

GENERIC · POWERTRAIN

P0E37

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0E37

DC/DC Converter Voltage Sensor B Range/Performance

P0E37 indicates that the powertrain control module has detected an out-of-range or performance fault in the voltage sensor circuit for the DC/DC converter, which is the component that steps high-voltage battery power down to charge the 12-volt system on hybrid and electric vehicles. The computer compares the sensor's reported voltage against expected values and flags the code when the signal falls outside a calibrated window or behaves erratically.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message, often with no other noticeable symptoms
- A low or fluctuating 12-volt battery charge that may cause dim lights, slow cranking, or electrical accessories acting strangely
- The vehicle may enter a reduced-power or failsafe mode that limits speed and acceleration
- The DC/DC converter may stop charging the 12-volt battery, leading to a no-start condition after the vehicle sits
- In some cases, the high-voltage system may be disabled and the vehicle will not start or move

Common causes, most likely first

- 1 A faulty voltage sensor integrated into the DC/DC converter assembly, which is the most common cause
- 2 Damaged, corroded, or loose wiring or connectors in the sensor circuit between the converter and the control module
- 3 A poor ground connection for the DC/DC converter or the sensor reference circuit
- 4 An internal fault in the DC/DC converter that affects its voltage output and confuses the sensor reading
- 5 A software calibration issue in the control module that misinterprets the sensor signal
- 6 Rarely, a failed control module that cannot correctly process the sensor input



How to diagnose and fix it

- 1 Perform a visual inspection of the DC/DC converter, its connectors, and the sensor wiring for damage, corrosion, or loose pins
- 2 Use a scan tool to read live data from the voltage sensor and compare it to actual battery voltage measured with a multimeter
- 3 Check the sensor reference voltage and ground circuits with a multimeter to confirm they are within specification
- 4 Inspect and clean the converter's ground connections to rule out a grounding fault
- 5 If the wiring and grounds are good, test the sensor signal with an oscilloscope to check for erratic behavior or dropouts
- 6 Replace the DC/DC converter assembly if the sensor is integrated and proven faulty
- 7 After repair, clear the codes and verify the sensor reading matches actual voltage with the key on and during a road test

What the voltage sensor code hides

- A weak or aging 12-volt battery can cause the DC/DC converter to work harder and may set this code indirectly, so always load-test the battery before condemning the converter.
- Corrosion inside a connector that looks fine from the outside is a frequent culprit, especially in vehicles driven in wet or salty conditions.
- The code can be set by a momentary glitch in the sensor signal that does not affect performance, so a single occurrence may not warrant immediate replacement.
- Some vehicles use the same sensor signal for multiple functions, and a fault in a related system such as the battery monitoring sensor can trigger this code as a side effect.
- After replacing the converter, some manufacturers require a relearn or calibration procedure with a scan tool to avoid a repeat code.

Can I keep driving with P0E37?

If the vehicle drives normally and the 12-volt battery is charging, you can drive cautiously to a repair shop, but avoid long trips and heavy electrical loads. If the battery warning light is on or the vehicle enters reduced power mode, stop driving and have it towed to prevent a no-start or safety risk.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope for signal analysis
- Battery load tester
- Wire terminal cleaning tools and electrical contact cleaner



Reading P0E37

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

Often seen with

P0562 System Voltage Low · **P0A0D** High Voltage System Interlock Circuit A High · **P0A94** DC/DC Converter A Performance · **P0E36** DC/DC Converter Voltage Sensor B Circuit · **P0E38** DC/DC Converter Voltage Sensor B Low

See it working

Watch the animated explainer [How a CVT Works: Belt and Pulley Transmission](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0e37/>

