



P0C4D

Hybrid/EV Battery Pack Coolant Pump A Supply Voltage Circuit High

P0C4D means the hybrid or electric vehicle battery pack coolant pump control circuit has reported a voltage higher than the manufacturer's expected range, so the pump may not be running. The computer monitors the supply voltage circuit and sets this code when the signal stays above the calibrated threshold for a set time, indicating an open circuit, short to voltage, or a failed pump module.

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
- Often no symptoms besides the warning light, especially if the pump still runs intermittently
- Reduced hybrid battery cooling performance, which may trigger additional derate or shutdown codes
- Possible reduced electric-only range or power output if the battery management system limits current
- In rare cases, a noticeable coolant smell or low coolant level if the pump has failed mechanically

Common causes, most likely first

- 1 Open circuit or high resistance in the coolant pump supply voltage wire, including a broken wire or corroded connector
- 2 Short to voltage on the pump control circuit, often from chafed wiring near the battery pack or pump housing
- 3 Failed coolant pump module or internal pump electronics causing an abnormal voltage reading
- 4 Poor ground connection for the pump or battery pack cooling system, leading to a floating supply voltage
- 5 Faulty hybrid battery pack coolant pump relay or fuse box connection, where applicable
- 6 Corrosion or water intrusion in the pump connector, common on underbody or battery-pack-mounted pumps
- 7 Battery energy control module (BECM) or hybrid control module software issue or internal fault misreporting the circuit voltage



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for related coolant pump or battery temperature codes before any parts replacement
- 2 Inspect the coolant pump connector and harness for corrosion, water intrusion, chafing, or loose pins, and repair as needed
- 3 Measure supply voltage at the pump connector with the key on and compare to battery voltage to confirm an open or high-voltage condition
- 4 Check the pump ground circuit for excessive resistance using a voltage drop test while the circuit is loaded
- 5 Test the coolant pump relay and fuse, and swap with a known-good relay if the circuit uses one
- 6 Command the coolant pump on with a bidirectional scan tool and observe pump operation and supply voltage behavior
- 7 If the circuit and connectors are good, replace the coolant pump module and clear codes, then verify the pump runs and the code does not return

Before you replace the coolant pump

- A high supply voltage code often means the pump control circuit is open, not that the pump itself has failed, so a voltage drop test at the connector is more reliable than guessing at the pump.
- Corroded pins or water intrusion at the pump connector can mimic a failed pump module, and cleaning or repinning the connector frequently resolves the code without any new parts.
- Some vehicles set P0C4D when the 12-volt supply to the pump is interrupted by a failing relay or fuse box connection, so check those before condemning the hybrid battery pack.
- A weak or failing 12-volt auxiliary battery can cause erratic voltage readings on the pump circuit and set this code, especially if other unrelated codes are also present.
- The code does not always mean the pump is dead; a pump that runs but reports an out-of-range voltage signal can still cool the battery, so confirm actual pump operation before replacement.

Can I keep driving with P0C4D?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, long uphill grades, or extended electric-only operation because a non-functioning coolant pump can overheat the hybrid battery. If the hybrid system warning light flashes or the vehicle enters a reduced-power mode, stop and have it towed.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with voltage drop capability
- Wire terminal pick and connector pin removal tools
- Electrical contact cleaner and dielectric grease
- Vehicle-specific wiring diagram for the coolant pump circuit



Reading P0C4D

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **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 · **P0C4E** Drive Motor A Position Exceeded Learning Limit

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/p0c4d/>

