# VD70S DIAGNOSTIC TOOL

# USER MANUAL



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## IMPORTANT:

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

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## Product Support Information

### Technical Assistance

Website: www.vdiagtool.com
E-Mail: support@vdiagtool.com
Phone: 1-213-355-7171 (United States)
or use our online contact form https://www.vdiagtool.com/support/tech-support

### Manuals / Technical Documentation

This manual is periodically revised to ensure the latest information is included. Download the latest version of this manual and other related technical documentation at:
https://www.vdiagtool.com/support/downloads

### Product Training Videos

Diagnostic Tool specific training videos are available on our website. Follow along and learn the basics of Diagnostic Tool operation with our free training videos.
Videos are product specific and are available at:
https://www.vdiagtool.com/support/training-center, select the applicable diagnostic tool, then select the training video you want to watch.

### 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 VDIAGTOOL is aware of. VDIAGTOOL cannot know, evaluate or advise you as to all of the 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.

### ⚠ 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.

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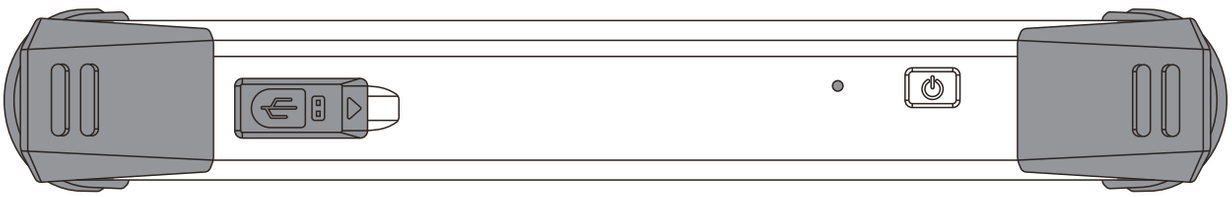
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# 1. Introduction

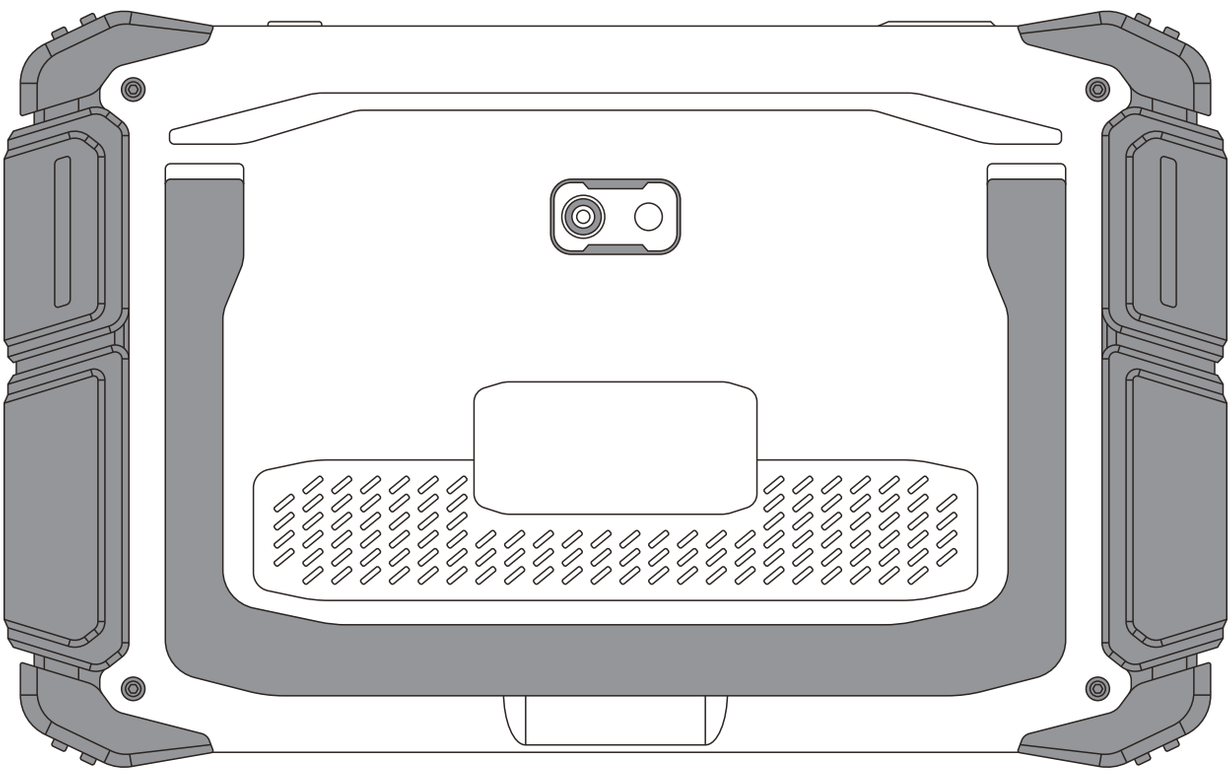
The VDIAGTOOL VD70S Diagnostic Tool interfaces with the electronic control unit(ECU) of a vehicle to retrieve diagnostic trouble codes (DTCs), access data stream information, and command active tests(bi-directional control tests). Various vehicle control systems, such as engine, transmission, and anti-lock brake system (ABS), SRS(Airbag) system, Chassis, Body and etc are readily diagnosed using this Diagnostic Tool. The Diagnostic Tool is capable of graphing up to eight(8) live data parameters on a single screen, and also includes ECU information.

This chapter introduces the basic features of the Diagnostic Tool, including the control buttons, data ports, battery pack, and power sources. Technical Specifications are provided at the end of this chapter.

## 1.1 Data and Power Connections



## 1.2 Battery Pack and Stand



## 1.3 Power Sources

VDIAGTOOL VD70S Diagnostic Tool can receive power from either of the two sources:

- Internal Battery Pack
- AC Power Supply

## 1.4 Internal Battery Pack

The VDIAGTOOL VD70S Diagnostic Tool can be powered from the internal rechargeable battery pack. A fully charged battery provides sufficient power for about 3.5 hours of continuous operation.

Battery charging occurs when the Diagnostic Tool is connected to the AC Power Supply and to a live AC power source.

## 1.5 AC Power Supply

The Diagnostic Tool can be powered from a standard AC outlet using the AC power supply. The connector on the end of the output cable of the AC power supply attaches to the DC power supply input jack on top of the Diagnostic Tool. Use only the AC power supply provided.

## 1.6 Technical Specifications

| Item | Description/Specification |
|---|---|
| Display | 7 Inch Touch Screen, 1024×600 Resolution |
| Operating System | Android 10.0 |
| Processor | Quad-Core Processor 1.5GHz |
| Memory | 2G RAM, 64G ROM |
| Connectivity | Bluetooth 4.1, Wi-Fi(2.4GHz & 5Ghz), Type-C |
| Sensor | Gravity Accelerometer/ Ambient Light Sensor |
| Audio | Microphone |
| Speaker | Built-In Speaker |
| Camera | 8 Mega Pixel |
| Battery | 18.25Wh<br>(DC 7.3V Rechargeable Li-ion Battery, 2500mAh) |
| Tested Battery Life | 3.5 hours |
| Power Supply | Input: 5.0V 3.0A<br>For AC Adapter Input: 100-240V<br>Adapter Output: 5.0V 3.0A |
| Operating Voltage | 9V-36V |
| Dimensions | 9.45×5.91×1.43 in (240×150×36.4mm) |

| Item | Description/Specification |
|---|---|
| Weight(Including Battery) | 2.0lbs (0.91kg) |
| Gross Weight | 4.85lbs (2.2kg) |
| Operating Temp Range(Ambient) | 32℉ ~ 104℉ (0℃ ~ 40℃) |
| Storage Temp(Ambient) | 14~122℉ (- 10~50℃) |
| Operating Humidity | <90% |

## 1.7 What's In The Box

| Name | QTY |
|---|---|
| VD70S Diagnostic Tool | 1 |
| VD70S VCI Box | 1 |
| Type- C to Type- A Adapter (Connecting to PC) | 1 |
| Type- C to Type- C Charger Cable | 1 |
| Charger Adapter US Standard | 1 |
| Charger Adapter EU Standard | 1 |
| Charger Adapter UK Standard | 1 |
| Color Carton | 1 |
| Quick Start Guide | 1 |
| Packing List | 1 |
| Hard Case | 1 |

# 2. **Getting Started**

Make sure the Diagnostic Tool has sufficient power or is connected to the external power supply (see Power Sources on page 2).

---

## Note:

The images and illustrations depicted in this manual may differ from the actual ones.

---

## Turning On/ Off and Force Shut Down

The following sections describe how to turn the VDIAGTOOL VD70S Diagnostic Tool on and off and how to perform an emergency shutdown.

## 2.1 Turning On

Press and hold the power button on the top right of the Diagnostic Tool for 3(three) seconds and it will automatically turn on when the internal battery pack has power in it or connected to an AC power supply.
If the internal battery pack is completed drained, you may need to wait for a few minutes before you turn it on.

## 2.2 Turning Off

Press and hold the power button again for over 3(three) seconds and the Diagnostic Tool will turn off automatically.

---

**Important:**

All vehicle communication must be terminated BEFORE turning off the Diagnostic Tool. A warning message displays if you attempt to turn the Diagnostic Tool off while communicating with the vehicle. Forcing a shut down while communicating may lead to ECM problems on some vehicles. Never disconnect the DB15 main cable when the Diagnostic Tool is communicating with the vehicle ECM.

---

## 2.3 Emergency Shutdown

During normal operation turn the Diagnostic Tool off using the Turning Off procedure above. The emergency shutdown procedure should only be used If the Diagnostic Tool does not respond to navigation or control buttons or exhibits erratic operation. To force an emergency shutdown, press and hold the Power button for five seconds until the Diagnostic Tool turns off.

---

IMPORTANT:

Using the emergency shutdown procedure while communicating with the vehicle ECM may lead to ECM problems on some vehicles.

---

# 3. Get to Know the Diagnostic Tool

This chapter describes the layout of the main diagnostic screen, main diagnostic screen icons, main screen and main screen icons of the android tablet.

## 3.1 Diagnostic Screen Layout & Diagnostic Screen Icons

When the Diagnostic Tool is turned on, it will run the diagnostic program automatically and you will see the diagnostic screen when the program is initiated. The Diagnostic Tool uses hidden toolbar at the bottom of diagnostic tablet and swipe up from the bottom will bring up the toolbar for 3 (three) seconds. The section below will show you the diagnostic screen layout and toolbar icons.

## 3.2 Diagnostic Screen Layout




## 3.3 Diagnostic Screen Icons

### 3.3.1 Auto Scan

Automatically detects and decodes the VIN number, and proceed to comprehensively scan all available vehicle electronic control modules for diagnostics.

### 3.3.2 Manual Diagnosis

Click this icon will bring up the diagnostic menu where you can navigate the vehicle by Auto VIN, Manual Input and select vehicle make, model, year and configurations manually for diagnostics, check DEMO program and perform OBDII tests.

### 3.3.3 Special Function

This section includes most commonly performed maintenance services that car repair do-it-yourselfers and professionals would use for day-to-day auto maintenance services.

Note:
This section does not include advanced features like resets, relearns, matchings, adaptations and initializations under diagnostic job menu. And functions with the same name may have different vehicle coverage for special function on main diagnostic menu and that under diagnostic job menu.

### 3.3.4 Report

This section includes diagnostic reports, data playback and data view functions, etc.

### 3.3.5 Updates

This section allow you to download diagnostic software programs individually or in batch.

### 3.3.6 More

This section allows you to set the user account and the workshop profile if applicable,check subscription period,check firmware information,use the endoscope and check user manual in PDF.

### 3.3.7 Settings

This section allows you to set the language of the diagnostic software, units of measurement, USB mode and OS settings, adjust volume and brightness level of the android tablet, and check App version, OS version, Serial Number of the Diagnostic Tool and VCI number.

### 3.3.8 Remote Control

Clicking this icon will run the TeamViewer for remote control assistance. Make sure the TeamViewer is in “ready to connect” status before the scheduled remote assistance appointment. The TeamViewer ID will show on the right side and the connection status at the bottom left.

### 3.3.9 Service Center

This section introduces the contact methods and social media accounts where you can get in touch with us for support or anything else.

## 3.4 Hidden Toolbar Menu, Main Screen Layout & Main Screen Icons

Swipe up from the bottom of the touch screen will un-hide the toolbar for 3 seconds and clicking the home button of the hidden toolbar will bring up the main screen of the diagnostic tablet. The sections below describes what’s the main screen layout looks like and what the icons are for.

### 3.4.1 Hidden Toolbar Menu

Take a screenshot on what's on the screen.

Volume Down icon, press to decrease the volume of the speaker of the android tablet.

Press to back one step from the current menu.

Home icon, press to go to the main screen of the android tablet.

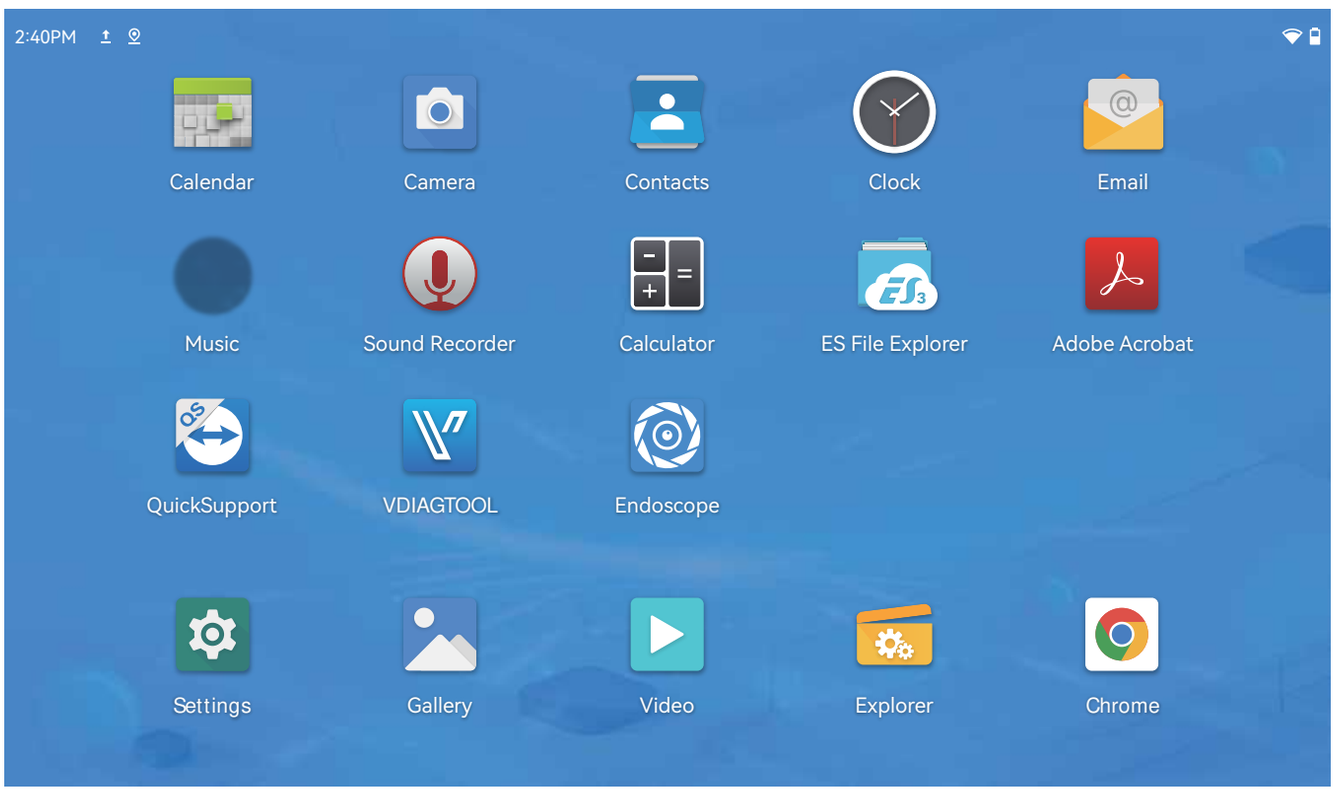
Task List icon, press this icon to view all ongoing tasks. Swipe up the respective task screen to kill the task.

