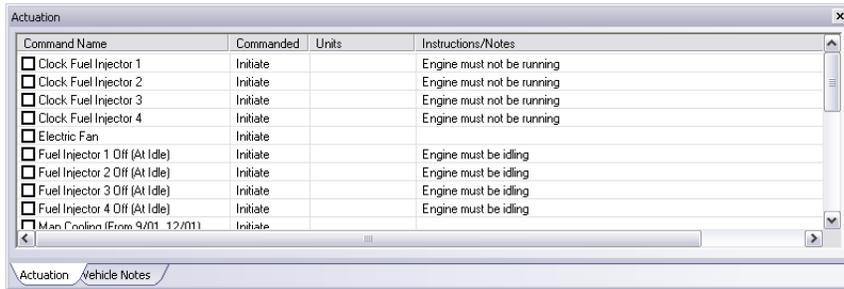


Enhanced Land Rover User Guide

READ ME FIRST!



Test OnBoard Systems

The Test OnBoard Systems tab is available to run those tests that can only be operated in isolation and require the complete control of the vehicle and the software.

NOTE: THE O2 SENSOR AND ONBOARD TEST RESULTS TAB ONLY WORK WHEN YOU ARE CONNECTED WITH THE ENHANCED POWERTRAIN ON FORD-CAN-BASED LAND ROVERS.

Common Problems

1. I can only connect to the engine and transmission with 2002 - 2005.5 vehicles.

Please verify that you are using the 16pin to 16pin BMW Body and Chassis adaptor cable. Without it, all the Land Rover systems will not be visible to our enhanced Land Rover option.

2. I select a system, but I keep getting the error that the system is not present or operating.

Before a system is connected to, a network test is initiated to check if the controller is equipped and/or operating. If the warning appears please verify that controller is present. If you are sure it is, then try cycling the key and resetting controller. For example, in the case of Air Suspension it's possible that the controller has gone to sleep and the ignition key needs to be cycled to wake the controller.

3. I click the Clear button, but several lights are still present.

Please try cycling the ignition key. It will allow the final reset step to take.

Check Your Package Contents

Your AutoEnginuity Land Rover package should contain:

- 1 x 1ft 16pin - 16pin BMW Body and Chassis adaptor cable

NOTE: If *any* of the above item(s) are missing, please contact your reseller.

Before Getting Started

Enhanced Land Rover will allow you to access systems not available with generic OBD-II. The enhanced Land Rover option is an add-on to the AutoEnginuity ScanTool. To offer this support, the enhanced Land Rover option utilizes a proprietary adaptor cable. Whether you need this adaptor cable depends on the vehicle's production date. Check to make sure that your ScanTool is already properly installed and that the enhanced option(s) are activated. Please see your ScanTool User Guide for instructions if necessary.

Connecting to the Vehicle

WARNING: DO NOT USE A POWER INVERTER WITHOUT AN "ISOLATED GROUND" WITH ANY USB PRODUCT CONNECTED TO YOUR VEHICLE. A GROUND LOOP MAY OCCUR.

1. Start the ScanTool software.
2. Connect the OBD-II connector to your computing device.
3. If you are going to be scanning BMW-based Land Rovers 2002.5 - 2004 or 2005.5 body and chassis controllers, please connect the BMW adaptor to the OBD-II connector and other end to the vehicle's DLC. (See your *ScanTool User Guide* if you need help finding the DLC location.) For all 2006 and later models the adaptor cable is not necessary.

4. The ScanTool will now connect to the vehicle. If you do not see the connection screen, press F2 or select *Vehicle | Connect*.
5. Once connected to the vehicle, the ScanTool will require you to select the vehicle model information. Selecting this information correctly is very important to obtaining reliable data. You may use the GetVIN option on model years 2004+.
6. Select your system at the bottom of the Vehicle Selection screen. By default the system selected is Enhanced Powertrain. If the system you select is not present or operating, the ScanTool software will display an alert and require you to select another system before continuing.
7. Click *OK* once the vehicle model information and the system are selected.
8. The connection phase will finalize by retrieving the trouble codes from all of the vehicle systems present. This can take up to 60 seconds.
9. Congratulations, you are now connected to your Land Rover!

