Trademarks

Autel®, MaxiSys®, MaxiDAS®, MaxiScan®, MaxiTPMS®, MaxiRecorder®, and MaxiCheck® are trademarks of Autel Intelligent Technology Corp., Ltd., registered in China, the United States and other countries. All other marks are trademarks or registered trademarks of their respective holders.

Copyright Information

Disclaimer of Warranties and Limitation of Liabilities

All information, specifications and illustrations in this manual are based on the latest information available at the time of printing.

Autel reserves the right to make changes at any time without notice. While information of this manual has been carefully checked for accuracy, no guarantee is given for the completeness and correctness of the contents, including but not limited to the product specifications, functions, and illustrations.

Autel will not be liable for any direct, special, incidental, indirect damages or any economic consequential damages. (including lost profits)

IMPORTANT

Before operating or maintaining this unit, please read this manual carefully, paying extra attention to the safety warnings and precautions.

For Services and Support:

pro.autel.com
www.autel.com

1-855-288-3587/1-855-AUTELUS (North America)
0086-755-86147779 (China)

support@autel.com

For details, please refer to the *Service Procedures* in this manual.

Safety Information

For your own safety and the safety of others, and to prevent damage to the device and vehicles upon which it is used, it is important that the safety instructions presented throughout this manual be read and understood by all persons operating or coming into contact with the device.

There are various procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the person doing the work. Because of the vast number of test applications and variations in the products that can be tested with this equipment, we cannot possibly anticipate or provide advice or safety messages to cover every circumstance. It is the automotive technician's responsibility to be knowledgeable of the system being tested. It is crucial to use proper service methods and test procedures. It is essential to perform tests in an appropriate and acceptable manner that does not endanger your safety, the safety of others in the work area, the device being used, or the vehicle being tested.

Before using the device, always refer to and follow the safety messages and applicable test procedures provided by the manufacturer of the vehicle or equipment being tested. Use the device only as described in this manual. Read, understand, and follow all safety messages and instructions in this manual.

Safety Messages

Safety messages are provided to help prevent personal injury and equipment damage. All safety messages are introduced by a signal word indicating the hazard level.

⚠ DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury to the operator or to bystanders.

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

Safety Instructions

The safety messages herein cover situations Autel is aware of. Autel cannot know, evaluate or advise you in regards of all possible hazards. You must be certain that any condition or service procedure encountered does not jeopardize your personal safety.

⚠ DANGER

When an engine is operating, keep the service area WELL VENTILATED or attach a building exhaust removal system to the engine exhaust system. Engines produce

carbon monoxide, an odorless, poisonous gas that causes slower reaction time and can lead to serious personal injury or loss of life.

It is not advised to use headphones at a high volume

Listening at high volumes for long periods of time may result in loss of hearing.

⚠Safety Warnings

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well-ventilated work area, for exhaust gases are poisonous.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while testing.
- Be extra cautious when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Keep a fire extinguisher suitable for gasoline, chemical, and electrical fires nearby.
- Do not connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the test equipment dry, clean, free from oil, water or grease. Use a mild detergent on a clean cloth to clean the outside of the equipment as necessary.
- Do not drive the vehicle and operate the test equipment at the same time. Any distraction may cause an accident.
- Refer to the service manual for the vehicle being serviced and adhere to all diagnostic procedures and precautions. Failure to do so may result in personal injury or damage to the test equipment.
- To avoid damaging the test equipment or generating false data, make sure the vehicle battery is fully charged and the connection to the vehicle DLC is clean and secure.

Do not place the test equipment on the distributor of the vehicle. Strong electro-magnetic interference can damage the equipment.

CONTENTS

1 Using This Manual

This manual contains device usage instructions.

Some illustrations shown in this manual may contain modules and optional equipment that are not included in your system.

1.1 Conventions

The following conventions are used.

1.1.1 Bold Text

Bold text is used to highlight selectable items such as buttons and menu options.

Example:

- Tap **OK**.

1.1.2 Notes and Important Messages

Notes

A **NOTE** provides helpful information such as additional explanations, tips, and comments.

Example:

NOTE

New batteries reach full capacity after approximately 3 to 5 charging and discharging cycles.

Important

IMPORTANT indicates a situation that if not avoided may result in damage to the tablet or vehicle.

Example:

IMPORTANT

Keep the cable away from heat, oil, sharp edges and moving parts. Replace damaged cables immediately.

1.1.3 Hyperlink

Hyperlinks or links that take you to other related articles, procedures, and illustrations are available in electronic documents. Blue italic text indicates a selectable hyperlink and blue underlined text indicates a website link or an email address link.

1.1.4 Illustrations

Illustrations used in this manual are samples, and the actual testing screen may vary for each vehicle being tested. Observe the menu titles and on-screen instructions to make correct option selection.

1.1.5 Procedures

An arrow icon indicates a procedure.

Example:

- **To use the camera:**
  1. Tap the **Camera** button. The camera screen opens.
  2. Focus the image to be captured in the view finder.
  3. Tap the inner white circle. The view finder now shows the captured picture and auto-saves the taken photo.
  4. Tap the thumbnail image on the top right corner of the screen to view the stored image.
  5. Tap the **Back** or **Home** button to exit the camera application.

2 General Introduction

MaxiSys MS909 is a multi-platform diagnostic solution comprised of a powerful 9.7-inch TFT-LCD touchscreen Android-based tablet, a VCI communication and diagnostic unit, as well as cloud-based repair instructions and expert advice. As an intelligent diagnostic and information system, MaxiSys MS909 not only displays the relevant repairs gathered from experienced industry experts, but provides step-by-step guidance to ensure the repair is done correctly and efficiently.

There are two main components to the MaxiSys system:

- Display Tablet – the central processor and monitor for the system.
- VCI - Vehicle Communication Interface.

This manual describes the construction and operation of these devices and how they work together to deliver diagnostic solutions.

2.1 MaxiSys Display Tablet

2.1.1 Functional Description

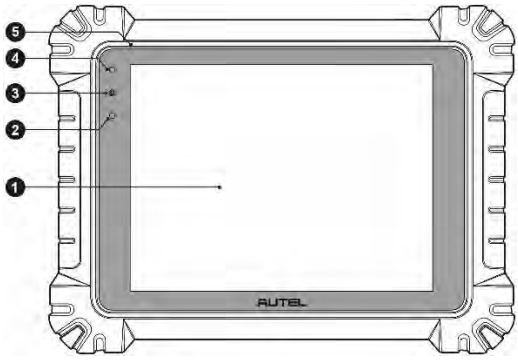


Figure 2-1 ***MaxiSys Tablet Front View***

1. 9.7” TFT-LCD Capacitive Touch Screen
2. Ambient Light Sensor – detects ambient brightness.
3. Power LED - refer to Table 2-1 Power LED Description for details.
4. Front Camera

5. Built-in Microphone

Table 2-1 *Power LED Description*

LED	Color	Description
Power	Green	● Lights green when the display tablet is being charged and the battery level is above 90%. ● Lights green when the Display Tablet is powered on and the battery level is above 15%.
	Yellow	Lights yellow when the Display Tablet is being charged and the battery level is below 90%.
	Red	Lights red when the Display Tablet is powered on and the battery level is below 15%

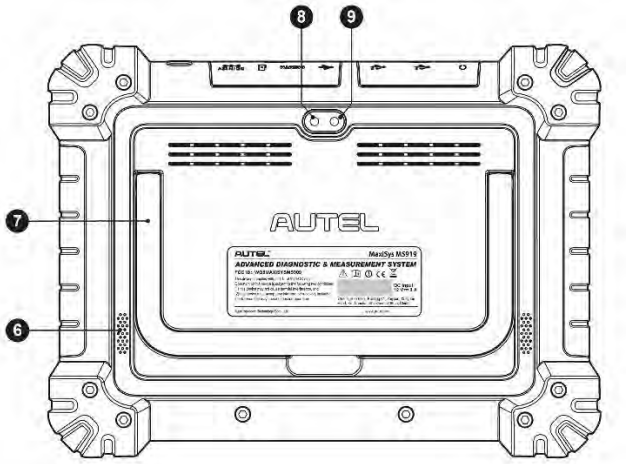


Figure 2-2 *MaxiSys Tablet Back View*

6. Speaker
7. Collapsible Stand – extends from the back to allow hands-free viewing of the tablet
8. Rear Camera
9. Camera Flash

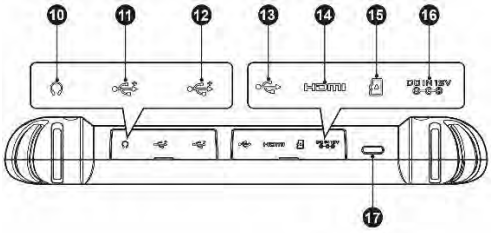


Figure 2-3 *MaxiSys Tablet Top View*

10. Head Phone Jack
11. USB Port
12. USB Port
13. Mini USB Port - cannot be used with the USB Port simultaneously.
14. HDMI (High-Definition Multimedia Interface) Port
15. Micro SD Card Slot
16. DC Power Supply Input Port
17. Lock/Power Button – long press to turn on and off the Display Tablet, or short press to lock the screen.

2.1.2 Power Sources

The tablet can receive power from any of the following sources:

- Internal Battery Pack
- AC/DC Power Supply
- Vehicle Power

IMPORTANT

Do not charge the battery when the temperature is lower than 0°C (0°F) or higher than 45°C (113°F).

Internal Battery Pack

The tablet can be powered with the internal rechargeable battery, which if fully charged can provide sufficient power for about 8 hours of continuous operation.

AC/DC Power Supply – using power adapter

The tablet can be powered from an external outlet using the AC/DC power adapter. The AC/DC power supply also charges the internal battery pack.

Vehicle Power

The tablet can be powered from the cigarette lighter or other DC power port on the test vehicle through a direct cable connection. The vehicle power cable connects to the DC power supply port on the top side of the display unit.

2.1.3 Technical Specifications

Table 2-2 *Tablet Specifications*

Item	Description
Operating System	Android 7.0
Processor	Samsung Exynos8895V 8-core Processor (2.3GHz Quad-core Mongoose + 1.7GHz Quad-core A53)
Memory	4GB RAM & 128GB On-board Memory
Display	9.7-inch TFT-LCD with 1536 x 2048 resolution & capacitive touch screen
Connectivity	● WiFix2 (802.11 a/b/g/n/ac 2x2 MIMO) ● BT v.2.1 + EDR ● GPS ● USB 2.0 (TWO USB HOST Type A, ONE USB mini device) ● SD Card (Support up to 64GB) ● HDMI 2.0
Camera	● Rear: 16 Megapixel, Autofocus with Flashlight ● Front: 5.0 Megapixel
Sensors	Gravity Accelerometer, Ambient Light Sensor (ALS)
Audio **Input / Output**	● Microphone ● Dual Speakers ● 3-Band 3.5 mm stereo/standard headset jack
Power and Battery	● 15000mAH 3.8V lithium-polymer battery ● Charging via 12V AC/DC power supply with the temperature between 0°C and 45°C
Input Voltage	12V/3A Adapter
Operating Temp.	0 to 50°C (32 to 122°F)

Item	Description
Storage Temp.	-20 to 60°C (-4 to 140°F)
Dimensions (WxHxD)	304.4 mm (11.98”) x 227.8 mm (8.97”) x 42.5 mm (1.67”)
Weight	1.66kg (3.66lb.)
Protocols	DoIP, PLC J2497, ISO-15765, SAE-J1939, ISO-14229 UDS, SAE-J2411 Single Wire Can(GMLAN), ISO-11898-2, ISO-11898-3, SAE-J2819 (TP20), TP16, ISO-9141, ISO-14230, SAE-J2610 (Chysler SCI), UART Echo Byte, SAE-J2809 (Honda Diag-H), SAE-J2740 (GM ALDL), SAE-J1567 (CCD BUS), Ford UBP, Nissan DDL UART with Clock, BMW DS2, BMW DS1, SAE J2819 (VAG KW81), KW82, SAE J1708, SAE-J1850 PWM (Ford SCP), SAE-J1850 VPW (GM Class2)

2.2 VCI – J2534 ECU Programming Device

2.2.1 Functional Description

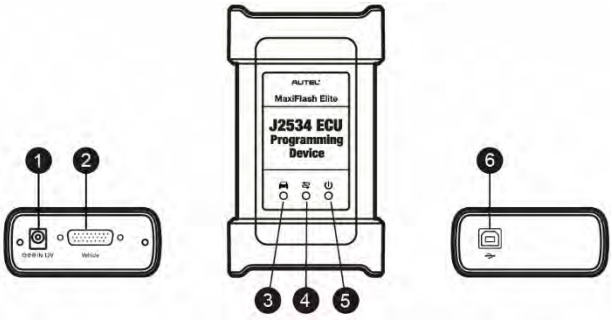


Figure 2-4 *J2534 ECU Programming Device*

1. DC Power Supply Input Port
2. Vehicle Data Connector
3. Vehicle LED
   - Flashes green when the device is communicating with the vehicle system

IMPORTANT

Do not disconnect the programming device while this status light is on! If the flash programming procedure is interrupted while the vehicle ECU is blank or only partially programmed, the module may be unrecoverable.

4. Connection LED
   - Lights solid green when the device is connected to the tablet via the USB cable
   - Lights solid blue when the device is connected to the tablet via Wi-Fi or Bluetooth
5. Power LED
   - Lights solid green when the device is powered on
   - Blinks red when system failure occurs
   - Lights amber automatically at power up when the device is self-testing
6. USB Port

J2534 Programming Capability

The J2534 ECU Programming Device is a SAE J2534-1 & -2 compliant PassThru programming interface device. Using the updated OEM software, it is capable of replacing the existing software/firmware in the Electronic Control Units (ECU), programming new ECUs and fixing software-controlled drivability issues and emission issues.

Communication

The J2534 ECU programming device supports BT and USB communications. It can transmit vehicle data to the tablet with or without a physical connection. The working range of the transmitter through BT communication is 210 feet (about 70 m). A signal lost due to moving out of range automatically restores itself when the tablet unit is brought closer to the VCI unit.

2.2.2 Power Sources

The J2534 programming device can receive power from both of the following sources:

- Vehicle Power
- AC/DC Power Supply

Vehicle Power

The J2534 programming device operates on 12-volt vehicle power, which it receives through the vehicle data connection port. The device powers on whenever it is connected to an OBD II/EOBD compliant data link connector (DLC). For non OBD

II/EOBD compliant vehicles, the device can be powered from a cigarette lighter or other suitable power port on the test vehicle using the auxiliary power cable.

AC/DC Power Supply

The J2534 programming device can be powered from a wall socket using the AC/DC power adapter.

2.2.3 Technical Specifications

Table 2-1 *J2534 ECU Programming Device Specifications*

Item	Description
Communications	Wireless BT V2.1 + EDR USB 2.0
Wireless Frequency	Wireless BT V2.1+EDR, 2.4GHz
Input Voltage Range	12 VDC to 24 VDC
Supply Current	170 mA 12 VDC 100 mA @ 24 VDC
Operating Temp.	0°C to 60°C (ambient)
Storage Temp.	-65°C to 100°C (ambient)
Dimensions (L x W x H)	149 mm (5.87”) x 86 mm (3.38”) x 35 mm (1.28”)
Weight	290 g (0.64 lb.)

NOTE

For additional information, please refer to the accompanied user manual for the J2534 ECU Programming Device.

2.3 Accessories Kit

2.3.1 Main Cable

The VCI device can be powered through the Main Cable when connected to an OBD II/EOBD compliant vehicle. The Main Cable connects the VCI device to the vehicle DLC, through which the VCI device can transmit vehicle data to the tablet.

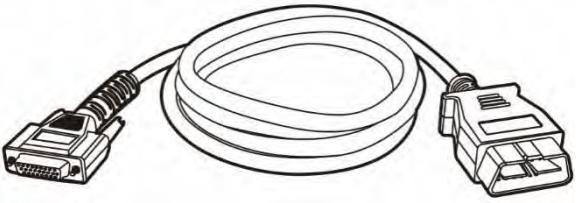


Figure 2-7 ***Main Cable – 1.5m in Length***

2.3.2 OBD I Adapters

The OBD I adapters are for Non-OBD II vehicles. The adapter used depends on the type of vehicle being tested. The most common adapters are shown below (Adapters may be sold separately, please contact your distributor for details).

Benz-14

Chrysler-16

BMW-20

Nissan-14

Mitsubishi/Hyundai-12+16

Fiat-3

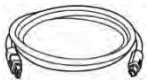
PSA-2

Mazda-17

VW/Audi-2+2

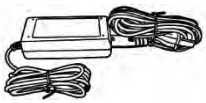
Benz-38

2.3.3 Other Accessories



Standard 2.0 USB Cable

Connects the tablet to the VCI unit.



AC/DC External Power Adapter

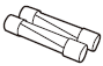
Connects the tablet to the external DC power port for power supply.

Cigarette Lighter

Provides power to the tablet or the VCI device through connection to the vehicle cigarette lighter receptacle, as some non-OBD II vehicles cannot provide power via the DLC connection.

Clipper Cable

Provides power to the tablet or the VCI device through connection to the vehicle battery.



Lighter Fuse x2

A safety device for the cigarette lighter.

3 Getting Started

Make sure the tablet has sufficient power or is connected to the external power supply (see *2.1.2 Power* Sources on page 10).

3.1 Power Up

Press and hold the Lock/Power button on the right side of the tablet to switch the unit on. The system boots up and displays the MaxiSys Main Screen.

Figure 0-1 ***Sample Main Screen Menu***

1. Application Buttons
2. Locator and Navigation Buttons
3. Status Icons

NOTE

The screen is locked by default upon startup. It is recommended to lock the screen when not in use to protect information in the system and conserve the power.

Almost all operations on the tablet are controlled through the touchscreen. The touchscreen navigation is menu driven, which allows you to quickly locate the test procedure, or data that you need, through a series of questions and options. Detailed descriptions of the menu structures are found in the chapters for each application.

3.1.1 Application Buttons

The table below briefly describes each of the applications in the MaxiSys system.

Table 0-1 *Applications*

Name	Button	Description
Diagnostics		Accesses the diagnostic functions. See Diagnostics on page 23.
Service		Accesses special functions menu. See Service on page 77.
Remote Programming		Accesses remote programming request menu. See Remote Programming on page 82.
MaxiFix		Provides an extensive resource of repair techniques and diagnostics information. See MaxiFix on page 91.
Measurement		Point of entry to measuring vehicle system parameters such as voltage, resistance, current, and monitors signal activities.
Data Manager		Accesses saved repair shop, customer and vehicle data including vehicle diagnostic details and test records. See Data Manager on page 106.
Settings		Accesses the system settings menu and general tablet menu. See 错误!未找到引用源。Settings on page 113.
Update		Accesses system software update menu. See Update on page 117.
VCI Manager		Accesses VCI connection menu. See 错误!未找到引用源。VCI Manager on page 119.

Name	Button	Description
ADAS		Accesses ADAS menu. See ADAS on page 123.
Support		Synchronizes Autel's online service database with the MaxiSys tablet. See Support on page 124.
Remote Desktop		Configures your unit to receive remote support using the TeamViewer application. See 错误!未找到引用源。Remote Desktop on page 127.
Quick Link		Provides associated website bookmarks to allow quick access to product update, service, support and other information. See Quick Link on page 128.
MaxiViewer		Provides a quick search for supported functions and/or vehicles. See MaxiViewer on page 129.
MaxiVideo		Configures the unit to operate as a video scope device by connecting to an Imager head cable for close vehicle inspections. See *MaxiVideo* on page 131.
MaxiMall		Purchase software updates directly from the tablet. See MaxiMall on page 136.

3.1.2 Locator and Navigation Buttons

Operations of the Navigation buttons at the bottom of the screen are described in the table below:

Table 0-2 *Locator and Navigation Buttons*

Name	Button	Description
Locator		Indicates the location of the screen. Swipe the screen left or right to view the previous or next screen.

Name	Button	Description
Back		Returns to the previous screen.
Android Home		Returns to Android System's Home screen.
Recent Apps		Displays a list of applications that are currently running. Tap an app icon to launch. Remove an app by swiping it to the right.
Browser		Launches the Chrome Internet browser.
Camera		Tap the icon to open the camera; or press and hold it to capture a screenshot of the tablet. The saved files are auto-stored in the Data Manager application for later review.
Display & Sound		Adjusts the brightness of the screen and the volume of the audio output.
MaxiSys Home		Returns to MaxiSys Main Screen.
VCI		Opens the VCI Manager application. A green check mark at the bottom right corner indicates the VCI device is connected, while a red cross icon will display if connection fails. The battery status icon displays the remaining VCI power.
MaxiSys Shortcut		Returns to the Diagnostics screen.
Service		Returns to the Service screen.

- **To use the camera**

1. Tap the **Camera** button. The camera screen opens.
2. Focus the image to be captured in the view finder.
3. Tap the inner blue circle. The view finder now shows the captured picture and auto-saves the taken photo.
4. Tap the thumbnail image on the top right corner of the screen to view the stored image.
5. Tap the **Back** or **Home** button to exit the camera application.

Refer to Android documentation for additional information.

3.1.3 System Status Icons

Your MaxiSys tablet is fully functional with standard status icons of the Android operating system. Refer to Android documentation for more information.

3.2 Power Down

Before you shut down the tablet, terminate all vehicle communications to avoid possible ECM errors on some vehicles. If such shutdown is attempted, a warning message will display to remind you to exit the Diagnostics application first.

- **To power down the MaxiSys tablet**
  1. Press and hold the Lock/Power button.
  2. Tap **Power off** option.
  3. Tap **OK**.

3.2.1 Reboot System

In case of system crash, long press the Lock/Power button and tap **Restart** to reboot the system.

3.3 Configure Printing

To print from the MaxiSys tablet, you need to install printer software on a Windows-based computer connected to a printer.

- **To install the MaxiSys Printer driver program**

1. Download the **Maxi PC Suite** from *www.autel.com* > *Support & Updates* > *Firmware & Downloads* > *Update Client*, and install to your windows-based computer.
2. Follow the pop-up instructions to install the Maxi PC Suit to your PC.
3. After the Maxi PC Suite installation, the printer driver program, **PC Link**, will be automatically installed on your PC.
4. Click on **Finish** to complete the installation procedure.

3.3.1 Printing

This section describes how to print files from the tablet through a Windows-based PC.

➢ **To print through a Windows-based PC**

1. Before printing, ensure the tablet is connected to the PC, either via Wi-Fi or LAN. See Printing Setting on page 114 for more information.
2. Launch the PC Link application on the PC to open the printer interface.
3. Click **Test Print** to make sure the printer is working successfully.
4. Tap the **Print** button on the toolbar displayed in various applications of the MaxiSys system. A temporary file will be created and sent to the computer for printing.
5. Enable the Auto Print function to automatically print the files received from the tablet.

To print the document later, click on **Open PDF file** and select the document, and double click the **Print** on the MaxiSys Printer interface to start printing.

NOTE

Ensure the computer with the PC Link software installed is connected to a printer.

4 Diagnostics

The Diagnostics application can access the electronic control module of multiple vehicle control systems, such as engine, transmission, ABS, and airbag system (SRS).

4.1 Vehicle Communication and Selection

4.1.1 Establish Vehicle Communication

The Diagnostics operations require connecting the MaxiSys MS909 tablet to the test vehicle through the VCI device using the Main Cable and test adapters (for non-OBD II vehicles). To establish proper vehicle communication with the tablet, you need to perform the following steps:

1. Connect the VCI device to the vehicle DLC for both communication and power supply.
2. Connect the VCI device to the tablet via BT pairing, Wi-Fi or USB connection.
3. When the above steps are completed, check the VCI navigation button at the bottom bar on the screen. If a green BT, Wi-Fi or USB icon displays at the lower right corner, the MaxiSys MS909 Diagnostic Platform is ready to start vehicle diagnosis.

4.1.1.1 Vehicle Connection

The method used to connect the VCI device to a vehicle DLC depends on the vehicle configuration as follows:

- A vehicle equipped with an On-board Diagnostics Two (OBD II) management system supplies both communication and 12-volt power through a standardized J-1962 DLC.
- A vehicle not equipped with an OBD II management system supplies communication through a DLC connection, and in some cases supplies 12-volt power through the cigarette lighter receptacle or a connection to the vehicle battery.

OBD II Vehicle Connection

This type of connection only requires the main cable without any additional adapter.

➢ **To connect to an OBD II vehicle**

1. Connect the main cable's female adapter to the Vehicle Data Connector on the VCI device, and tighten the captive screws.
2. Connect the 16-pin male adapter to the vehicle DLC under the vehicle dash.

NOTE

The vehicle DLC is not always located under the dash; refer to the user manual of the test vehicle for additional connection information.

Non-OBD II Vehicle Connection

This type of connection requires both the main cable and a required OBD I adapter for the specific vehicle being serviced.

There are three possible conditions for Non-OBD II vehicle connection:

- DLC connection supplies both communication and power.
- DLC connection supplies communication and power is to be supplied via the cigarette lighter connection.
- DLC connection supplies communication and power is to be supplied via connection to the vehicle battery.

➢ **To connect to a Non-OBD II Vehicle**

1. Connect the main cable's female adapter to the Vehicle Data Connector on the VCI device, and tighten the captive screws.
2. Locate the required OBD I adapter and connect its 9-pin jack to the main cable's male adapter.
3. Connect the attached OBD I adapter to the vehicle DLC.

NOTE

Some vehicles may have more than one adapter or may have test leads instead of an adapter. Make the proper connection to the vehicle DLC as required.

➢ **To connect the cigarette lighter**

1. Plug the DC power connector of the cigarette lighter into the DC power supply input port on the device.
2. Connect the male connector of the cigarette lighter into the vehicle cigarette lighter receptacle.

➢ **To connect the clipper cable**

1. Connect the tubular plug of the clipper cable to the male connector of the cigarette lighter.
2. Plug the DC power connector of the cigarette lighter into the DC power supply input port of the VCI device.

3. Connect the clipper cable to the vehicle battery.

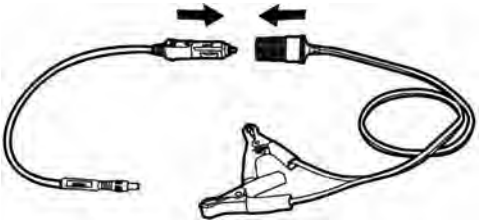


Figure 0-1 ***Connection between Cigarette Lighter and Clipper Cable***

NOTE

After the VCI device is successfully connected to the vehicle, the Power LED on the device lights, and a beep sound will be heard.

4.1.1.2 VCI Connection

After the VCI device is properly connected to the vehicle, the Power LED on the VCI device lights solid green, and is ready to establish communication with the tablet.

Coming with the MaxiSys MS909 tool kit, the VCI device supports three communication methods with the tablet: BT, Wi-Fi and USB.

Pairing Up via BT

The working range for BT communication is about 328 feet (100 m), giving technicians greater mobility to perform vehicle diagnosis from anywhere in the repair shop.

To expedite multi-vehicle diagnostics, more than one VCI can be used in busy repair shops enabling technicians to quickly pair via BT their MaxiSys tablet to each VCI separately and therefore eliminating the need to unplug the VCI from one vehicle and then connect it to another each time a new vehicle comes in for repairs.

- **To pair up the tablet with the VCI device via BT**
  1. Power up the tablet.
  2. Select the **VCI Manager** application from the MaxiSys Main Screen.
  3. The device automatically scans for available VCI devices around for BT pairing. The found devices are listed in the Setting section on the right side of the screen.

NOTE

If no VCI device is found, this may indicate that the signal strength is too weak to be detected. Reposition the VCI device, and remove all possible objects that may cause signal interference. Tap the **Scan** button at the top right corner to rescan for VCI.

4. Typically, the VCI device name displays as Maxi suffixed with a serial number.

Select the VCI device for pairing. (If using more than one VCI is used in the shop, ensure the correct VCI is selected to pair.)

5. When pairing is successful, the connection status displays as Connected.
6. The VCI icon in the bottom navigation bar displays a green circle BT icon when the tablet and the VCI are connected.

Refer to *12.2 BT* Pairing on page 120 for additional information.

