

GENERIC · POWERTRAIN

P0B6B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B6B

Hybrid/EV Battery Voltage Sense J Circuit High

P0B6B means the hybrid or electric vehicle battery pack's voltage sensing circuit for the 'J' sense line is reporting a voltage higher than the computer expects. The battery energy control module monitors each cell group through dedicated sense wires, and it sets this code when the signal on the J circuit exceeds the calibrated high threshold.

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, with the vehicle driving normally
- Reduced electric-only range or the engine running more often than usual
- A sudden drop in state of charge or the battery gauge behaving erratically
- Entry into limp mode or refusal to start in some cases
- Charging system faults or the vehicle not accepting a charge

Common causes, most likely first

- 1 A damaged or chafed voltage sense wire on the J circuit, often at a harness bend or connector
- 2 Corroded or loose terminals at the battery pack sense connector or the control module
- 3 A failed cell group or battery module causing an abnormal voltage reading on that sense line
- 4 Internal fault in the battery energy control module's sensing circuit
- 5 High resistance in a splice or connector pin on the J circuit
- 6 Water intrusion or contamination in the sense harness connector



How to diagnose and fix it

- 1 Inspect the J circuit sense wire and connector for chafing, corrosion, or loose pins, and repair as needed
- 2 Measure the voltage on the J sense circuit at the control module connector and compare it with the actual cell group voltage
- 3 Perform a voltage drop test on the J circuit to check for excessive resistance in the wire or connectors
- 4 Check the battery pack cell group voltages with a scan tool to see if the J sense line corresponds to a weak or failing module
- 5 If the sense circuit and cell voltages are correct, test or replace the battery energy control module
- 6 Clear the code and perform a hybrid battery learn or initialization procedure if required
- 7 Road test and verify the code does not return, monitoring live sense voltage data

Sense wire faults mimic battery failures

- A high voltage sense code often comes from a simple wiring fault rather than a failing battery pack, so always inspect the harness before condemning the pack.
The J circuit may share a connector with other sense lines, and a single bent pin can affect multiple readings, so check the whole connector body.
- Some vehicles set this code intermittently when the sense wire rubs against a metal bracket only during certain driving conditions, making it hard to reproduce in the shop.
- A weak cell group can cause the sense circuit to read high under load, so compare the J circuit reading with the actual measured cell voltage before replacing the module.
After repairs, the battery energy control module may need a relearn or adaptation reset, otherwise the code can stay stored even though the fault is fixed.

Can I keep driving with P0B6B?

You can usually drive the vehicle with this code if it is the only symptom and the car runs normally, but avoid heavy acceleration or long trips until it is diagnosed. If the hybrid system warning light is on along with reduced power or charging problems, have it checked promptly.

Tools that help

- Hybrid/EV-capable scan tool with live battery cell voltage data
- Digital multimeter with high-impedance DC voltage measurement
- Wiring diagram and connector pinout for the battery energy control module
- Insulation piercing probes or back-probe pins
- Torque wrench and insulated hand tools for high-voltage safety



Reading P0B6B

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- B** Hybrid propulsion.
- 6B** The exact fault within that area.

Often seen with

P0A1F Battery Energy Control Module A Performance · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B6A** Hybrid/EV Battery Voltage Sense J Circuit Low · **P0B6C** Hybrid/EV Battery Voltage Sense J Circuit Intermittent/Errat · **P0B6D** Hybrid/EV Battery Voltage Sense K 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/p0b6b/>

