

GENERIC · POWERTRAIN

P0B75

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B75

Hybrid/EV Battery Voltage Sense L Circuit High

P0B75 indicates that the hybrid or electric vehicle battery pack control module has detected an abnormally high voltage on the voltage sensing circuit for the 'L' battery module or cell group. The computer expects a specific voltage range on this sense line, and a reading above the calibrated threshold triggers the code, often disabling high-voltage charging or discharging to protect the pack.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Reduced or disabled electric-only propulsion, forcing the gasoline engine to run
- The vehicle may enter a fail-safe mode with limited power or speed
- Charging may be inhibited on plug-in hybrids, preventing a full charge
- Often no symptoms besides the warning light, with the vehicle driving normally
- In rare cases, a sudden loss of motive power or refusal to start

Common causes, most likely first

- 1 A faulty voltage sense wire (open, high resistance, or shorted to voltage) between the battery module and the battery control module
- 2 Corroded, loose, or damaged connector pins at the battery module or control module harness
- 3 A failed battery control module or voltage sensing circuit inside the module
- 4 An internal fault in the battery module, such as a cell group with abnormally high resistance or an open sense tap
- 5 Water intrusion or contamination in the battery pack causing sense circuit corrosion
- 6 A poor ground connection for the battery control module or voltage sensing reference



How to diagnose and fix it

- 1 Retrieve all stored codes and freeze-frame data, then clear codes and verify whether P0B75 returns immediately or after a drive cycle
- 2 Visually inspect the battery pack harness, connectors, and sense wires for chafing, corrosion, or loose pins, especially at the module and control module ends
- 3 Measure resistance and voltage drop on the 'L' circuit sense wire from the battery module to the control module, comparing with the service information specification
- 4 Check the battery control module ground and power supply for integrity, and verify the reference voltage at the module connector
- 5 If the wiring and connectors are good, perform a battery module voltage measurement directly at the cell taps and compare with the control module's reported value to isolate the module or the control module
- 6 Replace the faulty battery module or battery control module as indicated by the test results, following the manufacturer's high-voltage safety procedures
- 7 After repair, clear codes and perform a full drive cycle or charging cycle to confirm the code does not return

Sense circuit faults often mimic module failure

- A high voltage reading on a sense circuit is frequently caused by a poor ground reference rather than an actual overvoltage, so technicians who replace the battery module without checking grounds often see the code return.
- The 'L' designation refers to a specific cell group or module in the pack, and on some vehicles the sense line runs through a intermediate connector under the vehicle that is prone to water intrusion and corrosion.
- This code can be set by a momentary glitch during a low-voltage event, such as a weak 12-volt battery, so always verify the auxiliary battery and charging system before condemning hybrid components.
- On many hybrids, the battery control module is not separately serviceable and is part of the pack assembly, making thorough circuit testing critical before recommending a costly pack replacement.
- A sense wire that is shorted to a neighbouring higher-voltage sense line can produce a high reading on the 'L' circuit without any actual cell fault, so inspect the harness routing for pinch points.

Can I keep driving with P0B75?

Do not continue driving with this code if the hybrid system has disabled high-voltage operation or if the vehicle has entered a reduced-power mode, because unexpected loss of motive power can be dangerous. If the only symptom is the warning light and the vehicle drives normally, you may drive cautiously to a repair facility, but avoid heavy acceleration, high-speed driving, and charging until the fault is diagnosed.



Tools that help

- OBD-II scan tool with hybrid/EV battery data capability
- Digital multimeter with high-voltage safety rating
- Manufacturer service information and wiring diagrams
- Insulation tester or megohmmeter for high-voltage circuit checks
- High-voltage personal protective equipment (insulated gloves, safety glasses)

Reading P0B75

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

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B74** Hybrid/EV Battery Voltage Sense L Circuit Low · **P0B76** Hybrid/EV Battery Voltage Sense L Circuit Intermittent/Errat · **P0B77** Hybrid/EV Battery Voltage Sense M 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/p0b75/>