Wi-Fi Connection

The VCI device supports both 2.4GHz and 5GHz Wi-Fi connection. Please choose 2.4GHz or 5GHz Wi-Fi connection according to specific situations. In open areas, the working range of 2.4G Wi-Fi communication is up to 328 feet (100 m) while 5G Wi-Fi is up to 164 feet (50 m).

➢ **To pair the tablet with the VCI device via Wi-Fi**

1. Power up the tablet.
2. Select the **VCI Manager** application from the MaxiSys Main Screen.
3. When the **VCI Manager** application is opened, the tablet automatically scans for available VCI devices around for Wi-Fi connection. Found VCI devices are listed in the Setting section on the right side of the screen.
4. Typically, the VCI device name displays as Maxi suffixed with a serial number. Select the required device for connection.
5. When pairing is successful, the connection status is shown as Connected.
6. The VCI icon in the bottom navigation bar displays a green circle Wi-Fi icon when the tablet and the VCI are connected.

Refer to *Wi-Fi Connection* on page 120 for additional information.

USB Cable Connection

The USB cable connection is a simple and quick way to establish communication between the tablet and the VCI device. After properly connecting the USB cable from the tablet to the VCI device, the VCI navigation button in the bottom bar of the screen displays a green check mark and the USB LED on the VCI device lights solid green, indicating the connection between the devices is successful.

The MaxiSys diagnostic platform is now ready to perform vehicle diagnosis.

NOTE

The USB connection provides the most stable and fastest communication and is therefore the recommended communication mode between the tablet and VCI when operating ECU programming or coding. The USB communication method will take priority over other connected communication modes.

4.1.1.3 No Communication Message

A. If the tablet is unable to connect to the VCI, an “Error” message displays. The “Error” message indicates the tablet is not communicating with the VCI device. Troubleshoot the error by performing the following steps:
   - Ensure the VCI device is powered on.
   - When using the wireless connection, ensure the network is configured correctly and the proper device has been connected.
   - If the tablet loses communication abruptly during diagnostics, ensure no objects cause signal interruption.
   - Ensure the VCI device is properly positioned with the VCI front side up.
   - Move the tablet closer to the VCI device. If using the wired connection, ensure the cable is securely attached to the VCI.
   - Ensure the VCI communication mode is lit for the selected communication type, BT, Wi-Fi or USB.

B. If the VCI device is unable to establish a communication link, a message will display troubleshooting instructions. Possible causes for the communication error include:
   - The VCI device is unable to establish a communication link with the vehicle.
   - A vehicle system has been selected for diagnosis that is not supported by the vehicle.
   - There is a loose connection.
   - There is a blown vehicle fuse.
   - The vehicle or the data case has a wiring fault.
   - There is a circuit fault in the data cable or adapter.
   - The vehicle identification code is incorrectly input.

4.1.2 Getting Started

Prior to first use of the Diagnostics application, ensure the VCI device is properly connected to and is communicating with the tablet. See VCI Manager on page 119.

4.1.2.1 Vehicle Menu Layout

When the VCI device is properly connected to the vehicle, and paired to the tablet, the platform is ready to start vehicle diagnosis. Tap on the Diagnostics application button on the MaxiSys Main Screen, the Vehicle Menu displays on the screen.

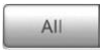
Figure 0-2 ***Sample Vehicle Menu Screen***

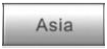
1. Top Toolbar Buttons
2. Manufacturer Buttons

Top toolbar Buttons

The operations of the Toolbar buttons at the top of the screen are listed and described in the table below:

Table 0-1 ***Top Toolbar Buttons***

Name	Button	Description
Home		Returns to the MaxiSys Main Screen.
VID Scan		Tap this button to open a dropdown list; tap **Auto Detect** for auto VIN detection; tap **Manual Input** to enter VIN code or license number manually. Tap **Scan VID** to scan the license number / VIN code by camera.
All		Displays all the vehicle makes in the vehicle menu.
Favorites		Displays use-selected favorite vehicle makes.

Name	Button	Description
History		Displays the stored test vehicle history records. This option provides direct access to the previously tested vehicle records during previous tests. See *9.1 Vehicle* History on page 107.
America		Displays the American vehicle menu.
Europe		Displays the European vehicle menu.
Asia		Displays the Asian vehicle menu.
China		Displays the Chinese vehicle menu.
Search		Tap the search field to display the virtual keyboard and input the vehicle manufacturer to test.
Cancel		Tap this button to exit the search screen or to cancel an operation.

Manufacturer Buttons

The Manufacturer buttons display the various vehicle brand names. Select the manufacturer button after the VCI device is properly connected to the test vehicle to start a diagnostic session.

4.1.3 Vehicle Identification

The MaxiSys diagnostic system supports five methods of vehicle identification.

1. Auto VIN Scan
2. Manual Input
3. Scan License / VIN
4. Manual Vehicle Selection
5. OBD II Direct Entry

4.1.3.1 Auto VIN Scan

The MaxiSys diagnostic system features the latest VIN-based Auto VIN Scan function to identify CAN vehicles with just one tap, enabling the technician to quickly identify the exact vehicle and scan its available systems for fault codes.

- **To perform Auto VIN Scan**
  1. Tap the **Diagnostics** application button from the MaxiSys Main Screen. The

Vehicle Menu displays.

2. Tap the **VID Scan** button in the top toolbar.
3. Select **Auto Detect**. The tablet starts VIN scanning on the vehicle ECU. Once the test vehicle is successfully identified, the system will guide you to the Vehicle Diagnostics screen.

Figure 0-3 ***Sample Auto Detect Screen***

Depending on the vehicle, the Auto VIN function is still available after a vehicle brand is selected.

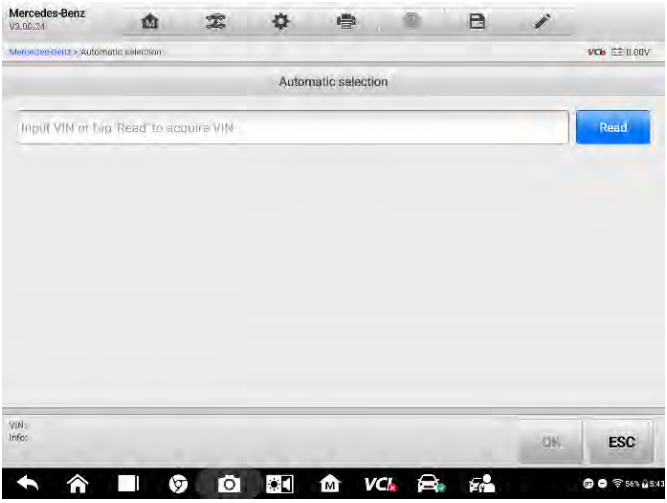


Figure 0-4 Sample Vehicle Selection Screen

Select **Automatic Selection** and the system will acquire VIN information automatically or allow users to input the VIN manually.

4.1.3.2 Manual Input

For vehicles that do not support the Auto VIN Scan function, the MaxiSys diagnostic system allows you to enter the vehicle VIN manually, or simply take a photo of the VIN sticker for quick vehicle identification.

➢ **To perform Manual Input**

1. Tap the **Diagnostics** application button from the MaxiSys Main Screen. The Vehicle Menu displays.
2. Tap the **VID Scan** button on the top toolbar.
3. Select **Manual Input**.
4. Tap the input box and enter the correct VIN code or license number.

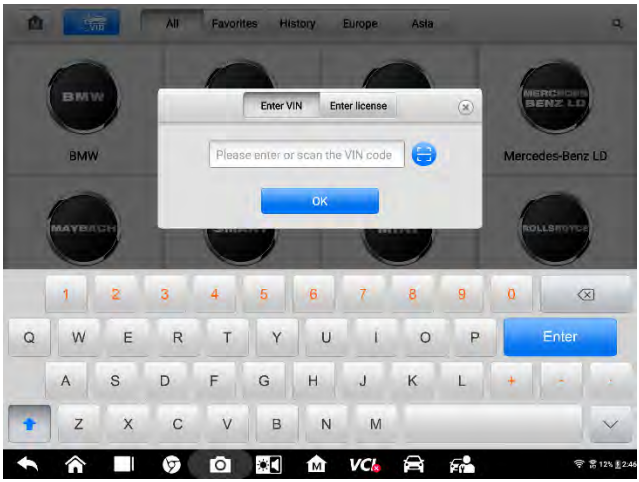


Figure 0-5 ***Sample Manual VIN Input***

5. Tap **OK**. The vehicle will be identified and matched to the vehicle database. The Vehicle Diagnostics screen displays.
6. Tap **Cancel** to exit Manual Input.

4.1.3.3 Scan License / VIN

Tap **Scan License / VIN** in the dropdown list (Figure 4-3), the camera will be opened. Position the tablet to align the license number or VIN code with the scanning window and the license number or VIN code will be scanned and identified automatically. Tap OK to proceed.

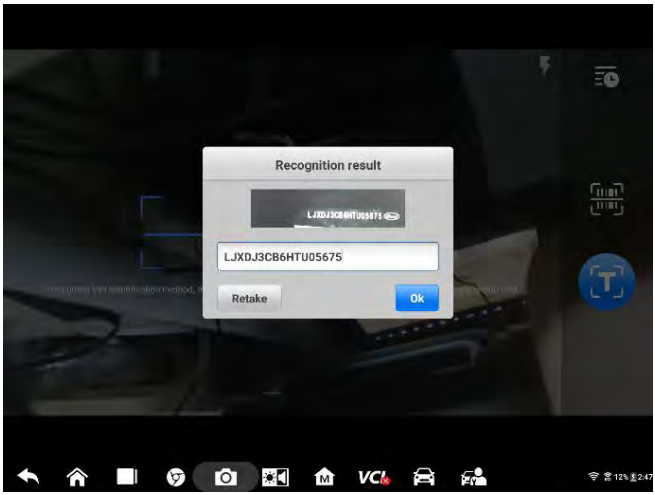


Figure 0-6 ***Sample Scan License / VIN Code 1***

The vehicle information will be displayed on the tablet. If previous diagnostic records are present for the vehicle, these records and vehicle information will display. The VIN and the vehicle make, model and year must be entered manually if no record for a vehicle with the scanned license number exists in the tablet.

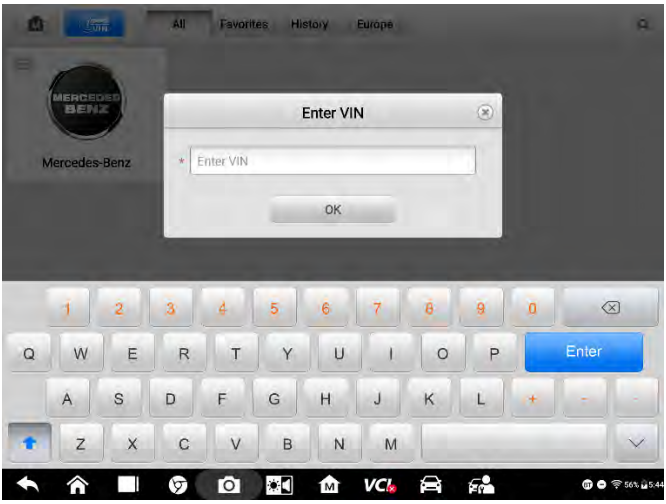


Figure 0-7 ***Sample Scan License / VIN Code 2***

4.1.3.4 Manual Vehicle Selection

When the vehicle VIN is not automatically retrievable through the vehicle ECU, or the specific VIN is unknown, you can select the vehicle manually.

Step-by-step Vehicle Selection

This mode of vehicle selection is menu driven. Follow the screen prompts and make a series of choices. Each selection you make advances you to the next screen. A **Back** button in the lower right corner of the screen redirects you to the previous screen. Procedures may vary by the vehicle being tested.

4.1.3.5 Alternative Vehicle Identification

Occasionally, the tablet may not be able to identify a vehicle. For these vehicles, the user needs to perform a generic OBD-II or EOBD diagnostics. See Generic OBD II Operations on page 60 for more information.

4.2 Diagnostics Screen Layout

This section describes how to navigate the Diagnostics interface and select test options.

4.2.1 Diagnostics Screen Layout

The Diagnostics screens typically includes six sections.

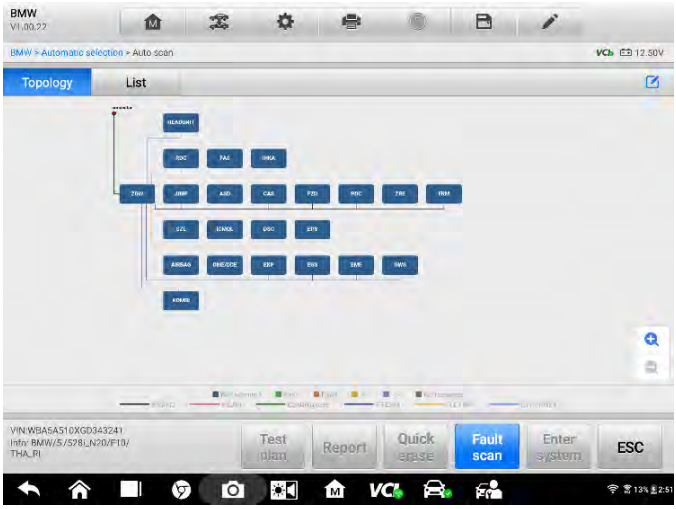


Figure 0-8 ***Sample Diagnostics Screen***

1. Diagnostics Toolbar
2. Current Directory Path
3. Status Information Bar

4. Navigation Bar
5. Main Section
6. Functional Buttons

Diagnostics Toolbar

The Diagnostics Toolbar contains buttons that allow you to print or save the displayed data and perform other operations. The table below provides a brief description for the operations of the Diagnostics toolbar buttons:

Table 0-2 *Diagnostics Toolbar Buttons*

Name	Button	Description
Home		Returns to the MaxiSys Main Screen.
Vehicle Swap		Exits the diagnostic session and returns to the vehicle menu screen to select another vehicle for testing.
Settings		Opens the setting screen. See Settings on page 113.
Print		Saves and prints a copy of the displayed data.
Help		Provides instructions or tips for operations of various diagnostic functions.
Save		Opens a submenu for the three options to save data: • Tap **Save This Page** to take a screenshot image • Tap **Save All Data** to save a PDF file (use this save option when data displays on multiple screens) • Tap **Start Saving** to record a video clip (available for recording Live Data or graph data only) These files are saved in Data Manager. See Data Manager on page 106.
Data Logging		Use this function when encountering an error when testing or diagnosing a vehicle. This function will record communication data and ECU information of the test vehicle and send it to Autel technicians to

Name	Button	Description
		review and provide solutions. To follow up the processing progress, see Data Logging on page 126.
Send		Tap to submit the Data Logging report to the technical support center via the Internet.

➢ **To print data in Diagnostics**

1. Tap the **Diagnostics** application button on the MaxiSys Main Screen. The **Print** button in the diagnostic toolbar is available throughout the Diagnostics operation.
2. Tap **Print** and a drop-down list appears.
   a) **Print This Page** – prints a screenshot of the current screen.
   b) **Print All Data** – prints a PDF copy of all displayed data.
3. A temporary file will be created and sent to the computer for printing.
4. A confirmation message displays when the file is sent.

NOTE

Make sure the tablet and the printer are connected either via Wi-Fi or LAN before printing. For more instructions on printing, see *10.1.3 Printing Settings* on page 114 for details.

➢ **To submit Data Logging reports in Diagnostics**

1. Tap the **Diagnostics** application button from the MaxiSys Main Screen. The pen-shaped **Data Logging** button on the diagnostic toolbar is available throughout the whole Diagnostics operations.
2. Tap the **Data Logging** button (a chat bubble icon is depicted on button) to open a selection box. Select from a list of errors to generally describe the problem encountered. A blue check mark will display adjacent to the error selected. Tap **OK** to continue.
3. A submission form will display to let you fill in the report information.
4. Tap the **Send** button in the upper right corner of the screen to submit the report form via the Internet, a confirmation message displays when sent successfully.

Status Information Bar

The Status Information Bar at the top of the Main Section displays the following items:

1. VCI Icon – indicates the communication status between the tablet and the VCI device.
2. Battery Icon – indicates the battery status of the vehicle.

Main Section

The Main Section varies depending on the stage of operations which shows vehicle identification selections, the main menu, test data, messages, instructions and other diagnostic information.

The Main Section can display as two format types, a topology map and as a listing of vehicle modules.

A. Topology Tab Page

The **Topology Tab** page displays a system distribution diagram of the vehicle control modules.

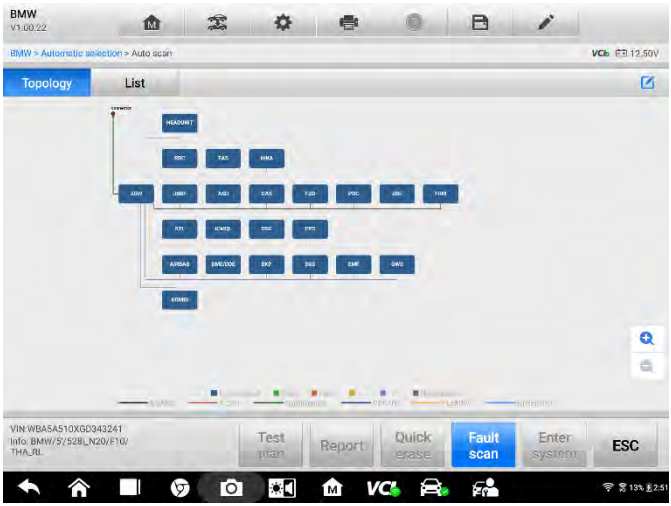


Figure 0-9 *Sample Topology Tab Page*

Tap a module icon to perform further diagnosis and tests via the Function Menu screen (Figure 4-11).

B. List Tab Page

Column 1 – displays the system numbers

Column 2 – displays the scanned systems

Column 3 – displays the screen results

- ✧ **-!-**: Indicates that the scanned system may not support the code reading function, or there is a communication error between the tablet and the control system.
- ✧ **-?-**: Indicates that the vehicle control system has been detected, but the tablet

cannot access it.

- ✧ **Fault | #**: Indicates there is/are detected fault code(s) present; "#" indicates the quantity of detected faults.
- ✧ **Pass | No Fault**: Indicates the system has been scanned and no faults are detected.
- ✧ **Not Scanned**: Indicates the system has not been scanned.
- ✧ **No Response:** Indicates the system has not received a response.

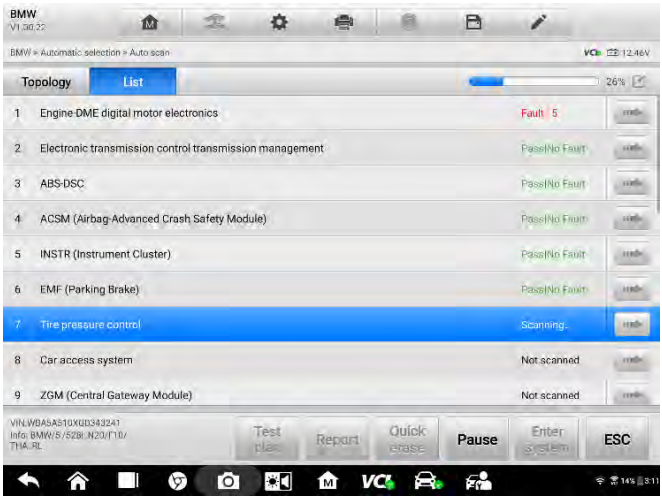


Figure 0-10 ***Sample List Tab Page***

Functional Buttons

The type of Functional Buttons displayed on the bottom of the screen vary by operation. Function include navigation, reporting and code clearing. The functions of these buttons will be described in the following sections when relevant.

The table below provides a brief description of the Functional Buttons' operations in Auto Scan:

Table 0-3 ***Functional Buttons in Diagnostics Screen***

Name	Description
Report	Displays the diagnostic data in the report form.
Quick Erase	Erases DTC records and other data from the ECM.
Fault Scan	Scans vehicle system modules.
Pause	Pauses the scanning process.

Name	Description
Enter System	Enters the ECU system.
ESC	Returns to the previous screen or exit Auto Scan.

Select one of the system modules from the Topology or List, and tap **Enter System** to enter the specific system functions

NOTE

The Diagnostic Buttons Toolbar (located at the top of the screen) will be active throughout the diagnostic session for such tasks as printing and saving the displayed data, obtaining help information, or performing data logging.

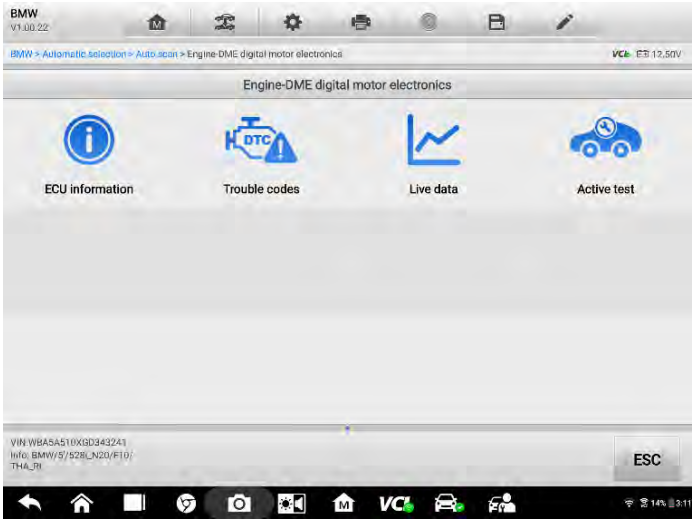


Figure 0-11 *Sample* Function Menu Screen

Available functions may vary by vehicle. The function menu may include:

- **ECU Information** – displays detailed ECU information. Select to display information screen.
- **Read Codes** – displays detailed DTC information retrieved from the vehicle control module.
- **Erase Codes** – erases DTC records and other data from the ECM.
- **Live Data** – retrieves and displays live data and parameters from the vehicle ECU.
- **Active Test** – provides specific subsystem and component tests. This selection

may display as Actuators, Actuator Test, or Function Tests. Available tests vary by vehicle.

- **Control Unit** – Select to directly locate a control system for testing. Follow the menu driven procedure, and make proper selections to be guided to appropriate module and function menu.

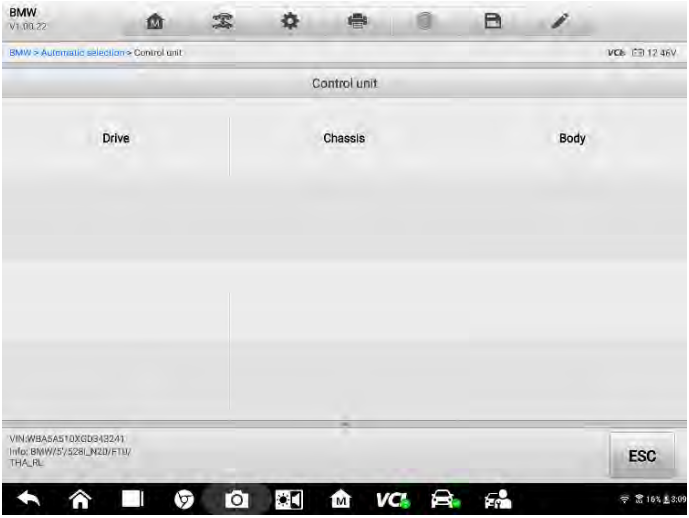


Figure 0-12 ***Sample Control Unit Screen***

- **Special Functions** – provides component adaptation or variant coding functions for custom configurations, and to allow to entry of adaptive values for certain components after repairs.

Screen Messages

Messages display when additional input is needed before proceeding. There are three main types of on-screen messages: Confirmation, Warning, and Error.

- **Confirmation Messages**

This type of messages usually displays as an Information screen, when you are about to perform an action that cannot be reversed or when an action has been initiated and your confirmation is needed to continue.

When a user-response is not required, the message displays briefly.

- **Warning Messages**

This type of messages displays when completing the selected action may result in an irreversible change or loss of data. An example of this message is the Erase Codes message.

- **Error Messages**

Error messages display when a systemic or procedural error has occurred. Possible errors include cable disconnection and communication interruption.

4.2.2 Making Selections

The Diagnostics application is a menu-driven program that presents a series of options one at a time. As you select from a menu, the next menu in the series displays. Each selection narrows the focus and leads to the desired test. Use your fingertip or the stylus pen to make menu selections.

4.3 Auto Scan

The Auto Scan function performs a comprehensive scanning of all systems in the vehicle ECU to locate faults and retrieve DTCs. Tap Fault Scan to start scan. Systems with no faults detected will display in green; systems containing faults will display in orange.

➢ **To perform Auto Scan function**

1. Tap the **Diagnostics** application button on the MaxiSys Main Screen. Choose the corresponding vehicle information and enter the vehicle diagnostic page.

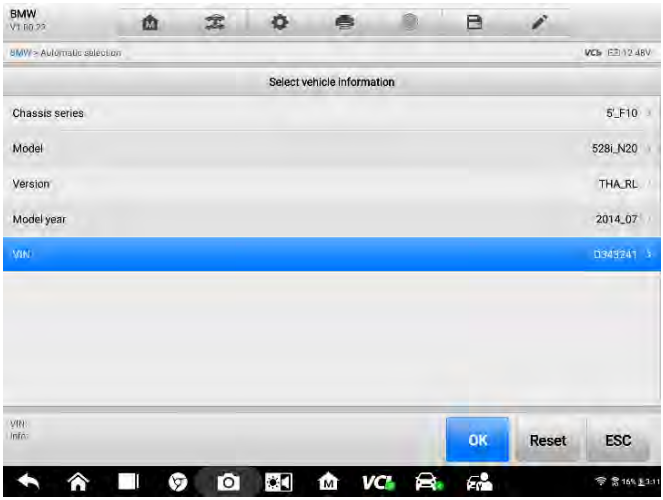


Figure 0-13 ***Sample Vehicle Selection Screen***

2. Select **Auto scan** on the Main menu to enter the diagnostic interface.

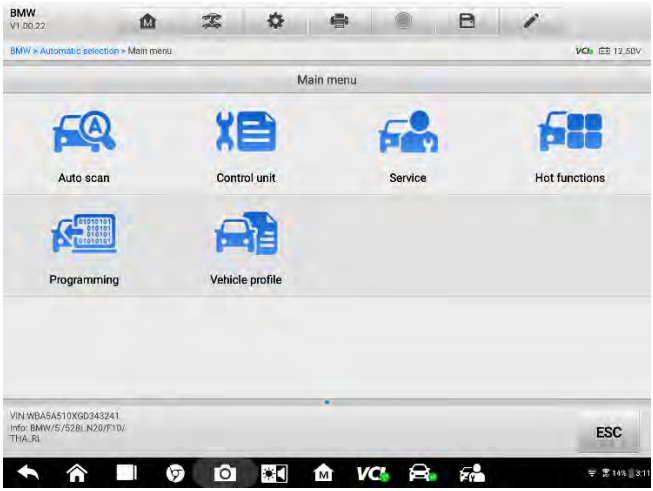


Figure 0-14 ***Main Menu Screen***

3. The **Topology** tab page displays in the main section. Tap the **Fault Scan** button at the bottom of the screen to scan the vehicle system modules.

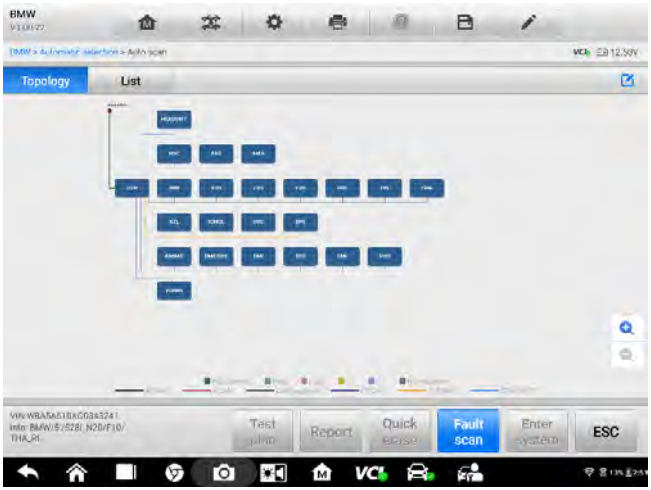


Figure 0-15 ***Sample Auto Scan Screen 1***

4.3.1 Test Plan

The Test Plan function intelligently prioritizes DTCs and leads the user to the proper repair. This function is initially available for a subset of vehicles with extensive

coverage to follow in subsequent software updates.

