

GENERIC · POWERTRAIN

P0B99

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0B99

Hybrid/EV Battery Voltage Sense S Circuit Intermittent/Erratic

P0B99 indicates that the hybrid or electric vehicle battery pack control module has detected an intermittent or erratic signal from the voltage sensing circuit for battery module 'S'. The computer expects a steady voltage reading from this specific cell group, but the signal is dropping out or fluctuating beyond acceptable limits.

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

Symptoms you may notice

- Illumination of the check engine light or hybrid system warning light, often with no other noticeable symptoms.
- Reduced electric-only range or the vehicle refusing to enter EV mode.
- Intermittent loss of power or hesitation during acceleration.
- A message on the dash indicating a hybrid battery fault or reduced power.
- The vehicle may fail to start or go into a 'ready' state if the fault is severe.

Common causes, most likely first

- 1 A loose, corroded, or damaged electrical connector at the battery voltage sense harness.
- 2 A chafed or broken wire in the voltage sensing circuit between the battery module and the control module.
- 3 A faulty voltage sensing harness internal to the battery pack, often due to vibration or heat damage.
- 4 A failing battery module 'S' itself, causing erratic voltage output under load.
- 5 Poor terminal contact at the battery cell group, such as a loose bus bar or corroded post.
- 6 A malfunctioning battery pack control module, though this is less common.



How to diagnose and fix it

- 1 Inspect the voltage sense harness and connectors at the battery pack for looseness, corrosion, or damage; clean and reseat as needed.
- 2 Perform a wiggle test on the harness while monitoring the voltage sense PID to identify intermittent connections.
- 3 Check the resistance of the voltage sense circuit from the module to the control module and compare to specifications.
- 4 Load test the battery module 'S' and compare its voltage to adjacent modules to identify a failing cell group.
- 5 Repair or replace any damaged wiring or connectors in the voltage sense circuit.
- 6 If the module is faulty, replace the battery module or pack as required by the manufacturer's procedure.
- 7 Clear the diagnostic trouble codes and perform a road test to verify the repair.

Intermittent Battery Sense Circuit Traps

- A common oversight is replacing the entire battery pack when the fault is simply a loose connector pin that loses contact only under vibration.
- The code can be set by a voltage sense line that is intermittently shorted to ground or to another sense line, which can be caused by a pinched harness inside the pack.
- Technicians often miss that the battery pack control module may set this code if its internal power supply is unstable, so check the module's power and ground first.
- This code does not always mean the battery module is failing; a faulty sense circuit can mimic a weak cell, leading to unnecessary module replacement.
- On some vehicles, the voltage sense harness runs near high-voltage cables, and electromagnetic interference can cause erratic signals if shielding is compromised.

Can I keep driving with P0B99?

It is generally safe to drive with this code if the vehicle is operating normally, but avoid heavy acceleration or prolonged high-speed driving until the fault is repaired. If the vehicle enters limp mode or shows a hybrid system warning, seek service immediately.

Tools that help

- OBD-II scan tool with hybrid battery data capabilities
- Digital multimeter with min/max recording
- Insulation resistance tester
- Battery pack service plug removal tools
- Wiring diagram and service information



Reading P0B99

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

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0B98** Hybrid/EV Battery Voltage Sense S Circuit High · **P0B9A** Hybrid/EV Battery Voltage Sense T Circuit · **P0B9B** Hybrid/EV Battery Voltage Sense T 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/p0b99/>

