

GENERIC · POWERTRAIN

P0439

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0439

Catalyst Heater Control Circuit (Bank 2)

P0439 indicates that the powertrain control module has detected a fault in the electrical circuit that controls the heater element for the bank 2 catalytic converter. The heater is used to bring the catalyst up to operating temperature quickly after a cold start, and the computer monitors the circuit for abnormal voltage or current behavior.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Extended time for the catalytic converter to reach operating temperature, potentially causing a temporary increase in emissions
- In some cases, a slight hesitation or rough running during cold starts if the heater fault affects overall catalyst efficiency
- Possible decrease in fuel economy if the engine management system adjusts fuel trim to compensate for perceived catalyst issues
- In rare instances, the vehicle may enter limp mode if the fault is severe and affects other systems

Common causes, most likely first

- 1 Failed catalytic converter heater element (open or shorted circuit)
- 2 Damaged or corroded wiring or connector at the bank 2 catalytic converter heater
- 3 Blown fuse or relay supplying power to the heater circuit
- 4 Faulty powertrain control module (PCM) driver for the heater circuit
- 5 High resistance in the ground circuit for the heater
- 6 Aftermarket or damaged catalytic converter with incompatible heater specifications



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check for any related freeze-frame data
- 2 Visually inspect the bank 2 catalytic converter heater wiring and connector for damage, corrosion, or loose pins
- 3 Check the heater circuit fuse and relay, and test for power and ground at the heater connector
- 4 Measure the resistance of the heater element with a multimeter and compare to the manufacturer's specification
- 5 Perform a voltage drop test on the power and ground circuits to identify excessive resistance
- 6 If the circuit tests good, check the PCM driver output with an oscilloscope or a test light
- 7 Replace the faulty component (heater element, wiring, fuse, relay, or PCM) as needed and clear the code

Common Misdiagnosis Traps for P0439

- A failed heater element is often misdiagnosed as a bad catalytic converter, leading to unnecessary replacement of the entire converter assembly.
Corroded connectors or chafed wiring near the exhaust can mimic a heater failure, so always perform a thorough visual and electrical inspection before condemning parts.
 - The heater circuit is only active during cold starts, so intermittent faults may not appear during a warm engine diagnostic; a cold-soak test is essential.
 - Some vehicles use a PWM signal to control the heater, and a standard multimeter may not accurately read the voltage; an oscilloscope is needed for proper diagnosis.
- A weak battery or charging system issue can cause low voltage that triggers this code, so check the vehicle's electrical baseline first.

Can I keep driving with P0439?

You can generally continue driving with P0439, but the vehicle may fail an emissions test and cold-start emissions will be higher. Avoid prolonged idling and schedule a diagnosis soon to prevent potential damage to the catalytic converter or other components.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Oscilloscope (optional for PWM circuits)
- Test light
- Socket set and wire probe kit



Reading P0439

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- 39** The exact fault within that area.

Often seen with

P0420 Catalyst System Efficiency Below Threshold (Bank 1) · **P0429** Catalyst Heater Control Circuit (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2) · **P0440** Evaporative Emission Control System Malfunction · **P0455** EVAP System Leak Detected (Large)

See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0439/>

