

GENERIC · POWERTRAIN

P00CA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00CA

Fuel Pressure Regulator A Solenoid Supply Voltage Control Circuit High

P00CA indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the supply control circuit for the fuel pressure regulator A solenoid. This means the circuit is likely shorted to voltage, open, or the solenoid itself has failed, preventing the PCM from properly regulating fuel pressure.

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

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling during acceleration due to incorrect fuel pressure
- Reduced engine performance or power, especially under load
- Poor fuel economy or rich-running conditions
- Difficulty starting or intermittent stalling
- A gasoline odor from the exhaust or engine bay

Common causes, most likely first

- 1 Short to voltage on the supply control circuit wiring
- 2 Open or high-resistance connection in the solenoid supply circuit
- 3 Failed fuel pressure regulator solenoid
- 4 Corroded or damaged electrical connector at the solenoid
- 5 Faulty powertrain control module (PCM) driver circuit
- 6 Blown fuse or relay supplying power to the solenoid circuit



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for related codes in other modules
- 2 Inspect the solenoid connector and wiring for corrosion, chafing, or loose pins
- 3 Measure resistance of the fuel pressure regulator solenoid and compare to specification
- 4 Check for short to voltage on the supply control circuit using a multimeter
- 5 Test the PCM driver output with a noid light or oscilloscope if the circuit appears intact
- 6 Repair or replace damaged wiring, connectors, or the solenoid as needed
- 7 Clear codes and perform a road test to confirm the repair

What Most Techs Miss on P00CA

- A shorted solenoid coil can back-feed voltage onto the control circuit, mimicking a wiring short and leading to unnecessary PCM replacement.
- The PCM may set P00CA intermittently if the solenoid connector is loose or corroded, so always wiggle-test the harness while monitoring live data.
- Some vehicles use a shared power supply for multiple solenoids; a fault in one can affect the voltage seen on the regulator circuit, so check for other codes.
- A failed fuel pressure regulator solenoid does not always cause driveability symptoms, so the code may be the only clue and should not be ignored.
- Aftermarket electrical accessories tapped into the harness can introduce voltage spikes that trigger this code, so inspect for non-factory wiring.

Can I keep driving with P00CA?

You can usually drive the vehicle to a repair shop, but avoid heavy acceleration or towing because incorrect fuel pressure may cause poor performance or increased emissions. If the engine runs rough or stalls, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light or noid light
- Oscilloscope (optional for advanced diagnosis)
- Wire repair kit and electrical contact cleaner



Reading P00CA

- 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.
- CA** 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 · **P00C9** Fuel Pressure Regulator A Solenoid Supply Voltage Control Ci · **P00CB** Fuel Volume Regulator Solenoid Supply Voltage Control Circui

See it working

Watch the animated explainer [How a Supercharger Works: Roots Blower in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00ca/>

