

GENERIC · NETWORK

U3547

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U3547

High Voltage System Interlock Circuit P Low

U3547 indicates that the high-voltage system interlock circuit for the low-voltage side (often called the 'P' loop) has been detected as having voltage above the expected threshold. The interlock is a safety loop that confirms all high-voltage connectors and covers are properly seated; when its voltage reads high, the control module sets this code to prevent high-voltage activation.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	High	Professional	Network communication

Symptoms you may notice

- High-voltage system may be disabled, preventing the vehicle from starting or moving
- Illumination of the high-voltage system warning light or service vehicle soon message
- No noticeable drivability issues if the fault is intermittent and the interlock circuit still completes
- Inability to engage electric drive or charge the high-voltage battery on plug-in vehicles
- Other high-voltage related codes stored in multiple control modules
- Often no symptoms besides the warning light if the high-voltage system remains functional

Common causes, most likely first

- Damaged or corroded interlock switch inside a high-voltage connector
- Open or high-resistance wiring in the interlock circuit due to chafing or pin fit issues
- Faulty high-voltage component that houses the interlock switch (e.g., battery pack, inverter, or service disconnect)
- Water intrusion or contamination in a high-voltage connector causing increased resistance
- Control module internal fault misreading interlock voltage
- Aftermarket or improper repair that bypassed or altered the interlock circuit

How to diagnose and fix it

- Inspect all high-voltage connectors for proper seating, corrosion, or damage and reconnect as needed
- Check interlock circuit wiring for continuity and resistance, repairing any opens or high-resistance faults
- Test the interlock switch operation at each high-voltage component using a multimeter and service information
- Verify power and ground supplies to the control module that sets the code
- Replace the faulty high-voltage component containing the interlock switch if testing confirms failure
- Clear codes and perform a high-voltage system enable procedure if required, then road test to confirm repair

Interlock Voltage High Is Not Always a Bad Switch

- A common oversight is assuming the interlock switch itself has failed when the real cause is a partially unseated connector that increases resistance and voltage drop.
- The interlock circuit often carries a low-current pilot signal; a high voltage reading can be caused by a poor ground reference at the control module rather than a faulty component.
- Some vehicles set this code after battery replacement or service if the high-voltage service disconnect is not fully latched, even though no parts are defective.
- This code does not always indicate a dangerous high-voltage fault; it may be a nuisance code from a momentarily loose connector during driving.
- Technicians sometimes replace expensive high-voltage components without first checking the interlock loop continuity through each connector, leading to misdiagnosis.

Can I keep driving with U3547?

Do not continue driving with this code if the high-voltage system warning is active, as the vehicle may disable high-voltage power unexpectedly. Have the interlock circuit inspected by a qualified high-voltage technician before further use.

Tools that help

- Digital multimeter with high-voltage safety rating
- Scan tool capable of reading hybrid/EV-specific codes
- Insulated hand tools
- Service information for interlock circuit diagrams
- High-voltage safety gloves and PPE

Reading U3547

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.
47	The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A0F** Engine Failed to Start · **U0111** Lost Communication With Battery Energy Control Module 'A' · **U3546** High Voltage System Interlock Circuit P Performance · **U3548** High Voltage System Interlock Circuit P High



See it working

Watch the animated explainer [How a Refrigerator Works: The Cooling Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u3547/>

