

GENERIC · POWERTRAIN

P0CB7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CB7

Hybrid/EV Battery Temperature Sensor P Circuit

P0CB7 indicates that the hybrid or electric vehicle battery pack's temperature sensor circuit, designated 'P', has a fault that the battery energy control module has detected. The module monitors the sensor's signal for expected voltage or resistance ranges and sets this code when the reading falls outside those limits or the circuit is open or shorted.

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 light
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced electric-only driving range or forced engine operation in hybrids
- Possible derating of battery charging or discharging power to protect the pack
- In rare cases, a message indicating battery temperature unavailable or hybrid system disabled
- No noticeable change in vehicle performance during normal driving

Common causes, most likely first

- 1 Faulty battery temperature sensor 'P' itself, due to internal failure or contamination
- 2 Damaged or corroded wiring harness or connector at the sensor or battery pack
- 3 Open or short circuit in the sensor signal or return circuit
- 4 Poor electrical connection at the battery energy control module connector
- 5 Failed battery energy control module, though this is less common
- 6 Moisture intrusion or physical damage to the sensor or its wiring
- 7 Aftermarket accessories or improper previous repairs disturbing the circuit



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data to confirm P0CB7 is current and not history
- 2 Visually inspect the battery temperature sensor, its connector, and wiring for damage, corrosion, or loose pins
- 3 Measure the sensor's resistance or voltage at the sensor connector and compare with the manufacturer's specification for the current temperature
- 4 Check continuity and resistance of the signal and return circuits between the sensor and the battery energy control module
- 5 If the circuit tests good, substitute a known-good sensor or simulate the signal with a resistor box to see if the code changes
- 6 Inspect the battery energy control module connector for corrosion or pushed-out terminals and repair as needed
- 7 Clear codes and perform a road test or hybrid system self-test to verify the repair and ensure the code does not return

What a P0CB7 code really tells you

- A P0CB7 code does not automatically mean the sensor is bad; wiring harness damage from rodent chewing or chafing is a frequent cause that is often overlooked.
- In many hybrids, the battery temperature sensor is part of a harness integrated into the battery pack, so a simple sensor replacement may require pack disassembly or harness repair.
- Intermittent codes can be caused by temperature-related resistance changes in a failing sensor that only acts up when the pack is cold or hot, so testing at operating temperature is critical.
- The battery energy control module may set this code if the sensor signal is plausible but inconsistent with other temperature sensors in the pack, indicating a stratification or sensor placement issue.
- Clearing the code without repairing the underlying circuit will usually result in the code returning after a few drive cycles, especially once the battery reaches normal operating temperature.

Can I keep driving with P0CB7?

You can generally continue driving with a P0CB7 code, but avoid aggressive acceleration, sustained high speeds, and heavy electrical loads until the fault is repaired. If the hybrid system warning light is flashing or the vehicle enters a reduced-power mode, have it checked promptly.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter
- Resistor substitution box
- Wiring diagram and service information
- Insulated hand tools and terminal pick set



Reading P0CB7

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- B7** The exact fault within that area.

Often seen with

P0AFA Hybrid/EV Battery System Voltage Low · **P0CB6** Hybrid/EV Battery Temperature Sensor O Circuit Intermittent/ · **P0CB8** Hybrid/EV Battery Temperature Sensor P Range/Performance · **P0CB9** Hybrid/EV Battery Temperature Sensor P Circuit Low · **P0CBA** Hybrid/EV Battery Temperature Sensor P Circuit High

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/p0cb7/>

