

GENERIC · POWERTRAIN

P0044

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0044

HO2S Heater Control Circuit High (Bank 1 Sensor 3)

P0044 means the engine computer has detected an abnormally high voltage on the heater control circuit for the third oxygen sensor on bank 1, which is the sensor located after the catalytic converter. The computer expects the heater circuit to draw current and pull the voltage down when commanded on, so a high-voltage reading tells it the circuit is open, shorted to power, or the heater element inside the sensor has failed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	Intermediate	Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Slightly longer time for the oxygen sensor to reach operating temperature, which may delay closed-loop fuel control when the engine is cold
- A pending or stored P0044 code with no drivability complaint in many cases
- Possible small decrease in fuel economy if the sensor heater never activates and the sensor stays cold longer
- In rare cases, a rough idle or hesitation during the first few minutes after a cold start

Common causes, most likely first

- 1 Failed heater element inside the bank 1 sensor 3 oxygen sensor
- 2 Open or damaged wire in the heater control circuit between the sensor and the computer
- 3 Corroded, loose, or disconnected electrical connector at the sensor or at the computer
- 4 Short to battery voltage on the heater control wire, often from chafed insulation
- 5 Faulty oxygen sensor heater relay or fuse that supplies power to the heater circuit
- 6 Internal driver failure inside the engine control module (ECM) that cannot pull the heater control line low



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P0044 is the only heater circuit code and not a companion to a sensor signal code
- 2 Inspect the sensor connector and the harness along the exhaust path for corrosion, loose pins, or chafed wires, and repair as needed
- 3 Check the heater circuit fuse and relay that feed the oxygen sensor heater, replacing any that are open or not switching
- 4 Measure resistance across the heater element at the sensor connector and compare it to the manufacturer's specification; replace the sensor if the element is open
- 5 With the key on and the heater commanded off, measure voltage on the control wire at the computer to check for a short to power; repair the harness if battery voltage is present
- 6 Command the heater on with a scan tool and verify the control wire is pulled low by the computer; if it stays high, test the computer driver circuit before condemning the ECM
- 7 Clear the code and perform a road test with several cold-start cycles to confirm the heater circuit passes its self-test and P0044 does not return

High voltage does not always mean a bad sensor

- A high-voltage heater code is often caused by an open heater element inside the sensor, but a corroded connector or a broken ground can produce the same voltage reading and is far cheaper to fix.
- Technicians sometimes replace the oxygen sensor only to find the new sensor sets the same code because the real fault is a short to power on the control wire or a failed heater relay.
- Bank 1 sensor 3 is a downstream sensor on many V6 and V8 engines, so a P0044 can appear alongside catalyst efficiency codes even though the heater circuit is the only electrical fault.
- The ECM may set P0044 only after a cold-start heater test, so the code can be intermittent and may not reappear on a warm engine during a quick shop check.
- A generic scan tool may show the heater circuit as 'on' even when the control wire is open, so voltage and resistance measurements at the sensor are more reliable than live data alone.

Can I keep driving with P0044?

You can usually keep driving with P0044 because the fault affects only the oxygen sensor heater and does not disable the engine, but avoid long periods of idling from a cold start and have the circuit checked soon to prevent a secondary catalyst or fuel-trim code from developing.



Tools that help

- OBD-II scan tool with live data and bidirectional heater control
- Digital multimeter with resistance and voltage measurement
- Back-probe kit or breakout leads for testing connectors without damage
- Wiring diagram for the oxygen sensor heater circuit
- Socket set and oxygen sensor wrench for sensor replacement

Reading P0044

- 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.
- 44** The exact fault within that area.

Often seen with

P0030 HO2S Heater Control Circuit (Bank 1 Sensor 1) · **P0031** HO2S Heater Control Circuit Low (Bank 1 Sensor 1) · **P0032** HO2S Heater Control Circuit High (Bank 1 Sensor 1) · **P0054** HO2S Heater Resistance (Bank 1 Sensor 2) · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1)

See it working

Watch the animated explainer [How a CVT Works: Belt and Pulley Transmission](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0044/>

