

GENERIC · POWERTRAIN

PODAD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

PODAD

Hybrid/EV Battery Cell Balancing Circuit A Stuck On

PODAD indicates that the battery energy control module has detected a fault in the cell balancing circuit for a specific battery module, where the circuit remains continuously active when it should be switching on and off. The module monitors the balancing circuit and sets this code when the circuit is stuck in the 'on' state, which can lead to excessive discharge of the affected cells and potential imbalance in the high-voltage battery pack.

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

Symptoms you may notice

- Illumination of the hybrid/EV system warning light or service vehicle soon message
- Often no symptoms besides the warning light, especially in early stages
- Reduced electric range or decreased hybrid fuel economy due to battery imbalance
- Possible reduced power output or limp mode if the battery management system limits performance
- In rare cases, a burning smell or heat from the battery pack area if the stuck circuit causes overheating

Common causes, most likely first

- 1 Faulty cell balancing circuit within the battery module, such as a shorted transistor or relay that keeps the balancing resistor connected
- 2 Damaged wiring or connector in the balancing circuit harness, causing a short to power or ground
- 3 Failed battery energy control module (BECM) or battery management system (BMS) driver circuit for the balancing function
- 4 Internal battery module fault, such as a defective balancing resistor or circuit board
- 5 Corrosion or moisture intrusion in the battery pack connectors or circuit board
- 6 Software glitch in the BECM causing false activation of the balancing circuit



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, and verify the PODAD is current and not history
- 2 Inspect the battery pack wiring harness and connectors for damage, corrosion, or loose pins, especially at the balancing circuit connector
- 3 Perform a visual inspection of the battery module circuit board for signs of overheating, burnt components, or moisture
- 4 Check the balancing circuit resistance and compare to specifications if accessible, following manufacturer procedures
- 5 Test the BECM output signal to the balancing circuit with a multimeter or oscilloscope to confirm the stuck-on condition
- 6 If the circuit is internal to the battery module, replace the affected battery module or assembly as per manufacturer guidelines
- 7 If the BECM is faulty, reprogram or replace it and perform necessary adaptations or calibration

Before you replace the battery pack

- A stuck-on balancing circuit can be caused by a simple shorted wire in the harness, which is far cheaper to fix than replacing the entire battery pack.
- The code may set intermittently due to a loose connector that only loses contact under certain driving conditions, so a thorough wiggle test of the harness is essential.
- Some manufacturers use a capacitor-based balancing system where a failed capacitor can mimic a stuck circuit, so component-level testing is needed before condemning the module.
- A weak or failing 12-volt auxiliary battery can cause erratic behavior in the BECM and set false balancing codes, so always check the 12-volt system first.
- After repairs, the BECM may need to relearn the battery cell characteristics; a simple code clear without a balancing cycle may not prevent recurrence.

Can I keep driving with PODAD?

It is generally safe to continue driving with this code, but avoid prolonged heavy acceleration or high-speed driving that stresses the battery pack. Schedule a diagnostic appointment soon to prevent further battery imbalance and potential long-term damage.



Tools that help

- OBD-II scan tool with hybrid/EV battery data capability
- Digital multimeter
- Oscilloscope for signal testing
- Manufacturer-specific diagnostic software
- Insulation tester (megohmmeter) for high-voltage circuit checks
- Battery pack lifting equipment if module removal is required

Reading P0DAD

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

Often seen with

P0AFA Hybrid/EV Battery System Voltage Low · **P0DAC** Hybrid/EV Battery Cell Balancing Circuit A · **P0DAE** Hybrid/EV Battery Cell Balancing Circuit A Stuck Off · **P0DAF** Hybrid/EV Battery Cell Balancing Circuit A Range/Performance · **P0DB0** Hybrid/EV Battery Cell Balancing Circuit B

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/p0dad/>

