

GENERIC · POWERTRAIN

P0092

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0092

Fuel Pressure Regulator 1 Control Circuit High

P0092 is a generic powertrain code indicating that the engine control module (ECM) has detected an abnormally high voltage on the control circuit for fuel pressure regulator 1, which is the primary regulator on the engine. The ECM commands a specific current or duty cycle to the regulator solenoid, and the feedback circuit reports a voltage above the expected range, signaling an open circuit, short to power, or a faulty regulator.

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
- Reduced engine performance or hesitation during acceleration
- Poor fuel economy due to incorrect fuel pressure
- Hard starting or extended cranking before the engine fires
- In rare cases, a rich fuel smell or black smoke from the exhaust

Common causes, most likely first

- 1 Faulty fuel pressure regulator solenoid or its internal coil
- 2 Open or high-resistance wiring in the control circuit between the ECM and the regulator
- 3 Short to voltage on the control circuit, often from chafed insulation or a pinched wire
- 4 Corroded or loose electrical connector at the fuel pressure regulator
- 5 Failed ECM driver for the fuel pressure regulator circuit
- 6 Poor ground connection for the fuel pressure regulator circuit



How to diagnose and fix it

- 1 Connect a scan tool and verify the code is current, then check for any related codes and freeze-frame data
- 2 Visually inspect the fuel pressure regulator connector and wiring for damage, corrosion, or loose pins
- 3 Measure the resistance of the fuel pressure regulator solenoid and compare it to the manufacturer's specification
- 4 Back-probe the control circuit at the ECM and check for an open or short to voltage with a multimeter
- 5 Perform a voltage drop test on the ground circuit to rule out high resistance
- 6 If the wiring and regulator test good, substitute a known-good regulator or use a lab scope to verify the ECM driver signal
- 7 Clear the code and test-drive the vehicle to confirm the repair and ensure the code does not return

What the high voltage reading really means

- A high voltage on the control circuit often indicates an open circuit rather than a short, because the ECM pulls the circuit up to a reference voltage when the driver is off.
Many technicians replace the fuel pressure regulator only to find a chafed wire in the harness near the intake manifold or valve cover, so always inspect the entire circuit before condemning the part.
- This code can be set by a weak or failing battery or charging system, as low system voltage can cause the ECM to misinterpret the feedback signal.
- On some vehicles, the fuel pressure regulator is part of the fuel pump assembly in the tank, making electrical access difficult and increasing the chance of misdiagnosis.
A dirty or clogged fuel filter can cause the regulator to work harder and eventually set this code, so check fuel pressure and filter condition as part of the diagnosis.

Can I keep driving with P0092?

You can usually drive the vehicle with this code, but avoid heavy acceleration or towing until it is repaired, as incorrect fuel pressure can cause poor performance and increased emissions. If the engine runs rough or stalls, have it checked promptly to prevent damage to the catalytic converter.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Back-probe kit or breakout box
- Fuel pressure test gauge
- Lab scope (optional for advanced diagnosis)



Reading P0092

- 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.
- 92** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0090** Fuel Pressure Regulator 1 Control Circuit · **P0091** Fuel Pressure Regulator 1 Control Circuit Low · **P0093** Fuel System Leak Detected - Large Leak

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0092/>

