

GENERIC · POWERTRAIN

P0B27

OBD-II TROUBLE CODE

P0B27

Hybrid/EV Battery B Voltage

P0B27 indicates that the hybrid or electric vehicle battery control module has detected an abnormal voltage condition in the high-voltage battery pack's 'B' section, which is a specific group of cells or modules within the overall pack. The computer compares voltage readings from this section against expected values and flags the code when the reading falls outside the acceptable range, signaling a potential imbalance or failure within that portion of the battery.

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

Symptoms you may notice

- Illumination of the check engine light or hybrid system warning light
- Reduced electric-only driving range or the vehicle switching to gasoline engine more frequently
- A noticeable decrease in acceleration or power, especially under electric assist
- The hybrid system may enter a fail-safe mode, limiting vehicle speed
- Often no symptoms besides the warning light, especially in early stages
- In some cases, the vehicle may refuse to start or run in electric mode

Common causes, most likely first

- 1 A failing or degraded cell or module within the 'B' section of the high-voltage battery pack
- 2 Poor electrical connection or corrosion at the battery module terminals or interconnects
- 3 A faulty cell voltage sensor or wiring harness within the battery pack
- 4 Imbalance in state of charge among cells in the 'B' section due to age or manufacturing variation
- 5 Battery management system (BMS) software glitch or calibration error
- 6 Physical damage or overheating affecting the 'B' battery section
- 7 Extreme temperature conditions causing temporary voltage deviations



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then clear the code and test-drive to see if it returns
- 2 Perform a visual inspection of the high-voltage battery pack and its wiring for obvious damage, corrosion, or loose connections (only if qualified and with proper safety gear)
- 3 Check for technical service bulletins (TSBs) or software updates for the battery management system that may address voltage reading errors
- 4 Measure the voltage of individual cells or modules in the 'B' section using a battery diagnostic tool or multimeter with high-voltage capability
- 5 Compare voltage readings across all sections to identify imbalance or a weak module
- 6 If a faulty module is identified, replace or rebalance the battery pack according to manufacturer procedures
- 7 After repairs, perform a battery pack calibration or relearn procedure as required by the vehicle manufacturer

What P0B27 really tells you about battery health

- This code often appears after a battery pack has been deeply discharged or left sitting for extended periods, causing a temporary voltage imbalance that may resolve after a full charge cycle.
- A weak 12-volt auxiliary battery can cause erratic behavior in the hybrid battery control module and set false voltage codes, so always check the 12-volt system first.
- The 'B' designation refers to a specific section of the battery pack, not the entire pack, so replacing the whole pack is rarely necessary unless multiple sections are failing.
- In some vehicles, a software update for the battery energy control module can recalibrate voltage thresholds and eliminate the code without any hardware replacement.
- Intermittent connection issues at the battery pack service plug or high-voltage junction box can mimic a failing module and set this code sporadically.

Can I keep driving with P0B27?

It is not advisable to continue driving with P0B27 set, as a voltage fault in the high-voltage battery can lead to reduced power, unexpected shutdown, or further battery damage. Have the vehicle inspected by a qualified hybrid technician promptly, and avoid heavy acceleration or long trips until repaired.

Tools that help

- Hybrid/EV-capable OBD-II scan tool
- Digital multimeter with high-voltage rating
- Battery module diagnostic tool or cell voltage tester
- Insulated safety gloves and high-voltage protective gear
- Manufacturer-specific service information and wiring diagrams



Reading P0B27

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

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B24** Hybrid/EV Battery A Voltage Unstable · **P0B26** Hybrid/EV Battery A Voltage High · **P0B28** Hybrid/EV Battery B Voltage Unstable

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/p0b27/>

