



P0AB5

Hybrid/EV Battery Pack Air Temperature Sensor B Circuit Intermittent/Erratic

P0AB5 means the hybrid or electric vehicle battery pack's air temperature sensor B circuit is reporting intermittent or erratic signals to the battery energy control module. The computer detects this when the sensor's voltage or resistance readings jump unpredictably or drop out momentarily, rather than following a smooth, plausible curve during key-on or while the pack is active.

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

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent and the pack temperature reading stays within a safe range.
- A hybrid or EV system warning message on the dash, sometimes accompanied by reduced power or a forced limp mode.
- The battery cooling fan may run continuously or at full speed because the control module cannot trust the temperature reading.
- Inconsistent state-of-charge or EV range estimates as the battery management system compensates for unreliable temperature data.
- Charging may stop early or refuse to start if the module sees an erratic temperature signal during a charge session.

Common causes, most likely first

- 1 A failing battery pack air temperature sensor B, where the internal thermistor becomes intermittent with heat cycling or vibration.
- 2 Damaged or chafed wiring in the sensor harness, often where it routes near the pack housing or through a grommet.
- 3 Corroded or loose connector pins at the sensor or at the battery energy control module, causing a high-resistance or intermittent connection.
- 4 Water intrusion or condensation in the sensor connector or pack air duct, which can short or corrupt the signal.
- 5 A faulty battery energy control module that misinterprets a good sensor signal, though this is less common than harness issues.
- 6 Loose sensor mounting that lets the sensor vibrate or lose contact with the airflow it is meant to measure.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0AB5, then clear the code and test-drive to see whether it returns as intermittent or hard fault.
- 2 Visually inspect sensor B, its connector, and the harness routing for chafing, corrosion, water intrusion, or loose mounting.
- 3 Back-probe the sensor signal and ground wires at the module and compare resistance or voltage against the manufacturer's temperature chart while wiggling the harness.
- 4 Perform a wiggle test on the harness and connectors while watching live temperature data to catch an intermittent open or short.
- 5 If the signal is erratic at the sensor, remove and test the sensor in a temperature-controlled environment or replace it with a known-good unit.
- 6 If the signal is clean at the sensor but erratic at the module, repair or replace the affected harness section or connector terminals.
- 7 After repair, clear codes and run a battery pack temperature rationality test or a long drive cycle to confirm the code does not reset.

Intermittent sensor faults that fool good parts

- A sensor that tests perfectly on a cold bench can still be intermittent once the pack heats up, so always test it hot and cold before condemning it.
- The code can set from a momentary glitch during key-on self-test, meaning the sensor and wiring may be fine and the real issue is a low or unstable 5-volt reference or ground at the module.
- Technicians often replace the sensor only to find the fault returns because the connector terminal tension was lost, so pin drag and terminal condition matter as much as the sensor itself.
- Battery cooling fan operation and duct airflow affect sensor B readings, so a blocked or failing fan can create temperature swings that mimic an erratic sensor.
- This code does not always mean the pack is overheating; it means the signal is untrustworthy, and the module may default to a conservative power limit even when actual temperatures are normal.

Can I keep driving with P0AB5?

You can usually drive with this code if the vehicle is not in limp mode and the battery temperature gauge reads normally, but avoid aggressive acceleration, fast charging, and long climbs until it is diagnosed. If the dash shows a hybrid system warning, reduced power, or a battery temperature warning, stop and have it checked before continuing.



Tools that help

- OBD-II scan tool with hybrid/EV battery data and freeze-frame capability
- Digital multimeter with back-probe pins and a temperature probe
- Manufacturer service information with sensor resistance and voltage charts
- Terminal pick and connector pin drag test kit
- Insulated hand tools and a torque wrench for sensor and pack cover fasteners

Reading P0AB5

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

Often seen with

P0A9C Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AB4** Hybrid/EV Battery Pack Air Temperature Sensor B Circuit High · **P0AB6** Engine Mount B Control Circuit/Open · **P0AB7** Engine Mount B Control Circuit Low · **P0AC4** Hybrid/EV Powertrain Control Module Requested MIL Illuminati

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/p0ab5/>

