

GENERIC · POWERTRAIN

P2B01

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2B01

Cylinder 2 Injection Pulse Performance

P2B01 indicates that the powertrain control module (PCM) has detected a performance problem with the fuel injection pulse for cylinder 2, meaning the electrical signal or the resulting fuel delivery is not meeting expected parameters. The PCM monitors the injector circuit and often compares crankshaft speed fluctuations to determine if cylinder 2 is contributing power unevenly.

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 misfire sensation, especially when the engine is cold
- Noticeable loss of power or hesitation during acceleration
- Shaking or vibration from the engine bay that may feel like a stumble
- Increased fuel consumption due to inefficient combustion
- In some cases, the engine may enter limp mode to protect the catalytic converter

Common causes, most likely first

- 1 Faulty fuel injector for cylinder 2 (clogged, stuck, or electrically failed)
- 2 Damaged or corroded wiring or connector at the cylinder 2 injector
- 3 Open or short circuit in the injector control circuit
- 4 Failed driver circuit inside the powertrain control module (PCM)
- 5 Low fuel pressure or restricted fuel delivery affecting that injector
- 6 Mechanical issue such as a faulty spark plug, ignition coil, or compression problem on cylinder 2

How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 2 injector connector and wiring for damage or corrosion
- 2 Use a scan tool to check for related misfire codes and freeze-frame data to confirm the fault
- 3 Test the injector resistance with a multimeter and compare to specifications
- 4 Check fuel pressure and inspect for restricted fuel filter or weak pump
- 5 Swap the cylinder 2 injector with another cylinder to see if the misfire moves
- 6 Perform a compression test and ignition system check to rule out mechanical or spark issues
- 7 If the injector and wiring are good, test the PCM driver circuit with a noid light or oscilloscope



Don't overlook these P2B01 traps

- A clogged or failing injector often causes this code without setting a traditional misfire code, so technicians who only look for P0302 may miss it.
- Wiring harness chafing near the intake manifold or valve cover is a common cause that is frequently overlooked during diagnosis.
- The PCM may set P2B01 even when the injector is functioning mechanically but the electrical pulse is slightly out of spec, so replacing the injector without testing the circuit can be a costly mistake.
- Low fuel pressure from a weak pump can affect one cylinder more than others and trigger this code, so always verify fuel delivery before condemning the injector.
- A faulty ignition coil or spark plug on cylinder 2 can cause the PCM to misinterpret the injector performance, so ignition system health must be confirmed first.

Can I keep driving with P2B01?

Driving with P2B01 is generally safe for short distances, but prolonged driving with a misfire can damage the catalytic converter and reduce fuel economy. Avoid heavy acceleration or towing until the fault is repaired.

Tools that help

- OBD-II scan tool with live data and misfire monitoring
- Digital multimeter
- Noid light or injector pulse tester
- Fuel pressure gauge
- Compression tester
- Basic hand tools and wiring repair kit

Reading P2B01

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
01	The exact fault within that area.

Often seen with

P0202 Injector Circuit Malfunction - Cylinder 2 · **P0261** Cylinder 1 Injector Circuit Low · **P0264** Cylinder 2 Injector Circuit Low · **P0302** Cylinder 2 Misfire Detected · **P2146** Fuel Injector Group 'A' Supply Voltage Circuit/Open



See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2b01/>

