

GENERIC · POWERTRAIN

P0E12

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0E12

Hybrid/EV Battery Pack Coolant Heater A Control Circuit/Open

P0E12 indicates that the hybrid or electric vehicle's battery pack coolant heater control circuit has an open condition, meaning the powertrain control module (PCM) or hybrid control module has detected a break in the electrical path to the heater. The computer commands the heater on and monitors the circuit for expected voltage or current; when the feedback does not match, it sets this code. This heater warms the battery coolant to bring the pack to an efficient operating temperature in cold conditions.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

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 in mild weather
- Reduced hybrid battery performance or slower charging in cold temperatures
- The coolant heater may not activate, leading to longer warm-up times and lower electric range
- Possible entry into a reduced-power or limp mode if the fault affects battery temperature regulation
- In some vehicles, a notification on the driver information center about battery heating unavailable

Common causes, most likely first

- 1 Open circuit in the wiring or connector between the control module and the coolant heater
- 2 Failed coolant heater element (open internal circuit)
- 3 Blown fuse or open relay supplying power to the heater circuit
- 4 Corroded, loose, or damaged electrical connector at the heater or control module
- 5 Faulty coolant temperature sensor giving incorrect feedback, though less common
- 6 Internal failure in the control module driver circuit (rare but possible)



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other modules
- 2 Inspect the coolant heater fuse and relay, testing for power and continuity
- 3 Visually inspect the heater wiring harness and connectors for damage, corrosion, or looseness
- 4 Measure resistance of the heater element and compare to specification
- 5 Check for voltage and ground signals at the heater connector while commanding the heater on with a scan tool
- 6 If the circuit tests good, suspect the control module; perform pinpoint tests per service information before replacement
- 7 Clear codes and verify the repair by running the heater command and confirming no code returns

Open circuit checks before heater replacement

- A common oversight is assuming the heater itself has failed when the real problem is a corroded connector or chafed wire in the harness, especially in areas exposed to road salt and moisture.
The code can set intermittently due to a loose ground connection, so a wiggle test of the harness while monitoring live data can reveal the fault without any parts replacement.
- Some vehicles will not command the coolant heater on unless the battery temperature is below a certain threshold, so the code may only appear in cold weather and not during a warm shop visit.
- A failed coolant heater can cause the hybrid system to limit power or disable electric-only mode to protect the battery, so ignoring the code may lead to reduced performance and efficiency.

Always check for technical service bulletins (TSBs) for the specific vehicle, as some manufacturers have updated connector designs or software calibrations that address this fault.

Can I keep driving with P0E12?

You can generally continue driving, but avoid relying on electric-only mode in cold weather and expect reduced battery performance and efficiency. If the vehicle enters a reduced-power mode or shows other warning lights, have it checked promptly to prevent further system issues.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Test light
- Wiring diagram and service information
- Socket set and trim tools for access



Reading P0E12

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A93** Inverter A Cooling System Performance · **P0C73** Hybrid Battery Pack Cooling Pump Performance · **P0E11** Generator Inverter Power Supply A Circuit High · **P0E13** Hybrid/EV Battery Pack Coolant Heater A Control Circuit Low

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/p0e12/>

