

BMW · POWERTRAIN

P1155

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1155 · BMW

O2 Sensor Heater Circuit Intermittent Bank 2 Sensor 2

P1155 on BMW vehicles indicates that the engine control module has detected an intermittent fault in the heater circuit for the downstream oxygen sensor on bank 2, which is the sensor after the catalytic converter. The computer monitors the heater element's current draw and expects a stable circuit; an intermittent signal means the circuit occasionally drops out or fluctuates beyond the expected range, often due to a poor connection or failing heater element.

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.
- Occasional rough idle or hesitation when the engine is cold, as the sensor takes longer to reach operating temperature.
- Slightly increased fuel consumption during warm-up because the sensor feedback is delayed.
- In rare cases, a stored pending code that clears itself after several drive cycles if the intermittent fault does not recur.
- No driveability complaints at all if the fault is very brief and the sensor otherwise functions normally.

Common causes, most likely first

- 1 Corroded, loose, or damaged electrical connector at the bank 2 sensor 2 oxygen sensor.
- 2 Chafed or broken wires in the sensor harness, especially near the exhaust or where the loom bends.
- 3 Failing heater element inside the oxygen sensor itself, causing intermittent open or high resistance.
- 4 Water intrusion into the connector or sensor housing leading to intermittent shorting.
- 5 Poor ground connection for the heater circuit at the chassis or engine block.
- 6 Rarely, an intermittent internal fault in the engine control module driver for that heater circuit.



How to diagnose and fix it

- 1 Inspect the bank 2 sensor 2 oxygen sensor connector for corrosion, moisture, or loose pins; clean and reseal as needed.
- 2 Check the sensor harness for chafing, burns, or breaks along its routing, especially near hot exhaust components.
- 3 Measure the heater element resistance at the sensor connector with a multimeter and compare to BMW specifications; an open or out-of-range reading indicates a faulty sensor.
- 4 Verify the heater circuit ground and power supply with a test light or multimeter while wiggling the harness to catch intermittent faults.
- 5 If the sensor is original and high-mileage, replace it with a quality OEM-type sensor even if resistance tests pass, as intermittent heater failures often do not show up in a static test.
- 6 Clear the fault codes and perform a drive cycle that includes a cold start and sufficient time for the oxygen sensor heater monitor to run, then recheck for pending codes.

Intermittent heater faults that fool technicians

- A common misdiagnosis is replacing the oxygen sensor immediately, but the intermittent nature often traces to a corroded connector pin that only loses contact when the engine bay heats up or vibrates.
- The heater circuit is powered through a fuse that also supplies other components; a fuse that is not blown but has high resistance can cause intermittent voltage drops that set P1155 without affecting other circuits noticeably.
- Bank 2 Sensor 2 on many BMW inline-six engines is accessed from underneath the vehicle, and the harness can rub against the transmission tunnel or heat shield, creating an intermittent short that only occurs during certain driving conditions.
- A failing heater element can test good when cold but open up as it heats, so a resistance check on a cold sensor may pass while the fault still occurs during the first few minutes of running.
- This code does not always mean the sensor is bad; the engine control module's heater driver circuit can develop intermittent faults, especially if water has entered the ECU enclosure, though this is less common.

Can I keep driving with P1155?

You can continue driving with P1155 because the fault is intermittent and does not affect engine safety, but avoid ignoring it for too long as a failing heater can eventually cause the sensor to stop reporting entirely, leading to higher emissions and reduced fuel economy. Schedule a diagnostic inspection at your convenience rather than treating it as an emergency.



Tools that help

- OBD-II scan tool with BMW-specific software or a generic tool capable of reading pending codes
- Digital multimeter with resistance and voltage measurement
- Test light or automotive logic probe
- Socket set and oxygen sensor socket for sensor removal if needed
- Contact cleaner and dielectric grease for connector service

Reading P1155

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

Often seen with

P1154 Manifold Switch Over Malfunction · **P1153** Air/Fuel Sensor Circuit Response Bank 1 Sensor 2 · **P1153** Bank 2 Fuel Control Shifted Lean FAOSC · **P1154** Bank 2 Fuel Control Shifted Rich FAOSC · **P1153** O2 Sensor Low Switching (Bank 2 Sensor 1) · **P1154** O2 Sensor Low Transition Time (Bank 2 Sensor 1) · **P1153** Bank 2 Fuel Control Shifted Lean · **P1154** Bank 2 Fuel Control Shifted Rich · **P1153** HO2S Insufficient Switching · **P1154** HO2S Transition Time Ratio · **P1153** O2 Sensor Heater Circuit High Voltage Bank 2 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)

See it working

Watch the animated explainer [Excavator Simulator: Hydraulics You Can Operate](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1155/>

