

GENERIC · POWERTRAIN

P009E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P009E

Fuel Pressure Relief Control Performance/Stuck Off

P009E indicates that the engine control module (ECM) has detected a performance problem with the fuel pressure relief control circuit, specifically that the relief valve or its control is stuck in the off position, preventing proper pressure regulation. The ECM commands the relief control to open or close and monitors the resulting fuel pressure change; when the pressure does not respond as expected, it sets this code.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

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, especially when the engine is cold
- Extended cranking time before the engine starts
- Reduced engine power or limp mode under acceleration
- Poor fuel economy or rich-running exhaust smell
- Hard starting or stalling after refueling

Common causes, most likely first

- 1 Faulty fuel pressure relief valve solenoid or stuck relief valve
- 2 Wiring damage (open, short, or corrosion) in the relief control circuit
- 3 Failed fuel pressure sensor providing inaccurate feedback
- 4 Restricted fuel filter or fuel line causing abnormal pressure
- 5 Weak or failing high-pressure fuel pump
- 6 ECM software issue or internal driver fault (rare)



How to diagnose and fix it

- 1 Connect a scan tool and verify the code is current, then check for related fuel system codes
- 2 Inspect the fuel pressure relief valve connector and wiring for damage or corrosion
- 3 Measure resistance of the relief valve solenoid and compare to manufacturer specification
- 4 Test fuel pressure with a mechanical gauge and compare to commanded values
- 5 Check the fuel pressure sensor signal for rationality and compare with actual pressure
- 6 Perform a circuit test from the ECM to the relief valve to rule out wiring faults
- 7 Replace the fuel pressure relief valve or solenoid if tests confirm it is stuck off

Relief valve stuck off is not always the valve

- A stuck-off relief valve can be caused by debris in the fuel system, so flushing the lines may be necessary after replacement.
- The ECM may set P009E when the fuel pressure sensor is biased, even if the relief valve is functioning correctly.
- In some vehicles, the relief valve is integrated into the high-pressure fuel pump and cannot be serviced separately.
- Intermittent wiring faults at the relief valve connector often mimic a failed valve and are missed during diagnosis.
- After repairs, a fuel pressure relearn or adaptive reset may be required to clear the code permanently.

Can I keep driving with P009E?

You can usually drive with this code, but avoid heavy acceleration or towing until it is diagnosed, as improper fuel pressure can cause poor performance and increased emissions. If the engine enters limp mode or stalls, seek service immediately.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Fuel pressure test gauge
- Factory service information for circuit specifications
- Basic hand tools (sockets, wrenches, screwdrivers)



Reading P009E

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

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P009D** Fuel Pressure Relief Control Circuit High · **P0191** Fuel Rail Pressure Sensor Circuit Range/Performance · **P0193** Fuel Rail Pressure Sensor Circuit High Input

See it working

Watch the animated explainer [How a Fuel Injector Works: Pulse Width and Spray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p009e/>