Volume Up icon, press to raise the volume of the speaker of the android tablet.

Diagnostic program shortcut, press this icon to run the diagnostic program.

Screen Recording icon, press this icon to start recording the screen including the surrounding sound. Press the icon again to end the screen recording process.

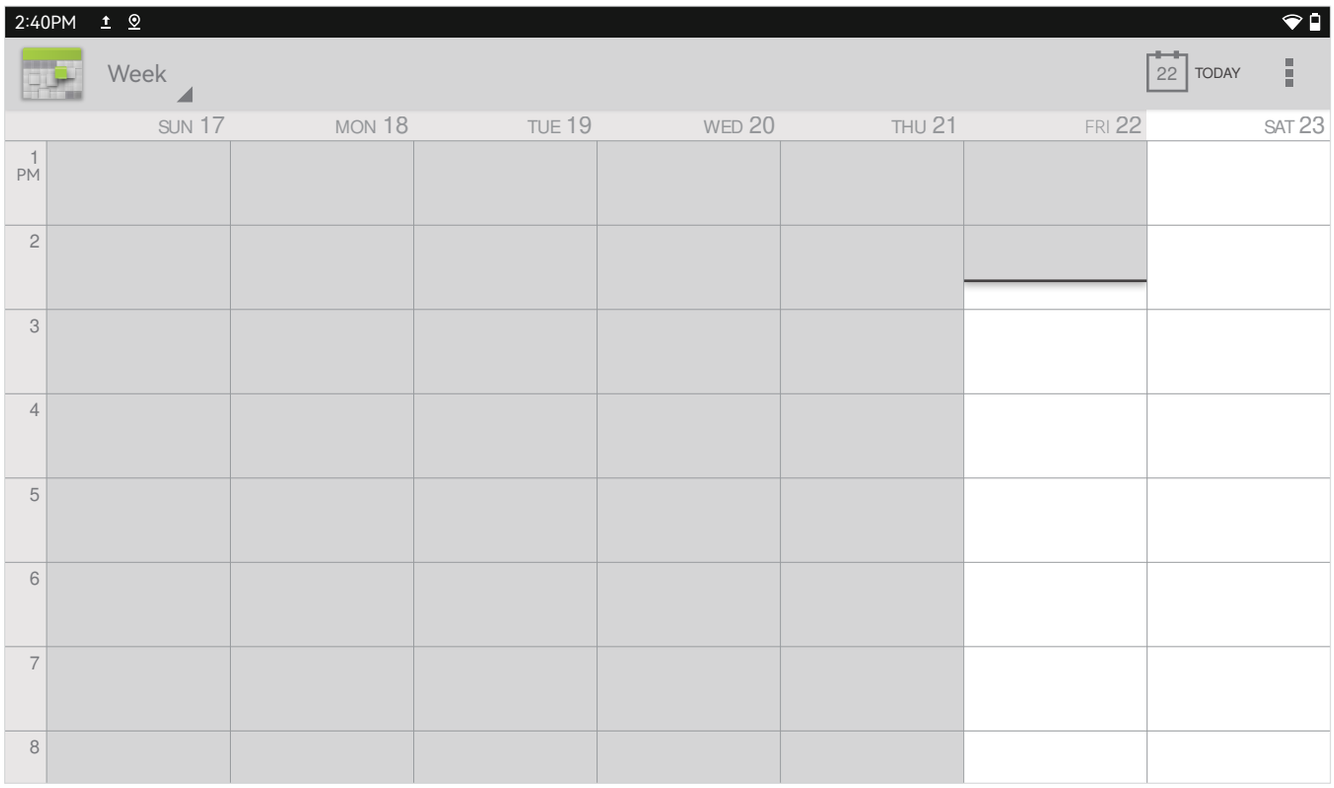
## 3.5 Main Screen Layout




## 3.6 Main Screen Icons

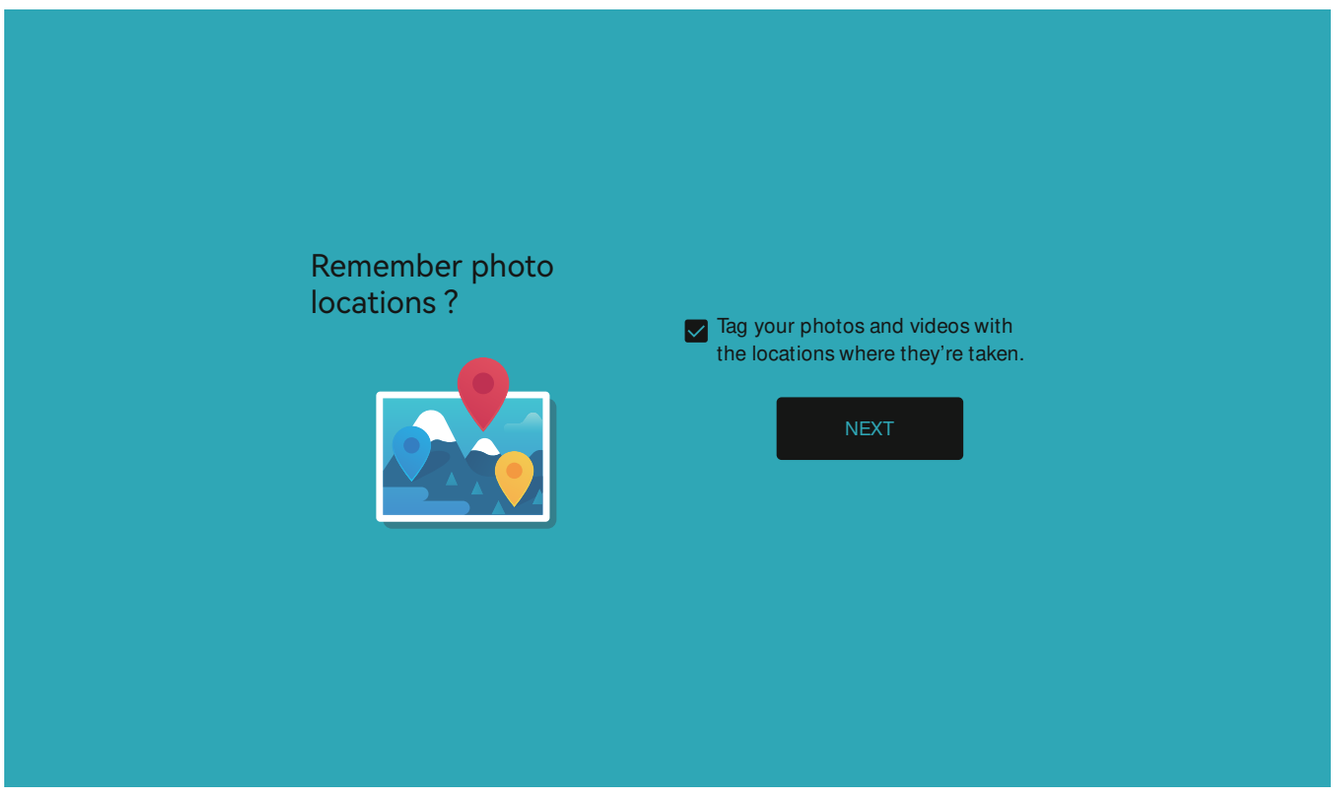
### 3.6.1 Calender

This function displays the calender in day, week and month.



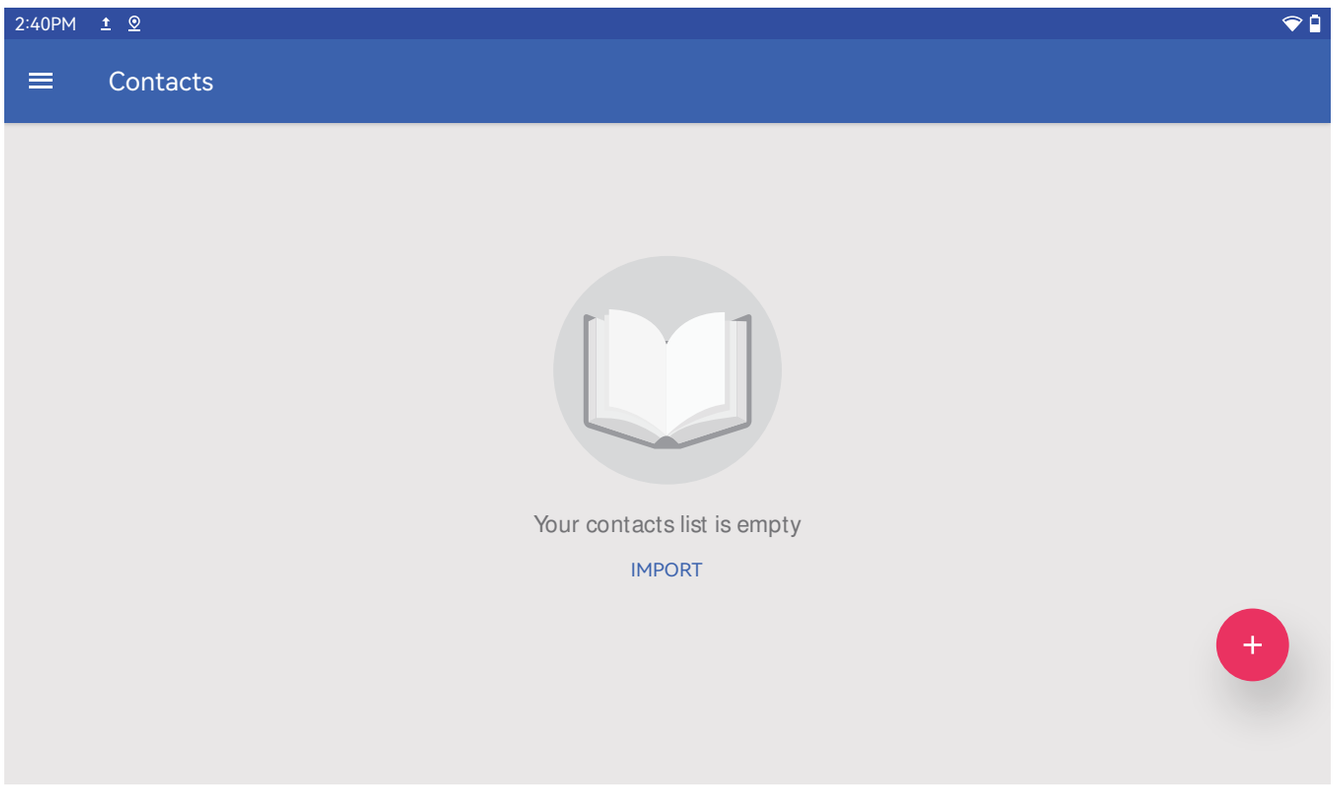

### 3.6.2 Camera

This function activates the camera at the back of the Diagnostic Tool so that you can take pictures of the vehicle problem.



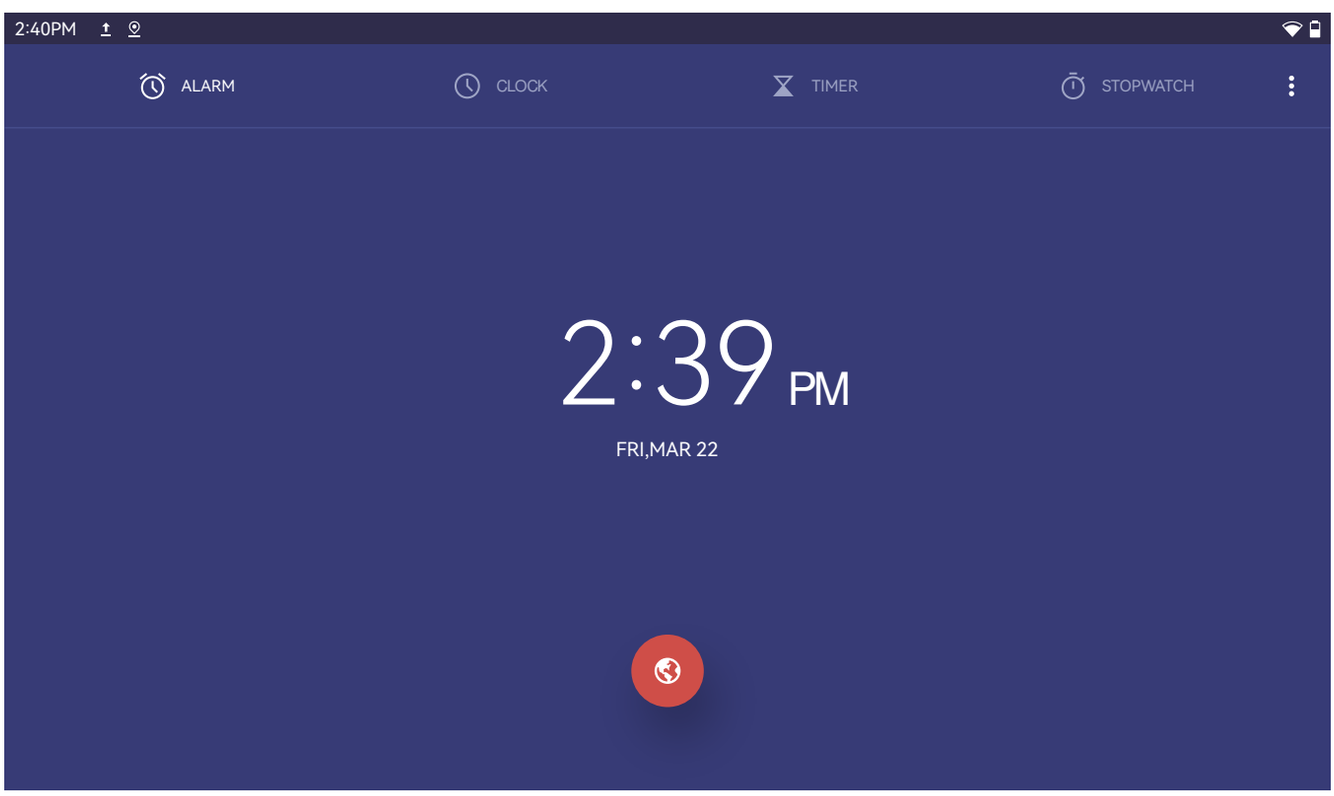
### 3.6.3 Contacts

This function allows you to manage your contact information, add a new contact by clicking "+" icon at the bottom right or import contacts in bulk in vcf file by clicking "IMPORT".



