

GENERIC · POWERTRAIN

P03D0

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03D0

Cylinder 6 Combustion Performance

P03D0 indicates that the engine computer has detected a combustion performance problem specifically on cylinder number 6, typically by monitoring crankshaft speed fluctuations that reveal a weak or inconsistent power stroke. The powertrain control module (PCM) sets this code when cylinder 6's contribution to engine torque falls outside the expected range during normal operation.

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
- Rough idle or engine vibration that may be more pronounced when cold
- Noticeable misfire or hesitation during acceleration
- Reduced fuel economy and increased exhaust emissions
- Shaking or shuddering felt through the steering wheel or seat
- In some cases, a flashing check engine light indicating a severe misfire that can damage the catalytic converter

Common causes, most likely first

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



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 6 ignition coil, spark plug, and injector connectors for damage or corrosion
- 2 Swap the ignition coil and spark plug from cylinder 6 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 to confirm the fault is isolated to cylinder 6
- 4 Run a compression test and, if low, a cylinder leak-down test to assess mechanical condition
- 5 Check fuel injector operation with a noid light or by listening with a stethoscope, and test injector resistance if specified
- 6 Inspect intake manifold gaskets and vacuum lines near cylinder 6 for leaks using a smoke machine
- 7 Repair or replace the confirmed faulty component, clear the codes, and verify the misfire is resolved with a test drive

Cylinder 6 misfire misdiagnosis traps

- A P03D0 can be set by a faulty ignition coil that still fires intermittently, so swapping components with another cylinder is a more reliable test than a simple resistance check.
- Vacuum leaks at the intake manifold gasket often affect a single cylinder on V-type engines, mimicking a bad injector or spark plug.
- Low compression from a worn valve seat or piston ring can cause a consistent misfire that does not respond to ignition or fuel repairs, so always perform a compression test before replacing parts.
- The code may appear after a recent repair if a connector was left loose or a spark plug was cracked during installation, so review recent work first.
- On engines with variable valve timing, a stuck phaser or solenoid can cause a single-cylinder misfire that sets P03D0 without any ignition or fuel fault.

Can I keep driving with P03D0?

You can usually drive the vehicle with a steady check engine light, but avoid heavy acceleration and prolonged idling to prevent catalytic converter damage. If the check engine light flashes, stop driving and have the vehicle towed, as a severe misfire can quickly overheat and ruin the catalytic converter.

Tools that help

- OBD-II scan tool with misfire and freeze-frame data capability
- Compression tester
- Spark tester
- Noid light or fuel injector test kit
- Vacuum gauge or smoke machine
- Basic hand tools and a torque wrench



Reading P03D0

- 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.
- D0** The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0306** Cylinder 6 Misfire Detected · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03d0/>