Figure 0-16 ***Sample Auto Scan Screen 2***

➢ **To perform the Test Plan function**

1. Select **Test Plan** from the bottom functional buttons.
2. A test plan displays with recommended test or procedure to perform. Items with higher priority should be tested first.

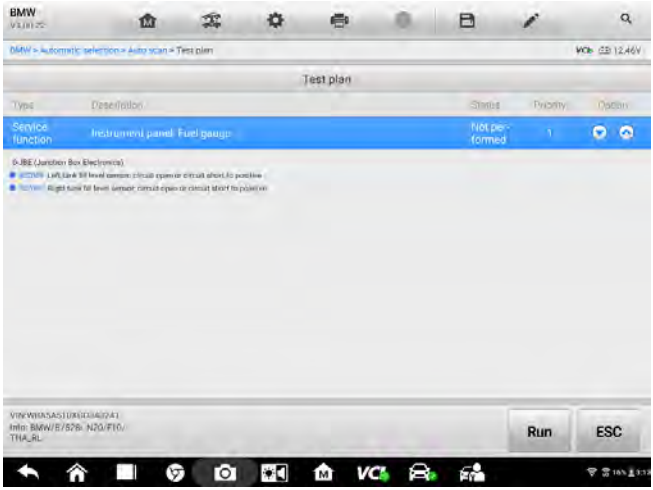


Figure 0-17 ***Sample Test Plan Screen 1***

4. Tap the button to test relative functions. Tap the button to display the system information in detail and tap again to fold it.

5. Press **Run** to continue.

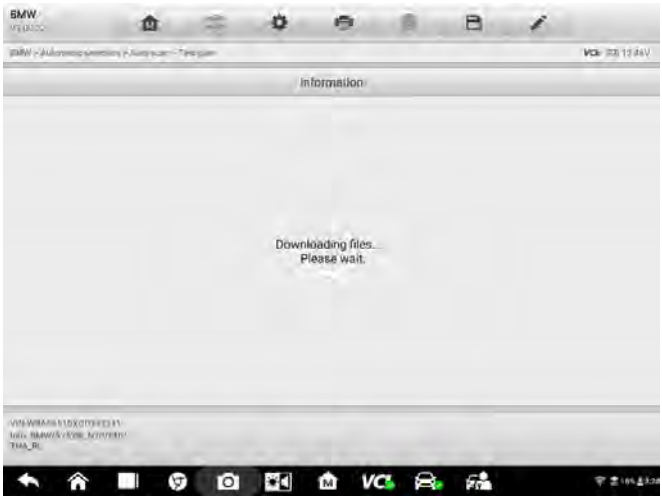


Figure 4-18 ***Sample Test Plan Screen 2***

6. Follow the downloaded instructions to complete action.

4.4 Read and Erase Codes

4.4.1 Read Codes

This function retrieves and displays the DTCs from the vehicle control system. The Read Codes screen varies for each vehicle being tested. For some vehicles, freeze frame data can also be retrieved for viewing. A sample Read Codes screen displays as below:

Figure 0-19 *Sample Read Codes Screen*

1. Diagnostics Toolbar – see *Table 0-2 Diagnostics Toolbar Buttons* on page 34 for details.
2. Current Directory Path
3. Status Information Bar
4. Navigation Bar
5. Main Section
   - Column 1 – displays the retrieved codes from the vehicle.
   - Column 2 – indicates the status of the retrieved codes.
   - Column 3 – detailed descriptions for the retrieved codes.
6. Functional Buttons
   - **DTC guide** – tap to check related repair cases and help information.
   - **Freeze Frame** – icon displays when freeze frame data is available for viewing; Tap icon to display data screen. The Freeze Frame interface is similar to the Read Codes interface and share similar operations.
   - **Search** – tap to search the selected DTC for additional information on the Internet.
   - **Erase codes** – tap to erase codes from the vehicle. It is recommended that DTCs are read and needed repairs are performed before erasing codes.

- **Read codes** - retrieves and displays the DTCs from the vehicle control system. The Read Codes screen varies for each vehicle being tested.
- **ESC** – tap it to return to the previous screen or exit the function.

4.4.2 Erase Codes

After reading the retrieved codes from the vehicle and certain repairs have been made, you can erase the codes from the vehicle using this function. Before performing this function, make sure the vehicle ignition key is in the ON (RUN) position with the engine off.

➢ **To erase codes**

1. Tap **Erase Codes** in the Function Menu.
2. A warning message displays to inform you of data loss when this function is applied.
   a) Tap **Yes** to continue. A confirming screen displays when the operation is successfully done.
   b) Tap **No** to exit.
3. Tap **ESC** on the confirming screen to exit Erase Codes.
4. Check the Read Codes function again to ensure the operation is successful.

4.5 Live Data

When this function is selected, the screen displays the data list for the selected module. The data available for any control module varies by vehicle. The parameters display in the order that they are transmitted by the ECM, so expect variation among vehicles.

Gesture scrolling allows you to quickly move through the data list. Touch the screen and drag your finger up or down to reposition the parameters being displayed if the data occupies more than one screen. The figure below displays a typical Live Data screen:

Figure 0-20 ***Sample Live Data Screen***

1. Diagnostics Toolbar Buttons – see *Table 0-2 Diagnostics Toolbar Buttons* on page 34 for detailed descriptions of the operations for each button.
2. Current Directory Path
3. Status Information Bar
4. Navigation Bar
5. Main Section

- Name Column – this column displays the parameter names.

  a) Check Box – tap the check box to the left of a parameter name to select the item. Tap the check box again to deselect it.

  b) Drop-down Button – tap the drop-down button on the right side of the parameter name to open a submenu, which provides optional modes in which to display the data.

- Value Column – displays the values of the parameter items.
- Unit Column – displays the unit for the parameter values.

  ➢ To change the Unit mode, tap the **Setting** button in the top toolbar and select a required mode. See *10.1.1* Unit on page 113.

Display Mode

There are four types of display modes available for data viewing, allowing you to view various types of parameters in the mode best suited to represent the data.

Tap the drop-down button to the right of the parameter name to open a submenu. A total of 6 buttons will be displayed: The 4 buttons to the left represent different data display modes, plus one Help button, active when additional information is available, and one Unit Change button, for switching the unit of displayed data, to the right.

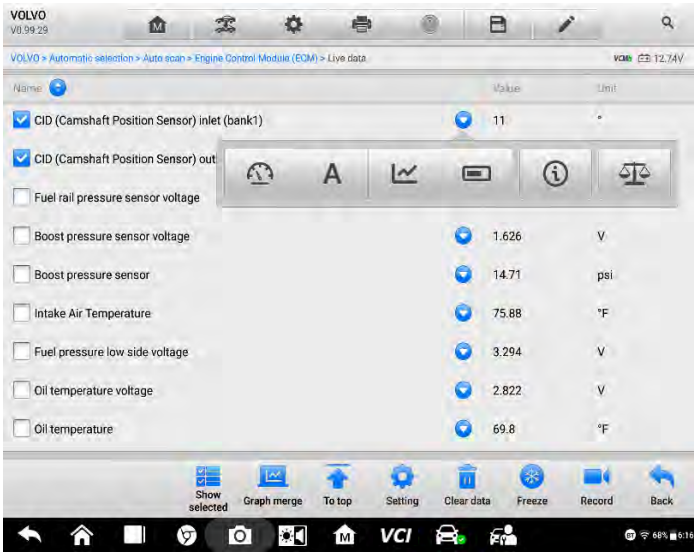


Figure 0-21 ***Sample Display Mode Screen***

Each parameter item displays the selected mode independently.

- ✧ **Analog Gauge Mode** – displays the parameters in gauge charts.
- ✧ **Text Mode** – the default mode that displays the parameters as a text list.
- ✧ **Waveform Graph Mode** – displays the parameters in waveform graphs.

  In this mode, three control buttons will display on the right side of the screen, allowing you to manipulate the displayed status.

  - Edit Button – tap to open an edit window, in which you can set the waveform color and the line thickness displayed for the selected parameter item.
  - Text Button – resumes Text Display Mode.
  - Zoom-in Button – tap once to display the selected data graph in full screen.

There are also two scale buttons, displayed above the waveform graph to the right side, which can be used to change the scale values of the X axis and Y axis of the graph. There are four scales available: x1, x2, x4 and x8.

Above the graph in the middle, there is a **SetY** button. Tap it to open the **Settings** window in which the minimum and maximum value of the Y axis can be set.

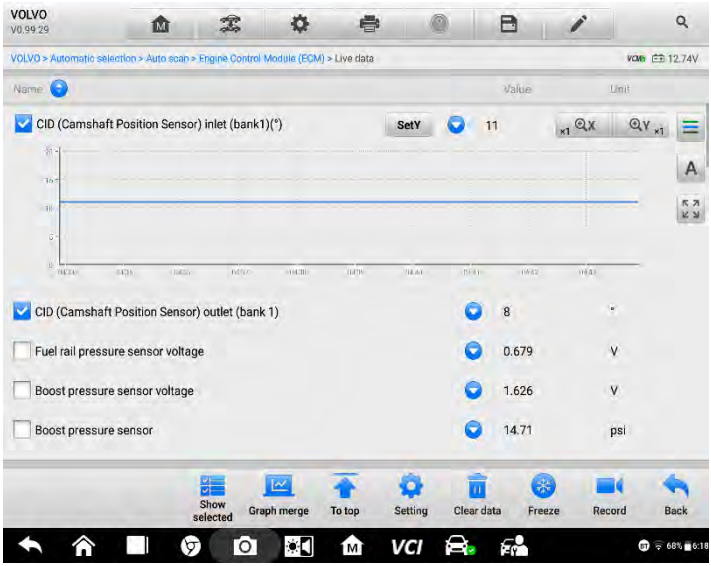


Figure 4-22 ***Sample Waveform Graph Mode Screen***

- ✧ **Digital Gauge Mode** – displays the parameters in the form of a digital gauge graph.

- ➢ **To edit the waveform color and line thickness in a data graph**

  1. Select 1 to 3 parameter items to display in Waveform Graph mode.
  2. Tap the **Zoom-in Button** on the right side to display the data graph in full screen.
  3. Tap the **Edit Button**, and an edit window displays.
  4. Select a parameter item from the left column.
  5. Select a color from the second column.
  6. Select a line thickness from the right column.
  7. Repeat step 4 to 6 to edit the waveform for each parameter.

8. Tap **Done** to save the setting and exit, or tap **Cancel** to exit without saving.

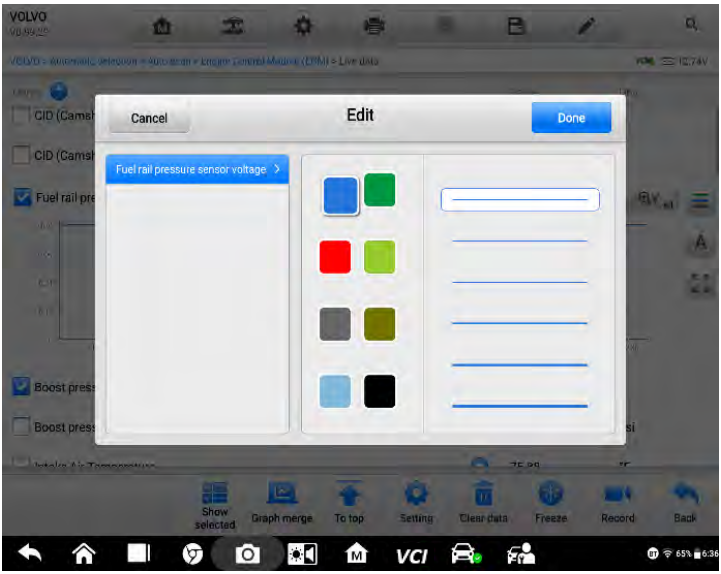


Figure 4-23 ***Sample Waveform Edit Screen***

6. Functional Buttons

The operations of all available functional buttons on the Live Data screen are described below:

✧ **Back** – returns to the previous screen or exits the function.

✧ **Record** – starts recording the retrieved live data; the recorded data is then stored as a video clip in the Data Manager application for future reviews. This function can be triggered automatically at preset threshold values or manually. The triggering mode and record duration can be configured in the Setting mode of Live Data.

✧ **Freeze** – displays the retrieved data in freeze mode.

- Previous frame – moves to the previous frame of frozen data.
- Next frame – moves to the next frame of frozen data.

✧ **Resume** – this button displays when the Record or Freeze function is applied. Tap this button to stop data recording, or exit freeze data mode, and resumes normal data display mode.

✧ **Flag** – this button displays when the Record function is applied. Tap this button to set flags to note points of interest when recording data. During playback in *Data*

Manager, the preset flag will enable a popup window to allow for notes to be added.

- ✧ **Clear data** – tap this button to clear all previously retrieved parameter values.
- ✧ **To top** – moves the selected data item(s) to the top of the list.
- ✧ **Graph merge** – tap this button to merge selected data graphs (for Waveform Graph Mode only). This function is very useful when comparing different parameters.

NOTE

This mode supports Graph Merge for 2 to 3 parameter items only. Select 2 or 3 parameters when creating a graph merge.

- ➢ To cancel Graph Merge mode, tap the drop-down button to the right of the parameter name, and select a data display mode.
  - ✧ **Show selected/Show all** – tap this button to switch between the two options; one displays the selected parameter items, and the other displays all the available items.
  - ✧ **Setting** – tap this button to open a setting screen to set the trigger mode, recording duration, and to set threshold values for data recording.

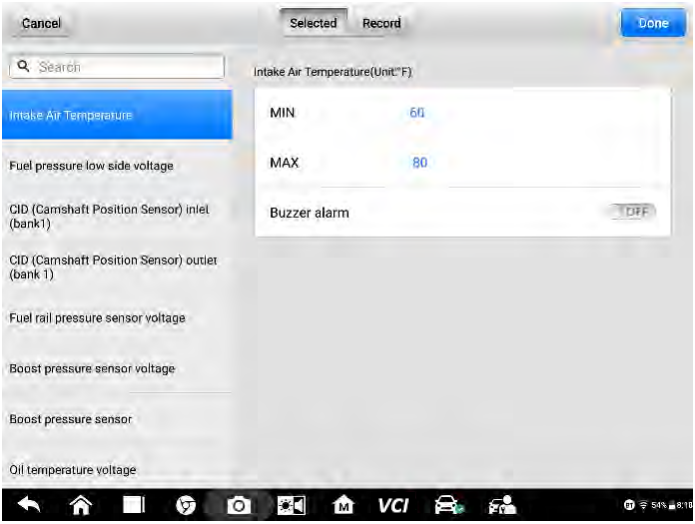


Figure 0-64 ***Sample Setting Mode in Live Data***

There are four navigation buttons at the top of the **Setting** mode screen.

- **Selected Button** – displays the configuration screen to set the threshold values, an

upper limit and a lower limit, for triggering the buzzer alarm. This function is only applied to the Waveform Graph display mode.

a) MIN – tap this button to display a virtual keyboard to enter the required lower limit value.

b) MAX – tap this button to display a virtual keyboard to enter the required upper limit value.

c) Buzzer alarm – switches the alarm on and off. The alarm function makes a beep sound as an alert when the data reading reaches the preset minimum or maximum point.

➢ **To set threshold limits for the parameter values**

1. Tap the **Setting** button at the bottom of the Live Data screen.
2. Tap the **Selected** navigation button.
3. Select a parameter item from the left column, or enter the item name in the Search box.
4. Tap the **MIN** button on the right side, and enter the required minimum value.
5. Tap the **MAX** button on the right side, and enter the required maximum value.
6. Tap the **ON/OFF** button on the right side of the **Buzzer alarm** button to turn it on or off.
7. Tap **Done** to save the setting and return to the Live Data screen; or tap **Cancel** to exit without saving.

When the limits are successfully set, two horizontal lines display on the data graph (when Waveform Graph Mode is applied) to indicate the alarm point. The limit lines are shown in different colors for distinction from the parameter waveforms.

- **Record** – displays the configuration screen for record setting, where you can set the trigger type, duration and trigger point for the data recording function.

a) Trigger type – sets the trigger mode for data recording. There are four options available:

1) Manual – allows you to manually start and stop data recording.

2) DTC – automatically triggers data recording when any DTC is detected.

3) DTC check mode – automatically triggers data recording when certain pre-selected DTC types are detected.

4) Parameter – automatically triggers data recording when any parameter value reaches the preset threshold.

b) Duration – sets the recording duration (for Auto trigger mode only).

Trigger point – reserves a relative percentage of a record length before the data recording start point for reference (for Auto trigger mode only).

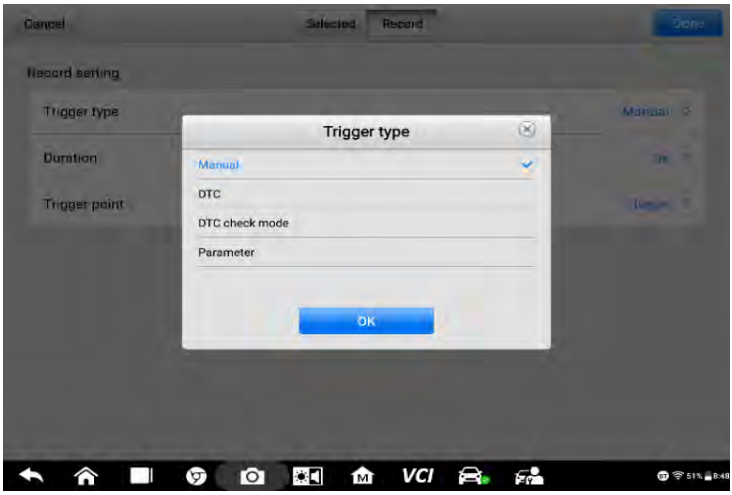


Figure 4-25 ***Sample Record Setting Screen***

➢ **To perform setting for live data record**

1. Tap the **Setting** button at the bottom of the Live Data screen.
2. Tap the **Record** navigation button.
3. Tap the > button to the right of **Trigger type** and select the required trigger mode.
4. Tap the > button to the right of **Duration** and select the time duration.
5. Tap the > button to the right of **Trigger point** and select a relative percentage of a record length to be reserved before the data recording start point.
6. Tap **Done** to save the setting and return to the Live Data screen; or tap **Cancel** to exit without saving.

- **Done** – confirms and saves the setting, and redirects you to the Live Data screen.
- **Cancel** – cancels the setting operation, and redirects you to the Live Data screen.

4.6 Active Test

The Active Test function is used to access vehicle-specific subsystem and component tests. Available tests vary by vehicle.

During an active test, the tablet sends commands to the ECU to activate the actuators. This test determines the integrity of the system or part by reading ECU data, or by monitoring the operation of the actuators. Such tests may include switching a solenoid, relay, or switch, between two operating states.

Selecting Active Test displays a menu of test options. Available tests vary by vehicle. Select test from menu option. Follow the instructions displayed on screen to complete test. Procedures and instructions vary by vehicle

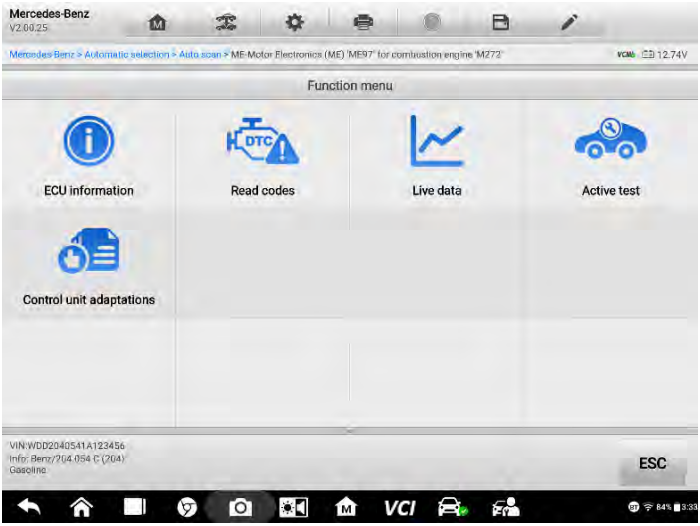


Figure 0-76 *Sample Active Test Screen 1*

Figure 0-87 ***Sample Active Test Screen 2***

The functional buttons in the lower right corner of the Active Test screen manipulate the test signals. The operational instructions are displayed in the main section of the test screen. Follow the on-screen instructions and make appropriate selections to complete the tests. Each time an operation is successfully executed, a message such as “Command Finished”, or “Activation Successful” displays.

Tap the ESC functional button to exit the test when finished.

4.7 ECU Information

This function retrieves and displays the specific information for the tested control unit, including unit type and version numbers.

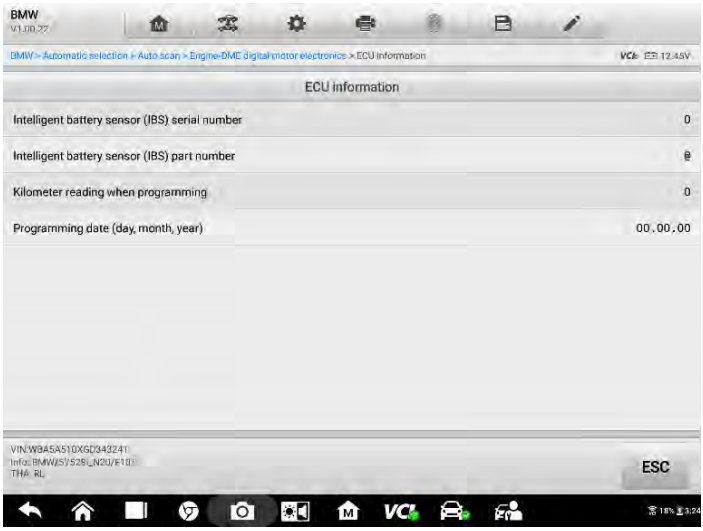


Figure 0-28 ***Sample ECU Information Screen***

1. Diagnostics Toolbar Buttons – see *Table 0-2 Diagnostics Toolbar Buttons* on page 34 for detailed description of each button.
2. Current Directory Path
3. Status Information Bar
4. Main Section – the left column displays the item names; the right column displays the specifications or descriptions.
5. Functional Button – in this case, only a **Back** (or **ESC**) button is available; tap it to exit after viewing.

4.8 Special Functions

These functions perform various component adaptations, including the recalibration or configuration of certain components after repairs or replacements have been completed.

Follow the on-screen instructions to go to the Special function option.

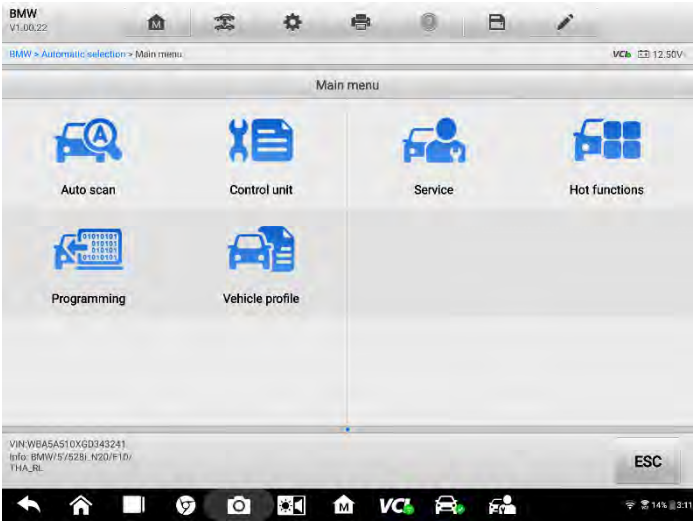


Figure 0-29 ***Sample Special Function Screen 1***

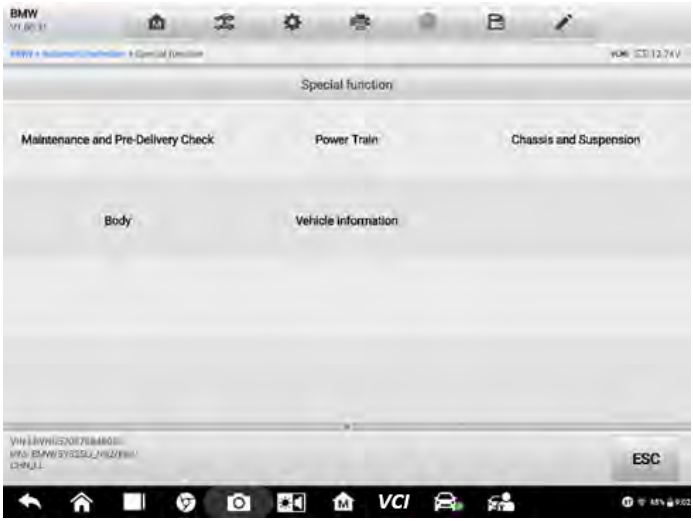
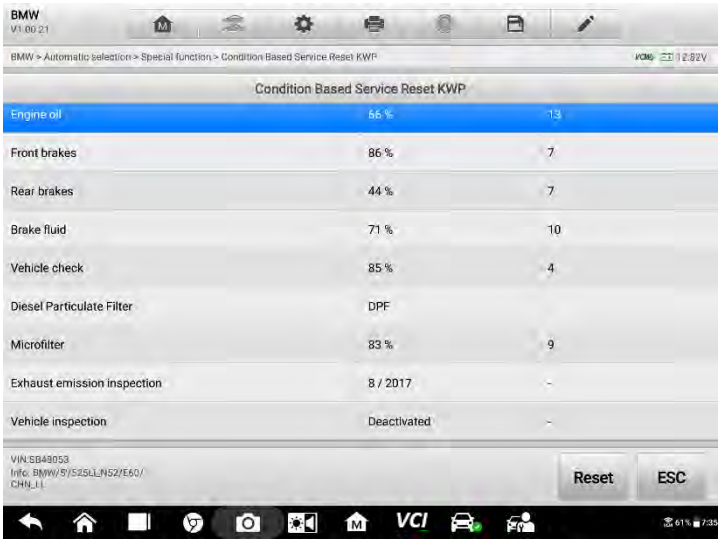


Figure 0-30 ***Sample Special Function Screen 2***



Select a function to display detailed function information and execution screen.

Figure 0-31 ***Sample Special Function Screen 3***

- Column 1 – displays the description of the function being performed or displays live data corresponding to the special function
- Column 2 – displays the execution status such as Completed or Activated or may display live data values that correspond to the special function
- Column 3 – displays the measurement units of the live data

Tap the Reset button perform the selected function or tap the ESC button to exit the function.

4.9 Programming

Since the introduction of OBD II and leading up to modern Hybrids and EVs, hardware and software technologies in cars have been advancing at an exponential. Updating software may be the only way to fix the following issues:

- Drivability
- Fuel Efficiency
- Power Loss
- Fault Codes

- Durability of Mechanical Parts

The Programming and Coding function is used to re-flash the vehicle control modules, which allows you to update the computer software of the vehicle to the latest version, as well as to reprogram adaptive data of certain components after making repairs or replacements.

NOTE

The programming function applies only when the vehicle is connected with a J2534 programming device, which serves as a PassThru interface to establish communication with and transfer data to the vehicle ECU.

Available programming or coding operations vary by test vehicle, and only the available operations display in the menu.

There are two general types of programming operations:

A. Coding – also known as *Teach-in Program*, or *Component Adaptation*, is used to reprogram adaptive data for vehicle control modules after repairs or replacements of vehicle parts.

B. Reprogramming Operations – downloads the latest version of software from the online server database through Internet access (this procedure is done automatically when the tablet is connected to the Internet, so there is no need to check for software updates yourself), and reprograms the newest version into the vehicle ECU.

NOTE

Ensure that the tablet is connected to the Internet before applying the ECU programming function, so that the tablet can access the manufacturer's server for update service.

Selecting the Programming or Coding function opens a menu of operation options that varies by make and model. Selecting a menu option either displays a programming interface or opens another menu of additional choices. Follow all screen instructions while performing the programming or coding operations. How and what information is presented on the screen vary by the type of operation being performed.

4.9.1 Coding

The main section of the Coding screen displays a list of vehicle components or coding options.

