

BMW · POWERTRAIN

P1457

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1457 · BMW

Heated Catalyst Heater Power Switch Temperature Sensor Electrical Bank 1

P1457 on BMW vehicles indicates that the engine control module (ECM) has detected an electrical fault in the temperature sensor circuit of the heated catalyst heater power switch for bank 1. The ECM monitors the sensor's signal to ensure it stays within an expected voltage range, and this code sets when the signal is out of range or the circuit is open or shorted.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	BMW specific	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light (CEL) on the dashboard.
- Often no other symptoms besides the warning light.
- Possible slight decrease in fuel economy if the heated catalyst does not activate properly.
- In rare cases, a faint sulfur or rotten egg smell from the exhaust when the catalyst is cold.
- Intermittent code setting during cold starts or damp conditions if the fault is a poor connection.

Common causes, most likely first

- 1 Faulty temperature sensor integrated into the heated catalyst heater power switch.
- 2 Damaged or corroded wiring harness or connector at the heated catalyst or ECM.
- 3 Open or short circuit in the sensor signal or ground circuit.
- 4 Failed heated catalyst heater power switch relay or control module.
- 5 Internal ECM fault affecting the sensor input circuit (rare).

How to diagnose and fix it

- 1 Use a BMW-specific scan tool to read live data from the heated catalyst temperature sensor and compare to ambient temperature after a cold soak.
- 2 Visually inspect the sensor connector and wiring for corrosion, chafing, or loose pins; repair as needed.
- 3 Measure resistance of the temperature sensor with a multimeter and compare to BMW specifications; replace sensor if out of range.
- 4 Check for continuity and short-to-ground or short-to-power on the signal and ground wires between the sensor and ECM; repair harness if faulty.
- 5 Test the heated catalyst heater power switch relay and its control circuit; replace relay if defective.
- 6 If all external circuits and components test good, suspect the ECM and perform further diagnostics before replacement.

Don't overlook the heater power switch

- The temperature sensor is often integrated into the heater power switch assembly, so a sensor fault may require replacing the entire switch rather than just the sensor.
- A weak battery or charging system issue can cause intermittent sensor codes on BMW models, so always verify battery voltage and charging system operation first.
- The heated catalyst system only activates during cold starts, so the fault may not appear during warm engine diagnostics; a cold soak test is essential.
- Corrosion at the connector is a common cause on older BMWs, especially in regions with road salt, and can mimic a failed sensor.
- This code does not always mean the catalytic converter itself is failing; the fault is strictly in the sensor circuit, so avoid replacing the converter without proper diagnosis.

Can I keep driving with P1457?

You can generally continue driving with this code, but the heated catalyst may not function, leading to increased emissions during cold starts. Avoid prolonged idling from cold and schedule diagnosis soon to prevent potential catalytic converter damage.

Tools that help

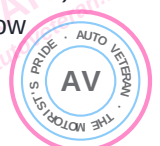
- BMW-specific scan tool (e.g., ISTA or equivalent)
- Digital multimeter
- Wiring diagram for the heated catalyst circuit
- Socket set and trim removal tools
- Infrared thermometer (optional for temperature verification)

Reading P1457

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (BMW): its meaning depends on the make.
4	Auxiliary emission controls.
57	The exact fault within that area.

Often seen with

P1456 Exhaust Gas Temperature Control Bank 1 Limit Attained · **P1456** Evaporative Emission Control System Leak Detected Fuel Tank · **P1456** Fuel Tank Temperature Sensor Circuit · **P1456** Evaporative Emission Control System Leak Detected Fuel Tank · **P1456** Heated Catalyst Heater Power Supply Open Circuit Bank 1 · **P0130** O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0136** O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2)



See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1457/>

