

JAGUAR · POWERTRAIN

P1187

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1187 · Jaguar

O2 Sensor Heater Circuit Open, Inferred Fault

P1187 on a Jaguar means the engine control module has detected an open circuit in the heater element of an oxygen sensor, but the fault was inferred from other sensor readings rather than a direct heater circuit test. The computer compares oxygen sensor signal behavior and heater current draw to determine that the sensor is not reaching operating temperature as expected.

SYSTEM

Powertrain

CODE TYPE

Jaguar specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Slightly rough idle or hesitation during cold starts while the engine is in open-loop fuel control
- Increased fuel consumption as the engine stays in warm-up enrichment longer than normal
- Occasional lean or rich fuel trim codes stored alongside P1187
- Failed emissions test due to incomplete oxygen sensor monitor
- In rare cases, a sulfur or rotten egg smell from the exhaust if the sensor stays cold and the mixture stays rich

Common causes, most likely first

- 1 Failed oxygen sensor heater element, typically from age or contamination
- 2 Corroded, chafed, or broken wiring between the oxygen sensor heater and the engine control module
- 3 Blown fuse or faulty relay supplying power to the oxygen sensor heater circuit
- 4 Poor ground connection at the sensor body or engine block
- 5 Engine control module software or internal driver fault, more common on older Jaguar models
- 6 Oil or coolant contamination of the sensor tip that damages the heater over time
- 7 Aftermarket oxygen sensor with incorrect heater resistance for the application



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1187 is active and not a history code
- 2 Inspect the oxygen sensor heater fuse and relay, and test for battery voltage at the heater supply wire with the key on
- 3 Measure heater resistance at the sensor connector and compare to Jaguar specifications for the fitted sensor
- 4 Check continuity and resistance of the heater ground circuit from the sensor connector to the engine control module
- 5 Inspect the sensor wiring harness for chafing, corrosion, or heat damage near the exhaust manifold
- 6 Replace the oxygen sensor if heater resistance is out of specification or the element is open
- 7 Clear codes and run the oxygen sensor heater monitor to confirm the repair, then verify fuel trims return to normal

Why inferred heater faults mislead Jaguar owners

- An inferred fault means the engine control module did not see a direct open circuit; it calculated the heater was not working from oxygen sensor signal timing, so a lazy sensor can set P1187 without any wiring problem.
- Jaguar oxygen sensor heaters on V6 and V8 engines often fail intermittently when cold, so the code may only appear on the first start of the day and clear after a short drive.
- A contaminated sensor from a leaking intake gasket or worn piston rings can damage the heater element, so replacing the sensor without fixing the root cause leads to a repeat failure.
- Some aftermarket oxygen sensors have heater resistances that are close but not identical to the Jaguar original, which can trigger P1187 even though the sensor appears to work.
- The heater circuit shares a power supply with other emissions components on many Jaguar models, so a blown fuse may also disable the purge valve or secondary air pump and set additional codes.

Can I keep driving with P1187?

You can usually drive the car short distances to a workshop, but avoid heavy load and long trips because the engine may stay in warm-up enrichment and damage the catalytic converter over time. Have the fault diagnosed promptly, especially if the check engine light flashes or fuel consumption rises noticeably.

Tools that help

- OBD-II scan tool with Jaguar-specific software
- Digital multimeter
- Back probe kit
- Wiring diagram for the specific Jaguar model
- Oxygen sensor socket
- Torque wrench



Reading P1187

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

Often seen with

P0130 O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2) · **P0171** System Too Lean (Bank 1) · **P0174** System Too Lean (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/jaguar-p1187/>

