

GENERIC · NETWORK

U0054

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0054

Vehicle Communication Bus C (shorted to Bus C)

U0054 is a generic network communication code indicating that the vehicle's Controller Area Network (CAN) bus C data line is shorted to itself, meaning the bus's two signal wires are electrically bridged together. The computer detected this by monitoring the differential voltage on bus C and seeing it collapse to near zero, which prevents any module on that bus from transmitting or receiving valid messages.

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

Symptoms you may notice

- Multiple warning lights illuminated simultaneously, including the check engine light, ABS, airbag, and traction control lamps
- The engine may start but run poorly or stall, or it may not start at all if the short affects the powertrain bus
- Inoperative accessories such as the radio, climate control, power windows, or instrument cluster
- A no-start condition where the ignition turns on but the starter does not engage
- Erratic gauge readings or a completely dead instrument panel
- Often no symptoms besides the warning light if the short is intermittent or confined to a non-critical bus segment

Common causes, most likely first

- Chafed or pinched CAN bus C wiring harness rubbing against a metal bracket or body panel
- Water intrusion into a connector causing corrosion that bridges the two bus wires
- A failed module on bus C internally shorting the CAN high and CAN low lines together
- Aftermarket electronics installation that accidentally crimped or spliced into the bus wiring
- A damaged or improperly repaired section of the harness from a previous collision or rodent damage
- A faulty transmission or powertrain control module connector that has backed out and touched the adjacent pin



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes from every module to identify which bus segments are affected
- 2 Measure resistance between CAN high and CAN low at the diagnostic link connector (DLC); a reading near zero ohms confirms a short
- 3 Disconnect modules one at a time from bus C and recheck resistance to isolate whether a module or the wiring is causing the short
- 4 Inspect the harness along its routing for chafing, pinches, corrosion, or previous repair damage, especially near moving components and connectors
- 5 Perform a voltage drop test on the bus wires with the ignition on to check for a short to ground or power if resistance testing is inconclusive
- 6 Repair or replace the damaged harness section or the faulty module, then clear codes and verify communication on bus C with a scan tool
- 7 Road test the vehicle and recheck for pending codes to confirm the repair is complete and no intermittent fault remains

Why a module can fake a wiring short

- A module with an internal fault can pull the entire bus C voltage down and mimic a wiring short, so disconnecting modules one by one is often faster than tracing the harness first.
- Aftermarket alarms, remote starters, and dash cameras are frequently tapped into bus wiring and can create a short that only appears when the accessory is powered up.
- The code can set intermittently from a harness that rubs only during certain driving conditions, such as going over bumps or making sharp turns, so a wiggle test along the harness is essential.
- Some vehicles use a terminating resistor inside a module; a failed resistor can distort bus voltage and set communication codes that look like a short but are actually a termination fault.
- A shorted bus C can prevent the scan tool from communicating with any module on that bus, so you may need to unplug modules to regain diagnostic access before you can read all codes.

Can I keep driving with U0054?

Do not drive the vehicle with an active U0054 because the short can disable critical modules including the engine, transmission, ABS, and airbags, leading to a stall or loss of safety systems. If the code is stored but the vehicle runs and drives normally, drive only to a repair shop at low speed and avoid highways.



Tools that help

- OBD-II scan tool with CAN bus communication capability
- Digital multimeter with resistance and voltage measurement
- Wiring diagram for the specific vehicle's bus C routing
- Back probe pins or breakout box for the diagnostic link connector
- Trim removal tools for accessing harness routing behind panels

Reading U0054

- 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.
- 54** The exact fault within that area.

Often seen with

U0001 Loss of Bus Communication · **U0055** Vehicle Communication Bus D · **U0056** Vehicle Communication Bus D (Performance) · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster

See it working

Watch the animated explainer [How Crank and Cam Position Sensors Work](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0054/>

