



P1137 · Ford

Lack of Downstream Heated Oxygen Sensor Switch Sensor Indicates Lean Bank 1

P1137 on a Ford means the downstream heated oxygen sensor (HO2S) on bank 1 is not switching as the powertrain control module (PCM) expects, and the PCM has interpreted the sensor signal as indicating a lean condition. In plain terms, the computer sees the post-catalyst sensor stuck or biased toward lean and sets this code because the sensor is not toggling between rich and lean the way a healthy sensor should.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the upstream sensor is still controlling fuel trim correctly.
- A slight decrease in fuel economy as the PCM may add fuel based on the lean indication.
- Rough idle or hesitation on acceleration in some cases, particularly when the sensor is slow to respond.
- A faint sulfur or rotten-egg smell from the exhaust if the catalyst is being overworked.
- Intermittent check engine light that comes and goes with temperature or moisture changes.
- Failed emissions test due to the oxygen sensor monitor not completing or reporting a fault.

Common causes, most likely first

- 1 A failing downstream heated oxygen sensor on bank 1 that is slow to switch or biased lean.
- 2 A vacuum leak downstream of the sensor or in the intake tract that leans out the mixture seen by the sensor.
- 3 Exhaust leaks between the catalyst and the downstream sensor, allowing outside air to skew the reading lean.
- 4 A contaminated sensor from oil, coolant, or silicone poisoning that reduces its switching ability.
- 5 Wiring or connector problems at the downstream sensor, such as chafed wires, corrosion, or poor ground.
- 6 A degraded catalytic converter that is not storing oxygen properly, causing the downstream sensor to read lean.
- 7 A PCM calibration issue or faulty PCM driver for the heater circuit, though this is less common.



How to diagnose and fix it

- 1 Check for any stored or pending codes and freeze-frame data to confirm the downstream sensor signal is actually lean and not a false interpretation.
- 2 Inspect the downstream oxygen sensor wiring and connector for damage, corrosion, or loose pins, and verify the heater circuit resistance and supply voltage.
- 3 Smoke-test the intake and exhaust system for vacuum or exhaust leaks that could cause a lean reading at the downstream sensor.
- 4 Use a scan tool to watch the downstream oxygen sensor voltage in real time; a healthy sensor should switch between approximately 0.1 and 0.9 volts, and a lazy or flat-lined sensor confirms replacement is needed.
- 5 Replace the downstream heated oxygen sensor on bank 1 with a quality direct-fit sensor, then clear codes and verify the monitor completes.
- 6 If the sensor is new and the code returns, check fuel trims and upstream sensor operation to rule out a mixture problem affecting the downstream reading.
- 7 As a last step, evaluate catalytic converter efficiency with a backpressure test or temperature differential check before condemning the converter.

What a lean downstream sensor really tells you

- A downstream oxygen sensor that reads lean does not automatically mean the engine is running lean; an exhaust leak before the sensor can pull in outside air and fool the PCM into setting P1137.
- Ford's downstream sensor on bank 1 is often the one after the catalytic converter on the passenger side of V-engine layouts, but confirm the bank location in service information because configurations vary by model.
- A lazy downstream sensor can pass a simple voltage test but still fail the PCM's switching-rate monitor, so watching live data over several minutes is more reliable than a single voltage check.
- Replacing the downstream sensor without checking for exhaust leaks or a failing catalyst often leads to a repeat code, because the new sensor will faithfully report the same lean condition.
- P1137 can be set by a contaminated sensor from coolant or oil burning in the engine, so address any internal coolant or oil consumption issues before installing a new sensor.

Can I keep driving with P1137?

You can usually drive with P1137 for a short time, but avoid heavy acceleration and long trips until it is diagnosed because a persistent lean reading can raise exhaust temperatures and damage the catalytic converter. If the check engine light starts flashing or you notice rough running, stop driving and have it inspected promptly.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter for checking sensor heater circuit and wiring
- Smoke machine for intake and exhaust leak testing
- Oxygen sensor socket and ratchet
- Infrared thermometer or backpressure gauge for catalyst evaluation

Reading P1137

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Ford): its meaning depends on the make.

1 Fuel and air metering.

37 The exact fault within that area.

Often seen with

P0136 O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0137** O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2) · **P0138** O2 Sensor Circuit High Voltage (Bank 1 Sensor 2) · **P0171** System Too Lean (Bank 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [How an Oxygen Sensor Works: Live 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

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

