

CHRYSLER · POWERTRAIN

P1161

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1161 · Chrysler

HO2S Heater Power Stage Circuit Bank 2 Sensor 2

P1161 on Chrysler vehicles indicates that the powertrain control module has detected an open, short, or excessive current draw in the heater power stage circuit for the downstream oxygen sensor on bank 2. The sensor's heater element is not receiving the commanded voltage or current, which prevents the sensor from reaching operating temperature quickly and can disrupt closed-loop fuel control.

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 noticeable symptoms
- Slightly rough idle or hesitation during cold starts while the sensor is cold
- A decrease in fuel economy as the system stays in open loop longer than normal
- Intermittent check engine light that may clear and reset depending on temperature and vibration
- Failed emissions test due to an incomplete or failed oxygen sensor monitor
- In rare cases, a noticeable sulfur or rotten egg smell from the exhaust if the sensor reads incorrectly

Common causes, most likely first

- 1 Failed oxygen sensor heater element inside the bank 2 sensor 2 assembly
- 2 Damaged or corroded wiring harness between the sensor and the powertrain control module
- 3 Blown fuse or faulty relay that supplies power to the oxygen sensor heater circuit
- 4 Loose or contaminated electrical connector at the sensor or along the harness
- 5 Internal short or open in the powertrain control module heater driver circuit
- 6 Exhaust leaks or physical damage to the sensor that compromise its heater circuit



How to diagnose and fix it

- 1 Inspect the oxygen sensor connector and harness for corrosion, chafing, or loose pins, and repair as needed
- 2 Check the heater circuit fuse and relay, and replace any failed components
- 3 Measure the resistance of the heater element at the sensor connector and compare to the manufacturer's specification
- 4 Test for voltage and ground at the sensor connector with the key on to verify the power stage circuit integrity
- 5 Backprobe the powertrain control module connector to check for an open or short in the heater driver circuit
- 6 Replace the bank 2 sensor 2 oxygen sensor if the heater element is out of specification or the circuit tests good
- 7 Clear the diagnostic trouble codes and verify the repair by running the oxygen sensor monitor to completion

Why the heater circuit fails before the sensor

- A common oversight is replacing the oxygen sensor without checking the heater circuit fuse and relay, which can leave the new sensor without power and the code returning immediately.
The heater element inside the sensor can fail intermittently when hot, so a resistance test performed on a cold sensor may pass even though the sensor is faulty.
- Corrosion inside the connector pins often mimics a failed sensor, and simply cleaning the terminals can resolve the code without any parts replacement.
- A shorted heater circuit can draw excessive current and damage the powertrain control module driver, so always check for a short to ground before installing a new sensor.
This code does not always mean the sensor is dead; a poor ground connection at the engine block can cause the heater circuit to test open even when the sensor is good.

Can I keep driving with P1161?

You can usually continue driving with P1161, but avoid extended idling and heavy load until the fault is repaired, because the engine may stay in open loop and run richer than normal. Have the circuit inspected soon to prevent catalytic converter damage and to ensure the vehicle passes emissions testing.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light
- Wiring diagram for the specific Chrysler vehicle
- Socket set and oxygen sensor wrench



Reading P1161

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 1** Fuel and air metering.
- 61** The exact fault within that area.

Often seen with

P1160 Manifold Temperature Sensor Circuit Short To Ground · **P1160** Fuel Trim Adaptation Additive Bank 2 Low · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2) · **P0155** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1) · **P0161** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 2)

See it working

Watch the animated explainer [How Variable Valve Timing Works: Cam Phaser and VVT Solenoid](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1161/>

