

GENERIC · POWERTRAIN

P01C7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P01C7

Fuel Pressure Sensor A Circuit Intermittent/Erratic

P01C7 indicates that the powertrain control module (PCM) has detected an intermittent or erratic signal from the fuel pressure sensor A circuit, which monitors fuel pressure in the high-pressure fuel system on gasoline direct-injection engines. The PCM sets this code when the sensor voltage or pressure reading jumps unpredictably rather than failing completely, making fuel delivery calculations unreliable.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Intermittent engine stumble or hesitation during acceleration
- Rough idle or fluctuating idle speed
- Reduced engine power or limp mode under load
- Poor fuel economy or increased fuel consumption
- Hard starting or extended cranking, especially when cold

Common causes, most likely first

- 1 Faulty fuel pressure sensor A with an internal intermittent connection
- 2 Damaged or chafed wiring harness to the fuel pressure sensor
- 3 Corroded or loose electrical connector at the sensor
- 4 Poor ground connection for the sensor circuit
- 5 Contaminated or restricted fuel filter causing pressure pulsations
- 6 Failing high-pressure fuel pump delivering erratic pressure
- 7 PCM software issue or internal driver fault (rare)



How to diagnose and fix it

- 1 Inspect the fuel pressure sensor connector and wiring for corrosion, chafing, or loose pins
- 2 Check for technical service bulletins (TSBs) and confirm the PCM has the latest calibration
- 3 Measure sensor reference voltage and ground at the connector with a digital multimeter
- 4 Monitor live fuel pressure data on a scan tool while wiggling the harness to reproduce the intermittent signal
- 5 Test the fuel pressure sensor output with a scope or multimeter and compare to specifications
- 6 Replace the fuel pressure sensor if tests confirm an erratic output
- 7 If the sensor and wiring are good, test the high-pressure fuel pump and fuel filter for restrictions

Intermittent Fuel Pressure Sensor Traps

- A loose or corroded ground connection at the chassis can cause erratic sensor readings that mimic a failed sensor, so always verify ground integrity before replacing parts.
- The code can be set by a momentary voltage spike from a failing alternator or ignition system, so check charging system stability if the sensor tests good.
- Some aftermarket fuel pressure sensors have poor calibration out of the box, leading to repeat codes even after replacement; use OEM-quality parts.
- Intermittent faults often leave no freeze-frame data, so a road test with a scan tool recording live data is essential to catch the glitch.
- A restricted fuel filter can cause pressure pulsations that the sensor interprets as erratic, so fuel system maintenance history matters.

Can I keep driving with P01C7?

You can usually drive the vehicle short distances to a repair shop, but avoid aggressive acceleration or heavy loads because an erratic fuel pressure signal can cause sudden power loss or stalling. If the engine stumbles severely or enters limp mode, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope (optional for signal analysis)
- Fuel pressure test gauge
- Wire terminal removal tools
- Service information for wiring diagrams and specifications



Reading P01C7

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- C7** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P01C5** Fuel Pressure Sensor A Circuit Low · **P01C6** Fuel Pressure Sensor A Circuit High · **P01C8** Fuel Rail/System Pressure - Too Low Bank 2

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p01c7/>

