

GENERIC · POWERTRAIN

P2B05

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2B05

Cylinder 6 Injection Pulse Performance

P2B05 indicates that the powertrain control module has detected an abnormal injection pulse performance specifically for cylinder number six, meaning the electrical command sent to that cylinder's fuel injector did not produce the expected response in terms of timing, duration, or current draw. The computer monitors the injector driver circuit and compares commanded pulse width against feedback from the circuit, and it sets this code when the actual pulse deviates from the expected profile beyond a calibrated threshold.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A noticeable misfire or rough idle that may be intermittent
- Reduced engine power or hesitation during acceleration
- Shaking or vibration felt through the steering wheel or seat
- A slight decrease in fuel economy over time
- In some cases, a rich or lean exhaust smell depending on whether the injector is stuck open or closed

Common causes, most likely first

- 1 Faulty fuel injector on cylinder six with a degraded internal coil or stuck pintle
- 2 Damaged or corroded electrical connector at the cylinder six injector
- 3 Chafed or open wiring in the injector harness between the PCM and the injector
- 4 Failed injector driver inside the powertrain control module (PCM)
- 5 Low fuel pressure or restricted fuel delivery affecting that cylinder's injector performance
- 6 Contamination or debris in the fuel rail partially clogging the cylinder six injector



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder six injector connector and harness for corrosion, chafing, or loose pins
- 2 Measure the resistance of the cylinder six injector with a multimeter and compare it to the manufacturer's specification
- 3 Use a noid light or oscilloscope to verify that the PCM is sending a proper pulse signal to the injector
- 4 Check fuel pressure at the rail and compare it to the specified value for the engine
- 5 Swap the cylinder six injector with a known-good injector from another cylinder to see if the misfire follows the injector
- 6 If the injector and wiring test good, test the injector driver circuit in the PCM for proper operation and replace the PCM if faulty
- 7 After repairs, clear the code and perform a road test to confirm the fault does not return

What the injector pulse code really tells you

- A P2B05 can be set by a marginal injector that still flows fuel but has an electrical signature outside the expected window, so the engine may run fine while the code is stored.
- Technicians often replace the injector only to find the real problem is a rubbed-through wire in the harness near the intake manifold, so always inspect the loom before condemning the injector.
- A weak ignition coil or spark plug on cylinder six can cause a misfire that mimics an injector fault, so rule out secondary ignition components before chasing the injector circuit.
- Low fuel pressure from a tired fuel pump can cause the PCM to see an abnormal injector pulse on one or more cylinders, so check fuel pressure before replacing parts.
- This code is specific to the injector driver circuit and does not directly indicate a mechanical engine fault, but a persistent misfire can damage the catalytic converter over time.

Can I keep driving with P2B05?

You can usually drive the vehicle with this code, but avoid heavy acceleration and long trips until it is diagnosed, because a persistent misfire can overheat and damage the catalytic converter. If the check engine light begins flashing, stop driving and have the vehicle towed to a repair shop.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Noid light or oscilloscope
- Fuel pressure gauge
- Basic hand tools for connector and injector access



Reading P2B05

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

Often seen with

P0206 Injector Circuit/Open - Cylinder 6 · **P0263** Cylinder 1 Contribution/Balance · **P0306** Cylinder 6 Misfire Detected · **P2B04** Cylinder 5 Injection Pulse Performance · **P2B06** Cylinder 7 Injection Pulse Performance

See it working

Watch the animated explainer [How Drive-by-Wire Works: Electronic Throttle Body](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2b05/>

