

GENERIC · POWERTRAIN

P0B8C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B8C

Hybrid/EV Battery Voltage Sense Q Circuit Range/Performance

P0B8C indicates that the hybrid or electric vehicle battery pack's voltage sensing circuit for the 'Q' cell group is reporting a voltage reading that falls outside the expected range or is inconsistent with the other cell groups. The battery energy control module (BECM) compares this circuit's signal against the others and flags a range or performance fault when the deviation exceeds calibrated limits.

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 service vehicle soon message
- Often no symptoms besides the warning light, especially in early stages
- Reduced electric-only range or the engine running more frequently than usual
- Intermittent loss of power or hesitation under acceleration
- The vehicle may enter a reduced-power limp mode
- Battery state-of-charge gauge behaving erratically or dropping suddenly

Common causes, most likely first

- 1 Faulty voltage sensing wire or connector at the Q cell group, often due to corrosion or vibration damage
- 2 Open or high-resistance connection in the sense circuit harness
- 3 Failed cell voltage sensor or sensing module integrated into the battery pack
- 4 Internal battery pack fault such as a weak or failing cell in the Q group causing abnormal voltage behavior
- 5 Battery energy control module (BECM) software glitch or internal fault
- 6 Loose or damaged battery pack terminal or inter-cell bus bar connection



How to diagnose and fix it

- 1 Retrieve all stored codes and freeze-frame data with a scan tool capable of reading hybrid battery data
- 2 Visually inspect the Q cell group sense wiring and connectors for corrosion, looseness, or damage
- 3 Measure the actual voltage of the Q cell group with a multimeter and compare it to the BECM reported value
- 4 Perform a voltage drop test on the sense circuit wiring to check for excessive resistance
- 5 Check for technical service bulletins (TSBs) or software updates for the BECM that address voltage sensing faults
- 6 If wiring and sensors check out, perform a battery pack capacity test to evaluate cell health in the Q group
- 7 Replace the faulty sense circuit component, sensor, or battery pack module as indicated by test results

What the Q circuit fault really means

- A P0B8C can be set by a simple loose connector at the battery pack, so always check the sense wiring before condemning the battery pack itself.
- The Q circuit may share a harness with other cell sense circuits, so a single damaged wire can trigger multiple voltage sense codes simultaneously.
- A weak cell in the Q group can cause the voltage to sag under load, setting this code even though the sensing circuit is electrically intact.
- Some vehicles require a BECM relearn or calibration after repairing the sense circuit, otherwise the code may return immediately.
- This code does not always mean the battery pack needs replacement; misdiagnosis often leads to unnecessary pack swaps when only a sensor or connector is at fault.

Can I keep driving with P0B8C?

It is generally safe to drive with this code if the vehicle is not in limp mode, but avoid heavy acceleration and long trips until diagnosed. If the hybrid system warning light flashes or power is reduced, have the vehicle inspected promptly.

Tools that help

- Hybrid-capable scan tool with battery data display
- Digital multimeter with CAT III rating
- Insulation tester or megohmmeter
- Battery pack service information and wiring diagrams
- Hand tools for connector and harness inspection



Reading P0B8C

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

Often seen with

P0A1F Battery Energy Control Module A Performance · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B8A** Hybrid/EV Battery Voltage Sense P Circuit Intermittent/Errat · **P0B8B** Hybrid/EV Battery Voltage Sense Q Circuit · **P0B8D** Hybrid/EV Battery Voltage Sense Q Circuit Low

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/p0b8c/>

