

GENERIC · POWERTRAIN

P0D45

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D45

Battery Charger 14 Volt Output Voltage Sensor Circuit High

P0D45 indicates that the battery charger's 14-volt output voltage sensor circuit is reporting a voltage higher than the manufacturer's expected range, which the control module interprets as a fault. The computer has detected an abnormally high signal on the sensor circuit that monitors the charger's 14-volt output, often due to a wiring issue, a faulty sensor, or a charging system problem.

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 activate or may shut down unexpectedly
- Electrical accessories may operate erratically or not at all if the charger is not supplying power
- The vehicle may experience a no-start condition if the auxiliary battery is not being charged
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 A short to voltage or high resistance in the 14-volt output voltage sensor signal circuit
- 2 A faulty 14-volt output voltage sensor integrated into the battery charger assembly
- 3 Corroded, loose, or damaged connectors at the charger or control module
- 4 A malfunctioning voltage regulator inside the battery charger causing actual overvoltage
- 5 A software or calibration issue in the control module that monitors the sensor
- 6 A poor ground connection for the charger or sensor circuit, causing a reference shift



How to diagnose and fix it

- 1 Perform a visual inspection of the charger wiring and connectors for damage, corrosion, or loose pins
- 2 Use a scan tool to read live data for the 14-volt output voltage sensor and compare it to actual measured voltage at the charger output
- 3 Check the sensor signal circuit for a short to voltage using a multimeter and wiring diagram
- 4 Measure resistance and voltage drop on the ground circuit for the charger and sensor
- 5 If the sensor is integrated into the charger, test the charger's output with a known-good load and verify voltage regulation
- 6 Repair or replace damaged wiring, connectors, or the battery charger assembly as needed
- 7 Clear the diagnostic trouble code and verify the repair by test-driving the vehicle and monitoring live data

Before you replace the battery charger

- A common misdiagnosis is replacing the battery charger when the real fault is a chafed signal wire shorting to a higher voltage source elsewhere in the harness.
The 14-volt output voltage sensor is often part of the charger assembly, but on some vehicles it is a separate component that can be replaced individually, so check the parts breakdown first.
- This code can set if the auxiliary battery is deeply discharged or faulty, causing the charger to operate at maximum output and the sensor to read above normal.
- Intermittent high-voltage readings can be caused by a poor ground connection that shifts the sensor's reference voltage, so always perform a voltage drop test on grounds.
Do not overlook the control module itself; a faulty analog-to-digital converter inside the module can misinterpret a correct sensor signal as high.

Can I keep driving with P0D45?

If the only symptom is a warning light and the vehicle drives normally, you can continue driving but should have the fault diagnosed soon to avoid a dead auxiliary battery. If the charger is not charging and the auxiliary battery is draining, avoid long trips and electrical loads, and seek repair promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or load tester
- Basic hand tools for connector and component access



Reading P0D45

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

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0A0D** High Voltage System Interlock Circuit A High · **P0D44** Battery Charger 14 Volt Output Voltage Sensor Circuit Low · **P0D46** Battery Charger 14 Volt Output Voltage Sensor Circuit Interm

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0d45/>

