

GENERIC · POWERTRAIN

P04F8

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04F8

Catalyst Heater Circuit Intermittent Bank 1

P04F8 indicates that the powertrain control module (PCM) has detected an intermittent fault in the electrical circuit that heats the catalytic converter on bank 1, which is the side of the engine containing cylinder number one. The heater is used to bring the catalyst up to operating temperature quickly after a cold start, and an intermittent signal means the circuit sometimes works and sometimes does not, so the PCM cannot reliably control or monitor it.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- A brief delay in catalyst light-off, which may cause a slight increase in cold-start emissions.
- In some vehicles, the engine may enter a limited-power or reduced-performance mode as a protective measure.
- Rough running or hesitation during the first few minutes after a cold start if the heater circuit affects fuel control strategies.
- Intermittent operation of the heater can lead to a pending code that appears and clears on its own before the light stays on.
- No driver-perceptible change in performance in most cases, because the heater is primarily an emissions-control device.

Common causes, most likely first

- 1 A loose, corroded, or damaged electrical connector at the catalytic converter heater element.
- 2 A chafed or broken wire in the heater circuit, often where it runs near hot exhaust components or sharp edges.
- 3 An intermittent open or short inside the catalytic converter heater element itself.
- 4 A failing heater relay or control module that supplies power to the heater circuit.
- 5 Poor ground connection for the heater circuit, causing voltage drops that trigger the intermittent fault.
- 6 A PCM software glitch or internal driver issue that misreports the heater circuit status.
- 7 Water intrusion or corrosion in the wiring harness that causes resistance to change with temperature or vibration.



How to diagnose and fix it

- 1 Inspect the heater circuit wiring and connectors at the catalytic converter for looseness, corrosion, or physical damage.
- 2 Check the heater element resistance with a multimeter and compare it to the manufacturer's specification, looking for intermittent opens when the harness is wiggled.
- 3 Test the heater relay and its control circuit, including the ground side, for proper operation and voltage drops.
- 4 Perform a voltage drop test on the power and ground circuits while the heater is commanded on to find high-resistance connections.
- 5 Verify that the PCM is commanding the heater on and that the feedback signal is present; use a scan tool to monitor heater circuit status in real time.
- 6 Repair or replace any faulty wiring, connectors, relay, or heater element as needed, then clear the code and verify the repair with a road test that includes a cold start.
- 7 If all electrical checks pass, check for technical service bulletins (TSBs) or PCM software updates that address intermittent heater circuit reporting.

Intermittent heater faults that fool technicians

- A common mistake is to replace the catalytic converter immediately, but the code often stems from a simple loose connector or chafed wire that only acts up under vibration or temperature change.
- The heater circuit is only active during cold starts, so an intermittent fault may not appear during a warm-bay inspection; testing must include a cold-soak condition.
- Some vehicles use the heater circuit to help the catalyst reach light-off temperature faster, and a failure may not set a hard code until multiple drive cycles have occurred, making it easy to overlook.
- A weak battery or charging system can cause intermittent voltage drops that trigger this code without any actual heater circuit defect.
- Aftermarket alarm or remote-start installations often tap into wiring near the heater circuit, creating intermittent faults that are not present in stock vehicles.

Can I keep driving with P04F8?

You can generally continue driving with this code because it primarily affects cold-start emissions and does not pose an immediate safety risk. Avoid long periods of idling from a cold start and have the circuit inspected soon to prevent the fault from becoming permanent and affecting emissions compliance.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or logic probe
- Heat gun and freeze spray for intermittent testing



Reading P04F8

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- F8** The exact fault within that area.

Often seen with

P0130 O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2) · **P04F7** Catalyst Heater Circuit High Bank 2 · **P04F9** Catalyst Heater Circuit Intermittent Bank 2

See it working

Watch the animated explainer [How a Car Thermostat Works: Wax Pellet and Cooling Fan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04f8/>

