

GENERIC · POWERTRAIN

P0CE3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CE3

Hybrid/EV Battery Pack Coolant Control Valve A Control Circuit High

P0CE3 indicates that the hybrid or electric vehicle battery pack coolant control valve A circuit has been detected as having a high voltage condition, meaning the control module sees the circuit voltage above the expected range. The computer monitors the valve's control circuit and sets this code when the signal exceeds a calibrated threshold, often due to an open circuit, a short to voltage, or a faulty valve actuator.

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
- Reduced hybrid/EV battery cooling performance, which may lead to power derating in extreme cases
- Possible overheating warning or reduced power if the valve fails to open
- In some vehicles, the coolant valve may default to a fixed position, causing inefficient battery thermal management
- Audible clicking or no sound from the valve when commanded, depending on failure mode

Common causes, most likely first

- 1 Open circuit in the control valve A wiring or connector, such as a broken wire or corroded terminal
- 2 Short to voltage on the control circuit, often from chafed wiring or moisture intrusion
- 3 Faulty coolant control valve A actuator (solenoid or motor) with high internal resistance
- 4 Poor electrical connection at the valve or control module, including loose pins or water damage
- 5 Failed control module driver for the valve circuit, though less common
- 6 Aftermarket accessories or improper repairs that disturbed the harness



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the hybrid/EV battery cooling system
- 2 Inspect the coolant control valve A connector and harness for corrosion, damage, or loose pins
- 3 Measure resistance across the valve actuator terminals and compare to manufacturer specifications
- 4 Check for short to voltage on the control circuit by backprobing with a multimeter while the valve is commanded off
- 5 Perform a wiggle test on the harness while monitoring the circuit voltage to identify intermittent faults
- 6 If wiring and connections are good, command the valve with a scan tool and observe operation; replace the valve if it fails to respond
- 7 Clear codes and verify the repair with a test drive, ensuring the coolant control valve operates correctly under various temperature conditions

Before you replace the coolant control valve

- A high voltage code often results from an open circuit rather than a shorted valve, so resistance checks on the actuator and continuity tests on the wiring are more reliable than guessing at the valve.
- The valve may share power or ground with other components in the battery cooling system, so a fault elsewhere can set this code; always check for additional codes that might point to a common circuit.
- Intermittent high voltage codes can be caused by a loose connector that only loses contact when the vehicle is cold or vibrating, so a wiggle test while monitoring live data is essential.
- Some vehicles use a pulse-width modulated signal to control the valve, and a high voltage code can be set if the signal wire is shorted to a higher voltage source such as a sensor reference, not just battery voltage.
- Replacing the valve without checking the control module's ability to command it can lead to repeat failures if the driver circuit inside the module is damaged.

Can I keep driving with P0CE3?

It is generally safe to drive with this code if the vehicle is not showing overheating warnings or reduced power, but avoid heavy loads or long trips until repaired. If the battery temperature rises or the vehicle enters a reduced power mode, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter with backprobing pins
- Wiring diagram for the specific vehicle
- Basic hand tools for connector and component access
- Test light or logic probe for circuit testing



Reading P0CE3

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- E3** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0C73** Hybrid Battery Pack Cooling Pump Performance
 · **P0CE2** Hybrid/EV Battery Pack Coolant Control Valve A Control Circu · **P0CE4** Hybrid/EV Battery Pack
 Coolant Control Valve Position Sensor · **P0CE5** Hybrid/EV Battery Pack Coolant Control Valve Position Sensor

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/p0ce3/>

