

GENERIC · POWERTRAIN

P03DA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03DA

Cylinder 7 Combustion Performance

P03DA indicates that the engine computer has detected a combustion performance problem specifically on cylinder 7, typically by monitoring crankshaft speed fluctuations that reveal a misfire. The powertrain control module (PCM) sets this code when cylinder 7 fails to contribute its expected share of power, often counting misfires over a specific drive cycle.

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

Symptoms you may notice

- Illuminated or flashing check engine light, with flashing indicating a severe misfire that can damage the catalytic converter
- Noticeable engine vibration or shaking, especially at idle or under light acceleration
- Reduced engine power and sluggish acceleration
- Rough running or stumbling that may feel like the engine is 'missing'
- Often no symptoms besides the warning light, particularly if the misfire is intermittent
- Poor fuel economy or a fuel smell from the exhaust

Common causes, most likely first

- 1 Worn or fouled spark plug on cylinder 7
- 2 Faulty ignition coil or spark plug wire for cylinder 7
- 3 Leaking or clogged fuel injector on cylinder 7
- 4 Vacuum leak or intake manifold gasket leak affecting cylinder 7
- 5 Low compression due to worn piston rings, valves, or head gasket issues on cylinder 7
- 6 Mechanical valvetrain fault such as a worn cam lobe or collapsed lifter on cylinder 7
- 7 Wiring or connector issue to the cylinder 7 ignition coil or injector



How to diagnose and fix it

- 1 Scan all stored codes and freeze-frame data, then perform a visual inspection of cylinder 7 ignition components and wiring
- 2 Swap the ignition coil and spark plug from cylinder 7 with a known-good cylinder to see if the misfire moves
- 3 Perform a cylinder balance test or misfire counter check with a scan tool to confirm which cylinder is misfiring
- 4 Check fuel injector operation with a noid light or listen for injector pulse, and inspect injector connectors
- 5 Run a compression test and leak-down test on cylinder 7 to rule out mechanical faults
- 6 Perform a vacuum leak test using propane or smoke to check for intake leaks near cylinder 7
- 7 Replace faulty components as identified, clear codes, and verify repair with a road test and misfire monitor

Cylinder 7 misfire traps you should avoid

- A P03DA code can be set by a faulty ignition coil that tests fine when cold but breaks down under load, so always swap components to a different cylinder to confirm the fault follows the part.
- Many technicians replace the spark plug and coil only to find the real cause is a leaking intake manifold gasket that leans out cylinder 7, so a smoke test is essential before parts replacement.
- The PCM may disable the fuel injector for cylinder 7 to protect the catalytic converter once the misfire is severe, which can make the engine run rough even after the original fault is fixed until the code is cleared.
- A misfire on cylinder 7 on V8 engines often points to a failed active fuel management (AFM) or displacement-on-demand lifter, a mechanical issue that will not show up in basic ignition tests.
- Low compression on cylinder 7 can be caused by a head gasket leak that is not yet producing white smoke, so a cooling system pressure test and combustion gas test in the coolant are wise checks.

Can I keep driving with P03DA?

If the check engine light is flashing, stop driving immediately and have the vehicle towed to avoid catalytic converter damage and potential engine damage. If the light is steady, you can drive cautiously to a repair shop but avoid heavy acceleration and prolonged driving.

Tools that help

- OBD-II scan tool with misfire counter and freeze-frame capability
- Spark plug socket and wrench
- Compression tester
- Vacuum gauge or smoke machine
- Noid light or fuel injector test kit
- Digital multimeter



Reading P03DA

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

Often seen with

P0171 System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0307** Cylinder 7 Misfire Detected · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

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/p03da/>

