

GENERIC · POWERTRAIN

P0B2A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B2A

Hybrid/EV Battery B Voltage High

P0B2A indicates that the hybrid or electric vehicle battery control module has detected an abnormally high voltage on battery module B, which is one section of the high-voltage pack. The computer compares voltage readings across modules and flags this code when module B exceeds the expected range, often pointing to a cell imbalance or a sensing circuit fault rather than a failed pack.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Reduced electric-only range or the engine running more often than usual
- A sudden drop in available power or limp-home mode
- The battery state-of-charge gauge behaving erratically or showing unexpected jumps
- Often no symptoms besides the warning light, especially in early stages

Common causes, most likely first

- 1 A weak or failing cell group within battery module B causing voltage to rise disproportionately during charging
- 2 Faulty voltage sensing harness or connector at module B, including chafed wires or corrosion
- 3 A malfunctioning battery control module or interface board that misreports module B voltage
- 4 Imbalanced state of charge across modules due to a failed balancing circuit
- 5 Extreme cold or heat affecting module B more than others and temporarily pushing voltage high
- 6 A charging system fault that overcharges the pack and stresses module B first

How to diagnose and fix it

- 1 Scan all hybrid/EV modules for stored codes and freeze-frame data to confirm P0B2A is current and not history
- 2 Inspect the voltage sensing harness and connectors at module B for damage, corrosion, or loose pins
- 3 Measure module B voltage directly with a high-voltage-rated meter and compare it to the control module's reported value
- 4 Perform a battery pack balancing procedure or a capacity test as specified by the manufacturer
- 5 Check for software updates to the battery control module that address voltage reporting or balancing logic
- 6 If a cell group is confirmed weak, replace the affected module or battery assembly per the service procedure
- 7 Clear codes and road-test the vehicle through several charge and discharge cycles to verify the repair

What a high module B voltage really means

- A high voltage reading on one module often indicates that module is weaker than the others, because a lower-capacity cell group reaches a higher voltage sooner during charging.
- The code can be set by a sensing circuit fault rather than an actual battery problem, so always compare the control module's reported voltage with a direct measurement before condemning the pack.
- Temperature differences across the pack can cause one module to report high voltage temporarily, and the code may not return after the pack stabilizes.
- A failing balancing circuit can leave module B chronically overcharged while the rest of the pack is normal, and this is frequently missed during a simple code read.
- Do not assume the high-voltage battery must be replaced; harness repairs and software updates resolve a meaningful share of these codes.

Can I keep driving with P0B2A?

Limit driving to essential trips and avoid aggressive acceleration or high-speed charging until the fault is diagnosed, because a genuinely overvoltage module can overheat or fail. If the vehicle enters limp mode or shows a high-voltage warning, stop driving and have it inspected by a qualified hybrid technician.

Tools that help

- Hybrid/EV-capable scan tool with module-level battery data
- High-voltage-rated digital multimeter and insulated gloves
- Manufacturer service information for battery module access and balancing procedures
- Insulation tester for high-voltage cable and connector checks
- Battery pack lifting equipment if module replacement is required

Reading P0B2A

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
2A	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 · **P0B29** Hybrid/EV Battery B Voltage Low · **P0B2B** Hybrid/EV Battery C Voltage



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/p0b2a/>

