



P1157 · Ford

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

P1157 on Ford vehicles means the downstream heated oxygen sensor (HO2S) for bank 2 is not switching as expected, and the powertrain control module (PCM) has interpreted the signal as indicating a lean condition. The PCM monitors the sensor's voltage activity after the catalytic converter and sets this code when the sensor stays lean or fails to switch within the calibrated time.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	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 adjusts fuel trims based on the faulty sensor signal.
- Occasional rough idle or hesitation during acceleration if the lean condition affects bank 2 fueling.
- Failed emissions inspection due to the stored trouble code and incomplete readiness monitors.
- In rare cases, a sulfur or rotten egg smell from the exhaust if the catalytic converter is stressed by the lean condition.

Common causes, most likely first

- 1 Failed downstream heated oxygen sensor on bank 2 (internal short, open circuit, or degraded element).
- 2 Wiring damage or corrosion in the bank 2 downstream HO2S circuit, including chafed wires, broken connectors, or water intrusion.
- 3 Exhaust leak upstream of the downstream sensor, allowing outside air to be drawn in and falsely lean out the reading.
- 4 Contaminated sensor from engine oil, coolant, or silicone-based sealants that coat the sensing element.
- 5 Low fuel pressure or a clogged fuel filter causing a genuine lean condition that the downstream sensor correctly reports.
- 6 Vacuum leak on bank 2 (intake manifold, vacuum lines, or PCV system) that leans out the mixture and affects the downstream sensor signal.
- 7 Aging or partially clogged catalytic converter on bank 2 that alters the exhaust gas composition and confuses the downstream sensor's switching pattern.



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check live data for the bank 2 downstream HO2S voltage; confirm it stays lean or switches abnormally compared to bank 1.
- 2 Inspect the bank 2 downstream oxygen sensor wiring and connector for damage, corrosion, or loose pins, and repair as needed.
- 3 Perform a visual and smoke test of the exhaust system upstream of the downstream sensor to rule out leaks that can cause a false lean reading.
- 4 Check fuel pressure and inspect for vacuum leaks on bank 2, especially around the intake manifold and PCV hoses, to rule out a genuine lean condition.
- 5 Test the downstream HO2S heater circuit with a multimeter for proper resistance and power/ground supply; replace the sensor if it fails the specification.
- 6 If the sensor and circuits test good, evaluate the catalytic converter's efficiency with a backpressure test or temperature readings to ensure it is not causing the sensor to read lean.
- 7 Clear the code and perform a road test with a scan tool to confirm the downstream sensor switches properly and the code does not return.

Downstream Sensor Lean Code Traps

- A common mistake is replacing the downstream oxygen sensor immediately, but an exhaust leak between the manifold and the sensor can draw in air and cause a lean reading that mimics a failed sensor.
- The code can be set by a lazy upstream sensor on bank 2 that skews fuel trims, so always compare upstream and downstream sensor activity on both banks before condemning the downstream sensor.
- Ford's downstream HO2S on bank 2 is often affected by coolant or oil contamination from a leaking intake gasket or valve cover gasket, which coats the sensor and prevents proper switching.
- A partially restricted catalytic converter on bank 2 can cause the downstream sensor to read lean because the converter stores and releases oxygen differently, and this is frequently overlooked when only the sensor is replaced.
- The PCM may set P1157 even when the sensor is functioning, if the engine has a vacuum leak that leans out bank 2 specifically, so a smoke test of the intake is a wise step before parts replacement.

Can I keep driving with P1157?

You can usually drive with P1157, but avoid heavy acceleration or long trips until it is diagnosed, because a persistent lean condition can overheat and damage the catalytic converter. Have the vehicle inspected soon to prevent more costly repairs.



Tools that help

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

Reading P1157

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

Often seen with

P1156 Manifold Absolute Pressure Sensor Circuit Open/Short To Grou · **P1156** HO2S Rich Average Bank 2 Sensor 1 · **P1156** HO2S Rich Average Bank 2 Sensor 1 · **P1156** O2 Sensor Heater Circuit Low Voltage Bank 2 Sensor 2 · **P0136** O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0156** O2 Sensor Circuit Malfunction (Bank 2 Sensor 2) · **P0171** System Too Lean (Bank 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [Fuel Trims Explained: Short-Term and Long-Term](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1157/>

