

GENERIC · POWERTRAIN

P0B10

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B10

Hybrid/EV Battery Pack Current Sensor B Circuit Low

P0B10 indicates that the hybrid or electric vehicle battery pack current sensor B circuit is reporting a voltage below its expected operating range. The battery energy control module monitors this sensor to calculate current flow into and out of the high-voltage pack, and it sets the code when the signal stays too low for too long.

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 check engine light
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced electric-only driving range or the engine running more often than usual
- A sudden drop in state of charge or inaccurate battery percentage display
- Entry into a reduced-power limp mode in some vehicles
- Possible failure to start or engage the high-voltage system in severe cases

Common causes, most likely first

- 1 Faulty battery pack current sensor B or its internal electronics
- 2 Damaged, corroded, or loose wiring or connector at the current sensor
- 3 Open or shorted signal circuit between the sensor and the battery energy control module
- 4 Poor ground connection for the current sensor or module
- 5 Failed battery energy control module or internal signal processing fault
- 6 Water intrusion or contamination in the sensor connector or harness
- 7 Aftermarket accessory or improper previous repair disturbing the sensor circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0B10 and any related codes before clearing anything
- 2 Visually inspect the current sensor, its connector, and the harness for damage, corrosion, or loose pins
- 3 Measure reference voltage and ground at the sensor connector with a digital multimeter and compare to manufacturer specifications
- 4 Back-probe the signal circuit and check for an open or short to ground between the sensor and the control module
- 5 Perform a wiggle test on the harness while monitoring sensor voltage to reveal intermittent faults
- 6 If wiring and connections are good, substitute a known-good sensor and recheck the live data
- 7 If the code persists with a known-good sensor and verified wiring, test or replace the battery energy control module per service information

Current sensor B faults that fool technicians

- A low signal code often comes from a poor ground or reference voltage drop rather than a failed sensor, so always verify power and ground before condemning the part.
- The sensor may test fine at rest but fail only under high current flow, so live data should be monitored during acceleration and regenerative braking events.
- Water intrusion into the sensor connector is a common hidden cause on vehicles that have been driven through deep water or have clogged underbody drains.
- A weak or failing 12-volt auxiliary battery can cause erratic module behavior and set false low-signal codes in the high-voltage system.
- Aftermarket alarms, remote starters, or improper jump-starting can disturb the low-voltage reference circuit shared by the current sensor.

Can I keep driving with P0B10?

You can usually drive the vehicle short distances to a service location, but avoid heavy acceleration, sustained high-speed driving, and any situation that demands maximum battery power. If the vehicle enters limp mode or shows a high-voltage system warning, stop safely and have it towed.

Tools that help

- OBD-II scan tool with hybrid/EV capability and live data
- Digital multimeter with back-probe pins
- Manufacturer service information and wiring diagrams
- Insulated hand tools rated for hybrid high-voltage work
- Battery terminal cleaner and contact enhancer



Reading P0B10

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B0F** Hybrid/EV Battery Pack Current Sensor B Circuit Range/Perfor · **P0B11** Hybrid/EV Battery Pack Current Sensor B Circuit High · **P0B12** Hybrid/EV Battery Pack Current Sensor B 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/p0b10/>

