

GENERIC · POWERTRAIN

P2C60

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2C60

Cylinder 8 Fuel Injector B Offset Learning At Min Limit

P2C60 indicates that the engine control module (ECM) has detected that the fuel injector offset learning value for cylinder 8 has reached its minimum allowable limit. This means the ECM can no longer compensate for the injector's flow characteristics within its programmed range, which typically points to a fuel injector that is delivering too much fuel or a related circuit fault.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire, especially noticeable when the engine is cold
- Decreased fuel economy due to rich running conditions
- Elevated hydrocarbon (HC) emissions that may cause an emissions test failure
- In some cases, a slight hesitation or stumble during acceleration

Common causes, most likely first

- 1 Fuel injector for cylinder 8 is partially stuck open or leaking, delivering excess fuel
- 2 Contaminated or clogged injector nozzle causing an abnormal spray pattern
- 3 Wiring harness or connector issue at the cylinder 8 injector, such as corrosion or a poor connection
- 4 Internal ECM fault affecting the injector driver circuit or learning algorithm
- 5 Low fuel pressure or a restricted fuel return causing the injector to operate outside its expected range
- 6 Use of incorrect or contaminated fuel that has damaged the injector

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related misfire or fuel trim codes
- 2 Inspect the cylinder 8 injector connector and wiring for damage, corrosion, or loose pins
- 3 Perform a fuel injector balance test or cylinder contribution test to compare injector performance
- 4 Check fuel pressure and volume to rule out a supply issue affecting all injectors
- 5 Remove and inspect the cylinder 8 injector for signs of leakage or contamination; test its spray pattern
- 6 Replace the cylinder 8 fuel injector if it is found to be faulty, and clear the code to see if it returns
- 7 If the injector and wiring are good, diagnose the ECM and its programming, including checking for software updates



When the injector itself is not the culprit

- A dirty or contaminated injector can cause this code even if the injector is not electrically failed, so a professional cleaning service may resolve it without replacement.
- The ECM's offset learning can be skewed by a vacuum leak or unmetered air entering the engine, which mimics a rich injector condition on that cylinder.
- A failing ignition coil or spark plug on cylinder 8 can cause misfire and fuel trim shifts that lead to this code, so always check secondary ignition components first.
- Some vehicles require a relearn procedure after injector replacement, and skipping it can cause the code to reset immediately.
- This code is often stored alongside P2C5F or other cylinder-specific injector offset codes, indicating a pattern failure rather than an isolated issue.

Can I keep driving with P2C60?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because the rich condition can damage the catalytic converter over time. Have the fault diagnosed promptly to prevent further emissions system damage.

Tools that help

- OBD-II scan tool with live data and injector balance test capability
- Digital multimeter for circuit testing
- Fuel pressure gauge
- Noid light or injector pulse tester
- Mechanic's stethoscope for listening to injector operation

Reading P2C60

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
60	The exact fault within that area.

Often seen with

P0172 System Too Rich (Bank 1) · **P0175** System Too Rich (Bank 2) · **P0208** Injector Circuit/Open - Cylinder 8
 · **P0308** Cylinder 8 Misfire Detected · **P2C5F** Cylinder 7 Fuel Injector B Offset Learning At Max Limit



See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2c60/>

