

GENERIC · POWERTRAIN

P0B8A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B8A

Hybrid/EV Battery Voltage Sense P Circuit Intermittent/Erratic

P0B8A means the hybrid or electric vehicle battery pack's voltage sensing circuit for the 'P' position is reporting a signal that cuts in and out or jumps around erratically. The battery energy control module (BECM) or vehicle control module monitors this voltage sense line and sets the code when the reading is not stable enough to trust for safe battery management.

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

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the intermittent fault has not recurred during the current drive cycle.
- A hybrid or EV system warning light or 'service high voltage system' message on the dash.
- Reduced electric-only range or the vehicle refusing to enter EV mode.
- Intermittent loss of power or a sudden switch to the gasoline engine in a plug-in hybrid.
- Charging that stops unexpectedly or a charge port indicator that flashes a fault.
- In rare cases, the vehicle may fail to start or go into a reduced-power limp mode.

Common causes, most likely first

- A loose, corroded or backed-out terminal in the voltage sense connector at the battery pack or module.
- A chafed or intermittently shorted voltage sense wire in the harness, often where it passes near a sharp edge or a moving suspension component.
- A failing voltage sense circuit inside the battery pack, such as a bad sense fuse or a damaged circuit board trace.
- A faulty battery energy control module (BECM) or its internal voltage sensing hardware.
- Water intrusion or contamination in a connector that causes the sense signal to fluctuate.
- A failing cell module that produces an unstable voltage reading under load, though this usually sets additional cell-specific codes.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0B8A, then clear the code and test-drive to see whether it returns under load, charging or over bumps.
- 2 Inspect the voltage sense connector at the battery pack for corrosion, loose pins, pushed-out terminals and water intrusion, and clean or repair as needed.
- 3 Wiggle-test the harness while watching live voltage-sense data on a scan tool to catch an intermittent open or short.
- 4 Check the voltage sense circuit for continuity and resistance end-to-end, and compare the reported sense voltage against a known-good meter reading at the pack terminals.
- 5 Inspect the battery pack sense fuse and circuit board for damage, following the manufacturer's high-voltage safety procedures.
- 6 If the wiring and connectors are sound, substitute a known-good BECM or have the module reflashed or replaced according to the service information.
- 7 After repair, clear codes and perform a full charge and discharge cycle to confirm the sense signal stays stable and the code does not reset.

Intermittent sense faults hide in connectors

- A voltage sense circuit that is intermittent often passes every static test, so the fault only shows up when the harness is flexed or the pack heats up and expands.
- Technicians sometimes replace the battery pack when the real problem is a single corroded pin in a sense connector, which is far cheaper to fix.
- This code can be set by a weak 12-volt auxiliary battery that causes the BECM to reboot or log erratic readings, so always check system voltage first.
- P0B8A is specific to the 'P' voltage sense circuit; if other sense circuits set codes at the same time, look for a shared ground or harness fault rather than a single sensor.
- High-voltage safety procedures are mandatory before touching pack connectors, and a fault that appears only during charging often points to a sense line that is disturbed by charge-port harness movement.

Can I keep driving with P0B8A?

You can usually drive the vehicle if it is running normally, but avoid heavy acceleration, fast charging and long trips until the fault is diagnosed, because an erratic voltage sense signal can cause the battery management system to misjudge cell condition. If the vehicle enters limp mode or shows a high-voltage system warning, stop driving and have it towed to a qualified hybrid technician.



Tools that help

- OBD-II scan tool with hybrid/EV battery data and freeze-frame capability
- Digital multimeter with min/max recording
- Back-probe kit and terminal pick tools
- Insulated high-voltage gloves and safety equipment
- Manufacturer service information for voltage sense circuit pinouts

Reading P0B8A

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
8A	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B89** Hybrid/EV Battery Voltage Sense P Circuit High · **P0B8B** Hybrid/EV Battery Voltage Sense Q Circuit · **P0B8C** Hybrid/EV Battery Voltage Sense Q Circuit Range/Performance

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/p0b8a/>

