

GENERIC · POWERTRAIN

P0B24

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B24

Hybrid/EV Battery A Voltage Unstable

This code means the battery management system has detected that the voltage of the high-voltage hybrid or electric vehicle battery pack, designated as Battery A, is fluctuating outside the expected stable range. The computer monitors individual cell group voltages and flags this fault when the readings swing too widely during normal operation, indicating an unstable power supply condition.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Professional	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or a dedicated hybrid system warning light
- Reduced electric-only driving range or the vehicle refusing to enter EV mode
- Intermittent loss of power or hesitation during acceleration
- The hybrid system may default to gasoline engine operation more frequently
- Often no symptoms besides the warning light, especially in early stages

Common causes, most likely first

- 1 A weak or failing cell group within the high-voltage battery pack causing voltage sag under load
- 2 Corroded or loose high-voltage battery terminal connections or intercell bus bars
- 3 A faulty battery voltage sensor or wiring harness within the pack
- 4 Degradation of the battery pack from age or repeated deep discharge cycles
- 5 Extreme temperature exposure affecting battery chemistry and voltage stability
- 6 A malfunctioning battery management system module or its software calibration

How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then clear the code and test-drive to see if it returns
- 2 Inspect the low-voltage battery and charging system first, as a weak 12-volt battery can cause erratic module behavior
- 3 Check the high-voltage battery pack for visible corrosion, loose connections, or damaged wiring at the service disconnect
- 4 Perform a battery pack voltage balance test with a manufacturer-specific diagnostic tool to identify weak cell groups
- 5 Update the battery management system software if a calibration bulletin applies to the vehicle
- 6 Replace the faulty cell group, voltage sensor, or battery pack assembly as determined by testing



What a voltage instability code really means

- A weak 12-volt auxiliary battery is a commonly overlooked cause because it powers the battery management electronics and can corrupt voltage readings
- This code does not automatically mean the entire high-voltage pack needs replacement; individual cell groups or sensors are often the culprit
- Intermittent voltage swings can be caused by a failing intercell bus bar connection that only acts up under vibration or temperature changes
- Technicians sometimes misdiagnose this as a motor or inverter fault because the symptoms mimic power loss, so always verify battery voltage stability first
- After any high-voltage battery service, the battery management system may need a relearn or calibration procedure to prevent false recurrence

Can I keep driving with P0B24?

It is not safe to continue driving with this code because an unstable high-voltage battery can lead to sudden power loss or a no-start condition. Have the vehicle inspected by a qualified hybrid technician before driving further, and avoid high-load driving or fast charging until repaired.

Tools that help

- Hybrid/EV-capable OBD-II scan tool with live data
- Digital multimeter with high-voltage rated probes
- Battery pack voltage balance tester or manufacturer-specific diagnostic software
- Insulated safety gloves and high-voltage protective equipment
- Service information for high-voltage system disable procedures

Reading P0B24

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

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0A80** Replace Hybrid/EV Battery Pack · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B23** Hybrid/EV Battery A Voltage · **P0B25** Hybrid/EV Battery A Voltage Low



See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0b24/>