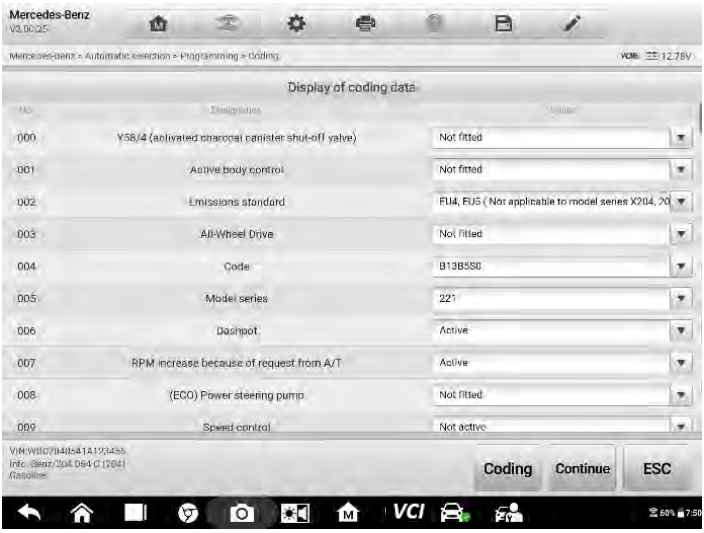


Figure 0-32 ***Sample Coding Screen***

The main section of the Coding screen displays a list of vehicle components and the coding information that mainly consists of two parts:

1. All available systems for coding are displayed on the left side, and the coding data or value on the right side.

2. The bottom of the main section displays the functional buttons that enable you to manipulate the operation.

Check the vehicle condition and the coding information carefully. Use the functional button to edit Codes for the corresponding components. Tap **Send** when you have finished editing all items. When the operation is completed, an execution status message such as Completed, Finished or Successful, may display.

Tap the **ESC** button to exit the function.

4.9.2 Reprogramming

Before the reprogramming begins:

- Ensure the tablet works in a stable Wi-Fi network.
- Connect the tablet to the VCI by USB.
- Fully charge the tablet battery and connect the tablet to a charger if necessary.
- Attach a battery maintainer to the vehicle battery to maintain a steady voltage throughout the reprogramming. Voltage requirements differ by vehicle. Consult the

vehicle manufacturer before programming a module.

- Keep the application running during module reprogramming, or the process may fail and result in permanent damage to the module.

Typical reprogramming operations require you to input and validate VIN number first. Tap the input box and enter the correct number. The programming interface then displays.

Figure 0-33 Sample Reprogramming Operation Screen

The main section of the reprogramming interface offers information of the hardware, the current software version and the newest software versions to be programmed into the control units.

A series of on-screen operational instructions will display to guide you through the programming procedure.

Carefully read the on-screen information and follow the instruction to execute the programming procedure.

4.9.3 Re-flash Errors

IMPORATANT

When reprogramming onboard, always make sure the vehicle battery is fully charged and in good working condition. During reprogramming, the operation may fail if voltage falls below the proper operation voltage. Sometimes a failed operation can be recovered, but the failed reprogramming can also ruin the control module. We recommend connecting an

external battery maintainer to the vehicle to ensure steady voltage throughout the programming. The required voltage differs by vehicle. Consult vehicle manufacturer for correct voltage to be maintained.

Occasionally a flash update procedure may not complete properly. Common causes of flash errors include poor cable connections between the tablet, VCI, and vehicle, the vehicle ignition being switched off before the flash procedure is complete, or low vehicle battery voltage.

If the process quits, recheck all the cable connections to assure good communications and initialize the flash procedure. The programming procedure will automatically repeat if the previous operation fails.

4.10 Generic OBD II Operations

The OBD II/EOBD vehicle diagnosis option offers a quick way to check for DTCs, isolate the cause of a dashboard malfunction indicator lamp (MIL), check monitor status prior to emissions certification testing, verify repairs, and perform other emissions-related services. The OBDII direct access option is also used for testing OBD II/EOBD-compliant vehicles that are not included in the Diagnostics database. Diagnostics toolbar buttons at the top of the screen are available for specific vehicle diagnostics. See Table 4-2 Diagnostics Toolbar Buttons on page 34 for details.

General Procedure

➢ **To access the OBD II/EOBD diagnostics functions**

1. Tap the **Diagnostics** application button in the MaxiSys Main Screen. The Vehicle Menu displays.
2. Tap the **EOBD** button. There are two options to establish communication with the vehicle.
   - Auto Scan – select it to establish communication using each protocol in order to determine which one the vehicle is using.
   - Protocol – select it to open a submenu of various protocols. A communication protocol is a standardized way of data communication between an ECM and a diagnostic tool. Global OBD may use several different communication protocols.
3. Select a specific protocol if the **Protocol** option is selected. Wait for the OBD II Diagnostic Menu to appear.

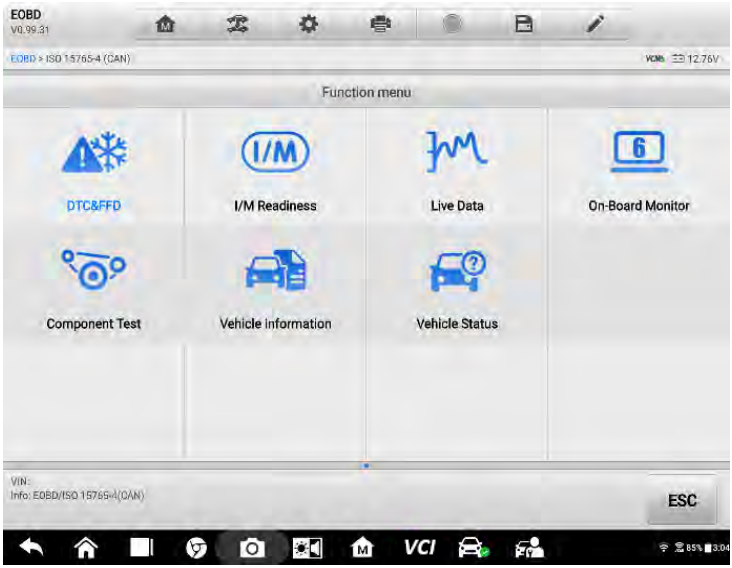


Figure 0-34 ***Sample OBD II Diagnostic Menu***

4. Select a function option to continue.

   - DTC & FFD
   - I/M Readiness
   - Live Data
   - O2 Sensor Monitor
   - On-Board Monitor
   - Component Test
   - Vehicle Information
   - Vehicle Status

NOTE

Supported functions may vary by vehicle.

Function Descriptions

This section describes the various functions of each diagnostic option:

Trouble Codes

When this function is selected, the screen displays a list of Stored Codes and Pending Codes. When the Freeze Frame data of certain DTCs are available for viewing, a snowflake button will display on the right side of the DTC item. The Erase Codes function can be applied by tapping the functional button at the bottom of the screen.

Figure 0-9 *Sample Trouble Codes Screen*

- **Stored Codes**

  Stored codes are emission-related DTCs from the ECM of the vehicle. OBD II/EOBD Codes have a priority according to their emission severity, with higher-priority codes overwriting lower-priority ones. The priority of the code determines if a MIL can enact the codes erase procedure. Manufacturers rank codes differently so expect display to vary by vehicle.

- **Pending Codes**

  These are codes whose storing conditions have been met during the last drive cycle, but need to be met on two or more consecutive drive cycles before the DTC stored. The purpose of displaying pending codes is to assist the service technician after a vehicle repair when diagnostic information is cleared, by reporting test results after a single driving cycle.

  a) If a test fails during the driving cycle, the DTC associated is reported. If the pending fault does not occur again within 40 to 80 warm-up cycles, the fault is automatically cleared from memory.

b) Test results reported do not necessarily indicate a faulty component or system. If test results indicate another failure after additional driving, a DTC is stored to indicate a faulty component or system.

- **Freeze Frame**

  In most cases the stored frame is the last DTC reported. Certain DTCs, those that have a greater impact on vehicle emission, have a higher priority. In these cases, DTC of the highest priority is the one for which the freeze frame records are retained. Freeze frame data includes a "snapshot" of critical parameter values at the time the DTC is stored.

- **Erase Codes**

  This option is used to clear all emission-related diagnostic data including DTCs, freeze frame data and specific manufacturer-enhanced data from the vehicle ECM. This option resets the I/M Readiness Monitor Status for all vehicle monitors to Not Ready or Not Complete status.

  A confirmation screen displays when the clear codes option is selected to prevent accidental loss of data. Select **Yes** on the confirmation screen to continue, or **No** to exit.

I/M Readiness

This function is used to check the readiness of the monitoring system. It is an excellent function to use prior to having a vehicle inspected for state emissions compliance. Selecting I/M Readiness opens a submenu with two choices:

- Since DTCs Cleared – displays the status of monitors since the last time the DTCs are erased.
- This Driving Cycle – displays the status of monitors since the beginning of the current drive cycle.

Live Data

This function enables the display of real-time PID data from the ECU. Displayed data includes analog and digital input and output, and system status information broadcast in the vehicle data stream.

Live data can be displayed in various modes, see *4.5 Live Data* on page 45 for detailed information.

O2 Sensor Monitor

This function allows retrieval and review of recent O2 sensor monitor test results stored on the vehicle on-board computer.

The O2 Sensor Monitor test function is not supported by vehicles that communicate using a controller area network (CAN). For O2 Sensor Monitor tests results of CAN-equipped vehicles, refer to *On-Board Monitor*.

On-Board Monitor

This function allows you to view the results of On-Board Monitor tests. The tests are useful after the service when a vehicle control module memory is already erased.

Component Test

This function enables dual-directional control of the ECM so that the diagnostic tool can transmit control commands to operate the vehicle systems. This function is useful in determining how well the ECM responds to a command.

Vehicle Information

This function enables the display of the vehicle identification number (VIN), calibration identification number, calibration verification number (CVN), and other information of the test vehicle.

Vehicle Status

This function checks the current condition of the vehicle, such as the communication protocols of OBD II modules, number of fault codes, and status of the Malfunction Indicator Light (MIL).

4.11 Diagnostic Report

Pre-Scan and Post-Scan

- To perform the pre-scan and post-scan functions:

1. Auto SCAN the Vehicle - the Auto VID function can automatically identify the vehicle and its equipped systems. All available modules in all systems will be scanned automatically. Codes and code details will be listed.
2. Print Pre-SCAN Report - vehicle images can be taken with tablet and attached to SCAN report. The report file can be generated and submitted. The report can be customized with shop and vehicle information.
3. Repair Vehicle - creates efficient repair plan from the start.
4. Auto SCAN Repaired Vehicle - ensures no new faults were created during repair and no DTCs are present at completion.
5. Print Post-SCAN Report - proves all DTCs on Pre-SCAN report are fixed.

Diagnostic Report PDF

The diagnostic report can be reviewed, saved, and printed in multiple applications of the platform.

a) Via the **History** function:

- Enter the Diagnosis main page, and tap **History** in the Top Toolbar.

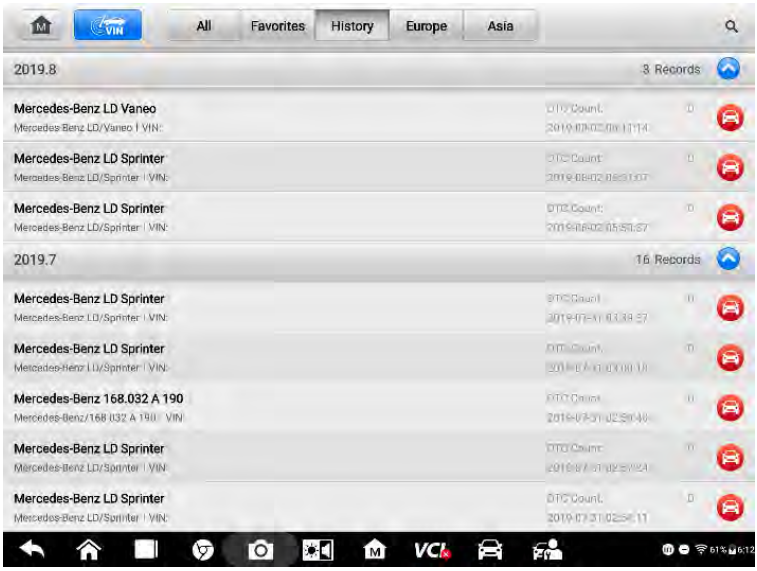


Figure 0-36 ***Sample History Screen***

- Select a history record, and tap the ••• button in the upper right corner to view, print, email or delete the PDF document.

Figure 0-37 ***Sample Historical Test Screen***

b) Via the Auto Scan function:

- Enter the **Auto Scan** page and tap **Fault Scan** in the Functional Button Bar at the bottom of the screen.

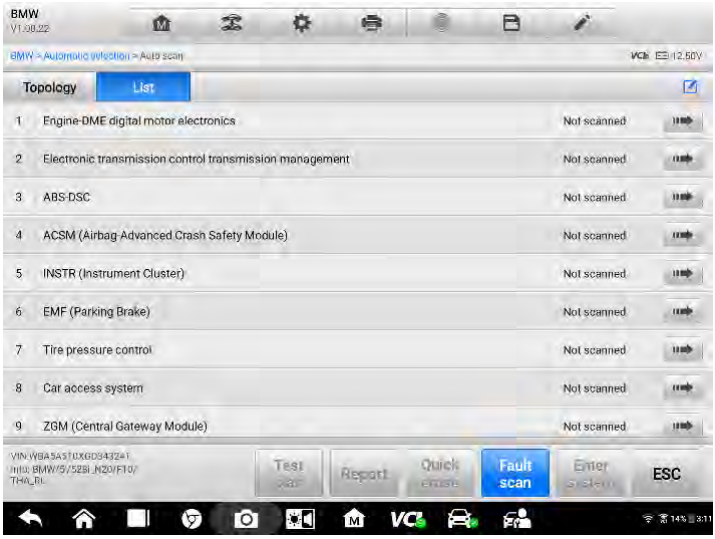


Figure 0-38 ***Sample Auto Scan Screen 1***

- When the system scan is completed, tap **Report** in the Functional Button Bar

at the bottom of the screen.

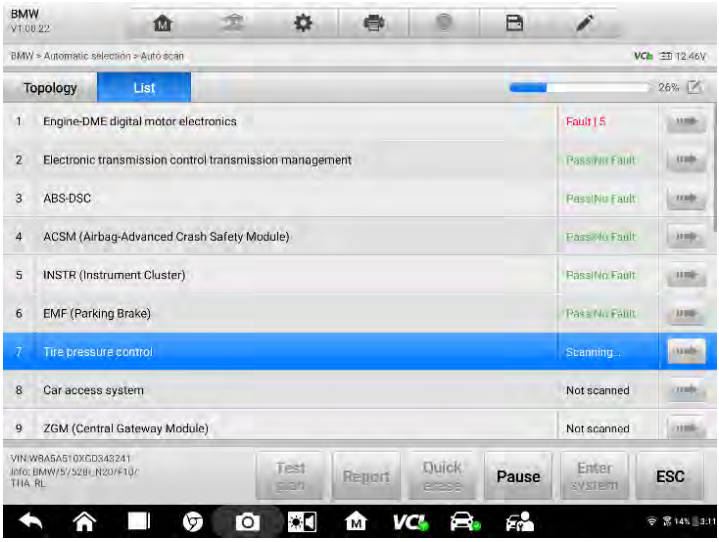


Figure 0-39 ***Sample Auto Scan Screen 2***

- Tap the button in the Diagnostics Toolbar, and select **Save all data** to save the PDF document or select Save this page to save the screenshot of the current page.

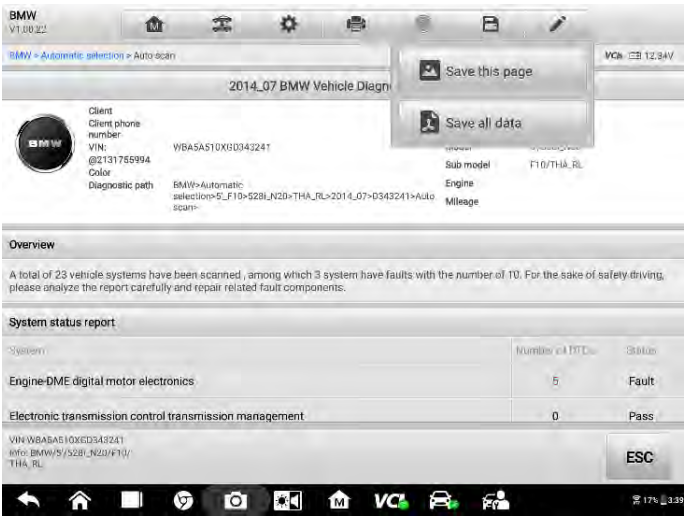


Figure 0-40 ***Sample Auto Scan Screen 3***

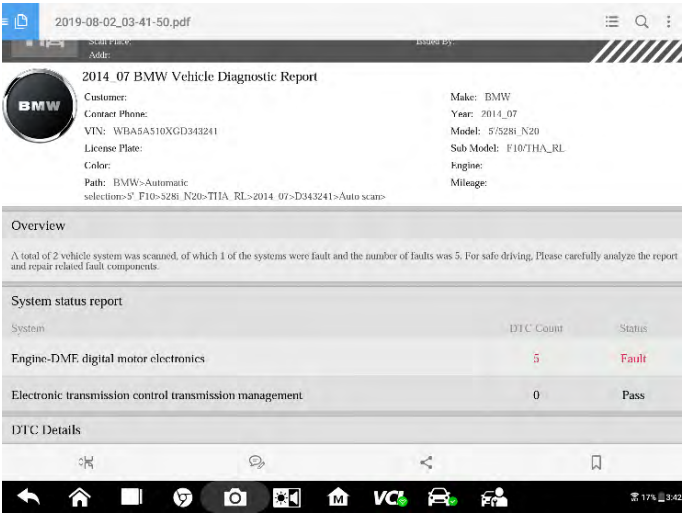


Figure 0-41 ***Sample PDF Document Screen***

c) Via the functions on the Navigation Bar:

- The diagnostic report can also be viewed from such diagnostics function screens including Auto scan, Read codes, Live data, and Active test. Tap the button in the Diagnostics Toolbar, and select **Save all data** to save the PDF document or select **Save** this page to save the screen shot of the current page.

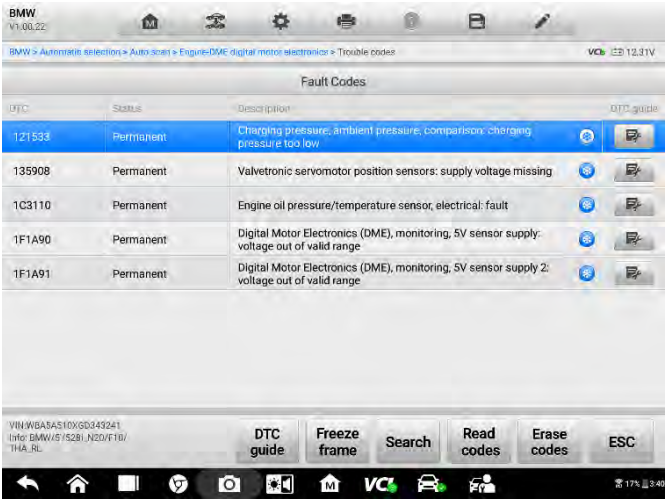


Figure 0-42 ***Sample Read Codes Screen***

4.12 Exit Diagnostics

The Diagnostics application operates while communication with the vehicle is still active. It is important to properly exit from the diagnostics operation interface to stop all communications with the vehicle before closing the Diagnostics application.

NOTE

Damage to the vehicle electronic control module (ECM) may occur if communication is disrupted. Ensure all forms of communication links such as data cable, USB cable, and wireless or wired network, are properly connected throughout the test. Exit all interfaces before disconnecting the test cable and power supply.

- **To exit the Diagnostics application**

1. On an active diagnostic screen, tap the **Back** or **ESC** functional button to exit a diagnostic session; Or
2. Tap the **Vehicle Swap** button in the diagnostics toolbar to return to the Vehicle Menu screen.
3. On the vehicle menu screen, tap the **Home** button in the top toolbar; or tap the **Back** button in the navigation bar at the bottom of the screen. Or
4. Tap the **Home** button in the diagnostics toolbar to exit the application directly and return to the MaxiSys Main Screen.

Now, the Diagnostics application is no longer communicating with the vehicle and it is safe to open other MaxiSys applications, or exit the MaxiSys Diagnostic System and return to the Android System's Home screen.

5 Repair Assist

Repair Assist offers an all-round fault-clearing function, through which you can access continually updated TSB, detailed repair information and professional troubleshooting. To ensure accuracy and reliability, it is based on a massive database of real shop repairs and technical guidance. Repair Assist also employs the latest cloud computing technology to match the specific DTC with the exact vehicle model.

5.1 Access Vehicle Systems

Before entering Repair Assist, connect MaxiSys MS909 to the test vehicle through the VCI device. For detailed procedure, see *Chapter 4 Diagnostics*.

When the tablet is connected to the vehicle, tap **Auto scan** in the main menu and turn on the ignition. For Volkswagen, Audi, BMW, Ford, Land Rover, Jaguar, Chrysler, Fiat and Volvo, a topology is added to map the relations among vehicle systems.

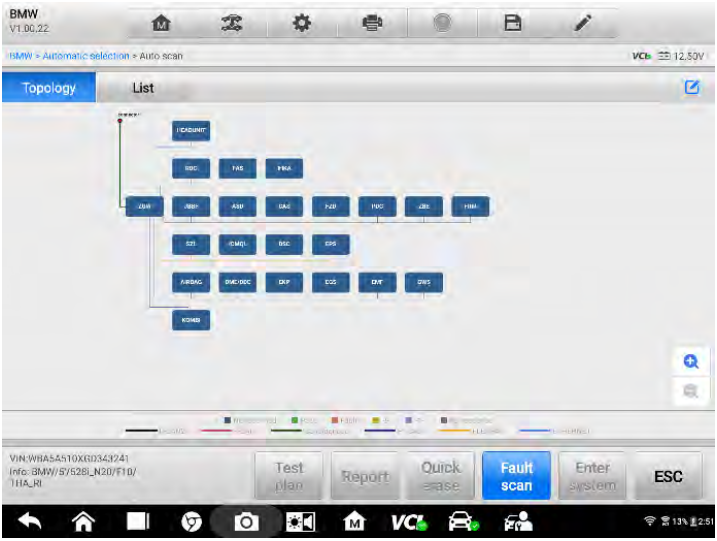


Figure 5-1 ***System Topology***

5.2 View the DTCs

To view the DTCs of the vehicle systems:

1. Tap **Fault scan** at the bottom of the **List** tab page to scan all the systems, as shown in Figure 5-2.

2. Tap the grey arrow to the right of an item to enter the **Fault Codes** page.

3. Tap the **DTC guide** button to the right of a DTC to view the corresponding DTC guide, as shown in Figure 5-4.

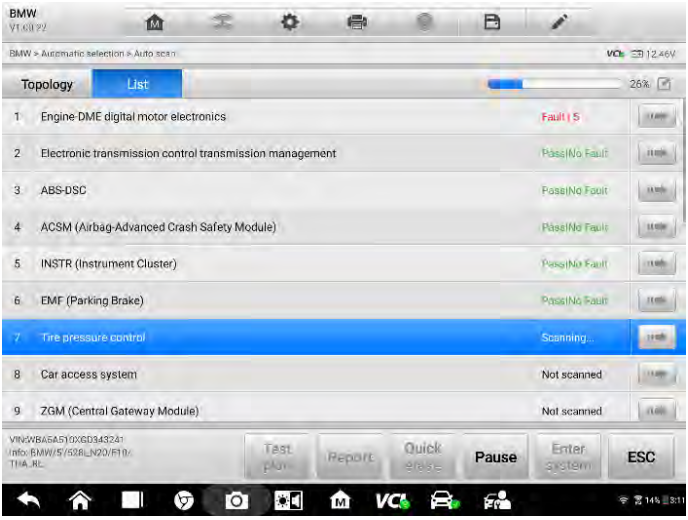


Figure 5-2 *DTC Scan*

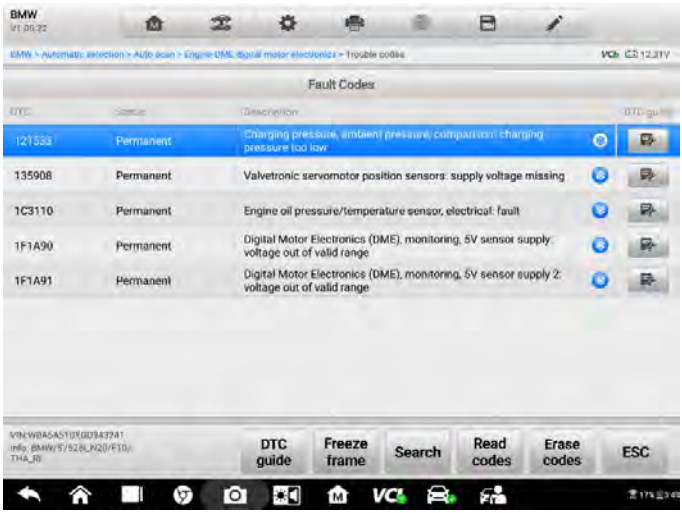


Figure 5-3 *Fault Codes*

5.3 DTC Guide

The repair case consists of the following sections:

1. **Intelligent Diagnostics** – displays possible faults the DTC indicates.
2. **Technical Service Bulletin** – contains DTC-related recalls, TSB, and OEM campaigns.

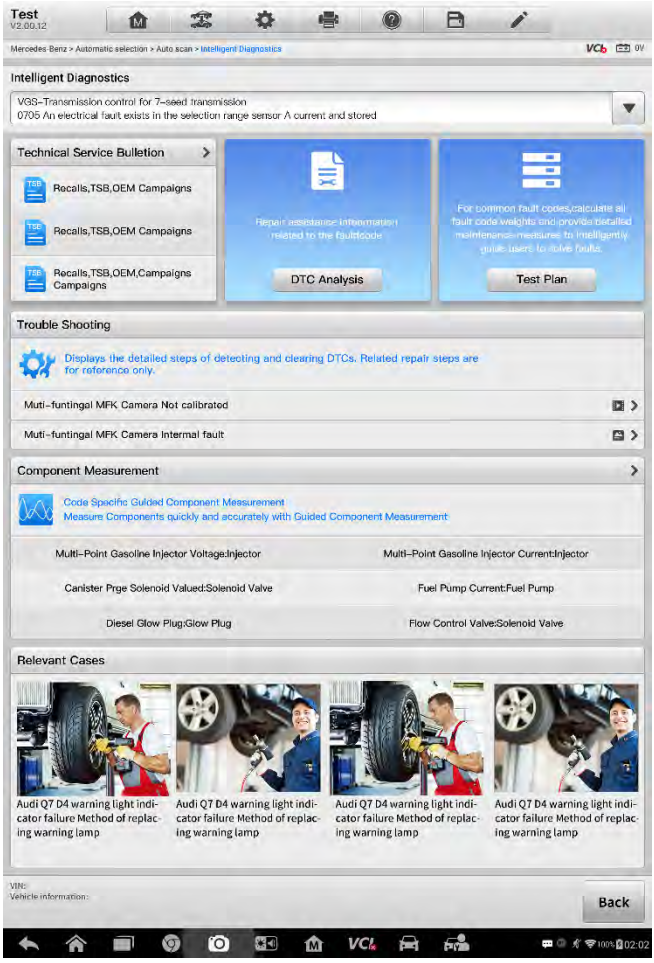


Figure 5-4 *DTC Guide*

3. **DTC Analysis** – provides repair assistance information related to the fault code.
4. **Test Plan** – generates test plans for common fault codes with their respective weights taken into account.

5. **Troubleshooting** – clarifies the steps for determining and clearing faults.
6. **Component Measurement** – specifies guidance for measuring DTC-related components quickly and accurately.
7. **Relevant Cases** – offers relevant fault-clearing cases for reference.

5.4 Technical Service Bulletin

Technical Service Bulletin provides a tool for matching DTCs with relevant TSB and OEM campaigns, shortening search time and simplifying operation procedure.

Figure 5-5 *TSB Section*

A DTC can relate to several TSBs, which are listed in the TSB section. To view all TSBs, tap the arrow in the upper right corner of the section to open the TSB page, as shown in Figure 5-6.

