

GENERIC · POWERTRAIN

P0C9A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C9A

Hybrid/EV Battery Temperature Sensor L Circuit High

P0C9A indicates that the hybrid or electric vehicle battery pack's temperature sensor circuit, designated 'L', is reporting a voltage higher than the manufacturer's expected range for the current conditions. The battery energy control module sets this code when the sensor signal wire shows an open circuit or a short to voltage, which makes the sensor appear to read an unrealistically low temperature.

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
- Often no symptoms besides the warning light, especially in mild ambient temperatures
- Reduced electric-only driving range or a forced transition to gasoline engine operation
- A noticeable drop in hybrid battery charging or discharging performance
- Possible refusal to enter EV mode or a message that EV mode is unavailable
- In rare cases, a limp-home mode that limits vehicle speed

Common causes, most likely first

- 1 A broken or chafed signal wire between the temperature sensor and the battery control module
- 2 Corroded or loose pins in the sensor connector or the control module connector
- 3 An open circuit inside the temperature sensor itself
- 4 A short to voltage on the sensor signal circuit, often from wire routing damage
- 5 A faulty battery energy control module or a poor module ground connection
- 6 Internal damage to the battery pack wiring harness from heat, vibration, or moisture intrusion



How to diagnose and fix it

- 1 Connect a scan tool and record the freeze-frame data and the sensor L temperature reading compared to other battery temperature sensors
- 2 Visually inspect the sensor connector and the battery control module connector for corrosion, pushed pins, or loose terminals
- 3 Measure resistance across the sensor and compare it to the manufacturer's temperature-resistance chart for the current battery temperature
- 4 Check the sensor signal circuit for continuity to the control module and for unwanted voltage with the key on
- 5 Inspect the wiring harness along its full route for chafing, pinches, or heat damage near the battery pack
- 6 Verify the control module ground circuit is clean and tight before condemning the module
- 7 Replace the faulty sensor or repair the damaged wiring, clear the code, and confirm the sensor L reading matches the other temperature sensors during a road test

What the high-voltage battery sensor hides

- A high voltage reading on a temperature sensor circuit almost always means an open circuit or a short to voltage, not a genuinely hot battery, so technicians who replace the battery pack are often chasing the wrong part.
- The 'L' designation refers to one specific sensor in a multi-sensor pack, and comparing its live reading to the other temperature sensors during a cold soak is the fastest way to confirm the fault.
- Corrosion inside the battery pack connector is a common cause that is missed when the harness looks fine from outside, so the connector should be opened and inspected under good light.
- A poor ground at the battery energy control module can pull the sensor signal voltage high and set this code even when the sensor and its wiring are perfectly healthy.
- This code can appear intermittently after a battery pack service or a collision repair where a harness was disturbed, so always check recent repair history before replacing parts.

Can I keep driving with P0C9A?

The vehicle can usually be driven, but avoid long trips and heavy electrical loads until the fault is repaired, because the control module may limit hybrid battery performance or disable EV mode. If the warning light is accompanied by a limp-home message, drive only to a safe location and arrange a proper diagnosis.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with resistance and voltage measurement
- Manufacturer service information for temperature-resistance charts and wiring diagrams
- Back-probe kit or terminal test leads
- Insulated hand tools and a torque wrench for high-voltage connector work



Reading P0C9A

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- 9A** 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 · **P0C98** Hybrid/EV Battery Temperature Sensor L Range/Performance · **P0C99** Hybrid/EV Battery Temperature Sensor L Circuit Low · **P0C9B** Hybrid/EV Battery Temperature Sensor L 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/p0c9a/>

