

GENERIC · POWERTRAIN

P2E75

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E75

Hybrid/EV Battery Pack Coolant Temperature Sensor D Circuit Range/Performance

P2E75 indicates that the hybrid or electric vehicle battery pack coolant temperature sensor D circuit is reporting a range or performance problem, meaning the voltage signal from that sensor does not match the expected values for the current operating conditions. The computer has detected that the sensor's output is outside the normal range or is not changing in a plausible way compared to other temperature sensors and models.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon light, often with no other noticeable symptoms
- Reduced hybrid system power or a forced limp mode to protect the battery pack
- Inconsistent or disabled battery cooling fan operation, leading to higher battery temperatures
- A message on the dashboard indicating a hybrid system fault or battery temperature warning
- Poor fuel economy or reduced electric-only driving range in hybrid vehicles
- In rare cases, the vehicle may refuse to start or enter a ready state

Common causes, most likely first

- 1 Faulty battery pack coolant temperature sensor D (open, shorted, or out of calibration)
- 2 Damaged or corroded wiring or connector at the sensor or harness
- 3 Coolant level low or air pockets in the battery cooling system causing inaccurate temperature readings
- 4 Failed coolant pump or restricted coolant flow affecting sensor performance
- 5 Internal fault in the battery energy control module (BECM) or hybrid control module
- 6 Software calibration issue in the control module requiring an update



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, then verify the sensor D reading against other battery temperature sensors and ambient temperature.
- 2 Visually inspect the sensor, connector, and wiring for damage, corrosion, or loose pins; repair as needed.
- 3 Check the battery coolant level and condition, and pressure-test the cooling system for leaks or air pockets.
- 4 Perform a resistance test on the sensor and compare to manufacturer specifications; replace if out of range.
- 5 Check for technical service bulletins (TSBs) or software updates for the hybrid control module that address sensor D range/performance issues.
- 6 If the sensor and wiring are good, test the circuit from the sensor to the control module for continuity and shorts; repair harness faults.
- 7 As a last step, substitute a known-good sensor or use a signal generator to simulate the sensor output and verify the control module responds correctly; replace the module if it does not.

Sensor D faults often misdiagnosed as module failure

- A common oversight is replacing the battery pack coolant temperature sensor without checking for low coolant or air pockets, which can cause the sensor to read out of range even when the sensor itself is fine.
- The code can be set by a intermittent connection at the sensor connector that only acts up under vibration or temperature changes, so a wiggle test while monitoring live data is essential.
- Some vehicles use multiple battery temperature sensors, and a fault in sensor D may be caused by a shared reference voltage or ground circuit that affects other sensors as well.
- A software calibration issue in the hybrid control module can cause false range/performance codes, so always check for applicable software updates before condemning hardware.
- This code does not always mean the sensor is bad; it can also be triggered by a failing coolant pump that prevents proper coolant flow, leading to a temperature signal that does not change as expected.

Can I keep driving with P2E75?

It is generally safe to drive with this code if the vehicle is not in limp mode and the battery temperature gauge is not in the red, but avoid aggressive driving or heavy electrical loads that could raise battery temperature. Have the fault diagnosed promptly to prevent battery overheating and potential long-term damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Infrared thermometer
- Socket and wrench set
- Wire repair kit with crimpers and heat shrink



Reading P2E75

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

Often seen with

P0A93 Inverter A Cooling System Performance · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **P2E74** Hybrid/EV Battery Pack Coolant Temperature Sensor D Circuit · **P2E76** Hybrid/EV Battery Pack Coolant Temperature Sensor D Circuit

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e75/>

