

GENERIC · POWERTRAIN

P0B1C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B1C

Hybrid/EV Battery Pack Voltage Sense C Circuit High

P0B1C indicates that the hybrid or electric vehicle battery pack voltage sense circuit C is reporting a voltage higher than the manufacturer's expected range. The battery energy control module monitors this circuit to ensure accurate cell voltage readings, and it sets the code when the signal exceeds a calibrated threshold for a set time.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	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 high voltage reading is intermittent.
- Reduced hybrid system power or a forced limp mode in some vehicles.
- Failure of the hybrid system to enter ready mode or start.
- Inaccurate state-of-charge or range display on the dashboard.
- Possible activation of a battery cooling fan at high speed due to perceived overheating.

Common causes, most likely first

- 1 A faulty voltage sense wire or connector at the battery pack, such as corrosion, a loose terminal, or a chafed harness.
- 2 High resistance in the voltage sense circuit ground or reference return, causing a skewed high reading.
- 3 A failed battery pack voltage sensor or sensing module internal to the pack.
- 4 A malfunctioning battery energy control module or hybrid control module interpreting the signal incorrectly.
- 5 Software calibration issues in the battery control module requiring a reflash or update.
- 6 Physical damage to the battery pack wiring harness from road debris or improper service procedures.



How to diagnose and fix it

- 1 Retrieve all stored codes and freeze-frame data with a scan tool capable of reading hybrid/EV battery modules, then clear codes and test-drive to see if P0B1C returns.
- 2 Visually inspect the battery pack voltage sense circuit C wiring and connectors for corrosion, loose pins, or damage, and repair as needed.
- 3 Measure resistance and voltage drop on the sense circuit C from the battery pack connector to the control module, comparing to manufacturer specifications.
- 4 Perform a pin fit and terminal tension test at the battery energy control module and at the battery pack connector.
- 5 If wiring and connections are good, substitute a known-good voltage sensor or sensing module and retest the circuit.
- 6 Check for technical service bulletins or software updates for the battery control module that address false high-voltage sense codes.
- 7 If the fault persists after all electrical checks, diagnose the battery energy control module itself and replace only after confirming power, ground, and communication integrity.

High Voltage Sense Circuit Pitfalls

- A high voltage sense reading often results from a poor ground connection rather than a failed sensor, so always check the reference return circuit before condemning parts.
- Intermittent P0B1C codes can be caused by vibration-induced connector fretting at the battery pack, which may not appear during a static resistance test.
- Some vehicles set this code when the 12-volt auxiliary battery is weak, because low system voltage corrupts the reference signal used by the battery control module.
- The code does not always mean the high-voltage battery is failing; it specifically points to the sensing circuit, and the pack may be perfectly healthy.
- After any repair, the battery control module may require a learned value reset or calibration drive cycle before the code will clear permanently.

Can I keep driving with P0B1C?

If the vehicle drives normally and only the warning light is on, you may drive short distances to a repair shop, but avoid heavy acceleration or long trips. If the hybrid system enters limp mode or refuses to start, stop driving and have the vehicle towed to prevent further damage.



Tools that help

- Hybrid/EV-capable scan tool with battery module data
- Digital multimeter with high-voltage safety rating
- Insulation tester or megohmmeter
- Terminal test kit and pin extractor set
- Manufacturer service information for circuit specifications

Reading P0B1C

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
1C	The exact fault within that area.

Often seen with

P0AFA Hybrid/EV Battery System Voltage Low · **P0AFC** Hybrid/EV Battery Pack Sensor Module · **P0B1A** Hybrid/EV Battery Pack Voltage Sense C Circuit Range/Perform · **P0B1B** Hybrid/EV Battery Pack Voltage Sense C Circuit Low · **P0B1D** Hybrid/EV Battery Pack Voltage Sense C Circuit Intermittent/

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/p0b1c/>

