

GENERIC · POWERTRAIN

P0CB2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CB2

Hybrid/EV Battery Temperature Sensor O Circuit

P0CB2 indicates that the hybrid or electric vehicle battery pack's temperature sensor circuit labeled 'O' has a fault, meaning the battery energy control module is not receiving a valid temperature signal from that sensor. The computer detects an abnormal voltage or resistance on the sensor circuit that falls outside the expected range for the current operating conditions.

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

Symptoms you may notice

- Illumination of the check engine light or hybrid system warning light
- Reduced hybrid system power or forced limp mode
- Battery cooling fan may run continuously or not at all
- Decreased fuel economy or electric-only range
- In rare cases, a message indicating battery temperature is unavailable
- Often no symptoms besides the warning light

Common causes, most likely first

- 1 Faulty battery temperature sensor O
- 2 Damaged or corroded wiring harness at the sensor connector
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Failed battery energy control module (BECM) or hybrid control module
- 5 Loose or improperly seated sensor connector
- 6 Internal battery pack damage affecting sensor mounting



How to diagnose and fix it

- 1 Use a scan tool to retrieve all stored codes and freeze-frame data, focusing on battery temperature sensor readings
- 2 Visually inspect the sensor O connector and wiring for corrosion, damage, or loose pins
- 3 Measure the resistance of the sensor O circuit and compare to manufacturer specifications
- 4 Check for continuity and short-to-ground on the signal and return circuits between the sensor and control module
- 5 If wiring and sensor test good, substitute a known-good sensor or simulate the signal to verify the control module response
- 6 Replace the faulty battery temperature sensor if resistance is out of range
- 7 Clear codes and perform a road test to confirm the repair and ensure the code does not return

Battery temperature sensor O diagnostic traps

- A faulty sensor O can cause the hybrid system to disable battery cooling, leading to overheating and reduced battery life if left unrepaired.
- The code may set intermittently due to a loose connector that only loses contact during vibration or temperature swings, so wiggle-testing the harness is essential.
- On some vehicles, the battery temperature sensors are wired in series or multiplexed, so a fault in one sensor can affect readings from others and set multiple codes.
- Replacing the sensor without checking the wiring harness is a common misdiagnosis, as chafed wires near the battery pack are a frequent root cause.
- The BECM may need reprogramming or calibration after sensor replacement on certain models, so consult service information before assuming a new sensor alone fixes the issue.

Can I keep driving with P0CB2?

It is generally safe to drive short distances to a repair facility, but avoid heavy acceleration, long trips, or extreme temperatures because the battery may not be properly cooled. Continued driving with a faulty temperature sensor can lead to battery overheating and permanent damage.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter
- Wiring diagram and service information
- Socket set and trim removal tools
- Contact cleaner and dielectric grease



Reading P0CB2

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
B2	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 · **P0CB1** Hybrid/EV Battery Temperature Sensor N Circuit Intermittent/ · **P0CB3** Hybrid/EV Battery Temperature Sensor O Range/Performance

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/p0cb2/>

