

GENERIC · POWERTRAIN

P02C0

OBD-II TROUBLE CODE

P02C0

Cylinder 10 - Injector Restricted

P02C0 indicates that the powertrain control module (PCM) has detected an abnormal restriction in the fuel injector for cylinder 10, typically by monitoring fuel trim or injector response and seeing a value outside the expected range. This means the injector is not delivering the commanded amount of fuel, which can cause a misfire, rough running, or no noticeable symptoms at all.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Fuel and air metering (injector circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms
- Rough idle or shaking, especially noticeable when the engine is cold
- Misfire or hesitation during acceleration
- Reduced engine power or poor fuel economy
- A strong fuel odor from the exhaust or under the hood
- In some cases, the engine may enter limp mode

Common causes, most likely first

- 1 Clogged or restricted fuel injector nozzle due to carbon deposits or debris
- 2 Faulty or dirty electrical connector at the injector
- 3 Damaged injector wiring harness or short to ground
- 4 Internal injector failure (coil or pintle)
- 5 Low fuel pressure or volume from a weak pump or clogged filter
- 6 Contaminated fuel or fuel system corrosion
- 7 PCM software issue or faulty driver circuit (rare)



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check for related misfire or fuel trim codes
- 2 Inspect the injector electrical connector and wiring for damage or corrosion
- 3 Measure injector resistance and compare to specifications
- 4 Perform a fuel pressure and volume test to rule out supply issues
- 5 Run a fuel injector balance test or cylinder contribution test to confirm the restriction
- 6 Use a professional injector cleaning service or replace the injector if cleaning fails
- 7 Clear the code and perform a road test to verify the repair

Cylinder 10 injector restriction: what the code hides

- A restricted injector may not trigger a misfire code until the restriction becomes severe, so the absence of a misfire does not mean the injector is fine.
- Fuel contamination from a failing fuel pump or corroded tank can cause multiple injectors to restrict, so always check fuel quality before replacing just one injector.
- The PCM may set P02C0 based on fuel trim corrections alone, so a vacuum leak or exhaust leak can mimic an injector restriction and lead to misdiagnosis.
- Cylinder 10 is often on a V10 or heavy-duty engine, and its injector may be difficult to access, making electrical and fuel pressure tests even more important before teardown.
- Some aftermarket injectors have different flow rates or spray patterns that can cause this code to return even after replacement, so use OEM-specified parts.

Can I keep driving with P02C0?

You can usually drive with P02C0, but avoid heavy acceleration or towing until it is diagnosed, because a restricted injector can cause misfires that damage the catalytic converter over time. If the engine is running rough or flashing the check engine light, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with live data and injector balance test capability
- Digital multimeter
- Fuel pressure gauge
- Noid light or injector pulse tester
- Mechanic's stethoscope or listening device
- Factory service information for cylinder 10 injector location and specifications



Reading P02C0

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 2** Fuel and air metering (injector circuits).
- C0** The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0174** System Too Lean (Bank 2) · **P020A** Cylinder 1 Injection Timing · **P0263** Cylinder 1 Contribution/Balance · **P0300** Random/Multiple Cylinder Misfire Detected

See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p02c0/>

