

GENERIC · POWERTRAIN

P242B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P242B

Exhaust Gas Temperature Sensor Circuit Range or Performance Bank 1 Sensor 3

P242B indicates that the powertrain control module has detected an out-of-range or performance problem with the exhaust gas temperature sensor circuit for bank 1 sensor 3, which is typically the sensor after the diesel particulate filter or catalytic converter. The computer compares the sensor signal against expected values during specific operating conditions and sets the code when the voltage or temperature reading falls outside the programmed limits.

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
- Reduced engine power or limp mode in some vehicles
- Poor fuel economy or increased regeneration frequency for diesel particulate filters
- Intermittent rough running or hesitation during acceleration
- A message on the dashboard indicating exhaust system service required

Common causes, most likely first

- 1 Faulty exhaust gas temperature sensor (bank 1 sensor 3) due to age or contamination
- 2 Damaged or corroded wiring harness or connector at the sensor
- 3 Exhaust leaks near the sensor causing inaccurate temperature readings
- 4 Failed sensor heating element or internal short in the sensor
- 5 Powertrain control module software issue or outdated calibration
- 6 Restricted exhaust flow or damaged substrate in the diesel particulate filter or catalytic converter



How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, wiring, and connector for damage, corrosion, or loose connections
- 2 Use a scan tool to check live data for the bank 1 sensor 3 temperature reading and compare it to ambient and expected values after a cold start
- 3 Check the sensor's resistance and voltage output according to the manufacturer's specifications
- 4 Inspect the exhaust system for leaks or restrictions upstream of the sensor
- 5 Test the sensor circuit for continuity, shorts to ground, and shorts to power using a multimeter
- 6 Replace the exhaust gas temperature sensor if it fails electrical or performance tests
- 7 Clear the diagnostic trouble codes and perform a road test to verify the repair and ensure the code does not return

Key checks before replacing the EGT sensor

- A common misdiagnosis is replacing the sensor when the real problem is a corroded connector or chafed wire that intermittently shorts, so always wiggle-test the harness while watching live data.
Exhaust leaks upstream of the sensor can cause it to read lower than actual temperature, setting a range code without any sensor fault, so inspect for soot trails around joints and gaskets.
- On many diesel vehicles, sensor 3 is the post-DPF sensor, and its readings are critical for regeneration strategy; a lazy sensor may not set a code until regeneration is commanded.
- The code can be set by a faulty thermostat or cooling system issue that prevents the engine from reaching normal operating temperature, skewing the expected temperature model.
After replacing the sensor, some vehicles require a relearn or adaptation reset for the new sensor to be recognized properly, so consult the service information for the specific model.

Can I keep driving with P242B?

You can generally continue driving with this code if the engine runs normally, but avoid long trips or heavy loads until it is diagnosed. If the vehicle enters limp mode or you notice excessive smoke or power loss, have it inspected promptly to prevent damage to the emissions system.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Infrared thermometer
- Socket and ratchet set
- Wiring diagram for the specific vehicle



Reading P242B

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- 2B** The exact fault within that area.

Often seen with

P0546 Exhaust Gas Temperature Sensor Circuit High (Bank 1 Sensor 1) · **P2033** Exhaust Gas Temperature Sensor Circuit High (Bank 1 Sensor 2) · **P242A** Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 3 · **P242C** Exhaust Gas Temperature Sensor Circuit Low Bank 1 Sensor 3 · **P242D** Exhaust Gas Temperature Sensor Circuit High Bank 1 Sensor 3

See it working

Watch the animated explainer [How the EVAP System Works: Fuel Vapour and Leak Test](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p242b/>

