



P0B6D

Hybrid/EV Battery Voltage Sense K Circuit

P0B6D indicates that the hybrid or electric vehicle battery pack monitoring system has detected an abnormal voltage reading on the voltage sense circuit designated as 'K'. The battery energy control module compares this sense line against expected values and flags the circuit when the signal falls outside its valid range, which can be caused by a wiring fault, a failing sense connection, 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, with the vehicle driving normally
- Reduced electric-only range or the engine running more frequently than usual
- A sudden drop in state of charge or inconsistent battery gauge readings
- Entry into limp mode or refusal to start in some cases
- Intermittent warning light that appears and clears with temperature or vibration

Common causes, most likely first

- 1 Damaged, chafed, or corroded wiring in the voltage sense K circuit
- 2 Loose or contaminated connector pins at the battery pack or control module
- 3 Faulty voltage sense harness internal to the battery pack
- 4 Failed battery energy control module or sense interface board
- 5 High-resistance cell interconnects or busbar connections affecting the sense reading
- 6 Internal battery pack fault such as a weak module or cell group
- 7 Water intrusion or debris in the battery pack connector area



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0B6D and any companion codes before clearing anything
- 2 Inspect the voltage sense K circuit wiring and connectors for damage, corrosion, or loose pins
- 3 Measure resistance and voltage drop on the sense K line from the battery pack to the control module
- 4 Compare the K sense reading against neighbouring sense circuits and the module's calculated pack voltage
- 5 Perform a battery pack visual inspection for moisture, debris, or damaged harness routing
- 6 Repair or replace the faulty sense harness or connector, then clear codes and verify the reading
- 7 If wiring and connections are good, test or replace the battery energy control module per manufacturer procedures

What the K sense circuit really tells you

- A voltage sense code often appears after battery pack service or connector reseating, so check recent repair history before condemning the pack.
- The K designation refers to one specific sense line in a multiplexed measurement system, and a single bad sense line can make the module misreport an entire cell group.
- Intermittent P0B6D codes that set only under vibration or temperature extremes usually point to a connector or harness issue rather than a failed module.
- Technicians sometimes replace the battery energy control module when the real fault is a high-resistance busbar or cell interconnect skewing the sense voltage.
- This code does not always mean the high-voltage battery is failing, and many cases resolve with a harness repair or connector cleaning.

Can I keep driving with P0B6D?

The vehicle may remain driveable with only a warning light, but continued driving risks a sudden loss of hybrid assistance or limp mode. Avoid heavy electrical loads and long trips until the circuit is diagnosed, and do not ignore repeated warnings.

Tools that help

- OBD-II scan tool with hybrid/EV module access and live data
- Digital multimeter with low-resistance and voltage-drop capability
- Manufacturer service information and wiring diagrams
- Insulated hand tools and personal protective equipment for high-voltage work
- Terminal pick and contact cleaner for connector inspection



Reading P0B6D

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

Often seen with

P0A1F Battery Energy Control Module A Performance · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B6B** Hybrid/EV Battery Voltage Sense J Circuit High · **P0B6C** Hybrid/EV Battery Voltage Sense J Circuit Intermittent/Errat · **P0B6E** Hybrid/EV Battery Voltage Sense K 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/p0b6d/>

