

GENERIC · POWERTRAIN

P20D4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P20D4

Exhaust Aftertreatment Fuel Injector B Control Circuit High

P20D4 indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the control circuit for the exhaust aftertreatment fuel injector B, which is used to inject diesel fuel into the exhaust stream to raise temperatures for the diesel particulate filter (DPF) regeneration. The PCM expects the circuit to pull to ground when commanded on, but it sees voltage staying near battery positive, indicating an open circuit, short to power, or a failed injector coil.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) with no other noticeable symptoms
- Reduced engine power or limp mode due to the PCM disabling regeneration
- Frequent active regeneration attempts or a regeneration that never completes
- A strong diesel fuel odor from the exhaust, especially after shutdown
- White or blue smoke from the tailpipe during regeneration attempts
- Possible DPF-related codes stored alongside P20D4

Common causes, most likely first

- 1 Open circuit in the control wire between the PCM and the exhaust aftertreatment fuel injector B
- 2 Short to voltage on the control wire, often from chafed insulation against a power wire
- 3 Failed exhaust aftertreatment fuel injector B (open or shorted internal coil)
- 4 Corroded, loose, or damaged connector pins at the injector or PCM
- 5 Internal PCM driver failure for that injector circuit
- 6 Aftermarket wiring repairs or accessories improperly tapped into the circuit



How to diagnose and fix it

- 1 Verify the stored code and check for any related codes using a scan tool, then clear codes and test-drive to see if P20D4 returns
- 2 Inspect the injector B connector and the PCM connector for corrosion, loose pins, or pushed-out terminals
- 3 Measure the resistance of the exhaust aftertreatment fuel injector B coil with a multimeter and compare to the manufacturer's specification
- 4 With the key on and engine off, back-probe the control wire at the injector to check for voltage when the injector is commanded off; then check for continuity to ground when commanded on
- 5 Disconnect the PCM and injector connectors and perform a continuity and short-to-power test on the control wire between them
- 6 If the wiring and injector test good, substitute a known-good injector or use a noid light to confirm the PCM driver is functioning
- 7 Repair or replace the faulty wiring, connector, injector, or PCM as indicated by the test results, then clear codes and verify regeneration completes

Why P20D4 often misleads on injector replacement

- A high-voltage code on an injector control circuit is more often caused by an open in the wiring or a bad connector than by a failed injector itself, so resistance testing the injector alone can send you down the wrong path.
- The PCM may set P20D4 only after a regeneration is commanded, so a simple key-on test may not reveal the fault; you need to command the injector on with a scan tool or run a regeneration to see the circuit fail under load.
- Exhaust aftertreatment fuel injectors are exposed to extreme heat and carbon, and a partially clogged injector can cause the PCM to see an unexpected current profile that sets a high-voltage code even though the coil is intact.
- Aftermarket accessories or remote starters tapped into the injector wiring can introduce a short to voltage that mimics a failed injector, so always inspect for non-factory wiring before condemning parts.
- A weak or failing battery or charging system can cause erratic voltage spikes that the PCM interprets as a high-voltage fault on the injector control circuit, so verify system voltage stability first.

Can I keep driving with P20D4?

You can usually drive the vehicle short distances to a repair shop, but avoid long trips or heavy loads because the PCM may inhibit DPF regeneration, leading to a clogged filter and reduced engine performance. If the engine enters limp mode or you notice excessive smoke, stop driving and seek professional diagnosis.



Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with resistance and voltage measurement
- Noid light or injector test light
- Wiring diagram for the exhaust aftertreatment fuel injector circuit
- Back-probe kit and terminal removal tools

Reading P20D4

- 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.
- D4** The exact fault within that area.

Often seen with

P2002 Particulate Trap Efficiency Below Threshold (Bank 1) · **P20D3** Exhaust Aftertreatment Fuel Injector B Control Circuit Low · **P20D5** Exhaust Aftertreatment Fuel Injector B Stuck Open · **P20D6** Exhaust Aftertreatment Fuel Injector B Stuck Closed · **P2463** Diesel Particulate Filter Restriction - Soot Accumulation

See it working

Watch the animated explainer [How Push-Button Start Works: Keyless Ignition](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p20d4/>

