

GENERIC · POWERTRAIN

P2B06

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2B06

Cylinder 7 Injection Pulse Performance

P2B06 indicates that the engine control module has detected an abnormal injection pulse performance specifically on cylinder 7, meaning the electrical or hydraulic response of that injector did not match the commanded pulse within expected limits. The module monitors injector current and voltage waveforms or fuel pressure response to flag this fault when the pulse width or injector reaction time falls outside the calibrated window.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or misfire sensation, especially when the engine is cold
- Reduced engine power or sluggish acceleration under load
- Increased fuel consumption due to improper fuel delivery on cylinder 7
- Occasional engine stumble or hesitation during light throttle cruise
- Fuel odor or black smoke from the exhaust in severe cases

Common causes, most likely first

- 1 Faulty or clogged fuel injector on cylinder 7
- 2 Damaged or corroded electrical connector at the cylinder 7 injector
- 3 Chafed or open injector wiring harness between the ECM and cylinder 7 injector
- 4 Internal ECM driver circuit fault for the cylinder 7 injector
- 5 Low fuel pressure or restricted fuel rail affecting injector performance
- 6 Mechanical engine issue such as low compression on cylinder 7 altering injector pulse response



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the fault is current and specific to cylinder 7
- 2 Inspect the cylinder 7 injector connector and wiring for corrosion, chafing, or loose pins
- 3 Measure injector resistance and compare it to the manufacturer's specification for that injector
- 4 Perform a fuel pressure and volume test to rule out a supply issue affecting all cylinders
- 5 Use a lab scope to compare the cylinder 7 injector current waveform against a known-good cylinder
- 6 Swap the cylinder 7 injector with another cylinder to see if the fault follows the injector
- 7 If the fault persists after electrical and fuel checks, test the ECM driver circuit or replace the ECM as a last resort

Why cylinder 7 injector codes mislead

- A clogged or partially restricted injector often sets P2B06 without any driveability complaint because the ECM detects the altered pulse response before the driver feels a misfire.
- Technicians frequently replace the cylinder 7 injector only to find the real problem is a chafed wire in the harness near the intake manifold or valve cover where heat and vibration take a toll.
- Low fuel pressure from a weak pump or clogged filter can cause injector pulse performance codes on multiple cylinders, so always check fuel supply before condemning an individual injector.
- A mechanical fault such as a worn camshaft lobe or low compression on cylinder 7 can change the injector's electrical response and set this code even when the injector itself is healthy.
- This code does not always mean the injector has failed electrically; it can be set by a momentary glitch in the ECM driver circuit that requires a wiggle test and scope capture to reproduce.

Can I keep driving with P2B06?

You can usually continue driving to a repair shop if the engine runs smoothly and the check engine light is steady, but avoid heavy acceleration or towing until the fault is diagnosed. If the light flashes or the engine misfires severely, stop driving to prevent catalytic converter damage from unburned fuel.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter for resistance and voltage checks
- Automotive lab scope for injector waveform analysis
- Fuel pressure gauge and adapter kit
- Injector noid light or injector pulse tester
- Hand tools for connector and component access



Reading P2B06

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

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0207** Injector Circuit/Open - Cylinder 7 · **P0307** Cylinder 7 Misfire Detected · **P2149** Fuel Injector Group 'B' Supply Voltage Circuit/Open · **P2B05** Cylinder 6 Injection Pulse Performance

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2b06/>

