

GENERIC · NETWORK

U3529

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U3529

High Voltage System Interlock Circuit H

U3529 indicates that the high-voltage system interlock circuit for the 'H' loop has reported a voltage above the manufacturer's expected range. The interlock is a safety loop that confirms high-voltage connectors and covers are properly seated; the computer detected an abnormally high signal voltage on that circuit, which can prevent the high-voltage system from energizing.

SYSTEM

Network

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Network communication

Symptoms you may notice

- Hybrid or electric vehicle may fail to start or enter 'Ready' mode
- High-voltage system warning light or message on the dash
- Vehicle may switch to reduced power or limp mode
- Often no symptoms besides the warning light, especially if the fault is intermittent
- High-voltage components such as the air conditioning compressor or DC-DC converter may not operate
- Charging may be disabled on plug-in models

Common causes, most likely first

- Damaged or disconnected high-voltage interlock connector or terminal
- Corroded or loose pins in the interlock circuit
- Faulty high-voltage component with an internal interlock switch (e.g., battery pack, inverter, compressor)
- Wiring harness damage from chafing, rodent damage, or collision repair
- Water intrusion into a high-voltage connector causing high resistance or short
- Faulty interlock detection circuit inside the vehicle control module
- Aftermarket or improper high-voltage component installation



How to diagnose and fix it

- 1 Perform a visual inspection of all high-voltage connectors and covers for proper seating and damage
- 2 Check for stored codes in all modules and record freeze-frame data to identify the affected interlock loop
- 3 Measure interlock circuit voltage and resistance at the connector with a high-impedance multimeter, following manufacturer procedures
- 4 Inspect and clean connector terminals; repair any corrosion or loose pins
- 5 Substitute a known-good interlock jumper or bypass tool only for diagnostic purposes, never as a permanent repair
- 6 Test individual high-voltage components for internal interlock continuity and replace as needed
- 7 Clear codes and verify the high-voltage system powers up correctly; road test if safe

Interlock faults are rarely the module

- A high voltage reading on the interlock circuit often means an open circuit, not a short, because the detection circuit pulls the line up when the loop is broken.
Many technicians replace the high-voltage battery pack when the real fault is a damaged connector or chafed wire in the interlock loop.
- The interlock circuit is a low-voltage safety loop; a fault here does not necessarily indicate a dangerous high-voltage short, but the system will disable high voltage as a precaution.
- After a collision or undercarriage impact, interlock wiring is frequently pinched or severed even when the high-voltage components appear intact.
Some vehicles require the interlock circuit to be intact for the high-voltage system to pre-charge, so a U3529 can prevent the vehicle from starting entirely.

Can I keep driving with U3529?

Do not continue driving if the high-voltage system warning is active, because the vehicle may lose power or fail to restart. Have the vehicle inspected by a qualified high-voltage technician before attempting further use.

Tools that help

- High-impedance digital multimeter (CAT III rated)
- Manufacturer-specific scan tool with hybrid/EV capability
- Insulated hand tools and personal protective equipment (PPE) for high-voltage work
- Wiring diagram and connector pinout for the affected circuit
- Interlock bypass tool (for diagnostic use only)



Reading U3529

- 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.
- 29** 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' · **U3528** High Voltage System Interlock Circuit G High · **U352A** High Voltage System Interlock Circuit H Performance

See it working

Watch the animated explainer [How Coil-on-Plug Ignition Works: Coil and Spark Plug](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u3529/>

