



## P2D4C

# Hybrid/EV Battery Pack H Over Temperature

P2D4C indicates that the hybrid or electric vehicle battery pack, specifically the pack designated 'H', has exceeded its safe operating temperature threshold. The battery energy control module monitors temperature sensors within the pack and sets this code when the measured temperature remains above the calibrated limit for a defined period.

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

## Symptoms you may notice

- Warning light or message on the dashboard indicating a hybrid system fault or battery overheating
- Reduced electric-only driving range or the vehicle refusing to enter EV mode
- Power output limited, often accompanied by a turtle or reduced power icon
- The cooling fan for the battery pack may run continuously or at maximum speed after shutdown
- In severe cases, the vehicle may enter a fail-safe mode and shut down the hybrid system
- Often no symptoms besides the warning light, especially if the over-temperature condition was brief

## Common causes, most likely first

- 1 Low or contaminated battery pack coolant (for liquid-cooled packs) or a coolant leak
- 2 Failed battery pack cooling fan or blower motor, or a restricted air intake or exhaust duct
- 3 Faulty battery temperature sensor or a damaged sensor wiring harness within the pack
- 4 Clogged or blocked cooling fins on the battery modules, reducing heat dissipation
- 5 Battery energy control module software issue or a faulty module itself
- 6 High ambient temperatures combined with aggressive driving or heavy loads without adequate cooling
- 7 Internal battery degradation causing excessive heat generation during charge or discharge



## How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then verify the battery temperature readings against actual conditions with an infrared thermometer
- 2 Inspect the battery pack cooling system: check coolant level and condition (if liquid-cooled), verify fan operation, and look for blocked ducts or debris
- 3 Test the battery temperature sensors and their wiring for resistance and continuity according to the manufacturer's specifications
- 4 Check for software updates or calibration bulletins for the battery energy control module
- 5 Perform a battery pack cooling system service if due, including coolant replacement and fan inspection
- 6 If the over-temperature condition persists, perform a guided diagnostic for the battery pack internal components, including module temperature spread analysis
- 7 Replace the faulty component (sensor, fan, coolant pump, or control module) as identified, then clear codes and verify the repair with a road test

## Battery pack H over-temperature pitfalls

- A common misdiagnosis is replacing the battery pack when the actual fault is a simple cooling fan relay or a blocked air filter for the pack, so always verify airflow and fan operation first.
- The code can be set by a temporary condition such as parking over hot asphalt or driving in extreme heat, and may not indicate a hard failure if the temperature returns to normal.
- Some vehicles use the letter 'H' to denote a specific battery pack in a multi-pack configuration, so confirm the pack location and sensor circuit before ordering parts.
- A faulty temperature sensor can read artificially high, causing the code without any real overheating, so compare sensor readings across the pack for consistency.
- After repairs, the battery energy control module may require a relearn or calibration procedure to clear the code permanently, which many DIYers overlook.

## Can I keep driving with P2D4C?

Do not continue driving with this code active, as overheating can permanently damage the battery pack and pose a safety risk. Stop safely, allow the pack to cool, and have the vehicle inspected by a qualified hybrid technician before resuming normal operation.

## Tools that help

- Hybrid/EV-capable scan tool with live data and freeze-frame capability
- Infrared thermometer for verifying battery pack temperatures
- Digital multimeter for testing sensors and wiring
- Manufacturer service information for cooling system specifications and sensor resistance values
- Insulated gloves and safety glasses for high-voltage safety



### Reading P2D4C

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- 4C** The exact fault within that area.

### Often seen with

**P0A9C** Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AC4** Hybrid/EV Powertrain Control Module Requested MIL Illuminati · **P0AFA** Hybrid/EV Battery System Voltage Low · **P2D4B** Hybrid/EV Battery Pack G Over Temperature · **P2D4D** Hybrid/EV Battery Pack I Over Temperature

### 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/p2d4c/>

