

GENERIC · POWERTRAIN

P0D49

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D49

Battery Charger 14 Volt Output Current Sensor Circuit Low

P0D49 indicates that the battery charger's 14-volt output current sensor circuit is reporting a voltage or signal that is lower than the manufacturer's expected range, which the control module interprets as a fault. The computer detects this when the sensor's output stays below a calibrated threshold for a set period, often indicating a wiring issue, a faulty sensor, or a problem within the charger itself.

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

Symptoms you may notice

- Illumination of the check engine light or a dedicated charging system warning light.
- The 14-volt battery charger may fail to charge the auxiliary battery, leading to a no-start or reduced electrical performance.
- Electrical accessories may operate erratically or dim if the auxiliary battery is not being maintained.
- The vehicle may enter a reduced power mode or disable the auto start-stop feature to protect the electrical system.
- Often no symptoms besides the warning light, especially if the fault is intermittent or only affects the sensor signal.
- A stored diagnostic trouble code may be the only indication, with no noticeable change in vehicle behavior.

Common causes, most likely first

- 1 A faulty current sensor integrated into the battery charger's 14-volt output circuit.
- 2 Damaged, corroded, or loose wiring or connectors in the sensor circuit, including the signal, ground, or reference voltage wires.
- 3 High resistance or an open circuit in the sensor ground circuit, causing a low signal.
- 4 A short to ground on the sensor signal wire, pulling the voltage below the expected range.
- 5 Internal failure within the battery charger module, such as a defective current-sensing element or circuit board.
- 6 Water intrusion or physical damage to the charger assembly or its connectors, leading to signal degradation.
- 7 A weak or failing auxiliary battery that causes the charger to operate outside its normal parameters, indirectly setting the code.



How to diagnose and fix it

- 1 Inspect the battery charger and its wiring for obvious damage, corrosion, or loose connections, and repair as needed.
- 2 Use a scan tool to view live data for the 14-volt output current sensor to confirm the low signal and check for intermittent behavior.
- 3 Perform a voltage drop test on the sensor ground circuit and the signal circuit to identify excessive resistance or an open circuit.
- 4 Disconnect the sensor and measure reference voltage and ground at the connector to verify the control module is providing the correct inputs.
- 5 Check for a short to ground on the signal wire by measuring resistance between the signal terminal and chassis ground with the sensor disconnected.
- 6 If wiring and connectors are good, replace the battery charger current sensor or the charger assembly as recommended by the manufacturer.
- 7 Clear the diagnostic trouble codes and perform a road test to verify the repair, ensuring the sensor signal returns to normal range.

Sensor Circuit Checks Before Charger Replacement

- A low signal from the current sensor often results from a poor ground connection at the charger mounting point, which is frequently overlooked during diagnosis.
- The code can be set by a weak auxiliary battery that causes the charger to operate at low output, so always load-test the battery before condemning the sensor.
- Intermittent faults may only appear during specific charging conditions, such as high electrical load or low ambient temperatures, so wiggle-test wiring while monitoring live data.
- Replacing the charger without checking the signal wire for a short to ground can lead to a repeat failure if the harness is chafed against a metal component.
- Some vehicles use the same current sensor signal for multiple functions, so a fault in a related system can set this code even when the charger itself is healthy.

Can I keep driving with P0D49?

You can usually continue driving to a repair shop, but avoid relying on the vehicle's auto start-stop or accessory power features for long periods. If the charging system warning light is illuminated along with this code, limit driving to essential trips to prevent a no-start condition.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the battery charger circuit
- Test light or jumper wires
- Basic hand tools for connector and component access

Reading P0D49

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

Often seen with

P0562 System Voltage Low · **P0A94** DC/DC Converter A Performance · **P0D48** Battery Charger 14 Volt Output Current Sensor Circuit Range/ · **P0D4A** Battery Charger 14 Volt Output Current Sensor Circuit High · **P0D4B** Battery Charger 14 Volt Output Current Sensor Circuit Interm

See it working

Watch the animated explainer [How a Padlock Works: Pin Tumbler Lock in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0d49/>

