



P0B1A

Hybrid/EV Battery Pack Voltage Sense C Circuit Range/Performance

P0B1A indicates that the hybrid or electric vehicle battery pack voltage sensing circuit C is reporting a voltage reading that falls outside the expected range or is not performing correctly. The battery energy control module compares this circuit's signal against other voltage sense circuits and flags the code when the reading is implausible or erratic.

SYSTEM Powertrain	CODE TYPE Generic (all makes)	SEVERITY Medium	FIX DIFFICULTY Professional	AREA Hybrid propulsion
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Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Reduced electric-only range or the vehicle refusing to enter EV mode
- Intermittent loss of power or a sudden limp-home mode
- Charging system faults or the high-voltage battery failing to accept a charge
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty voltage sensing circuit C wiring, including chafed, corroded, or loose connections
- 2 Failed battery pack voltage sensor or sensing module
- 3 Internal battery pack cell imbalance or module failure affecting voltage readings
- 4 Battery energy control module software glitch or internal fault
- 5 High-voltage cable or connector damage causing signal interference
- 6 Water intrusion or contamination in the battery pack connector

How to diagnose and fix it

- 1 Perform a visual inspection of the voltage sensing circuit C wiring and connectors for damage or corrosion
- 2 Check for technical service bulletins (TSBs) or software updates for the battery energy control module
- 3 Measure resistance and voltage drop across the sensing circuit to verify integrity
- 4 Compare voltage readings from all sense circuits using a scan tool to isolate the faulty circuit
- 5 Test the voltage sensor or sensing module with a multimeter and replace if out of specification
- 6 Inspect the high-voltage battery pack for cell imbalance or module failure using a battery diagnostic tool
- 7 Repair or replace damaged wiring or connectors, then clear codes and verify the repair



Voltage sense circuit C pitfalls to avoid

- A loose or corroded ground connection for the battery pack can cause this code even when the sensing circuit itself is intact.
- Technicians often replace the voltage sensor only to find the real problem is a failing battery module causing erratic voltage readings.
- Intermittent faults may not set a pending code until the vehicle is driven under specific load conditions, so a road test with a scan tool is essential.
- The code can be triggered by a low 12-volt auxiliary battery, which affects the reference voltage for the sensing circuits.
- After repairs, some vehicles require a battery pack voltage relearn procedure or the code will immediately reset.

Can I keep driving with P0B1A?

It is generally safe to drive with this code if the vehicle is not in limp mode, but avoid aggressive acceleration or high-speed driving until diagnosed. If the hybrid system warning light is flashing or the vehicle loses power, stop driving and seek professional service immediately.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter
- Battery pack diagnostic software
- Insulation tester
- Wiring diagram and service information

Reading P0B1A

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

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B19** Hybrid/EV Battery Pack Voltage Sense C Circuit · **P0B1B** Hybrid/EV Battery Pack Voltage Sense C Circuit Low · **P0B1C** Hybrid/EV Battery Pack Voltage Sense C Circuit High



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/p0b1a/>

