

BMW · POWERTRAIN

P1456

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1456 · BMW

Heated Catalyst Heater Power Supply Open Circuit Bank 1

P1456 on BMW vehicles means the engine control module (DME) has detected an open circuit in the power supply wire feeding the heated catalyst heater for bank 1. The heater element is not receiving the voltage it needs to warm the catalytic converter quickly after a cold start, so the DME flags the circuit as open.

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, often with no other symptoms besides the warning light
- A slight delay in catalytic converter light-off during cold starts, which may not be noticeable to the driver
- Occasional rough running or hesitation immediately after a cold start if the catalyst is slow to heat
- Failed emissions readiness monitors for the catalyst heater circuit
- In rare cases, a burning smell or visible damage at the heater connector if the open circuit is caused by a corroded or melted terminal

Common causes, most likely first

- 1 Broken or corroded power supply wire between the DME and the heated catalyst heater connector
- 2 Failed heated catalyst heater element itself, creating an internal open circuit
- 3 Corroded or loose electrical connector at the heated catalyst heater
- 4 Blown fuse or failed relay in the heated catalyst heater power supply circuit
- 5 Damaged wiring harness caused by road debris, heat exposure, or rodent damage
- 6 Faulty DME output driver for the heater circuit, though this is less common



How to diagnose and fix it

- 1 Check the fuse and relay for the heated catalyst heater circuit and replace any blown fuse or faulty relay
- 2 Inspect the heater connector at the catalytic converter for corrosion, loose pins, or melted plastic and clean or repair as needed
- 3 Disconnect the heater connector and measure resistance across the heater element to confirm it is not open
- 4 With the connector disconnected, check for battery voltage on the power supply wire from the DME with the key on and the heater commanded on
- 5 Perform a voltage drop test on the power supply wire and ground circuit to locate high resistance or an open segment
- 6 Repair or replace the damaged section of the wiring harness, including any chafed or broken wires
- 7 Clear the fault memory and run a cold-start catalyst heater monitor to verify the repair

What BMW technicians check before replacing the catalyst

- A common misdiagnosis is replacing the catalytic converter when the actual fault is a corroded connector pin or a broken wire in the harness near the exhaust, which is far cheaper to fix.
- The heated catalyst heater only operates during a cold start, so an open circuit may not set a code until the vehicle sits overnight and the DME commands the heater on.
- On some BMW models, the heater power supply wire runs close to the exhaust manifold and can suffer heat damage that is not visible until the loom is opened.
- A failed heater element can sometimes be intermittent, so a resistance check may pass when cold but fail when the circuit is loaded; a voltage drop test under load is more reliable.
- This code does not always mean the catalyst itself is failing; the DME only monitors the heater circuit, not the catalyst efficiency, so a P1456 can coexist with a healthy converter.

Can I keep driving with P1456?

You can usually continue driving with P1456 because the engine will still run and the main catalytic converter will eventually light off, but avoid long periods of idling from cold and get the circuit repaired soon to prevent emissions test failure and further wiring damage.

Tools that help

- Digital multimeter with resistance and voltage measurement
- OBD-II scan tool capable of reading BMW manufacturer-specific codes and activating the heater circuit
- Wiring diagram for the specific BMW model
- Fuse puller and test light
- Heat-resistant wire repair kit and crimping tools



Reading P1456

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

Often seen with

P1457 Exhaust Gas Temperature Sensor 2 Open Short To B+ · **P1457** Evaporative Emission Control System Leak Detected Control Ca · **P1457** Purge Solenoid Control System · **P1457** Purge Solenoid Valve Low System Malfunction · **P1457** Evaporative Emission Control System Leak Detected Control Ca · **P1457** Unable To Pull Vacuum In Tank · **P1457** Heated Catalyst Heater Power Switch Temperature Sensor Elect · **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 Coil-on-Plug Ignition Works: Coil and Spark Plug](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1456/>

