

GENERIC · POWERTRAIN

P0058

OBD-II TROUBLE CODE

P0058

HO2S Heater Control Circuit High (Bank 2 Sensor 2)

P0058 means the powertrain control module (PCM) has detected an abnormally high voltage on the heater control circuit for the downstream oxygen sensor on bank 2, which is the side of the engine that does not contain cylinder number one. The heater is a resistive element inside the sensor that brings it up to operating temperature quickly, and a high-voltage reading tells the PCM that the circuit is likely open, shorted to voltage, or has excessive resistance.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and 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 because the sensor takes longer to become active
- Occasional rough idle or hesitation when the engine is cold
- A pending or stored P0058 code that returns after clearing
- In rare cases, a failed emissions test due to the sensor heater not functioning

Common causes, most likely first

- 1 Open or damaged heater element inside the bank 2 sensor 2 oxygen sensor
- 2 Broken, corroded, or disconnected wiring in the heater control circuit
- 3 High resistance at the sensor connector or PCM connector terminals
- 4 Short to voltage on the heater control wire, often from chafing against a hot or moving component
- 5 Faulty powertrain control module (PCM) driver for the heater circuit, though this is uncommon
- 6 Blown fuse or relay that supplies power to the oxygen sensor heater circuit



How to diagnose and fix it

- 1 Inspect the bank 2 sensor 2 oxygen sensor connector and wiring for damage, corrosion, or loose pins
- 2 Check the heater circuit fuse and relay, and verify power and ground at the sensor connector with the key on
- 3 Measure the resistance of the oxygen sensor heater element with a multimeter and compare to the manufacturer's specification
- 4 Perform a voltage drop test on the heater control circuit to identify excessive resistance or an open circuit
- 5 If the circuit tests good, substitute a known-good oxygen sensor and clear the code to see if it returns
- 6 Repair or replace any damaged wiring, connectors, or the PCM as needed, then clear the code and verify the repair with a test drive

Why a high voltage code is not always the sensor

- A high voltage reading on the heater control circuit often indicates an open circuit rather than a shorted sensor, so replacing the sensor without checking the wiring can waste money.
- The heater element inside the oxygen sensor can fail open while the sensor still produces a plausible signal, so the engine may run fine and the only clue is the code.
- Corrosion inside the connector pins is a common cause that is easily overlooked because the outside of the connector looks fine.
- A short to voltage on the heater control wire can be caused by the wire rubbing against a hot exhaust component or a sharp edge, so a thorough visual inspection of the harness routing is essential.
- Some vehicles use a relay to power the oxygen sensor heaters, and a failing relay can cause a high voltage code without any issue in the sensor itself.

Can I keep driving with P0058?

You can usually continue driving with this code because the engine management system will still run the engine, but the oxygen sensor may take longer to warm up, which can slightly increase emissions and fuel consumption. Avoid long periods of idling and have the fault diagnosed soon to prevent potential catalytic converter damage from unburned fuel.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and oxygen sensor socket
- Contact cleaner and dielectric grease



Reading P0058

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- 58** The exact fault within that area.

Often seen with

P0053 HO2S Heater Resistance (Bank 1 Sensor 1) · **P0057** HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
 · **P0059** HO2S Heater Resistance (Bank 2 Sensor 1) · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)

See it working

Watch the animated explainer [How a Fuel Injector Works: Pulse Width and Spray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0058/>

