

GENERIC · POWERTRAIN

P2156

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2156

Fuel Injector Group 'D' Supply Voltage Circuit Low

P2156 indicates that the powertrain control module (PCM) has detected a low voltage condition on the power supply circuit feeding fuel injector group 'D'. This group typically includes a set of injectors that share a common power feed, and the PCM monitors the voltage on that circuit to ensure it stays within the expected range; a low reading suggests a short to ground, excessive resistance, or a faulty connection.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illuminated check engine light (malfunction indicator lamp) with no other noticeable symptoms
- Rough idle or misfire, especially if the affected injectors stop firing
- Engine hesitation or stumble during acceleration
- Reduced engine power or limp mode in some vehicles
- Poor fuel economy due to incomplete combustion
- Difficulty starting or stalling shortly after start-up

Common causes, most likely first

- 1 Faulty fuel injector with an internal short to ground
- 2 Damaged wiring harness or connector at the injector group 'D' circuit
- 3 Corroded or loose electrical connections at the injectors or PCM
- 4 Blown fuse or faulty relay supplying power to the injector group
- 5 High resistance in the power supply circuit due to chafed or broken wires
- 6 PCM driver circuit failure (less common)



How to diagnose and fix it

- 1 Perform a visual inspection of the injector group 'D' wiring harness and connectors for damage, corrosion, or loose pins
- 2 Check the fuse and relay that supply power to the injector group and replace if faulty
- 3 Measure resistance across each injector in group 'D' and compare to specifications; replace any that are out of range
- 4 With the key on and engine off, measure voltage at the injector group 'D' power wire to verify it is within specification (typically battery voltage)
- 5 Perform a voltage drop test on the ground and power circuits to identify excessive resistance
- 6 Disconnect the PCM and check for continuity or shorts to ground on the injector control circuits
- 7 If all wiring and injectors test good, suspect the PCM and perform a thorough diagnostic before replacement

What P2156 Doesn't Tell You

- A low voltage code on an injector group often stems from a poor ground connection rather than a failed injector, so always check ground points and battery terminals first.
- Some vehicles use a shared power feed for multiple injectors, and a single shorted injector can pull down the entire group's voltage, causing multiple misfire codes to set simultaneously.
- The PCM may set P2156 intermittently if the wiring harness rubs against a metal component only during certain engine movements, so wiggle-testing the harness while monitoring live data is crucial.
- Replacing an injector without checking the circuit can lead to repeat failures if the root cause is a chafed wire that shorts only under vibration.
- P2156 can be triggered by a weak battery or charging system issue that causes system voltage to drop below the threshold during cranking, so always verify battery health.

Can I keep driving with P2156?

If the check engine light is on but the engine runs smoothly, you can drive cautiously to a repair shop, but avoid heavy acceleration or long trips. If you notice misfiring, hesitation, or reduced power, stop driving and have the vehicle towed to prevent catalytic converter damage or unsafe driving conditions.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM)
- Test light
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools for accessing injectors



Reading P2156

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- 56** The exact fault within that area.

Often seen with

P0200 Injector Circuit Malfunction · **P0261** Cylinder 1 Injector Circuit Low · **P0300** Random/Multiple Cylinder Misfire Detected · **P2155** Fuel Injector Group 'D' Supply Voltage Circuit/Open · **P2157** Fuel Injector Group 'D' Supply Voltage Circuit High

See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2156/>

