

CHRYSLER · POWERTRAIN

P1137

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1137 · Chrysler

HO2S Bank 1 Sensor 2 Lean Or Low Voltage

P1137 on a Chrysler vehicle means the powertrain control module (PCM) has detected that the downstream heated oxygen sensor (HO2S) on bank 1, sensor 2, is reporting a lean condition or a voltage that stays lower than expected. The PCM monitors this sensor after the catalytic converter to judge catalyst efficiency and fuel control, and it sets the code when the signal remains below its calibrated lean threshold for a set period.

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
- A slight decrease in fuel economy as the PCM richens the mixture based on the lean signal
- Occasional rough idle or hesitation during light acceleration
- A sulfur or rotten-egg smell from the exhaust if the converter is being overworked
- Failed emissions inspection due to the stored code and monitor status
- In rare cases, a surging or fluctuating idle as fuel trim shifts

Common causes, most likely first

- 1 A failed downstream heated oxygen sensor (HO2S bank 1 sensor 2) sending a false lean signal
- 2 A vacuum leak in the intake or exhaust system upstream of the sensor, leaning out the mixture
- 3 A leaking exhaust gasket or cracked exhaust pipe before the sensor, allowing outside air into the stream
- 4 A weak or failing fuel pump or clogged fuel filter reducing fuel delivery
- 5 Dirty or failing fuel injectors causing a lean condition on bank 1
- 6 A contaminated mass airflow (MAF) sensor under-reporting incoming air
- 7 A catalytic converter that is not yet warm enough or is failing, affecting the downstream sensor reading



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data and fuel trim values to confirm the lean condition
- 2 Visually inspect the downstream oxygen sensor wiring and connector for damage, corrosion, or loose pins
- 3 Smoke-test the intake and exhaust system to locate vacuum or exhaust leaks
- 4 Check fuel pressure with a gauge and compare to specification to rule out a weak pump or restricted filter
- 5 Measure the HO2S signal voltage with a multimeter or oscilloscope to verify the sensor's response
- 6 Replace the downstream oxygen sensor if it is slow, stuck low, or contaminated
- 7 Clear the code and perform a road test to verify the repair and confirm the monitor runs to completion

Downstream sensor traps on Chrysler engines

- A downstream oxygen sensor can report lean simply because the catalytic converter is not yet at operating temperature, so always check for a stuck-open thermostat before condemning the sensor.
- Exhaust leaks between the converter and the sensor are a common cause that many technicians overlook, because the leak pulls in outside air and the sensor reads it as a lean condition.
- Chrysler PCMs are sensitive to aftermarket oxygen sensors with incorrect heater resistance, so use an OEM-quality sensor to avoid a repeat code.
- A lean bank 1 sensor 2 code does not always mean the sensor is bad; a vacuum leak at the intake manifold gasket can affect both banks but set the code on the downstream sensor first.
- Fuel trim data is your best friend here: if long-term fuel trim is positive on bank 1, the engine is genuinely lean and the sensor is telling the truth, so look for a fuel delivery or vacuum issue.

Can I keep driving with P1137?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because a persistent lean condition can overheat the catalytic converter. If the check engine light begins flashing, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter or oscilloscope for oxygen sensor signal testing
- Smoke machine for intake and exhaust leak detection
- Fuel pressure gauge
- Socket set and oxygen sensor wrench



Reading P1137

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 1** Fuel and air metering.
- 37** 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 [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1137/>

