

CHRYSLER · POWERTRAIN

P1131

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1131 · Chrysler

HO2S Circuit Low Variance Bank 1 Sensor 2

P1131 on a Chrysler vehicle means the downstream heated oxygen sensor (HO2S) on bank 1 is not switching voltage as much as the powertrain control module (PCM) expects during its monitor. The PCM compares the sensor's activity over a set drive cycle and flags the circuit when the variance stays too low, which usually points to a lazy sensor, a wiring problem, or an exhaust issue rather than a failed catalytic converter alone.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms besides the warning light
- A slight drop in fuel economy if the sensor is biased lean or rich
- Occasional rough idle or hesitation on acceleration when the sensor signal is erratic
- Failed emissions inspection because the oxygen sensor monitor will not complete
- A faint sulfur or rotten-egg smell from the exhaust if the sensor is stuck rich
- No noticeable drivability change in many cases, which is why the code is often ignored

Common causes, most likely first

- 1 Aged or contaminated downstream heated oxygen sensor that has become slow to respond
- 2 Corroded, chafed, or loose wiring in the HO2S circuit between the sensor and the PCM
- 3 An exhaust leak ahead of the sensor letting outside air into the exhaust stream
- 4 A failing catalytic converter that no longer stores and releases oxygen as designed
- 5 Oil or coolant contamination from an internal engine leak coating the sensor element
- 6 A PCM software calibration issue or a faulty PCM driver on rare occasions
- 7 A restricted exhaust or damaged sensor mounting boss that affects sensor readings



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1131 is the only oxygen-sensor-related code
- 2 Inspect the downstream HO2S wiring and connector for corrosion, chafing, or pushed-out terminals
- 3 Check for exhaust leaks between the manifold and the sensor using a smoke test or a stethoscope
- 4 Graph the downstream HO2S voltage on a scan tool during a steady cruise to see if it switches or stays flat
- 5 Perform a propane enrichment test or a snap-throttle test to judge sensor response time
- 6 Verify the catalytic converter's oxygen-storage capacity with an infrared thermometer or backpressure gauge
- 7 Replace the downstream HO2S only after wiring, exhaust, and converter checks confirm the sensor is the fault

Why the downstream sensor looks lazy

- A downstream HO2S that stays flat around 0.45 volts often indicates a coated sensor rather than a failed converter, so inspect for oil or coolant intrusion before condemning the catalyst.
- Chrysler PCMs on some models will set P1131 when the sensor's switching frequency drops below a calibrated threshold, which can happen from a small exhaust leak that lets in outside oxygen.
- Replacing the downstream sensor without checking the upstream sensor's fuel trim can mask a rich or lean condition that will destroy the new sensor in a few thousand miles.
- A restricted exhaust or a collapsed substrate can slow exhaust flow past the sensor and produce a low-variance reading that mimics a bad sensor.
- Some aftermarket sensors have a different heater resistance and switching characteristic than the original, so a new sensor can still set P1131 if it is not the correct specification.

Can I keep driving with P1131?

You can usually keep driving with P1131 because it rarely causes an immediate safety problem, but avoid long trips and heavy towing until it is diagnosed. If the check engine light starts flashing or you notice rough running, stop driving and have the vehicle inspected promptly.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with back-probing pins
- Smoke machine for exhaust leak testing
- Infrared thermometer for catalytic converter temperature checks
- Exhaust backpressure gauge
- Oxygen sensor socket and hand tools



Reading P1131

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 1** Fuel and air metering.
- 31** 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) · **P0171** System Too Lean (Bank 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [How Drive-by-Wire Works: Electronic Throttle Body](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1131/>

