

GENERIC · POWERTRAIN

P0C8F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C8F

Hybrid/EV Battery Temperature Sensor J Circuit Low

P0C8F indicates that the hybrid or electric vehicle battery temperature sensor circuit designated as 'J' is reporting a voltage or signal that is lower than the manufacturer's expected range. The battery energy control module monitors this sensor to protect the high-voltage pack from overheating or overcooling, and it sets the code when the signal wire shows a short to ground or an open circuit that pulls the reading low.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message on the dashboard
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced electric-only driving range or forced engine operation in hybrids
- Possible derating of battery charging or discharging power to protect the pack
- In rare cases, the vehicle may refuse to enter ready mode or start
- A stored freeze-frame showing battery temperature at an implausible low value

Common causes, most likely first

- 1 Damaged or chafed wiring harness between the J temperature sensor and the battery control module
- 2 Corroded or loose electrical connector at the sensor or module
- 3 Failed battery temperature sensor J itself, reading open or shorted
- 4 Internal fault in the battery energy control module or its sensor interface circuit
- 5 Moisture intrusion into the sensor connector or harness causing a short to ground
- 6 Aftermarket accessories or improper previous repairs disturbing the high-voltage battery wiring



How to diagnose and fix it

- 1 Connect a scan tool and record all hybrid battery temperature sensor readings to confirm sensor J is the outlier
- 2 Inspect the sensor J connector and harness for corrosion, chafing, or loose pins, and repair as needed
- 3 Measure resistance of sensor J at the connector and compare to the manufacturer's temperature-resistance chart
- 4 Check the signal wire for a short to ground and the reference wire for continuity back to the control module
- 5 If wiring and sensor test good, substitute a known-good sensor or simulate the signal to verify the module responds correctly
- 6 Replace the faulty temperature sensor or repair the harness, then clear codes and verify the reading matches other sensors
- 7 If the fault persists after all external checks, diagnose or replace the battery energy control module per service information

What the J sensor code really tells you

- A low signal code often results from a short to ground in the harness rather than a failed sensor, so always inspect wiring before condemning the sensor.
- The J designation refers to one specific sensor in a multi-sensor pack, and comparing its live reading to the others quickly confirms whether the fault is real or a wiring artifact.
- Intermittent codes can be caused by a connector that only loses contact when the battery pack expands or contracts with temperature changes, so wiggle-test the harness while watching live data.
- Some vehicles set this code when the 12-volt auxiliary battery is weak and the control module misreads sensor voltages during low-voltage conditions, so check system voltage first.
- Replacing the sensor without clearing adaptive battery data can leave the module still using a default value, so follow the manufacturer's reset procedure after repairs.

Can I keep driving with P0C8F?

You can usually drive the vehicle short distances to a repair shop, but avoid aggressive acceleration, sustained high-speed driving, and heavy charging until the fault is fixed. If the hybrid system warning light flashes or the vehicle enters reduced power mode, stop driving and arrange a tow to prevent battery damage.

Tools that help

- Hybrid-capable OBD-II scan tool with live data
- Digital multimeter with resistance and voltage measurement
- Manufacturer service information for sensor resistance charts and wiring diagrams
- Insulated hand tools and personal protective equipment for high-voltage safety
- Breakout box or back-probe kit for connector testing



Reading P0C8F

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0C8D** Hybrid/EV Battery Temperature Sensor J Circuit · **P0C8E** Hybrid/EV Battery Temperature Sensor J Range/Performance · **P0C90** Hybrid/EV Battery Temperature Sensor J Circuit High

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/p0c8f/>

