

GENERIC · POWERTRAIN

P0155

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0155

O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1)

P0155 means the engine computer has detected a fault in the electrical heater circuit for the upstream oxygen sensor on bank 2, which is the side of the engine that does not contain cylinder number one. The heater is a small resistor inside the sensor that warms it to operating temperature quickly so the computer can enter closed-loop fuel control sooner after a cold start. The computer monitors the heater circuit for expected current flow and sets this code when the current is too low, too high, or absent entirely.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- A slight delay in the oxygen sensor becoming active after a cold start, which may cause rough running for the first minute or two
- Slightly higher fuel consumption during warm-up because the system stays in open-loop fuel control longer
- In some vehicles, a noticeable stumble or hesitation when the engine is cold
- Rarely, a failed emissions test because the heater monitor has not completed

Common causes, most likely first

- 1 Failed heater element inside the bank 2 sensor 1 oxygen sensor, which is the most common cause
- 2 Open or shorted wiring in the heater circuit between the sensor and the engine computer
- 3 Corroded, loose, or damaged connector pins at the oxygen sensor or at the computer
- 4 Blown fuse that supplies power to the oxygen sensor heater circuit
- 5 Failed oxygen sensor heater relay in vehicles that use a dedicated relay
- 6 Engine computer driver circuit failure, which is uncommon but possible



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P0155 is the only heater-related code and to note engine temperature and run time at failure
- 2 Inspect the bank 2 sensor 1 connector and the harness for corrosion, chafing, or loose pins, and check the heater circuit fuse
- 3 Measure the resistance of the sensor heater element with a multimeter and compare it to the manufacturer's specification, which is typically a few ohms
- 4 With the key on and the sensor disconnected, check for battery voltage at the heater power supply wire and check the ground-side wire for continuity to the computer
- 5 Command the heater on with a scan tool if the vehicle supports bidirectional control, and verify current flow with a low-current clamp or by measuring voltage drop
- 6 Replace the bank 2 sensor 1 oxygen sensor if the heater element is open or out of specification, using the correct sensor for the application
- 7 Clear the codes, run the oxygen sensor heater monitor to completion, and verify the code does not return

What the heater code really tells you

- A P0155 can be set by a heater circuit that is electrically intact but slow to warm up, so always compare the sensor's warm-up time to the manufacturer's monitor rather than assuming the sensor is dead.
- Bank 2 sensor 1 is the upstream sensor on the bank without cylinder one, and on V6 and V8 engines that bank is often tucked against the firewall, so a visual inspection of the connector is easy to skip and easy to regret.
- A blown heater fuse is frequently caused by a chafed heater wire shorting to ground, so replacing the fuse without finding the rub point will just blow the new fuse.
- Some vehicles set P0155 when the heater circuit is open but the sensor still reads correctly once hot, which means the engine may run fine and the only clue is the warning light.
- After replacing the sensor, the heater monitor may not run until the engine has sat overnight, so a code that reappears immediately after a repair often points to a wiring fault rather than a bad new sensor.

Can I keep driving with P0155?

The vehicle is safe to drive with P0155 because the heater circuit only affects how quickly the oxygen sensor warms up, not the engine's basic operation. Avoid long periods of idling from cold and schedule the repair soon, since prolonged open-loop operation can increase fuel consumption and emissions.



Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Low-current clamp meter
- Wiring diagram for the oxygen sensor heater circuit
- Oxygen sensor socket
- Contact cleaner and dielectric grease

Reading P0155

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

Often seen with

P0135 O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2) · **P0150** O2 Sensor Circuit Malfunction (Bank 2 Sensor 1) · **P0151** O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1) · **P0161** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 2)

See it working

Watch the animated explainer [Master the Four-Stroke Engine Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0155/>

