

GENERIC · NETWORK

U0045

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0045

Vehicle Communication Bus B (shorted to Bus B)

U0045 is a generic network communication code indicating that the vehicle's Controller Area Network (CAN) bus, designated as Bus B, has a short circuit between its two data lines. The computer detected an abnormal low-resistance path between CAN High and CAN Low, which prevents normal differential signaling and disrupts communication among modules.

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 on the dashboard, often including the check engine light, ABS, and airbag lights.
- Intermittent or complete failure of various electronic systems such as power windows, radio, or climate control.
- The engine may start and run, but other modules may be unresponsive or show communication errors when scanned.
- Often no symptoms besides the warning light if the short is intermittent or affects only non-critical modules.
- The vehicle may enter a limp mode or fail to start if the short affects the powertrain control module's communication.
- Scan tool may be unable to communicate with some or all modules on Bus B.

Common causes, most likely first

- Damaged or chafed wiring harness where CAN Bus B wires rub against metal components or pass through tight spaces.
- Water intrusion into a connector or module, causing corrosion and a short between the CAN High and CAN Low pins.
- Internal short inside a module connected to Bus B, such as the body control module or a door module.
- Aftermarket accessories improperly tapped into the CAN Bus B wiring, creating a short.
- Loose or damaged connector pins that bridge the two CAN lines.
- Rodent damage to the wiring insulation, exposing and shorting the CAN conductors.



How to diagnose and fix it

- 1 Use a scan tool to read all codes and identify which modules are offline or reporting communication errors on Bus B.
- 2 Visually inspect the CAN Bus B wiring harness for obvious damage, chafing, or corrosion, especially near connectors and pass-throughs.
- 3 Disconnect modules one by one from Bus B and check if the short disappears; this isolates a faulty module.
- 4 Measure resistance between CAN High and CAN Low at the diagnostic link connector (DLC); a reading significantly below 60 ohms indicates a short.
- 5 Perform a voltage check on CAN High and CAN Low with the ignition on to confirm proper bias voltages and detect a short to ground or power.
- 6 Repair or replace the damaged section of wiring harness or the faulty module causing the short.
- 7 Clear codes and verify communication is restored on Bus B with a scan tool.

Before you replace a module for U0045

- A common misdiagnosis is replacing the body control module when the real cause is a chafed wire behind the dashboard or in the door jamb.
- Aftermarket alarms or remote starters are frequent culprits because their installers sometimes splice into CAN Bus B wires, creating an intermittent short.
- The code can be set by a short that only occurs when the vehicle is in motion, so a wiggle test of the harness while monitoring live data is often necessary.
- Water leaks into the trunk or footwells can corrode connectors and bridge the CAN lines, especially on vehicles with sunroofs or roof rails.
- U0045 does not always mean the bus is completely dead; a partial short can allow some communication, leading to confusing symptoms that mimic other faults.

Can I keep driving with U0045?

If the vehicle starts and runs, you may drive it cautiously to a repair shop, but avoid long trips and be prepared for unexpected loss of electrical functions. If multiple systems fail or the engine stalls, stop driving and have the vehicle towed to prevent unsafe operation.

Tools that help

- OBD-II scan tool with CAN bus monitoring capability
- Digital multimeter with resistance and voltage measurement
- Wiring diagram for the specific vehicle
- Breakout box for the diagnostic link connector
- Wire repair kit with crimping tools and heat shrink



Reading U0045

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

Often seen with

U0001 Loss of Bus Communication · **U0002** High Speed CAN Communication Bus (Performance) · **U0046** Vehicle Communication Bus C · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0045/>

