



P04E7

EGR Temperature Sensor D Circuit Low

P04E7 indicates that the powertrain control module has detected an abnormally low voltage signal on the EGR temperature sensor D circuit, which typically points to a short to ground or an open circuit in the sensor's return path. The computer compares the sensor's output against expected values and flags this code when the signal falls below the calibrated threshold for a set period.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling when the engine is cold, especially during EGR activation
- Slightly elevated emissions or a failed emissions test
- Poor fuel economy in some cases due to incorrect EGR flow calculations
- Intermittent engine hesitation or surge under light throttle
- In rare instances, a noticeable decrease in engine performance if the EGR system remains open

Common causes, most likely first

- 1 Faulty EGR temperature sensor D, internally shorted or failed
- 2 Damaged or corroded wiring harness to the sensor, particularly a short to ground
- 3 Loose, corroded, or disconnected electrical connector at the sensor
- 4 Open circuit in the sensor ground or signal return wire
- 5 Water or oil intrusion into the connector causing a low-resistance path
- 6 PCM internal fault affecting the sensor reference voltage or signal processing

How to diagnose and fix it

- 1 Inspect the sensor connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 2 Measure the sensor's resistance or voltage output with a multimeter and compare to manufacturer specifications
- 3 Check for continuity between the sensor signal wire and ground to rule out a short to ground
- 4 Verify the sensor's ground circuit has less than 1 ohm resistance to the battery negative terminal
- 5 If wiring and connectors are good, replace the EGR temperature sensor D with a known-good unit
- 6 Clear the diagnostic trouble codes and perform a road test to confirm the repair
- 7 If the code persists after sensor replacement, diagnose the PCM and its reference voltage circuit



Why a low signal is not always the sensor

- A short to ground in the sensor wiring is more common than a failed sensor itself, especially where the harness rubs against hot EGR components.
- The EGR temperature sensor D circuit often shares a ground with other sensors, so a bad ground elsewhere can set this code without any fault in the sensor.
- Technicians sometimes replace the EGR valve when the real problem is the temperature sensor, because both can cause similar driveability symptoms.
- This code can be set by a poor connection at the PCM connector, which is often overlooked during diagnosis.
- On some vehicles, the EGR temperature sensor is integrated into the EGR cooler, making replacement more labor-intensive than expected.

Can I keep driving with P04E7?

The vehicle is generally safe to drive with this code because it does not cause a immediate safety risk, but prolonged driving may increase emissions and slightly affect fuel economy. Avoid heavy loads or sustained high-speed driving until the fault is repaired, and address the issue promptly to prevent secondary damage.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools for connector and sensor access
- Contact cleaner and dielectric grease

Reading P04E7

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
E7	The exact fault within that area.

Often seen with

P0401 EGR Flow Insufficient Detected · **P0402** EGR Flow Excessive Detected · **P0403** EGR Circuit Malfunction · **P04E6** EGR Temperature Sensor D Circuit Range/Performance · **P04E8** EGR Temperature Sensor D Circuit High



See it working

Watch the animated explainer [How the PCV System Works: Crankcase Ventilation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04e7/>

