



P0ACF

Hybrid/EV Battery Pack Cooling Fan 3 Control Circuit/Open

P0ACF indicates that the hybrid or electric vehicle battery pack cooling fan control circuit for fan number three is open, meaning the battery energy control module has detected no electrical continuity on the control wire for that fan. The module commands the fan to run for thermal management of the high-voltage battery, but the open circuit prevents current flow, so the fan does not operate as intended.

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 a hybrid system warning light on the dashboard
- Often no symptoms besides the warning light, especially if the battery pack remains within a safe temperature range
- Reduced hybrid battery cooling performance, which may lead to a derated power output or limited electric-only operation
- Possible audible absence of the cooling fan running when the vehicle is parked and the battery is warm
- In rare cases, a message indicating hybrid system overheating or reduced power

Common causes, most likely first

- 1 Broken or disconnected wire in the control circuit between the battery energy control module and the cooling fan
- 2 Corroded or loose electrical connector at the cooling fan or at the control module
- 3 Failed cooling fan motor with an open internal winding
- 4 Open circuit inside the fan control module or relay that supplies power to the fan
- 5 Damaged pins or terminals in the harness connector due to vibration or moisture intrusion
- 6 Faulty battery energy control module driver circuit (less common)



How to diagnose and fix it

- 1 Inspect the cooling fan connector and the control module connector for corrosion, loose pins, or damage, and clean or repair as needed
- 2 Check the fan control circuit wiring for continuity and resistance using a multimeter, looking for opens or high resistance
- 3 Verify power and ground at the fan connector with the fan commanded on using a scan tool, to confirm the circuit integrity
- 4 Test the cooling fan motor directly by applying power and ground to confirm it spins freely and draws normal current
- 5 If the fan motor is faulty, replace the cooling fan assembly
- 6 If the wiring is open, repair or replace the affected harness section
- 7 Clear the diagnostic trouble code and verify the fan operates correctly during a commanded test

What a P0ACF code really tells you

- An open circuit does not always mean the fan motor has failed; a simple unplugged connector or a chafed wire can set this code just as easily.
- Some vehicles use a shared power feed for multiple cooling fans, so a failure in one fan can affect others and set related codes.
- The battery energy control module may command the fan only under specific conditions, so a fan that works during a manual test can still have an intermittent open circuit.
- Corrosion inside a connector can create an open circuit that only appears when the vehicle is exposed to moisture or temperature swings.
- Replacing the fan without checking the control circuit first is a common misdiagnosis that leads to repeat failures.

Can I keep driving with P0ACF?

You can usually continue driving short distances at moderate speeds, but avoid aggressive driving or heavy electrical loads that raise battery temperature, and schedule diagnosis soon to prevent overheating and possible hybrid system damage.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wire repair kit with crimpers and heat shrink
- Electrical contact cleaner
- Service information for wiring diagrams and connector pinouts



Reading P0ACF

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

Often seen with

P0ACB Hybrid/EV Battery Temperature Sensor C Circuit Range/Perform · **P0ACC** Hybrid/EV Battery Temperature Sensor C Circuit Low · **P0ACD** Hybrid/EV Battery Temperature Sensor C Circuit High · **P0ACE** Hybrid/EV Battery Temperature Sensor C Circuit Intermittent/ · **P0AD0** Hybrid/EV Battery Pack Cooling Fan 3 Performance/Stuck Off

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/p0acf/>

