

GENERIC · POWERTRAIN

P04D0

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04D0

EGR Temperature Sensor C Circuit Low

P04D0 indicates that the powertrain control module has detected an abnormally low voltage signal from the exhaust gas recirculation temperature sensor C circuit, which is typically a thermistor that reports the temperature of the recirculated exhaust gas. The computer expects the signal voltage to fall within a calibrated range, and a sustained low value suggests a short to ground, an open circuit, or a sensor that has failed in a low-resistance state.

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 stumbling when the engine is cold, especially if the EGR valve is stuck open
- Slightly elevated emissions during inspection or noticeable exhaust odor
- Intermittent hesitation or surge during light-throttle cruising if the faulty signal disrupts EGR flow calculations
- Poor fuel economy in some cases because the PCM may alter injection timing based on incorrect temperature data
- No drivability complaints at all in many instances, with the code being the only evidence of a fault

Common causes, most likely first

- 1 A failed EGR temperature sensor C whose internal thermistor has shorted, pulling the signal voltage low
- 2 Damaged or chafed wiring between the sensor and the PCM, causing a short to ground on the signal circuit
- 3 Corroded or loose electrical connector pins at the sensor or PCM, creating high resistance or intermittent contact
- 4 An open circuit in the sensor ground return, which can make the signal appear low to the PCM
- 5 Exhaust gas leaks near the sensor that allow outside air to cool the probe and skew the reading
- 6 A PCM internal fault on the signal input circuit, though this is far less common than sensor or wiring problems
- 7 Carbon buildup or contamination on the sensor tip that alters its resistance characteristics over time



How to diagnose and fix it

- 1 Connect a scan tool and verify P04D0 is current, then check freeze-frame data for the EGR temperature sensor C voltage to confirm the low reading
- 2 Visually inspect the sensor, connector, and wiring harness for chafing, corrosion, or loose pins, and repair any obvious damage
- 3 Measure resistance across the sensor terminals and compare to the manufacturer's temperature-resistance chart; replace the sensor if it is out of specification
- 4 Backprobe the signal circuit at the PCM connector and check for a short to ground with the sensor disconnected; repair the harness if continuity to ground exists
- 5 Check the sensor ground circuit for excessive resistance or an open circuit, and repair the ground path if needed
- 6 Clear the code and perform a road test with the scan tool monitoring EGR temperature sensor C voltage to confirm the repair and ensure the code does not return
- 7 If all external circuits and the sensor test good, follow the manufacturer's diagnostic flow for PCM pin checks and internal circuit testing before condemning the PCM

What a low EGR temperature signal really tells you

- A low signal voltage does not automatically mean the sensor is bad; a short to ground anywhere on the signal wire will produce the same code, so harness inspection is critical before parts replacement.
- Many vehicles use multiple EGR temperature sensors, and sensor C may be located in a pipe or passage that is difficult to access, so confirm the exact sensor location from the service information rather than guessing.
- Exhaust leaks upstream of the sensor can draw in outside air and cause the sensor to report a lower temperature than actual, setting this code even though the sensor itself is healthy.
- The PCM may substitute a default EGR temperature value when this code is active, which can mask drivability symptoms and make the fault seem intermittent during a test drive.
- A poor ground connection at the engine block or chassis can elevate the ground reference for the sensor circuit and mimic a low signal, so ground integrity checks belong in the diagnostic routine.

Can I keep driving with P04D0?

The vehicle is generally safe to drive with P04D0 because the fault primarily affects emissions and the PCM can default to a substitute temperature value. Avoid long periods of idling or heavy towing until the repair is made, and address the code promptly if your area requires an emissions inspection.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with resistance and voltage measurement
- Backprobe pins or piercing probes for circuit testing
- Service information with wiring diagrams and temperature-resistance charts
- Basic hand tools for connector and sensor access

Reading P04D0

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
D0	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 · **P04D1** EGR Temperature Sensor C Circuit High · **P04D2** EGR Temperature Sensor C Circuit Intermittent/Erratic

See it working

Watch the animated explainer [How a Car Thermostat Works: Wax Pellet and Cooling Fan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04d0/>

