

GENERIC · POWERTRAIN

P021C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P021C

Cylinder 9 Injection Timing

P021C indicates that the powertrain control module has detected an injection timing error specifically for cylinder 9, meaning the fuel injector for that cylinder is not opening or closing at the precise moment the engine computer commands. The module compares commanded injection timing against feedback from the injector circuit or crankshaft position sensor and sets this code when the deviation exceeds a calibrated threshold.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or a noticeable vibration that feels like a misfire
- Reduced engine power or hesitation during acceleration
- Increased fuel consumption as the engine compensates for poor combustion
- Occasional engine stumble or surge at steady cruising speed
- Hard starting or extended cranking, especially when cold

Common causes, most likely first

- 1 Faulty fuel injector on cylinder 9, such as a stuck pintle or clogged nozzle
- 2 Damaged or corroded electrical connector at the cylinder 9 injector
- 3 Open or shorted wiring in the injector control circuit for cylinder 9
- 4 Failed injector driver inside the powertrain control module
- 5 Contaminated fuel or debris blocking the injector inlet screen
- 6 Worn camshaft or lifter affecting the injector lobe on cylinder 9
- 7 Low fuel pressure or a weak high-pressure pump causing inconsistent injection timing



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data to confirm the code is current and not history
- 2 Inspect the cylinder 9 injector connector and harness for corrosion, chafing, or loose pins
- 3 Measure injector resistance and compare it to the manufacturer's specification
- 4 Perform a fuel pressure and volume test to rule out a supply problem
- 5 Use a noid light or oscilloscope to verify the injector pulse signal from the control module
- 6 Swap the cylinder 9 injector with a known-good injector from another cylinder and recheck the code
- 7 If the fault follows the injector, replace it; if it stays with the cylinder, trace the circuit and test the module driver

Cylinder 9 injector faults that fool technicians

- A clogged injector screen can cause an injection timing error without ever setting a misfire code, so technicians who only look for misfires miss this fault.
- The injector driver inside the powertrain control module can fail intermittently when hot, so the code may only appear after a long drive and disappear after the engine cools.
- Corroded pins inside the injector connector often look clean from the outside, so a visual inspection alone is not enough to rule out a connection problem.
- A weak camshaft lobe or collapsed lifter can alter the injector rocker geometry on some engines, producing a timing error that no amount of injector replacement will fix.
- This code does not always mean the injector is bad; a low fuel pressure condition or a faulty crankshaft position sensor can skew the timing calculation and set P021C.

Can I keep driving with P021C?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long highway trips because continued driving with a faulty injector can wash cylinder walls and damage the catalytic converter. If the engine is misfiring severely or flashing the check engine light, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter for resistance and voltage checks
- Noid light or oscilloscope for injector pulse testing
- Fuel pressure gauge
- Hand tools for injector removal and replacement



Reading P021C

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

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0209** Injector Circuit/Open - Cylinder 9 · **P0210** Injector Circuit/Open - Cylinder 10 · **P021D** Cylinder 10 Injection Timing · **P0309** Cylinder 9 Misfire Detected

See it working

Watch the animated explainer [How a CVT Works: Belt and Pulley Transmission](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p021c/>