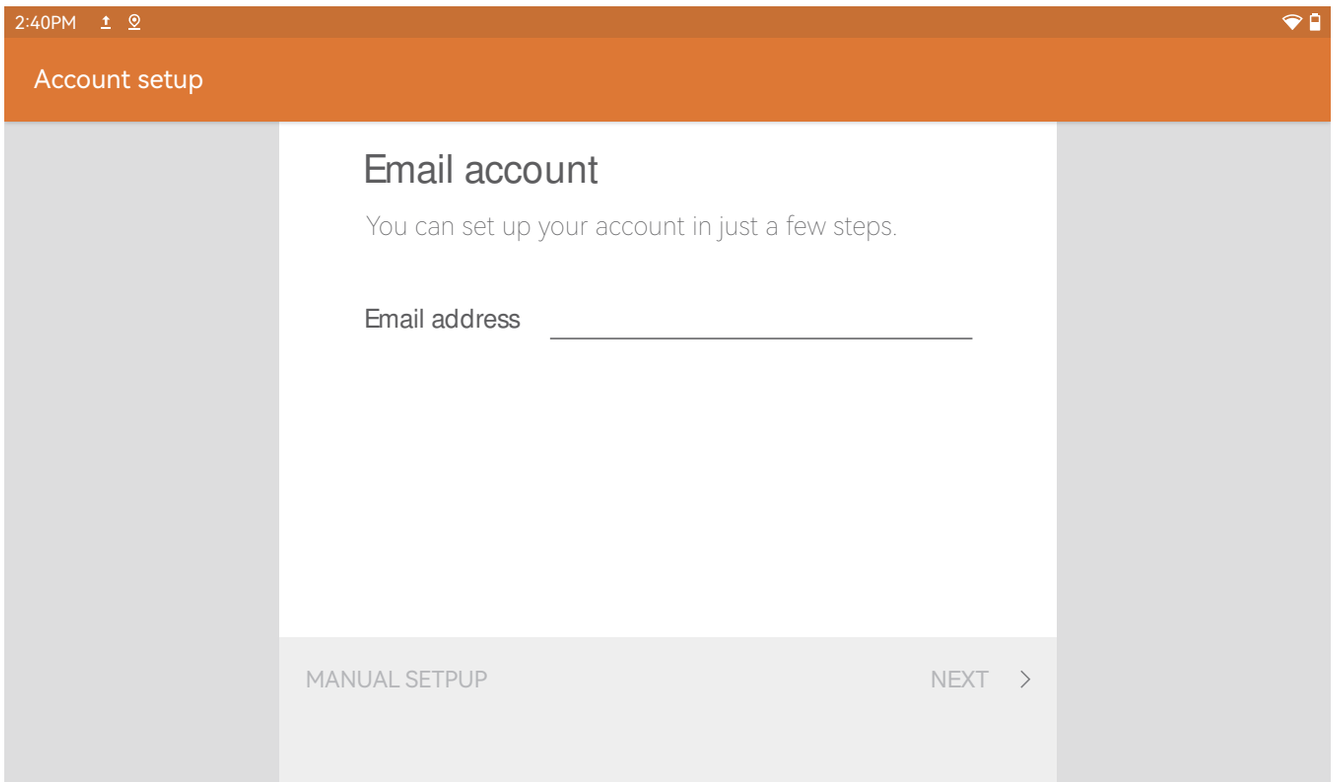

### 3.6.4 Clock

This function allows you to set alarms, set timer, to use the stopwatch or the clock.



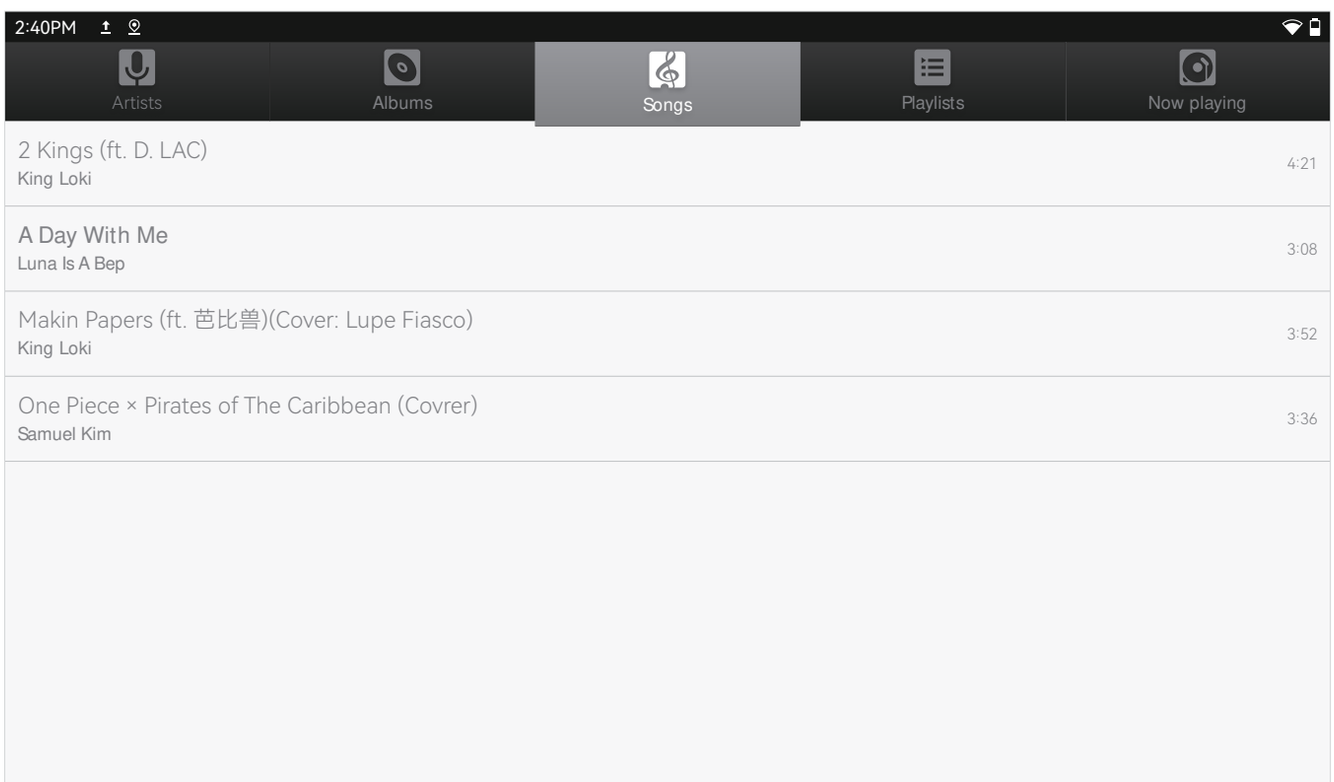
### 3.6.5 Email

This function allows you to set up a new email account to send emails or share reports.



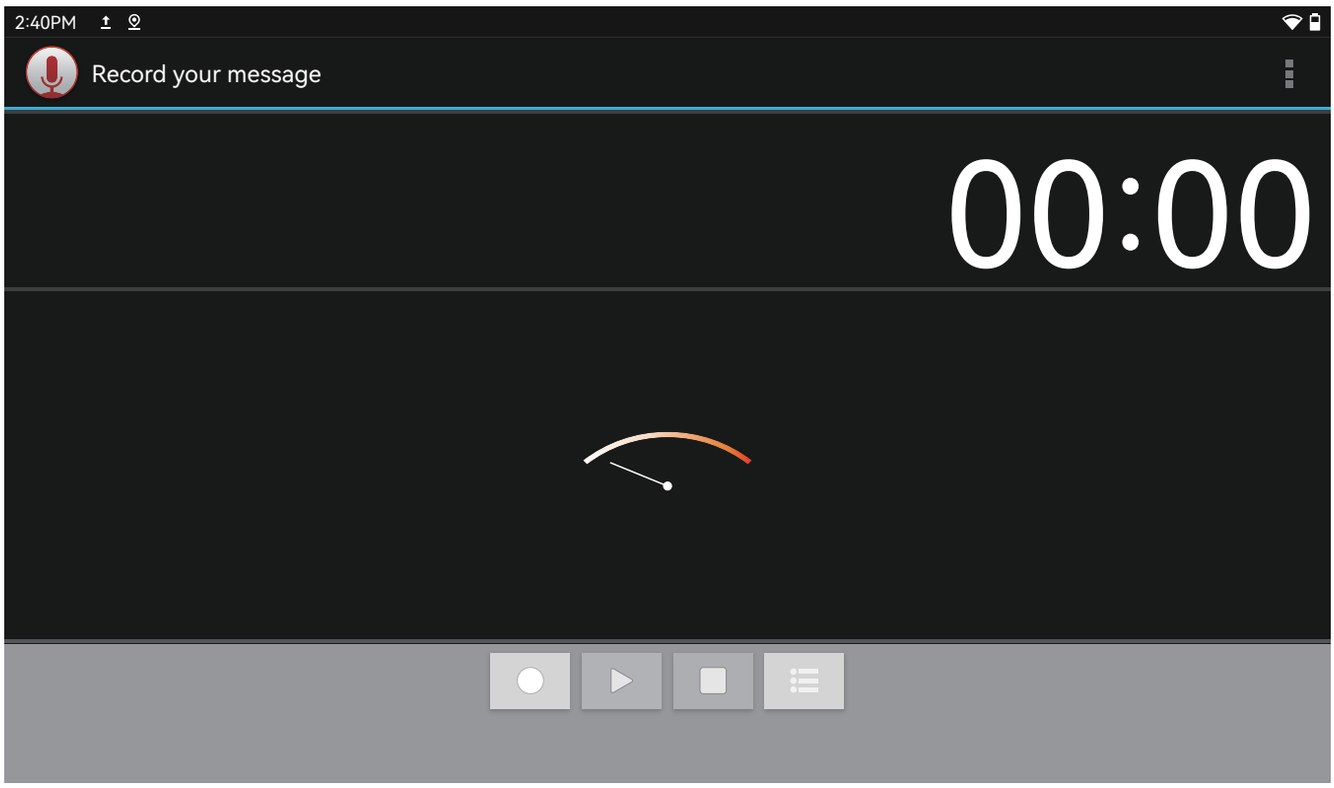

### 3.6.6 Music

This function allows you add new songs, playlist, albums, artists and etc.



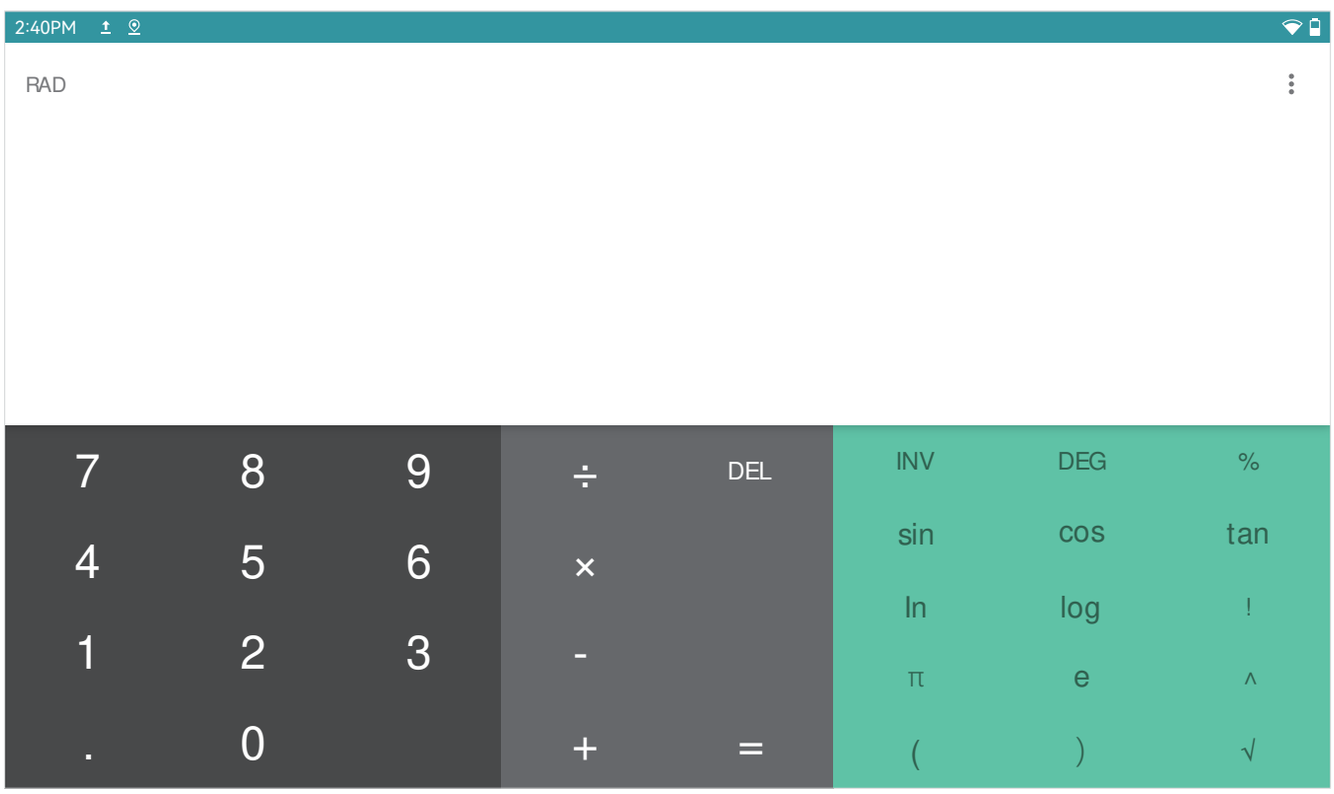
### 3.6.7 Sound Recorder

This function allows you to record a voice message.



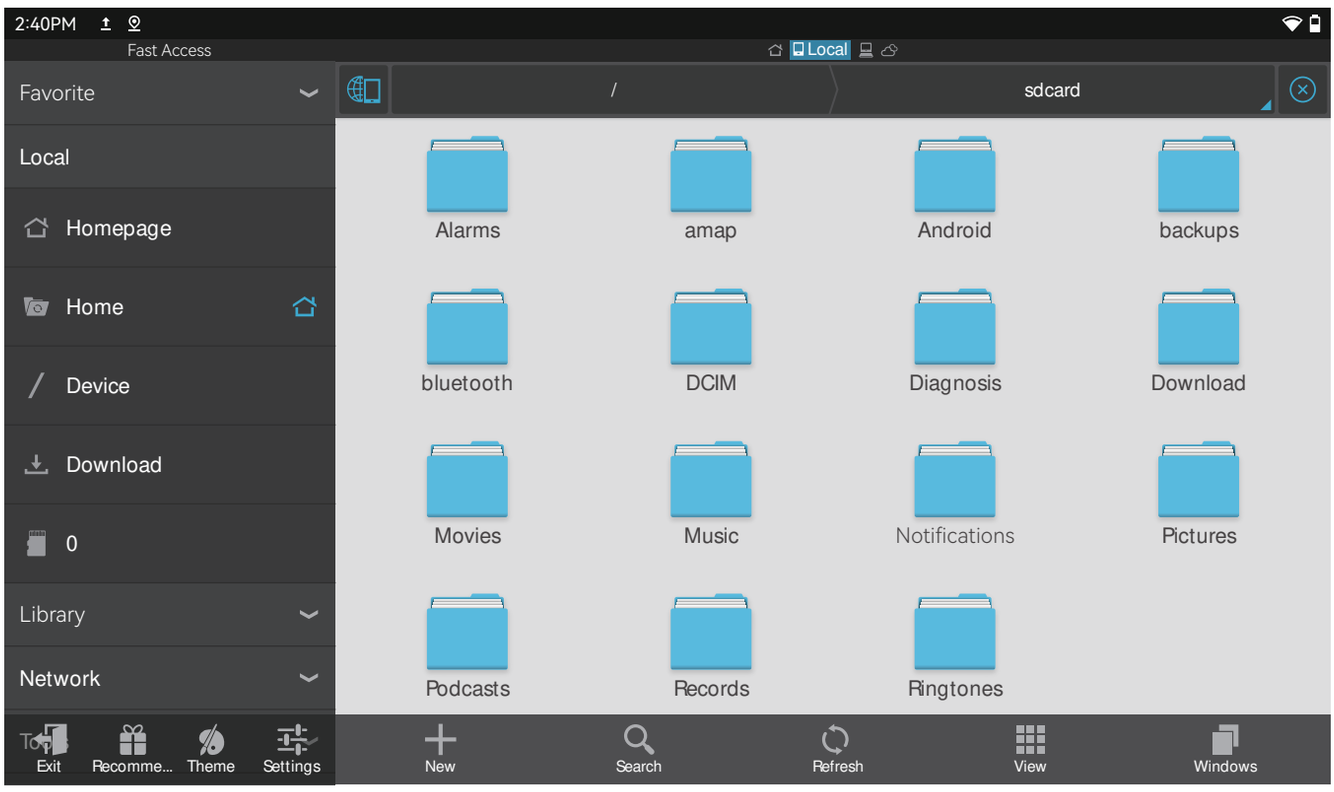

### 3.6.8 Calculator

This function brings up calculator.



