

GENERIC · NETWORK

U0009

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

U0009

High Speed CAN Communication Bus (shorted to Bus)

U0009 is a generic network code indicating that the high-speed Controller Area Network (CAN) communication bus has been detected as shorted to the bus itself, meaning the CAN High and CAN Low lines are shorted together. The vehicle's control modules detect this condition when the differential voltage between the two bus lines falls outside the expected range, typically near zero volts, preventing normal communication.

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 traction control.
- The engine may crank but not start, or may start and run poorly if communication between the engine and transmission modules is disrupted.
- Erratic operation of electrical accessories such as the radio, windows, or climate control, depending on which modules are affected.
- A no-start condition where the ignition is on but the engine does not crank because the start request cannot be communicated.
- Often no symptoms besides the warning light if the short is intermittent or only affects non-critical modules.
- The transmission may default to a limp mode or fail to shift properly due to lost communication with the powertrain control module.

Common causes, most likely first

- Physical damage to the CAN bus wiring harness, such as chafing, pinching, or rodent damage, causing the CAN High and CAN Low wires to touch.
- Water intrusion into a connector or module, leading to corrosion and a conductive path between the CAN bus lines.
- A faulty control module internally shorting the CAN bus lines together.
- Improperly installed aftermarket accessories, such as alarms or remote starters, that splice into the CAN bus and create a short.
- A defective CAN bus termination resistor or a shorted transceiver inside a module.
- Loose or damaged pins in a connector that allow the CAN High and CAN Low terminals to contact each other.



How to diagnose and fix it

- 1 Use an OBD-II scan tool to read all stored codes and identify which modules are communicating and which are not, then record the freeze frame data if available.
- 2 Visually inspect the CAN bus wiring harness for obvious damage, especially near areas prone to flexing, heat, or rodent activity, and check for aftermarket wiring splices.
- 3 Disconnect the battery and measure resistance between CAN High and CAN Low at the diagnostic link connector (DLC); a reading near 0 ohms indicates a short, while normal is about 60 ohms.
- 4 Isolate sections of the CAN bus by disconnecting modules one at a time and rechecking resistance to determine if the short is in a module or the wiring.
- 5 If the short persists with all modules disconnected, trace the harness to find where the CAN High and CAN Low wires are shorted together, repairing or replacing the affected section.
- 6 After repairing the short, clear the codes and verify communication with all modules using the scan tool, then perform a road test to ensure the code does not return.

Don't Replace Modules Before Checking These

- A common misdiagnosis is to replace the engine control module or transmission control module when the real cause is a chafed wiring harness behind the dashboard or under the hood.
- Aftermarket electronic accessories, especially those tapped into the CAN bus at the OBD-II connector, frequently cause this code by introducing a short or improper termination.
- Water leaks into the passenger compartment or trunk can corrode connectors and create a short between CAN High and CAN Low that only appears in damp conditions.
- The code can be set intermittently by a loose connector pin that momentarily bridges the CAN bus lines, so always wiggle-test connectors while monitoring live data.
- A shorted CAN bus can cause multiple modules to set communication codes, but U0009 specifically points to a short between the bus lines rather than an open circuit or a single module failure.

Can I keep driving with U0009?

Do not drive the vehicle with an active U0009 code, as the shorted CAN bus can disable critical systems like power steering, braking, and shifting, leading to unsafe operation. If the code is intermittent and the vehicle drives normally, limit driving to a short distance to a repair shop and avoid highways.

Tools that help

- OBD-II scan tool with live data and module communication capabilities
- Digital multimeter with resistance and voltage measurement
- Wiring diagram for the specific vehicle
- CAN bus breakout box or test leads
- Trim removal tools for accessing harnesses



Reading U0009

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

Often seen with

U0001 Loss of Bus Communication · **U0002** High Speed CAN Communication Bus (Performance) · **U0100** Lost Communication With ECM/PCM A · **U0101** Lost Communication with TCM · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control

See it working

Watch the animated explainer [How a Rotary Engine Works: Wankel in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/u0009/>

