

GENERIC · POWERTRAIN

P0AEA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0AEA

Hybrid/EV Battery Temperature Sensor D Circuit Low

P0AEA indicates that the hybrid or electric vehicle battery temperature sensor D circuit is reporting a voltage below the expected range, which the computer interprets as a low signal. This typically means the sensor's signal wire is shorted to ground or the sensor itself has failed, preventing accurate battery temperature monitoring.

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 performance or a forced limp mode in some vehicles.
- Inaccurate or fluctuating battery temperature readings on a scan tool.
- Possible reduction in electric-only driving range or charging speed.
- In rare cases, the vehicle may refuse to start or engage the hybrid system.

Common causes, most likely first

- 1 A short to ground in the sensor signal wire or connector.
- 2 A faulty battery temperature sensor D itself.
- 3 Corroded, damaged, or loose electrical connectors at the sensor or harness.
- 4 A shorted sensor internally or a wiring harness chafed against metal.
- 5 A problem with the hybrid battery control module or its internal circuitry.
- 6 Moisture intrusion into the sensor or connector causing a low-resistance path.



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check live battery temperature sensor D data for a low or erratic reading.
- 2 Visually inspect the sensor, its connector, and the wiring harness for damage, corrosion, or signs of shorting.
- 3 Disconnect the sensor and measure resistance across its terminals; compare to the manufacturer's specification for the current temperature.
- 4 With the sensor disconnected, check the signal wire for continuity to ground; a short will show near-zero resistance.
- 5 Repair or replace any damaged wiring or connectors, then clear the code and retest.
- 6 If wiring is intact, replace the battery temperature sensor D and verify the reading with a scan tool.
- 7 If the code persists after sensor replacement, diagnose the hybrid battery control module or its programming.

When the sensor is not the culprit

- A shorted sensor signal wire often mimics a failed sensor, so always check the harness for continuity to ground before replacing parts.
- The code can be set by a poor connection at the sensor connector that only acts up when the vehicle is warm or vibrating, so wiggle-test the harness while watching live data.
- On some vehicles, the battery temperature sensor is part of a larger battery pack assembly and cannot be replaced separately, requiring a more involved repair.
- A low signal can also be caused by water intrusion into the battery pack area, which may set additional codes for other sensors or insulation faults.
- Clearing the code without repairing the underlying short may lead to a recurrence and potential battery overheating if the fault is intermittent.

Can I keep driving with P0AEA?

It is generally safe to drive with this code if the vehicle is not in limp mode, but avoid aggressive driving or heavy electrical loads until repaired. Prolonged driving with a faulty temperature sensor can lead to battery overheating and costly damage, so schedule diagnosis soon.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire repair kit with crimpers and heat shrink
- Socket set and trim removal tools
- Manufacturer-specific service information for sensor resistance specifications



Reading P0AEA

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AA6** Hybrid/EV Battery Voltage System Isolation Fault
 · **P0AE9** Hybrid/EV Battery Temperature Sensor D Circuit Range/Perform · **P0AEB** Hybrid/EV Battery Temperature Sensor D 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/p0aea/>

