



P2E5E

Cylinder 6 Alternative Fuel Misfire Detected

P2E5E indicates that the powertrain control module has detected a misfire on cylinder 6 while the engine is running on an alternative fuel such as compressed natural gas, propane, or E85. The computer monitors crankshaft speed fluctuations and identifies that cylinder 6 is not contributing power evenly, which can damage the catalytic converter if left unresolved.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Professional	Hybrid propulsion

Symptoms you may notice

- Illuminated or flashing check engine light, especially under load
- Rough idle or shaking that may be more noticeable when switching to alternative fuel
- Noticeable loss of power or hesitation during acceleration
- Poor fuel economy on both gasoline and alternative fuel modes
- Often no symptoms besides the warning light in early stages

Common causes, most likely first

- 1 Worn or fouled spark plug specific to cylinder 6, often due to alternative fuel's different burn characteristics
- 2 Faulty ignition coil or plug wire on cylinder 6
- 3 Clogged or malfunctioning fuel injector for the alternative fuel system on cylinder 6
- 4 Vacuum leak or intake manifold gasket issue near cylinder 6
- 5 Low compression from worn rings, valves, or head gasket on cylinder 6
- 6 Contaminated alternative fuel or incorrect fuel pressure for the alternative fuel system
- 7 Wiring or connector fault in the cylinder 6 injector or ignition circuit

How to diagnose and fix it

- 1 Scan all stored codes and freeze-frame data to confirm misfire counts specifically on cylinder 6
- 2 Inspect and replace the spark plug on cylinder 6, checking gap and electrode condition
- 3 Swap the ignition coil from cylinder 6 with a known-good cylinder to see if the misfire moves
- 4 Test the alternative fuel injector on cylinder 6 for resistance, pulse, and spray pattern
- 5 Perform a compression test and cylinder leak-down test on cylinder 6 to rule out mechanical faults
- 6 Check for vacuum leaks near the intake runner for cylinder 6 using a smoke machine
- 7 Verify alternative fuel pressure and quality, and inspect wiring to the cylinder 6 injector and coil



Alternative fuel misfires need different diagnostics

- Alternative fuels often burn hotter or drier than gasoline, which can accelerate spark plug wear and make cylinder 6 the first to misfire even when other cylinders seem fine.
- A P2E5E code does not always mean the ignition system is at fault; a sticking alternative fuel injector or low fuel pressure can cause the same misfire signature.
- Technicians sometimes replace all spark plugs and coils without addressing the alternative fuel system, only to have the code return because the root cause was fuel delivery or compression.
- Misfire counters can be misleading if the engine is not fully warmed up or if the alternative fuel system is still in changeover mode, so road-test data under load is essential.
- A flashing check engine light with this code means the misfire is severe enough to damage the catalytic converter, and driving should be limited until repaired.

Can I keep driving with P2E5E?

If the check engine light is flashing, stop driving and have the vehicle towed to avoid catalytic converter damage. If the light is steady, you may drive gently to a repair shop but avoid heavy acceleration or towing.

Tools that help

- OBD-II scan tool with misfire counter and freeze-frame capability
- Spark plug socket and gap gauge
- Ignition coil tester or known-good coil for swapping
- Compression gauge and cylinder leak-down tester
- Smoke machine for vacuum leak detection
- Fuel pressure gauge and injector test light

Reading P2E5E

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
E	Hybrid propulsion.
5E	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 · **P2E5D** Cylinder 5 Alternative Fuel Misfire Detected · **P2E5F** Cylinder 7 Alternative Fuel 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/p2e5e/>

