

GENERIC · POWERTRAIN

P0310

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0310

Cylinder 10 Misfire Detected

P0310 indicates that the engine control module has detected a misfire on cylinder 10, typically by monitoring crankshaft speed fluctuations that occur when that cylinder fails to contribute power. The code is stored when the misfire count exceeds a calibrated threshold, which can be caused by ignition, fuel, compression, or mechanical faults specific to that cylinder.

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

Symptoms you may notice

- Illuminated or flashing check engine light, especially under load
- Noticeable engine vibration or shaking, particularly at idle or during acceleration
- Rough running and reduced power output
- Poor fuel economy due to unburned fuel
- Often no symptoms besides the warning light, especially if the misfire is intermittent
- Possible smell of raw fuel from the exhaust if the misfire is severe

Common causes, most likely first

- 1 Worn or fouled spark plug on cylinder 10
- 2 Faulty ignition coil or spark plug wire for cylinder 10
- 3 Clogged or leaking fuel injector on cylinder 10
- 4 Vacuum leak affecting the intake runner for cylinder 10
- 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 ignition or injector circuit for cylinder 10



How to diagnose and fix it

- 1 Perform a visual inspection of the ignition coil, spark plug, and injector connector for cylinder 10, looking for damage or corrosion
- 2 Swap the ignition coil and spark plug from cylinder 10 with a known-good cylinder to see if the misfire moves
- 3 Use a scan tool to check misfire counters and confirm which cylinder is misfiring under what conditions
- 4 Test the fuel injector for cylinder 10 with a noid light or injector balance test
- 5 Run a compression test and a cylinder leak-down test on cylinder 10 to rule out mechanical faults
- 6 Check for vacuum leaks at the intake manifold and hoses near cylinder 10
- 7 Repair or replace the faulty component, clear the code, and verify the misfire is resolved with a test drive

Cylinder 10 misfire misdiagnosis traps

- Cylinder 10 is often on a V10 or large engine where access is difficult, leading technicians to replace parts without proper testing and misdiagnose the root cause.
- A misfire code for one cylinder does not always mean that cylinder is at fault; a vacuum leak or fuel pressure issue can affect one cylinder more than others.
- Ignition coil failures are common, but swapping coils between cylinders is a quick and free way to confirm before buying a new coil.
- Low compression on cylinder 10 can be caused by a failing head gasket or valve issue that may not trigger other codes, so compression testing is essential.
- Intermittent misfires that only set P0310 under specific loads may be due to a failing injector or wiring harness chafe that only acts up when hot or vibrating.

Can I keep driving with P0310?

Avoid driving with a flashing check engine light because a severe misfire can overheat and damage the catalytic converter; if the light is steady, drive gently to a repair shop without heavy acceleration or towing.

Tools that help

- OBD-II scan tool with live misfire data
- Spark plug socket and wrench
- Compression tester
- Noid light or injector test kit
- Digital multimeter
- Vacuum gauge



Reading P0310

- 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.
- 10** 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/p0310/>

