

CHRYSLER · POWERTRAIN

P1159

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1159 · Chrysler

HO2S Cross Counts Bank 2 Sensor 2

P1159 on Chrysler vehicles means the powertrain control module (PCM) has detected that the downstream heated oxygen sensor (HO2S) on bank 2 is not switching, or crossing, between rich and lean voltage thresholds as often as the PCM expects. The PCM counts these voltage transitions, called cross counts, and sets the code when the count stays too low over a monitored driving cycle, indicating a lazy or stuck sensor or a related circuit fault.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Slightly reduced fuel economy over time as the PCM loses fine control of bank 2 fuel trim
- A faint sulfur or rotten-egg smell from the exhaust if the sensor is stuck rich
- Occasional rough idle or light surging on engines that use downstream sensor feedback for trim
- Failed emissions inspection due to the oxygen sensor monitor not completing or reporting a fault
- In rare cases, a stored pending code that returns after two consecutive drive cycles

Common causes, most likely first

- 1 Aged or contaminated bank 2 sensor 2 heated oxygen sensor that no longer switches cleanly
- 2 Exhaust leak between the bank 2 catalytic converter and the downstream sensor, letting outside air pulse past the tip
- 3 Damaged or chafed sensor wiring harness, especially where it routes near the exhaust or transmission
- 4 Corroded or loose sensor connector pins causing intermittent signal loss
- 5 A failing bank 2 catalytic converter that no longer stores and releases oxygen, flattening the downstream signal
- 6 An exhaust restriction or misfire on bank 2 that alters the exhaust gas composition reaching the sensor
- 7 PCM software calibration issue or a faulty heater circuit in the sensor that keeps it from reaching operating temperature



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1159, then clear the code and verify whether it returns after a full drive cycle
- 2 Inspect the bank 2 sensor 2 wiring and connector for chafing, corrosion, or pushed pins, and repair as needed
- 3 Smoke-test or pressure-test the exhaust from the bank 2 converter back to the sensor to rule out leaks
- 4 Graph the bank 2 sensor 2 voltage on a scan tool while holding a steady throttle; a healthy sensor should cross 450 mV several times per second
- 5 Check the sensor heater resistance and supply voltage against the Chrysler service specification for the engine
- 6 If the sensor is slow or flat-lined and wiring and exhaust are sound, replace the bank 2 sensor 2 with the correct OEM-type sensor
- 7 After repair, clear codes and complete the oxygen sensor monitor to confirm the cross-count fault does not reset

Cross counts reveal a lazy sensor, not always a bad one

- A downstream sensor that reads a steady 450 mV on the scan tool is not necessarily failed; the PCM may be holding it there during a forced rich or lean test, so always watch cross counts during a steady cruise rather than at idle
- Exhaust leaks upstream of the sensor are the most commonly missed cause because they pull in outside oxygen and make a good sensor look lazy, so a smoke test is cheaper than a sensor
- Chrysler PCMs on some engines use the downstream sensor for catalyst efficiency monitoring, so a P1159 can appear alongside P0420 or P0430 even when the converter is still functional
- Replacing the sensor without checking the heater circuit often leads to a repeat code, because a weak heater keeps the sensor below its switching temperature at idle
- A misfire on bank 2 can load the exhaust with unburned fuel and coat the sensor, so always check misfire counters and fuel trims before condemning the sensor

Can I keep driving with P1159?

You can usually keep driving with P1159 because the engine will run on default fuel control, but avoid long trips or heavy load until it is diagnosed. Prolonged driving with a lazy sensor can damage the catalytic converter and increase emissions, so schedule service soon.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter for heater circuit and wiring checks
- Exhaust smoke machine or pressure tester
- Oxygen sensor socket and ratchet
- Wiring diagram for the Chrysler engine and body platform



Reading P1159

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 1** Fuel and air metering.
- 59** 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) · **P0155** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2)

See it working

Watch the animated explainer [How a Wideband Air-Fuel Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1159/>

