

CHRYSLER · POWERTRAIN

P1164

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1164 · Chrysler

HO2S Bank 2 Sensor 3 Rich Or High Voltage

P1164 on a Chrysler vehicle means the powertrain control module has detected that the downstream heated oxygen sensor (HO2S) on bank 2, sensor 3, is reporting a rich condition or a voltage that stays higher than expected. The computer compares this signal against its expected range and sets the code when the sensor output remains elevated for a calibrated 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 engine runs richer than commanded
- Occasional rough idle or hesitation when the mixture is excessively rich
- A sulfur or rotten-egg smell from the exhaust in severe cases
- Black sooty exhaust smoke under heavy acceleration if the rich condition is pronounced

Common causes, most likely first

- 1 Faulty bank 2 sensor 3 heated oxygen sensor (HO2S) reading rich when the mixture is actually normal
- 2 Exhaust leak before or near the sensor allowing outside air to skew the reading
- 3 Wiring damage or corrosion in the sensor circuit causing a high-voltage signal
- 4 A stuck-open or leaking fuel injector on bank 2 enriching the mixture
- 5 High fuel pressure from a failed fuel pressure regulator or restricted return line
- 6 A contaminated mass airflow sensor over-reporting airflow and causing excess fuel delivery
- 7 A restricted air filter or intake blockage reducing airflow and enriching the mixture

How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data and HO2S voltage readings to confirm the rich condition
- 2 Visually inspect the bank 2 sensor 3 wiring and connector for chafing, corrosion, or loose pins
- 3 Check for exhaust leaks upstream of the sensor using a smoke test or listening for ticking
- 4 Measure fuel pressure and compare it to the manufacturer's specification
- 5 Perform an injector balance test or inspect spark plugs on bank 2 for rich fouling
- 6 Swap the bank 2 sensor 3 with a known-good sensor to see if the code follows the sensor
- 7 Replace the faulty HO2S or repair the circuit fault, then clear codes and verify the repair with a road test



When the sensor is not the real culprit

- A rich-reading downstream oxygen sensor often indicates a problem upstream, such as a leaking injector or high fuel pressure, so replacing the sensor first can waste money.
- Exhaust leaks between the engine and the sensor pull in outside oxygen and can make the sensor report a false lean or rich condition depending on the leak location.
- Chrysler's bank 2 sensor 3 is typically a downstream sensor on the second bank, and its voltage should oscillate slowly; a steady high voltage suggests a rich mixture or a shorted signal circuit.
- A contaminated mass airflow sensor can cause a rich condition on both banks, but the code may set only for bank 2 if the contamination is uneven or the bank 2 sensor is more sensitive.
- After repairs, the PCM may need several drive cycles to relearn fuel trim, so the code may not clear immediately even when the fault is fixed.

Can I keep driving with P1164?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration and long trips because a persistent rich condition can damage the catalytic converter and waste fuel. If the check engine light starts flashing, stop driving and seek immediate service.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Fuel pressure gauge
- Smoke machine for exhaust leak testing
- Socket set and oxygen sensor wrench

Reading P1164

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



Often seen with

P1163 Fuel Temperature Sensor Circuit Open/Short To B+ · **P1165** Bank 1 Long Term Fuel Trim Range 1 Lower Lean Limit Exceeded · **P1163** HO2S11 Slow Response Bank 1 Sensor 1 · **P1165** Swirl Control Valve Control Vacuum Switch · **P1163** HO2S11 Slow Response Bank 1 Sensor 1 · **P1165** HO2S11 Slow Response Bank 1 Sensor 1 · **P1163** HO2S Bank 2 Sensor 3 Lean System Or Low Voltage · **P1165** HO2S Cross Counts Bank 2 Sensor 2 · **P1163** HO2S Bank 2 Sensor 3 Lean System Or Low Voltage · **P1165** HO2S Cross Counts Bank 2 Sensor 2 · **P1163** Fuel Trim Adaptation Additive Per Ignition Bank 1 High · **P1165** Fuel Trim Adaptation Additive Per Ignition Bank 2 High · **P0132** O2 Sensor Circuit High Voltage (Bank 1 Sensor 1) · **P0172** System Too Rich (Bank 1) · **P0175** System Too Rich (Bank 2)

See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1164/>

