

GENERIC · POWERTRAIN

P04F3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04F3

Catalyst Heater Supply Voltage Bank 2

P04F3 indicates that the powertrain control module has detected an abnormal supply voltage on the heater circuit for the bank 2 catalytic converter, which is the converter on the side of the engine that does not contain cylinder number one. The computer monitors the voltage feed to the heater element and sets this code when the circuit falls outside the expected range, typically because of an open circuit, a short to ground, or a faulty heater element.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Extended catalyst warm-up time, which may cause a temporary rich-running condition after a cold start
- Slightly reduced fuel economy during the first few minutes of driving
- In rare cases, a sulfur or rotten-egg smell from the exhaust if the catalyst does not reach operating temperature quickly
- Possible hesitation or stumble immediately after a cold start on some vehicles
- No driver-perceptible change in performance once the engine is warm

Common causes, most likely first

- 1 Open or broken wire in the heater supply circuit to the bank 2 catalytic converter
- 2 Corroded or loose electrical connector at the bank 2 catalyst heater
- 3 Failed heater element inside the bank 2 catalytic converter assembly
- 4 Blown fuse or faulty relay that feeds the catalyst heater circuit
- 5 Short to ground or short to voltage in the heater supply wiring
- 6 Faulty powertrain control module driver for the heater circuit, though this is uncommon



How to diagnose and fix it

- 1 Check the fuse and relay that supply power to the bank 2 catalyst heater circuit, replacing any that are blown or faulty
- 2 Inspect the wiring harness and connector at the bank 2 catalytic converter for chafing, corrosion, or loose pins, and repair as needed
- 3 Measure resistance of the bank 2 catalyst heater element with a multimeter and compare to the manufacturer's specification to confirm it is open or out of range
- 4 Backprobe the heater supply circuit at the powertrain control module connector and verify voltage is present when the heater is commanded on
- 5 Perform a voltage drop test on both the power and ground sides of the heater circuit to locate excessive resistance
- 6 If the heater element is faulty, replace the bank 2 catalytic converter assembly as required by the manufacturer's procedure
- 7 Clear the diagnostic trouble codes and verify the repair by running a cold-start monitor to confirm the heater circuit operates correctly

What the heater supply code really means

- A P04F3 can be set by a simple blown fuse that also powers other components, so always check for additional codes that might point to a shared circuit.
- The heater element inside the catalytic converter can fail open while the converter still functions adequately once warm, so the code does not automatically mean the converter is failing emissions.
- Some vehicles use a solid-state relay or a dedicated module to control the catalyst heater, and a fault in that module can mimic a wiring problem.
- Technicians often overlook a poor ground connection for the heater circuit, which can cause a voltage supply code without any visible wire damage.
- After replacing a catalytic converter for this code, some manufacturers require a heater circuit adaptation reset or a specific drive cycle to prevent the code from returning.

Can I keep driving with P04F3?

You can generally continue driving with this code because the engine will still run and the catalyst will eventually warm up from exhaust heat, but avoid long periods of idling or repeated short trips until the repair is made. Have the circuit inspected soon to prevent potential emissions test failure and to maintain fuel efficiency.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Fuse puller and test light
- Wire repair kit with crimping tools
- Vehicle-specific service information for circuit diagrams and resistance specifications

Reading P04F3

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
F3	The exact fault within that area.

Often seen with

P0420 Catalyst System Efficiency Below Threshold (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2) · **P04F0** EVAP System High Load Purge Line A Performance · **P04F1** EVAP System Purge Line Performance · **P04F2** Catalyst Heater Supply Voltage Bank 1

See it working

Watch the animated explainer [How the EVAP System Works: Fuel Vapour and Leak Test](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p04f3/>

