

VOLKSWAGEN · POWERTRAIN

P1135

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1135 · Volkswagen

Oxygen Sensor Heating Circuit Bank 1 + 2 Sensor 2 Electrical Malfunction

P1135 on Volkswagen vehicles indicates that the engine control module has detected an electrical fault in the heater circuit for the downstream oxygen sensor on both banks of a V-style engine. The computer monitors the current flow through the sensor's heating element and flags this code when the circuit is open, shorted, or drawing current outside the expected range.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Fuel and air
metering**

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly higher fuel consumption during cold starts because the sensor takes longer to reach operating temperature
- Occasional rough idle or hesitation when the engine is cold
- A pending or stored fault that may cause the vehicle to fail an emissions inspection
- In rare cases, a slight decrease in fuel economy over time if the sensor remains cold and the system stays in open loop longer

Common causes, most likely first

- 1 Failed oxygen sensor heater element inside the downstream sensor on bank 1 or bank 2
- 2 Corroded, burnt, or disconnected wiring or connector pins at the sensor or harness
- 3 Blown fuse that supplies power to the oxygen sensor heater circuit
- 4 Open or shorted wire in the harness between the sensor and the engine control module
- 5 Faulty engine control module driver for the heater circuit, though this is less common
- 6 Oil or coolant contamination that has damaged the sensor's internal heater

How to diagnose and fix it

- 1 Check the fuse that protects the oxygen sensor heater circuit and replace it if blown
- 2 Inspect the sensor connectors and harness for corrosion, chafing, or loose pins, and repair as needed
- 3 Measure the resistance of the heater element in both downstream sensors and compare to the manufacturer's specification
- 4 Test for power and ground at the sensor connector with the key on to confirm the circuit is complete
- 5 If resistance is out of spec or the circuit tests faulty, replace the affected oxygen sensor
- 6 Clear the fault codes and perform a road test to verify the repair and ensure the code does not return



What the heater circuit test really reveals

- A P1135 can be set by a heater circuit that is electrically intact but drawing slightly too much or too little current, so a simple continuity check may not find the fault.
- Volkswagen often groups both downstream sensors under one code, so technicians must check both banks even if only one sensor is suspected.
- The downstream sensor heater is powered through a fuse that also supplies other components, so a blown fuse may cause additional codes that point away from the oxygen sensor.
- Aftermarket sensors with incorrect heater resistance are a common cause of repeat P1135 codes even when the original sensor was replaced.
- The engine control module may set this code intermittently if the heater circuit is affected by vibration or temperature changes, so a wiggle test of the harness is essential.

Can I keep driving with P1135?

You can usually continue driving with this code because the engine will still run, but the vehicle may fail an emissions test and cold-start fuel economy will suffer. Avoid long periods of idling from cold and have the fault repaired soon to prevent damage to the catalytic converter from unburned fuel.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Fuse puller or test light
- Socket set and oxygen sensor wrench
- Wiring diagram for the vehicle

Reading P1135

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

Often seen with

P1136 Long Term Fuel Trim Add Fuel Bank 1 System Too Lean · **P1136** HO2S Bank 1 Sensor 1 Heater Circuit High Input · **P1136** Control Box Fan Circuit · **P1136** HO2S Rich Average Bank 1 Sensor 1 · **P1136** HO2S Rich Average Bank 1 Sensor 1 · **P1136** O2 Sensor Heater Circuit High Voltage Bank 1 Sensor 1 · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0141** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2) · **P0155** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1) · **P0161** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 2)



See it working

Watch the animated explainer [How an Elevator Works: Traction Lift 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-p1135/>