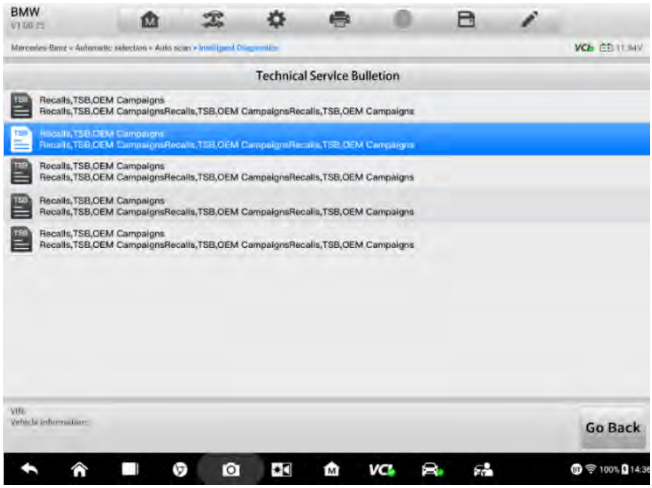


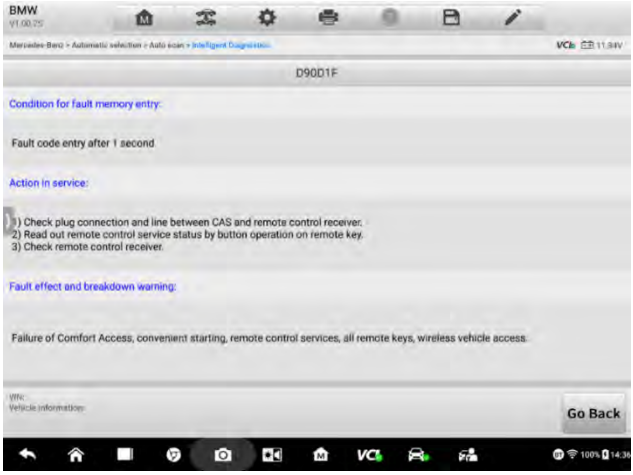
Figure 5-6 *TSB Page*

You can tap and view any TSB in the page, as shown in **Figure 5-7.**

Figure 5-7 ***TSB Information***

5.5 DTC Analysis

DTC analysis contains conditions for fault memory entry, action in service and fault

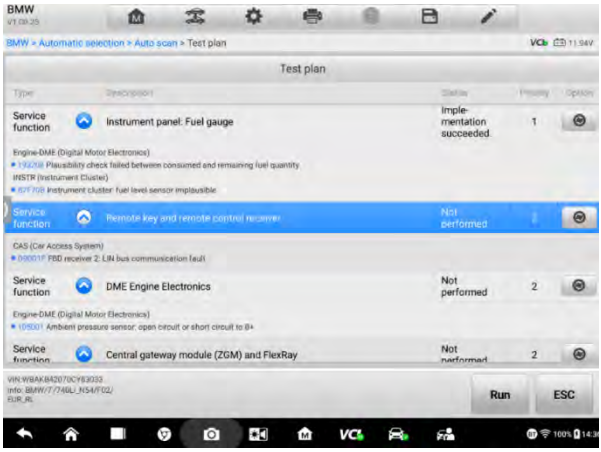


effect and breakdown warning.

Figure 5-8 ***DTC Analysis***

5.6 Test Plan

Test plan specifies information of the items to be tested, including type, description, status and priority. The higher the priority, the earlier the components related should be tested. You can tap the arrow following each service function to view the

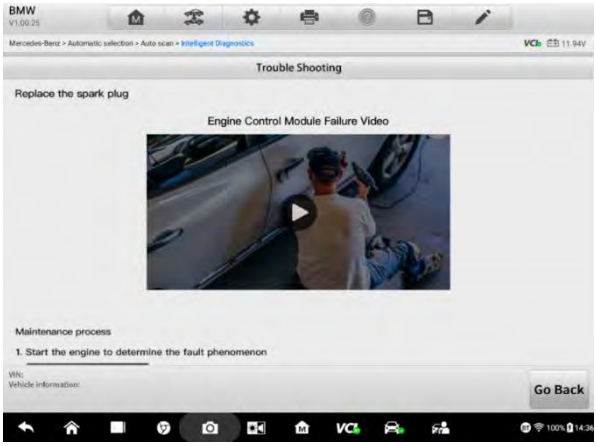


corresponding DTCs and tap again to collapse them.

Figure 5-9 *Test Plan*

5.7 Troubleshooting

Troubleshooting provides a series of operations for finding out the reason that causes the DTC. It is not only introduced in words, but also in images and videos, as shown in



the following figure.

Figure 5-10 ***Troubleshooting***

5.8 Component Measurement

The component measurement section gives general description, connection guidance and test guidance for using an oscilloscope to troubleshoot the fault.

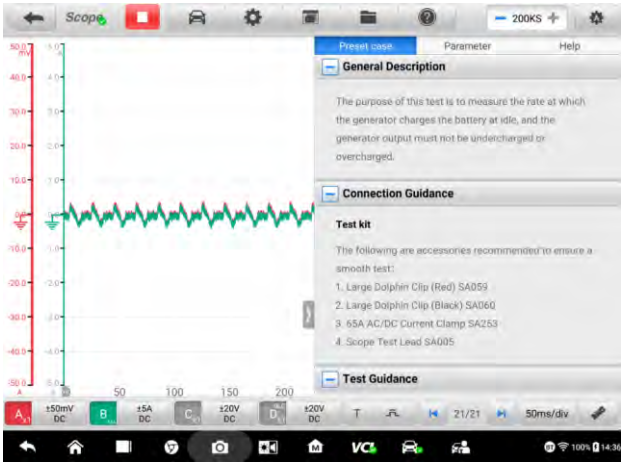


Figure 5-11 ***Component Measurement***

5.9 Relevant Cases

This section offers relevant fault-clearing cases for your reference. You can study cases on similar faults to get an all-round understanding of how to fix the fault with your vehicle, as shown in Figure 5-12.

Figure 5-12 ***Relevant Cases***

6 Service

The Service section is specially designed to provide quick access to the vehicle systems for various scheduled service and maintenance tasks. The typical service operation screen is a series of menu driven executive commands. Follow on-screen instructions to select appropriate execution options, enter correct values or data, and perform necessary actions. The application will display detailed instructions to complete selected service operations.

After entering each special function, the screen will display two application choices: Diagnosis and Hot Functions. The Diagnosis enables the reading and clearing of codes which is sometimes necessary after completing certain special functions. Hot Functions consists of sub functions of the selected special function.

Figure 6-1 ***Sample Service Menu***

Several most commonly used services are described in this chapter.

6.1 Oil Reset Service

Perform reset for the Engine Oil Life system, which calculates an optimal oil life change interval depending on the vehicle driving conditions and climate. The Oil Life Reminder must be reset each time the oil is changed, so the system can calculate when the next oil change is required.

NOTE

1. Always reset the engine oil life to 100% after every oil change.
2. All required work must be carried out before the service indicators are reset. Failure to do so may result in incorrect service values and cause DTCs to be stored by the relevant control module.
3. For some vehicles, the scan tool can reset additional service lights such as maintenance cycle and service interval. On BMW vehicles for example, service resets include engine oil, spark plugs, front/rear brakes, coolant, particle filter, brake fluid, micro filter, vehicle inspection, exhaust emission inspection and vehicle checks.

6.2 Electric Parking Brake (EPB) Service

This function has a multitude of usages to maintain the electronic braking system safely and effectively. The applications include deactivating and activating the brake control system, assisting with brake fluid control, opening and closing brake pads, and setting brakes after disc or pad replacement.

6.2.1 EPB Safety

It can be dangerous to perform Electric Parking Brake (EPB) system maintenance, so before you begin the service work, please keep these rules in mind.

- ✓ Ensure that you are fully familiar with the braking system and its operation before commencing any work.
- ✓ The EPB control system may be required to be deactivated before carrying out any maintenance/diagnostic work on the brake system. This can be done from the tool menu.
- ✓ Only perform maintenance work when the vehicle is stationary and on level ground.
- ✓ Ensure that the EPB control system is reactivated after the maintenance work has been completed.

NOTE

Autel accepts no responsibility for any accident or injury arising from the maintenance of the Electric Parking Brake system.

6.3 Tire Pressure Monitoring System (TPMS) Service

This function allows you to quickly look up the tire sensor IDs from the vehicle ECU, as well as to perform TPMS replacement and reset procedures after tire sensors are replaced.

6.4 Battery Management System (BMS) Service

BMS allows the tool to evaluate the battery charge state, monitor the close-circuit current, register the battery replacement, activate the rest state of the vehicle, and charge the battery via the diagnostic socket.

NOTE

1. This function is not supported by all vehicles.
2. The sub functions and actual test screens of the BMS may vary by vehicle, please follow the on-screen instructions to make correct option selection.

The vehicle may use either a sealed lead-acid battery or an Absorbed Glass Mat (AGM) battery. Lead acid battery contains liquid sulphuric acid and can spill when overturned. AGM battery (known as VRLA battery, valve regulated lead acid) also contains sulphuric acid, but the acid is contained in glass mats between terminal plates.

It is recommended that the replacement aftermarket battery has the same specifications, such as capacity and type, as the exiting battery. If the original battery is replaced with a different type of battery (e.g. a lead-acid battery is replaced with an AGM battery) or a battery with a different capacity (mAh), the vehicle may require reprogramming of the new battery type, in addition to, performing the battery reset. Consult the vehicle manual for additional vehicle-specific information.

6.5 Diesel Particle Filter (DPF) Service

The Diesel Particle Filter (DPF) function manages DPF regeneration, DPF component replacement teach-in and DPF teach-in after replacing the engine control unit.

The ECM monitors driving style and selects a suitable time to employ regeneration. Cars driven a lot at idling speed and low load will attempt to regenerate earlier than cars driven more with higher load and speed. For regeneration to take place, a prolonged high exhaust temperature must be obtained.

In the event of the car being driven in such a way that regeneration is not possible, i.e., frequent short journeys, a diagnostic trouble code will eventually be registered in addition to the DPF light and “Check Engine” indicators displaying. A service regeneration can be requested in the workshop using the diagnostic tool.

Before performing a forced DPF regeneration using the tool, check the following items:

- The fuel light is not on.
- No DPF-relevant faults are stored in system.
- The vehicle has the specified engine oil.
- The oil for diesel is not contaminated.

IMPORTANT

Before diagnosing the problem vehicle and attempting to perform an emergency regeneration, it is important to obtain a full diagnostic log and read out relevant measured value blocks.

NOTE

1. The DPF will not regenerate if the engine management light is on, or there is a faulty EGR valve.
2. The ECU must be re-adapted when replacing the DPF and when topping up the fuel additive Eolys.

If the vehicle needs to be driven in order to perform a DPF service, a second person is needed for the function. One person should drive the vehicle while the other person observes the screen on the Tool. Do not attempt to drive and observe the scan tool at the same time. This is dangerous and puts your life and the lives of other motors and pedestrians at risk.

6.6 Immobilizer (IMMO) Service

An immobilizer is an anti-theft mechanism that prevents an automobile's engine from starting unless the correct ignition key or other device is present. This device prevents thieves from starting the car by a method known as hot wiring. Most new vehicles have an immobilizer as standard equipment. An important advantage of this system is that it doesn't require the car owner to activate it; it operates automatically. An immobilizer is considered as providing much more effective anti-theft protection than an audible alarm alone; many auto insurance companies offer lower rates for vehicles that are equipped with an immobilizer.

As an anti-theft device, an immobilizer disables one of the systems needed to start a car's engine, usually the fuel supply or the ignition. This is accomplished by radio frequency identification between a transponder in the ignition key and a device called a radio frequency reader in the steering column. When the key is placed in the ignition, the transponder sends a signal with a unique identification code to the reader, which relays it to a receiver in the vehicle computer control module. If the code is correct, the computer allows the fuel supply and ignition systems to operate and start the car. If the code is incorrect or absent, the computer disables the system, and the car will be unable to start until the correct key is placed in the ignition.

The IMMO service can disable a lost vehicle key and program the replacement key fob. One or more replacement key fobs can be programmed.

6.7 Steering Angle Sensor (SAS) Service

SAS Calibration permanently stores the current steering wheel position as the straight-ahead position in the SAS EEPROM. Therefore, the front wheels and the steering wheel must be set exactly to the straight-ahead position before calibration. In addition, the VIN is also read from the instrument cluster and stored permanently in the SAS EEPROM. On successful completion of calibration, the SAS fault memory is automatically cleared.

Calibration must always be carried out after the following operations:

- Steering wheel replacement
- SAS replacement
- Any maintenance that involves opening the connector hub from the SAS to the column
- Any maintenance or repair work on the steering linkage, steering gear or other related mechanism
- Wheel alignment or wheel track adjustment
- Accident repairs where damage to the SAS or assembly, or any part of the steering system may have occurred

NOTE

1. Autel accepts no responsibility for any accident or injury arising from servicing the SAS system. When interpreting DTCs retrieved from the vehicle, always follow the manufacturer's recommendation for repair.
2. All software screens shown in this manual are examples, and actual test screens may vary by test vehicle. Pay attention to the menu titles and onscreen instructions to make correct option selections.
3. Before starting procedure, make sure the vehicle has an ESC button. Look for button on dash.

7 Remote Programming

Remote Programming Operation is a support function based on data transmission through Cloud platform, providing remote programming for solving diagnostic and repair issues.

7.1 General Introduction

The remote programming operation uses the Cloud platform to build an invisible bridge that connects the client diagnostic tablet with experts that have OEM software information. The following diagram presents an overview of the principles of the Remote Programming function.

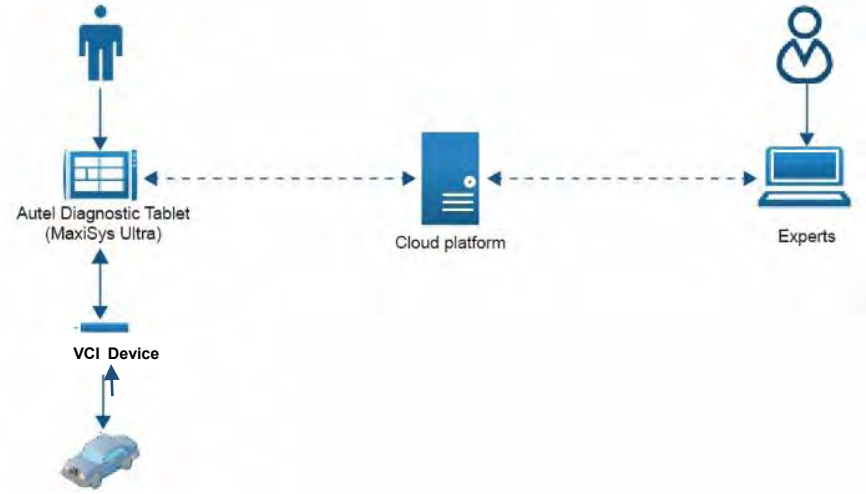


Figure 7-1 ***Principles of Remote Programming***

Table 7-1 ***Description of Remote Programming principle***

Name	Description
VCI device	Build a link between the vehicle and the Autel diagnostic tablet.
MaxiSys MS909	Tap the Remote Programming module on its screen for uploading diagnostic data and other questions.

Name	Description
Cloud platform	Transmit diagnostic data from the vehicle side to the experts, making it possible for the experts doing OEM remote programming for vehicle diagnosis.
Experts	Provide technical support for diagnostic troubles based on OEM software.

The Remote Programming is a newly developed module which supplements the MaxiSys MS909 in vehicle diagnosis. It overcomes the distance problem and expands the functions of the MaxiSys MS909 diagnostic tablet. Apart from that, Remote Programming provides instant support for dealing with new faults in diagnosing the latest vehicle models.

NOTE

Except for the above professional functions, Remote Programming cannot be ignored also because the expert support is free of charge.

7.2 Getting Started

Before getting started, a proper connection between the vehicle and VCI is required. When faults have been detected, there is no way to solve it because of OEM restriction. It is time for you to log in to the Remote Programming module on the MaxiSys tablet. Remote Programming has a quite easy access channel, just follow the steps below:

- **To open the Remote Programming application**

1. Tap the **Remote Programming** icon to enter the Homepage. (VIN is auto-matched during the procedure.)
2. Select relevant vehicle information (brand, model, and year).
3. Tap the **Finish** icon in the upper right corner of the screen.

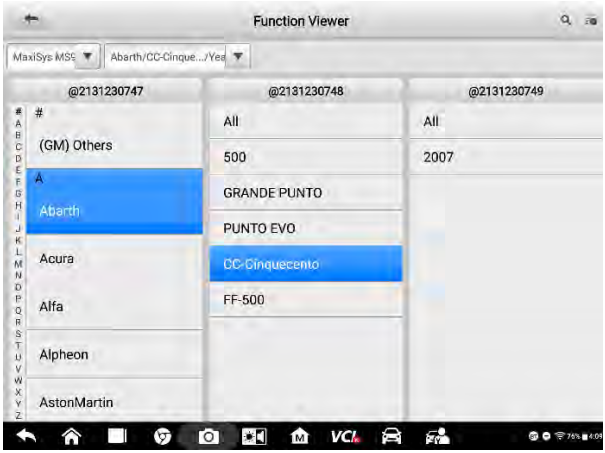


Figure 7-2 ***Sample Vehicle Selection Screen***

7.3 Operation

The Remote Programming Operation process consists of 3 main steps, namely, order submission, order confirmation, and the most critical, remote programming. Besides, historical order serves as a reminder of your previous data information.

7.3.1 Submit Order

When you see the **Service** and **Me** tabs at the top, you have entered the **Submit Order** page.

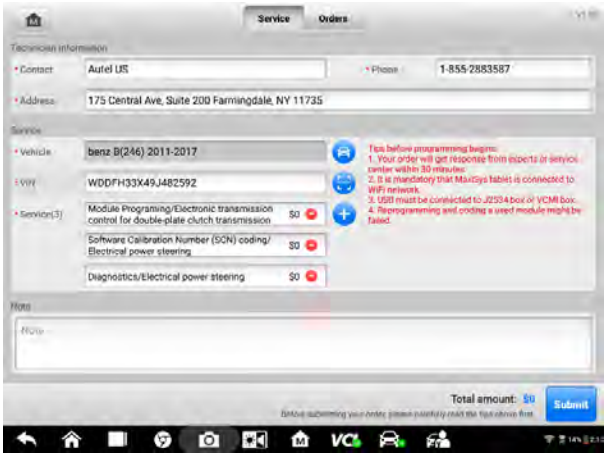


Figure 7-3 ***Sample Submit Order Screen***

Input the Technician information and Service information according to the notes prompted.

In the Service information section, there are 3 blue buttons to the right of the boxes. These buttons are available for quick filling. For detailed operation, see the table below.

Table 7-2 Functions of Buttons

Icon	Description
	For selecting vehicle brands and models.
	For scanning the VIN code of the vehicle.
	For adding exact Service types.

The **Note contents** in red color on the middle right side are tips for doing the remote programming connection. While the **Notes** at the bottom are designed for writing vehicle troubles for experts' reference.

After all information have been input, tap the **Submit** button to proceed.

NOTE

Each box that starts with a red asterisk must be filled. The information input must be valid and genuine.

7.3.2 Confirm Order

As the order has been submitted, you are directed to the Confirm Order page. Make a quick check about the contents that you have input before and then tap the blue button OK to continue.

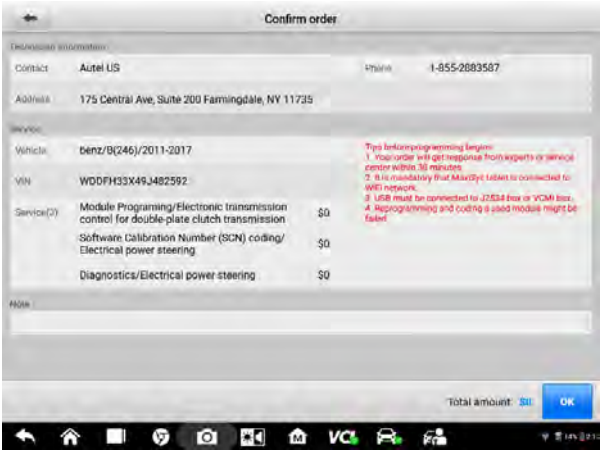


Figure 7-4 ***Sample Confirm Order Screen 1***

If you do not want to continue with this order, or if you find any errors in your order, you can tap the **Cancel** button in the lower right corner to terminate the procedure.

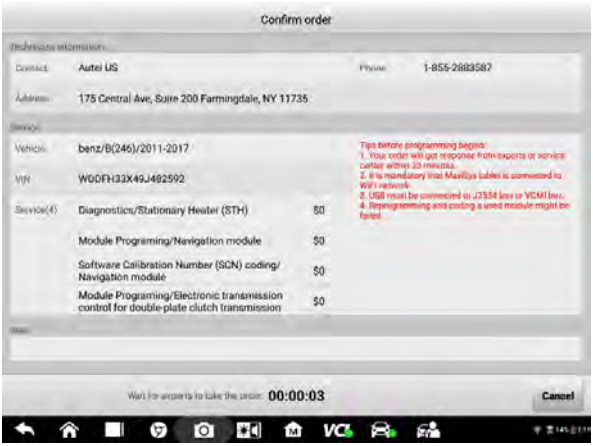


Figure 7-5 ***Sample Confirm Order Screen 2***

NOTE

This **Cancel** button can be pressed only before the expert takes your order.

After the expert takes your order, a message will appear asking for your confirmation. You need to confirm this order within 5 minutes. Otherwise, this order will be canceled automatically

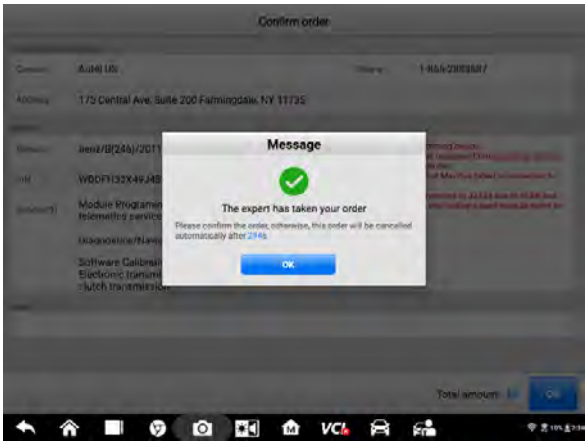


Figure 7-6 ***Sample Confirm Order Screen 3***

7.3.3 Remote Programming

Once the expert has received your order, the **Remote Programming** page appears. At this point, the expert starts to perform remote programming. If you want to see how the expert programs, tap **Remote desktop** in the upper right corner. Once the expert accepts your request, you can access the expert's computer desktop.

7.3.3.1 Request Accepted

When the expert accepts your request, you will see a shared desktop showing a series of programming operations as in the figure below.

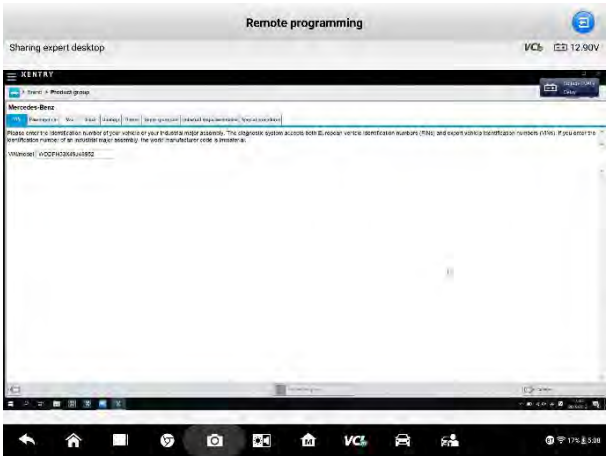


Figure 7-7 ***Sample Remote Programming Screen 1***

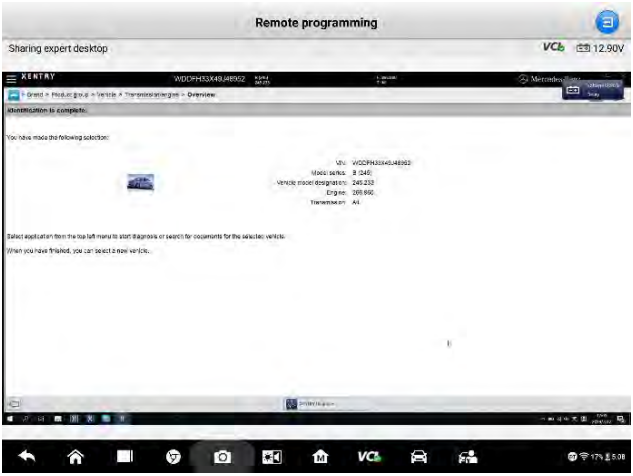


Figure 7-8 *Sample Remote Programming Screen 2*

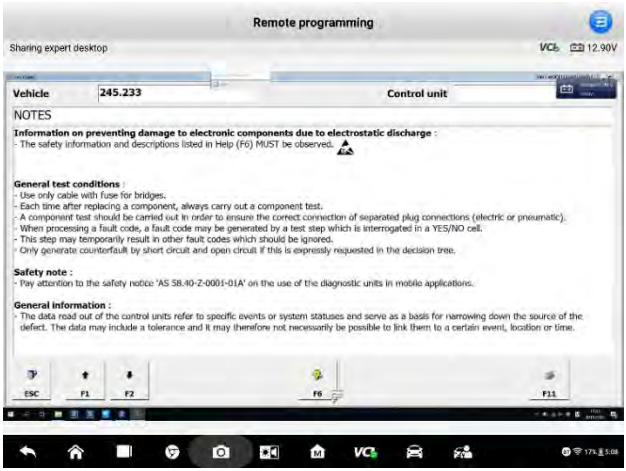


Figure 7-9 *Sample Remote Programming Screen 3*

These operations are based on the OEM software which authorizes the expert to do programming and help you diagnose the vehicle.

7.3.3.2 Request Rejected

If the expert rejects your request, you will receive a rejection message.

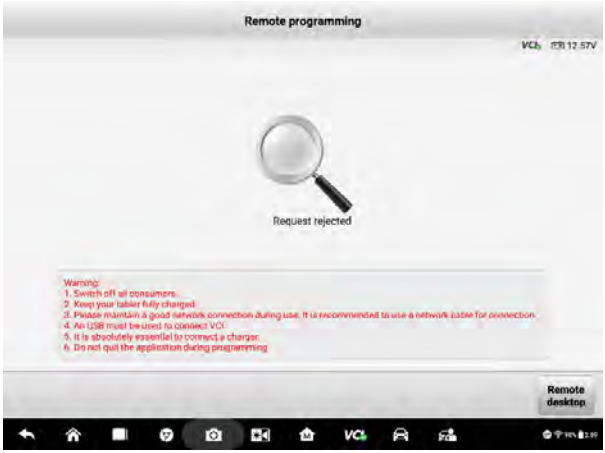


Figure 7-10 ***Sample Request Rejected Page***

7.3.3.3 Programming Finished

When Remote Programming is finished, a message will be returned saying **Programming is over, please wait for expert to upload the report…**.

After that, you will be redirected to the **Program Report** page that shows the status, **Success** or **Failure**, of each programming procedure.

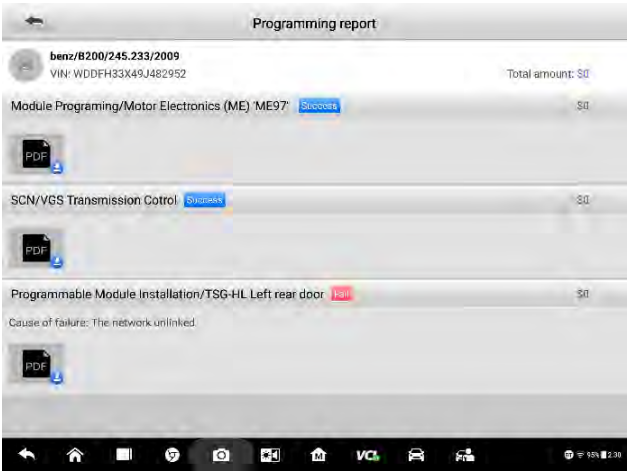


Figure 7-11 ***Sample Programming Report Page***

NOTE

A PDF report file is attached to each record. Tap it to see the detailed output information.

