

GENERIC · POWERTRAIN

P20D1

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P20D1

Exhaust Aftertreatment Fuel Injector B Control Circuit/Open

P20D1 indicates that the powertrain control module (PCM) has detected an open circuit or excessive resistance in the control circuit for the exhaust aftertreatment fuel injector B, which is used to raise exhaust temperature for diesel particulate filter regeneration. The PCM monitors the commanded state of the injector against the expected electrical feedback and sets this code when the circuit does not respond as expected.

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, MIL)
- Often no symptoms besides the warning light
- Reduced engine power or limp mode in some vehicles
- Frequent or failed diesel particulate filter (DPF) regeneration attempts
- Possible rough running or misfire if the injector is stuck open
- Exhaust smoke or unusual odor during regeneration

Common causes, most likely first

- 1 Open or damaged wiring in the injector control circuit (broken wire, chafed insulation, corroded connector)
- 2 Failed exhaust aftertreatment fuel injector B (open coil or internal short)
- 3 Poor electrical connection at the injector or PCM connector (loose pins, corrosion, water intrusion)
- 4 Blown fuse or faulty relay supplying power to the injector circuit
- 5 PCM internal driver failure (rare but possible)
- 6 Aftermarket or damaged exhaust components interfering with injector wiring



How to diagnose and fix it

- 1 Inspect the injector connector and wiring for damage, corrosion, or loose pins; clean and secure as needed
- 2 Check the fuse and relay for the aftertreatment fuel injector circuit and replace if faulty
- 3 Measure the resistance of the injector coil with a multimeter and compare to specification; replace the injector if out of range
- 4 Perform a voltage drop test on the control circuit while commanding the injector on with a scan tool to identify high resistance
- 5 Check for continuity and short to ground or power in the harness between the PCM and injector; repair wiring as necessary
- 6 If all electrical checks pass, suspect the PCM and perform pinpoint tests according to the manufacturer's diagnostic flow chart
- 7 Clear the code and verify repair by running a forced DPF regeneration and confirming the injector operates correctly

Before you replace the injector

- A loose or corroded connector at the exhaust aftertreatment fuel injector is a frequent cause of this code, so always inspect and clean terminals before condemning the injector.
- The code can be set by a blown fuse that also powers other components, so check all fuses related to the aftertreatment system, not just the injector circuit.
- Some vehicles require a relearn or adaptation reset after injector replacement, and skipping this step can cause the code to return even with a new part.
- An open circuit may be intermittent, so wiggle-test the harness while monitoring live data to catch a broken wire that only fails under vibration or heat.
- This code does not always mean the injector itself has failed; a faulty PCM driver or high-resistance ground can mimic an open circuit, so complete circuit testing is essential.

Can I keep driving with P20D1?

You can usually drive the vehicle with this code, but avoid long trips or heavy loads that trigger regeneration, as a failed injector can prevent DPF regeneration and lead to more serious exhaust system damage. Have the fault diagnosed promptly to avoid costly repairs.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or jumper wires
- Socket set and trim removal tools



Reading P20D1

- 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.
- D1** The exact fault within that area.

Often seen with

P2002 Particulate Trap Efficiency Below Threshold (Bank 1) · **P20D0** Exhaust Aftertreatment Fuel Injector A Stuck Closed · **P20D2** Exhaust Aftertreatment Fuel Injector B Control Performance · **P20D3** Exhaust Aftertreatment Fuel Injector B Control Circuit Low · **P2463** Diesel Particulate Filter Restriction - Soot Accumulation

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/p20d1/>