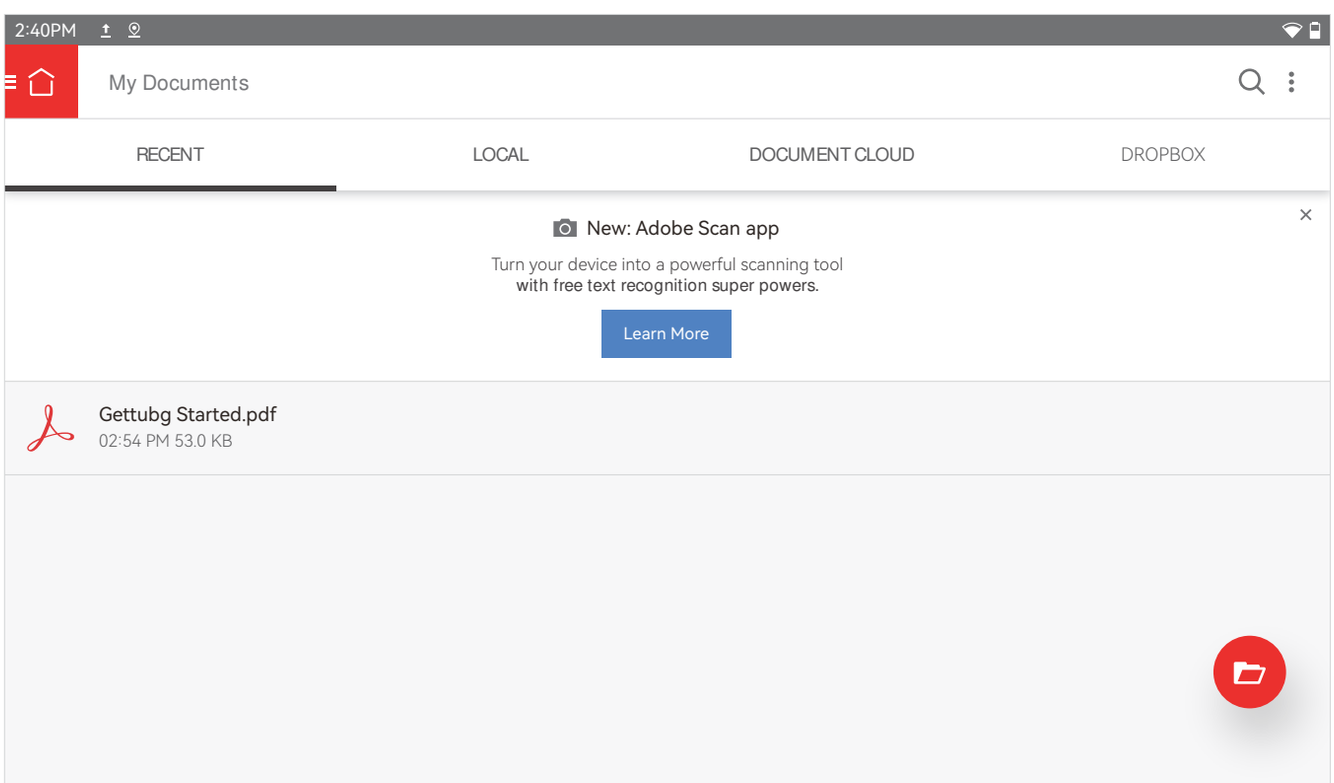
### 3.6.9 ES File Explorer

This function allows you to manage the documents, reports, files and folders stored in the memory.



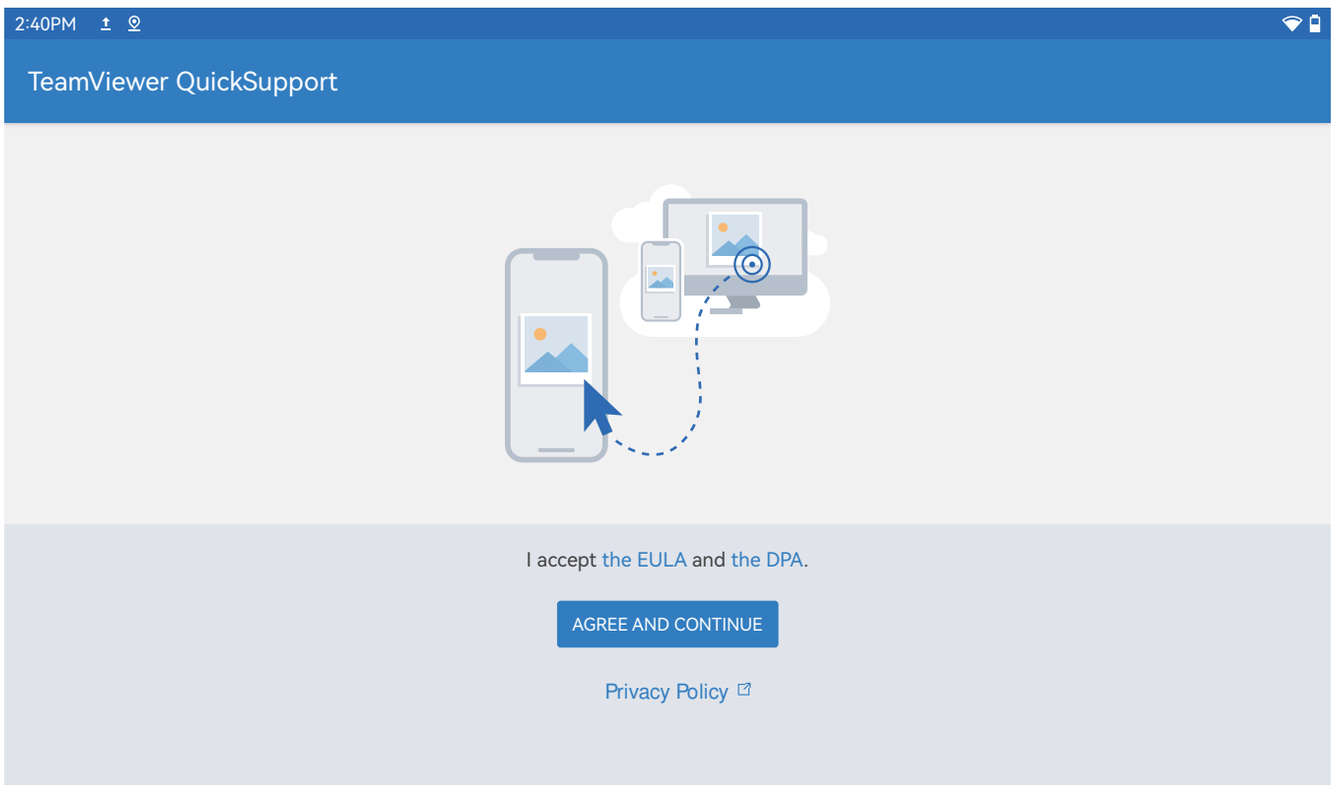

### 3.6.10 Adobe Acrobat

This function allows you to manage PDF files and access DROPBOX account when you have logged into Adobe account and DROPBOX account.



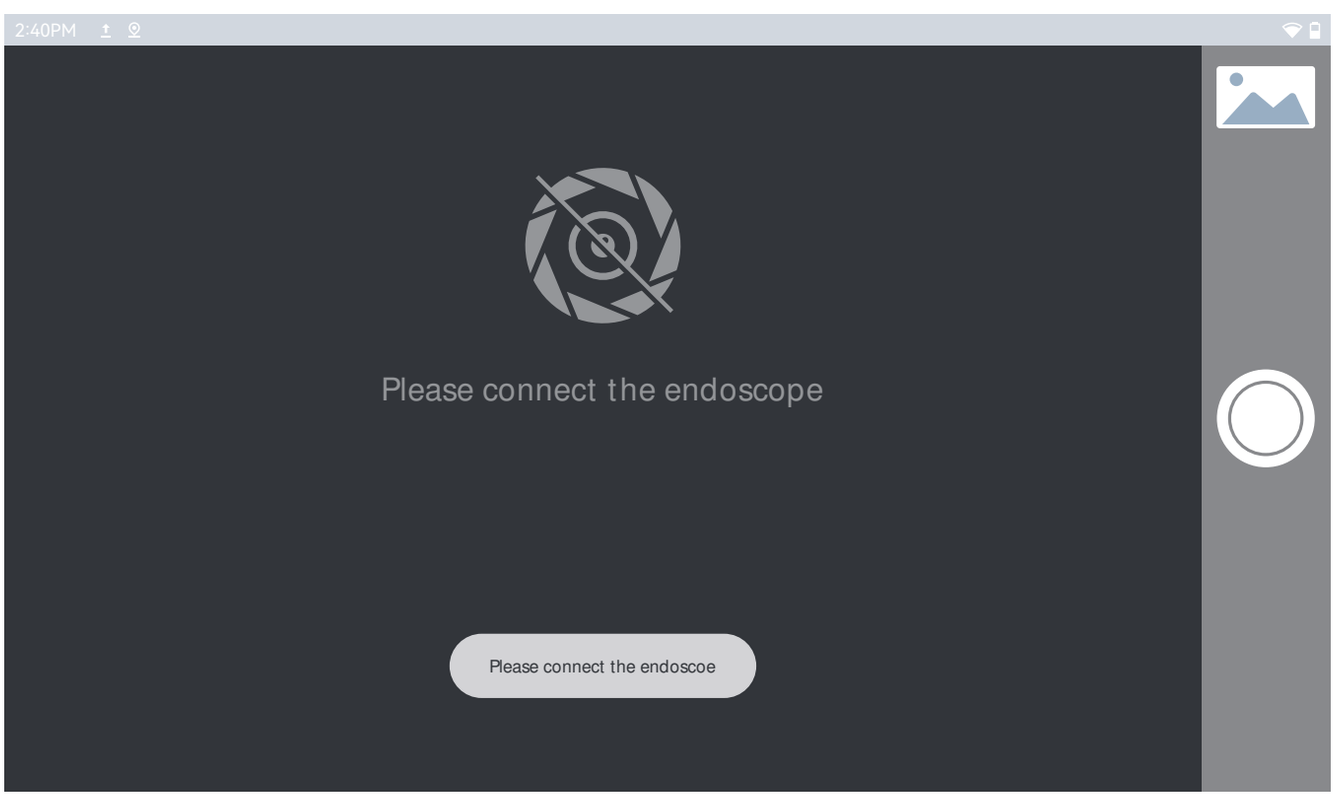
### 3.6.11 Quick Support

This function allows our tech support team to control the Diagnostic Tool remotely to check possible problems with the Diagnostic Tool or help you with navigation path etc.



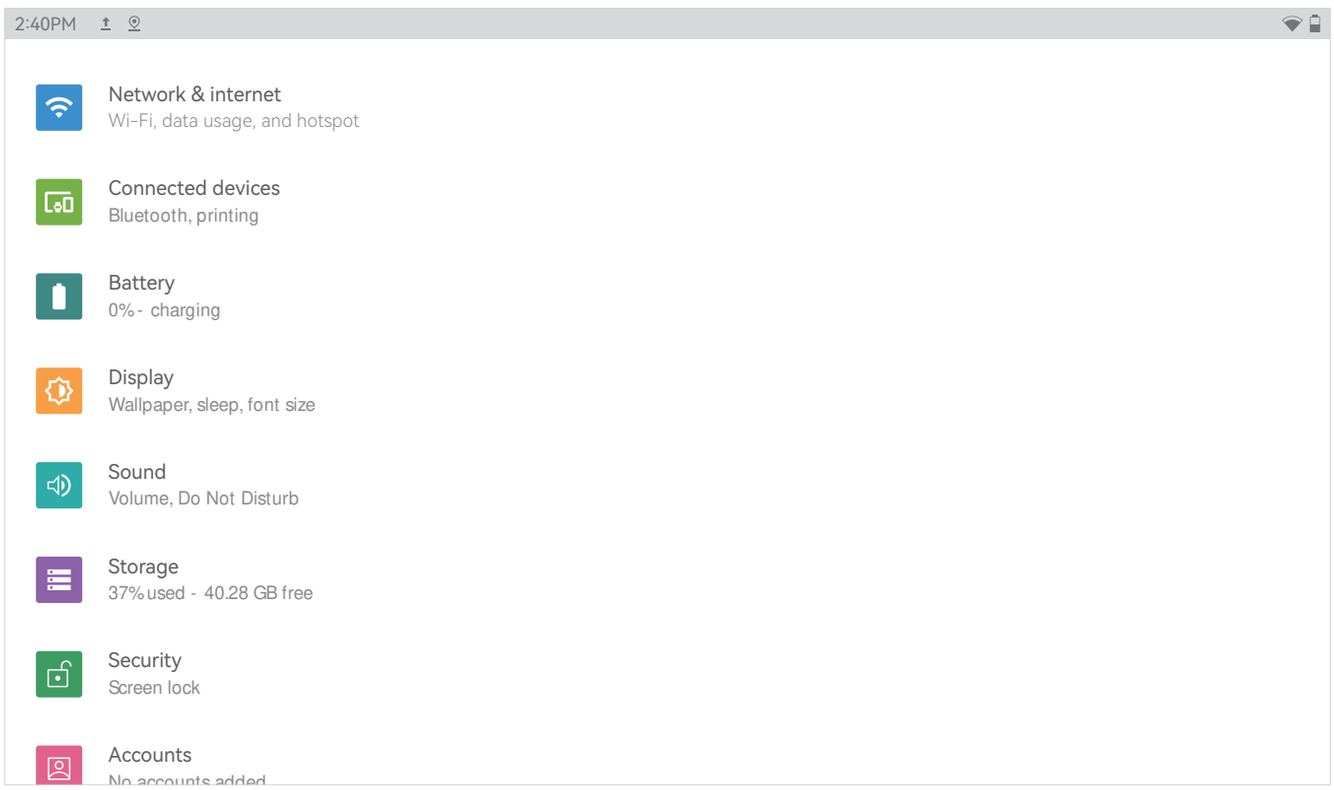

### 3.6.12 Endoscope

This function allows you to use the endoscope to perform visual inspection when it's connected to to the Diagnostic Tool.



