

GENERIC · POWERTRAIN

P0C7E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C7E

Hybrid/EV Battery Temperature Sensor G Circuit Low

P0C7E means the hybrid or electric vehicle battery pack's temperature sensor G is reporting a voltage below the normal range to the battery energy control module. The module expects a specific voltage window from that sensor, and a low reading tells it the sensor circuit is shorted to ground or the sensor itself has failed.

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

Symptoms you may notice

- Illuminated check engine light or hybrid system warning light
- Often no symptoms besides the warning light
- Reduced electric-only driving range or forced gasoline engine operation
- Hybrid system may refuse to start or enter a limited-power mode
- Battery cooling fan running constantly or not at all
- Dashboard message advising service of the high-voltage battery

Common causes, most likely first

- 1 Temperature sensor G internally shorted to ground
- 2 Chafed or pinched sensor wiring harness shorting to chassis ground
- 3 Corroded or loose connector pins at the sensor or battery module
- 4 Moisture intrusion into the sensor connector or harness
- 5 Failed battery energy control module driver circuit
- 6 Damaged sensor pigtail from heat or vibration

How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0C7E before clearing anything
- 2 Inspect the sensor G harness and connector for chafing, corrosion, and moisture
- 3 Measure sensor G resistance and compare it to the manufacturer's temperature chart
- 4 Back-probe the signal wire at the module and check voltage with the key on
- 5 Check for a short to ground on the signal wire with the sensor disconnected
- 6 Replace the faulty temperature sensor or repair the shorted harness section
- 7 Clear codes and verify sensor G voltage reads normally across a full key cycle



What a low sensor G reading really means

- A low voltage code on a temperature sensor almost always means a short to ground, not an open circuit, so chasing a broken wire wastes time.
- Sensor G is one of several pack temperature sensors, and a single low reading can make the module derate charging or disable electric-only mode even when the pack is fine.
- Technicians often replace the sensor when the real fault is a pinched harness behind the battery pack where vibration rubs through insulation.
- Clearing the code without checking freeze-frame data can hide whether the fault happened hot, cold, or only while driving over bumps.
- High-voltage battery work requires proper personal protective equipment and manufacturer procedures, so this is not a casual DIY job.

Can I keep driving with P0C7E?

You can usually drive the vehicle, but the hybrid system may limit power or refuse electric-only operation, so avoid long trips and heavy loads until it is repaired. Do not open or touch the high-voltage battery pack yourself; have a qualified technician inspect the sensor circuit.

Tools that help

- OBD-II scan tool with hybrid module access
- Digital multimeter
- Back-probe kit
- Manufacturer service information for sensor resistance values
- Insulated hand tools and high-voltage safety gloves

Reading P0C7E

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
7E	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0C7D** Hybrid/EV Battery Temperature Sensor G Range/Performance · **P0C7F** Hybrid/EV Battery Temperature Sensor G Circuit High · **P0C80** Hybrid/EV Battery Temperature Sensor G Circuit Intermittent/



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/p0c7e/>

