



## P0DAE

# Hybrid/EV Battery Cell Balancing Circuit A Stuck Off

P0DAE means the battery management system has detected that the cell balancing circuit for a specific battery cell group is stuck in the off state, so it cannot equalize the charge across the cells. The computer monitors the balancing circuit's response and sets this code when the circuit fails to activate or shows no expected voltage or current change when commanded on.

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

## Symptoms you may notice

- Illumination of the hybrid or electric vehicle warning light, often with a message to service the battery system.
- Reduced electric-only range or lower available power as the battery pack becomes unbalanced over time.
- The vehicle may enter a reduced-power limp mode or refuse to start in some cases.
- Often no symptoms besides the warning light, especially if the imbalance is still small.
- Gradual degradation of battery performance and increased charging times.
- In rare cases, a noticeable drop in state of charge for one cell group shown on a battery monitor.

## Common causes, most likely first

- 1 Faulty cell balancing circuit board or module integrated into the battery pack.
- 2 Open or shorted wiring in the balancing circuit harness between the battery management system and the cell group.
- 3 Failed balancing resistor or switching transistor on the circuit board.
- 4 Corroded or loose connector pins at the battery management system or cell module.
- 5 Internal battery management system software glitch or corrupted calibration.
- 6 A weak or failing battery cell that prevents the balancing circuit from achieving the expected effect.
- 7 Water intrusion or physical damage to the balancing circuit components.



## How to diagnose and fix it

- 1 Use a scan tool to retrieve the freeze-frame data and confirm which cell group or balancing circuit is flagged.
- 2 Perform a visual inspection of the battery pack wiring, connectors, and circuit boards for corrosion, damage, or loose pins.
- 3 Check the balancing circuit harness for continuity and resistance against the manufacturer's specifications.
- 4 Test the balancing resistor and switching transistor on the suspect circuit board if accessible.
- 5 Verify battery management system software is up to date and reflash if a known calibration issue exists.
- 6 Replace the faulty cell balancing circuit board or module as required.
- 7 Clear the codes and perform a battery pack balancing drive cycle or relearn procedure to confirm the repair.

## What the balancing circuit code really means

- A stuck-off balancing circuit often does not immediately affect drivability, so many drivers ignore the warning until the battery pack becomes significantly unbalanced.
- The code can be set by a weak cell rather than the circuit itself, because the balancing circuit cannot achieve the expected voltage change when a cell is failing.
- Technicians sometimes replace the battery management system unnecessarily when the real fault is a corroded connector pin or a damaged wire in the balancing harness.
- On some vehicles, the balancing circuit is part of the cell module assembly and cannot be serviced separately, requiring replacement of the entire module.
- A low 12-volt auxiliary battery can cause spurious communication and balancing codes, so always verify system voltage before condemning battery pack components.

## Can I keep driving with P0DAE?

You can usually continue driving with this code, but avoid long trips or heavy electrical loads until it is diagnosed, because an uncorrected imbalance can accelerate battery pack degradation. If the vehicle enters a reduced-power mode or shows a battery fault message, stop driving and seek service.

## Tools that help

- Hybrid/EV-capable scan tool with battery management system data
- Digital multimeter with resistance and continuity functions
- Insulation tester or megohmmeter for high-voltage circuit checks
- Manufacturer service information for balancing circuit specifications
- Battery pack lifting equipment if module removal is required



### Reading P0DAE

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

### Often seen with

**P0AFA** Hybrid/EV Battery System Voltage Low · **P0B24** Hybrid/EV Battery A Voltage Unstable · **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/p0dae/>

