

GENERIC · POWERTRAIN

P0305

OBD-II TROUBLE CODE

P0305

Cylinder 5 Misfire Detected

P0305 means the engine computer detected a misfire on cylinder 5, identified by monitoring crankshaft speed fluctuations that occur when that cylinder fails to contribute power. The powertrain control module (PCM) compares the acceleration of the crankshaft after each cylinder's power stroke and flags this code when cylinder 5's contribution falls outside the expected range.

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

Symptoms you may notice

- Often no symptoms besides the warning light, especially at light load or steady cruising
- Noticeable engine shake or vibration at idle that may smooth out as engine speed rises
- Rough running, hesitation, or a stumble during acceleration
- Reduced power and poor fuel economy as the engine compensates for the dead cylinder
- Flashing check engine light under load, indicating a misfire severe enough to damage the catalytic converter
- A raw fuel smell from the exhaust if unburned fuel is passing through the engine

Common causes, most likely first

- Worn or fouled spark plug on cylinder 5, including incorrect gap or a plug damaged during installation
- Failed ignition coil or coil-on-plug boot for cylinder 5, often caused by oil or moisture intrusion
- Faulty or clogged fuel injector on cylinder 5, or a damaged injector connector or wiring
- Vacuum leak at the intake manifold runner or gasket near cylinder 5, leaning out that cylinder
- Low compression on cylinder 5 from worn rings, a burned valve, or a failed head gasket
- Mechanical valvetrain fault such as a collapsed lifter or worn camshaft lobe affecting cylinder 5
- Ignition system secondary problems like a cracked coil housing or carbon tracking on the plug boot



How to diagnose and fix it

- 1 Scan all stored and pending codes and record freeze-frame data to see the conditions when the misfire was set
- 2 Perform a visual inspection of cylinder 5's ignition coil, boot, and spark plug for oil, moisture, or carbon tracking
- 3 Swap the cylinder 5 ignition coil with a known-good coil from another cylinder and see if the misfire follows the coil
- 4 Remove and inspect the cylinder 5 spark plug for wear, fouling, or incorrect gap, and replace it if suspect
- 5 Run a relative compression test or a cylinder leak-down test on cylinder 5 to rule out mechanical faults
- 6 Check fuel injector operation with a noid light or injector balance test, and inspect the injector connector and wiring
- 7 Smoke-test the intake system for vacuum leaks near cylinder 5 and repair any leaking gaskets or hoses

What a cylinder 5 misfire really tells you

- A P0305 does not always mean the spark plug or coil is bad; a vacuum leak or a failing injector can lean out cylinder 5 and set the same code without any ignition fault.
- On engines with variable valve timing or cylinder deactivation, a stuck oil control valve or lifter can cause a misfire that mimics an ignition problem and will not be fixed by replacing the coil.
- A flashing check engine light with P0305 means the misfire is actively dumping unburned fuel into the catalytic converter, and continuing to drive can melt the substrate within minutes.
- Carbon tracking inside a coil boot can cause an intermittent misfire that only appears under high load or damp conditions, so a coil that tests fine on a bench may still be the culprit.
- A misfire counter that shows cylinder 5 misfiring only at idle often points to a vacuum leak or injector issue, while a misfire that appears only under load more commonly points to ignition or compression.

Can I keep driving with P0305?

You can drive cautiously to a repair shop if the check engine light is steady and the engine runs smoothly, but avoid hard acceleration and heavy loads. If the light is flashing or the engine shakes badly, stop driving and have the vehicle towed to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool with live misfire counter and freeze-frame capability
- Spark plug socket and torque wrench
- Ignition coil removal tool or boot puller
- Compression gauge or cylinder leak-down tester
- Noid light or fuel injector balance tester
- Smoke machine for intake leak detection



Reading P0305

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

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0302** Cylinder 2 Misfire Detected · **P0303** Cylinder 3 Misfire Detected · **P0304** Cylinder 4 Misfire Detected

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0305/>

