

GENERIC · POWERTRAIN

P01C2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P01C2

Fuel Rail Pressure Sensor Circuit Intermittent/Erratic Bank 2

P01C2 means the powertrain control module (PCM) is seeing an intermittent or erratic signal from the fuel rail pressure sensor on bank 2, which monitors the high-pressure fuel rail feeding the second bank of cylinders. The PCM compares the sensor voltage against expected values and flags the code when the signal drops out, spikes, or jumps around instead of tracking rail pressure smoothly.

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 symptoms besides the warning light
- Intermittent engine stumble, hesitation, or misfire under acceleration or load
- Rough idle or fluctuating idle speed that comes and goes
- Reduced power or limp-home mode when the PCM substitutes a default rail pressure value
- Hard starting or extended cranking, especially when the fault is present at startup
- Poor fuel economy or black smoke from the exhaust if rail pressure control is affected

Common causes, most likely first

- 1 Faulty fuel rail pressure sensor on bank 2, with internal electronics that break down intermittently with heat or vibration
- 2 Damaged, chafed, or corroded wiring in the sensor circuit, especially where the harness passes near hot or moving components
- 3 Loose or contaminated sensor connector pins causing an unstable electrical connection
- 4 Poor ground or reference voltage supply shared with other sensors on the same circuit
- 5 Fuel system contamination or debris interfering with sensor readings on the high-pressure side
- 6 A failing high-pressure fuel pump on bank 2 that produces pressure pulsations the sensor reports as erratic
- 7 PCM internal fault or software issue, which is rare but possible after all other causes are ruled out



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data for P01C2 to see the conditions when it set
- 2 Inspect the bank 2 fuel rail pressure sensor connector and harness for chafing, corrosion, loose pins, and heat damage
- 3 Back-probe the sensor signal, reference voltage, and ground wires and wiggle-test the harness while watching live data for dropouts
- 4 Compare live fuel rail pressure sensor readings against a mechanical gauge or the commanded pressure to confirm the sensor is lying
- 5 Check for fuel system contamination and verify high-pressure pump output on bank 2 if pressure readings are unstable
- 6 Replace the bank 2 fuel rail pressure sensor only after electrical and pressure tests confirm it is the source of the erratic signal
- 7 Clear codes and perform a road test with live data logging to verify the intermittent signal is gone and no codes return

Intermittent sensor faults that fool parts cannons

- A sensor that tests perfectly when cold can still set P01C2 once the engine bay heat-soaks, so always wiggle-test and heat-test the circuit before condemning the sensor.
- The code does not always mean the sensor is bad; a chafed signal wire that shorts only over bumps will produce the same intermittent flag and is far cheaper to fix.
- Low fuel pressure from a tired high-pressure pump on bank 2 can make the sensor signal look erratic, so verify actual rail pressure before replacing electronics.
- Corrosion inside the connector that is invisible from the outside often causes this code, and cleaning or repinning the connector resolves it without any new parts.
- A weak battery or charging system that drops voltage during cranking can cause the PCM to misread the sensor signal and store an intermittent code that never returns.

Can I keep driving with P01C2?

You can usually drive with P01C2 because the PCM substitutes a default rail pressure value, but avoid hard acceleration and towing until it is diagnosed. If the engine stumbles, misfires, or enters limp mode, have it checked promptly to prevent damage to the high-pressure fuel system.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Fuel pressure test gauge rated for high-pressure systems
- Wiring diagram for the bank 2 fuel rail pressure sensor circuit
- Contact cleaner and dielectric grease for connector service

Reading P01C2

- 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.
- C2** The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0192** Fuel Rail Pressure Sensor Circuit Low Input · **P01C1** Fuel Rail Pressure Sensor Circuit High Bank 2 · **P01C3** Fuel Pressure Sensor A Circuit

See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p01c2/>

