperature sensor D if it fails electrical testing, then clear codes and verify the repair with a road test.

What the EGR temperature sensor D really does

- The EGR temperature sensor D is often a thermistor that changes resistance with temperature, and a lazy sensor can set P04E6 without ever failing a simple resistance check at room temperature.
- Carbon buildup in the EGR passage can insulate the sensor tip, causing it to react too slowly and trigger a range/performance code even though the sensor itself is electrically sound.
- A stuck-open EGR valve can cause the sensor to read higher-than-expected temperatures at idle, setting this code while the root cause is mechanical, not electrical.
- Some vehicles use the EGR temperature sensor to infer EGR flow, so a code for sensor D can actually indicate a flow problem rather than a sensor failure.
- Intermittent connector fretting corrosion is a common hidden cause; the sensor may test perfectly on a bench but fail under vibration and temperature changes.

Can I keep driving with P04E6?

The vehicle is generally safe to drive with P04E6 because it does not cause an immediate safety risk, but prolonged driving with a faulty EGR temperature sensor can lead to increased emissions and reduced fuel economy. Avoid heavy acceleration or towing until the fault is repaired, and address the code promptly to prevent secondary issues.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Temperature probe or infrared thermometer
- Wiring diagram for the specific vehicle
- Basic hand tools (socket set, screwdrivers)



Reading P04E6

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- E6** The exact fault within that area.

Often seen with

P0400 Exhaust Gas Recirculation Flow Malfunction · **P0401** EGR Flow Insufficient Detected · **P0402** EGR Flow Excessive Detected · **P04E5** EGR Temperature Sensor D Circuit · **P04E7** EGR Temperature Sensor D Circuit Low

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04e6/>