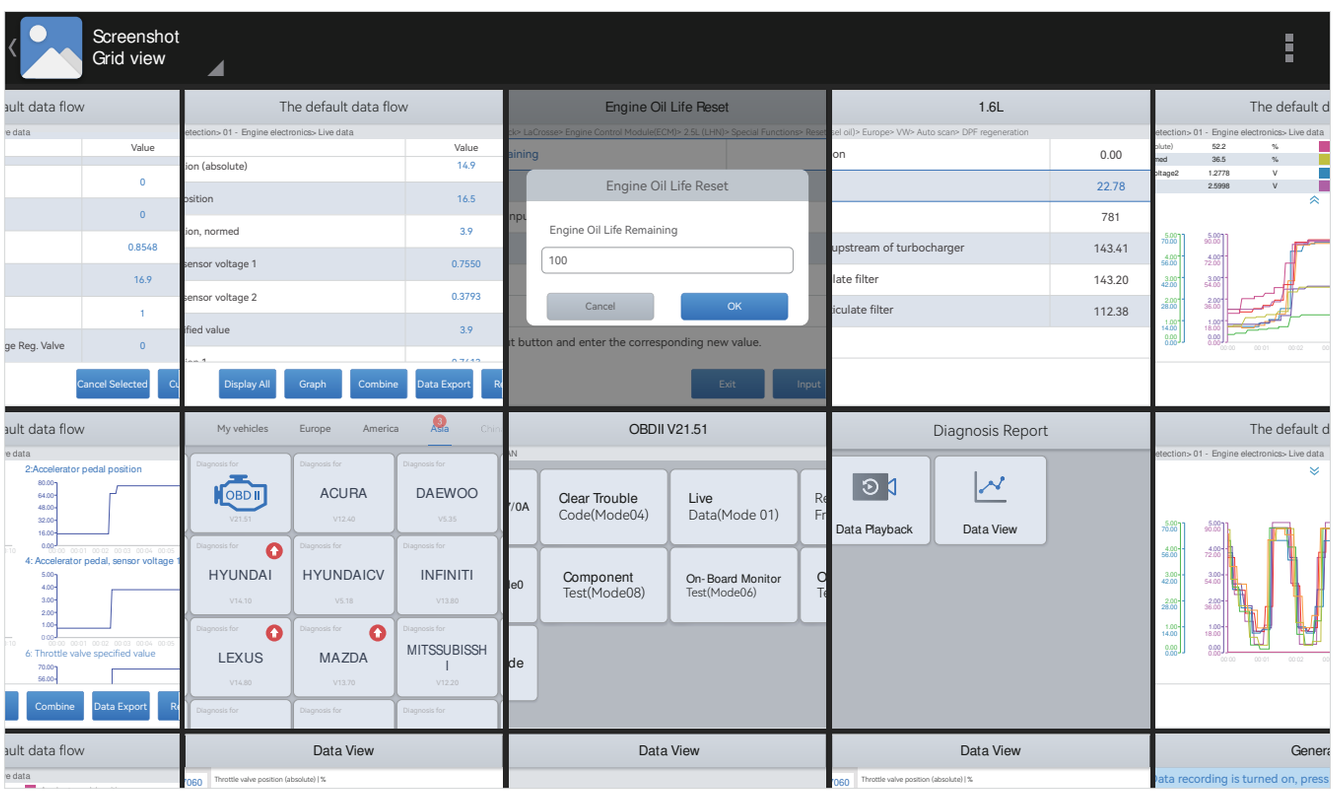
## 3.6.13 Settings

This function allows you to set up android tablet settings, including Wi-Fi connections, manage battery, set up screen settings, control sound volume, check memory storage...



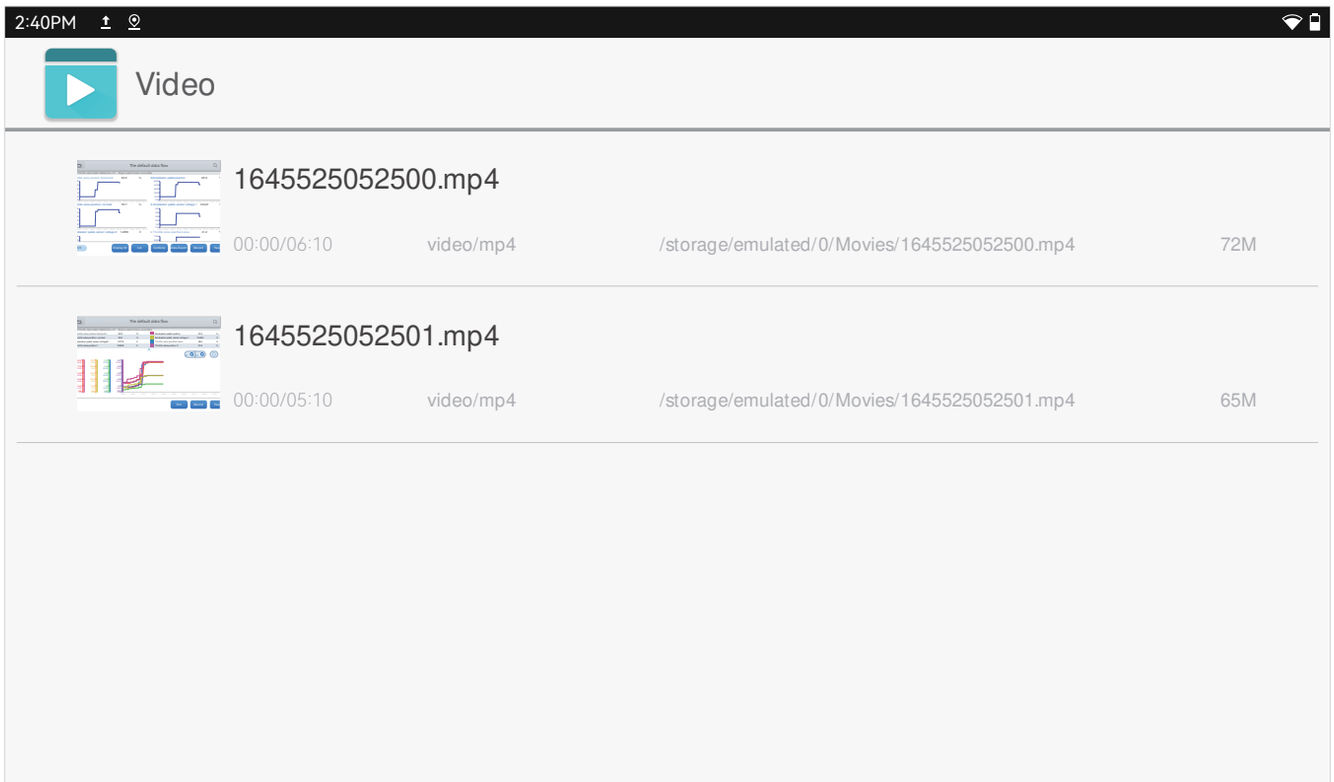

## 3.6.14 Gallery

This function allows you to view the screenshots, images taken by the camera and screen recordings.



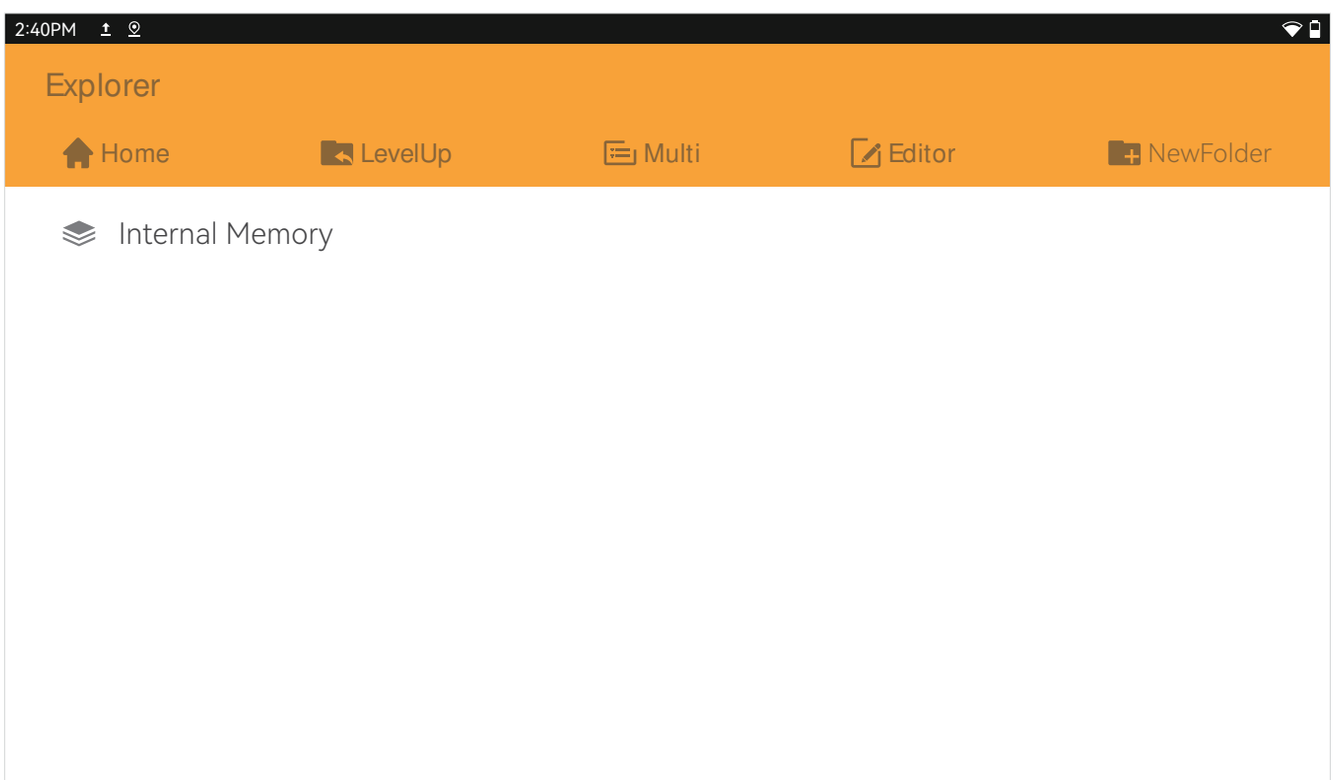
### 3.6.15 Video

This function allows you to view the recorded screen recordings.



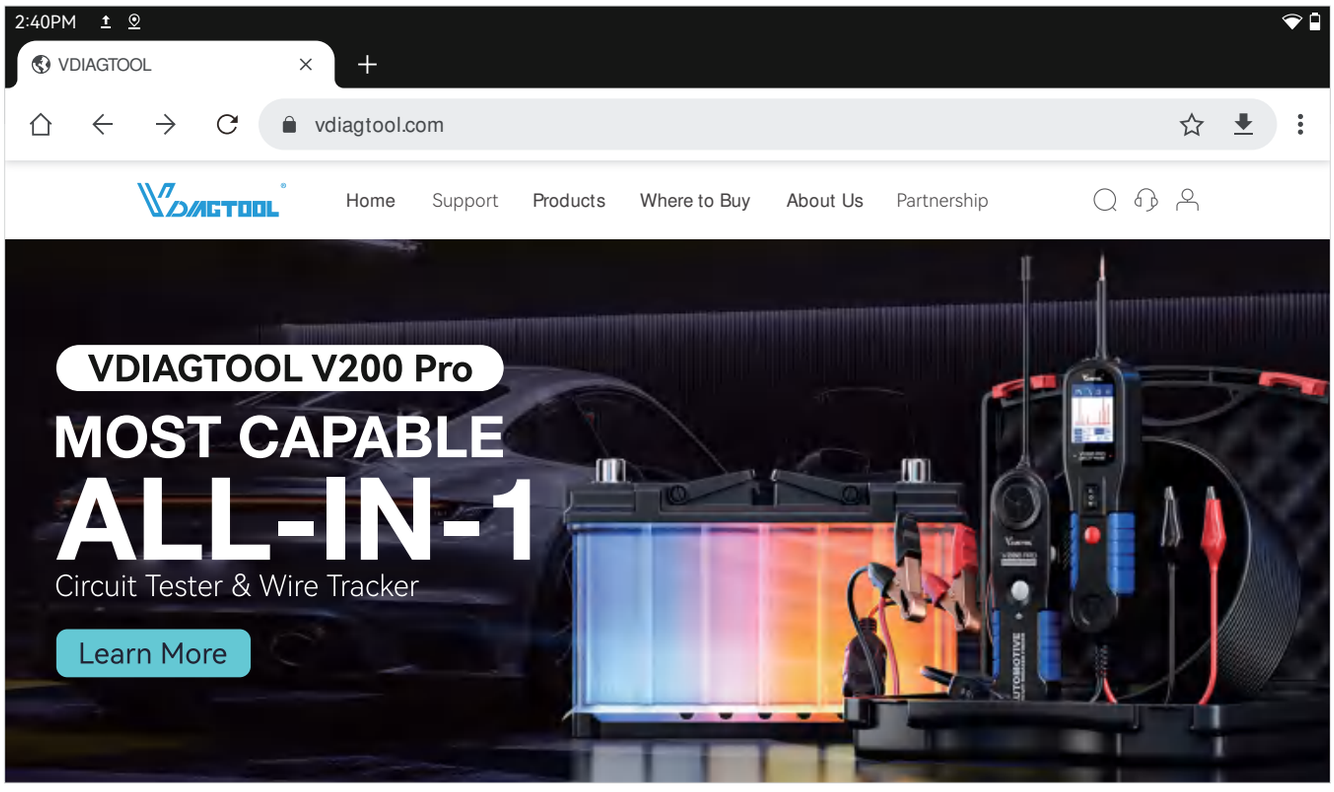

### 3.6.16 Explorer

This function allows you to view the internal memory and edit files.



### 3.6.17 Chrome

This function activates preinstalled browser so that you can search fault codes and etc online.




## 3.7 Connect to USB Type-C Port for Data Transfer

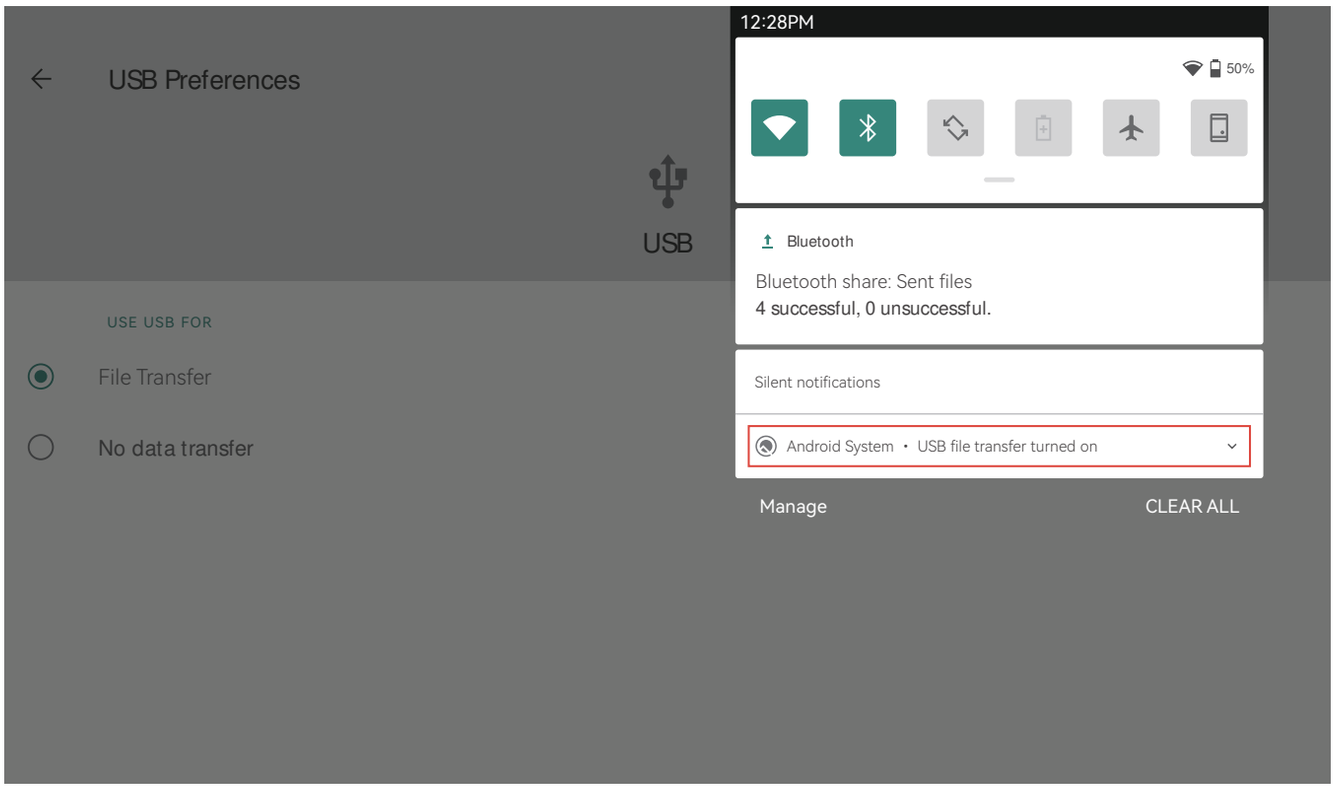
To enable data transfer between the Diagnostic Tool and a PC, please follow the steps below:

