

GENERIC · POWERTRAIN

P0DEB

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0DEB

Hybrid/EV Battery Pack Coolant Control Valve C Control Circuit Low

This code indicates that the hybrid or electric vehicle battery pack coolant control valve C has a control circuit that is reading low voltage, meaning the computer sees a short to ground or an open circuit on the valve's command wire. The powertrain control module sets this fault when the voltage on the control circuit falls below the expected threshold, preventing the valve from moving to its commanded position.

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 valve fails in a position that still allows some coolant flow
- Reduced hybrid/EV battery cooling performance, which may trigger additional codes or power limiting
- Overheating warning or reduced power output in extreme cases when battery temperature rises
- Possible audible change in coolant flow or valve operation, though many valves are quiet
- In some vehicles, the engine may start or run more often to compensate for battery cooling needs

Common causes, most likely first

- Damaged or corroded wiring harness at the coolant control valve connector
- Failed coolant control valve C (internal short or open coil)
- Poor electrical connection at the valve, such as loose pins or water intrusion
- Open circuit in the control wire between the valve and the powertrain control module
- Short to ground on the control circuit, often from chafed wiring
- Faulty powertrain control module driver, though this is less common



How to diagnose and fix it

- 1 Inspect the coolant control valve connector and wiring for corrosion, damage, or loose pins, and repair as needed
- 2 Measure resistance across the valve C control circuit at the valve connector to check for an open or shorted coil
- 3 Check for voltage on the control wire with the key on and the valve commanded, comparing to manufacturer specifications
- 4 Perform a wiggle test on the harness while monitoring the circuit to reveal intermittent faults
- 5 If the circuit tests good, replace the coolant control valve C and clear the code
- 6 If the circuit still reads low after valve replacement, diagnose the control module and its connections
- 7 After repair, clear codes and verify the valve operates through a scan tool bidirectional test, then road test to confirm no return of the fault

Before you replace the coolant control valve

- A low circuit code often results from a simple unplugged or loose connector rather than a failed valve, so always check connector seating first.
- The valve may share power or ground with other components, so a fault in a common circuit can set this code along with others.
- Some vehicles use a pulse-width modulated signal, and a low reading can be caused by a shorted driver in the control module rather than the valve itself.
- Coolant control valves can fail intermittently when hot, so a cold resistance check may pass while the fault occurs only at operating temperature.
- Replacing the valve without clearing adaptive learning or performing a calibration may leave the new valve inoperable and the code returning.

Can I keep driving with P0DEB?

You can usually drive the vehicle with this code, but avoid heavy acceleration or long uphill climbs that demand maximum battery cooling. If the vehicle enters a reduced power mode or shows a high battery temperature warning, stop and have it serviced promptly.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket and ratchet set
- Terminal pick and electrical contact cleaner



Reading P0DEB

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0C00** Drive Motor A Current Low · **P0DE9** Hybrid/EV Battery Pack Coolant Control Valve C Performance/S · **P0DEA** Hybrid/EV Battery Pack Coolant Control Valve C Stuck On · **P0DEC** Hybrid/EV Battery Pack Coolant Control Valve C Control Circu

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0deb/>

