

GENERIC · POWERTRAIN

P0091

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0091

Fuel Pressure Regulator 1 Control Circuit Low

P0091 means the engine computer has detected that the electrical circuit controlling the fuel pressure regulator on bank 1 is showing a low voltage condition, which usually indicates a short to ground or an open circuit. The regulator itself may be mechanical, but the computer is specifically reporting a problem with the control wire that commands it.

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

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or stumbling acceleration if the regulator is stuck at low pressure
- Extended cranking before the engine starts, or a no-start condition
- Reduced engine power or limp mode in some vehicles
- Poor fuel economy or black smoke from the tailpipe if the regulator fails rich
- Intermittent misfire codes or hesitation under load

Common causes, most likely first

- 1 Damaged or chafed control wire shorting to ground
- 2 Corroded or loose electrical connector at the fuel pressure regulator
- 3 Failed fuel pressure regulator solenoid or control valve
- 4 Open circuit in the regulator control wiring or a blown fuse
- 5 Faulty engine control module driver for the regulator circuit
- 6 Internal short in the regulator causing excessive current draw



How to diagnose and fix it

- 1 Scan all modules for stored codes and record freeze-frame data to confirm the fault conditions
- 2 Visually inspect the regulator connector and wiring for corrosion, chafing, or loose pins
- 3 Measure resistance of the regulator solenoid and compare to manufacturer specification
- 4 Check for voltage on the control wire with the key on and engine off, looking for a short to ground
- 5 Perform a wiggle test on the harness while monitoring live data to catch intermittent faults
- 6 If wiring and connector are good, test the regulator with a known-good unit or follow the factory diagnostic flow chart
- 7 Clear codes and verify the repair with a road test under the same conditions that set the original code

What the low circuit code really means

- A low circuit code does not automatically condemn the regulator; a shorted wire or corroded connector is just as common and far cheaper to fix.
- Some vehicles use a fuel pressure control module that can set P0091 even when the regulator itself is fine, so always check for related module codes.
- The regulator may be mechanically stuck while the electrical circuit tests good, so live fuel pressure data is essential before replacing parts.
- Intermittent P0091 codes often appear after engine wash or in wet weather when moisture enters a connector, so inspect for water intrusion.
- A failed regulator can cause fuel to leak into the vacuum line on some designs, leading to rich running and a low circuit code simultaneously.

Can I keep driving with P0091?

You can usually drive cautiously to a repair shop if the engine runs smoothly and the light is steady, but avoid heavy acceleration or towing. If the engine stumbles, stalls, or the light flashes, stop driving and have the vehicle towed to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Fuel pressure test gauge
- Wiring diagram for the specific vehicle
- Basic hand tools and terminal pick set



Reading P0091

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

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0092** Fuel Pressure Regulator 1 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 the PCV System Works: Crankcase Ventilation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0091/>

