

GENERIC · POWERTRAIN

P0C6F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C6F

Hybrid/EV Battery Temperature Sensor B/C Correlation

P0C6F indicates that the hybrid or electric vehicle battery pack's temperature sensors B and C are reporting values that do not agree with each other beyond the manufacturer's allowed tolerance. The battery energy control module compares these two sensor signals and sets the code when the correlation between them falls outside the expected range, which can affect battery charging and discharging strategy.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the sensor offset is small
- Reduced electric-only driving range or forced engine operation in a plug-in hybrid
- Charging may stop early or refuse to start, particularly in extreme temperatures
- A noticeable drop in hybrid battery assist or regenerative braking strength
- In some cases, the vehicle may enter a reduced-power limp mode

Common causes, most likely first

- 1 A faulty battery temperature sensor B or C, such as an open circuit, short, or skewed thermistor
- 2 Damaged or corroded wiring or connector pins in the sensor harness inside the battery pack
- 3 A loose or improperly seated sensor that loses thermal contact with the battery cells
- 4 High-voltage battery pack overheating or uneven cell temperatures from a cooling system fault
- 5 A software calibration issue in the battery energy control module that misinterprets sensor readings
- 6 Internal failure of the battery energy control module affecting the sensor reference voltage
- 7 Physical damage to the battery pack or sensor wiring from impact or fluid intrusion



How to diagnose and fix it

- 1 Connect a scan tool and record all battery temperature sensor readings in a cold-soak condition to compare B and C against each other and against ambient temperature
- 2 Inspect the battery pack service plug and low-voltage connectors for corrosion, loose pins, or water intrusion before condemning any sensor
- 3 Check the sensor harness routing for chafing or pinching where it passes near pack mounting points or sharp edges
- 4 Perform a manufacturer-specific battery temperature sensor resistance or voltage test at the sensor connector to isolate the sensor from the wiring
- 5 If the sensor is accessible, verify it is seated firmly against the cell surface with the correct thermal interface material
- 6 Reprogram or update the battery energy control module software if a known calibration bulletin applies to the vehicle
- 7 Replace the faulty temperature sensor or the affected battery module assembly, then clear codes and verify correlation returns within specification during a charge and discharge cycle

What the correlation code really means

- A P0C6F does not automatically mean a sensor has failed; a cooling fan that runs constantly or a blocked battery pack air filter can create a real temperature split between sensor B and sensor C locations.
- Technicians often replace the sensor first and find the code returns because the connector terminal tension was lost, so always perform a drag test on the pins before installing a new sensor.
- On many packs, sensor B and sensor C are physically close together, so a large correlation error usually points to a wiring fault rather than a genuine thermal event.
- The battery energy control module may set this code only after a key-off sleep cycle, so a quick test drive after clearing codes can falsely suggest the repair was successful.
- A weak 12-volt auxiliary battery can cause erratic sensor reference voltage and set correlation codes that disappear once the auxiliary battery is charged or replaced.

Can I keep driving with P0C6F?

You can usually drive the vehicle to a service location, but avoid heavy acceleration, sustained high speeds, and DC fast charging until the fault is diagnosed. If the hybrid system warning light is accompanied by a reduced-power message or charging refusal, arrange a tow rather than continuing to drive.



Tools that help

- Hybrid/EV-capable scan tool with live battery temperature data
- Digital multimeter with thermistor temperature probe
- Insulated hand tools rated for high-voltage work
- Terminal drag test gauge set
- Manufacturer service information for battery pack access procedures

Reading P0C6F

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
6F	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 · **P0C6E** Hybrid/EV Battery Temperature Sensor A/B Correlation · **P0C70** Hybrid/EV Battery Temperature Sensor C/D 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/p0c6f/>