Operation Instructions

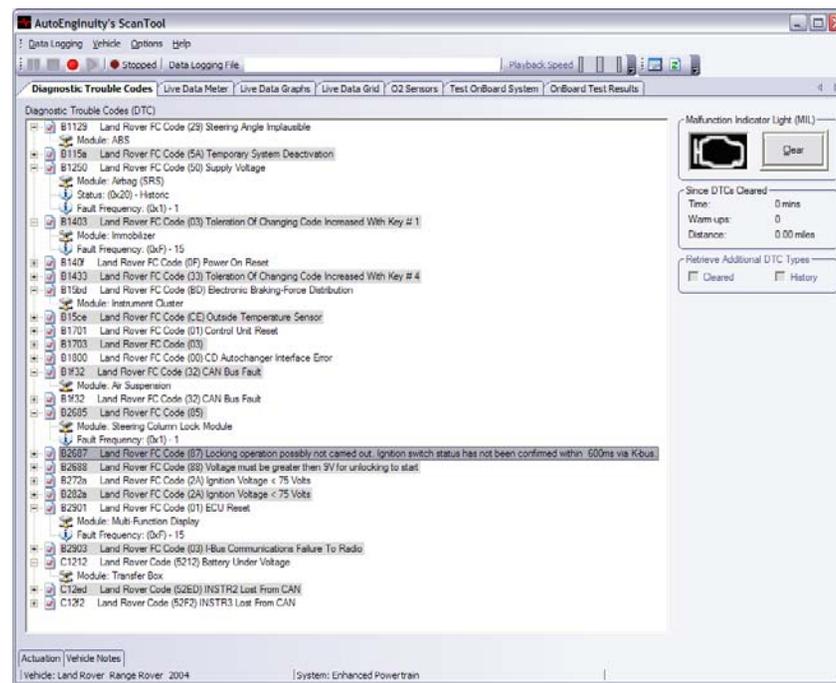
Trouble Codes

The ScanTool will default to showing you any trouble codes that may be present on the vehicle. The software will decode the engine, transmission, ABS, airbag, and central body controllers for you. Please refer to Land Rover's service site or another reference site for service information related to any reported trouble codes.

For BMW-based Land Rover models, the trouble code number convention has been slightly modified. If you look at the example below you will see the B1129 trouble code. The 'B' refers to the type of code. 'B' is for Body as you would expect. The first two alpha numerics are used for the system ID. In this example 11 is the Steering Angle Sensor controller (LEW). The next two alpha numerics are the actual Land Rover FC code. If the software supports the decoding of the Land Rover FC, it will display the description on the top-most line of the trouble code entry. Like the OBD-II trouble codes, you can get more information by selecting the (+) plus sign to the left of the trouble code entry. This will display more detailed information such as the fault frequency or any Freeze Frame information.

For Ford-CAN-based models (2005.5+), fault frequency will not be available but SubType will instead. SubType information will report why the code was set by the controller.

In the case of mixed Ford-CAN-based and BMW-based Land Rover models, trouble codes will only be retrieved from the type of controller that is selected. So in the case of the CAN ECM, only other CAN-based systems will have trouble codes retrieved from.



Live Data

Watching live data from your vehicle is very important to servicing your vehicle so we offer three ways to view it. The live data Meters, Grid, and Graph tabs operate the same as the basic kit. One thing to note is that BMW-based Land Rover models sends multiple sensor responses in a single transmission, so you will see data update in "chunks".

Actuation (BMW-based Land Rovers Only)

To reset adaptations or actuate a solenoid, use the Actuation window. This dockable window is normally available at the bottom of the ScanTool screen as a tab. This window's controls will only be enabled when you are on any of the live data tabs (Meter, Grid, or Graph). Land Rover actuations typically are only toggle states; meaning once you select them, they will actuate and the check box will deselect. Most actuations require the vehicle to be in a certain state to operate. You may see instructions for an actuation on the far right.

WARNING: DO NOT ACTUATE ANY COMPONENT OR RUN ANY TEST WITHOUT FOLLOWING LAND ROVER'S DOCUMENTED PROCEDURES. AUTOENGINUITY IS NOT LIABLE FOR THE IMPROPER ACTUATION OF COMPONENTS OR TESTS.