

GENERIC · POWERTRAIN

P0B3E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B3E

Hybrid/EV Battery Voltage Sense A Circuit High

P0B3E indicates that the hybrid or electric vehicle battery pack's voltage sensing circuit, specifically the 'A' channel, is reporting a voltage higher than the manufacturer's expected range to the battery energy control module. The computer detects this when the signal voltage on the sense circuit exceeds a calibrated threshold, which can be caused by a wiring fault, a failed sensor, or an internal battery pack issue.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power or limp mode as the battery management system limits output
- Inability to charge the high-voltage battery or unexpected charging behavior
- Battery state-of-charge gauge showing erratic readings or dropping rapidly

Common causes, most likely first

- 1 Damaged or chafed wiring in the voltage sense circuit, causing a short to voltage or high resistance
- 2 Corroded or loose connector pins at the battery pack voltage sensor or control module
- 3 Failed voltage sensing harness or sensor internal to the battery pack
- 4 Faulty battery energy control module (BECM) or hybrid control module
- 5 Internal battery pack cell imbalance or module failure affecting voltage sensing
- 6 Water intrusion or contamination in the voltage sense connector
- 7 Aftermarket accessories improperly wired near the high-voltage harness

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related hybrid system codes before proceeding
- 2 Inspect the voltage sense circuit wiring and connectors for damage, corrosion, or loose pins
- 3 Measure the voltage signal on the sense circuit at the battery pack and compare to the scan tool data
- 4 Perform a voltage drop test on the ground and power supplies to the battery control module
- 5 Check for technical service bulletins (TSBs) or software updates for the hybrid control module
- 6 If wiring and sensors are good, test the battery energy control module and replace if faulty
- 7 Clear codes and perform a road test to confirm the repair, monitoring live voltage data



Voltage Sense Circuit High: Common Oversights

- A high voltage sense code often results from a poor ground connection rather than a failed sensor, so always check grounds before replacing parts.
- Intermittent faults can be caused by vibration or temperature changes, so wiggle-test the harness while watching live data to reproduce the issue.
- The code may set due to a software glitch in the battery control module, and a reflash or update can resolve it without hardware replacement.
- Voltage sense circuits are sensitive to added resistance from corroded terminals, which can mimic a high voltage signal and mislead diagnosis.
- Never assume the battery pack is faulty; the sense circuit is a low-voltage signal path that is more likely to fail than the pack itself.

Can I keep driving with P0B3E?

It is generally safe to drive with this code if the vehicle is not in limp mode, but avoid aggressive driving or long trips until diagnosed, as a faulty voltage sense circuit can lead to inaccurate battery management and potential stalling.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter (DMM)
- Wiring diagram and service information
- Insulation tester (megohmmeter) for high-voltage circuits
- Terminal pick and electrical contact cleaner

Reading P0B3E

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B3D** Hybrid/EV Battery Voltage Sense A Circuit Low · **P0B3F** Hybrid/EV Battery Voltage Sense A Circuit Intermittent/Errat · **P0B40** Hybrid/EV Battery Voltage Sense B Circuit



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/p0b3e/>

