

GENERIC · POWERTRAIN

P2E70

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E70

Hybrid/EV Battery Pack B Cell Thickness

P2E70 indicates that the hybrid or electric vehicle battery pack's battery management system has detected an abnormal cell thickness measurement for pack B, which typically reflects internal swelling or mechanical deformation of one or more cells. The computer compares thickness sensor readings across the pack and flags this code when a cell's physical dimension exceeds the expected range, often due to swelling from age, heat, or internal damage.

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

Symptoms you may notice

- Illumination of the hybrid/EV battery fault warning light, often with no other noticeable symptoms
- Reduced electric-only range or power output as the system limits battery use to protect the swollen cell
- A message on the dash advising service of the high-voltage battery system
- In some cases, the vehicle may refuse to enter ready mode or may switch to limp-home mode
- Possible audible warning chime or reduced charging rate when plugged in

Common causes, most likely first

- 1 Normal aging and degradation of the battery cells leading to internal swelling
- 2 Overheating events that cause cell pouch or prismatic can deformation
- 3 Mechanical damage to the battery pack from impact or improper handling
- 4 Manufacturing defect in the cell thickness sensor or its wiring
- 5 Faulty battery management system (BMS) software or calibration
- 6 Physical damage to the pack housing that compresses cells unevenly



How to diagnose and fix it

- 1 Use a scan tool to read all hybrid/EV battery codes and freeze-frame data to confirm P2E70 and check for related codes
- 2 Inspect the battery pack for visible swelling, damage, or fluid leaks without opening the high-voltage enclosure
- 3 Check the cell thickness sensor wiring and connectors for corrosion, looseness, or damage
- 4 Perform a battery pack health check with manufacturer-specific diagnostic software to measure cell voltages and internal resistance
- 5 If sensor and wiring are good, compare thickness readings across all cells to identify a single swollen cell or a sensor fault
- 6 Replace the affected battery module or pack if swelling is confirmed, following manufacturer procedures for high-voltage safety
- 7 After repair, clear codes and perform a battery pack calibration or relearn procedure as required

What a thickness code really tells you

- A cell thickness code does not always mean the battery is failing; a faulty thickness sensor or a loose connector can set the same code and is far cheaper to fix.
- Swelling often starts in a single cell and may not affect performance immediately, so drivers may ignore the warning until range loss becomes obvious.
- Heat is the biggest accelerator of cell swelling, so vehicles used in hot climates or with frequent fast charging are more prone to this code.
- Replacing just one swollen module is sometimes possible, but many manufacturers require replacing the entire pack to maintain balance and safety.
- After any battery pack repair, the BMS must be recalibrated; skipping this step can cause the code to return even with a new module.

Can I keep driving with P2E70?

It is not safe to continue driving with a confirmed cell thickness fault because a swollen cell can lead to thermal runaway or sudden loss of power. Have the vehicle towed to a qualified hybrid/EV service center and avoid charging until inspected.

Tools that help

- Hybrid/EV-capable scan tool with manufacturer-specific software
- Digital multimeter with high-voltage rated probes
- Insulation tester (megohmmeter) for high-voltage circuit checks
- Battery pack lifting equipment and high-voltage safety gloves
- Manufacturer service information for battery pack removal and calibration



Reading P2E70

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

Often seen with

P0A7F Hybrid/EV Battery Pack Deterioration · **P0A80** Replace Hybrid/EV Battery Pack · **P0AFA** Hybrid/EV Battery System Voltage Low · **P2E71** Hybrid/EV Battery Pack B Cell Thickness Sensor Circuit High · **P2E72** Hybrid/EV Battery Pack B Cell Thickness Sensor Circuit Low

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/p2e70/>

