

GENERIC · POWERTRAIN

P0C70

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C70

Hybrid/EV Battery Temperature Sensor C/D Correlation

P0C70 indicates that the hybrid or electric vehicle battery pack's temperature sensor C and sensor D are reporting values that do not correlate as expected, meaning the computer sees a disagreement between two sensors that should track closely together. The powertrain control module sets this code when the temperature readings from these two sensors diverge beyond a calibrated threshold for a set period, often indicating a faulty sensor, wiring issue, or a problem within the battery pack itself.

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

Symptoms you may notice

- Illumination of the check engine light or hybrid system warning light, often with no other noticeable symptoms.
- Reduced hybrid system performance or a forced limp mode that limits power output.
- The vehicle may refuse to enter electric-only mode or may shut down the hybrid system entirely.
- Inconsistent battery temperature readings on a scan tool, with one sensor showing a significantly different value from the other.
- Possible charging issues or reduced electric range if the battery management system derates the pack due to temperature uncertainty.

Common causes, most likely first

- 1 Faulty temperature sensor C or D within the high-voltage battery pack, due to age, thermal cycling, or contamination.
- 2 Damaged or corroded wiring or connector at the sensor, often from moisture intrusion or vibration.
- 3 Open or short circuit in the sensor signal or return circuit, including chafed harnesses near the battery pack.
- 4 Poor electrical connection at the battery management system (BMS) controller or the sensor interface.
- 5 Internal battery pack issue such as a failing cell that causes localized heating and skews one sensor's reading.
- 6 Software glitch or outdated calibration in the BMS that misinterprets sensor correlation.
- 7 Aftermarket or improper battery pack repairs that left a sensor misaligned or unseated.



How to diagnose and fix it

- 1 Use a scan tool to read live data from both temperature sensors and compare their values when the pack is at rest and during operation.
- 2 Visually inspect the sensor wiring and connectors for damage, corrosion, or loose pins, especially at the battery pack interface.
- 3 Perform a resistance test on each sensor and compare to specifications, checking for opens, shorts, or out-of-range values.
- 4 Check the sensor signal circuit for voltage drops or intermittent faults by wiggle-testing the harness while monitoring live data.
- 5 If wiring and sensors test good, verify the BMS software is up to date and reflash if a known calibration update exists.
- 6 Replace the faulty temperature sensor or sensor harness as required, following high-voltage safety procedures.
- 7 Clear the code and perform a road test to confirm the correlation issue is resolved and the code does not return.

What a correlation code really tells you

- A correlation code does not automatically mean a sensor has failed; it means the two sensors disagree, and the fault could be in either sensor, the wiring, or the battery pack itself.
- Temperature sensors inside high-voltage battery packs are often wired in a daisy-chain configuration, so a single bad connection can affect multiple sensor readings and set correlation codes for several sensors at once.
- Intermittent correlation faults frequently appear only under specific conditions such as cold starts or after long drives, so a static test may pass while the problem remains.
- Some manufacturers use the temperature sensor readings to calculate allowable charge and discharge rates, so a correlation fault can cause reduced performance even if the battery pack is otherwise healthy.
- Replacing a sensor without checking the battery management system's live data during a test drive can lead to a misdiagnosis if the real issue is a failing cell causing localized heat.

Can I keep driving with P0C70?

It is generally safe to drive with P0C70 set, but avoid aggressive acceleration, heavy loads, and long trips until the fault is diagnosed, because the battery management system may be operating with inaccurate temperature data and could reduce power or disable the hybrid system unexpectedly. If the vehicle enters limp mode or shows a hybrid system warning, have it inspected promptly.



Tools that help

- OBD-II scan tool with live data and hybrid battery temperature sensor PIDs
- Digital multimeter with resistance and voltage measurement capabilities
- High-voltage safety gloves and insulated tools
- Vehicle-specific service information for sensor resistance specifications and wiring diagrams
- Back probe kit for testing connectors without damage

Reading P0C70

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

Often seen with

P0A1F Battery Energy Control Module A Performance · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0C6F** Hybrid/EV Battery Temperature Sensor B/C Correlation · **P0C71** Hybrid/EV Battery Temperature Sensor D/E Correlation · **P0C72** Hybrid/EV Battery Temperature Sensor E/F Correlation

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/p0c70/>

