



P0DE6

Hybrid/EV Battery Pack Cell Voltage Low

P0DE6 indicates that the hybrid or electric vehicle battery pack has at least one cell whose voltage is lower than the threshold expected by the battery management system. The computer compares individual cell voltages during key-on, charging, or driving and flags this code when a cell consistently reads below the acceptable minimum.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or check engine light, often with no other noticeable symptoms
- Reduced electric-only range or the gasoline engine running more frequently than usual
- A sudden drop in state of charge or the battery gauge falling faster than normal
- The vehicle entering a reduced-power or limp mode, especially under acceleration or on inclines
- Failure of the high-voltage battery to accept a full charge during regenerative braking or plug-in charging
- In rare cases, a noticeable hesitation or shudder when the hybrid system engages

Common causes, most likely first

- 1 A genuinely weak or failing battery cell that can no longer hold voltage under load
- 2 Unbalanced cell voltages across the pack due to normal aging and repeated charge cycles
- 3 A faulty cell voltage sensor or sensing harness that reports an incorrect low reading
- 4 Poor electrical connection at the battery pack terminals or inter-cell bus bars causing voltage drop
- 5 A battery management system (BMS) software glitch or calibration error that misinterprets cell data
- 6 Extreme cold or heat affecting cell performance temporarily and triggering the threshold
- 7 A parasitic drain or repeated deep discharges that have degraded one or more cells



How to diagnose and fix it

- 1 Use a scan tool to read all hybrid battery data, including individual cell voltages and the freeze-frame data stored when the code set
- 2 Perform a visual inspection of the battery pack, terminals, and sensing harness for corrosion, loose connections, or damage
- 3 Check for any related codes in the battery management system and record all cell voltage readings under load and at rest
- 4 Test the suspect cell or module with a conductance or capacity test if the manufacturer provides a procedure
- 5 Verify the accuracy of the cell voltage sensor by comparing its reading with a known-good meter at the sensor connector
- 6 If a cell is confirmed weak, follow the manufacturer's procedure for cell replacement or pack balancing, which may require a dealer-level tool
- 7 After repair, clear the code and perform a battery pack relearn or calibration drive cycle as specified for the vehicle

What a low cell voltage really tells you

- A single low cell often indicates a failing cell, but it can also be caused by a faulty voltage sensor that reports low while the cell is actually fine, so always verify sensor accuracy before condemning the pack.
- This code frequently appears after a vehicle has been sitting unused for weeks, because self-discharge can leave one cell lower than the rest and trigger the threshold without any permanent damage.
- Extreme ambient temperatures can cause temporary cell voltage depression that sets this code, and the code may not return after the pack warms up or cools down to normal operating range.
- A weak 12-volt auxiliary battery can cause erratic behavior in the hybrid control system and lead to false low-voltage reports from the pack, so check the 12-volt system first.
- Replacing a single cell without balancing the entire pack often leads to repeat codes, because the new cell will have a different internal resistance and capacity than the aged cells around it.

Can I keep driving with P0DE6?

It is not safe to continue driving with this code because a low cell can lead to sudden loss of hybrid power, reduced vehicle performance, or further battery damage. Avoid heavy acceleration, long grades, and extended driving until the fault is diagnosed and repaired.



Tools that help

- Hybrid/EV-capable scan tool with live cell voltage data
- Digital multimeter with high-voltage safety rating
- Insulation tester for high-voltage circuits
- Battery conductance or capacity tester
- Manufacturer-specific battery pack service tool or laptop software
- Personal protective equipment including high-voltage gloves and safety glasses

Reading P0DE6

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
D	Hybrid propulsion.
E6	The exact fault within that area.

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0BBD** Hybrid/EV Battery Pack Voltage Variation Exceeded Limit · **P0DE5** Charge Status Indicator B Control Circuit/Open · **P0DE7** Hybrid/EV Battery Pack Cell Voltage High

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/p0de6/>

