

BMW · POWERTRAIN

P1135

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1135 · BMW

O2 Sensor Heater Circuit Low Voltage Bank 1 Sensor 1

P1135 on a BMW means the engine control module has detected that the oxygen sensor heater circuit for Bank 1 Sensor 1 is drawing too little current or has a lower-than-expected voltage, indicating an open circuit, high resistance, or a failed heater element. The sensor is located before the catalytic converter on the bank that contains cylinder one, and its heater is responsible for bringing the sensor up to operating temperature quickly after a cold start.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	BMW specific	Low	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly rough idle or hesitation during the first minute or two after a cold start
- A pending or stored P1135 code that returns quickly after being cleared
- Occasional poor fuel economy if the fault persists and the sensor stays cold
- In rare cases, a sulfur or rotten-egg smell from the exhaust if the sensor never reaches operating temperature

Common causes, most likely first

- 1 Failed oxygen sensor heater element inside Bank 1 Sensor 1
- 2 Corroded, loose, or damaged electrical connector at the oxygen sensor
- 3 Broken or chafed wire in the heater circuit between the sensor and the engine control module
- 4 Blown fuse or faulty relay that supplies power to the oxygen sensor heater circuit
- 5 High resistance in the ground circuit for the oxygen sensor heater
- 6 Engine control module internal driver failure for the heater circuit, though this is uncommon



How to diagnose and fix it

- 1 Clear the code and verify it returns, then check for any related codes that might point to a shared circuit fault
- 2 Inspect the oxygen sensor connector and wiring for corrosion, loose pins, or physical damage, and repair as needed
- 3 Check the fuse and relay that feed the oxygen sensor heater circuit, replacing any blown fuse or faulty relay
- 4 Measure the resistance of the heater element across the sensor-side terminals and compare to BMW specifications for that engine
- 5 With the sensor disconnected and the key on, check for battery voltage at the heater power supply wire and good ground on the ground wire
- 6 If voltage and ground are present but the heater resistance is out of spec, replace Bank 1 Sensor 1 with a quality OEM or equivalent sensor
- 7 After repair, clear the code and perform a cold-start drive cycle to confirm the heater circuit monitors pass and the light stays off

What BMW techs check before replacing the sensor

- A P1135 on BMW engines is frequently caused by a corroded connector or a chafed wire near the exhaust manifold rather than by the sensor itself, so always inspect the harness before condemning the part.
- The heater circuit is powered through a fuse that is often shared with other emissions components, so a blown fuse can set P1135 alongside other codes and should be checked first.
- On some BMW models, the oxygen sensor heater ground is shared with other sensors, and a poor ground can cause a low-voltage heater code even when the sensor heater tests good.
- After replacing the sensor, the engine control module may need a short drive cycle to re-learn the heater characteristics, and clearing the code without completing the cycle can lead to a false return.
- Using a generic universal oxygen sensor instead of the correct BMW-specific sensor can cause heater resistance mismatches that set P1135 again shortly after installation.

Can I keep driving with P1135?

You can usually continue driving with P1135 because the engine will still run and the main risk is slightly higher emissions during warm-up, but avoid long periods of idling or repeated short cold-start trips until the fault is repaired. If the check engine light begins flashing or you notice rough running, stop driving and have the vehicle diagnosed promptly.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire probe set and electrical contact cleaner
- Fuse puller and test light
- Oxygen sensor socket
- BMW-specific service information for heater resistance specifications

Reading P1135

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

Often seen with

P1134 Oxygen Sensor Heating Circuit Bank 1 + 2 Sensor 2 Short To B · **P1134** Front Oxygen AF Sensor Microcomputer Problem · **P1134** Bank 1 Fuel Control Shifted Rich · **P1134** O2 Sensor Transition Time (Bank 1 Sensor 1) · **P1134** Bank 1 Fuel Control Shifted Rich · **P1134** HO2S Transition Time Ratio · **P1134** O2 Sensor Heater Circuit Signal Intermittent Bank 1 Sensor 1 · **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)

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1135/>

