U0136: LOST COMMUNICATION WITH REAR DIFFERENTIAL CONTROL MODULE

OVERVIEW

Severity	:	Medium
DIY Difficulty Level	:	Advanced
Repair Cost	:	**$75-$650**
Can I Still Drive?	:	**Yes** (Short-term only)

What Does The U0136 Code Mean?

This code means that the Rear Differential Control Module (DCM) and other control modules on the vehicle are not talking to 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 rear DCM receives input from a variety of sensors, some hardwired directly to it, some are sent over the bus communications system. These inputs allow the module to control the drive line application, whether it is a two-wheel drive or four-wheel drive application. It also has the ability to lock the axles to the differential, change the gear ratio applied to the drive axles and the amount of torque applied to the drive line.

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 U0136 Code?

Symptoms of a U0136 engine code may include:

- Malfunction Indicator Light On
- Traction Control Indicator On or Flashing – depending upon system

What Are The Potential Causes Of The U0136 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 DCM module – most common
- Rarely – faulty control module

How Can You Fix The U0136 Code?

Step 1

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 U0136, try to access the rear differential control module. If you can access codes from the DCM module, then the U0136 code is either intermittent or a memory code. If unable to access codes for the DCM module, then the U0136 code that the other modules are setting is active, and the problem is there now.

Step 2

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

Check all fuses that power up the DCM module on this vehicle. Check all grounds for the DCM. 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 U0136 code returns or if you are able to communicate with the DCM module. If the code does not return or communication is re-established, then the fuses/connections were most likely your problem.

Step 3

If the code returns, locate the CAN C bus communication connections on your particular vehicle,

most importantly the DCM module connector. Disconnect the negative battery cable before unplugging the connector at the DCM 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 DCM 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 DCM module. Gain access to a wiring diagram and determine where the main powers and grounds come into the DCM module. Reconnect the battery before continuing, with the DCM module still disconnected.

Connect the red lead of your voltmeter to each B+ (battery voltage) supply coming into the DCM 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.

Step 4

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.

If all tests have passed and communication is still not possible, or you were unable to clear the U0136 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 DCM module. Most of these DCM modules must be programmed, or calibrated to the vehicle in order to be installed correctly.

Severity Description

Severity in this case depends upon the system. Because this drivetrain system provides safety during hard acceleration/cornering maneuvers, safety is a concern when diagnosing these systems. Also, safety is a concern during servicing of these systems as well. ALWAYS consult service information prior to disassembly/diagnosing these systems.

Reference Sources

U0136 Lost Communication with Rear Differential Control Module, OBD-Codes.