

GENERIC · POWERTRAIN

P2E3B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E3B

Battery Charger B Output Voltage Too Low

P2E3B indicates that the powertrain control module has detected the output voltage from battery charger B is lower than the manufacturer's expected threshold for the current operating conditions. This typically occurs in hybrid and electric vehicles where a separate charger circuit manages a second battery pack or auxiliary battery, and the PCM monitors the charger's output to ensure it is supplying adequate voltage to charge the battery.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced charging performance or slower recharge times for the affected battery
- Possible electrical system warnings or low-voltage indicators on the dashboard
- In some cases, the vehicle may enter a reduced power or limp mode to protect the battery
- Auxiliary equipment powered by battery B may operate intermittently or fail

Common causes, most likely first

- 1 Faulty battery charger B unit or internal failure of the charger module
- 2 Damaged or corroded wiring and connectors between the charger and the battery
- 3 High resistance in the charging circuit due to loose or oxidized terminals
- 4 A failing battery B that cannot accept charge properly, causing the charger to work outside its expected range
- 5 Software or calibration issue in the powertrain control module affecting charger control
- 6 Blown fuse or faulty relay in the charger B power supply circuit
- 7 Ground connection problem for the charger or battery B circuit



How to diagnose and fix it

- 1 Perform a visual inspection of the charger B wiring, connectors, and fuses for obvious damage or corrosion
- 2 Use a digital multimeter to check for battery voltage at the charger B output terminals with the system commanded on
- 3 Inspect and clean all ground connections related to charger B and battery B
- 4 Check for technical service bulletins or software updates for the PCM that address charger B operation
- 5 Test the battery B state of health and charge acceptance using a conductance tester or diagnostic scan tool
- 6 If voltage is low at the charger output but input power and ground are good, replace the charger B unit
- 7 After repairs, clear the diagnostic trouble codes and verify the charger output voltage meets specification during a road test

Charger B faults often misdiagnosed

- A weak or aged battery B can cause the charger to log a low output voltage code even when the charger itself is functioning correctly, so always load-test the battery before condemning the charger.
Corroded or loose ground connections on the charger B circuit are a frequent culprit that can mimic a failed charger, and these are often overlooked during diagnosis.
- The code can be set by a momentary voltage dip during engine cranking or a brief electrical load spike, so check for a history of intermittent low-voltage events before replacing parts.
- On some vehicles, charger B is part of a dual-battery system where the auxiliary battery is charged only under specific conditions; the code may set if those conditions are not met due to a faulty voltage sense wire.
A software calibration issue in the PCM can cause false low-voltage readings, so verify that the latest software is installed before replacing hardware.

Can I keep driving with P2E3B?

You can usually continue driving with this code, but avoid relying on the auxiliary battery for critical functions and do not ignore repeated warnings. If the vehicle enters a reduced power mode or you notice electrical failures, have it inspected promptly to prevent being stranded.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Battery conductance tester
- Basic hand tools for connector and terminal inspection
- Service information for charger B circuit specifications



Reading P2E3B

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- E** Hybrid propulsion.
- 3B** The exact fault within that area.

Often seen with

P0A94 DC/DC Converter A Performance · **P2E3A** Battery Charger B Output Voltage Performance · **P2E3C** Battery Charger B Output Current Performance · **U0111** Lost Communication With Battery Energy Control Module 'A'

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e3b/>

