

GENERIC · POWERTRAIN

P03B2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03B2

Cylinder 3 Combustion Performance

P03B2 is a generic powertrain code indicating that the engine control module (ECM) has detected a combustion performance problem specifically on cylinder number 3. The ECM monitors crankshaft speed fluctuations and compares them to expected values; when cylinder 3 contributes less power than the others, the code is stored and the check engine light is illuminated.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Rough idle or engine vibration, especially noticeable when stopped in gear
- Noticeable misfire or hesitation during acceleration
- Often no symptoms besides the warning light, particularly in early stages
- Reduced fuel economy due to incomplete combustion
- Shaking or jerking at steady cruising speeds
- In some cases, a flashing check engine light indicating a severe misfire that can damage the catalytic converter

Common causes, most likely first

- Worn or fouled spark plug on cylinder 3
- Faulty ignition coil or spark plug wire for cylinder 3
- Clogged or leaking fuel injector on cylinder 3
- Vacuum leak affecting cylinder 3 intake path
- Low compression due to worn piston rings, valves, or head gasket
- Faulty crankshaft position sensor or reluctor wheel causing false misfire detection
- Wiring or connector issue to the cylinder 3 injector or coil



How to diagnose and fix it

- 1 Perform a visual inspection of cylinder 3 ignition components and wiring for damage or corrosion
- 2 Swap the ignition coil and spark plug from cylinder 3 with a known-good cylinder to see if the misfire moves
- 3 Use a scan tool to check for pending or stored misfire counters and freeze-frame data
- 4 Test the fuel injector for cylinder 3 with a noid light or injector balance test
- 5 Run a compression test and cylinder leak-down test to rule out mechanical issues
- 6 Check for vacuum leaks using a smoke machine or propane enrichment test
- 7 If all else fails, perform a crankshaft position sensor relearn or inspect the reluctor wheel for damage

Cylinder 3 misfire: look beyond the obvious

- A misfire code for a single cylinder often results from a faulty ignition coil that tests fine when cold but breaks down under heat; swapping it to another cylinder is the quickest way to confirm.
- Fuel injector problems can be intermittent and may not set a code until the engine is under load; a clogged injector often causes a lean condition that the ECM misinterprets as a misfire.
- Low compression on cylinder 3 can be caused by a worn camshaft lobe or a sticking valve, which may not show up in a simple compression test unless the engine is cranked long enough.
- A vacuum leak at the intake manifold gasket near cylinder 3 can cause a lean misfire that mimics a bad injector, so always smoke-test the intake before replacing parts.
- The ECM may falsely report a cylinder 3 misfire if the crankshaft position sensor signal is erratic due to a damaged reluctor wheel or excessive air gap, so inspect the sensor and wheel before condemning ignition or fuel components.

Can I keep driving with P03B2?

You can drive the vehicle short distances to a repair shop, but avoid heavy acceleration and prolonged driving, especially if the check engine light is flashing. A flashing light indicates a severe misfire that can quickly overheat and damage the catalytic converter, so stop driving and seek immediate repair if that occurs.

Tools that help

- OBD-II scan tool with live data and misfire counters
- Spark plug socket and ratchet
- Ignition coil tester or multimeter
- Compression gauge
- Noid light or fuel injector tester
- Vacuum smoke machine



Reading P03B2

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 3** Ignition system and misfire.
- B2** The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0203** Injector Circuit Malfunction - Cylinder 3 · **P0300** Random/Multiple Cylinder Misfire Detected · **P0303** Cylinder 3 Misfire Detected · **P0353** Ignition Coil C Primary/Secondary Circuit Malfunction

See it working

Watch the animated explainer [How a Padlock Works: Pin Tumbler Lock in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03b2/>

