

GENERIC · POWERTRAIN

P0DB6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0DB6

Hybrid/EV Battery Cell Balancing Circuit C Stuck Off

P0DB6 indicates that the hybrid or electric vehicle's battery management system has detected a fault in the cell balancing circuit for a specific group of cells, labeled 'C', where the circuit is stuck in the off state and cannot perform its balancing function. The computer monitors the balancing circuit's ability to bleed excess charge from individual cells and sets this code when it sees no current flow or an unexpected voltage pattern during a balancing command.

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 on the dashboard.
- Often no symptoms besides the warning light, especially in the early stages of the fault.
- Gradual loss of electric-only range or reduced fuel economy as cell imbalance worsens.
- Inconsistent state of charge readings or fluctuating battery gauge behavior.
- Possible reduced power output or limp mode if the imbalance becomes severe.
- In rare cases, a noticeable hesitation or shudder during acceleration from a stop.

Common causes, most likely first

- 1 Open or high-resistance wiring in the cell balancing circuit, such as a broken wire or corroded connector.
- 2 Failed cell balancing resistor or transistor on the battery management circuit board.
- 3 Faulty battery management system (BMS) control module that cannot command the balancing circuit.
- 4 Internal short or open in the balancing circuit within the battery pack assembly.
- 5 Loose or damaged terminal connections at the battery module or BMS harness.
- 6 Software glitch in the BMS causing false detection of a stuck-off circuit.



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then clear the code and test-drive to see if it returns immediately.
- 2 Inspect the battery management system wiring harness and connectors for signs of damage, corrosion, or loose pins, especially at the balancing circuit 'C' connector.
- 3 Measure resistance across the balancing circuit 'C' with a multimeter and compare to manufacturer specifications to check for opens or shorts.
- 4 Perform a guided diagnostic routine using the scan tool to command the balancing circuit on and off while monitoring voltage or current changes.
- 5 If the circuit is accessible, test the balancing resistor and transistor for proper operation and replace the faulty component if needed.
- 6 Reprogram or update the BMS software if a known calibration issue exists for this code.
- 7 If all external checks pass, replace the battery management system module or the affected battery module assembly as per manufacturer procedures.

What a stuck-off balancing circuit really means

- A stuck-off balancing circuit often does not immediately affect vehicle performance because the battery pack can still deliver power, but it slowly allows one cell group to drift out of balance, reducing overall pack capacity and lifespan.
- Many technicians replace the entire battery pack when the real fault is a simple broken wire or corroded connector in the balancing circuit, so always perform a thorough visual and resistance check first.
- This code can be set by a weak 12-volt auxiliary battery causing low voltage to the BMS, so check the 12-volt system before condemning hybrid components.
- Some vehicles require a specific driving cycle or balancing routine to be completed before the code will clear and stay off, so a simple code clear may not be sufficient.
- The 'C' in the definition refers to a specific cell group or balancing channel, and misreading it as a general battery fault can lead to unnecessary replacement of healthy modules.

Can I keep driving with P0DB6?

You can generally continue driving with this code, but avoid aggressive acceleration or prolonged high-speed driving that stresses the battery pack further. Schedule a diagnostic appointment soon to prevent gradual battery degradation and possible progression to a more severe fault.



Tools that help

- OBD-II scan tool with hybrid/EV battery management capabilities
- Digital multimeter with resistance and voltage measurement
- Manufacturer-specific diagnostic software or scan tool
- Insulated hand tools for high-voltage safety
- Wiring diagram and service information for the specific vehicle

Reading P0DB6

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
D	Hybrid propulsion.
B6	The exact fault within that area.

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0DB5** Hybrid/EV Battery Cell Balancing Circuit C Stuck On · **P0DB7** Hybrid/EV Battery Cell Balancing Circuit C Range/Performance · **P0DB8** Hybrid/EV Battery Cell Balancing Circuit D

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/p0db6/>