7.3.4 Historical Orders

Historical orders are orders completed or not completed out of subjective or objective reasons, such as proactive cancellation, unexpected networking disconnection, or unexpected power-off.

Tap the **Me** button, and you will see the historical orders.

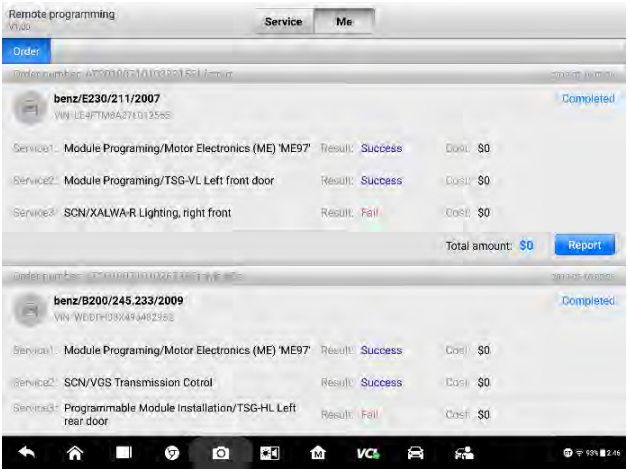


Figure 7-12 ***Sample Historical Orders Page***

Both Completed and Incomplete orders are recorded in this part. For Completed orders, the programming report is available if you tap the blue button **Report**. For Incomplete orders, you can resubmit them.

➢ **To resubmit the incomplete orders**

1. Tap the **Submit** button, and the **Incomplete orders** page appears.
2. Check and confirm the information on the **Incomplete orders** page.
3. Tap **OK** to continue.
4. Wait for the expert to take orders.
5. A **Message** saying **Expert has received the order** appears Tap **OK** after you confirm the message.

NOTE

If you do not confirm the order within five minutes, the system will cancel it.

8 MaxiFix

MaxiFix is an online community, based on the ever-expanding cloud database that provides abundant information and resources to help find efficient solutions to all kinds of vehicle troubles. It serves as a forum that enables users to network with other MaxiSys users and with Autel technicians. Users can post questions and answers, share tips and search for repair cases with proven documented fixes.

MaxiFix is an expanding resource as the database is updated daily with reported solution cases and advisory reports from MaxiSys users worldwide.

Information in the MaxiFix database is organized into a series of diagnostic tips that designed to help you locate the cause of particular problems of the test vehicle and quickly find solutions to them.

8.1 Getting Started

Tap the blue MaxiFix icon. You will be automatically logged in as the MaxiFix system identifies the serial number and password of the MS909 tablet and its associated registered user.

8.2 Navigation

The MaxiFix full screen layout will display upon opening, as shown in Figure 8-1 below.

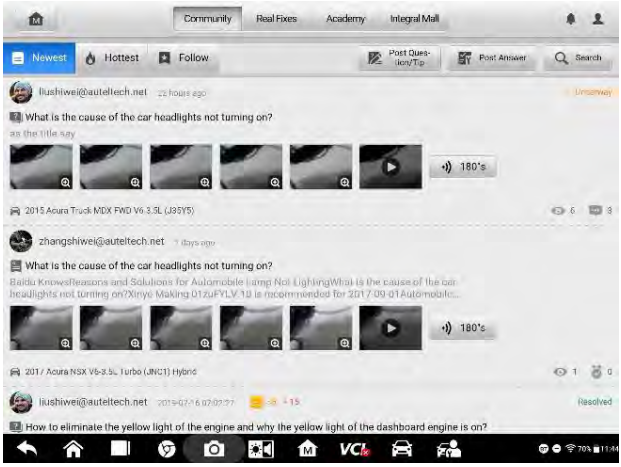


Figure 8-1 ***MaxiFix Home Page***

The MaxiFix home page contains three main areas:

1. **Navigation Bar** – the top navigation bar allows you to switch between different sections of MaxiFix. The bell-shaped icon and the bust icon to the right lead to My Messages and Personal Center respectively.
2. **Function Menu** – the function menu below the navigation bar displays tabs and functional buttons.
3. **Main Screen** – the main screen displays questions and answers, problems and solutions, comments and thumb-ups, images and videos as well as other information posted by Autel users.

My Messages & Personal Center

My Messages

The bell-shaped icon leads to messages about your activities in MaxiFix.

Tap the icon to enter the **My Messages** page, where you can see a list of messages read or unread. If a piece of message is not read, the entry is in dark black; otherwise, the entry turns to gray.

The unread messages will be set as read once you tap the **All set as read** button. If there are too many messages, you can tap the **Clear** button to clear the messages.

Personal Center

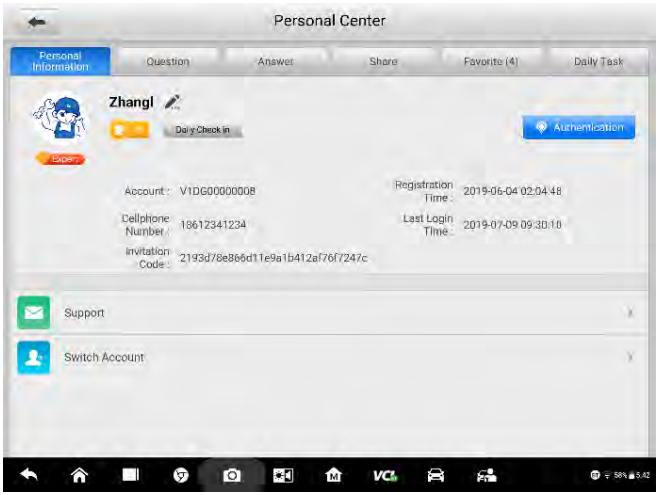


Figure 8-2 *Personal Center Page*

Personal Center consists of six tab pages, including **Personal Information**, **Question**, **Answer**, **Share**, **Favorite**, and **Daily Task**. Each tab page shows a different aspect of user activity in MaxiFix.

Personal Information – contains technician accreditation, support and account operations.

- **To apply for technician accreditation**

  1. Tap the **Authentication** button and enter the **Technician Accreditation** page.
  2. Fill in the information required.
  3. Upload intelligible pictures of your technician certificate.
  4. Tap **Submit** to have your application reviewed.
  5. Wait for your application to be passed. As long as your information meets the required standards, you will get a authentication soon.

Back in the main screen of Personal Information, **Support** offers a feedback channel for sharing user experience in MaxiFix and viewing FAQs. MaxiFix allows other accounts to log in. You can tap **Switch Account** to switch to another account.

Question – displays the posted questions in the MaxiFix community.

Answer – displays your answers to questions.

Share – displays tips for troubleshooting and diagnosis.

Favorite – displays questions, shares, and repair cases you saved before.

Daily task – displays various tasks with reward coins. You can finish daily tasks to earn reward coins and community experience values. The daily tasks include sharing tips, posting questions, and answering pending questions. You can tap the **Go to finish** button to the right of each task to earn the provided coins.

8.3 Operations

The top navigation bar consists of Home, Real Fixes, Academy and Integral Mall, the functions of which are shown below:

Community – shows questions and answers about vehicle problems and fault code solutions. Moreover, this section offers a good chance to blend in the MaxiFix community.

Real Fixes – presents real cases collected from actual shop repairs in an easy-to-understand and professional manner.

Academy – offers an online learning and help platform featuring videos and query tools.

Integral Mall – displays a series of Autel diagnostic products, such as diagnostic tablets, endoscopes, and oscilloscopes. You can get them with the required number of reward coins.

8.3.1 Community

The community section consists of three tab pages.

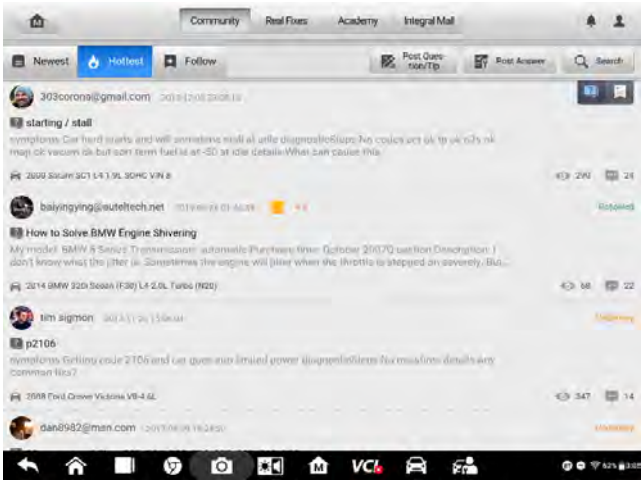


Figure 8-3 *Hottest Questions and Tips*

- **Newest** – displays questions and tips posted by MaxiSys users in order of time. The question mark icon leads a question

Table 8-1: Table of Small Icons in MaxiFix

Icon	Description
	Signifies what follows is a question.

Icon	Description
	Signifies what follows is a repair tip.
	Signifies the number of views.
	Signifies the number of times the repair tip is adopted.
	Signifies the number of answers to the question.
	Signifies the number of reward coins provided.

Each **question** is accompanied with two icons indicating the number of views and answers respectively. Similarly, each repair tip is accompanied with two icons indicating the number of views and adoptions.

Some of the questions are attached with a coin icon, indicating the number of reward coins provided for the best answer. The questioner can raise the number of reward coins to stimulate better solutions.

The orange **Underway** to the right of the questions indicates that the question has been answered by technicians or users but not confirmed by the questioner; while the green **Resolved** indicates that the questioner has confirmed the best answer.

- **Hottest** – displays hot questions with the most replies from experts or users, along with the most views.

For viewing convenience, entries under the Hottest menu are divided in two modes. Tap the question mark icon, and the screen only displays questions posted by users. Tap the bookmark icon, and the screen only shows repair tips shared by users. (For icon functions, *see Table 8-1: Table of Small Icons in MaxiFix*)

- **Follow** – displays the questions and tips you are following. The **Select Vehicle** button to the left allows you to make a quick selection of specific vehicles.

➢ **To select a vehicle**

1. Tap the blue **Select Vehicle** button to the left.
2. Select from the **Brand** list.
3. Select from the **Model** list.

After selecting a model, the identified vehicle is shown in the **Follow** tab page, with related user-posted questions and tips displayed together with user IDs. Tap one of the matched entries to see the details.

Functional Buttons:

The three functional buttons in the upper right corner are designed to facilitate communications between users and Autel experts.

- **Post Question/Tip** – provides a channel to post questions about vehicle faults and share solutions to diagnostic troubles.

  - **To post a question/tip**

    1. Tap the **Post Question/Tip** button.
    2. Tap the **Select Vehicle** button, select **Year, Brand, Model,** and **Engine** from the lists.
    3. Fill in the **Subject** in short phrases or a short question with keyword.
    4. Fill in **Credit Reward** as a reward for the best answer.
    5. Write your question or expression about vehicle faults in the **Content** box. (Three different posting ways are available, including picture, video and voice.)
    6. After all have done above, tap **Submit** in the upper right corner. And your question will be uploaded soon on the list of the Newest.

NOTE

The steps of posting a sharing tip are similar to posting a question, except that step 4 is not included in **Sharing Tip**.

Once a question has been posted, the entry is presented with the **Question icon**. While a tip has been posted, the entry is presented with the **Service Tip icon**.

- **Post Answer** – This button is for answering questions posted by other MaxiSys MS909 users.

  - **To post an answer**

    1. Tap the Post Answer button to enter the Pending Questions page.
    2. Select **To be answered**, and you will see a list of unanswered questions. Select **Underway**, and you will see a list of questions with some but no best answers.

3. Tap one question entry, and enter a page with a blue **Post Answer** button to the right.
4. Tap the **Post Answer** button to enter the **Reply** page.
5. Post your analysis and insights in the **Content** box.

NOTE
Three different posting methods are available: a maximum of five still images, a video within 15 seconds or a voice up to 3 minutes.

Answer adopted by the questioner will automatically receive reward coins. If your answer is confirmed as the Best Answer, you will receive reward coins from both the system and the questioner.

NOTE
You can add to answer via the **Continue Answer** button.

- **Search** – This button enables you to search for answers and solutions.

NOTE
The most-used keywords will be added into **Hot Search**. **Search History** records the keywords you input.

8.3.2 Real Fixes

In **Real Fixes,** a list of repair cases and troubleshooting tips are collected by way of content instructions and graph analysis. Additionally, some repair cases are attached with videos showing the whole process of troubleshooting.

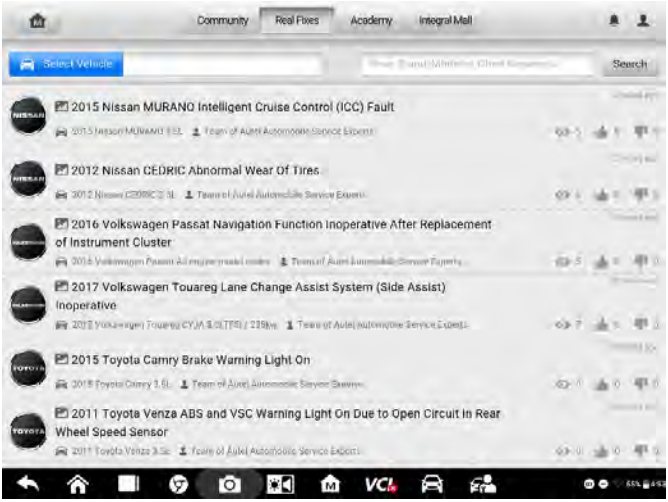


Figure 8-4 ***Sample Real Fixes Page 1***

There are six function parts in Real Fixes, as explained below:

1. Signifies the navigation bar

2. Signifies the vehicle selection button

3. Signifies the keywords search for repair fixes

4. Signifies the total search results of keywords searching

5. Signifies the repair fixes title and vehicle specification

6. Signifies the views and satisfaction for the repair case in MaxiFix community

In the list of real cases, three icons are attached to each fixes entry, making it possible for viewers to evaluate each case entry. For icon meanings, see Table 8-2 Icons on Real Fixes.

Table 8-2 Icons on Real Fixes

Icon	Description
	Repair case includes text and images.
	Repair case is accompanied with a video for explaining vehicle principles and diagnostic troubles.
	Vehicle identification, including brand and model.
	The number of views for each repair case.
	Tap this icon if you find the repair case helpful.
	Tap this icon if you find the repair case not helpful.

The **Select Vehicle** button in the upper left half allows you to choose the vehicle model and search for relevant repair information.

- **To Search for a real fix**

  1. Tap the blue ***Select Vehicle*** button on the left.

2. Select ***Year*** of the vehicle from the list.
3. Select ***Brand*** of the vehicle from the list.
4. Select ***Model*** of the vehicle from the list.
5. Select ***Engine*** of the vehicle from the list.
6. After all selections have been done, the system will match the identified vehicle with a list of repair case entries.
7. Press one entry of them and enter the real fix page with diagnostic description in detail (Figure 8-5).

Real Fixes in Detail

Figure 8-5 *Sample Real Fixes Page 2*

This page comprises a series of diagnostic operations, from finding vehicle faults, locating errors, to providing suggested solutions. It is based on a great deal of real repair cases with relevant graphs and videos, to present a complete maintenance database for the reference of MaxiSys MS909 users.

Each repair case includes nine main parts:

1. **Applicable Vehicles** – matches different types of vehicles that this repair case analysis can be applicable to.

2. **Symptoms** – points out the fault symptoms of the vehicle, which provides a reference to confirm the vehicle problems.

3. **DTC** – matches relevant fault codes for further resolving. This is based on a large DTC database commonly used worldwide.

4. **Trouble Area** – indicates the exact position of the vehicle problems. This part helps to locate the vehicle problems accurately.

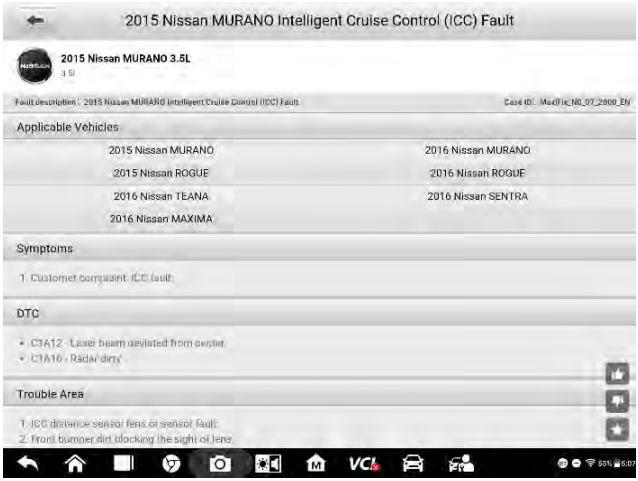


Figure 8-6 ***Sample Trouble Area Page***

5. **Troubleshooting** –illustrates the detailed diagnostic operations in a vivid format.

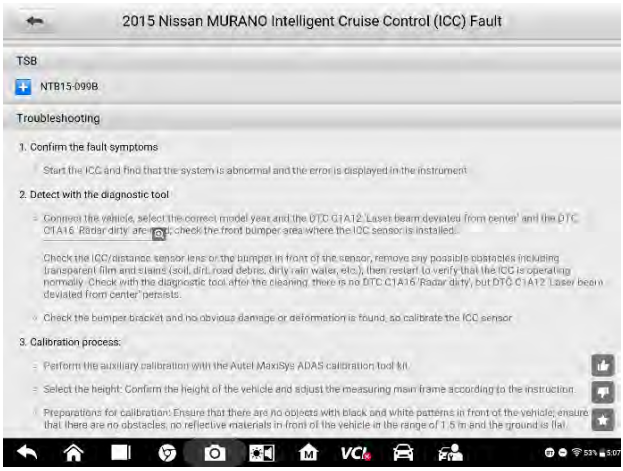


Figure 8-7 ***Sample Troubleshooting Page 1***

Troubleshooting is usually presented as text. However, instructional videos are sometimes provided.

Figure 8-8 ***Sample Troubleshooting Page 2***

6. **Real Fixes** – displays suggested vehicle repairs. Purchase diagnostic devices directly by tapping associated link and access the Autel website.

7. **Author** – identifies the author of the professional repair case. Some of them are authenticated technicians, while most are from the team of Autel Automobile Service Experts with long-term diagnostic experience and technical skills.

8. **Manual** – presents relevant operations on components during the diagnosis.

9. **Recommended cases** – associates other repair cases that share similar faults or keywords with this case.

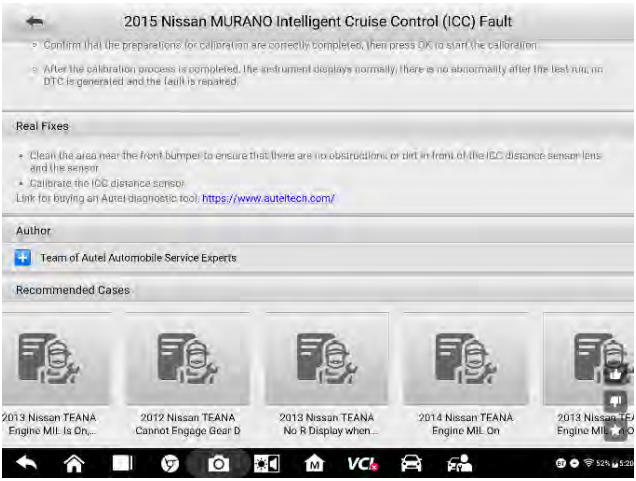


Figure 8-9 *Sample Recommended Cases Page*

For some vehicles repair case, a TSB file is added for further analysis, shown as below.

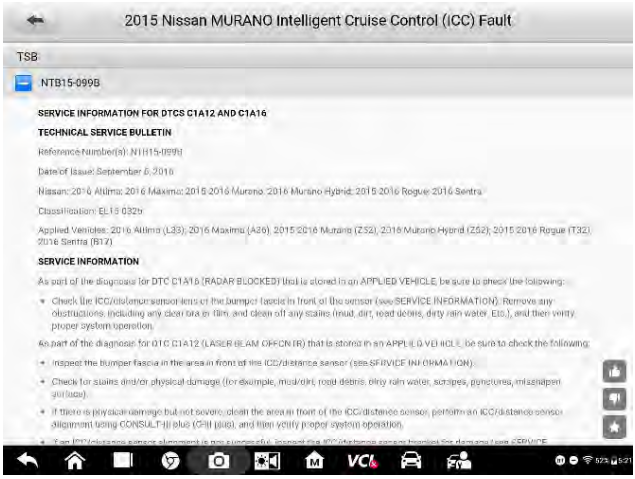


Figure 8-10 *TSB Page*

Quick search: To search for relevant vehicle symptoms and repair issues, use the Search box in the upper right corner of the Real Fixes section. Input keywords and tap the Search button, and the system will match all relevant entries for reference. The more keywords, the more precise the matching results.

8.3.3 Academy

The third section of MaxiFix is Academy, a platform for technicians to enrich their knowledge and improve operating skills. Academy contains two main parts, Featured Videos and Query Tools.

Figure 8-11 ***Sample Academy Page***

Featured Videos – are intended to help the technicians, namely the MaxiSys MS909 users, to improve their diagnostics skills and enhance their overall vehicle repair and servicing knowledge.

1. **Tool Tips**: Videos on Tool Tips present knowledge of diagnostic tools as well as operations in diagnostic process.

2. **Skill Enhancement**: Videos on Skill Enhancement are shot to show diagnostic procedures in real maintenance scenes and share expertise of senior technicians.

3. **Vehicle Theory**: Videos on Vehicle Theory are recorded to impart vehicle theories or principles by experts in vehicle structure and maintenance.

Query Tools – provides large volumes of vehicle data for quick query. The Accumulator Query is for vehicle battery searching, while the Tire Query is for tire information searching.

➢ **To run a query (take Tire Query for example)**

1. Tap the **Tire Query** icon to enter the Select Vehicle page.

2. Tap the **Select Vehicle** to select from the four rows of menus that appear.

3. Select **Year, Brand, Model**, and **Engine**.

4. After all selections have been done, the corresponding tire specifications will be displayed.

8.3.4 Integral Mall

The Integral Mall is a new menu of MaxiFix, which is designed for enhancing interaction and communication between technicians and Autel support.

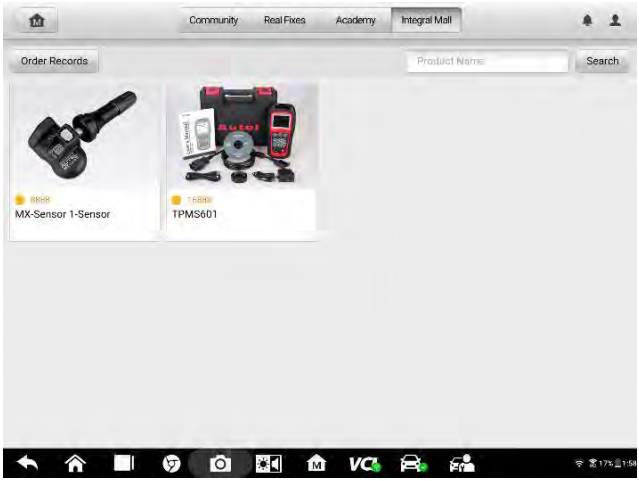


Figure 8-12 ***Sample Integral Mall Page***

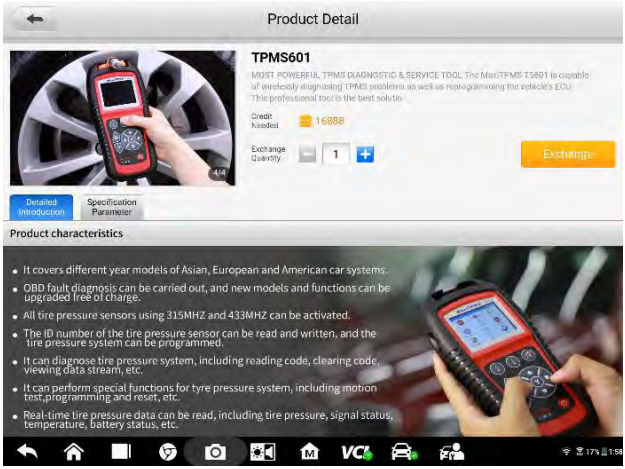
In the Integral mall, the reward coins can be used as coupons for exchanging specific products or devices. If you are keen on some of them, just make an order for the exchange with the required number of coins. You will get a reduction of payment with the coins.

➢ **To make an order (take MaixiTPMS TS601 for example)**

1. Enter the Integral Mall, and you will see the products priced in reward coins.

2. In the product list, tap MaixiTPMS TS601 and enter the **Product Detail** page.

3. Read the information about the main functions of the product, pay attention to the number of coins needed for exchange, and then choose the quantity



of exchange. Product pictures are showcased in the carousel, below which there are two buttons. **Detailed Introduction** describes the product characteristics, while **Specification Parameter** explains data for product configuration.

Figure 8-13 ***Sample Product Detail Page***

4. Tap the **Exchange** button in orange to enter the Exchange Confirmation page

5. Check the order details carefully and tap the **Confirm** button in the upper right corner. The exchange is completed when the Exchange Success notice appears.

6. Tap **Done** to complete the process.

NOTE

For more information about the orders you have made, please switch to the Integral Mall page, and tap **Order Records**, you will see all the orders you have made in Integral Mall.

9 Data Manager

The Data Manager application allows you to store, print, and review the saved files, manage the workshop information, customer information records and keep test vehicle records.

Selecting the Data Manager application opens the file system menu.

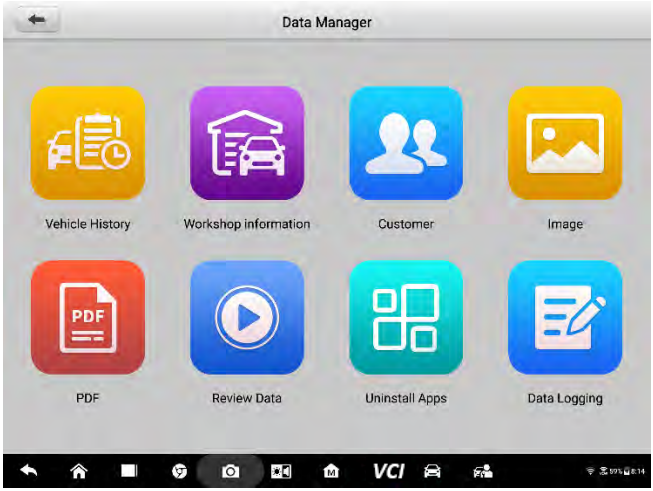


Figure 9-1 ***Data Manager***

The table below describes each of the functional buttons in the Data Manager application.

Table 9-1 ***Buttons in Data Manager***

Name	Button	Description
Vehicle History		Tap to view the diagnostic records.
Workshop Information		Tap to view or edit the workshop information.
Customer		Tap to view or add a new customer.
Image		Tap to view the screenshots.

Name	Button	Description
PDF		Tap to view the diagnostic reports.
Review Data		Tap to view the recorded data.
Uninstall Apps		Tap to uninstall applications.
Data Logging		Tap to view communications with Autel support service and ECU information of the test vehicle. The saved data can be reported and sent to the technical center via the Internet.

9.1 Vehicle History

This function stores records of test vehicle history, including vehicle information and the retrieved DTCs from previous diagnostic sessions. Test information is summarized and displays in an easy-to-read table listing. The Vehicle History also provides direct access to the previously tested vehicle and allows you to directly restart a diagnostic session without needing to perform auto or manual vehicle selection.

