

GENERIC · POWERTRAIN

P00C6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00C6

Fuel Rail Pressure Too Low - Engine Cranking

P00C6 means the powertrain control module (PCM) commanded a certain fuel rail pressure during engine cranking but the fuel pressure sensor reported a value below the expected threshold. The PCM sets this code when the measured rail pressure stays too low while the starter is turning the engine, indicating the high-pressure fuel system cannot build enough pressure to start or run properly.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Engine cranks but does not start, or starts only after prolonged cranking
- Long crank time before the engine catches, especially when cold
- Rough idle or stalling immediately after startup
- Reduced engine power or limp mode once the engine is running
- Fuel smell or visible fuel leaks around the high-pressure pump or rail
- Often no symptoms besides the warning light if the fault is intermittent

Common causes, most likely first

- 1 Weak or failing high-pressure fuel pump (HPFP) unable to build cranking pressure
- 2 Low fuel level or restricted fuel supply from a clogged fuel filter or failing in-tank lift pump
- 3 Leaking or stuck-open fuel injector causing pressure to bleed off during cranking
- 4 Faulty fuel rail pressure sensor sending an inaccurate low reading to the PCM
- 5 Air intrusion into the fuel system from a loose fitting or damaged supply line
- 6 Wiring or connector damage at the fuel rail pressure sensor or fuel pressure control valve
- 7 Contaminated fuel or a restricted fuel rail inlet screen reducing flow



How to diagnose and fix it

- 1 Check for stored and pending codes in all modules and verify battery voltage is adequate for reliable cranking
- 2 Inspect fuel level, fuel quality, and the low-pressure supply circuit for restrictions or air leaks
- 3 Connect a scan tool and compare commanded versus actual fuel rail pressure during cranking to confirm the low-pressure condition
- 4 Perform a fuel pressure leak-down test to see whether pressure bleeds off through an injector or the high-pressure pump
- 5 Inspect the fuel rail pressure sensor and its wiring for corrosion, chafing, or loose connections, and verify the sensor signal with a multimeter
- 6 Test the high-pressure fuel pump output and the fuel pressure control valve operation according to the manufacturer's service procedure
- 7 Repair or replace the confirmed faulty component, clear the codes, and verify the engine starts with rail pressure within specification

Cranking pressure faults that fool technicians

- A weak battery or slow cranking speed can cause P00C6 because the high-pressure pump cannot generate enough pressure at low engine RPM, so always verify cranking speed before condemning fuel components.
- The fuel rail pressure sensor can report low pressure even when the mechanical system is healthy, so compare its live reading against a mechanical gauge before replacing the high-pressure pump.
- A stuck-open or leaking injector often sets P00C6 together with misfire or rich-condition codes because it bleeds rail pressure down during cranking.
- Air trapped in the fuel system after a filter change or running the tank dry can trigger this code until the system is properly primed and purged.
- Some vehicles set P00C6 only when the engine is cold, which points to a pressure control valve or pump seal that does not hold pressure overnight rather than a completely failed pump.

Can I keep driving with P00C6?

Do not continue driving when P00C6 is active because the engine may stall or fail to restart, leaving you in a dangerous position. If the vehicle still runs, drive only to a safe location or workshop and avoid high-load driving until the fuel pressure fault is repaired.

Tools that help

- OBD-II scan tool with live fuel pressure data
- Fuel pressure test gauge kit
- Digital multimeter
- Basic hand tools and socket set
- Factory service information for pressure specifications



Reading P00C6

- 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.
- C6** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0190** Fuel Rail Pressure Sensor Circuit Malfunction · **P0191** Fuel Rail Pressure Sensor Circuit Range/Performance · **P0300** Random/Multiple Cylinder Misfire Detected

See it working

Watch the animated explainer [Helicopter Simulator: Take Off, Hover and Land](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00c6/>

