

GENERIC · POWERTRAIN

P0CB5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CB5

Hybrid/EV Battery Temperature Sensor O Circuit High

P0CB5 indicates that the hybrid or electric vehicle battery pack's temperature sensor circuit labeled 'O' is reporting a voltage higher than the manufacturer's expected range, which the battery energy control module interprets as an open circuit or a short to voltage. The computer sets this code when the sensor signal line exceeds the normal high threshold for a calibrated period, typically because the sensor is disconnected, damaged, or its wiring is compromised.

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 on the dashboard
- Often no symptoms besides the warning light, especially if the fault is intermittent or affects a sensor not critical for immediate operation
- Reduced electric-only driving range or forced engine operation if the battery management system limits power to protect the pack
- Possible failure to enter or maintain hybrid/EV drive modes, with the vehicle defaulting to gasoline engine power
- In rare cases, a complete shutdown of the high-voltage system or refusal to start if the fault is interpreted as a critical safety issue

Common causes, most likely first

- 1 Failed battery temperature sensor 'O' itself, typically an internal open circuit or short to voltage within the thermistor
- 2 Damaged, corroded, or disconnected wiring or connector at the sensor 'O' location, often due to vibration, heat, or moisture intrusion
- 3 Open circuit or high resistance in the signal circuit between sensor 'O' and the battery energy control module
- 4 Short to voltage on the sensor signal circuit, possibly from chafed insulation contacting a power wire
- 5 Faulty battery energy control module or its internal processing circuit for the temperature sensor input
- 6 Loose or corroded ground connection for the sensor return circuit, causing a reference voltage shift



How to diagnose and fix it

- 1 Connect a scan tool and record all freeze-frame data and stored codes, then clear codes and verify whether P0CB5 returns immediately or after a drive cycle
- 2 Visually inspect the sensor 'O' connector and harness for corrosion, loose pins, or obvious damage, and check for technical service bulletins specific to the vehicle
- 3 Measure the resistance of sensor 'O' with a multimeter and compare it to the manufacturer's temperature-resistance chart, wiggle-testing the harness while observing the reading
- 4 Backprobe the signal circuit at the battery energy control module connector to check for an open or short to voltage, and measure reference voltage and ground integrity
- 5 If wiring and sensor resistance test good, substitute a known-good sensor or simulate the signal with a resistor decade box to see if the code changes
- 6 Repair or replace the faulty sensor, harness, or connector as indicated by the tests, using proper high-voltage safety procedures and disconnecting the service plug
- 7 Clear codes and perform a road test with the scan tool monitoring sensor 'O' voltage to confirm the repair and ensure no other codes return

What a high battery temp sensor code hides

- A high voltage reading on a temperature sensor circuit almost always means an open circuit rather than an actual overheating event, so do not replace the battery pack based on this code alone.
- The sensor 'O' designation often refers to a specific module within the pack, and on some vehicles it is integrated into a bus bar or cell module assembly, making replacement more involved than a simple plug-in sensor.
- Intermittent faults frequently trace to a pin that is slightly backed out of the connector, which can pass a static resistance test but fail under vibration or temperature changes.
- A short to voltage on the signal circuit can be caused by a chafed wire near a high-voltage cable, and this should be ruled out before condemning the battery energy control module.
- Some vehicles set this code as a history code after a low 12-volt battery event, so always check and clear unrelated low-voltage codes before starting invasive diagnostics.

Can I keep driving with P0CB5?

You can generally drive the vehicle short distances to a repair shop, but avoid long trips or heavy loads because the battery management system may limit power or disable hybrid operation. If the vehicle enters a reduced power mode or shows a high-voltage system warning, stop safely and have it towed.



Tools that help

- OBD-II scan tool with hybrid/EV battery data capability
- Digital multimeter with resistance and voltage measurement
- Backprobe pins and wiring diagram for the specific vehicle
- Resistor decade box or sensor simulator
- High-voltage safety gloves and service plug removal tools

Reading P0CB5

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
B5	The exact fault within that area.

Often seen with

P0A9C Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0CB3** Hybrid/EV Battery Temperature Sensor O Range/Performance · **P0CB4** Hybrid/EV Battery Temperature Sensor O Circuit Low · **P0CB6** Hybrid/EV Battery Temperature Sensor O Circuit Intermittent/

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/p0cb5/>

