

GENERIC · POWERTRAIN

P0548

OBD-II TROUBLE CODE

P0548

Exhaust Gas Temperature Sensor Circuit Low (Bank 2 Sensor 1)

P0548 means the powertrain control module has detected an abnormally low voltage signal from the exhaust gas temperature sensor located before the catalytic converter on bank 2. The sensor's internal thermistor normally varies resistance with temperature, and the circuit voltage should stay within a calibrated range; a low reading tells the computer the sensor is reporting an unrealistically cold exhaust or that the circuit is shorted to ground.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp-home mode if the computer substitutes a default exhaust temperature value
- Poor fuel economy or altered regeneration strategy on diesel vehicles equipped with a particulate filter
- Intermittent warning light that comes and goes with vibration or moisture
- A stored freeze-frame showing low sensor voltage at the moment the fault set
- On some vehicles, a message in the driver information center about emissions system service

Common causes, most likely first

- 1 Sensor signal wire chafed through and shorted to ground between the sensor and the powertrain control module
- 2 Failed exhaust gas temperature sensor with an internal short or drifted thermistor element
- 3 Corroded, loose, or water-intruded connector pins at the sensor or harness junction
- 4 Open or high-resistance ground circuit shared with other sensors, skewing the voltage reading
- 5 Exhaust leaks upstream of the sensor allowing outside air to cool the probe tip
- 6 Powertrain control module internal fault on the sensor input circuit, though this is rare
- 7 Aftermarket sensor or pigtail installed with incorrect resistance characteristics



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0548, then clear the code and verify whether it returns immediately or only after a drive cycle
- 2 Visually inspect the sensor, connector, and harness routing for chafing, corrosion, or contact with hot exhaust components
- 3 Measure sensor resistance with a multimeter and compare against the manufacturer's temperature-resistance chart for the current exhaust temperature
- 4 Backprobe the signal wire at the powertrain control module and check for a short to ground with the sensor disconnected
- 5 Check the sensor ground circuit for excessive resistance using a voltage drop test under load
- 6 Perform a smoke test or listen for exhaust leaks upstream of the sensor if resistance and wiring test normal
- 7 Replace the sensor only after circuit tests confirm the sensor itself is out of specification, then clear codes and complete a drive cycle to verify the repair

Why this code often misleads diag techs

- A low voltage reading does not automatically mean the sensor is bad; a shorted signal wire or a bad ground will produce the same code and replacing the sensor will not fix it.
- On diesel engines, this sensor plays a direct role in diesel particulate filter regeneration, so ignoring the code can lead to a plugged filter and a much larger repair bill.
- Exhaust leaks upstream of the sensor are a commonly missed cause because they cool the probe tip and drive the voltage low without any wiring fault at all.
- Some vehicles set P0548 only after a cold-start rationality check, so the code may not reappear until the next morning even if the fault is still present.
- Aftermarket sensors with incorrect resistance curves are a frequent cause of repeat codes, so a sensor that tests good on a generic multimeter may still be wrong for the application.

Can I keep driving with P0548?

The vehicle is generally safe to drive short distances because the fault affects emissions monitoring rather than immediate engine operation, but avoid heavy towing or sustained high-load driving until it is repaired. On diesel vehicles with a particulate filter, prolonged driving with this code can lead to filter damage, so schedule diagnosis promptly.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with backprobe pins
- Manufacturer or equivalent temperature-resistance specification chart
- Smoke machine for exhaust leak testing
- Socket set and heat-shield-safe gloves



Reading P0548

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 48** The exact fault within that area.

Often seen with

P0545 Exhaust Gas Temperature Sensor Circuit Low (Bank 1 Sensor 1) · **P0546** Exhaust Gas Temperature Sensor Circuit High (Bank 1 Sensor 1) · **P0547** Exhaust Gas Temperature Sensor Circuit (Bank 2 Sensor 1) · **P0549** Exhaust Gas Temperature Sensor Circuit High (Bank 2 Sensor 1) · **P2033** Exhaust Gas Temperature Sensor Circuit High (Bank 1 Sensor 2)

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0548/>

