U0149: LOST COMMUNICATION WITH GATEWAY "D"

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	**$75-$200**
Can I Still Drive?	:	**Yes**

What Does The U0149 Code Mean?

This is a generic communication system diagnostic trouble code that applies to most vehicle makes and models.This code means that the gateway “D” module and other control modules on the vehicle are not communicating with each other.

The circuit most often used to communicate with is known as Controller Area Network bus communications, or simply put, CAN bus. Without this CAN bus, control modules cannot exchange information, and your scan tool may not be able to get information from the vehicle, depending on which circuit is affected.

The Gateway module is responsible for passing information from one CAN bus network to the other modules on the other CAN bus network. Your scan tool may often connect to this Gateway module to gain access to both CAN bus networks at one time to speed up access time.

Troubleshooting steps may vary depending upon manufacturer, type of communications system, number of wires and wire colors in the communication system.

What Are The Symptoms Of The U0149 Code?

Symptoms of a U0149 engine code may include:

- Malfunction Indicator Lamp (MIL) on
- Vehicle may or may not start and run

- ABS indicator light on
- TRAC indicator light on (depending on manufacturer)
- ESP/ESC indicator light on (depending on manufacturer)

What Are The Potential Causes Of The U0149 Code?

Typically the causes for this code to set are:

- Open in the CAN bus + circuit
- Open in the CAN bus – circuit
- Short to power in either CAN bus circuit
- Short to ground in either CAN bus circuit
- Open power or ground to GATEWAY “D” module – most common
- Rarely – faulty control module

How Can You Fix The U0149 Code?

Check for technical service bulletins (TSB)

A good starting point is always to check for technical service bulletins (TSB) for your particular vehicle. Your issue may be a known issue with a known fix put out by the manufacturer and can save you time and money during diagnosis.

If your scan tool can access fault codes and the only one you retrieve from other modules is the U0149, try to access the GATEWAY module. If you can access codes from the GATEWAY module, then the U0149 code is either intermittent or a memory code. If unable to access codes for the GATEWAY module, then the U0149 code that the other modules are setting is active, and the problem is there now.

The most common failure is loss of power or ground to the module.

Check all fuses that power up the GATEWAY module

Check all fuses that power up the GATEWAY module on this vehicle. Check all grounds for the GATEWAY module. Locate where the ground attaching points are on the vehicle and make sure that these connections are clean and tight. If you have to, take them off, get a small wire bristle brush and baking soda/water solution and clean each one, both the connector and where it connects.

If any repairs were made, clear the diagnostic trouble codes from memory, and see if the U0149 code returns or if you are able to communicate with the GATEWAY module. If the code does not return or communication is re-established, then the fuses/connections were most likely your problem.

Locate the CAN C bus communication connections

If the code returns, locate the CAN C bus communication connections on your particular vehicle, most importantly the GATEWAY module connector. Disconnect the negative battery cable before unplugging the connector at the GATEWAY control module. Once located, visually inspect the connectors and wiring. Look for scraping, rubbing, bare wires, burn spots or melted plastic. Pull the connectors apart and carefully inspect the terminals (the metal parts) inside the connectors. See if they look burned or have a green tint indicating corrosion. Use electrical contact cleaner and a plastic bristle brush if cleaning of the terminals is needed. Let dry and apply electrical grease where the terminals contact.

Before connecting the connectors back to the GATEWAY module, make these few voltage checks. You will need to have access to a digital volt-ohmmeter (DVOM). Verify that you have power and ground at the GATEWAY module. Gain access to a wiring diagram and determine where the main powers and grounds come into the GATEWAY module. Reconnect the battery before continuing, with the GATEWAY module still disconnected. Connect the red lead of your voltmeter to each B+ (battery voltage) supply coming into the GATEWAY module connector and the black lead of your voltmeter to a good ground (if not sure, battery negative always works). You see a reading of battery voltage. Verify that you have good grounds as well. Hook the red lead of your voltmeter to battery positive (B+) and the black lead to each ground circuit. Once again you should see battery voltage at each connection. If not, repair the power or ground circuit problem.

Check the two communication circuits

Next, check the two communication circuits. Locate the CAN C+ (or HSCAN + circuit) and CAN C- (or HSCAN – circuit). With the black lead of your voltmeter connected to a good ground, connect the red lead to CAN C+. With the Key On, Engine Off, you should see about 2.6 volts and fluctuating slightly. Next, connect the red voltmeter lead to the CAN C- circuit. You should see approximately 2.4 volts and fluctuating slightly. Other manufacturers show CAN C- at approximately .5 volts and fluctuating Key On Engine Off. Check the specifications for your manufacturer.

Next, check the other two communication circuits. Locate the CAN B+ (or MSCAN + circuit) and CAN B- (or MSCAN – circuit). With the black lead of your voltmeter connected to a good ground, connect the red lead to CAN B+. With the Key On, Engine Off, you should see about 0.5 volts and fluctuating slightly. Next, connect the red voltmeter lead to the CAN B- circuit. You should see approximately 4.4 volts and fluctuating slightly.

If all tests have passed and communication is still not possible, or you were unable to clear the U0149 fault code, the only thing left that can be done is to seek assistance from a trained automotive diagnostician, as this would indicate a failed GATEWAY module. Most of these GATEWAY modules must be programmed, or calibrated to the vehicle in order to be installed correctly.

Reference Sources

U0149 Lost Communication With Gateway D, OBD-Codes.