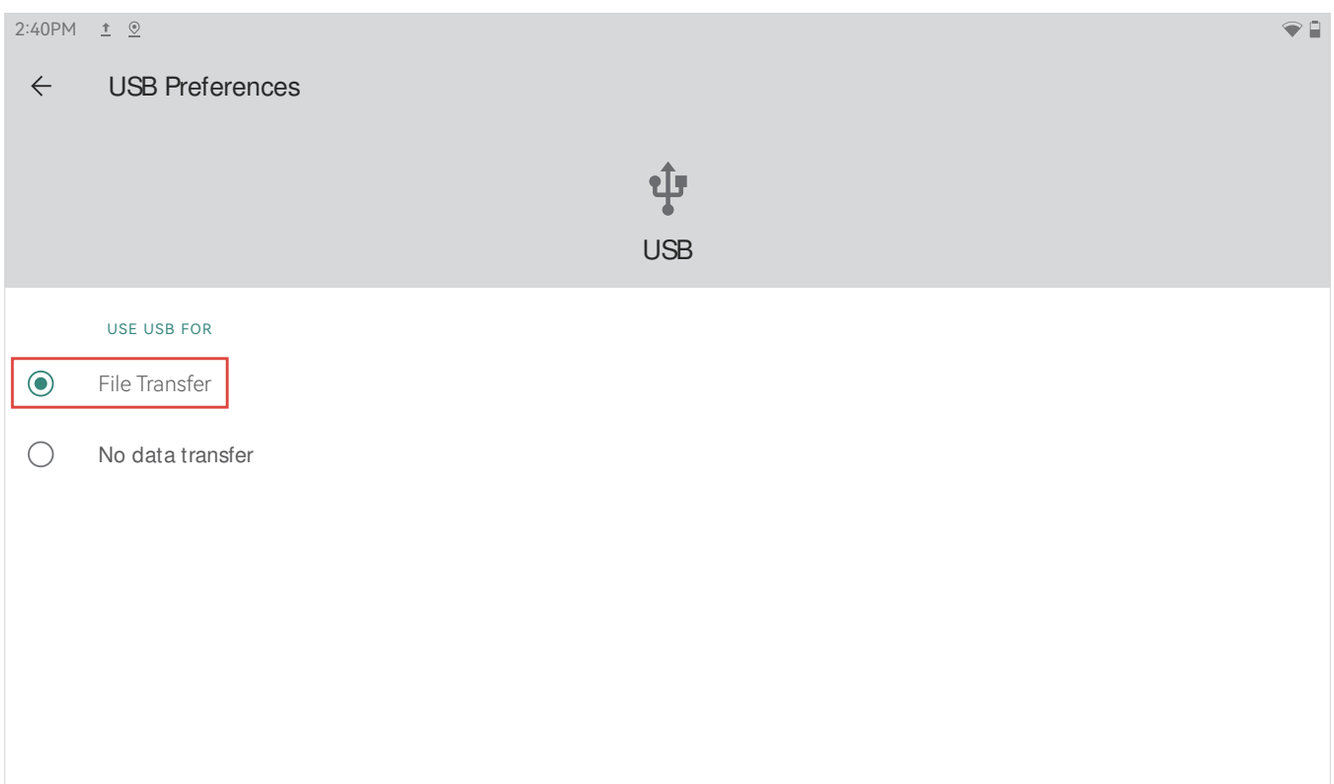
Step 1: Connect the Diagnostic Tool to a PC through Type-C cable with one end into the Type-C port on the Diagnostic Tool and the other end into the USB 2.0 port on the PC.

Step 2: Then swipe down from the upper right corner or the upper left corner on the Diagnostic Tool to bring up the drop down menu and click “Android System. Charging this device via USB”.

Step 3: Change the option from “No data transfer” to “File Transfer”.

Step 4: Check the device connected on the PC and click “VD70S” to check the files stored in the internal memory of the Diagnostic Tool.



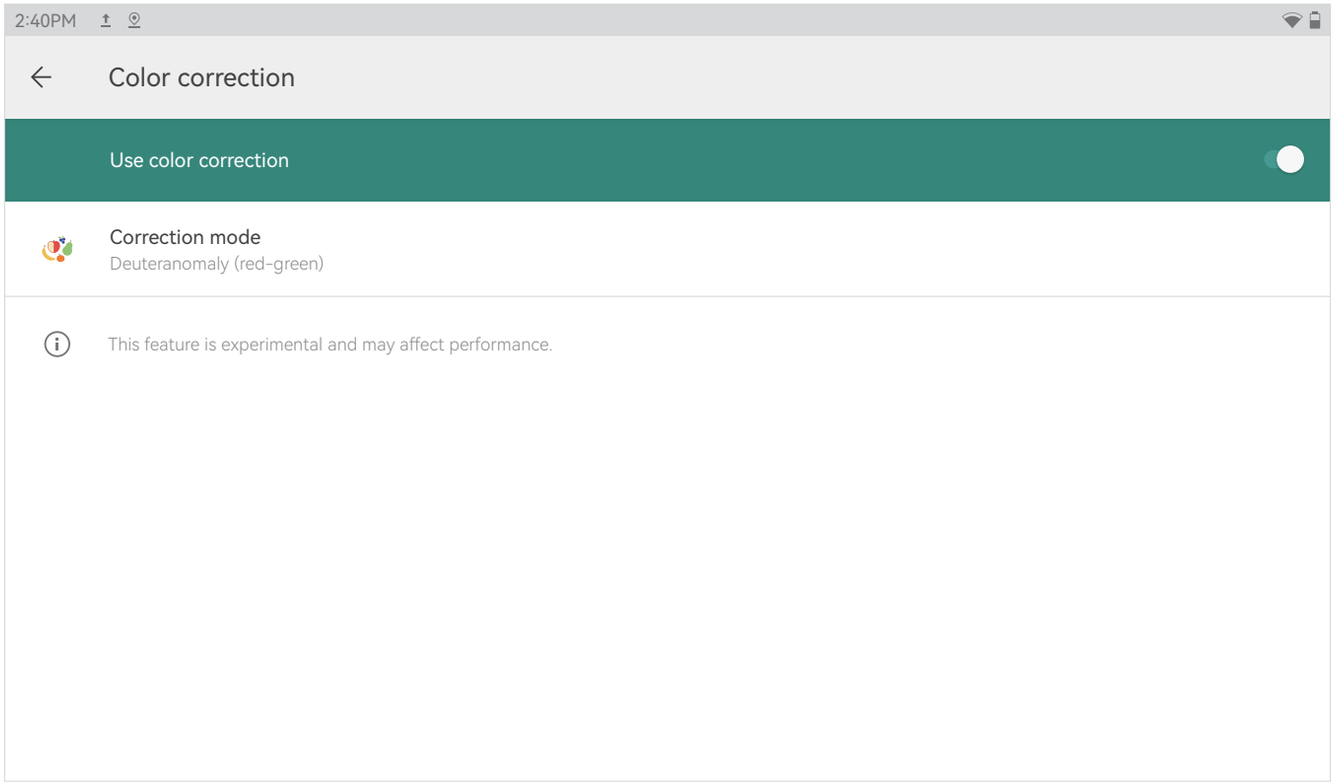

## 3.8 Red-Green Color Blindness Color Correction Mode

Follow the steps below to set to red-green color blindness color correction mode:

Step 1: Swipe up from the bottom and bring up the hidden menu.

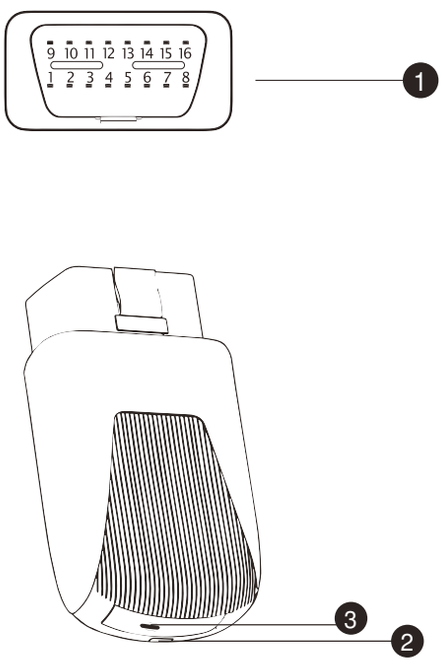
Step 2: Click home button to switch to main screen of android tablet.

Step 3: Click Settings- Accessibility- Swipe down to find “Color correction”- Switch “Use color correction” to on position.




## 3.9 VCI Box

The VCI Box communicates with the Diagnostic Tool via WiFi. The WiFi wireless connection provides faster transmission speed than Bluetooth, ensuring stable communication, longer transmission distances, and higher data capacity, helping you achieve faster diagnostics.




❶ OBD Male Adapter
❷ VCI Indicator
❸ Type-C Port - Connect to Diagnostic Tool via cable

## 3.10 FCA AutoAuth - SGW

Security Gateway Module (SGW) – In 2018, the SGW was implemented by FCA USA to prevent unauthorized access. FCA said that SGW was developed to limit "the ability of non-registered and non-authenticated users to perform intrusive diagnostics such asbi-directional controls", so users cannot directly clear the DTC, as well as any bi-direction-al control test (including actuation, relearn and calibration) on vehicles equipped with SGW.

VDIAGTOOL Receives Certification by FCA to access SGW Module, and perform previously restricted actions, by registering with AutoAuth, an authentication service. VDIAGTOOL Tablet scanner users can register through AutoAuth's Internet-based registration portal for $50 a year. (Note: This fee is NOT charged by VDIAGTOOL company)

You can now access the SGW module and perform operations that were previously restricted by registering with the AutoAuth authentication service. This process eliminatesthe need for additional accessories. Users begin by registering through AutoAuth's web-based portal, selecting their desired package, and adding their VDIAGTOOL diagnostic tool.

The information above indicates that if you cannot find "Transmission" or a similar name in the diagnostic menu, you should locate "Transmission Oil Temperature" under the PID data (live data) menu of the Powertrain Control Module (or PCM). Similarly, if you are looking for the ABS Bleeding feature, you should go to the Special Function under theBrake Control Module (BCM). This approach helps navigate and locate specific diagnosticfeatures within the Diagnostic Tool's interface.

# 4. How to Diagnose Vehicles

This chapter describes the basic operation of the Diagnostic Tool function.

The Diagnosis icon is located on the Home screen.

The Diagnostic Tool function allows your Diagnostic Tool to communicate with the electronic control systems of a vehicle. This allows you to retrieve diagnostic trouble codes (DTCs), view PID data, perform active tests and various advanced resets, relearns, matchings, adaptations, initializations and etc.

## 4.1 My Vehicles

“My vehicles” function allows you to add the diagnostic programs you use often to save time navigating the vehicles. Click Manual Diagnosis icon on the diagnostic screen, you will see “My vehicles” listed in the top taskbar.

To add diagnostic program that you use often into this section, click the add icon→select the region where the vehicle brand is originated→select the brands you often use→click “completed” to finish adding brands operations. To remove a diagnostic program for “My vehicles” list, click the pen icon- select the diagnostic program you want to remove- click “Remove” to finish removing it from the list.

### 4.1.1 Compatibility Check

This Diagnostic Tool is compatible with all OBDII/EOBD vehicles to perform generic ODBII tests and vast number of vehicle makes and models in the United States, Europe, Asia, Australia etc to perform all electronic control systems diagnostics. However, the functions available for each vehicle vary, even for vehicles of the same make, model and year.

---

## IMPORTANT:

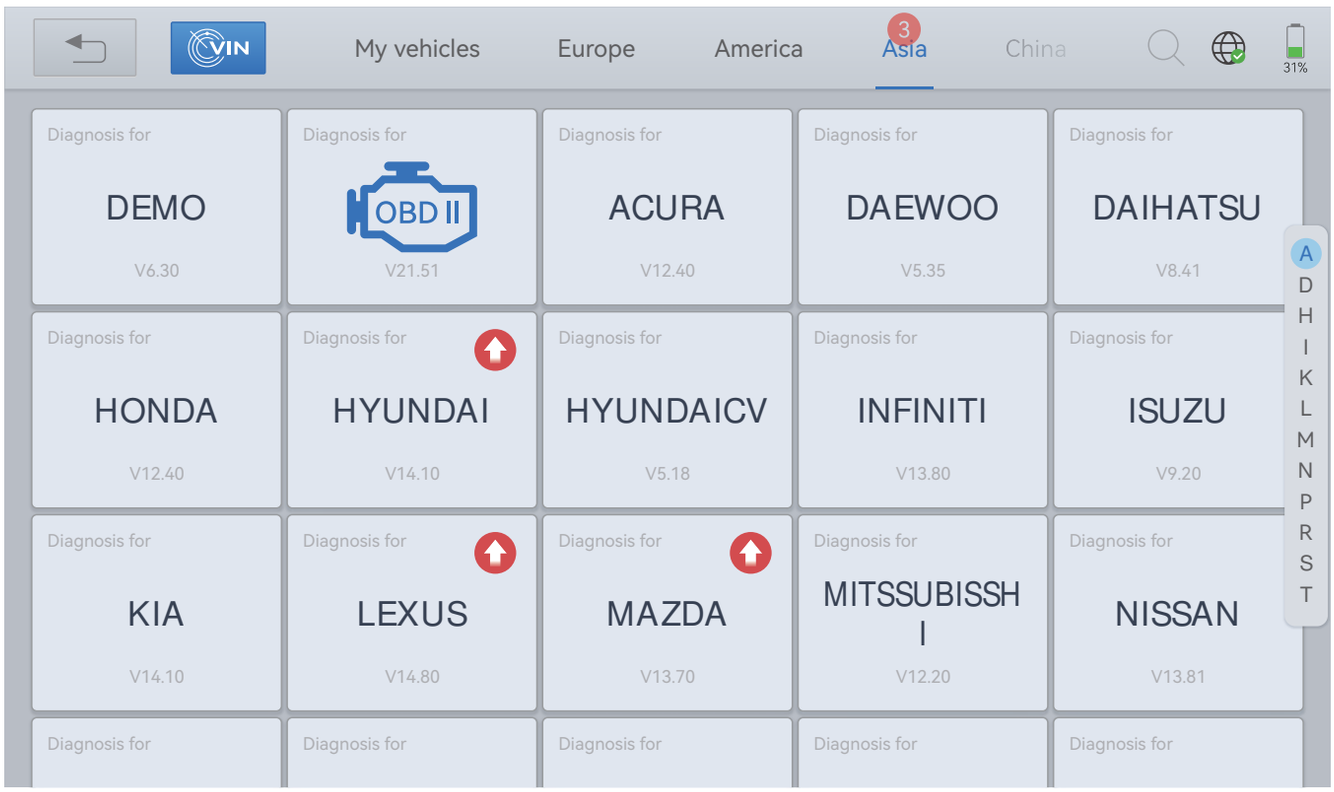
Special Functions on the main diagnostic screen are not universally available to all vehicles. Functions available to a specific vehicle are strictly subject to compatibility check, providing with the vehicle VIN, make, model and year.

