

GENERIC · POWERTRAIN

P0130

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0130

O2 Sensor Circuit Malfunction (Bank 1 Sensor 1)

P0130 means the engine computer has detected a problem with the electrical circuit of the upstream oxygen sensor on Bank 1, which is the sensor mounted before the catalytic converter on the side of the engine containing cylinder number one. The computer monitors this sensor's signal and heater circuit for expected voltage changes, and it sets this code when the signal stays outside the normal range or the circuit behaves erratically for a calibrated period.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A slight decrease in fuel economy as the computer defaults to a richer fuel mixture
- Rough idle or hesitation during acceleration in some cases
- Failed emissions inspection due to the stored trouble code
- Occasional surging or stumbling when the engine is cold

Common causes, most likely first

- 1 Failed upstream oxygen sensor (Bank 1 Sensor 1) due to age or contamination
- 2 Damaged or corroded wiring or connector at the sensor or along its circuit
- 3 Exhaust leak before the sensor allowing outside air to skew the reading
- 4 Contaminated sensor from coolant, oil, or silicone poisoning
- 5 Faulty sensor heater circuit or blown fuse affecting sensor operation
- 6 Engine computer (PCM) internal fault, though this is rare

How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, its wiring, and connector for damage or corrosion
- 2 Check for exhaust leaks upstream of the sensor using a smoke test or listening for ticking
- 3 Use a scan tool to view live oxygen sensor data and confirm the signal is stuck or erratic
- 4 Test the sensor heater circuit with a multimeter for proper resistance and power supply
- 5 Check the fuse that supplies power to the oxygen sensor heater circuit
- 6 Replace the upstream oxygen sensor if testing confirms it is faulty
- 7 Clear the code and verify the repair by test-driving the vehicle and monitoring readiness monitors



What to check before replacing the sensor

- A P0130 can be set by a simple exhaust leak before the sensor, which draws in outside air and makes the sensor report a false lean condition, so always inspect the exhaust system first.
- Contamination from coolant or oil burning in the engine can coat the sensor element and cause this code without the sensor being electrically defective, so look for other symptoms like low coolant or oil consumption.
- The sensor heater circuit is often overlooked; a blown fuse or corroded ground can disable the heater and trigger P0130 even though the sensor itself is fine.
- On some vehicles, a faulty mass airflow sensor or a vacuum leak can cause the oxygen sensor signal to go out of range and set this code, so diagnose the entire fuel trim picture before condemning the sensor.
- Replacing the sensor without clearing the adaptive fuel trim memory can cause the new sensor to read incorrectly for a while, so always reset the computer after repair.

Can I keep driving with P0130?

You can generally continue driving with P0130, but avoid aggressive acceleration and long trips because the engine may run richer and fuel economy will suffer. Have the fault diagnosed soon to prevent potential damage to the catalytic converter from unburned fuel.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Socket set and oxygen sensor socket
- Smoke machine for exhaust leak testing
- Jack and jack stands or ramps for access

Reading P0130

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.
30	The exact fault within that area.

Often seen with

P0131 O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1) · **P0132** O2 Sensor Circuit High Voltage (Bank 1 Sensor 1) · **P0133** O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0134** O2 Sensor Circuit No Activity (Bank 1 Sensor 1) · **P0171** System Too Lean (Bank 1)



See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0130/>

