



P01CE

Cylinder 2 Injection Timing Performance - Over Advanced

P01CE indicates that the engine control module has detected the fuel injection timing for cylinder 2 is more advanced than the commanded value during its self-test. The computer compares the actual injection event timing to the desired timing and sets this code when the deviation exceeds a calibrated threshold, typically due to a mechanical or electrical fault in the injector circuit or the injector itself.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire sensation, especially when the engine is cold
- Reduced engine performance or hesitation during acceleration
- Increased fuel consumption due to inefficient combustion
- Possible black smoke from the exhaust if the advanced timing causes incomplete combustion
- In rare cases, a no-start condition if the timing deviation is severe

Common causes, most likely first

- 1 Faulty fuel injector for cylinder 2, such as a stuck or sluggish needle
- 2 Wiring harness issue in the cylinder 2 injector circuit, including chafed wires or poor connections
- 3 Corroded or loose electrical connector at the cylinder 2 injector
- 4 Failed engine control module driver for the cylinder 2 injector
- 5 Mechanical issue with the injector hold-down or sealing, causing improper spray pattern
- 6 Contaminated fuel or clogged injector filter screen affecting spray timing
- 7 Software calibration issue in the engine control module requiring reprogramming



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 2 injector connector and wiring for damage or corrosion
- 2 Use a scan tool to check for other stored codes and freeze-frame data related to injection timing
- 3 Test the resistance of the cylinder 2 injector and compare it to the manufacturer's specification
- 4 Perform an injector balance test or cylinder contribution test to isolate the faulty injector
- 5 Check fuel pressure and quality to rule out contamination or delivery issues
- 6 Swap the cylinder 2 injector with a known-good injector from another cylinder to see if the code follows
- 7 If the injector is faulty, replace it and clear the codes; if wiring is faulty, repair the harness

Over-Advanced Timing Isn't Always the Injector

- A dirty or contaminated injector can cause over-advanced timing without completely failing, so ultrasonic cleaning may resolve the issue before replacement.
- The code can be set by a faulty engine control module driver even when the injector tests good, so module diagnostics should be performed before condemning the injector.
- Injection timing is often calculated from multiple sensor inputs, so a failing camshaft or crankshaft position sensor can indirectly cause this code.
- Some vehicles use adaptive learning for injection timing, and a battery disconnect or module reset can temporarily set this code until relearn is complete.
- A restricted fuel filter or weak fuel pump can cause timing deviations that mimic an injector fault, so fuel delivery should be verified first.

Can I keep driving with P01CE?

Driving with P01CE is generally safe for short distances, but prolonged driving with advanced injection timing can lead to engine damage, increased emissions, and poor fuel economy. Avoid heavy loads and high speeds until the fault is diagnosed and repaired.

Tools that help

- OBD-II scan tool with live data and injector testing capabilities
- Digital multimeter for circuit and resistance testing
- Fuel pressure gauge
- Noid light or injector pulse tester
- Hand tools for connector and component access



Reading P01CE

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

Often seen with

P01C9 Fuel Rail/System Pressure - Too High Bank 2 · **P01CF** Cylinder 3 Injection Timing Performance - Over Retarded · **P0202** Injector Circuit Malfunction - Cylinder 2 · **P0261** Cylinder 1 Injector Circuit Low · **P0302** Cylinder 2 Misfire Detected

See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p01ce/>

