



P0DCE

Hybrid/EV Battery Cell Balancing Circuit I Stuck Off

P0DCE indicates that the battery management system has detected a fault in the cell balancing circuit for one specific battery cell group, where the circuit remains stuck in the off state and cannot bleed energy from that cell. The computer monitors the balancing transistor and its control line, and it sets this code when the expected voltage drop or current flow through the balancing resistor does not occur during a commanded balancing event.

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 no symptoms besides the warning light
- Reduced electric-only range or slower charging times as the battery pack becomes imbalanced over time
- A noticeable decrease in fuel economy on hybrid models because the engine runs more to compensate for weak cells
- Intermittent or permanent disablement of the stop-start function and reduced regenerative braking strength
- In rare cases, a message on the dash advising that the hybrid system is unavailable and the vehicle may enter a limp mode

Common causes, most likely first

- 1 Open or high-resistance cell balancing resistor that prevents current flow when the transistor is commanded on
- 2 Failed cell balancing transistor (open or shorted) inside the battery management circuit board
- 3 Broken or corroded wire in the balancing harness between the battery management controller and the cell module
- 4 Loose or contaminated connector pin at the cell balancing circuit, often due to vibration or moisture ingress
- 5 Faulty battery management system (BMS) controller that incorrectly reports the circuit as stuck off
- 6 Internal short or severe imbalance in the battery cell group itself, causing the balancing circuit to appear inactive



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then verify the P0DCE is current and not history
- 2 Inspect the cell balancing harness and connectors for chafing, corrosion, or loose pins, and perform a wiggle test while monitoring balancing status
- 3 Measure the resistance of the balancing resistor and compare it to the manufacturer's specification to confirm it is not open
- 4 Command the balancing circuit on with a bidirectional scan tool and measure voltage drop across the resistor to verify the transistor is switching
- 5 If the resistor and wiring test good, back-probe the BMS connector to check for control voltage at the transistor gate during a commanded balancing event
- 6 Replace the faulty cell balancing circuit board or the affected battery module according to the manufacturer's service procedure
- 7 Clear the codes and perform a battery pack balancing drive cycle or a relearn procedure as required, then verify the code does not return

What a stuck-off balancing circuit really means

- A stuck-off balancing circuit often does not set a warning light until the battery pack has been imbalanced for many drive cycles, so the code may appear long after the actual fault began.
- Technicians frequently replace the entire battery pack when only a single balancing resistor or transistor on one cell module has failed, which is an expensive misdiagnosis.
- The BMS may command balancing only during specific conditions such as key-off sleep periods or charging, so a circuit that tests fine during active driving can still be faulty.
- A weak or failing 12-volt auxiliary battery can cause the BMS to log false balancing circuit codes because the controller voltage drops during balancing events.
- After repairing the circuit, the battery pack may need a full balancing cycle or a capacity relearn before the code stays cleared and the state of charge readings become accurate.

Can I keep driving with P0DCE?

The vehicle remains drivable in most cases because the fault affects battery balancing rather than immediate high-voltage safety, but continued driving will worsen cell imbalance and reduce pack life. Avoid leaving the battery at a very low state of charge for extended periods and schedule diagnosis promptly to prevent permanent capacity loss.



Tools that help

- Bidirectional scan tool with hybrid/EV battery balancing capability
- Digital multimeter with millivolt and resistance ranges
- Insulated hand tools rated for hybrid high-voltage work
- Battery module load tester or conductance tester
- Manufacturer service information for balancing circuit specifications

Reading P0DCE

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

Often seen with

P0AFA Hybrid/EV Battery System Voltage Low · **P0DCB** Hybrid/EV Battery Cell Balancing Circuit H Range/Performance · **P0DCC** Hybrid/EV Battery Cell Balancing Circuit I · **P0DCD** Hybrid/EV Battery Cell Balancing Circuit I Stuck On · **P0DCF** Hybrid/EV Battery Cell Balancing Circuit I 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/p0dce/>

