



P0C8E

Hybrid/EV Battery Temperature Sensor J Range/Performance

P0C8E means the hybrid or electric vehicle battery pack's temperature sensor J is reporting a reading or behavior that falls outside the range the battery control module expects. The computer has detected that the sensor's signal is not plausible for the current operating conditions, which can affect battery charging and cooling strategies.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or a dedicated hybrid system warning light
- Reduced electric-only range or the vehicle refusing to enter EV mode
- A message on the dash advising that battery temperature is high or that performance is limited
- The hybrid system may disable start-stop or regenerative braking
- Often no symptoms besides the warning light, especially if the fault is intermittent
- In rare cases, the vehicle may enter a limp-home mode with reduced power

Common causes, most likely first

- 1 Faulty battery temperature sensor J itself, due to an internal short or open circuit
- 2 Damaged or corroded wiring or connector at sensor J or along its harness
- 3 Poor electrical connection at the battery control module or a chafed wire in the battery pack
- 4 Battery control module software that is outdated and misinterprets sensor data
- 5 Extreme ambient temperatures causing a temporary out-of-range reading that sets a pending code
- 6 A problem with the battery cooling system that causes actual overheating and triggers the sensor range fault
- 7 Rarely, a failure within the battery control module itself



How to diagnose and fix it

- 1 Use a scan tool to read the freeze-frame data and confirm the exact sensor J signal and when the fault set
- 2 Visually inspect sensor J, its connector, and the harness for damage, corrosion, or loose pins
- 3 Measure the resistance of sensor J with a multimeter and compare it to the manufacturer's temperature-resistance chart
- 4 Check for continuity and short-to-ground or short-to-power on the sensor signal and return circuits
- 5 Verify the battery cooling system is operating correctly and that the pack is not genuinely overheating
- 6 If the sensor and wiring test good, check for technical service bulletins or software updates for the battery control module
- 7 Replace sensor J only after confirming the fault is not caused by wiring or the control module, then clear codes and verify the repair

What most technicians miss on P0C8E

- A loose or corroded connector at the battery pack can mimic a failed sensor J, so always wiggle-test the harness while watching live data before condemning the sensor.
- Some vehicles set P0C8E when the 12-volt auxiliary battery is weak, because low system voltage corrupts the sensor signal; check the 12-volt battery first.
- The code can be stored by a temporary over-temperature event during aggressive driving or fast charging, and it may not return after clearing if the cooling system recovers.
- Replacing sensor J without checking for a chafed wire inside the battery pack often leads to a repeat failure within a few weeks.
- A battery control module software update can change the threshold for sensor J range, so always check for applicable updates before replacing hardware.

Can I keep driving with P0C8E?

You can usually drive the vehicle short distances to a repair shop, but avoid aggressive acceleration, fast charging, and long trips until the fault is diagnosed. If the dash displays a high battery temperature warning or reduced power, stop safely and have the vehicle towed.

Tools that help

- OBD-II scan tool with hybrid/EV battery data capability
- Digital multimeter with temperature sensor resistance testing
- Manufacturer service information for sensor resistance charts and wiring diagrams
- Insulated hand tools for high-voltage safety disconnects
- Battery pack lifting equipment if sensor replacement requires pack removal



Reading P0C8E

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- 8E** The exact fault within that area.

Often seen with

P0A9C Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AC4** Hybrid/EV Powertrain Control Module Requested MIL Illuminati · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0C8D** Hybrid/EV Battery Temperature Sensor J Circuit · **P0C8F** Hybrid/EV Battery Temperature Sensor J Circuit Low

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0c8e/>

