

GENERIC · POWERTRAIN

P0C0F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C0F

Drive Motor B Inverter Power Supply Circuit Low

P0C0F indicates that the powertrain control module has detected a low-voltage condition on the power supply circuit feeding the inverter for drive motor B, which is the second traction motor in a hybrid or electric vehicle. The inverter converts high-voltage direct current from the battery into the three-phase alternating current that spins the motor, so a low supply circuit means the inverter is not receiving the voltage it needs to operate reliably.

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

Symptoms you may notice

- Illumination of the check engine light or a dedicated hybrid/EV system warning lamp
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power or a limp-home mode that limits vehicle speed and acceleration
- The vehicle may refuse to start or shift into drive if the inverter supply is severely low
- Intermittent stalling or sudden loss of propulsion while driving
- A message on the dash indicating a hybrid or electric system fault

Common causes, most likely first

- 1 A loose, corroded, or damaged ground connection on the inverter power supply circuit
- 2 A blown high-voltage fuse or a tripped service disconnect that interrupts supply to the inverter
- 3 Chafed or pinched wiring in the inverter power supply harness, often near a connector or a sharp body edge
- 4 A faulty inverter assembly with an internal short or failed power supply component
- 5 A weak or failing 12-volt auxiliary battery that drags down the control circuit voltage
- 6 A defective power supply relay or contactor that fails to close fully
- 7 Corrosion or water intrusion at the inverter connector, particularly on vehicles driven in wet or salty conditions



How to diagnose and fix it

- 1 Inspect the 12-volt battery state of charge and charging system, since a weak auxiliary battery can set this code
- 2 Check all ground straps and the inverter power supply connector for tightness, corrosion, and water intrusion
- 3 Test the high-voltage fuse and service disconnect for continuity, following all high-voltage safety procedures
- 4 Perform a voltage drop test on the inverter power supply circuit under load to locate excessive resistance
- 5 Inspect the wiring harness for chafing, pinches, or heat damage along its full length
- 6 If the circuit tests good, substitute a known-good inverter or follow the manufacturer's diagnostic flow to test the inverter internally
- 7 Clear the code and verify the repair with a road test that includes several key cycles

Before you condemn the inverter

- A weak 12-volt auxiliary battery is a surprisingly common cause of this code because the inverter control electronics are powered by the low-voltage system, and a sagging battery can drag the supply circuit below threshold.
- The code can be set by a momentary voltage dip during engine cranking or a high-voltage contactor closing event, so an intermittent P0C0F with no driveability complaint often points to a connection issue rather than a failed inverter.
- Technicians sometimes replace the inverter only to find the real fault is a corroded ground strap hidden behind a plastic splash shield, so always perform a voltage drop test before parts swapping.
- This code does not always mean the inverter itself has failed; the supply circuit includes fuses, relays, contactors, and wiring, and any of those can set the same low-voltage fault.
- On some vehicles, a failing DC-DC converter can pull down the low-voltage supply that feeds the inverter control board, setting P0C0F even though the high-voltage circuit is intact.

Can I keep driving with P0C0F?

Do not continue driving with this code active, because a low inverter supply can cause a sudden loss of propulsion or leave the vehicle unable to start. Have the vehicle towed to a qualified hybrid or electric vehicle technician, and avoid any attempt to inspect high-voltage components yourself.

Tools that help

- Digital multimeter with high-voltage safety rating
- OBD-II scan tool capable of reading hybrid/EV-specific codes
- Insulated hand tools rated for high-voltage work
- High-voltage safety gloves and insulated mat
- Wiring diagram and service information for the specific vehicle



Reading P0C0F

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A94** DC/DC Converter A Performance · **P0C00** Drive Motor A Current Low · **P0C0E** Drive Motor B Inverter Power Supply Circuit/Open · **P0C10** Drive Motor B Inverter Power Supply 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/p0c0f/>