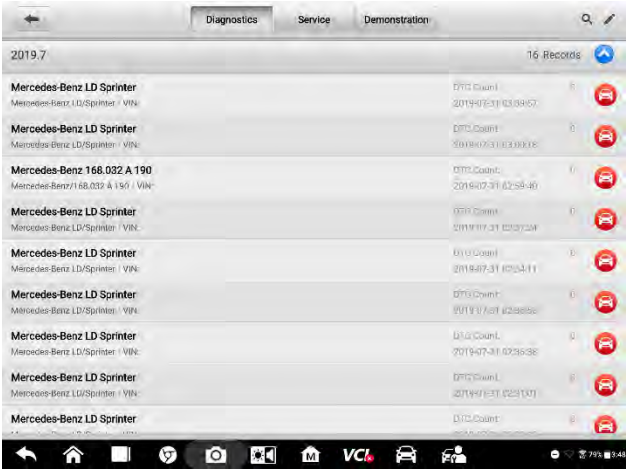


Figure 9-2 *Vehicle Records*

1. Top navigation bar.
2. Main section – displays all the vehicle records.

➢ **To activate a test session for the recorded vehicle**

1. Tap **Data Manager** on the MaxiSys main screen.
2. Select **Vehicle History**. In the top navigation bar, choose **Diagnostics** or **Service** to view diagnostic records or service records.
3. Tap **Diagnostics** at the bottom of the thumbnail of a vehicle record. Or,
4. Tap a vehicle thumbnail to select record.
5. A History Test record window displays. Review the recorded information of the test vehicle, and tap the Diagnostics button in the upper right corner to continue diagnostics.
6. The Diagnostics screen of the vehicle displays and a new diagnostic session is activated, see Diagnostics for detailed instructions on vehicle diagnostic operations.

Historical Test

The Historical Test record of the tested vehicle is a detailed data form, which includes general information of the vehicle such as vehicle year, make and model and the diagnostic trouble codes retrieved from the previous test sessions. Technician-added service notes will display if present.

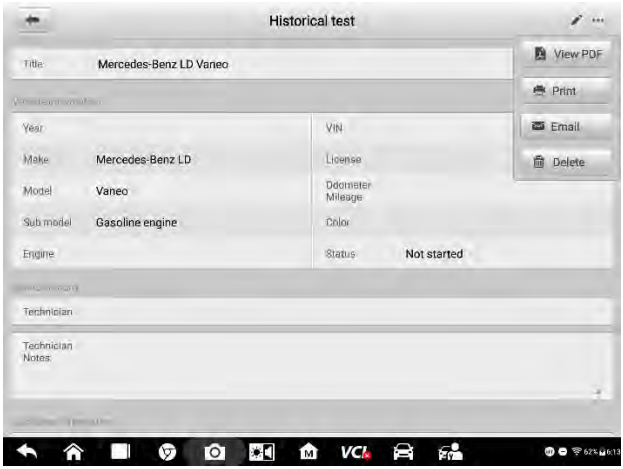


Figure 9-3 *Historical Test*

➢ **To edit historical test records**

1. Tap **Data Manager** in the MaxiSys main screen.
2. Select **Vehicle History**.
3. Select the test record to be edited.
4. Tap **Edit** in the upper right corner of the screen to start editing.

5. Tap an item before inputting information or attaching files or images to it.
6. Tap **Add to Customer** to correlate the test record to an existing customer account, or add a new account to be correlated with the test record. See *9.3* Customer on page 109 for more information.
7. Tap **Done** to save the updated record, or tap **Cancel** to exit without saving.

NOTE

The vehicle VIN, license number and customer account are correlated by default. Vehicle records will automatically be correlated using this vehicle and customer identification.

9.2 Workshop Information

Workshop Information allows you to input, edit, and save shop name, address, phone number and other information which displays as the header of printed vehicle diagnostic reports and other test files.

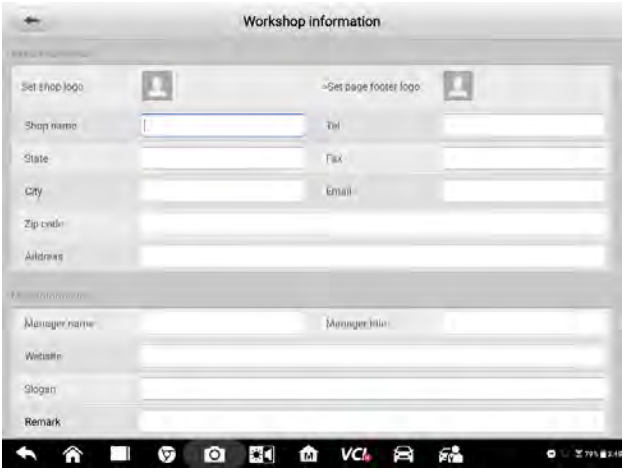


Figure 9-4 *Workshop Information*

➢ **To edit the workshop information**

1. Tap **Data Manager** in the MaxiSys Main Screen.
2. Select **Workshop Information**.
3. Tap each field to input the corresponding information.
4. Tap **Done** to save the updated workshop information, or tap **Cancel** to exit without saving.

9.3 Customer

The Customer function allows you to create and edit customer accounts. It helps you to save and organize all customer accounts correlated with the test vehicle records.

➢ **To create a customer account**

1. Tap the **Data Manager** application in the MaxiSys main screen.
2. Select **Customer** and tap the **Add Customer** button in the upper left corner of the page that appears.
3. Fill out the fields labelled with an asterisk.
4. For customers with more than one vehicle for service, tap **Add New Vehicle Information**. To delete the added vehicle information, tap the button.
5. Tap **OK** in the upper right corner of the screen to save the customer information, or tap **Cancel** to exit without saving.

➢ **To edit or delete a customer account**

1. In the **Customer** page, select a customer account to view the customer information.
2. Tap the **Edit** icon in the upper right corner to edit the customer information.
3. Tap **Complete** in the upper right corner after you finish the editing, or tap the **Delete** button to the opposite to delete the customer information.

9.4 Image

The Image section keeps all the screenshots.

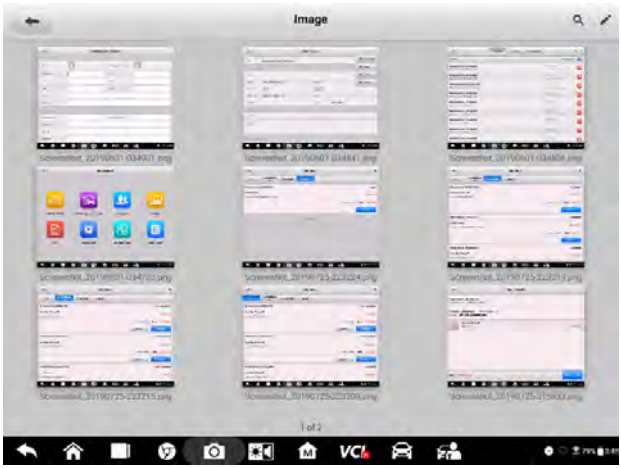


Figure 9-5 ***Image***

1. Toolbar Buttons – used to edit, print or delete the images. The following table introduces each button in detail.
2. Main Section – showcases the images.

Table 9-2 *Toolbar Buttons Description*

Name	Button	Description
Back		Return to the previous screen.
Search		Locate an image by vehicle name, test path, file name or file info.
Edit		Tap to select images to be deleted, emailed or printed.
Info		Tap to view the image info.
Print		Tap to email or print the selected image.
Delete		Tap to delete the selected image.

- **To edit image information**
  1. Select **Data Manager** from the MaxiSys Main Screen.
  2. Select **Image** and tap an image to display it in full screen.
  3. Tap the **Info** icon in the upper right corner to open a window displaying the image information.
  4. Tap **Edit** to edit the file name and file information.
  5. Tap **Done** to save the information and exit, or tap **Cancel** to exit without saving.
- **To delete the images**
  1. In the **Image** page, tap the **Edit** icon in the upper right corner. A check box appears at the foot of each thumbnail.
  2. Select the images to be deleted by tapping the thumbnails. Thumbnails selected display a check mark in the check box.
  3. Tap the **Delete** button, and then **Delete Selected**, or tap **Delete all** to delete all images.

9.5 PDF

The PDF section displays all the PDF files stored in the tablet. You can view or edit the PDF files using Adobe Reader. For more information, see Adobe Reader documentation.

9.6 Review Data

The Review Data function allows you to playback frames of live data.

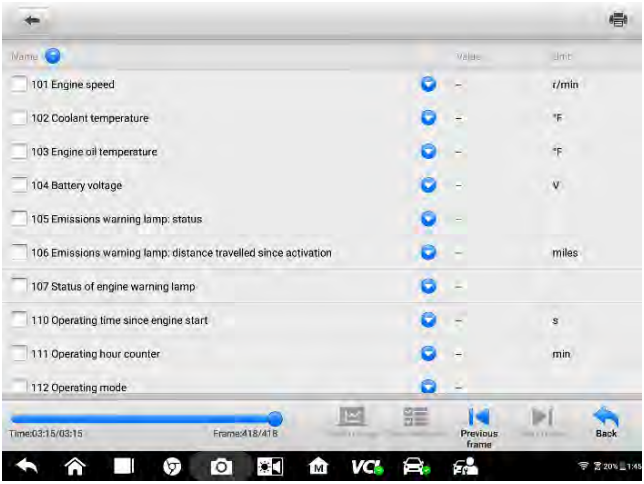


Figure 9-7 ***Live Data Frames***

1. Main Section – displays the live data frames.
2. Toolbar – allows you to manipulate data playback.

9.7 Uninstall Apps

This section allows you to manage the diagnostics installed on the MaxiSys tablet.

➢ **To delete the images**

1. Tap **Uninstall Apps** to enter the diagnostics page.

2. Tap the diagnostics you want to uninstall, and the selected items will display a blue check mark.

3. Tap the **Delete** icon in the upper right corner of the screen.

9.8 Data Logging

The Data Logging section allows you to launch the Support platform directly to view all data loggings in the diagnostic system. For more information, see **14.5 Data** Logging on Page 119.

10 Settings

Access the Settings menu to adjust default setting and view information about the MaxiSys system. The following options are available for the MaxiSys system settings:

- Unit
- Language
- Printing settings
- Scan report
- Notification center
- Auto update
- ADAS registration
- Vehicle list
- System settings
- About

10.1 Operations

This section describes how to alter the system settings.

10.1.1 Unit

This option allows you to change the measurement unit for the diagnostic system.

➢ **To change the unit**

1. Tap the **Settings** application in the main screen.
2. Select **Unit** from the left navigation pane.
3. Select the appropriate measurement unit, Metric or Imperial. A check mark displays to the right of the selected unit.

10.1.2 Language

This option allows you to change the MaxiSys system language.

➢ **To change the system language**

1. Tap the **Settings** application in the main screen.

2. Select **Language** from the left navigation pane.
3. Select the appropriate language. A check mark displays to the right of the selected language.

10.1.3 Printing Settings

This option allows you to print from the tablet to a network printer via a computer.

➢ **To connect to the printer**

1. Tap the **Settings** application in the main screen.
2. Select **Printing settings** from the left navigation pane.
3. Tap **Print via Network** to activate the printing function, which enables the device to send files to the printer through Wi-Fi or ethernet connection.

➢ **To install the MaxiSys printer driver**

1. Download **Maxi PC Suite** from www.autel.com > Supports & Updates > Firmware & Downloads > Update Client, and install it to a Windows-based PC.
2. Double-click on **Setup.exe**.
3. Select an installation language to load the wizard.
4. Follow the instructions on the screen and click on **Next** to continue.
5. Click the **Install** button and the printer driver will be installed.
6. Click the **Finish** button to complete the installation.

NOTE
The MaxiSys printer runs automatically after the installation.

This section describes how to receive and print files from the MaxiSys tablet through PC:

➢ **To perform printing through the computer**

1. Make sure the tablet is connected to the computer network, via Wi-Fi or LAN.
2. Run the **MaxiSys Printer** program on the computer.
3. Click on **Test Print** to check whether the printer works properly.
4. Tap the **Print** button in the tablet toolbar. A test document will be sent to the computer.
   - If **Auto Print** is selected, the MaxiSys printer will automatically print the received document.
   - Otherwise, click the **Open PDF File** button to view files. Select the file(s) to be printed and click **Print**.

NOTE

Make sure the computer installed with the Printing Services program is connected to a printer.

10.1.4 Notification Center

This option allows you to turn the Notification Center function on or off. The Notification Center function configures the MaxiSys tablet to receive regular online messages from the server for system update notifications or other service information via the Internet. It is recommended that the Notification setting be on at all times so as not to miss updates or important service messages. Internet access is required for receiving online messages.

- **To enable the Notification Center function**
  1. Tap **Settings** in the main screen.
  2. Select **Notification center** from the left navigation pane.
  3. Toggle on the notification center in the main section of the screen. The toggle button turns from grey to blue.

When the notification center is turned on, newly received notifications will display on the main screen. Press the message bar and drag it down to display the received messages.

Tap a specific message to launch the corresponding application. For example, if you tap an Update notification, the Update application will be launched.

10.1.5 Auto Update

This option allows you to preset a time to update the software. There are three update options: OS Update, MaxiSys Update and Vehicle Update.

Toggle on the update option you prefer. The button displays blue if Autel Update is enabled and displays gray if disabled. Set the time of the day for updating. The selected software will be automatically updated at the specific time.

10.1.6 ADAS Registration

- **To active MaxiSys ADAS Calibration**
  1. Confirm that updates for the registered MaxiSys tablet are available.

2. Select **Settings** from the main screen.
3. Click on **ADAS Binding**.
4. Scan the QR code on the ADAS frame, or manually input its serial number.
5. Enter the verification code from the ADAS Calibration Card.
6. The system will reset and the main screen will display once registration has been completed.

10.1.7 Vehicle List

This option allows you to sort the vehicles either by alphabetic order or by frequency of use.

- **To adjust the vehicle list setting**
  1. Tap the **Settings** application on the MaxiSys main screen.
  2. Select **Vehicle list** from the left navigation pane.
  3. Select a sorting method. A check mark will display to the right of the selected method.

10.1.8 System Settings

This function provides direct access to the Android system settings interface, where you can adjust settings such as network, sound and display, system security, and check information about the Android system. Refer to Android documentation for more information.

10.1.9 About

The About function provides information of the MaxiSys diagnostic device, including the product name, version, hardware, and serial number.

- **To check the MaxiSys product information**
  1. Tap the **Settings** application in the main screen.
  2. Select **About** from the left navigation pane. The above product information displays on the right side.

11 Update

This section describes how to download and install updates to the MaxiSys Diagnostic System firmware using the Update application to increase MaxiSys capabilities.

MaxiSys MS909 automatically searches for available updates when it is connected to the Internet. A notification displays when an update is available, if the Notifications function is enabled in Settings. For more information, see *10.1.4 Notification* Center on page 115).

Figure 0-1 *Update*

1. Navigation and Controls
   - Home Button – return to the MaxiSys main screen
   - Update All – download and install all available updates
   - Show Recent – display the recent updates
   - Search Bar – search for specific updates, for example, by make
2. Status Bar
   - Left Side – displays the device model and serial number
   - Right Side – displays the update progress
3. Main Section
   - Left Column – displays vehicle brands and version information of the update
   - Middle Column – contains a brief introduction to the new version, as shown in
   - Right Column – displays the operation button which varies according to the

specific update status

- **To update the firmware**

1. Power up the tablet, and ensure that it is connected to a power source and has a steady Internet connection.

2. Tap the **Update** application button from the MaxiSys Job Menu; or tap the update notification message when received. The Update application screen displays.

3. Check all available updates:

   - If you decide to update all the items, tap the **Update All** button.
   - If you only want to update some individual items, tap the **Update** button on the right column of the specific item. This option is highly recommended to ensure updates are performed correctly, especially if unsure of the speed and stability of your shops Internet connection.

4. Tap the **Pause** button to suspend the updating process. Tap **Continue** to resume the update and the process will continue from the pause point.

5. When the updating process is completed, the firmware will be installed automatically. The new version will replace the older version.

12 VCI Manager

VCI Manager is for connecting the MaxiSys MS909 tablet with a VCI device through Wi-Fi or Bluetooth. This application allows you to pair the tablet with the VCI device and to check the communication status.

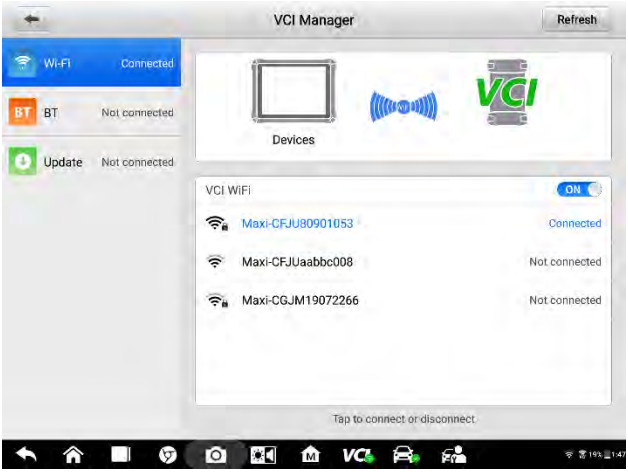


Figure 12-1 ***VCI Manager***

1. **Connection Mode** – three connection modes are available. The connection state displays adjacent to each mode.
   - Wi-Fi Connection – when connected to a wireless device, the connection state is Connected, otherwise it is Not Connected.
   - BT Pairing – when paired to a wireless device, the connection state is Connected; otherwise it is Not Connected.
   - Update – updates VCI software via the MaxiSys tablet using USB connection.
2. **Settings** – this section allows you to manage and set up network connection.
   - Wi-Fi Setting – searches for and displays the type and partial serial number of all devices available for Wi-Fi connection.
   - BT Setting – searches for and displays the type and partial serial number of devices available for BT pairing. Tap a device to start pairing. The BT status icon to the left of the device name indicates the strength of the received signal.
   - Ethernet Setting – allows you to perform network configuration.

12.1 Wi-Fi Connection

With Wi-Fi connection to the VCI device, you can work with MaxiSys MS909 somewhere pleasant rather than the hot garage, while performing diagnostic operations as smoothly as beside the vehicle. The MaxiSys tablet can be operated up to 100 meters away from the VCI device when connected to the vehicle.

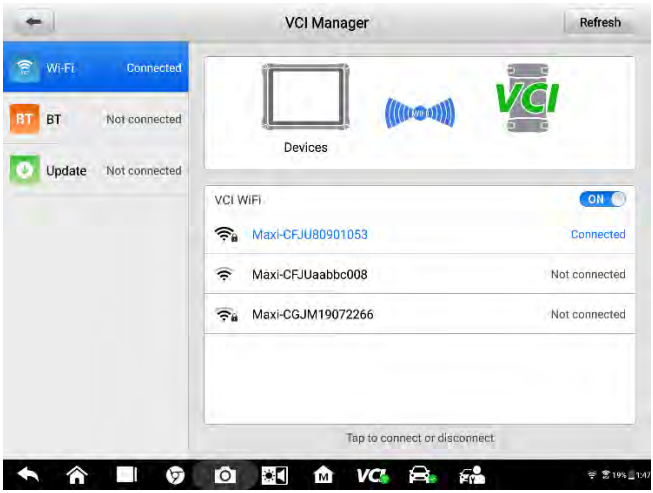


Figure 0-2 *Wi-Fi Connection*

➢ **To connect the VCI device with the tablet via Wi-Fi**

1. Connect the 26-pin end of the data cable to the VCI device.
2. Connect the 9-pin end of the data cable to the vehicle data link connector (DLC).
3. Tap **VCI Manager** to enter the VCI Manager page.
4. Toggle on the Wi-Fi function. Tap **Refresh** at the top right corner. The tablet starts to search for available devices.
5. Tap the target device for connection.
6. When connection succeeds, the connection status is shown as Connected.
7. Wait a few seconds for the VCI button at the bottom of the screen to assume the green Wi-Fi icon.
8. To disconnect the VCI device, tap its name in the VCI Wi-Fi list.

12.2 BT Pairing

The VCI device must be either connected to a vehicle or to a power source before the synchronization procedure.

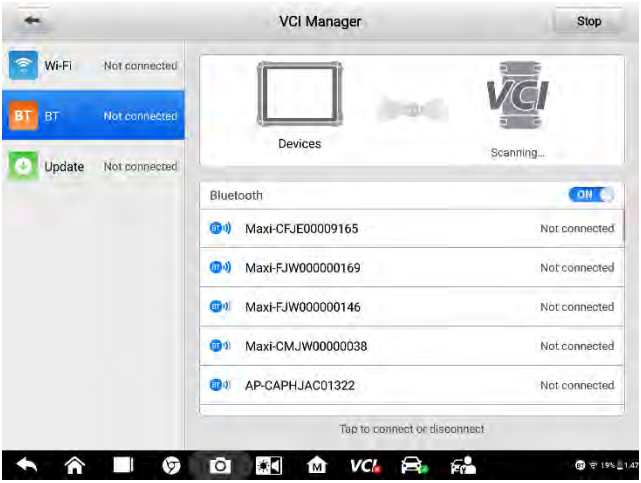


Figure 0-2 *BT Pairing*

➢ **To pair the VCI device with the tablet**

1. Connect the 26-pin end of the data cable to the VCI device.
2. Connect the 9-pin end of the data cable to the vehicle DLC.
3. Tap **VCI Manager** to enter the VCI Manager page.
4. Select **BT** from the connection mode list.
5. Toggle on the Bluetooth function. Tap **Scan** in the upper right corner. The device starts to search for available BT devices.
6. Tap the target device for connection.
7. When connection succeeds, the connection status is shown as Connected.
8. Wait a few seconds for the VCI button at the bottom of the screen to assume the green BT icon.
9. To disconnect the VCI device, tap its name in the VCI Wi-Fi list.

NOTE

A VCI device can be paired to only one tablet at a time and cannot be discovered by other tablets once it is already paired.

12.3 Update

The Update module provides the latest update for the MaxiSys MS909 tablet. Before updating the VCI software, make sure the tablet network is stable.

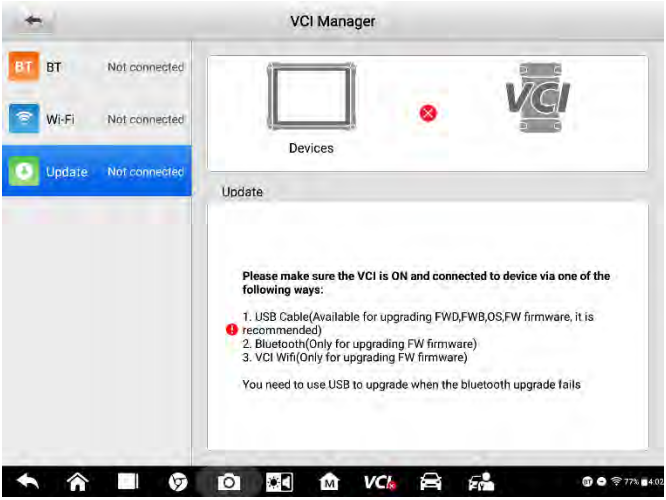


Figure 0-3 *VCI Update*

- **To update the VCI software**

1. Connect the VCI device to the tablet via USB.
2. Tap **VCI Manager** to enter the VCI Manager page.
3. Select **Update** from the connection mode list.
4. The current version and the latest version of the VCI software are displayed. Tap **Update Now** to update the VCI software.

13 ADAS

Advanced Driver Assistance Systems (ADAS) are electronic systems that aid a driver either through passive alerts or active control of the vehicle for safety and better driving.

Safety features are designed to avoid collisions and accidents by offering technologies that alert the driver to potential problems, or to avoid collisions by implementing safeguards and taking over control of the vehicle. Adaptive features may automate lighting, provide adaptive cruise control and collision avoidance, pedestrian crash avoidance mitigation (PCAM), incorporate satnav/traffic warnings, alert driver to other cars or dangers, lane departure warning system, automatic lane centering, show what is in blind spots, or connect to smartphones for navigation instructions.

Autel ADAS Calibration Tool features the following highlights to achieve flexible, precise and complete ADAS calibration.

1. Covers vehicle makes, including Benz, BMW, Audi, VW, Porsche, Infiniti, Lexus, GM, Ford, Volvo, Toyota, Nissan, Honda, Hyundai, and Kia.
2. Supports the calibration of multiple driver assistant systems, including Adaptive. Cruise Control (ACC), Night Vision System (NVS), Lane Departure Warning (LDW), Blind Spot Detection (BSD), Around View Monitoring (AVM), Rear Collision Warning (RCW) and Heads-up Displays (HUD).
3. Offers graphic illustrations and step-by-step instructions.
4. Provides demos to guide the technician through the calibration.

Figure 13-1 ***Autel ADAS Calibration***

14 Support

The Support application is connected to Autel service channel and online communities, which allow you to submit complaints or send help requests for quick and effective service and support.

14.1 Product Registration

To access the Support platform to obtain updates and other services, you need to register your MaxiSys MS909 the first time you use it.

➢ **To register the diagnostic device**

1. Go to http://pro.autel.com.
2. Sign in with your Autel account ID and password.
3. If you do not have an Autel account, click on the **Create Autel ID** button on the left side to create an ID.
4. Enter the required information in the input fields, and click on the **Get Verification Code** button for email verification.
5. Input the verification code sent to the registered email address. Read through the Autel Terms and Conditions before clicking on **Agree** and **Create Autel ID**. The product registration page displays.
6. Select your product model, enter the product serial number and password in the About section of Settings, and click on **Submit** to complete the registration procedure.

14.2 Application Interface

The Support interface consists of the following parts:

- My Account - contains Personal Info, Update Info and Service Info
- Complaint - allows you to lodge a complaint and view previous complaints
- Data Logging - records communications with Autel support service
- Training - provides linkage to Autel online videos
- FAQ - provides answers to frequently asked questions about Autel online membership and shopping and payment procedures

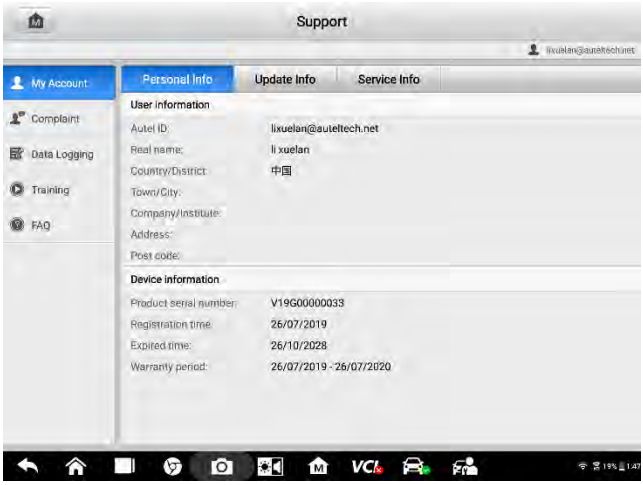


Figure 0-1 ***Application Interface***

14.3 My Account

14.3.1 Personal Info

- User information – displays details of your Autel account, such as Autel ID, name, address and post code.
- Device information – displays information of the registered product, including serial number, registration date, expiration date, and warranty period.

14.3.2 Update Info

The Update Info tab page displays the software update history, including the product serial number, software version or name, and the update time.

14.3.3 Service Info

The Service Info tab page displays the service history of the product, which contains details such as the fault type, components replaced, and system updates.

14.4 Complaint

The Complaint section allows you to lodge a complaint and view previous complaints.

14.4.1 Screen Layout

Complaint List

The list displays complaints of various subjects, along with the ticket ID, user account, date, and complaint status.

There are two kinds of case status:

- Open – indicates the complaint case has been started but not completed
- Closed – indicates the complaint case has been processed and completed

➢ **To lodge a complaint**

1. Tap **Complaint** in the left navigation pane.
2. Tap **New Issue** in the upper right corner. A list of service channels displays.
3. Select the target service channel and tap **Next** to fill out the standard complaint form. To settle the complaint more efficiently, we recommend you to complete the form in detail. You can also attach images or PDF files to the form.
4. Set a processing time in the last section according to the urgency of the case.
5. Tap **Submit** to send the completed form to Autel online service. The submitted complaints will be properly processed and replied soon.

14.5 Data Logging

The Data Logging section records communications with Autel support service, who are obliged to process the submitted reports and feedback within 48 hours. You can keep in touch with Autel support service until the problem is solved.

➢ **To make a reply in a Data Logging session**

1. Tap the **Feedback** tab to view the submitted data loggings.
2. Select the latest message from Autel support service.
3. Tap the input field at the bottom of the screen, and enter your reply. Or tap the Audio button to record a voice message, or tap the camera button to take a screenshot.
4. Tap **Send** to send your reply to Support.

14.6 Training

The Training section provides linkage to Autel online videos. Select a video channel by language to watch available Autel online tutorial videos on such topics as product usage and vehicle diagnostics.

