

GENERIC · POWERTRAIN

P03C5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03C5

Cylinder 5 Pressure Variation High

P03C5 indicates that the powertrain control module has detected an abnormally high variation in cylinder 5's contribution to engine power, typically measured through crankshaft speed fluctuations between firing events. The computer compares each cylinder's acceleration signature and flags cylinder 5 when its variation exceeds the calibrated threshold, pointing to a mechanical, fuel, or ignition imbalance specific to that cylinder.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms at first
- Rough idle or a noticeable shake that worsens when the engine is cold
- Misfire-like shudder or hesitation during light acceleration
- Reduced fuel economy as the engine compensates for the weak cylinder
- A flashing check engine light under load if the variation becomes severe enough to risk catalytic converter damage

Common causes, most likely first

- 1 Worn or fouled spark plug in cylinder 5, including incorrect gap or heat range
- 2 Faulty ignition coil or plug boot dedicated to cylinder 5
- 3 Leaking or clogged fuel injector causing an uneven fuel delivery to cylinder 5
- 4 Vacuum leak at the intake runner or injector seal serving cylinder 5
- 5 Low compression from worn rings, a burned valve, or a leaking head gasket on cylinder 5
- 6 Sticking or collapsed hydraulic lifter or rocker arm affecting valve timing on that cylinder
- 7 Carbon buildup on the intake valve or piston crown altering cylinder 5's breathing



How to diagnose and fix it

- 1 Scan all stored and pending codes and record freeze-frame data to confirm the fault is isolated to cylinder 5
- 2 Inspect the spark plug and ignition coil for cylinder 5, swapping the coil with a neighbouring cylinder to see if the code follows
- 3 Perform a cylinder contribution or power balance test with a scan tool to verify which cylinder is weak
- 4 Check fuel injector operation with a noid light or injector balance test, and inspect the injector seal for leaks
- 5 Run a compression test and, if low, a cylinder leak-down test to separate ring, valve, and head gasket faults
- 6 Smoke-test the intake tract to rule out a vacuum leak specific to cylinder 5's runner
- 7 Repair the confirmed mechanical or fuel fault, clear the codes, and verify the variation returns within specification during a road test

Why cylinder 5 variation misleads many technicians

- A P03C5 can be set by a perfectly healthy engine if the crankshaft position sensor signal is erratic, so always check sensor integrity before tearing into the engine.
Swapping the ignition coil to another cylinder is the fastest way to prove whether the fault is ignition-related, yet many people replace the plug first and waste time.
- A vacuum leak at the intake manifold gasket near cylinder 5 can mimic a bad injector and will not show up on a compression test.
- This code does not always mean the cylinder is dead; a partially restricted injector or a marginal plug can produce enough variation to set the code while the engine still feels mostly normal.
Carbon buildup on direct-injection engines often affects one cylinder more than others, so a P03C5 on a high-mileage direct-injection engine should prompt an intake valve inspection.

Can I keep driving with P03C5?

You can usually drive short distances at moderate speed to a repair shop, but avoid heavy acceleration and towing because a persistent cylinder 5 variation can overheat the catalytic converter. If the check engine light flashes, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data and cylinder contribution capability
- Compression gauge and cylinder leak-down tester
- Spark tester and noid light
- Vacuum gauge and smoke machine
- Basic hand tools and a torque wrench



Reading P03C5

- 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.
- C5** The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0205** Injector Circuit/Open - Cylinder 5 · **P0300** Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0305** Cylinder 5 Misfire Detected

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03c5/>

