

GENERIC · POWERTRAIN

P03CD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03CD

Cylinder 6 Pressure Too High

P03CD means the powertrain control module has detected that cylinder 6 is producing abnormally high combustion pressure, as reported by a cylinder pressure sensor or inferred from crankshaft speed fluctuations. The computer sets this code when the pressure signal for cylinder 6 exceeds the expected range for the current operating conditions, indicating a mechanical or fueling fault that can lead to engine damage if ignored.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms at first
- Engine knocking or pinging under acceleration, especially when climbing hills or towing
- Rough idle or misfire-like shudder that may be more pronounced when the engine is cold
- Reduced fuel economy and a noticeable loss of power during hard acceleration
- In severe cases, a loud metallic rapping noise from the engine bay that worsens with load

Common causes, most likely first

- 1 Carbon buildup on the piston top or cylinder head, effectively raising the compression ratio
- 2 A faulty cylinder pressure sensor or damaged wiring to that sensor, sending a false high reading
- 3 Improper fuel octane or a tank of bad fuel causing detonation and pressure spikes
- 4 A stuck or leaking fuel injector for cylinder 6, over-fueling that cylinder and raising combustion pressure
- 5 An aftermarket tune or calibration error that advances ignition timing too far for cylinder 6
- 6 Mechanical faults such as a warped cylinder head, damaged head gasket, or incorrect piston installation



How to diagnose and fix it

- 1 Scan all stored and pending codes with a capable scan tool to confirm P03CD is the only pressure-related fault and check for misfire or knock sensor codes
- 2 Verify fuel quality and octane rating, then inspect the fuel trim data for cylinder 6 to see if it is running rich compared to other cylinders
- 3 Perform a cylinder pressure test or use a scan tool to read live cylinder pressure sensor data and compare cylinder 6 to the other cylinders
- 4 Inspect the cylinder 6 pressure sensor and its wiring harness for chafing, corrosion, or loose connectors, and swap the sensor with a known-good one if accessible
- 5 Run a fuel injector balance test or remove the cylinder 6 injector for bench testing to rule out a leaking or stuck injector
- 6 Use a borescope to inspect the top of the piston and combustion chamber for heavy carbon deposits, and perform a decarbonization service if deposits are found
- 7 If all external checks pass, perform a compression test and leak-down test to assess mechanical condition, then repair internal engine damage as needed

Why cylinder 6 pressure reads high

- A false high pressure reading from a failing cylinder pressure sensor is more common than actual mechanical overpressure, so always verify the sensor signal before tearing into the engine.
- Carbon deposits on the piston crown can raise compression enough to trigger this code without any other driveability complaint, especially on direct-injection engines.
- A leaking fuel injector can hydraulically raise cylinder pressure and may not set a rich code if the leak is small, so injector balance testing is a critical step.
- This code can be set by a calibration issue after a reflash or tuner install, so check for aftermarket software before condemning hard parts.
- Cylinder pressure codes often accompany misfire codes for the same cylinder, but the misfire may be the root cause rather than the result, so diagnose both together.

Can I keep driving with P03CD?

Do not continue driving with this code if you hear knocking or notice a loss of power, because high cylinder pressure can quickly damage pistons, rings, and bearings. If the only symptom is the warning light and the engine runs smoothly, you may drive gently to a repair shop, but avoid heavy acceleration and towing until the fault is diagnosed.



Tools that help

- OBD-II scan tool with live cylinder pressure and fuel trim data capability
- Cylinder pressure gauge or compression tester
- Leak-down tester
- Borescope camera
- Fuel injector balance tester or multimeter for injector resistance
- Basic hand tools for sensor and injector access

Reading P03CD

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.
CD	The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0172** System Too Rich (Bank 1) · **P0306** Cylinder 6 Misfire Detected · **P0325** Knock Sensor 1 Circuit Malfunction (Bank 1) · **P03CE** Cylinder 6 Pressure Variation Low

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03cd/>