15 Remote Desktop

Remote Desktop is imbedded with the TeamViewer QuickSupport software. You can use it to get remote support from the Autel support center or your colleagues or friends, by allowing them to control your MaxiSys tablet from their PC.

15.1 Operations

If you liken a TeamViewer communication to a phone call, a TeamViewer ID would be the number of a phone user. Computers and mobile devices that run TeamViewer are identified by a globally unique ID, which is generated the first time the device runs TeamViewer. The ID is created based on the hardware characteristics and remains unchanged.

Make sure the tablet is connected to the Internet before launching Remote Desktop, so that the tablet can receive remote support from a third party.

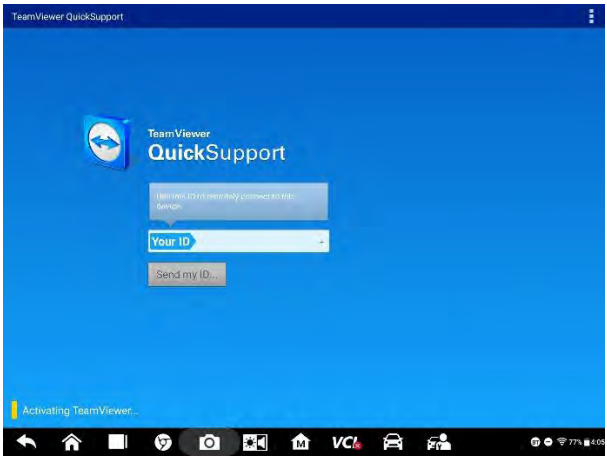


Figure 15-1 ***Remote Desktop***

- **To receive remote support from a partner**
  1. Tap the **Remote Desktop** icon to open the TeamViewer interface and generate the device ID.
  2. The PC on the control end must be installed with the Remote Control software through which to control your tablet.
  3. Give your TeamViewer ID to the controller, who will send back a request for remote control.
  4. Tap **Allow** to accept the request, or **Deny** to reject.

16 Quick Link

Quick Link provides convenient access to Autel official website as well as many other well-known sites in automotive service, which offers abundant information and resources, such as technical help, knowledge bases, forums, training and expert consultations.

Figure 16-1 *Quick Link*

- **To open a quick link**
  1. Tap **Quick Link** to open the Quick Link interface.
  2. Select a website. The selected website is opened in Chrome.

17 MaxiViewer

MaxiViewer allows you to search for functions supported by our tools and the version information. There are two ways of searching, either by vehicle or by function.

- **To search by vehicle**

1. Tap the **MaxiViewer** icon.
2. Select the tablet model from the drop-down list in the upper left corner.
3. Select the vehicle brand, model, and year.

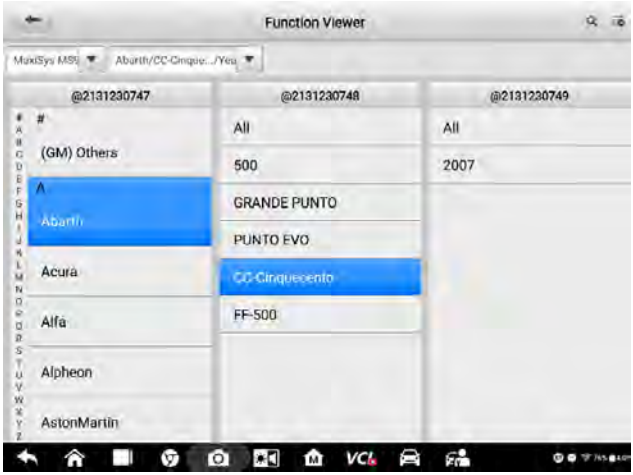


Figure *17-1 Function Viewer Screen 1*

4. All the functions and sub-functions supported by the tablet for the selected model are displayed.

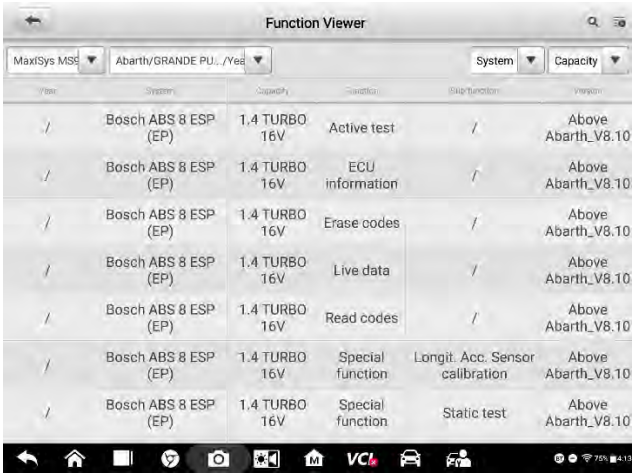


Figure 17-2 *MaxiViewer*

- **To search by function**

  1. Tap the MaxiViewer icon.
  2. Select the tablet model from the drop-down list in the upper left corner.
  3. Enter the function you want to search by in the top right search box. All vehicles supported with the function will be listed, along with their brand, model, year, system, sub system, function, sub-function, and version.

NOTE

Fuzzy search is supported. You can type in part of the function keywords to search for vehicles that this function supports.

18 MaxiVideo

MaxiVideo enables you to examine areas blocked from sight on Maxisys MS909 when connected to a digital inspection camera. You can record images and videos of the inspected items in a safe and convenient way.

⚠ **WARNING**

Follow the instructions below to prevent tool damage and reduce the risk of injury from electric shock, entanglement and other causes.

- Do not place the imager head in anything or anywhere that may contain electric charge or moving parts, which increases the risk of electric shock or entanglement injuries.
- Do not use the imager head to clear clogged areas.
- When inspection is completed, withdraw the imager head carefully from the inspected area.
- The imager head cable is waterproof to a depth of 3m (10'). Going deeper may induce leakage into the imager head cable and cause electric shock or tool damage.
- The working temperature of the imager head is between 32 °F (0 °C) and 113 °F (45 °C).

Check-Ups:

- ✓ **FOR AUTOMOBILES**: Ensure the automobile is not running during inspection to avoid damage from hot metal and liquid under the hood. Do not get oil or gasoline on the imager head.
- ✓ **FOR PIPES**: If you suspect that a metal pipe may carry electric charge, have a qualified electrician to check the pipe before inspecting it.
- ✓ **FOR WALLS**: Before you inspect the inside of a wall with the imager head, turn off the circuit breaker to the house.
- ✓ **WORK AREA**: Ensure the work area has sufficient light.

18.1 Accessories

The Digital Inspection Camera can be purchased along with the standard MaxiSys tool kit.

18.1.1 Digital Inspection Camera

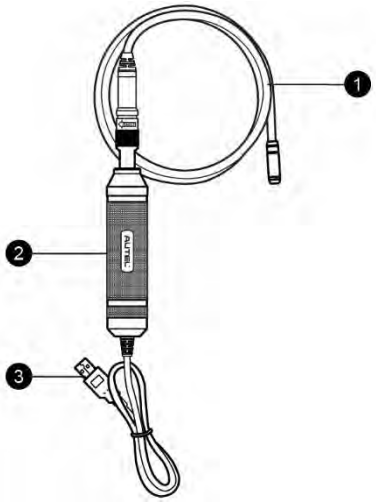


Figure 18-1 ***Digital Inspection Camera***

1. Removable Imager Head Cable – features two sizes (*8.5 mm and 5.5 mm*) of imager head for your choice
2. Handgrip – ergonomically designed handle for comfortable grip and agile operation
3. USB Cable – connects the imager head cable to the MaxiSys tablet

18.1.2 Imager Head Accessories

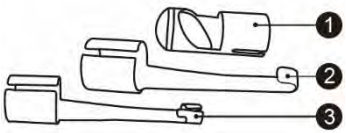


Figure 18-2 ***8.5mm Imager Head Accessories***

1. Magnet – for picking up small metal objects such as dropped rings or screws
2. Hook – for unclogging obstacles and pulling out wires from pipes
3. Mirror – for reflecting light from awkward corners

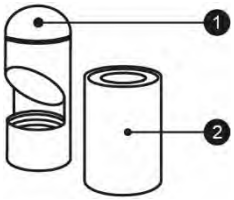


Figure 18-3 *5.5mm Imager Head Accessories*

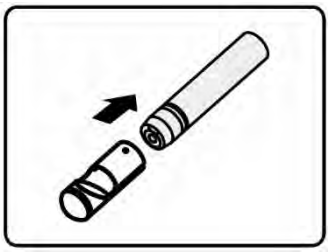
1. Mirror – for reflecting light from awkward corners
2. Magnet – for picking up small metal objects such as dropped rings or screws

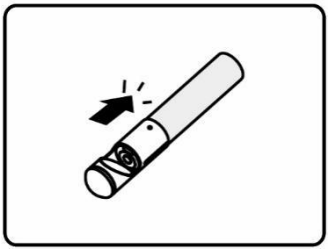
18.1.3 Accessory Assembly

18.1.3.1 For 8.5mm Imager Head

The three accessories, including the magnet, hook, and mirror, can be attached to the imager head in the same manner described below:

1. Point the accessory to the imager head in the right direction.



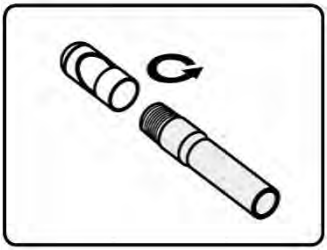


2. Cap and fix the accessory over the imager head.

18.1.3.2 For 5.5mm Imager Head

The two accessories, including the magnet and mirror, can be attached to the imager head in the same manner described below:

1. Point the accessory to the imager head in the right direction.



2. Cap and screw the accessory onto the imager head.

18.1.4 Technical Specifications

Table 18-1 Specifications

Item	Description
Optimal Viewing Distance	1" to 14" (2.54cm to 35.56cm) for 8.5mm-diameter imager head 3/8" to 12" (0.95cm to 30cm) for 5.5mm-diameter imager head
Resolution	JPG images (640x480) AVI videos (320 x 240)
Operating Temperature	Main Unit: 0°C to 55°C (ambient) Cable: -10°C to 70°C
Storage Temperature	-20°C to 75°C (ambient)
Waterproof	Imager head and cable to 1m

Item	Description
Weight	0.3 kg for 8.5 mm diameter imager head 0.2 kg for 5.5 mm diameter imager head

18.2 Operations

Before opening the MaxiVideo application, the imager head cable must be connected to the tablet through the USB port. Install the correct imager head accessories according to the specific needs.

NOTE

The imager head cable can be bent into any shape to access confined or awkward spaces.

- **To take images using the MaxiVideo application**
  1. Connect the imager head cable to the USB port on the top of the tablet.
  2. Tap the **MaxiVideo** icon to open the application interface. The imager head camera is used by default.
  3. Select the **Camera** icon in the lower right corner.
  4. Adjust the imager head cable to focus on the target area.
  5. Tap the blue ring on the screen. The target area is captured and auto-saved.
  6. Tap the thumbnail in the upper right corner and slide the screen left or right to view the saved images.
  7. To edit an image, tap it and the toolbar appears.
  8. Select the corresponding button to **Share**, **Delete**, or **Edit** the image.
  9. To exit MaxiVideo, tap **Back** or **Home** in the bottom navigation bar.
- **To record a video using the MaxiVideo application**
  1. Connect the imager head cable to the USB port on the top of the tablet.
  2. Tap the **MaxiVideo** icon to open the application interface. The imager head camera is used by default.
  3. Select the **Video** icon in the lower right corner.
  4. Adjust the imager head cable to focus on the target area.
  5. Tap the red ring on the screen to start recording.
  6. Tap the red circle again to stop recording. The recorded video is automatically saved.
  7. Tap the thumbnail in the upper right corner to review the recorded video.
  8. To edit the video, tap it and the toolbar appears.
  9. Select the corresponding button to **Share**, **Delete**, or **Edit** the video.

19 MaxiMall

MaxiMall is an online mall for purchasing MaxiSys software subscription updates and other value-added services.

19.1 Operations

Via MaxiMall, users can easily update their software subscriptions and extend their warranties. The software updates extend vehicle coverage and ensure that your MS909 tablet and VCI have the latest features and functions.

19.1.1 MaxiMall Homepage

The MaxiMall application is easy to access. Tap the MaxiMall icon, then enter the MaxiMall homepage.

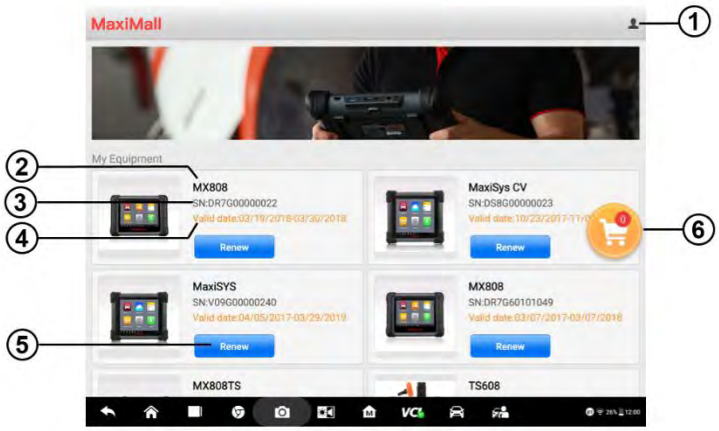


Figure 19-1 ***MaxiMall Homepage***

Please read information and order buttons carefully before purchasing Renew subscriptions.

1. **Personal Center** - displays your account information, your Autel equipment, and previous orders
2. **Product Name** - the name and model of the Autel device you own
3. **SN** - the serial number of the device for identification

4. **Valid Date** - reminds you of the effective period of the MaxiSys MS909 software before a new version is released

5. **Blue Button** - provides conditional access to new software or value-added services for specific devices (For example, when you tap **Renew**, you can renew the software by adding it to cart for settlement, as Figure 19-2 shows.)

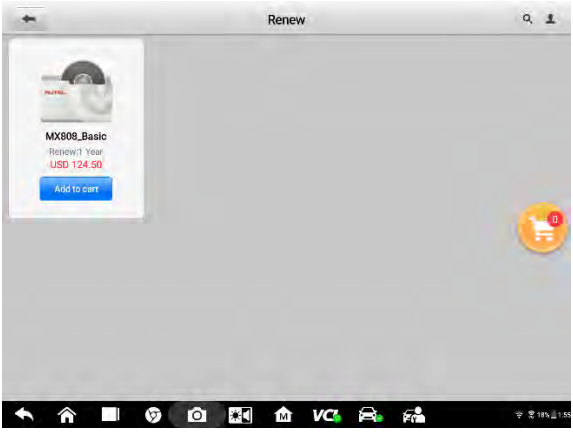


Figure 19-2 ***Renew Software***

6. **Cart** – contains items selected for purchase.

19.1.2 To Make an Order in MaxiMall

Take Renew as an example to make an order:

1. Tap the **Renew** button as shown in **Figure 19-1.**
2. Select the desired software and add it to your shop cart.
3. Tap the **Cart** icon on the right side to enter the **Cart** page.
4. Tap the check box before the item you want to purchase, or tap **Select all** if you want to buy all the added items. Tap the blue **Settlement** button to proceed.
5. In the **Order Details** page**,** check your personal information, such as Nick Name, Phone Number, Address, and the total cost of purchase. Tap **Submit Order** (**Figure 19-3**).

Figure 19-3 ***Order Details***

19.1.3 Personal Center

Personal Center is a crucial module for dealing with your orders. On the top of Personal Center, the personal information is matched with your Autel ID. Please check and ensure that the information is correct.

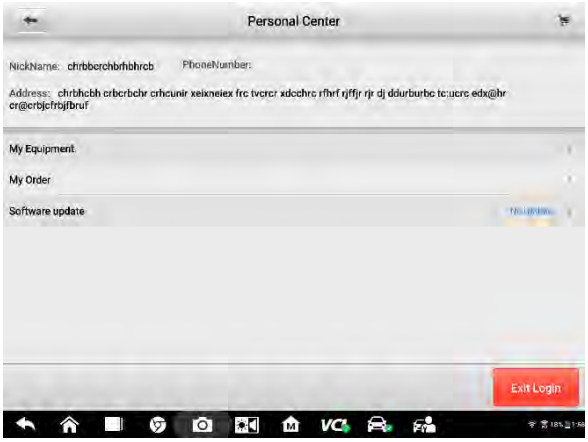


Figure 19-4 ***Personal Center***

The following three entries are **My Equipment**, **My Order**, and **Software update** respectively. **My Equipment** lists the tools and tablets you already own; **Software update** shows MaxiMall application updates available; **My Order** lists your orders and the status of each.

To exit, tap the red **Exit Login** button in the lower right corner.

19.1.4 My Order

Tap the right arrow in the **My Order** entry to enter the **My Order** page. Four tabs display on top of the window.

19.1.4.1 All Orders

Choose the **All** tab, and you will see all the orders in **Completed** or **Incompleteness** status.

Each order starts with the Order Number and Product name. On the right side of each order, the status, price of each item in the order, total number of items, and total cost. The Order status button displays in blue.

For completed orders, the button shows Details; for uncompleted orders, there are two buttons - **Cancel** in gray and **Settlement** in blue.

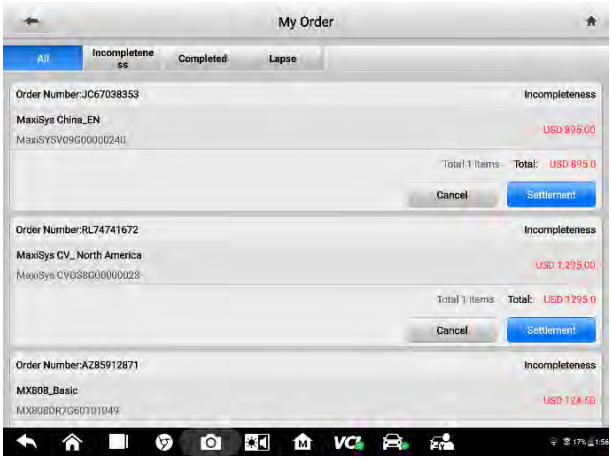


Figure 19-5 ***My Orders***

19.1.4.2 Incompleteness

Choose the **Incompleteness** tab, and you will see orders that are not completed. You can tap either **Cancel** or **Settlement** to continue with purchase.

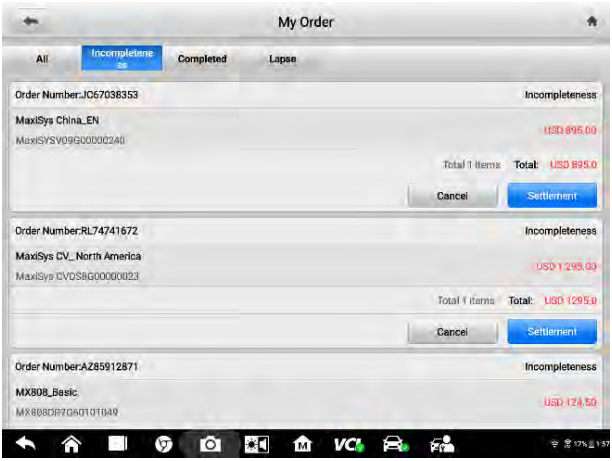


Figure 19-6 ***Incomplete Orders***

19.1.4.3 Completed

The **Completed** tab page shows the completed orders. You can tap the **Details** button to check the order details.

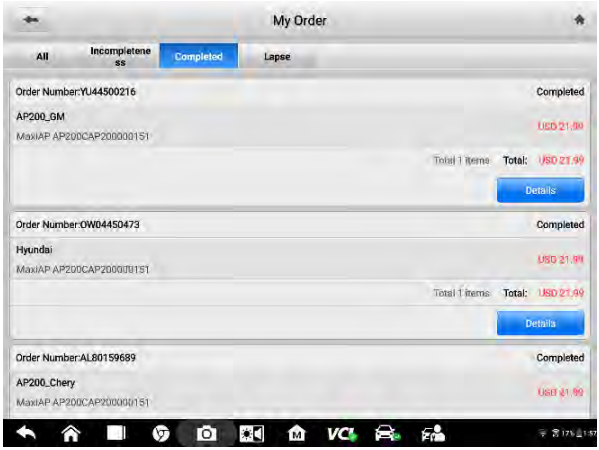


Figure 19-7 ***Completed Orders***

19.1.4.4 Lapse

The **Lapse** tab page shows canceled orders.

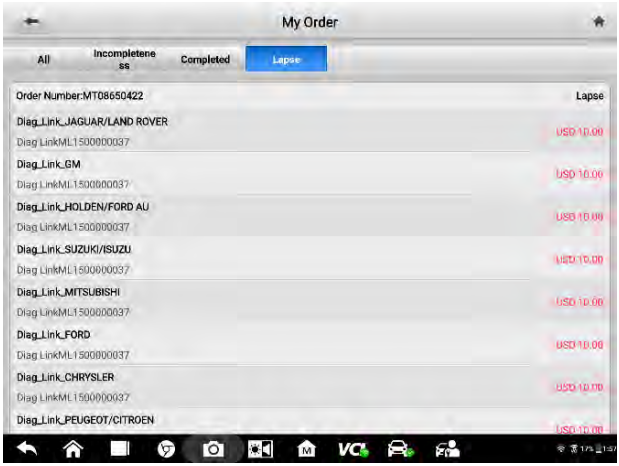


Figure 19-8 *Lapse*

20 Maintenance and Service

To ensure that the tablet and the combined VCI unit perform at their optimum level, we advise that the product maintenance instructions in this section are strictly followed.

Maintenance Instructions

The following includes how to maintain your devices, together with precautions to take.

- Use a soft cloth dampened with alcohol or mild glass cleaner to clean the tablet touchscreen at the end of each work day.
- Do not use any abrasive cleansers, detergent, or automotive chemicals on the tablet.
- Keep the devices in dry conditions and within specified operating temperatures.
- Dry your hands before using the tablet. The touchscreen of the tablet may not work when it is moist, or when you tap the touchscreen with wet hands.
- Do not store the devices in humid, dusty or dirty areas.
- Check the housing, wiring, and connectors for dirt and damage before and after each use.
- Do not attempt to disassemble your tablet or the VCI unit.
- Do not drop or cause severe impact to the devices.
- Use only authorized battery chargers and accessories. Any malfunction or damage caused by the use of unauthorized battery charger or accessories will void the limited product warranty.
- Ensure that the battery charger does not contact conductive objects.
- Do not use the tablet beside microwave ovens, cordless phones and certain medical or scientific instruments to prevent signal interference.

Troubleshooting Checklist

A. When the tablet does not work properly:
   - Make sure the tablet has been registered online.
   - Make sure the system software and diagnostic application are properly updated.
   - Make sure the tablet is connected to the Internet.
   - Check all cables, connections, and indicators to see if the signal is being received.

B. When battery life is shorter than usual:
   - This may happen when you are in an area with low signal strength. Turn off your device if it is not in use.

C. When you cannot turn on the tablet:
   - Make sure the battery is charged or the tablet is connected to a power source.

D. When you are unable to charge the tablet:
   - Your charger maybe out of order. Contact your nearest dealer.
   - You may be attempting to use the device in an overly hot/cold temperature. Charge the device in a temperate area.
   - Your device may not be connected to the charger properly. Check the connector.

NOTE

If the problems persist, please contact Autel customer service or your local selling agent.

About Battery Usage

Your tablet is powered by a built-in lithium-ion polymer battery, which enables you to recharge your battery when there is electricity left.

DANGER

The built-in lithium-ion polymer battery is factory-replaceable only; incorrect replacement or tampering with the battery pack may cause an explosion.

- Do not use a damaged battery charger.
- Do not disassemble, open, crush, bend, deform, puncture, or shred the battery.
- Do not modify, remanufacture or attempt to insert foreign objects into the battery, or expose the battery to fire, explosion, or other hazards.
- Only use the specified charger and USB cables. Use of non-Autel-authorized charger or USB cables may lead to device malfunction or failure.
- Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazards.
- Avoid dropping the tablet. If the tablet is dropped, especially on a hard surface, and you suspect damage, take the tablet to a service center for inspection.
- Try to keep closer to your wireless router to reduce battery usage.
- The time needed to recharge the battery varies depending on the remaining battery capacity.
- Battery life inevitably shortens over time.

- Unplug the charger once the tablet is fully charged since overcharging may shorten battery life.
- Keep the battery in temperate environments. Do not place it inside a car when it is too hot or too cold, which may reduce the capacity and life of the battery.

Service Procedures

This section provides information on technical support, repair service, and application for replacement or optional parts.

Technical Support

If you have any question or problem on product operations, please contact us.

AUTEL NORTH AMERICA

- **Phone**: 855-AUTEL-US (855-288-3587) Monday-Friday 9am-6pm EST
- **Website**: www.autel.com
- **Email**: ussupport@autel.com
- **Address**: 175 Central Avenue, Suite 200, Farmingdale, New York, USA 11735

AUTEL EUROPE

- **Phone**: 0049 (0) 61032000522
- **Website**: www.autel.eu
- **Email**: sales.eu@autel.com, support.eu@autel.com
- **Address**: Robert-Bosch-Strasse 25, 63225, Langen, Germany

AUTEL CHINA HQ

- **Phone**: 0086-755-86147779
- **Website**: www.autel.com
- **Email**: support@autel.com
- **Address**: 7th, 8th and 10th floor, Building B1, Zhiyuan, Xueyuan Road, Xili, Nanshan, Shenzhen, 518055, China.

AUTEL SOUTH AMERICA

- **Phone**: (+507) 308-7566
- **Website**: www.autel.com/es
- **Email**: sales.latin@autel.com, latsupport@autel.com

- **Address**: Office 103, Building 3845, International Business Park, Veracruz, Panamá Pacífico, Panamá.

AUTEL AUSTRALIA

- **Phone**: 03 9480 2978 / +61 476293327
- **Website**: www.autel.com.au
- **Email**: sales@autel.com.au
- **Address**: 155 Islington Street, Melbourne, Collingwood, VIC 3066

For technical assistance in other markets, please contact your local selling agent.

Repair Service

If it is necessary to send back your device for repair, please download and fill out the repair service form from www.autel.com. The following information must be included:

- Contact name
- Return address
- Telephone number
- Product name
- Complete description of the problem
- Proof-of-purchase for warranty repairs
- Preferred method of payment for non-warranty repairs

NOTE

For non-warranty repairs, payment can be made with Visa, Master Card, or with approved credit terms.

Send the device to your local agent, or to the address below:

6th-10th Floor, Building B1, Zhiyuan,

Xueyuan Road, Xili, Nanshan,

Shenzhen, 518055, China

Other Services

You can purchase the accessories directly from authorized tool suppliers of Autel, or your local distributor or agent.

Your purchase order should include the following information:

- Contact information
- Product or part name

- Item description
- Purchase quantity

21 Compliance Information

FCC Compliance **FCC ID: WQ8MAXISYSMS909**

This equipment has been tested and verified to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SAR:

The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/Kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels to use only the

power required to reach the network. To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to antenna should be minimized.

The highest SAR value for this model phone when worn on the body, as described in this user guide, is **0.660W/Kg**(Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements).

22 Warranty

22.1 12-Month Limited Warranty

Autel Intelligent Technology Corp., Ltd. (the Company) warrants to the original retail purchaser of this MaxiSys Diagnostic Device that should this product or any part thereof during normal usage and under normal conditions be proven defective in material or workmanship that results in product failure within twelve (12) months period from the date of purchase, such defect(s) will be repaired, or replaced (with new or rebuilt parts) with Proof of Purchase, at the Company's option, without charge for parts or labor directly related to the defect(s).

The Company shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the device. Some states do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you.

This warranty does not apply to:

a) Products subjected to abnormal use or conditions, accident, mishandling, neglect, unauthorized alteration, misuse, improper installation or repair or improper storage;

b) Products whose mechanical serial number or electronic serial number has been removed, altered or defaced;

c) Damage from exposure to excessive temperatures or extreme environmental conditions;

d) Damage resulting from connection to, or use of any accessory or other product not approved or authorized by the Company;

e) Defects in appearance, cosmetic, decorative or structural items such as framing and non-operative parts.

f) Products damaged from external causes such as fire, dirt, sand, battery leakage, blown fuse, theft or improper usage of any electrical source.

IMPORTANT

All contents of the product may be deleted during the process of repair. You should create a back-up copy of any contents of your product before delivering the product for warranty service.