



P03BC

Cylinder 4 Combustion Performance

P03BC is a generic powertrain code indicating that the engine control module has detected a combustion quality problem specifically on cylinder number four, typically by monitoring crankshaft speed fluctuations or ionization current. The computer compares cylinder four's contribution to the others and flags the code when its performance falls outside the expected range, often setting a pending or stored fault before turning on the check engine light.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms at first
- A noticeable engine misfire or rough idle, especially when cold or under light load
- Reduced power and sluggish acceleration, as the engine compensates for a weak cylinder
- Shaking or vibration felt through the steering wheel or seat during idle or low-speed driving
- Occasional flashing check engine light under hard acceleration, indicating a severe misfire that can damage the catalytic converter
- Poor fuel economy or a faint raw fuel smell from the exhaust

Common causes, most likely first

- 1 Worn or fouled spark plug on cylinder four, often from normal wear or incorrect heat range
- 2 Failed ignition coil or spark plug wire dedicated to cylinder four
- 3 Leaking or clogged fuel injector causing an incorrect air-fuel mixture in that cylinder
- 4 Vacuum leak at the intake manifold runner or gasket near cylinder four, leaning out the mixture
- 5 Low compression from worn piston rings, a burned valve, or a faulty head gasket affecting that cylinder
- 6 Mechanical valvetrain issue such as a collapsed lifter or worn cam lobe on cylinder four
- 7 Contaminated engine oil or carbon buildup on the intake valve causing poor combustion



How to diagnose and fix it

- 1 Scan all stored and pending codes and record freeze-frame data to confirm the misfire is isolated to cylinder four
- 2 Perform a visual inspection of the ignition components on cylinder four, checking for cracked coil boots, damaged wires, or oil-fouled plugs
- 3 Swap the ignition coil and spark plug from cylinder four with a known-good cylinder to see if the misfire follows the component
- 4 Conduct a cylinder balance test or use a scan tool to monitor misfire counters per cylinder while manipulating the throttle
- 5 Check fuel injector operation with a noid light or by listening with a stethoscope, and inspect the injector connector for corrosion
- 6 Run a compression test and, if low, a cylinder leak-down test to rule out mechanical faults before replacing ignition parts
- 7 Smoke-test the intake system for vacuum leaks near cylinder four and repair any leaking gaskets or hoses

Why cylinder four misfires are often misdiagnosed

- A P03BC can be set by a faulty crankshaft position sensor or a damaged reluctor wheel, causing the computer to misinterpret normal speed fluctuations as a misfire on cylinder four.
- Many technicians replace the ignition coil first, but a leaking intake manifold gasket near cylinder four can lean out the mixture and trigger the same code without any ignition fault.
- Low fuel pressure or a partially clogged fuel filter can affect cylinder four more than others if it is at the end of the fuel rail, mimicking an injector failure.
- A sticking or misadjusted EGR valve can cause a lean misfire that the computer attributes to a single cylinder, especially at idle or light cruise.
- The code may appear after a recent repair if the wrong heat range spark plug was installed or if an injector connector was not fully seated during reassembly.

Can I keep driving with P03BC?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or sustained high speeds because a persistent misfire can overheat and damage the catalytic converter. If the check engine light flashes, stop driving as soon as it is safe and have the vehicle towed.



Tools that help

- OBD-II scan tool with live data and misfire counter capability
- Spark plug socket and ratchet set
- Compression gauge
- Noid light or fuel injector pulse tester
- Vacuum gauge or smoke machine
- Digital multimeter

Reading P03BC

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.
BC	The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0204** Injector Circuit Malfunction - Cylinder 4 · **P0300** Random/Multiple Cylinder Misfire Detected · **P0304** Cylinder 4 Misfire Detected · **P0354** Ignition Coil D Primary/Secondary Circuit Malfunction

See it working

Watch the animated explainer [How a Six-Speed Manual Gearbox Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03bc/>

