



P0E1C

Hybrid/EV Battery Pack Coolant Pump B Control Circuit High

This code means the hybrid or electric vehicle battery pack coolant pump B control circuit is showing a high voltage condition, which the computer interprets as an open circuit or a short to voltage on the control wire. The powertrain control module sets this code when the commanded pump operation does not match the expected feedback signal, indicating the pump is not being controlled properly.

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 still running at a default speed
- Reduced hybrid system performance or a message to service the hybrid system
- Possible overheating of the high-voltage battery pack, leading to reduced power or shutdown
- In some cases, the vehicle may enter a fail-safe mode with limited speed or range
- A noticeable lack of cabin heat or cooling if the coolant pump also serves the climate system

Common causes, most likely first

- 1 Open circuit in the control wire between the coolant pump and the control module, such as a broken wire or loose connector
- 2 Short to voltage on the control circuit, often due to chafed wiring or contamination in a connector
- 3 Failed coolant pump B, where the internal electronics have failed and no longer respond to control signals
- 4 Corroded or damaged electrical connector at the pump or module, causing high resistance or intermittent open
- 5 Faulty powertrain control module or hybrid control module, though this is less common
- 6 Blown fuse or relay supplying power to the pump control circuit, if the circuit design includes one
- 7 Aftermarket accessories or improper previous repairs that have disturbed the wiring harness



How to diagnose and fix it

- 1 Scan all modules for related codes and record freeze-frame data to understand when the fault occurs
- 2 Visually inspect the coolant pump B connector and wiring for damage, corrosion, or loose pins
- 3 Check the pump control circuit for continuity and short to voltage using a multimeter, following the manufacturer's wiring diagram
- 4 Test the coolant pump B by applying power and ground directly to verify operation, if accessible
- 5 Check for technical service bulletins or software updates for the hybrid control module that may address false settings
- 6 Replace the coolant pump B if testing confirms it is faulty, and clear codes to verify the repair
- 7 If the circuit tests good and the pump operates, diagnose the control module and its connections as the last step

What a high circuit code really means

- A high circuit code does not always mean the pump has failed; an open control wire or a poor connection at the pump can set the same code, so always check the harness before replacing parts.
- Some vehicles use a pulse-width modulated signal to control pump speed, and a short to voltage on that signal line can be caused by water intrusion in a connector that looks fine from the outside.
- The coolant pump may still run at full speed when the control circuit is open, masking the fault and leading drivers to ignore the warning light until battery overheating occurs.
- A weak or failing 12-volt battery can cause erratic control module behavior and set this code, so check battery health and charging system output before condemning the pump.
- After any repair, clear the codes and perform a complete drive cycle that includes hybrid battery warm-up and cool-down to confirm the code does not return.

Can I keep driving with P0E1C?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, long trips, or high ambient temperatures because the battery pack may overheat without proper coolant circulation. If the hybrid system warning appears or power is reduced, stop driving and have the vehicle towed to prevent damage.

Tools that help

- OBD-II scan tool with hybrid module capability
- Digital multimeter with back-probing pins
- Manufacturer-specific wiring diagram
- Basic hand tools for connector and pump access
- Insulation piercing probes or breakout box for circuit testing



Reading P0E1C

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0C73** Hybrid Battery Pack Cooling Pump Performance
 · **P0E1A** Hybrid/EV Battery Pack Coolant Pump B Control Circuit/Open · **P0E1B** Hybrid/EV Battery Pack Coolant Pump B Control Circuit Low · **P0E1D** Hybrid/EV Battery Pack Coolant Pump B Control Performance

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/p0e1c/>

