

GENERIC · POWERTRAIN

P0448

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0448

Evaporative Emission System Vent Control Circuit Shorted

P0448 means the powertrain control module (PCM) has detected a short circuit in the evaporative emission (EVAP) system vent control circuit, which is the wiring path that commands the vent valve to open or close. The PCM monitors the voltage on the control wire and sees a value outside the expected range, indicating the circuit is shorted to ground or to power. This prevents the vent valve from operating correctly and can stop the EVAP system from performing its self-tests.

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.
- A faint fuel odor may be present if the vent valve is stuck open or closed, affecting fuel vapor containment.
- Difficulty refueling or a fuel nozzle that clicks off repeatedly if the vent valve cannot open to relieve tank pressure.
- A slight hiss or pop when removing the fuel cap due to abnormal tank pressure or vacuum.
- Failed emissions test because the EVAP monitor will not complete or shows a fault.
- In rare cases, rough idle or driveability issues if the short affects shared power or ground circuits.

Common causes, most likely first

- 1 Damaged or chafed wiring in the vent control circuit, often near the valve or where the harness flexes.
- 2 A failed vent control solenoid or valve with an internal short in its coil.
- 3 Corroded or loose electrical connector pins at the vent valve or PCM.
- 4 A short to ground or power in the harness between the PCM and the vent valve, sometimes caused by rodent damage or road debris.
- 5 A faulty PCM driver for the vent control circuit, though this is less common.
- 6 Water intrusion into the vent valve connector or into the harness, leading to corrosion and a short.



How to diagnose and fix it

- 1 Inspect the vent valve connector and wiring for visible damage, corrosion, or loose pins, and repair as needed.
- 2 Disconnect the vent valve and check the control circuit for a short to ground or power using a digital multimeter; repair the harness if a short is found.
- 3 Test the vent valve solenoid resistance and compare it to the manufacturer's specification; replace the valve if it is out of range or shows an internal short.
- 4 Check for continuity and voltage on the control wire from the PCM to the vent valve while wiggling the harness to reveal intermittent shorts.
- 5 If the circuit and valve test good, verify the PCM driver operation with a scan tool and oscilloscope, and replace the PCM only if confirmed faulty.
- 6 Clear the diagnostic trouble codes (DTCs) and perform the EVAP system monitor drive cycle to confirm the repair.
- 7 If the code returns, recheck all connections and the integrity of the entire EVAP system, including the vent valve operation.

Vent valve shorts that fool technicians

- A shorted vent valve solenoid can mimic a wiring short, so always test the valve coil resistance before replacing the PCM or harness.
- The vent control circuit often shares a power or ground with other EVAP components, so a short elsewhere can set P0448 along with other codes.
- Rodent damage to the vent valve wiring is a common cause that is frequently overlooked during visual inspection.
- A vent valve that is mechanically stuck can cause the PCM to detect an electrical short because the current draw changes, so test both electrical and mechanical operation.
- In some vehicles, the vent valve is part of the fuel tank assembly, making replacement more involved and often misdiagnosed as a simple solenoid.

Can I keep driving with P0448?

You can generally drive with P0448, but avoid topping off the fuel tank and park away from open flames because the EVAP system may not vent properly. Have the fault diagnosed soon to prevent fuel vapor leaks and to ensure the vehicle passes emissions testing.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools for connector and component access
- Oscilloscope (optional for advanced diagnosis)



Reading P0448

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

Often seen with

P0449 Evaporative Emission System Vent Valve/Solenoid Circuit · **P0450** Evaporative Emission System Pressure Sensor/Switch · **P0451** Evaporative Emission System Pressure Sensor/Switch Range/Per · **P0452** Evaporative Emission System Pressure Sensor/Switch Low · **P0453** Evaporative Emission System Pressure Sensor/Switch High

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0448/>

