

FORD · POWERTRAIN

P1158

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1158 · Ford

Lack of Downstream Heated Oxygen Sensor Switch Sensor Indicates Rich Bank 2

P1158 on Ford vehicles means the powertrain control module (PCM) has detected that the downstream heated oxygen sensor (HO2S) on bank 2 is stuck indicating a rich exhaust condition, so it is not switching between lean and rich as expected. The PCM monitors the sensor's voltage and sets this code when the signal remains high (rich) for too long during closed-loop operation.

SYSTEM

Powertrain

CODE TYPE

Ford 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 may default to a richer fuel mixture.
- Occasional rough idle or hesitation during acceleration if the rich condition affects combustion.
- A strong fuel odor from the exhaust in severe cases.
- Failed emissions tests due to increased hydrocarbon (HC) and carbon monoxide (CO) levels.

Common causes, most likely first

- 1 Faulty downstream heated oxygen sensor (HO2S) on bank 2 that is slow to respond or stuck rich.
- 2 Wiring or connector issues in the sensor circuit, such as corrosion, chafing, or loose pins.
- 3 Exhaust leaks upstream of the sensor allowing outside air to affect readings.
- 4 A leaking fuel injector on bank 2 causing an actual rich condition.
- 5 High fuel pressure from a faulty fuel pressure regulator or restricted return line.
- 6 Contamination of the sensor from engine oil or coolant leaks.
- 7 A failing catalytic converter that is not storing oxygen properly, though this is less common for a rich-stuck code.



How to diagnose and fix it

- 1 Perform a visual inspection of the bank 2 downstream HO2S sensor, wiring, and connector for damage or corrosion.
- 2 Check for exhaust leaks between the engine and the sensor using a smoke machine or by listening for ticking sounds.
- 3 Use a scan tool to monitor the downstream HO2S voltage; a healthy sensor should switch between 0.1V and 0.9V; a stuck high voltage confirms the rich condition.
- 4 Test the sensor's heater circuit resistance and compare to specifications; replace the sensor if out of range.
- 5 Check fuel pressure with a gauge and compare to Ford specifications; repair if too high.
- 6 Perform an injector balance test or inspect spark plugs on bank 2 for signs of rich running (black soot).
- 7 If all else checks out, verify the catalytic converter efficiency with a backpressure test or temperature readings; replace if restricted.

Don't jump to the oxygen sensor

- A stuck-rich downstream sensor is often a symptom of an actual rich condition on bank 2, such as a leaking injector, rather than a failed sensor itself.
- Ford's PCM may set P1158 when the sensor's voltage remains above 0.6V for an extended period, but a lazy sensor that responds slowly can also trigger it without being completely dead.
- Exhaust leaks before the sensor can cause false lean readings, but a leak after the sensor can draw in air and cause the sensor to read rich incorrectly.
- The downstream sensor's primary job is to monitor catalytic converter efficiency; a rich-stuck code may indicate the converter is being overwhelmed by unburned fuel.
- Always check for technical service bulletins (TSBs) for the specific Ford model and year, as some vehicles have known issues with sensor calibration or PCM software.

Can I keep driving with P1158?

You can generally continue driving with P1158, but avoid heavy acceleration or towing until the fault is repaired, as prolonged rich operation can damage the catalytic converter and increase emissions. Have the vehicle diagnosed promptly to prevent more costly repairs.

Tools that help

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



Reading P1158

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

Often seen with

P1157 Manifold Absolute Pressure Sensor Circuit Power Supply Malfunction · **P1157** Lack Of HO2S22 Switches Sensor Indicates Lean · **P1157** HO2S Bank 2 Sensor 2 Lean System Or Low Voltage · **P1157** Lack of Downstream Heated Oxygen Sensor Switch Sensor Indicates Lean · **P1157** HO2S Bank 2 Sensor 2 Lean System Or Low Voltage · **P1157** O2 Sensor Heater Circuit High Voltage Bank 2 Sensor 2 · **P0130** O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0136** O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0172** System Too Rich (Bank 1) · **P0175** System Too Rich (Bank 2)

See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1158/>

