

GENERIC · NETWORK

U3537

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U3537

High Voltage System Interlock Circuit L Low

U3537 is a manufacturer-specific high-voltage interlock code that the battery energy control module sets when it detects a low-side interlock loop fault on circuit L, meaning the safety loop that confirms high-voltage connectors are fully seated has lost continuity or is shorted to ground. The computer is not reporting a crash or a contactor failure; it is reporting that the low side of the interlock circuit is not returning the expected voltage, so the module cannot verify that the high-voltage system is safely assembled.

SYSTEM

Network

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Network communication

Symptoms you may notice

- High-voltage system disabled with a red or amber hybrid/EV warning light on the dash
- Vehicle may refuse to start or shift into ready mode, leaving you with a no-crank or no-drive condition
- Instrument cluster may display a message such as 'Pull over safely' or 'High-voltage system fault'
- Often no symptoms besides the warning light if the fault is intermittent and the loop re-closes on the next key cycle
- Loss of cabin climate control or DC-DC charging on some platforms because the high-voltage system is inhibited
- Intermittent return of normal operation after driving over bumps, which points to a loose connector rather than a failed component

Common causes, most likely first

- 1 A high-voltage connector that is not fully latched, so the interlock pin in that connector is not making contact
- 2 Corrosion, water intrusion or pin fretting inside an interlock connector, especially at the battery pack, inverter or service disconnect
- 3 A damaged or chafed interlock wire on the low side of circuit L, shorted to ground or broken by vibration or rodent damage
- 4 A failed service disconnect plug or manual disconnect switch whose internal interlock contact has worn out
- 5 A faulty high-voltage component that has lost its internal interlock continuity, such as the battery pack, inverter or charger
- 6 A battery energy control module or interlock detection circuit that has failed and reports a false low-side fault
- 7 Aftermarket alarm, telematics or remote-start wiring tapped into the interlock circuit and disturbing its return path



How to diagnose and fix it

- 1 Scan all modules and record every high-voltage and interlock-related code before clearing anything, because U3537 rarely travels alone
- 2 Inspect and reseal every high-voltage connector you can safely reach with the vehicle powered down and the service disconnect removed, checking for a fully latched lever and clean interlock pins
- 3 Measure resistance and voltage on the low side of circuit L at the battery energy control module connector and compare with the high side to confirm whether the loop is open or shorted to ground
- 4 Disconnect high-voltage components one at a time and recheck the interlock loop to isolate which connector or component is breaking continuity
- 5 Check the service disconnect plug and any manual disconnect switch for worn interlock contacts, and test the switch with a meter rather than by feel
- 6 Inspect the harness along its full run for chafe, pinch points and rodent damage, paying attention to areas near the pack, inverter and firewall pass-throughs
- 7 Only after the loop tests good end to end, substitute a known-good battery energy control module or perform the manufacturer's interlock learn/reset procedure

Interlock codes are rarely the module's fault

- Technicians often replace the battery energy control module first, but the overwhelming majority of U3537 events trace to a connector that is latched but not seated, or to a single pushed-back interlock pin that a visual check will not reveal
- A low-side interlock fault can be set by a completely different high-voltage component than the one named in the code, because the interlock loop is a series chain and any break in that chain looks the same to the module
- The code can be intermittent and clear itself after a key cycle, which tempts drivers to ignore it, but an intermittent interlock is a genuine safety concern because the module may allow high voltage to be present while it believes the loop is open
- Aftermarket wiring for alarms, dash cameras or telematics tapped into the wrong harness can disturb the interlock return path and set U3537 with no factory fault present at all
- Never bypass or jumper an interlock circuit to clear the code, because doing so defeats the safety system that protects technicians and first responders from live high voltage

Can I keep driving with U3537?

Do not continue driving with an active U3537, because the vehicle may disable high voltage at any moment and leave you without power assist or propulsion, and an interlock fault means the safety loop cannot confirm the high-voltage system is properly assembled. Have the vehicle towed or driven only to a nearby qualified shop, and never open or probe high-voltage components yourself.



Tools that help

- OBD-II scan tool capable of reading hybrid/EV modules and interlock data
- Digital multimeter with a low-ohms range and min/max recording
- Manufacturer service information with high-voltage connector locations and interlock loop diagrams
- Insulated high-voltage gloves and a CAT III-rated meter for any live testing
- Terminal pick and connector pin inspection tools
- Battery service disconnect removal tool or procedure

Reading U3537

U	Network: communication between the vehicle's control modules.
3	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Network communication.
37	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0AA6** Hybrid/EV Battery Voltage System Isolation Fault
 · **U0111** Lost Communication With Battery Energy Control Module 'A' · **U3536** High Voltage System Interlock Circuit L Performance · **U3538** High Voltage System Interlock Circuit L High

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u3537/>

