

GENERIC · NETWORK

U0046

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0046

Vehicle Communication Bus C

U0046 is a generic network communication code indicating that one or more control modules cannot reliably exchange data on Vehicle Communication Bus C, which is a dedicated CAN (Controller Area Network) bus used for high-speed inter-module messaging. The computer that set the code detected a loss of expected messages, excessive bus errors, or a bus-off condition on that specific network segment, not a failure of any single sensor or actuator.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Network	Generic (all makes)	Medium	Professional	Network wiring and bus faults

Symptoms you may notice

- Illumination of the malfunction indicator lamp (MIL) or a dedicated network fault light, often with no other noticeable symptoms
- Multiple unrelated warning lights appearing at once, such as ABS, traction control, airbag, and stability control
- Intermittent or complete failure of features that depend on inter-module communication, including power windows, climate control, or instrument cluster displays
- The engine may start and run normally, or it may crank without starting if the affected bus carries powertrain messages
- Erratic gauge behavior, flickering displays, or modules that appear offline during a scan tool session
- No symptoms at all besides the stored code, especially when the fault is intermittent or history-only

Common causes, most likely first

- 1 Damaged, chafed, or corroded wiring on the CAN C bus, particularly at connectors, door jamb pass-throughs, and under-carpet harness runs
- 2 A control module on Bus C that is internally shorted or holding the bus dominant, pulling the entire network down
- 3 Loose or contaminated connector terminals at any module on the bus, causing intermittent open or high-resistance connections
- 4 Failed or missing bus termination resistors, which are often integrated into specific modules rather than being serviceable separately
- 5 Water intrusion or corrosion in a module connector or harness splice pack that feeds the Bus C segment
- 6 Aftermarket accessories improperly tapped into the CAN wiring, introducing noise or incorrect termination
- 7 A module that has lost its power or ground feed, causing it to stop communicating and triggering the code in other modules



How to diagnose and fix it

- 1 Connect a scan tool and record all stored, pending, and history codes across every module, then note which modules are communicating and which are offline on Bus C
- 2 Inspect the Bus C wiring and connectors at each module for chafing, corrosion, pushed terminals, and water intrusion, starting at the modules that are offline
- 3 Measure resistance across the CAN C bus at the diagnostic link connector (DLC) with the battery disconnected; a reading near 60 ohms indicates proper termination, while a very low or open reading points to a wiring or termination fault
- 4 With the bus powered, measure CAN high and CAN low voltages at the DLC and compare them to the manufacturer's specification to confirm whether the bus is shorted, open, or biased incorrectly
- 5 Disconnect modules one at a time on the affected bus segment and recheck communication to isolate a module that is holding the bus down
- 6 Repair or replace the faulty harness section, connector terminal, or module identified in the previous steps, then clear codes and verify that all modules communicate reliably
- 7 Perform a road test with the scan tool recording live network data to confirm the fault does not return under vibration or temperature change

What Most Techs Miss on Bus C Faults

- A module that has simply lost its power or ground feed will stop communicating and set U0046 in other modules, so always verify power and ground at the silent module before condemning the bus wiring or the module itself.
- Bus termination resistors are frequently built into two specific modules rather than being separate serviceable parts, so an open or shorted termination fault may require replacing a module rather than a resistor.
- Aftermarket alarms, remote starters, and phone chargers plugged into the DLC can backfeed voltage onto the CAN C bus and cause communication codes that disappear once the accessory is removed.
- U0046 is often stored as a history code after a low battery or jump-start event, and it may never return once the battery is charged and codes are cleared, so do not replace modules based on a history code alone.
- A single chafed wire in a door jamb boot or under a seat can intermittently short the bus only when the door is opened or the seat is moved, so wiggle-testing the harness while watching live data is essential.

Can I keep driving with U0046?

If the vehicle starts, runs, and drives normally with only the warning light on, it is generally safe to drive to a repair shop, but avoid long trips and do not tow a trailer until the fault is repaired. If multiple warning lights are on, the engine cranks without starting, or the instrument cluster is dead, stop driving and have the vehicle towed because critical safety and powertrain modules may be offline.



Tools that help

- OBD-II scan tool with full module communication and live network data capability
- Digital multimeter with resistance and voltage measurement functions
- Wiring diagram and connector pinout for the specific vehicle
- Breakout box or back-probe kit for the diagnostic link connector
- Hand tools for connector and trim panel removal

Reading U0046

- U** Network: communication between the vehicle's control modules.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Network wiring and bus faults.
- 46** The exact fault within that area.

Often seen with

U0001 Loss of Bus Communication · **U0002** High Speed CAN Communication Bus (Performance) · **U0047** Vehicle Communication Bus C (Performance) · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster

See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0046/>

