

GENERIC · NETWORK

U0024

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0024

Low Speed CAN Communication Bus (-) Open

U0024 indicates that the controller area network (CAN) bus has detected an open circuit on the low-speed CAN negative line, which is the return path for differential data communication between modules. The fault is set when a module monitoring the bus sees an expected voltage or signal missing on the CAN low wire, disrupting normal data exchange across the network.

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

Symptoms you may notice

- Multiple warning lights illuminated on the dashboard, often including the check engine light, ABS, and airbag warnings.
- Intermittent or complete failure of communication with scan tools for one or more control modules.
- Erratic operation of electrical accessories such as windows, locks, or climate control due to lost network messages.
- The vehicle may enter limp mode or refuse to start if critical modules cannot communicate.
- Often no symptoms besides the warning light if the open is on a non-critical segment of the bus.

Common causes, most likely first

- A broken or chafed wire in the CAN low circuit, often at a flex point near a door hinge or under the dash.
- Corroded or loose pins in a CAN bus connector, particularly at a module or splice pack.
- A failed control module that internally shorts or opens the CAN low line.
- Damage from rodent chewing or previous repair work that pinched the harness.
- Water intrusion into a connector or module causing corrosion on the CAN low terminal.
- A missing or improperly installed terminating resistor in the CAN bus network.



How to diagnose and fix it

- 1 Connect a scan tool and record all modules that fail to communicate, then check for other CAN-related codes to narrow the fault to a specific segment.
- 2 Inspect the CAN low wire at each module connector for corrosion, pushed-out pins, or loose terminals, starting with the modules that are not communicating.
- 3 Measure resistance between CAN low and CAN high at the data link connector (DLC) with the battery disconnected; a reading far from 60 ohms indicates an open or missing termination.
- 4 Perform a voltage drop test on the CAN low circuit while wiggling the harness at suspected flex points to find intermittent opens.
- 5 Disconnect modules one at a time to see if the bus resistance returns to normal, isolating a faulty module that is loading down the line.
- 6 Repair or replace the damaged section of CAN low wiring, using proper crimp and seal techniques, then clear codes and verify communication with all modules.

What a CAN low open really means

- A single open on the CAN low wire can take down the entire bus because the differential signal relies on both lines being intact, so many modules may appear dead even though only one wire is broken.
- Technicians often replace a module that fails to communicate when the real problem is a corroded connector pin on the CAN low circuit, so always check connector condition before condemning a module.
- The code can be set by a module that is not on the main bus but on a sub-network, so consult the wiring diagram for the specific vehicle to locate all CAN low segments.
- Intermittent U0024 codes are frequently caused by a harness rubbing against a metal edge near the steering column or pedal assembly, which only opens the circuit when the vehicle is moving.
- A missing or damaged terminating resistor can mimic an open on the CAN low line, so measure resistance at the DLC before cutting into the harness.

Can I keep driving with U0024?

If the vehicle starts and runs normally, you can drive it to a repair shop, but avoid long trips and be prepared for warning lights or limp mode. If multiple modules are offline or the engine stalls, stop driving and have the vehicle towed to prevent unsafe loss of communication.

Tools that help

- OBD-II scan tool with live data and module communication capability
- Digital multimeter with resistance and voltage measurement
- Wiring diagram for the specific vehicle's CAN bus topology
- Back probe pins and jumper wires for testing connectors
- Harness repair kit with crimp connectors and heat shrink



Reading U0024

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

Often seen with

U0020 Low Speed CAN Communication Bus (Performance) · **U0021** Low Speed CAN Communication Bus (+) Open · **U0022** Low Speed CAN Communication Bus (+) Low · **U0023** Low Speed CAN Communication Bus (+) High · **U0025** Low Speed CAN Communication Bus (-) Low

See it working

Watch the animated explainer [Inline-Four Engine X-Ray: Firing Order 1-3-4-2](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0024/>