---

To check compatibility, please consult tech support via support@vdiagtool.com any time or refer to our website https://www.vdiagtool.com/support/vehicle-coverage (for reference only, subject to confirmation from tech support).

## 4.2 Software Program Version

This Diagnostic Tool displays the current software program version at the bottom of each vehicle manufacturer. For example, the current installed Benz software program is V21.80 as shown in picture below.




The red up arrow indicates there is a newer version software program available for download. And when you have clicked the arrow to update the software program and installed it, the Diagnostic Tool will display a newer version software program installed.

## 4.3 Demo Program

The “DEMO” program simulates the vehicle navigation process, the functions options available and what the menu looks like. You may use this DEMO program to practice how to use the Diagnostic Tool function before you activate the tool.

---

### IMPORTANT:

The DEMO program may not reflect the latest vehicle diagnostic process or the real screen. This program are NOT used for vehicle coverage/compatibility check.

---

## 4.4 Trial Mode

The Diagnostic Tool comes with a few trials which you can use to check the functions of the Diagnostic Tool or compatibility with your vehicle before you actually activates the tool. However, the trails available vary due to the various numbers of factory inspections (routine inspections and random inspections) it went through.

## 4.5 Wi-Fi Connection

This Diagnostic Tool can connect to 2.4 GHz or 5.0 GHz frequency hotspot or Wi-Fi. Swipe up the hidden bottom toolbar and see the tab menu. Click Home- Network & internet- Switch on Wi-Fi connection-Click Wi-Fi icon to view Wi-Fi available-Select the Wi-Fi you want to connect and input password to connect.

If your Wi-Fi does not work well or you are in a field that does not have home Wi-Fi connection, you can connect to your mobile phone hot spot.

For iOS users, go to Settings- Personal Hotspot- Switch on "Allow Others to Join" and "Maximize Compatibility" to set your phone and connect to the hotspot from your Diagnostic Tool following the steps above.

For Android phone users, go to Settings- Wireless & networks-Tethering & portable hotspot- Portable WLAN hotspot- Switch on hotspot- Configure WLAN hotspot- Encryption Type- WPA2 PSK- Show advanced options and make sure "Max connections allowed" has user left for the Diagnostic Tool.

---

### Note:

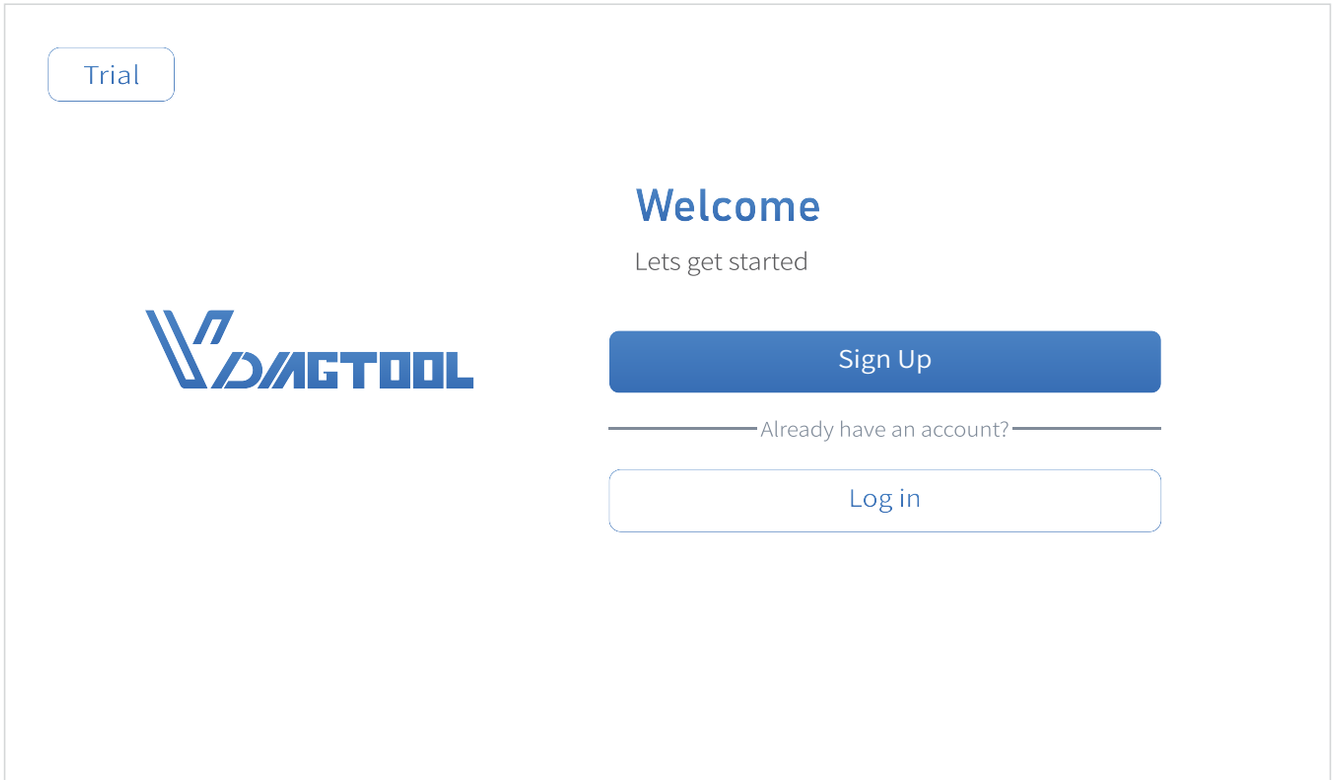
Wi-Fi connection is not required in diagnostics for most of the vehicle brands. Diagnostics for just a few vehicle brands like Peugeot requires accessing online server and should connect to Wi-Fi while diagnosing.

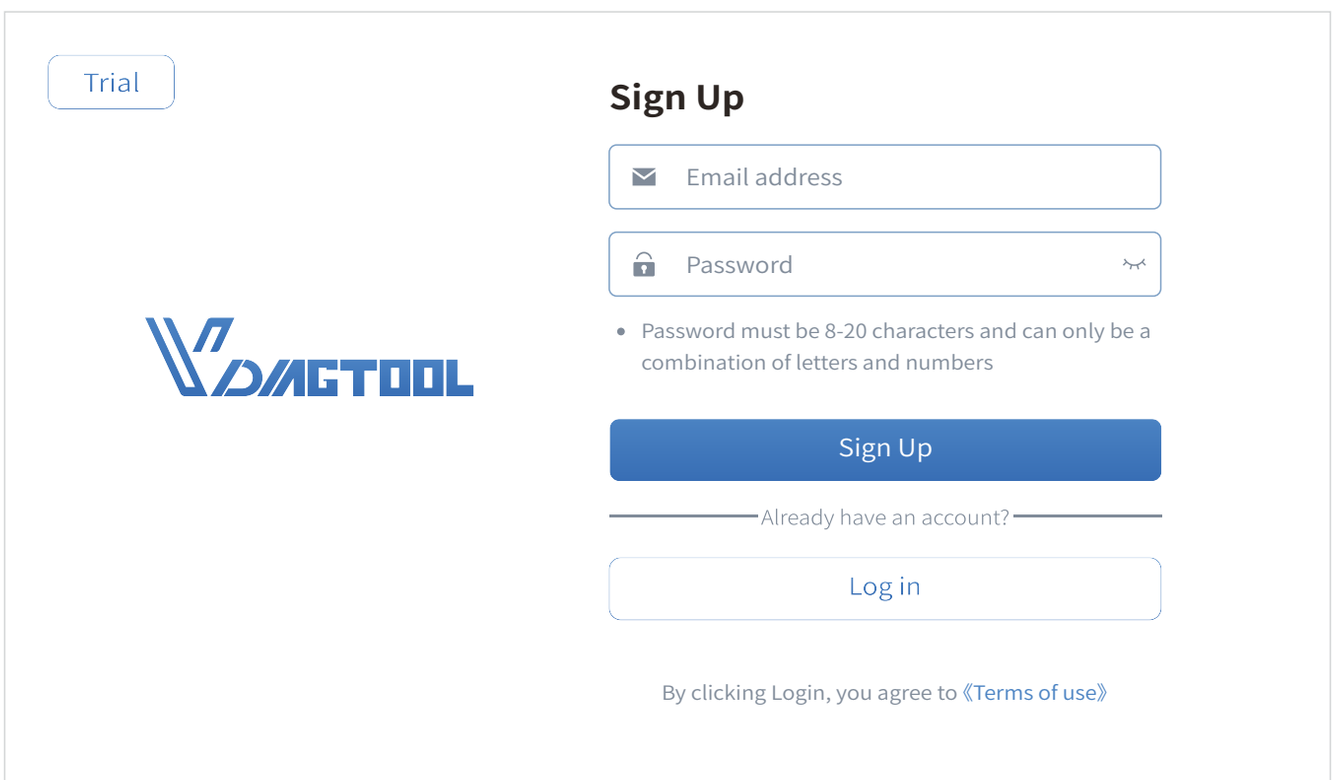
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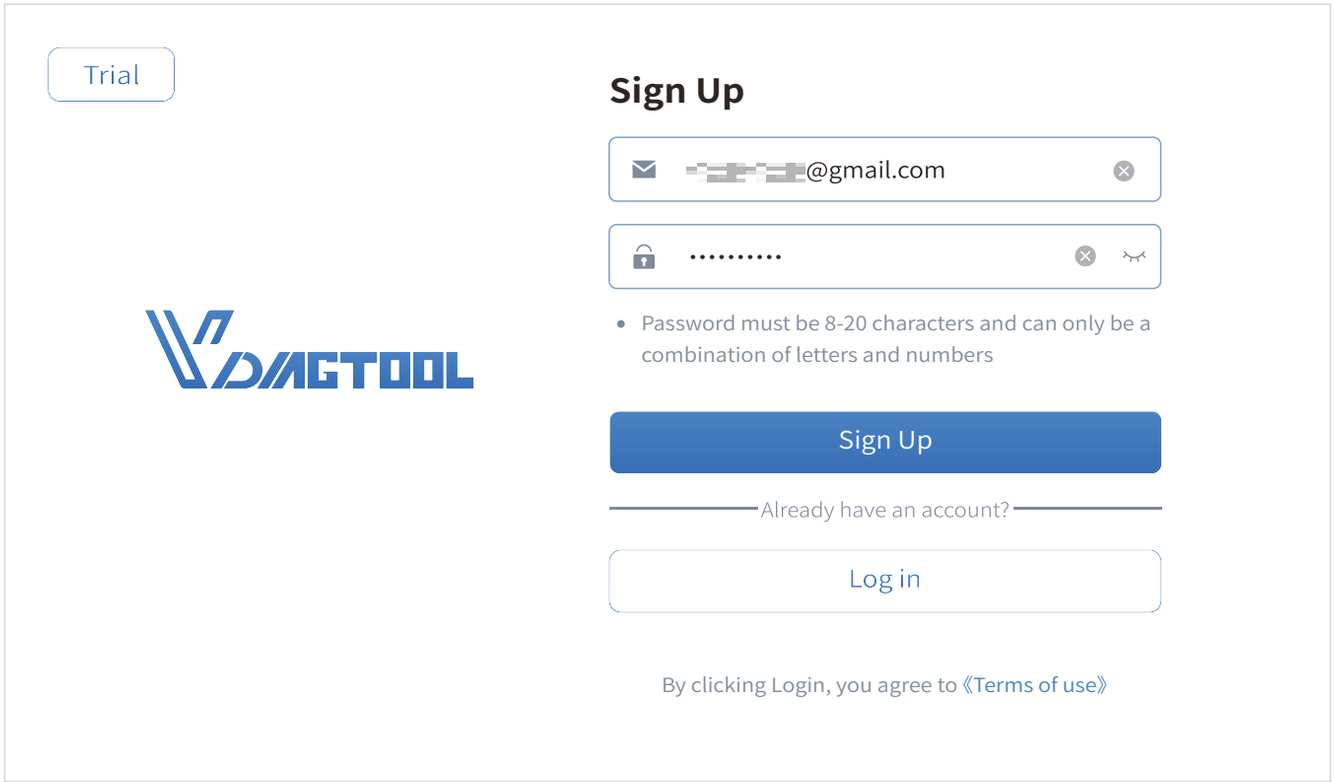
## 4.6 Product Activation

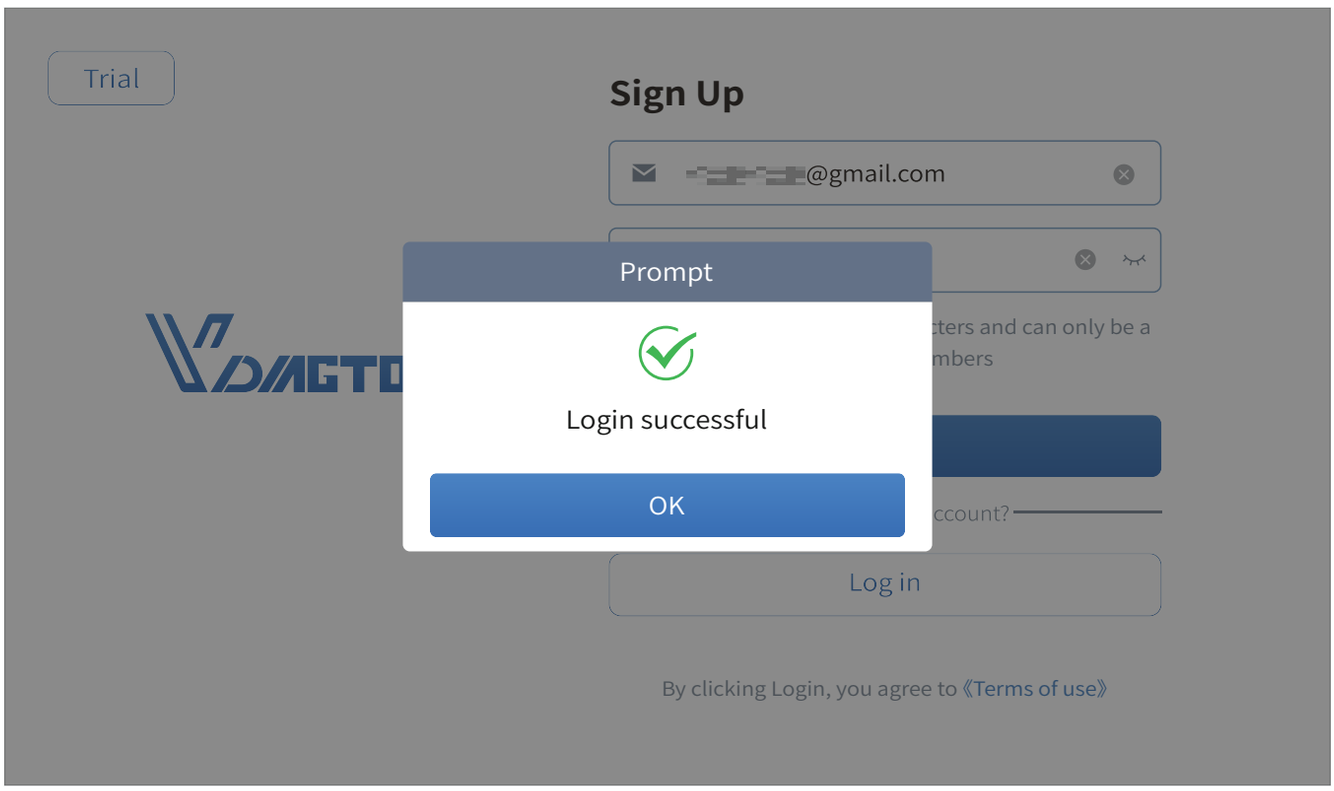
When the Diagnostic Tool ran out of trials, you have to register and activate the Diagnostic Tool to continue using the diagnostic programs.

