

GENERIC · POWERTRAIN

P009B

OBD-II TROUBLE CODE

P009B

Fuel Pressure Relief Control Circuit/Open

P009B indicates that the powertrain control module has detected an open circuit or loss of continuity in the fuel pressure relief control circuit, which typically controls a solenoid valve that bleeds off excess pressure in the high-pressure fuel system. The computer monitors the circuit for expected voltage or current and sets this code when the signal falls outside the normal range, often due to a broken wire, poor connection, or failed solenoid.

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
- Rough idle or stumbling when the fuel pressure relief valve fails to regulate pressure
- Reduced engine performance or limp mode under certain driving conditions
- Difficulty starting or extended cranking due to improper fuel pressure regulation
- In rare cases, a fuel smell or visible leak if the valve sticks open

Common causes, most likely first

- 1 Open or damaged wire in the fuel pressure relief control circuit, such as a broken conductor or corroded terminal
- 2 Failed fuel pressure relief solenoid, where the internal coil is open or shorted
- 3 Poor electrical connection at the solenoid or powertrain control module connector
- 4 Blown fuse or relay supplying power to the relief control circuit
- 5 Faulty powertrain control module driver, though this is less common
- 6 Contamination or debris causing the relief valve to stick, which may indirectly affect circuit feedback



How to diagnose and fix it

- 1 Inspect the fuel pressure relief solenoid connector and wiring for obvious damage, corrosion, or loose pins
- 2 Check the fuse and relay that supply power to the relief control circuit and replace if blown
- 3 Measure resistance across the solenoid coil with a multimeter and compare to the manufacturer's specification
- 4 Perform a voltage drop test on the ground and power sides of the circuit while the key is on to identify high resistance
- 5 Back-probe the powertrain control module connector to verify the control signal is present and not shorted to ground or power
- 6 If the circuit tests good, command the relief valve on with a scan tool and listen for an audible click or observe fuel pressure change
- 7 Replace the fuel pressure relief solenoid or valve assembly if electrical tests confirm an open coil or no response to commands

Don't overlook the simple wiring fault

- A common oversight is replacing the fuel pressure relief solenoid without first checking the wiring harness for chafing or a broken wire near the engine mount or heat source, which is a frequent cause of this code.
- P009B can be set intermittently by a poor connection that only acts up when the engine is hot or vibrating, so a wiggle test of the harness while monitoring live data is often more revealing than a static resistance check.
- Some technicians misdiagnose this as a low fuel pressure problem and replace the high-pressure pump, but the code specifically points to the relief control circuit, not the pump itself.
- The fuel pressure relief valve may be integrated into the high-pressure fuel pump on some vehicles, so a failed solenoid can require replacing the entire pump assembly, which is a costly trap if the circuit is not verified first.
- A scan tool that can command the relief valve is essential; without it, you may miss a sticking valve that electrically tests fine but mechanically fails to relieve pressure.

Can I keep driving with P009B?

You can usually drive the vehicle with this code, but avoid aggressive acceleration or heavy loads because the fuel pressure relief valve may not function correctly, potentially causing a rich condition or reduced power. If you notice rough running, fuel smell, or a significant loss of performance, have it diagnosed promptly to prevent damage to the fuel system or catalytic converter.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools for connector and component access
- Fuel pressure gauge (if applicable)



Reading P009B

- 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.
- 9B** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P009A** Intake Air Temperature/Ambient Air Temperature Correlation · **P009C** Fuel Pressure Relief Control Circuit Low · **P0193** Fuel Rail Pressure Sensor Circuit High Input

See it working

Watch the animated explainer [Car Relay Test Bench: Test 4-Pin and 5-Pin Relays](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p009b/>

