

GENERIC · POWERTRAIN

P0C07

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C07

Drive Motor A Phase U-V-W Circuit High

P0C07 indicates that the hybrid or electric vehicle's motor control module has detected an abnormally high current or voltage condition in the phase U, V, or W circuit of drive motor A. The computer monitors the three-phase inverter output and sets this code when the circuit exceeds safe limits, often due to a short, open, or insulation fault.

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 hybrid system warning lamp
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power or limp-home mode with limited motor output
- Vehicle may refuse to start or shift into gear if the high-voltage system is disabled
- Possible shuddering or rough operation under acceleration if one phase is weak
- In some cases, the engine may run continuously or the vehicle may default to gasoline-only operation

Common causes, most likely first

- 1 Damaged or chafed motor phase cable (U, V, or W) causing a short to ground or between phases
- 2 Loose or corroded connector pins at the motor or inverter terminals
- 3 Internal short or open winding in the drive motor stator
- 4 Failed inverter module or power transistor inside the motor control unit
- 5 Insulation breakdown due to moisture, heat, or contamination in the motor housing
- 6 Faulty current sensor or voltage sensing circuit within the inverter
- 7 Aftermarket or improper wiring repairs that alter resistance or shielding



How to diagnose and fix it

- 1 Perform a visual inspection of the motor phase cables and connectors for chafing, corrosion, or loose pins
- 2 Use a digital multimeter to check resistance between each phase and ground, and between phases, with the high-voltage system disabled
- 3 Measure insulation resistance with a megohmmeter to detect subtle winding or cable leakage
- 4 Inspect the inverter terminals and motor connector for signs of arcing, overheating, or moisture intrusion
- 5 Check for technical service bulletins or software updates for the motor control module that may address false setting
- 6 If the fault persists, perform a guided diagnostic using the manufacturer's scan tool to monitor phase current and voltage live data
- 7 Replace the faulty motor phase cable, connector, or motor assembly as indicated by test results

What the phase circuit code really means

- A high voltage or current reading on a phase circuit does not always mean the motor is bad; a poor connection at the inverter can mimic a failed winding.
- Intermittent codes often appear after driving through deep water or after a car wash, pointing to moisture ingress in the motor connector rather than a hard failure.
- Some vehicles set P0C07 when the 12-volt battery is weak because the inverter's self-test runs at startup and misreads a low reference voltage.
- A shorted phase cable can be caused by a rodent chewing through the insulation, which is easily missed if only the motor and inverter are inspected.
- The code can be stored by a faulty current sensor inside the inverter even when the actual phase circuit is healthy, so live data comparison is essential before replacing parts.

Can I keep driving with P0C07?

Do not continue driving with this code active, because a high-voltage phase fault can cause sudden loss of power or damage the inverter and motor. Have the vehicle towed to a qualified hybrid or electric vehicle technician for diagnosis.

Tools that help

- Digital multimeter with high-voltage rated probes
- Megohmmeter (insulation tester)
- Manufacturer-specific scan tool with live data capability
- High-voltage safety gloves and insulated tools
- Wiring diagram and service information for the vehicle



Reading P0C07

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

Often seen with

P0A78 Drive Motor A Inverter Performance · **P0A7A** Generator Inverter Performance · **P0C00** Drive Motor A Current Low · **P0C01** Drive Motor A Current High · **P0C02** Drive Motor B Current

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/p0c07/>

