

GENERIC · POWERTRAIN

P0B0E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B0E

Hybrid/EV Battery Pack Current Sensor B Circuit

P0B0E indicates that the hybrid or electric vehicle's battery management system has detected an abnormal signal from the current sensor that monitors the high-voltage battery pack, specifically on circuit B. The computer compares this sensor's readings against expected values from other current sensors and flags a fault when the signal is out of range, erratic, or missing entirely.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon light
- Reduced electric-only driving range or the vehicle refusing to enter EV mode
- Inconsistent state-of-charge readings on the dashboard, such as sudden drops or jumps
- The internal combustion engine starting more frequently than usual in a hybrid
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Possible limp mode or reduced power output if the fault is severe

Common causes, most likely first

- 1 Faulty battery pack current sensor B itself, due to internal failure or contamination
- 2 Damaged or corroded wiring harness or connector at the current sensor
- 3 Poor electrical connection or high resistance in the sensor ground circuit
- 4 Failed battery management system (BMS) module or control module software glitch
- 5 Loose or degraded high-voltage cable connection affecting sensor reference voltage
- 6 Water intrusion or physical damage to the sensor or its wiring
- 7 Interference from aftermarket electronics or improper previous repairs



How to diagnose and fix it

- 1 Perform a thorough visual inspection of the current sensor, its connector, and wiring for damage, corrosion, or loose pins
- 2 Use a scan tool to retrieve all stored codes and freeze-frame data, then clear codes and test-drive to see if P0B0E returns
- 3 Check the sensor's reference voltage and ground circuits with a multimeter, comparing to manufacturer specifications
- 4 Back-probe the sensor signal wire and monitor its voltage while wiggling the harness to detect intermittent faults
- 5 If the signal is erratic, replace the current sensor B following the factory service procedure, which may require high-voltage safety precautions
- 6 After replacement, clear codes and perform any required BMS relearn or calibration procedure
- 7 If the fault persists, diagnose the BMS module and its software for updates or internal failure

Before you replace the battery current sensor

- A weak or failing 12-volt auxiliary battery can cause erratic behavior in hybrid control modules and set false current sensor codes, so always load-test the 12-volt battery first.
- The current sensor B circuit often shares a ground with other sensors; a single bad ground can trigger multiple codes, so check grounds before condemning the sensor.
- In some vehicles, the current sensor is integrated into the battery pack and not serviceable separately, requiring battery pack replacement, so verify part availability before quoting.
- Intermittent P0B0E codes that appear only in cold or wet weather often point to a harness chafe or connector seal failure rather than a failed sensor.
- After any high-voltage battery service, the BMS may need a calibration drive cycle to relearn the current sensor offset, or the code will reset immediately.

Can I keep driving with P0B0E?

You can generally continue driving with P0B0E if the vehicle drives normally and only the warning light is on, but avoid aggressive acceleration or relying on electric-only mode until the fault is repaired. If the vehicle enters limp mode or shows severe power reduction, stop driving and seek professional diagnosis.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter with back-probing pins
- Factory service information for wiring diagrams and sensor specifications
- Insulated hand tools and personal protective equipment for high-voltage safety
- Battery load tester for the 12-volt auxiliary battery



Reading P0B0E

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B0C** Electric/Auxiliary Transmission Fluid Pump A Hydraulic Leaka · **P0B0D** Electric/Auxiliary Transmission Fluid Pump Motor Control Mod · **P0B0F** Hybrid/EV Battery Pack Current Sensor B Circuit Range/Perfor

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/p0b0e/>

