

GENERIC · POWERTRAIN

P20CC

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P20CC

Exhaust Aftertreatment Fuel Injector A Control Performance

P20CC indicates that the powertrain control module (PCM) has detected a performance fault in the control circuit for the exhaust aftertreatment fuel injector on bank 1. This injector, also called the seventh injector, sprays diesel fuel into the exhaust stream to raise temperature for the diesel particulate filter (DPF) regeneration, and the PCM monitors the circuit for expected electrical response. The code sets when the commanded injector operation does not match the feedback signal, indicating an open, short, or mechanical issue.

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

- Illuminated malfunction indicator lamp (MIL), often with no other symptoms
- Reduced engine power or limp mode due to derate strategy
- Excessive black or white smoke from the tailpipe during regeneration attempts
- Frequent or failed diesel particulate filter (DPF) regeneration, leading to soot accumulation
- Rough running or misfire if the injector leaks fuel into the exhaust
- Poor fuel economy or increased exhaust temperatures

Common causes, most likely first

- 1 Faulty exhaust aftertreatment fuel injector (clogged nozzle, internal short, or open coil)
- 2 Damaged or corroded wiring harness or connector at the injector
- 3 Blown fuse or faulty relay supplying power to the injector circuit
- 4 Failed exhaust aftertreatment fuel injector control module or driver in the PCM
- 5 Restricted fuel supply line or low fuel pressure to the injector
- 6 Exhaust system blockage or excessive backpressure affecting injector performance



How to diagnose and fix it

- 1 Inspect the injector wiring harness and connector for chafing, corrosion, or loose pins; repair as needed
- 2 Check the fuse and relay for the aftertreatment fuel injector circuit and replace if faulty
- 3 Measure the injector coil resistance with a multimeter and compare to manufacturer specifications
- 4 Test for power and ground signals at the injector connector while commanding the injector on with a scan tool
- 5 Perform a fuel pressure and flow test to the aftertreatment injector to rule out supply issues
- 6 Remove and inspect the injector for carbon buildup or clogging; clean or replace if necessary
- 7 Clear the code and perform a forced DPF regeneration to verify the repair and confirm the code does not return

Don't overlook the exhaust injector driver

- A common misdiagnosis is replacing the exhaust aftertreatment fuel injector when the actual fault lies in the control module driver or a corroded connector pin.
- The code can be set by a clogged injector nozzle that still passes electrical tests, so flow testing is essential before condemning the part.
- Low fuel pressure or air in the fuel system from a recent filter change can trigger this code without any injector fault.
- Excessive exhaust backpressure from a partially melted DPF can cause the injector to perform outside expected parameters and set P20CC.
- Always check for related codes like P20CB or P20CD, as multiple injector circuit codes often point to a shared power or ground issue.

Can I keep driving with P20CC?

Driving with P20CC is possible but not recommended for long distances, as failed regenerations can lead to a clogged DPF and reduced engine power. Avoid heavy loads and prolonged idling until the fault is repaired, and do not attempt repeated forced regenerations without diagnosing the root cause.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Fuel pressure test kit
- Exhaust backpressure gauge
- Basic hand tools and socket set



Reading P20CC

- 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.
- CC** The exact fault within that area.

Often seen with

P2002 Particulate Trap Efficiency Below Threshold (Bank 1) · **P20CB** Exhaust Aftertreatment Fuel Injector A Control Circuit/Open · **P20CD** Exhaust Aftertreatment Fuel Injector A Control Circuit Low · **P2453** Diesel Particulate Filter Pressure Sensor Circuit Range/Perf · **P2463** Diesel Particulate Filter Restriction - Soot Accumulation

See it working

Watch the animated explainer [How a Wideband Air-Fuel Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p20cc/>

