

JAGUAR · POWERTRAIN

P1190

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1190 · Jaguar

O2 Sensor Heater Circuit Low Resistance Fault 2

P1190 on a Jaguar means the engine control module has detected that the heater element inside a specific oxygen sensor circuit has lower electrical resistance than expected, which usually points to a shorted heater element or damaged wiring. The code is stored when the module's heater circuit self-test sees current flow that is too high for the commanded voltage, indicating the heater is drawing excessive current.

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 poor fuel economy if the sensor stays cold and the engine runs in open loop longer than normal
- Intermittent hesitation during light acceleration when the heater circuit is failing intermittently
- A pending P1190 that reappears after clearing, especially in cold weather when the heater is commanded on
- No driveability complaint at all in many cases because the heater fault does not always disable the sensor signal

Common causes, most likely first

- 1 Failed oxygen sensor heater element with internal shorting, which is the most common cause on higher-mileage Jaguars
- 2 Chafed or pinched heater circuit wiring shorting to ground or to another wire in the harness
- 3 Corroded or water-contaminated connector pins at the oxygen sensor or at the engine control module
- 4 Engine control module heater driver circuit fault, though this is far less common than sensor or wiring failure
- 5 Aftermarket oxygen sensor with incorrect heater resistance fitted during a previous repair
- 6 Moisture ingress into the sensor connector causing a low-resistance path across the heater pins



How to diagnose and fix it

- 1 Read all stored and pending codes with a scan tool that supports Jaguar-specific data, and record freeze-frame information before clearing anything
- 2 Inspect the oxygen sensor connector and the harness run for chafing, corrosion, or moisture, and repair any damaged wiring first
- 3 Measure the heater element resistance at the sensor connector with a multimeter and compare it to the Jaguar specification for that sensor
- 4 Check the heater circuit for a short to ground or short to voltage with the sensor disconnected and the key on
- 5 If resistance is out of specification, replace the affected oxygen sensor with a correct-resistance unit and clear the code
- 6 If the sensor and wiring test good, check the engine control module heater driver output with a scope or bidirectional scan tool before condemning the module
- 7 After repair, run the heater circuit monitor to completion and verify the code does not return over a full cold-start drive cycle

What a low-resistance heater code really means

- A low-resistance heater fault is not the same as an open heater circuit, so replacing the sensor blindly without measuring resistance can waste money if the real problem is a chafed harness shorting to ground.
- Jaguar oxygen sensor heaters are commanded on aggressively after a cold start, so a marginal short often only sets the code in cold weather or on the first start of the day rather than during a warm recheck.
- Water ingress into the sensor connector is a frequent hidden cause on Jaguars with underbody splash shields missing or damaged, and the connector can look fine until the pins are inspected closely.
- An aftermarket oxygen sensor with the wrong heater resistance will set this code repeatedly even though the sensor is new, so always verify the replacement part matches the original resistance specification.
- This code can appear alongside mixture codes if the sensor heater fault keeps the sensor from reaching operating temperature, so diagnose the heater circuit before chasing fuel trim problems.

Can I keep driving with P1190?

You can usually keep driving short distances because the engine will still run, but avoid long periods of idling and cold-weather short trips until the fault is repaired. Prolonged driving with a shorted heater circuit can damage the engine control module driver, so have it diagnosed promptly.

Tools that help

- Jaguar-compatible scan tool with live data and bidirectional control
- Digital multimeter with resistance and continuity functions
- Back probe kit for testing connector pins without damage
- Wiring diagram for the specific Jaguar model and engine
- Oscilloscope for checking heater driver output if the module is suspected



Reading P1190

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

Often seen with

P1191 TP Controlled Circuit · **P1191** O2 Sensor Heater Circuit Open, Hardware Fault · **P1191** Intake Air Duct Leak · **P1191** Key Line Voltage · **P1191** Intake Air Duct Air Leak · **P1191** Pre-Catalyst Fuel Trim System Bank 2 · **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) · **P0150** O2 Sensor Circuit Malfunction (Bank 2 Sensor 1)

See it working

Watch the animated explainer [How a Starter Motor Works: Pre-Engaged Starter](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/jaguar-p1190/>

