

GENERIC · POWERTRAIN

P0A65

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0A65

Drive Motor A Phase W Current High

P0A65 indicates that the hybrid or electric vehicle control module has detected an abnormally high current flowing through the phase W circuit of drive motor A, which is one of the three power phases in the motor's inverter circuit. The computer compares commanded current to measured feedback and flags the fault when the actual current exceeds the expected value for a calibrated time, pointing to a short, a failing inverter component, or a wiring problem.

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 light, often with no other noticeable symptoms.
- Reduced power or limp-home mode, where the vehicle limits motor output to protect the inverter and motor.
- The vehicle may refuse to start or shift into drive if the fault is severe and the controller disables the motor.
- Intermittent shuddering or hesitation during acceleration if the high current is not constant.
- Possible overheating smell or warning if the excessive current causes thermal stress in the inverter or motor windings.

Common causes, most likely first

- 1 A short circuit or low resistance in the phase W cable or connector between the inverter and the motor.
- 2 Failed current sensor or sensing circuit inside the inverter that incorrectly reports high current.
- 3 Damaged inverter power module, such as a shorted insulated-gate bipolar transistor (IGBT) or diode in the phase W leg.
- 4 Internal motor winding fault, including a short between turns or to ground in the phase W winding.
- 5 Corrosion or water intrusion in the phase W connector or motor terminal, creating a partial short.
- 6 A faulty motor control module or hybrid control unit that miscommands current due to software or hardware failure.



How to diagnose and fix it

- 1 Perform a visual inspection of the phase W cables, connectors, and motor terminals for chafing, corrosion, or loose pins.
- 2 Use a digital multimeter to check resistance and isolation between phase W and ground, and between phase W and the other phases, with the system powered down.
- 3 Retrieve freeze-frame data and compare commanded versus actual current for phase W using a scan tool capable of hybrid data, looking for a consistent offset.
- 4 Swap or substitute the current sensor if accessible, or perform a known-good inverter test if the manufacturer allows, to isolate the sensor from the power stage.
- 5 Check for technical service bulletins (TSBs) or software updates for the hybrid control module that address current-sensing calibration.
- 6 If wiring and sensors are good, perform an insulation resistance test on the motor phase W winding and inspect for signs of overheating or damage.
- 7 Replace the faulty component—cable, sensor, inverter, or motor—only after confirming the fault with the above tests, then clear codes and verify the repair with a road test.

Phase W current faults often misdiagnosed

- A loose or corroded ground connection for the inverter can cause the current sensor to read high on one phase, so always check grounds before condemning the inverter.
- The code can be set by a failing 12-volt battery or charging system that causes voltage spikes, leading to false current readings in the hybrid control module.
- Many technicians replace the entire inverter assembly when only the current sensor or a connector pigtail is at fault, so test the sensor circuit first.
- Phase W high current can be a symptom of a mechanical binding in the motor or transmission that overloads that phase, so check for abnormal drag or noise.
- After repairs, some vehicles require a current sensor calibration or learn procedure with a scan tool, otherwise the code may return immediately.

Can I keep driving with P0A65?

Do not continue driving with this code because excessive phase current can overheat and destroy the inverter or motor, leading to a sudden loss of power. Have the vehicle towed to a qualified hybrid repair facility for diagnosis.



Tools that help

- Hybrid-capable scan tool with live data and freeze-frame access
- Digital multimeter with insulation resistance testing capability
- Oscilloscope for current waveform analysis (optional but helpful)
- Manufacturer service information for wiring diagrams and test procedures
- Insulation tester (megohmmeter) for motor winding checks
- Basic hand tools for connector and component access

Reading P0A65

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

Often seen with

P0A64 Drive Motor A Phase W Current Low · **P0A66** Drive Motor B Phase U Current · **P0A67** Drive Motor B Phase U Current Low · **P0A68** Drive Motor B Phase U Current High · **P0A69** Drive Motor B Phase V 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/p0a65/>

