

VOLKSWAGEN · POWERTRAIN

P1199

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1199 · Volkswagen

Oxygen Sensor Heater Circuit Bank 2 Sensor 2 Electrical Malfunction

P1199 on a Volkswagen means the engine control module has detected an electrical fault in the heater circuit for the downstream oxygen sensor on bank 2, which is the side of the engine opposite cylinder one. The computer monitors the heater element's current draw and expects a specific resistance range when the heater is commanded on, so an open circuit, short to ground, or short to power will set this code and illuminate the check engine light.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

**Fuel and air
metering**

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Slightly higher fuel consumption because the downstream sensor stays cold longer and the system runs in open-loop longer than normal
- Occasional rough idle or hesitation during cold starts while the sensor heater is not functioning
- A pending or stored P1199 code that returns immediately after clearing if the circuit fault is hard
- In rare cases, a faint smell of unburned fuel from the exhaust during warm-up

Common causes, most likely first

- 1 Failed oxygen sensor heater element inside the bank 2 sensor 2 sensor itself, which is the most common cause on higher-mileage Volkswagens
- 2 Corroded, burnt, or pushed-back pins in the sensor connector or the engine control module connector
- 3 Broken or chafed wire in the heater circuit harness, often near the exhaust manifold or where the loom flexes
- 4 Blown fuse that supplies the oxygen sensor heater circuit, sometimes shared with other emissions components
- 5 Short to ground or short to power in the heater control wire between the sensor and the engine control module
- 6 Internal driver failure in the engine control module, which is rare but does occur on older Volkswagen models



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1199, then clear the code and verify whether it returns immediately as a hard fault or only after a cold-start drive cycle
- 2 Inspect the bank 2 sensor 2 connector and the harness routing for corrosion, chafing, or heat damage, and check the heater circuit fuse in the engine bay fuse box
- 3 Measure the resistance of the oxygen sensor heater element at the sensor connector with a multimeter and compare it to the manufacturer's specification for your engine code
- 4 With the key on and the sensor disconnected, check for battery voltage on the heater supply wire and verify the control wire is not shorted to ground or power
- 5 Perform a voltage drop test on the heater circuit under load to catch high-resistance connections that a simple continuity check will miss
- 6 If the wiring and fuse check out but the heater resistance is out of spec or open, replace the bank 2 sensor 2 oxygen sensor with the correct part for your Volkswagen engine code
- 7 After repair, clear the codes and complete a cold-start drive cycle to confirm the heater monitor runs and the code does not return

What the heater circuit test really checks

- The engine control module does not simply check for continuity; it measures the heater current ramp and expects a specific profile, so a heater that is partially shorted can still set P1199 even though a basic resistance check looks acceptable.
- A bad ground for the oxygen sensor heater circuit, often at the engine block or chassis stud, can mimic a failed sensor and cause repeat replacements if the ground is not cleaned and tightened.
- On many Volkswagen engines, bank 2 sensor 2 is the post-catalytic converter sensor on the cylinder bank that is hardest to reach, and the harness is often damaged during unrelated repairs such as clutch or turbo work.
- P1199 does not always mean the sensor is dead; a blown fuse or a rubbed-through wire in the loom can set the same code, so the circuit must be tested before any part is fitted.
- A failing heater circuit can cause the downstream sensor to stay cold and report a lazy signal, which may set companion codes for catalyst efficiency or sensor slow response that disappear once the heater is repaired.

Can I keep driving with P1199?

You can usually keep driving with P1199 because the fault affects emissions monitoring and cold-start heater performance rather than immediate engine safety. Avoid long periods of idling from cold and have the circuit inspected soon, since a shorted heater circuit can drain the battery or damage the engine control module driver if left unchecked.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with resistance and voltage drop functions
- Wiring diagram for your specific Volkswagen engine code
- Back-probe kit or breakout leads for testing connectors without damage
- Heat-resistant replacement sensor socket and hand tools

Reading P1199

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

Often seen with

P1198 Oxygen Sensor Heater Circuit Bank 1 Sensor 2 Electrical Malf · **P1198** Fuel Level Input Circuit High · **P1198** Radiator Temperature Sensor Voltage Too High · **P1198** Pump Rotor Control Underfueling · **P1198** Radiator Temperature Sensor Voltage Too High · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0136** O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [How a Rotary Engine Works: Wankel in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1199/>

