

GENERIC · POWERTRAIN

P04CF

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04CF

EGR Temperature Sensor C Circuit Range/Performance

P04CF means the engine computer has detected that the signal from the EGR temperature sensor C is outside the expected range or is not behaving in a plausible way during the exhaust gas recirculation test. The computer is not necessarily seeing a dead sensor, but rather a signal that does not match the temperature changes it expects when the EGR valve opens and closes.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- A slight decrease in fuel economy if the EGR system is disabled by the computer.
- Intermittent rough idle or hesitation when the EGR valve is commanded open.
- Failed emissions test due to the check engine light or readiness monitors not completing.
- In rare cases, a noticeable stumble or surge during light-throttle cruising.

Common causes, most likely first

- 1 Faulty EGR temperature sensor C, such as an open or shorted internal element.
- 2 Damaged or corroded wiring or connector at the sensor or the engine computer.
- 3 Exhaust gas recirculation valve stuck open or closed, preventing the expected temperature change.
- 4 Carbon buildup or blockage in the EGR passage or cooler, restricting flow to the sensor.
- 5 A leaking or restricted EGR cooler that affects the temperature signal.
- 6 Engine computer software issue or a faulty internal driver for the sensor circuit.



How to diagnose and fix it

- 1 Use a scan tool to read the stored code and freeze-frame data, then clear the code and road-test to see if it returns.
- 2 Visually inspect the EGR temperature sensor C, its connector, and the wiring harness for damage, corrosion, or loose pins.
- 3 Measure the sensor's resistance or voltage with a multimeter and compare it to the manufacturer's specification for the current temperature.
- 4 Check the EGR valve operation by commanding it open and closed with the scan tool while watching the sensor signal for a corresponding change.
- 5 Inspect the EGR passages and cooler for carbon blockage or leaks that would prevent proper gas flow to the sensor.
- 6 If the sensor and wiring test good, perform a voltage drop test on the sensor circuit to rule out high resistance in the harness.
- 7 Replace the EGR temperature sensor C only after confirming the circuit and EGR flow are functioning correctly.

What the EGR temperature sensor really does

- The EGR temperature sensor C is often a thermistor that changes resistance with temperature, and a range/performance code can set even when the sensor still reads a plausible value at room temperature.
- A stuck-open EGR valve can cause the sensor to read a higher-than-expected temperature at idle, triggering this code without any sensor fault at all.
- Many technicians replace the sensor first, but carbon-blocked EGR passages are a common root cause that will set the code again on a new sensor.
- The code can be set by a faulty engine computer driver, but this is rare and should only be suspected after all other circuit and mechanical checks pass.
- On some vehicles, the EGR temperature sensor is integrated into the EGR cooler or valve assembly, making the repair more involved than a simple sensor swap.

Can I keep driving with P04CF?

You can usually continue driving with this code, but avoid heavy acceleration and long idling until it is diagnosed, because a malfunctioning EGR system can increase emissions and may eventually affect engine performance. If the check engine light starts flashing or you notice rough running, have it checked promptly.



Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Hand tools for removing connectors and sensor
- Vacuum pump or smoke machine for testing EGR flow
- Wiring diagram for the EGR temperature sensor circuit

Reading P04CF

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

Often seen with

P0401 EGR Flow Insufficient Detected · **P0402** EGR Flow Excessive Detected · **P04CE** EGR Temperature Sensor C Circuit · **P04D0** EGR Temperature Sensor C Circuit Low · **P04D1** EGR Temperature Sensor C Circuit High

See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04cf/>

