

GENERIC · POWERTRAIN

P20CB

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P20CB

Exhaust Aftertreatment Fuel Injector A Control Circuit/Open

P20CB indicates that the powertrain control module (PCM) has detected an open circuit or loss of continuity in the control circuit for the exhaust aftertreatment fuel injector designated as 'A'. This injector is responsible for delivering diesel fuel or a similar reductant into the exhaust stream to raise temperature for regeneration of the diesel particulate filter (DPF) or to support the selective catalytic reduction (SCR) system. The PCM monitors the circuit for expected voltage or current and sets this code when the signal is missing or out of range.

SYSTEM Powertrain	CODE TYPE Generic (all makes)	SEVERITY Medium	FIX DIFFICULTY Intermediate	AREA Fuel and air metering and auxiliary emission controls
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Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp, MIL), often with no other noticeable symptoms
- Reduced engine power or limp mode if the fault triggers protective strategies
- Increased frequency or duration of DPF regeneration cycles, or a regeneration that fails to complete
- Exhaust aftertreatment system warning message on the dashboard, such as 'Service Exhaust Fluid System' or 'Exhaust Filter Full'
- Poor fuel economy or elevated exhaust temperatures during regeneration attempts
- In some cases, a no-start condition if the injector circuit is shorted to power and blows a fuse

Common causes, most likely first

- 1 Open or damaged wiring in the exhaust aftertreatment fuel injector control circuit, such as a broken wire or corroded connector
- 2 Failed exhaust aftertreatment fuel injector (open internal coil or seized pintle)
- 3 Loose, dirty, or disconnected electrical connector at the injector or at the PCM
- 4 Blown fuse or faulty relay that supplies power to the injector control circuit
- 5 PCM internal driver failure for the injector control circuit (rare but possible)
- 6 Aftermarket accessories or poor previous repairs that disturbed the injector wiring harness



How to diagnose and fix it

- 1 Inspect the injector electrical connector and the PCM connector for corrosion, loose pins, or pushed-back terminals, and clean or repair as needed
- 2 Check the fuse and relay that supply power to the exhaust aftertreatment fuel injector circuit, and replace any failed components
- 3 Measure resistance across the injector coil with a multimeter and compare to the manufacturer's specification; an open or out-of-range reading indicates a failed injector
- 4 Perform a voltage drop test on the control circuit while commanding the injector on with a scan tool, looking for excessive resistance or an open circuit
- 5 Continuity-test the individual wires from the PCM to the injector, wiggle-testing the harness to reveal intermittent opens
- 6 If the circuit and injector test good, substitute a known-good injector or use a noid light to verify the PCM driver is commanding the injector
- 7 Clear the code and perform a road test or forced regeneration to confirm the repair and ensure the code does not return

Before you replace the exhaust injector

- A loose or corroded connector at the exhaust aftertreatment fuel injector is a far more common cause of P20CB than a failed injector itself, so always inspect and clean the terminals first.
- The code can be set by a blown fuse that also powers other aftertreatment components, so a single fuse check can save hours of diagnostic time.
- Intermittent opens often appear only when the engine is hot or vibrating, so wiggle-testing the harness while monitoring live data is essential before condemning parts.
- Some vehicles use a solid-state relay or a dedicated control module for the exhaust injector; a fault there can mimic an open injector circuit and set P20CB.
- Replacing the injector without checking the PCM driver output can lead to a repeat failure if the original driver was shorted and damaged the new injector.

Can I keep driving with P20CB?

You can usually drive the vehicle with P20CB, but avoid long trips or heavy loads because the aftertreatment system may not regenerate properly, leading to a clogged DPF and reduced performance. If the engine enters limp mode or you notice excessive exhaust smoke, seek service promptly.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter with resistance and voltage drop functions
- Noid light or injector test light
- Wire terminal pick and electrical contact cleaner
- Factory service information for wiring diagrams and resistance specifications

Reading P20CB

P Powertrain: engine, transmission and emissions.

2 Generic (SAE) code: it means the same thing on every OBD-II vehicle.

0 Fuel and air metering and auxiliary emission controls.

CB The exact fault within that area.

Often seen with

P2002 Particulate Trap Efficiency Below Threshold (Bank 1) · **P20CC** Exhaust Aftertreatment Fuel Injector A Control Performance · **P20CD** Exhaust Aftertreatment Fuel Injector A Control Circuit Low · **P20CE** Exhaust Aftertreatment Fuel Injector A Control Circuit High · **P2463** Diesel Particulate Filter Restriction - Soot Accumulation

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p20cb/>

