

GENERIC · POWERTRAIN

P2CF5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2CF5

Hybrid/EV Battery Pack Coolant Pump B Stuck/Stalled

P2CF5 indicates that the hybrid or electric vehicle battery pack coolant pump B has been detected as stuck or stalled by the battery energy control module. The computer monitors the pump's electrical current and feedback signal, and when the pump fails to rotate or draws abnormal current, it sets this code to protect the battery from overheating.

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 service vehicle soon message
- Often no symptoms besides the warning light, especially if the pump is only intermittently stalling
- Reduced hybrid/EV performance or power output as the system limits battery usage to prevent overheating
- Active or pending overheat warnings for the high-voltage battery pack
- Audible whining or silence from the coolant pump area when the vehicle is in ready mode
- Possible charging issues or reduced electric range due to thermal management restrictions

Common causes, most likely first

- 1 Coolant pump B electrical connector is loose, corroded, or damaged
- 2 Coolant pump B motor has failed internally (worn brushes, seized bearing, or open winding)
- 3 Blown fuse or damaged wiring in the pump B power or ground circuit
- 4 Low coolant level or air lock in the cooling system causing the pump to cavitate and stall
- 5 Coolant pump B control module or relay malfunction
- 6 Debris or contamination in the coolant passage blocking the pump impeller
- 7 Battery energy control module software glitch or faulty pump feedback signal



How to diagnose and fix it

- 1 Verify coolant level and condition; top off or flush if contaminated, then clear the code and retest
- 2 Inspect the coolant pump B electrical connector and harness for looseness, corrosion, or damage; repair as needed
- 3 Check the fuse and relay for pump B; replace if blown or faulty
- 4 Measure resistance and supply voltage at the pump B connector to rule out wiring faults
- 5 Command the pump on with a scan tool and listen for operation; if no response, replace the pump
- 6 Perform a bidirectional pump test and monitor live data for current draw and feedback signal
- 7 After repair, clear codes and verify the pump operates correctly during a road test with battery cooling active

Coolant pump B stall often misdiagnosed

- A stuck pump B can be caused by air trapped in the cooling system after a coolant service, so proper bleeding is critical before replacing parts.
- The pump may stall intermittently due to thermal expansion of a worn bearing, so a cold-only inspection can miss the fault.
- Some vehicles use the same pump for both battery and power electronics cooling, so a fault may affect multiple systems and set related codes.
- A failed pump can cause the battery to overheat and trigger power reduction, but the driver may not notice until the battery is already stressed.
- Always check for technical service bulletins (TSBs) for pump B software updates or revised part numbers before condemning the pump.

Can I keep driving with P2CF5?

Driving with this code is not recommended because a stalled coolant pump can lead to battery overheating and reduced performance, and in severe cases may cause permanent battery damage. Limit driving to short distances and avoid heavy acceleration or high ambient temperatures until the fault is repaired.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter for electrical checks
- Coolant refractometer or hydrometer
- Basic hand tools (socket set, screwdrivers, pliers)
- Vacuum coolant refill kit to avoid air locks



Reading P2CF5

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- F5** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A93** Inverter A Cooling System Performance · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **P2CF4** Hybrid/EV Battery Pack Coolant Pump B Supply Voltage Circuit · **P2CF6** Hybrid/EV Battery Pack Coolant Pump B Overspeed /Air in Syst

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/p2cf5/>

