

GENERIC · POWERTRAIN

P0CE7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CE7

Hybrid/EV Battery Pack Coolant Control Valve Position Sensor Circuit High

P0CE7 indicates that the hybrid or electric vehicle battery pack coolant control valve position sensor circuit is reporting a voltage higher than the manufacturer's expected range, which the control module interprets as a fault. The computer has detected an abnormally high signal on the sensor circuit, meaning the valve position cannot be reliably determined, potentially affecting battery thermal management.

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 hybrid system warning light
- Often no symptoms besides the warning light
- Reduced hybrid system performance or forced limp mode
- Battery pack overheating or overcooling due to improper coolant flow
- Possible reduced electric driving range or charging issues
- In rare cases, a no-start condition if the battery thermal management is severely compromised

Common causes, most likely first

- 1 Faulty coolant control valve position sensor
- 2 Damaged or corroded wiring harness or connector at the valve
- 3 Open circuit or high resistance in the sensor signal circuit
- 4 Short to voltage on the sensor reference or signal circuit
- 5 Failed coolant control valve actuator causing the sensor to read out of range
- 6 Contaminated or degraded coolant affecting valve movement and sensor feedback
- 7 Faulty hybrid/EV battery control module (less common)



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check live data for the valve position sensor voltage
- 2 Inspect the sensor connector and wiring for corrosion, damage, or loose pins
- 3 Measure resistance and voltage on the sensor circuit according to the manufacturer's specifications
- 4 Test the coolant control valve for proper movement and mechanical binding
- 5 Replace the coolant control valve position sensor if faulty
- 6 Repair or replace damaged wiring or connectors as needed
- 7 Clear the code and perform a road test to confirm the repair, monitoring live data

Don't overlook the coolant valve itself

- A high sensor signal often results from a short to voltage in the reference circuit, which can be caused by chafed wiring near hot or moving components.
- Technicians sometimes replace the sensor only to find the coolant control valve is mechanically stuck, causing the sensor to read out of range.
- The code can be set by low coolant level or air pockets in the system, leading to improper valve operation and sensor feedback.
- On some vehicles, the sensor is integrated into the valve assembly and cannot be serviced separately, requiring valve replacement.
- Always check for related codes in the hybrid battery management system, as a failing control module can mimic sensor circuit faults.

Can I keep driving with P0CE7?

Driving with this code is generally not recommended because improper battery thermal management can lead to overheating and reduced performance; avoid heavy loads or long trips until repaired.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram and service information
- Basic hand tools (screwdrivers, socket set)
- Coolant refractometer or hydrometer



Reading P0CE7

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- E7** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A0F** Engine Failed to Start · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **P0CE6** Hybrid/EV Battery Pack Coolant Control Valve Position Sensor · **P0CE8** 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/p0ce7/>

