



P03CE

Cylinder 6 Pressure Variation Low

P03CE indicates that the engine control module has detected an abnormal low pressure variation in cylinder 6 during the power stroke, based on signals from the cylinder pressure sensor. This means cylinder 6 is not building or maintaining combustion pressure as expected compared to the other cylinders, which can affect engine smoothness and emissions.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or engine vibration, especially noticeable at low speeds
- Misfire-like shudder or hesitation during acceleration
- Reduced engine power or sluggish response
- Increased fuel consumption due to inefficient combustion
- Possible black smoke or strong fuel odor from the exhaust

Common causes, most likely first

- 1 Faulty cylinder pressure sensor or damaged sensor wiring/connector
- 2 Worn or damaged fuel injector for cylinder 6 causing poor fuel delivery
- 3 Mechanical issue such as a sticking valve, worn piston rings, or cylinder wall damage
- 4 Carbon buildup on intake valves or injector tips restricting flow
- 5 Engine control module software error or corrupted calibration
- 6 Low compression due to head gasket leak or valve seat problems

How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 6 pressure sensor and its wiring for damage or loose connections
- 2 Use a scan tool to check for related misfire codes and freeze-frame data to confirm the fault conditions
- 3 Run a compression test on cylinder 6 and compare with other cylinders to rule out mechanical problems
- 4 Swap the cylinder 6 pressure sensor with a known-good one from another cylinder (if accessible) to see if the code follows
- 5 Check fuel injector operation with a noid light or injector balance test to ensure proper fuel delivery
- 6 Inspect intake valves and injector tips with a borescope for carbon buildup and clean if necessary
- 7 If all else checks out, reprogram or update the engine control module software per manufacturer procedures

Cylinder 6 Pressure Sensor Pitfalls

- A low pressure variation reading often results from a failing pressure sensor rather than a mechanical engine fault, so always test the sensor before tearing into the engine.
- Carbon buildup on the injector or intake valve can mimic a bad sensor by altering combustion pressure, so a borescope inspection is a smart early step.
- The code may set intermittently due to a loose connector or chafed wire, so wiggle-test the harness while monitoring live data.
- Do not assume a misfire code means the ignition coil is at fault; pressure variation codes point to combustion quality, not spark.
- After repairs, clear the code and perform a drive cycle that includes idle and acceleration to verify the fix before returning the vehicle.

Can I keep driving with P03CE?

You can usually continue driving with this code, but avoid heavy acceleration or towing until diagnosed, as prolonged driving with a pressure variation may lead to catalytic converter damage or worsening engine performance.

Tools that help

- OBD-II scan tool with live data capability
- Compression tester
- Noid light or injector balance tester
- Borescope camera
- Digital multimeter
- Basic hand tools

Reading P03CE

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.
CE	The exact fault within that area.

Often seen with

P0172 System Too Rich (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0306** Cylinder 6 Misfire Detected · **P03CD** Cylinder 6 Pressure Too High · **P03CF** Cylinder 6 Pressure Variation High



See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03ce/>

