

GENERIC · POWERTRAIN

P04F9

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04F9

Catalyst Heater Circuit Intermittent Bank 2

P04F9 indicates that the powertrain control module (PCM) has detected an intermittent fault in the electrical circuit that supplies power to the catalytic converter heater on bank 2. The heater is a resistive element that warms the catalyst quickly after a cold start to reduce emissions, and the PCM monitors the circuit for expected current draw; an intermittent condition means the circuit sometimes works and sometimes does not, so the driver may see a flickering or stored warning light rather than a permanent failure.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often intermittently rather than constantly.
- No noticeable performance issues in most cases, because the heater only affects cold-start emissions.
- A pending code that sets and clears over several drive cycles without any driver-perceived change.
- Slightly higher emissions during the first few minutes after a cold start, which may not be obvious to the driver.
- In rare cases, a rough idle or hesitation immediately after a cold start if the catalyst does not light off quickly.
- Other codes related to catalyst efficiency or oxygen sensor heating may appear alongside P04F9.

Common causes, most likely first

- 1 A loose, corroded, or intermittently connected electrical connector at the catalytic converter heater or at the PCM.
- 2 A damaged or chafed wire in the heater circuit that shorts or opens only when the harness moves or heats up.
- 3 An intermittent open or short inside the catalytic converter heater element itself, often temperature-dependent.
- 4 A faulty heater relay or fuse that makes poor contact intermittently.
- 5 Water intrusion or corrosion in the heater circuit connector causing variable resistance.
- 6 A PCM driver circuit issue that intermittently fails to command the heater on, though this is less common.
- 7 Aftermarket or damaged wiring from previous repairs that introduces an intermittent fault.



How to diagnose and fix it

- 1 Inspect the heater circuit connectors at the catalytic converter and PCM for corrosion, loose pins, or water intrusion, and clean or reseal them as needed.
- 2 Perform a wiggle test on the heater wiring harness while monitoring heater circuit current or resistance with a scan tool to reproduce the intermittent fault.
- 3 Check the heater relay and fuse for intermittent operation by swapping with a known-good relay and testing continuity under load.
- 4 Measure the resistance of the catalytic converter heater element when cold and again after warming, looking for a value that changes drastically or goes open.
- 5 Use a scan tool to command the heater on and off while watching live data for heater current or voltage to confirm whether the PCM is commanding the heater and whether the circuit responds.
- 6 If the heater element itself is intermittent, replace the catalytic converter assembly or heater element as applicable to the vehicle design.
- 7 Clear the code and perform a thorough road test with several cold starts to verify the intermittent fault is resolved.

Intermittent heater faults that fool technicians

- A heater circuit that tests perfectly when cold can still be intermittent when hot, so always test the circuit both cold and after the engine reaches operating temperature.
- The code can be set by a poor connection at the PCM ground or a shared ground point, not just by the heater circuit itself, so check grounds before condemning the catalyst.
- Some vehicles use a pulse-width-modulated signal to control the heater, and a standard multimeter may not show the true average voltage, leading to a false diagnosis of an open circuit.
- An intermittent heater fault often leaves no driveability symptoms, so the warning light may be the only clue and the code may clear itself during a long drive.
- Replacing the catalytic converter without first verifying the heater circuit with a scan tool and a wiggle test is a common and expensive misdiagnosis.

Can I keep driving with P04F9?

The vehicle remains safe to drive because the heater only affects cold-start emissions and does not compromise engine operation. Avoid long periods of idling from cold starts and schedule diagnosis soon, but there is no need to stop driving immediately.



Tools that help

- OBD-II scan tool with live data and bidirectional control capability
- Digital multimeter with min/max recording
- Test light or load tester
- Wiring diagram for the specific vehicle
- Relay puller and fuse tester
- Heat gun and freeze spray for temperature-related testing

Reading P04F9

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
F9	The exact fault within that area.

Often seen with

P0135 O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0155** O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2) · **P04F8** Catalyst Heater Circuit Intermittent Bank 1

See it working

Watch the animated explainer [How Hydraulic Brakes Work: Pedal to Caliper](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04f9/>

