

GENERIC · POWERTRAIN

P2C01

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2C01

Fuel Pressure Regulator D Performance

P2C01 indicates that the powertrain control module (PCM) has detected a performance fault in the fuel pressure regulator circuit, meaning the regulator is not maintaining the commanded fuel pressure within the expected range. The PCM monitors fuel pressure via a sensor and compares actual pressure to the desired pressure, setting this code when the deviation exceeds calibrated limits for a specified time.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling during acceleration due to inconsistent fuel delivery
- Reduced engine power or hesitation when accelerating
- Poor fuel economy as the regulator fails to maintain optimal pressure
- Hard starting or extended cranking, especially when the engine is cold
- In rare cases, a rich or lean fuel mixture code may accompany this code

Common causes, most likely first

- 1 Faulty fuel pressure regulator solenoid or mechanical regulator assembly
- 2 Clogged or restricted fuel filter or fuel line
- 3 Weak or failing fuel pump not supplying adequate volume
- 4 Wiring issues such as open, short, or high resistance in the regulator control circuit
- 5 Corroded or loose electrical connectors at the regulator or PCM
- 6 Fuel pressure sensor malfunction providing inaccurate feedback to the PCM
- 7 Mechanical binding or internal leakage within the regulator

How to diagnose and fix it

- 1 Perform a visual inspection of the fuel pressure regulator, wiring, and connectors for damage or corrosion
- 2 Check fuel pressure with a mechanical gauge and compare to manufacturer specifications
- 3 Test the regulator control circuit for continuity, shorts, and resistance using a digital multimeter
- 4 Inspect and replace the fuel filter if restricted, then retest fuel pressure
- 5 Command the regulator with a scan tool to verify it responds to changes in duty cycle
- 6 If electrical and pressure tests indicate a faulty regulator, replace the fuel pressure regulator
- 7 Clear the code and perform a road test to confirm the repair and ensure the code does not return



Don't overlook the fuel pressure sensor

- A skewed fuel pressure sensor can report false pressure readings, leading to a P2C01 without any actual regulator fault.
- Restricted fuel return lines or a kinked hose can cause pressure deviations that mimic a failed regulator.
- On some vehicles, the fuel pressure regulator is integrated into the fuel pump module, making replacement more involved than expected.
- Intermittent wiring faults at the regulator connector often set P2C01 only under specific conditions like vibration or temperature changes.
- A weak fuel pump may not always set a pump-specific code but can cause low pressure that triggers P2C01.

Can I keep driving with P2C01?

Driving with P2C01 is generally possible but not recommended for extended periods, as incorrect fuel pressure can lead to poor performance and potentially damage other components. Avoid heavy acceleration and towing until the fault is diagnosed and repaired.

Tools that help

- OBD-II scan tool with live data capability
- Fuel pressure gauge
- Digital multimeter
- Basic hand tools (wrenches, screwdrivers, pliers)
- Service manual or wiring diagram for the specific vehicle

Reading P2C01

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
01	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 · **P0171** System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1)



See it working

Watch the animated explainer [Manual Car Driving Simulator: Learn Clutch Control](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2c01/>

