



P0AC7

Hybrid/EV Battery Temperature Sensor B Circuit Low

P0AC7 means the hybrid or electric vehicle battery pack's temperature sensor B circuit is reporting a voltage lower than the manufacturer's expected range, which the computer interprets as a short to ground or an open sensor. The powertrain control module sets this code when the signal from that specific sensor stays below the low threshold for a calibrated time, indicating it cannot trust the battery temperature reading.

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, often with no other noticeable symptoms.
- Reduced hybrid system power or a forced limp mode if the battery temperature reading is implausible.
- The vehicle may refuse to enter EV mode or may start the engine more frequently than normal.
- A message on the dash indicating a hybrid battery or cooling system fault.
- In some cases, the battery cooling fan may run continuously or not at all due to incorrect temperature data.

Common causes, most likely first

- 1 A faulty battery temperature sensor B itself, internally shorted or open.
- 2 Damaged or chafed wiring between the sensor and the battery control module, often from vibration or rodent damage.
- 3 Corroded or loose electrical connector pins at the sensor or module.
- 4 A short to ground in the sensor signal circuit.
- 5 A failed battery control module or hybrid vehicle control module not processing the signal correctly.
- 6 Internal battery pack damage or overheating that has physically damaged the sensor.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related temperature sensor codes to confirm the fault is isolated to sensor B.
- 2 Inspect the sensor wiring and connector for damage, corrosion, or loose pins, repairing as needed.
- 3 Measure the resistance of the temperature sensor B and compare it to the manufacturer's specification for the current ambient temperature.
- 4 Backprobe the sensor signal circuit at the control module and check for a short to ground or an open circuit.
- 5 If the sensor is out of specification, replace the battery temperature sensor B and clear the code.
- 6 If the wiring and sensor test good, follow the manufacturer's diagnostic flow for the battery control module or hybrid control module.
- 7 After repairs, clear codes and perform a road test to confirm the code does not return.

What a low battery temp signal really means

- A low voltage on the sensor circuit often indicates a short to ground rather than a sensor that is reading cold, so check the harness before condemning the sensor.
- On many hybrids, the battery temperature sensors are wired in a daisy-chain; a fault in one sensor's wiring can affect the readings of others and set multiple codes.
- The code can be set by a poor connection at the battery control module even when the sensor itself is fine, so always inspect the module connectors.
- Replacing the sensor without checking the cooling system can lead to a repeat failure if the battery pack is actually overheating due to a blocked fan or duct.
- Some vehicles use the same sensor for multiple functions, so a low signal can also cause incorrect state-of-charge calculations and reduced electric range.

Can I keep driving with P0AC7?

You can usually drive the vehicle with this code, but avoid heavy acceleration or prolonged high-speed driving because the system may not properly manage battery temperature. If the hybrid system warning light is on or the vehicle enters limp mode, have it checked promptly to prevent battery damage.

Tools that help

- OBD-II scan tool with hybrid capability
- Digital multimeter
- Backprobe pins
- Service information for wiring diagrams and sensor specifications
- Insulated hand tools



Reading P0AC7

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- A** Hybrid propulsion.
- C7** The exact fault within that area.

Often seen with

P0A9C Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AC5** Hybrid/EV Battery Temperature Sensor B Circuit · **P0AC6** Hybrid/EV Battery Temperature Sensor B Circuit Range/Perform · **P0AC8** Hybrid/EV Battery Temperature Sensor B Circuit High · **P0AFA** Hybrid/EV Battery System Voltage Low

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/p0ac7/>

