

GENERIC · POWERTRAIN

P2D58

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2D58

Generator B Mechanical Performance

P2D58 indicates that the engine control module has detected a mechanical performance fault with Generator B, which is the second alternator or a belt-driven starter-generator on the vehicle. The computer monitors the generator's output and response to commands, and it sets this code when the generator fails to produce the expected voltage or current within a specified time, or when its mechanical drive system is not functioning correctly.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Battery warning light illuminated on the dashboard
- Dimming headlights or interior lights, especially at idle
- Electrical accessories such as radio or climate control behaving erratically
- Battery repeatedly going flat or requiring jump starts
- Squealing or chirping noise from the accessory drive belt
- Often no symptoms besides the warning light, especially if the main battery still has charge

Common causes, most likely first

- 1 Worn or slipping accessory drive belt or belt tensioner
- 2 Faulty generator B internal regulator or rectifier
- 3 Open or high-resistance wiring in the generator B control circuit
- 4 Failed generator B bearings or decoupler pulley causing mechanical drag
- 5 Corroded or loose battery and ground connections affecting generator output
- 6 Engine control module software calibration issue misinterpreting generator response

How to diagnose and fix it

- 1 Inspect the accessory drive belt and tensioner for wear, glazing, or improper tension
- 2 Check battery voltage and perform a charging system test with a load tester
- 3 Inspect generator B wiring harness and connectors for corrosion, chafing, or loose pins
- 4 Measure generator B output voltage and compare to commanded value using a scan tool
- 5 Test the generator B decoupler pulley for proper one-way operation
- 6 Replace the generator B assembly if internal electrical or mechanical failure is confirmed
- 7 Clear the code and verify the charging system operates correctly under load



What a slipping belt can hide

- A worn belt or weak tensioner can cause this code without any generator fault, so always inspect the drive belt before condemning the alternator.
- Some vehicles use a belt-driven starter-generator for Generator B, and a failing decoupler pulley can mimic an internal generator failure.
- The code can set intermittently due to a loose ground connection that only acts up under certain electrical loads or temperature conditions.
- A scan tool that can command generator output is essential; without it, you may replace a good generator because of a wiring or control module issue.
- After replacing Generator B, the engine control module may require a relearn procedure for the charging system to prevent repeat codes.

Can I keep driving with P2D58?

You can drive short distances to a repair shop if the battery is fully charged and the warning light is the only symptom, but avoid long trips or heavy electrical loads. If the battery is draining or the engine begins to stall, stop driving and arrange a tow to prevent being stranded.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Battery load tester
- Belt tension gauge
- Socket and wrench set

Reading P2D58

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
D	Hybrid propulsion.
58	The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0620** Generator Control Circuit Malfunction · **P0625** Generator Field/F Terminal Circuit Low · **P2D59** Generator B Over Temperature



See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2d58/>

