



P040C

EGR Temperature Sensor A Circuit Low

P040C means the engine computer has detected a low voltage signal from the exhaust gas recirculation (EGR) temperature sensor on bank 1, sensor A. The sensor circuit is reporting a value below the expected range, which usually points to a wiring fault, a failed sensor, or a poor connection rather than a mechanical EGR problem.

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
- Slightly reduced fuel economy or power delivery
- Intermittent hesitation during light acceleration
- Failed emissions test due to the stored code
- In rare cases, a noticeable exhaust smell or increased nitrogen oxide (NOx) emissions

Common causes, most likely first

- 1 Faulty EGR temperature sensor (internal short or open circuit)
- 2 Damaged or corroded wiring harness to the sensor (chafed wire, broken connector pin)
- 3 Loose or contaminated sensor connector causing high resistance
- 4 Poor ground connection for the sensor circuit
- 5 Engine control module (ECM) calibration issue or internal driver fault (less common)
- 6 Exhaust leaks near the sensor affecting temperature reading (indirect cause)
- 7 Aftermarket or incorrect sensor installed previously

How to diagnose and fix it

- 1 Connect a scan tool and verify the P040C code is active, then check freeze-frame data for sensor voltage
- 2 Inspect the EGR temperature sensor connector and wiring for corrosion, chafing, or loose pins
- 3 Measure sensor resistance and compare to manufacturer specifications (usually a negative temperature coefficient (NTC) thermistor)
- 4 Check the sensor reference voltage and ground circuit with a multimeter to rule out wiring faults
- 5 Perform a voltage drop test on the ground circuit to confirm a clean ground path
- 6 Replace the EGR temperature sensor if resistance is out of range or the signal circuit is shorted
- 7 Clear the code and perform a drive cycle to confirm the repair, then recheck for pending codes



Don't overlook the sensor connector

- A loose or corroded connector at the EGR temperature sensor is a frequent cause of P040C that many technicians miss because the sensor itself tests good.
- The code can be set by a wiring short to ground that only occurs when the engine harness flexes, so a wiggle test while monitoring live data is often necessary.
- P040C does not always mean the sensor has failed; a poor ground at the sensor body can pull the signal voltage low and mimic a bad sensor.
- Some vehicles use the EGR temperature sensor to infer EGR flow, so a low signal can also trigger related EGR flow codes even when the EGR valve is functioning.
- After replacing the sensor, always clear adaptive learning and verify the signal voltage rises smoothly as the engine warms up to avoid a repeat code.

Can I keep driving with P040C?

The vehicle is generally safe to drive with P040C because the fault is electrical and does not cause immediate mechanical damage, but avoid long trips or heavy loads until the code is diagnosed. Continued driving may increase emissions and could lead to other EGR-related codes if the sensor signal is intermittent.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the EGR temperature sensor circuit
- Socket set and ratchet
- Contact cleaner and dielectric grease

Reading P040C

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
0C	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 · **P040D** EGR Temperature Sensor A Circuit High · **P040E** EGR Temperature Sensor A Circuit Intermittent/Erratic



See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p040c/>

