

GENERIC · POWERTRAIN

P0A99

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0A99

Hybrid/EV Battery Pack Cooling Fan 2 Control Circuit Low

P0A99 indicates that the hybrid or electric vehicle battery pack cooling fan 2 control circuit has a low voltage condition, meaning the control module detected a short to ground or an abnormally low signal on the fan's control wire. This fan is responsible for moving air across the high-voltage battery to keep it within its optimal temperature range, and a fault here can lead to reduced battery performance or overheating.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or hybrid system warning light
- Often no symptoms besides the warning light, especially in mild weather or light driving
- Reduced hybrid battery cooling, which may trigger a separate battery temperature warning
- Possible reduced electric-only range or power output if the battery overheats
- Fan may run continuously at full speed or not at all, depending on the failure mode
- In some cases, the vehicle may enter a reduced power mode to protect the battery

Common causes, most likely first

- 1 Damaged or chafed wiring in the fan 2 control circuit, causing a short to ground
- 2 Corroded or loose electrical connector at the cooling fan 2 or its control module
- 3 Failed cooling fan 2 motor with an internal short
- 4 Faulty cooling fan control module or relay internal short
- 5 Water intrusion or debris in the fan connector or wiring harness
- 6 Failed hybrid battery pack cooling fan 2 driver circuit inside the battery control module

How to diagnose and fix it

- 1 Inspect the cooling fan 2 connector and wiring for corrosion, damage, or loose pins, and repair as needed
- 2 Disconnect the fan 2 connector and check for a short to ground on the control circuit using a multimeter
- 3 Test the cooling fan 2 motor by applying power and ground directly to verify it operates smoothly
- 4 Check the fan control module or relay for proper operation and replace if faulty
- 5 Inspect the hybrid battery pack cooling fan 2 driver circuit in the battery control module for signs of damage
- 6 Clear the diagnostic trouble code and perform a road test to verify the repair and ensure the code does not return



Don't overlook the fan connector

- A common cause of this code is a corroded connector at the cooling fan 2, often due to water intrusion from a clogged sunroof drain or car wash, which is frequently missed during visual inspections.
- The code can set intermittently if the wiring harness rubs against a metal bracket, so a wiggle test of the harness while monitoring live data can reveal the fault.
- A low control circuit voltage does not always mean the fan motor is bad; the control module itself can have an internal short that pulls the signal low.
- Some vehicles use a shared ground for multiple cooling fans, so a bad ground on one fan can affect the other and set related codes.
- After repairs, the hybrid battery cooling fan may need to be re-learned or calibrated with a scan tool to ensure proper operation.

Can I keep driving with P0A99?

It is generally safe to drive short distances at moderate speeds, but avoid heavy acceleration, long uphill climbs, or high ambient temperatures that stress the battery. If the hybrid battery temperature warning appears, stop and let the system cool, as continued driving can damage the battery pack.

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
- Factory service information for wiring diagrams

Reading P0A99

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

Often seen with

P0A98 Hybrid/EV Battery Pack Cooling Fan 2 Stuck On · **P0A9A** Hybrid/EV Battery Pack Cooling Fan 2 Control Circuit High · **P0A9B** Hybrid/EV Battery Temperature Sensor A Circuit · **P0A9C** Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0A9D** Hybrid/EV Battery Temperature Sensor A Circuit Low



See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0a99/>

