

GENERIC · POWERTRAIN

P0D39

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D39

Battery Charger A Input Current Sensor Circuit Range/Performance

P0D39 indicates that the battery charger's input current sensor circuit is reporting a value outside its expected range or not performing as designed. The powertrain control module (PCM) monitors this sensor to ensure the charger is drawing the correct current, and it sets this code when the signal is implausible or erratic.

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, often with no other noticeable symptoms
- Battery warning light or charging system message on the dashboard
- Reduced charging performance, leading to a slow-draining battery or electrical accessories behaving oddly
- The vehicle may enter a reduced-power mode or disable the charging system as a protective measure
- In some cases, the engine may crank slowly or fail to start if the battery is not being charged properly

Common causes, most likely first

- 1 Faulty input current sensor or its internal circuitry
- 2 Damaged or corroded wiring and connectors between the sensor and the PCM
- 3 Poor ground connection for the sensor or charging system
- 4 PCM software issue or internal fault in the current-sensing circuit
- 5 A malfunctioning battery charger assembly (e.g., onboard charger) causing abnormal current draw
- 6 Aftermarket accessories or improper wiring interfering with the sensor signal

How to diagnose and fix it

- 1 Inspect the sensor wiring and connectors for damage, corrosion, or loose pins; repair as needed
- 2 Check and clean all ground connections related to the charging system and sensor
- 3 Use a scan tool to view live data from the input current sensor and compare with actual current draw using a clamp meter
- 4 Perform a voltage drop test on the sensor circuit to rule out excessive resistance
- 5 If the sensor signal is erratic but wiring is good, replace the input current sensor
- 6 Reprogram or update the PCM if a known software calibration issue exists
- 7 If the fault persists after sensor replacement, diagnose the battery charger assembly or PCM as the root cause



When the sensor is not the real culprit

- A weak or failing 12-volt battery can cause erratic current sensor readings and set this code, so always load-test the battery before condemning the sensor.
- Corrosion inside a connector that looks fine from the outside often causes intermittent range/performance faults; wiggle-test the harness while watching live data.
- The code can be set by a one-time glitch after jump-starting or battery replacement, so clear it and verify it does not return before replacing parts.
- On vehicles with an onboard charger, a failing charger can draw abnormal current and trigger this code even when the sensor itself is healthy.
- Aftermarket electrical accessories tapped into the charging circuit can introduce noise that the PCM interprets as a sensor range fault.

Can I keep driving with P0D39?

You can usually drive the vehicle, but avoid long trips and heavy electrical loads until the fault is repaired, because the charging system may not be operating at full capacity. If the battery warning light is on or the engine cranks slowly, limit driving to reach a safe repair location.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Clamp-on current meter
- Battery load tester
- Wire terminal cleaning tools and electrical contact cleaner

Reading P0D39

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

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0D3A** Battery Charger A Input Current Sensor Circuit Low · **P0D3B** Battery Charger A Input Current Sensor Circuit High · **P0D3C** Battery Charger A Input Current Sensor Circuit Intermittent/



See it working

Watch the animated explainer [How a Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0d39/>

