

GENERIC · POWERTRAIN

P0B76

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B76

Hybrid/EV Battery Voltage Sense L Circuit Intermittent/Erratic

P0B76 indicates that the hybrid or electric vehicle battery pack's voltage sensing circuit, specifically the 'L' circuit, is reporting an intermittent or erratic signal to the battery energy control module. The computer detects this when the voltage reading from that sense line jumps, drops out, or becomes inconsistent compared to the other cell voltage sensors, often due to a poor connection or failing sensor.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

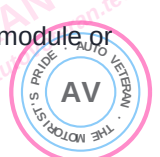
- Illumination of the check engine light or hybrid system warning light.
- Often no symptoms besides the warning light, especially if the erratic signal is brief.
- Reduced hybrid system power or a forced limp mode in some vehicles.
- Inconsistent state-of-charge readings or unexpected battery gauge behavior.
- In rare cases, the vehicle may fail to start or enter a 'ready' state.

Common causes, most likely first

- 1 Loose, corroded, or damaged electrical connector at the voltage sense circuit or battery module.
- 2 Chafed or broken wire in the voltage sense harness, often due to vibration or routing issues.
- 3 Faulty voltage sense circuit within the battery pack, such as a failing sense wire or internal connection.
- 4 Malfunctioning battery energy control module (BECM) or voltage sensing interface.
- 5 High resistance in the sense circuit due to pin fitment or terminal corrosion.
- 6 Interference from aftermarket electronics or improper previous repairs.

How to diagnose and fix it

- 1 Inspect and clean the voltage sense circuit connectors at the battery pack and control module.
- 2 Perform a wiggle test on the harness while monitoring live voltage sense data to identify intermittent faults.
- 3 Check for technical service bulletins (TSBs) or manufacturer-specific diagnostic procedures for the voltage sense circuit.
- 4 Measure resistance and voltage drop across the sense circuit wiring to detect high resistance or open circuits.
- 5 Replace or repair damaged sections of the voltage sense harness as needed.
- 6 If the circuit tests good, follow the manufacturer's diagnostic flow to test the battery energy control module or battery pack internals.



Intermittent Voltage Sense Faults Often Misdiagnosed

- A common oversight is replacing the entire battery pack when the fault is simply a loose connector or chafed wire in the voltage sense circuit.
- The 'L' circuit designation refers to a specific sense line within the battery pack, and its exact location varies by manufacturer, so always consult the correct wiring diagram.
- Intermittent faults may not set a hard code until the vehicle has completed several drive cycles, making them difficult to reproduce in the shop.
- Aftermarket alarm or audio installations can introduce electrical noise that mimics a faulty voltage sense signal.
- Some vehicles require a battery pack service plug disconnect and specific safety procedures before testing the sense circuits, which many DIYers overlook.

Can I keep driving with P0B76?

If the only symptom is a warning light and the vehicle drives normally, you can drive to a service center, but avoid heavy acceleration or long trips until diagnosed. If the hybrid system enters limp mode or shows reduced power, stop driving and seek professional diagnosis to prevent further battery damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM) with min/max recording
- Wiring diagram and service information for the specific vehicle
- Insulation piercing probes or back-probe pins
- Battery pack service plug removal tool (if applicable)

Reading P0B76

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

Often seen with

P0A1F Battery Energy Control Module A Performance · **P0AFA** Hybrid/EV Battery System Voltage Low ·
P0B75 Hybrid/EV Battery Voltage Sense L Circuit High · **P0B77** Hybrid/EV Battery Voltage Sense M Circuit ·
P0B78 Hybrid/EV Battery Voltage Sense M Circuit Range/Performance



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/p0b76/>

