

GENERIC · POWERTRAIN

P009D

OBD-II TROUBLE CODE

P009D

Fuel Pressure Relief Control Circuit High

P009D indicates that the powertrain control module has detected an abnormally high voltage on the fuel pressure relief control circuit, which typically points to an open circuit, a short to voltage, or a failed relief valve solenoid. The computer commands the relief valve to open and bleed off excess fuel pressure, but the feedback signal remains higher than expected, so the module sets this code and may default to a reduced fuel pressure strategy.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A slight hesitation or stumble during acceleration if fuel pressure control is compromised
- Reduced engine power or limp mode in some vehicles when the fault is active
- A fuel odor or visible leak if the relief valve is stuck closed and pressure spikes
- Rough idle or hard starting in cases where the relief circuit affects overall pressure regulation

Common causes, most likely first

- 1 Open or damaged wire in the fuel pressure relief control circuit, such as a broken conductor or corroded connector
- 2 Short to voltage on the control circuit, often from chafed insulation rubbing against a power wire
- 3 Failed fuel pressure relief valve solenoid, where the coil is open or internally shorted
- 4 Poor electrical connection at the relief valve connector, including loose pins or water intrusion
- 5 Faulty powertrain control module driver for the relief circuit, though this is less common
- 6 Aftermarket electrical accessories improperly tapped into the circuit causing voltage interference



How to diagnose and fix it

- 1 Connect a scan tool and verify P009D is current, then check for related fuel pressure codes and freeze-frame data
- 2 Inspect the relief valve connector and harness for corrosion, loose pins, or chafed wiring, repairing as needed
- 3 Measure resistance across the relief valve solenoid and compare to the manufacturer's specification to rule out an open or shorted coil
- 4 Backprobe the control circuit at the module and at the valve to check for an open or short to voltage with the key on and engine off
- 5 Command the relief valve on and off with the scan tool while monitoring circuit voltage to confirm the driver and wiring respond correctly
- 6 If the circuit and solenoid test good, substitute a known-good module only after confirming all powers and grounds are intact
- 7 Clear the code and perform a road test with live data to confirm the repair and ensure no pending codes return

Relief valve circuit checks that save time

- A high voltage code on a control circuit often means the driver inside the module is not pulling the circuit low, so test the module output before condemning the valve.
- The fuel pressure relief valve is sometimes integrated into the high-pressure fuel pump, so a failed pump assembly can set this code even when the solenoid tests fine.
- Intermittent connector fretting at the relief valve is a common cause that only shows up during a wiggle test, so always flex the harness while watching live data.
- This code does not always mean the relief valve is stuck open; a short to voltage on the control wire can mimic a failed valve and lead to unnecessary replacement.
- Aftermarket remote starters or alarm systems tapped into the fuel system wiring can introduce voltage spikes that trigger P009D without any hard part failure.

Can I keep driving with P009D?

You can usually drive the vehicle with P009D set, but avoid aggressive acceleration or towing until the fault is repaired because fuel pressure control may be compromised. If you notice a fuel odor, visible leak, or the engine enters limp mode, stop driving and have the vehicle inspected immediately.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with backprobe pins
- Wiring diagram for the fuel pressure relief control circuit
- Basic hand tools for connector and harness inspection
- Manufacturer service information for resistance specifications



Reading P009D

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- 9D** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P009E** Fuel Pressure Relief Control Performance/Stuck Off · **P0190** Fuel Rail Pressure Sensor Circuit Malfunction · **P0191** Fuel Rail Pressure Sensor Circuit Range/Performance

See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p009d/>

