

GENERIC · NETWORK

U3534

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U3534

High Voltage System Interlock Circuit K High

U3534 indicates that the high-voltage system interlock circuit K is reporting a voltage higher than the manufacturer's expected range, which the battery energy control module interprets as a fault in the safety interlock loop. The interlock is a low-current circuit that confirms all high-voltage service covers and connectors are properly seated before allowing high-voltage contactors to close.

SYSTEM

Network

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Network communication

Symptoms you may notice

- High-voltage system warning light illuminated on the dashboard
- Vehicle may refuse to start or enter 'Ready' mode because the high-voltage contactors remain open
- Reduced power or limp-home mode if the vehicle does start
- Inability to charge the high-voltage battery on plug-in models
- Often no symptoms besides the warning light if the fault is intermittent

Common causes, most likely first

- 1 Damaged or corroded high-voltage interlock connector pins causing a high-resistance or open signal
- 2 Faulty service disconnect plug or interlock switch not fully latched
- 3 Chafed or shorted interlock wiring harness rubbing against a metal component
- 4 Failed battery energy control module or interlock monitoring circuit
- 5 Water intrusion into a high-voltage connector or junction box
- 6 Aftermarket accessories or improper previous repairs disturbing the interlock loop



How to diagnose and fix it

- 1 Inspect all high-voltage service covers and connectors for proper seating and latch engagement
- 2 Check the service disconnect plug for full insertion and clean, undamaged terminals
- 3 Perform a visual inspection of the interlock wiring for chafing, corrosion, or water intrusion
- 4 Measure interlock circuit voltage and resistance at the battery energy control module connector and compare to specification
- 5 Disconnect and reseal each high-voltage connector one at a time while monitoring the live data parameter for the interlock circuit
- 6 Repair or replace damaged wiring, pins, or the faulty connector identified during testing
- 7 Clear the code and verify the interlock circuit reads within normal range during a road test

Interlock faults that fool good technicians

- A high-voltage interlock code often sets from a connector that looks fully seated but has a pin backed out of its housing, so always perform a gentle pull test on each terminal.
The interlock circuit is a low-voltage loop, so a high-voltage insulation tester is not needed and can damage the module if probed incorrectly.
- Aftermarket alarm or remote-start installations frequently tap into the interlock wiring and create high-resistance faults that only appear in damp weather.
- Some vehicles log U3534 as a history code after a low auxiliary battery causes a momentary voltage spike, so clear the code and verify it does not return before replacing parts.

A failed service disconnect plug can set this code without any visible damage, so substitution with a known-good plug is a valid diagnostic step.

Can I keep driving with U3534?

Do not continue driving with an active U3534 because the high-voltage contactors may remain open or behave unpredictably, and the vehicle may lose power unexpectedly. Have the vehicle towed to a qualified high-voltage technician rather than attempting to jump-start or drive it.

Tools that help

- Digital multimeter with low-voltage DC capability
- Manufacturer-specific scan tool capable of reading high-voltage module data
- Terminal pick and connector pin removal tools
- Insulated safety gloves rated for high-voltage work
- Wiring diagram for the interlock circuit



Reading U3534

- 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.
- 34** 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' · **U3533** High Voltage System Interlock Circuit K Low · **U3535** High Voltage System Interlock Circuit L

See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u3534/>

