

GENERIC · POWERTRAIN

P0C4A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C4A

Hybrid/EV Battery Pack Coolant Pump A Control Performance

P0C4A indicates that the hybrid or electric vehicle battery pack coolant pump A is not performing as commanded by the control module. The computer monitors the pump's electrical circuit and feedback signals, and it has detected a performance deviation that falls outside the expected range during operation.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Reduced electric driving range or power output due to battery temperature management
- Audible whining or humming from the coolant pump that changes with speed or stops entirely
- Overheating of the high-voltage battery pack, which may trigger additional warnings
- Often no symptoms besides the warning light, especially if the pump still operates at a reduced capacity

Common causes, most likely first

- 1 Faulty coolant pump A, such as a worn impeller or internal electrical failure
- 2 Damaged or corroded wiring and connectors in the pump circuit
- 3 Blown fuse or faulty relay supplying power to the coolant pump
- 4 Low coolant level or air trapped in the cooling system causing cavitation
- 5 Blocked or restricted coolant passages in the battery pack or hoses
- 6 Control module software issue or failed pump driver inside the module

How to diagnose and fix it

- 1 Check coolant level and condition, and top up or bleed the system if necessary
- 2 Inspect the pump fuse and relay, and replace if blown or faulty
- 3 Visually inspect wiring and connectors at the pump and control module for damage or corrosion
- 4 Use a scan tool to command the pump on and off while listening for operation and checking live data
- 5 Measure voltage and ground at the pump connector to verify power and ground integrity
- 6 Perform a resistance test on the pump motor and compare to specifications
- 7 Replace the coolant pump if electrical and hydraulic checks pass but performance remains inadequate



What the coolant pump code hides

- A pump that runs but has a worn impeller can trigger P0C4A without any electrical fault, so flow testing is more reliable than just listening for noise.
- Air pockets in the cooling system after a repair are a common cause of performance codes because the pump cavitates and cannot build pressure.
- The code can set intermittently due to a loose ground connection that tests fine when the engine is cold but fails under vibration.
- Some vehicles use the coolant pump to cool the onboard charger and inverter as well, so a failing pump may cause charging faults before battery overheating appears.
- Replacing the pump without flushing contaminated coolant can lead to repeat failure if debris damages the new pump's impeller.

Can I keep driving with P0C4A?

It is generally safe to drive short distances to a repair shop, but avoid aggressive driving, fast charging, and heavy electrical loads that increase battery heat. Continued driving with a failed pump can lead to battery overheating and reduced power, so schedule service promptly.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter
- Coolant refractometer or hydrometer
- Hose clamp pliers
- Vacuum coolant refill tool

Reading P0C4A

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
4A	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A0F** Engine Failed to Start · **P0A93** Inverter A Cooling System Performance · **P0C4B** Hybrid/EV Battery Pack Coolant Pump A Supply Voltage Circuit · **P0C4C** Hybrid/EV Battery Pack Coolant Pump A Supply Voltage Circuit



See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0c4a/>

