

GENERIC · POWERTRAIN

P0D1C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D1C

Hybrid/EV Battery Pack Coolant Control Valve B Stuck On

The hybrid or electric vehicle battery pack uses a liquid coolant loop, and a control valve (labeled B) regulates coolant flow through that loop. The code sets when the powertrain control module commands the valve to move but the valve's position sensor or electrical feedback indicates it remains stuck in the open or energized 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 with no other noticeable symptoms
- Reduced hybrid battery cooling performance, which may trigger a separate battery temperature warning
- The vehicle may enter a reduced power or limp mode to protect the high-voltage battery
- Coolant leaks or unusual coolant smell near the battery pack or valve assembly
- Inconsistent cabin heating or cooling if the battery coolant loop shares a circuit with the HVAC system

Common causes, most likely first

- 1 Failed coolant control valve B, where the internal mechanism is mechanically stuck open or the solenoid remains energized
- 2 Damaged or corroded electrical connector at the valve, causing a short to power that keeps the valve commanded on
- 3 Chafed or shorted wiring in the valve control circuit, often from vibration or heat exposure
- 4 Debris or sediment in the coolant loop that jams the valve pintle or obstructs its travel
- 5 A faulty powertrain control module driver circuit that continuously supplies voltage to the valve
- 6 Low coolant level or air pockets causing the valve to overheat and seize



How to diagnose and fix it

- 1 Scan all modules for related codes and freeze-frame data to confirm the valve command versus actual position
- 2 Inspect the valve connector and wiring for corrosion, loose pins, or signs of overheating
- 3 Measure resistance and voltage at the valve solenoid and compare to manufacturer specifications
- 4 Command the valve open and closed with a scan tool while watching live position data to verify mechanical movement
- 5 Drain and inspect the coolant for debris or contamination that could jam the valve
- 6 Replace the coolant control valve B if electrical and mechanical checks confirm it is stuck
- 7 Clear codes and perform a relearn or calibration procedure for the coolant valve if required

What a stuck-open valve really means

- A valve stuck open often causes overcooling of the battery pack rather than overheating, so drivers may not see a temperature warning until winter conditions expose poor cabin heat or slow battery warm-up. Technicians frequently replace the valve only to find a shorted wire in the harness that keeps the solenoid energized, so always check the control circuit for a short to power before condemning the valve.
 - Some vehicles use the same coolant loop for the battery and the cabin heater, so a stuck valve can produce HVAC symptoms that mislead diagnosis toward the climate control system.
 - Debris from a failing coolant pump or degraded hoses can lodge in the valve and cause it to stick, meaning the root cause may be elsewhere in the cooling system.
- The code can set intermittently if the valve sticks only when cold or after a long drive, so a road test with live data may be needed to reproduce the fault.

Can I keep driving with P0D1C?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, long trips, or extreme temperatures because a stuck valve can prevent proper battery cooling and lead to reduced power or battery damage. If the vehicle enters limp mode or displays a high-voltage battery warning, stop driving and arrange a tow.

Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter
- Basic socket and wrench set
- Coolant drain pan and hose clamp pliers
- Manufacturer service information for valve testing and coolant bleeding



Reading P0D1C

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- 1C** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **P0D1B** Hybrid/EV Battery Pack Coolant Control Valve B Performance/S · **P0D1D** Hybrid/EV Battery Pack Coolant Control Valve B 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/p0d1c/>

