

GENERIC · POWERTRAIN

P03E4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03E4

Cylinder 8 Combustion Performance

P03E4 indicates that the powertrain control module has detected a combustion performance problem specifically on cylinder 8, typically by monitoring crankshaft speed fluctuations that reveal a misfire. The computer sets this code when the misfire rate exceeds a calibrated threshold that could damage the catalytic converter or affect emissions.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often flashing if the misfire is severe
- Noticeable engine vibration or shaking, especially at idle or under load
- Rough running or hesitation during acceleration
- Reduced power and poor fuel economy
- A distinct exhaust note that may sound uneven or popping
- Often no symptoms besides the warning light when the misfire is intermittent

Common causes, most likely first

- 1 Worn or fouled spark plug on cylinder 8
- 2 Faulty ignition coil or spark plug wire for cylinder 8
- 3 Failed fuel injector or clogged injector screen on cylinder 8
- 4 Vacuum leak or intake manifold gasket leak affecting cylinder 8
- 5 Low compression due to worn piston rings, valves, or head gasket
- 6 Faulty crankshaft position sensor or reluctor wheel causing false misfire detection
- 7 Wiring or connector issue to the cylinder 8 ignition coil or injector

How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 8 ignition components and wiring for damage or corrosion
- 2 Swap the ignition coil and spark plug from cylinder 8 to another cylinder to see if the misfire moves
- 3 Use a scan tool to check misfire counters and confirm which cylinder is misfiring
- 4 Run a compression test and cylinder leak-down test on cylinder 8 to rule out mechanical faults
- 5 Check fuel injector operation with a noid light or injector balance test
- 6 Inspect for vacuum leaks using a smoke machine or carburetor cleaner around the intake
- 7 Repair or replace the faulty component and clear the code, then verify the misfire is resolved



Cylinder 8 misfire diagnosis pitfalls

- A misfire code for a single cylinder often results from a faulty ignition coil that tests fine when cold but breaks down under heat and load.
- Fuel injector problems on one cylinder can mimic ignition faults, so swapping components is a reliable way to isolate the cause.
- A vacuum leak at the intake manifold runner for cylinder 8 can cause a lean misfire that only appears at idle or light throttle.
- Low compression from a worn camshaft lobe or collapsed lifter can set a persistent misfire code without any ignition or fuel fault.
- The code can be set by a faulty crankshaft position sensor or damaged reluctor wheel, so always check for other codes like P0335 before replacing parts.

Can I keep driving with P03E4?

If the check engine light is flashing, stop driving immediately to prevent catalytic converter damage. If the light is steady, limit driving to short distances and avoid heavy acceleration until the misfire is repaired.

Tools that help

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

Reading P03E4

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.
E4	The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0208** Injector Circuit/Open - Cylinder 8 · **P0300** Random/Multiple Cylinder Misfire Detected · **P0308** Cylinder 8 Misfire Detected · **P0335** Crankshaft Position Sensor A Circuit Malfunction



See it working

Watch the animated explainer **V6 Engine Explained: 60° Bank and Firing Order** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03e4/>

