

GENERIC · POWERTRAIN

P0CE8

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0CE8

Hybrid/EV Battery Pack Coolant Control Valve Position Sensor Circuit Intermittent/Erratic

P0CE8 indicates that the hybrid or electric vehicle battery pack coolant control valve position sensor circuit is reporting intermittent or erratic signals to the battery energy control module. The computer detects this when the sensor voltage or position feedback jumps unpredictably or drops out momentarily, rather than following a smooth, expected pattern during valve movement.

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 fault is intermittent
- Reduced hybrid system performance or forced limp mode in some vehicles
- Inconsistent battery pack temperature readings or cooling fan operation
- Possible charging or EV range estimation errors if the battery thermal management is affected

Common causes, most likely first

- 1 Faulty coolant control valve position sensor or its internal wiring
- 2 Damaged or corroded electrical connector at the valve or sensor
- 3 Chafed, open, or shorted wires in the sensor circuit harness
- 4 Poor electrical ground connection for the sensor or valve actuator
- 5 Sticking or binding coolant control valve causing erratic sensor feedback
- 6 Failed battery energy control module or hybrid control module (less common)
- 7 Coolant contamination or debris interfering with valve movement and sensor reading



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to understand when the fault occurs
- 2 Visually inspect the coolant control valve, sensor, and harness for obvious damage, corrosion, or coolant leaks
- 3 Disconnect the sensor connector and check for bent pins, water intrusion, or loose terminals; clean and apply dielectric grease if needed
- 4 Measure sensor reference voltage, ground continuity, and signal voltage with a multimeter while wiggling the harness to detect intermittent faults
- 5 Command the coolant control valve through its full range with a scan tool and observe sensor position feedback for smoothness and consistency
- 6 If the sensor signal is erratic but the valve moves freely, replace the position sensor or valve assembly as required by the manufacturer
- 7 After repair, clear codes, perform any required relearn or calibration procedure, and verify the fault does not return during a road test

Intermittent faults often hide in the harness

- A common misdiagnosis is replacing the coolant control valve when the real problem is a chafed wire in the harness that only shorts when the engine moves or the vehicle hits bumps.
- The code can set from a momentary glitch that lasts less than a second, so the sensor may test perfectly fine when the vehicle is stationary in the workshop.
- Coolant leaks or seepage at the valve can wick into the sensor connector and cause erratic readings without any visible external damage.
- Some vehicles use the same sensor signal for multiple functions, so a fault here can also trigger unrelated-looking codes in the hybrid control system.
- A weak or failing 12-volt auxiliary battery can cause low reference voltage to the sensor, leading to intermittent position errors that mimic a failed sensor.

Can I keep driving with P0CE8?

You can usually continue driving if the only symptom is the warning light, but avoid heavy acceleration, prolonged high-speed driving, or rapid charging until the fault is repaired. If the vehicle enters limp mode or shows battery temperature warnings, stop driving and seek service to prevent damage to the hybrid battery pack.



Tools that help

- OBD-II scan tool with hybrid/EV capability and bidirectional controls
- Digital multimeter with min/max recording
- Back probe pins or breakout leads
- Wire repair kit with crimp connectors and heat shrink
- Manufacturer service information for circuit diagrams and valve calibration procedures

Reading P0CE8

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
E8	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0C00** Drive Motor A Current Low · **P0CE7** Hybrid/EV Battery Pack Coolant Control Valve Position Sensor · **P0CE9** Hybrid/EV Electronics Coolant Pump A Control Circuit/Open · **P0CEA** Hybrid/EV Electronics Coolant Pump A Performance

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/p0ce8/>

