U0100: LOST COMMUNICATION WITH ECM/PCM "A"

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Advanced
Repair Cost	:	**$75-$1500**
Can I Still Drive?	:	**Yes**

What Does The U0100 Code Mean?

The generic OBD trouble code U0100 is a serious situation where the signals between the electronic control module (ECM) or the powertrain control module (PCM) and a particular module have been lost. There could also be a problem with the CAN bus wiring disrupting communications.

The vehicle will simply shut off at any time and will not restart as long as communications are interrupted. Most everything on present day vehicles is computer controlled. The engine and drivetrain are completely controlled by a computer network, its modules and actuators.

The U0100 code is generic inasmuch as it has the same frame of reference on all vehicles. Somewhere within the CAN bus network (Controller Area Network) an electrical connector, wiring harness, module has failed, or the computer has crashed.

The CAN bus allows microcontrollers and modules, as well as other devices communicate independently of a host computer. The CAN bus was designed for the automobile specifically.

What Are The Symptoms Of The U0100 Code?

Symptoms of a U0100 DTC code may include.

- Vehicle stalls and will not crank or restart
- OBD trouble code U0100 will be set and the check engine light illuminated
- Vehicle may start after sitting idle for a period of time, however, it would be risky to operate

because it could fail again at a most inopportune moment

What Are The Potential Causes Of The U0100 Code?

This is not a common problem. It's been my experience that the most likely failure is the ECM, PCM or transmission control module. There are at least two CAN bus locations in a vehicle. They could be under the carpet, behind the kick panels, under the driver's seat, under the dash or between the A/C housing and center console. They handle communications for all the modules.

A communications failure between anything in the network will cause this code. If additional codes are present to isolate the problem, diagnosis is simplified.

The installation of performance enhancing computer chips or devices may not be compatible with the ECM or CAN bus wiring causing the lost communications code.

A bent or pushed out pin terminal in one of the connectors or a loose ground to the computer will cause such a code. Jumping a dead battery and inadvertently reversing the polarity momentarily will destroy the computer.

How Can You Fix The U0100 Code?

Check all the Technical Service Bulletins

Look online for all the Technical Service Bulletins on your vehicle. Check the bulletins for any reference to U0100 and the suggested repair procedure. While online, check to see if any recalls were posted for this code and check your warranty period.

Diagnosing and repairing this type of problem is difficult at best using the proper diagnostic equipment. If the problem turns out to be a failed ECM or PCM, very likely it will need programming before the vehicle will start.

Consult the service manual for a comprehensive description of the additional code relating to the offending module and its location. Look at the wiring diagram and locate the CAN bus for this module and its location.

There are at least two CAN bus locations. Depending on the manufacturer, they could be located anywhere inside the car-under the carpet near the sill plate, under the seat, behind the kick panel, in front of the center console (requires console removal) or behind the passenger air bag. Access the CAN bus.

The location of the module is dependent on what it operates. Air bag modules will be inside the door panel or under the carpet toward the center of the vehicle. Body ride control modules are usually under the seat, in the console or trunk. There are 18 or more modules in all late model vehicles. Each CAN bus handles communication between the ECM and at least 9 modules

Consult the service manual and locate the pins to the module in question. Disconnect the connector and test each wire for a short to ground. If a short is present, rather than replacing the entire harness, cut the shorted wire out of the circuit about one inch from either connector and run a wire of equivalent size as an overlay.

Check the appropriate wires for continuity

Disconnect the module and check the appropriate wires for continuity. If there are no opens, replace the module.

If there were no additional codes the ECM is in question. Install a memory saver before disconnecting anything to retain the ECMs programming. Treat this diagnosis in the same manner. If the CAN bus is not faulty, the ECM will need to be replaced. In most cases the vehicle will need to be programmed for the key to be accepted and a program installed in the computer in order for it to run.

If the need arises, tow the vehicle to the dealer. The least expensive way to correct this type of problem is to locate an automotive shop with an older experienced “Master ASE automotive technician” with the appropriate diagnostic equipment.

An experienced Master Tech will usually have the ability to quickly isolate and repair the problem in less time for a more reasonable price. The reasoning is based on the fact that the dealer as well as independents charge by the hour.

Reference Sources

U0100 Lost Communication With ECM/PCM "A", OBD-Codes.