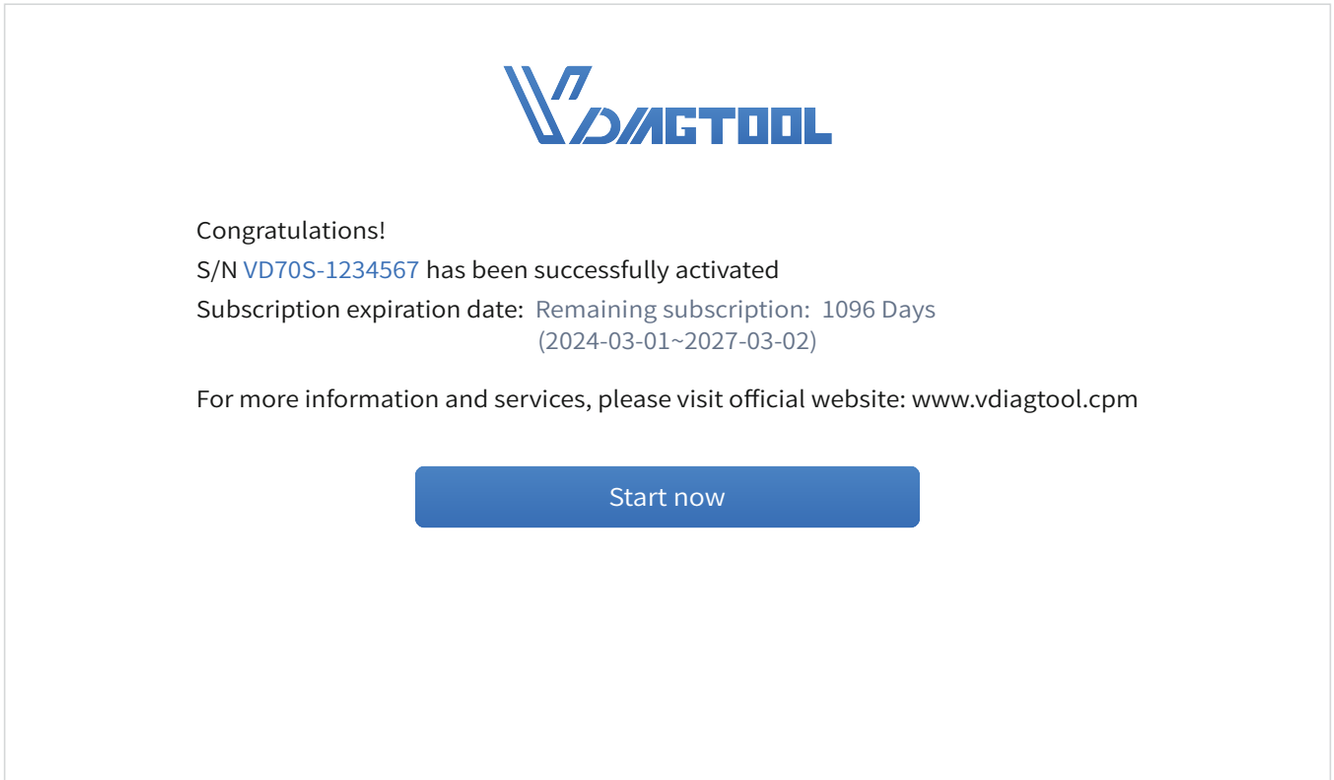
To register the Diagnostic Tool, click "Register"- input your email address- set the password and repeat the password- agree to the User Terms and submit your registration. When you see registration completed on the screen, the Diagnostic Tool has been registered and activated! And you can use the email address and password you just set for login(the Diagnostic Tool will remember your account information once registered and you don't need to login every time).


Trial
Welcome
Lets get started
Sign Up
Already have an account?
Log in


Trial
Sign Up
Email address
Password
Password must be 8-20 characters and can only be a combination of letters and numbers
Sign Up
Already have an account?
Log in
By clicking Login, you agree to《Terms of use》


Trial
Sign Up
@gmail.com
Password must be 8-20 characters and can only be a combination of letters and numbers
Sign Up
Already have an account?
Log in
By clicking Login, you agree to《Terms of use》

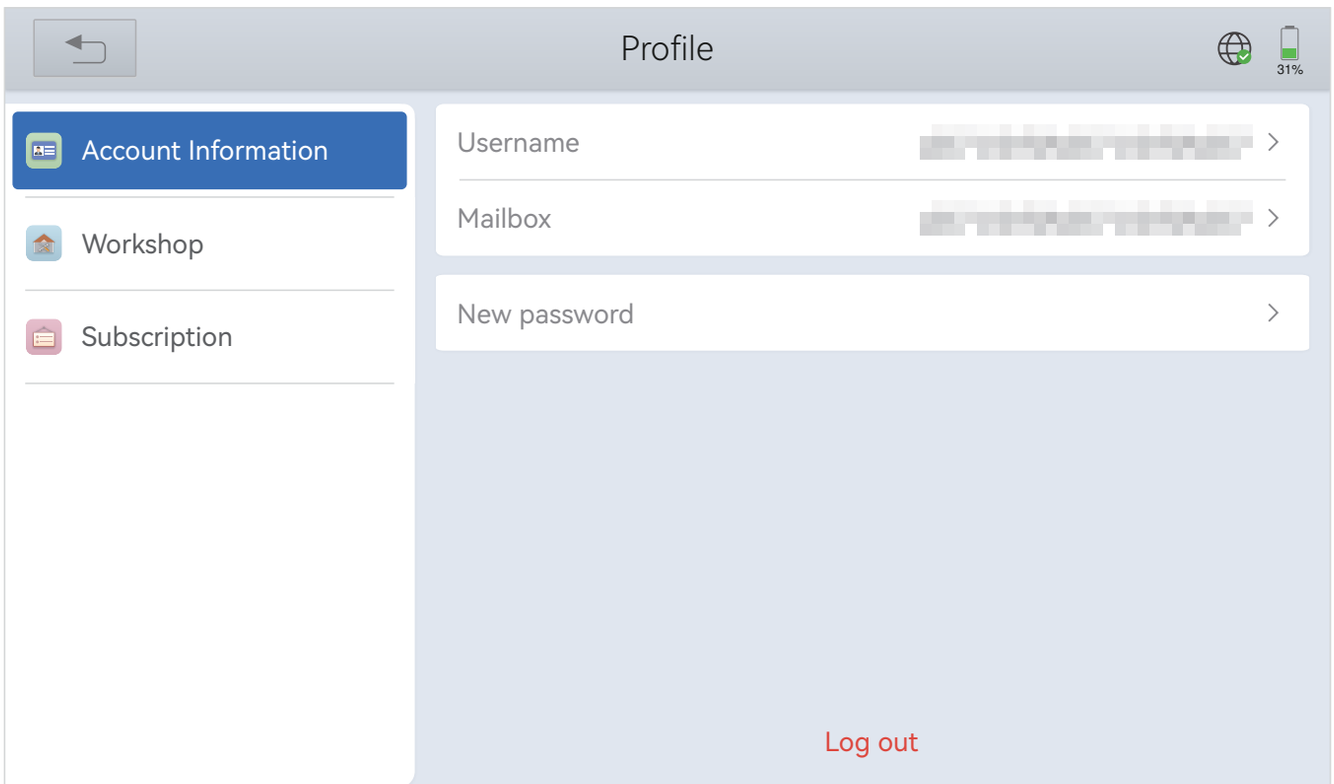

Trial
Sign Up
@gmail.com
Prompt
Login successful
OK
Log in
By clicking Login, you agree to《Terms of use》

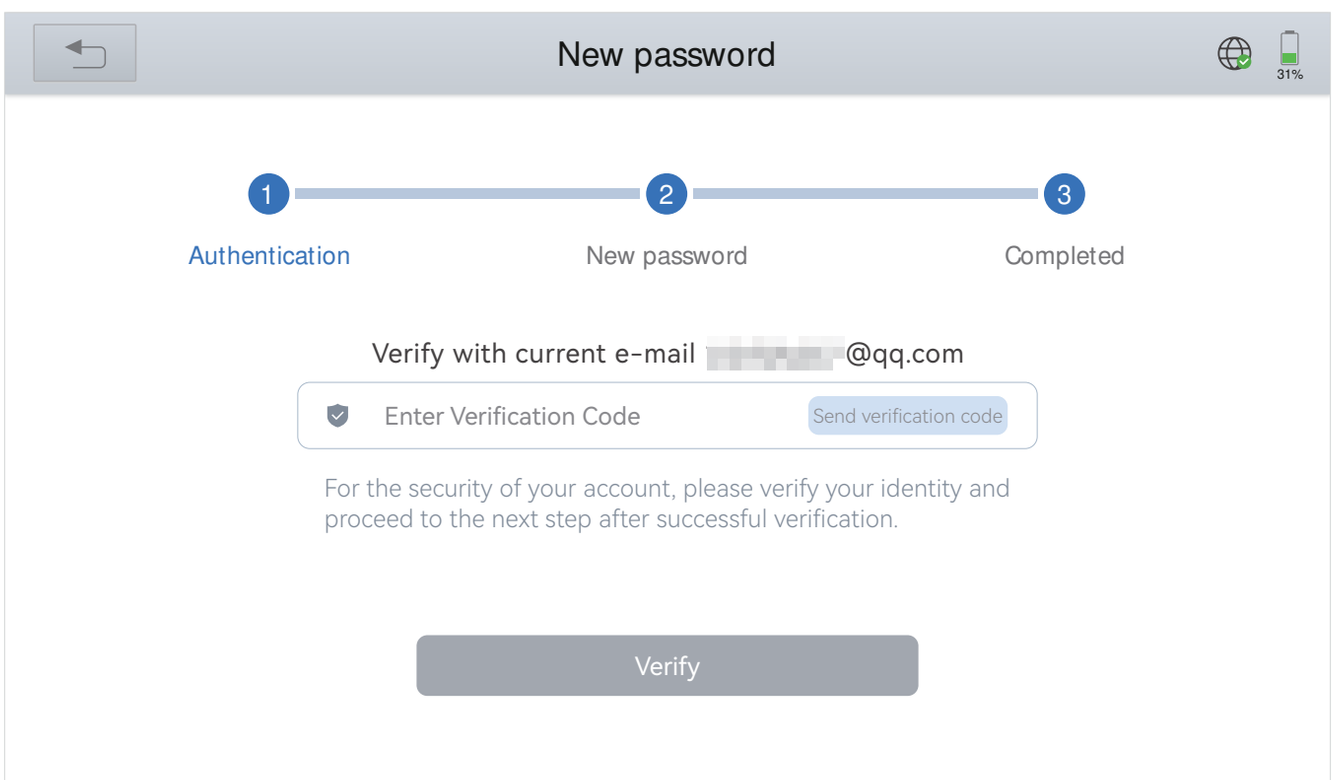



## Note:

If you are unable to register the Diagnostic Tool or you can't see the activation screen, contact our support team via support@vdiagtool.com or fill out the tech support form on our website www.vdiagtool.com asap for assistance.

If you forget your password, click “New password” and input your email address and click “Get verification code”. You will receive a verification code from noreply@service-vdiag-tool.com and input the verification code to proceed to reset the password. If you don’t see the verification code in the inbox, please check the spam box as well.

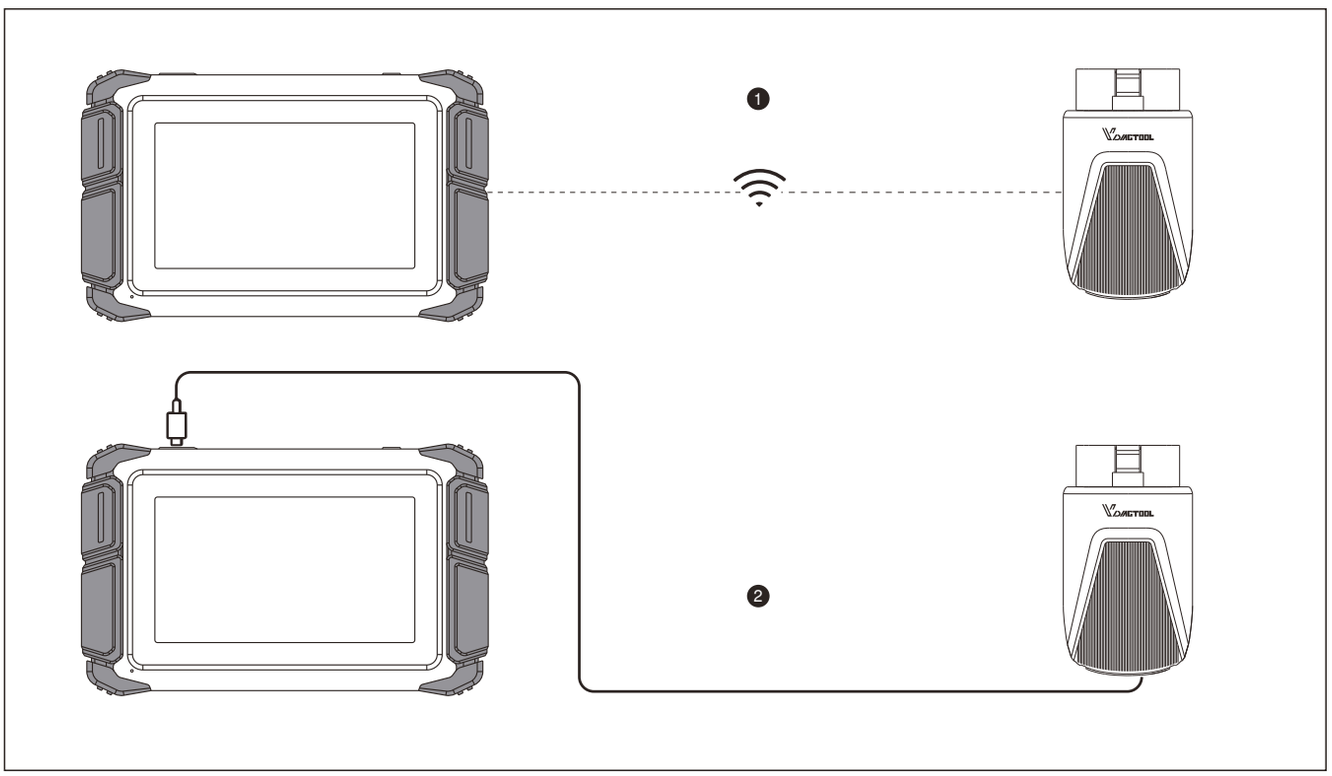


If you forgot the email address you used for the product activation, please send the S/N (Serial Number) of the Diagnostic Tool to support@vdiagtool.com to recover the registration information.

## 4.7 Connecting the VCI Box

The Diagnostic Tool uses a VCI box that has OBDII-16 male connector for vehicle communication.




Note: The VCI box connects to the Diagnostic Tool via WiFi. If the WiFi function is not working currently, you can also connect to the Diagnostic Tool directly via a Type-C cable.

To establish communication between the Diagnostic Tool and the vehicle, please follow the steps below:

Step 1: Turn on the Diagnostic Tool.

Step 2: Plug VCI box into vehicle's OBDII port, make sure Power and Wi-Fi indicators light

Step 3: Turn on the ignition and run the diagnostic program on the Diagnostic Tool.

## 4.8 Diagnose Vehicles

The vehicle must be correctly identified for the Diagnostic Tool to communicate and perform diagnostics. The vehicle identification sequence is menu driven, follow the screen prompts to enter the information. Exact procedures may vary by the make, model, and year of the vehicle.

To identify a vehicle for diagnostics, you have 4(four) options listed as below:

### 4.8.1 Auto Scan

Click "Auto Scan" icon on the diagnostic screen, and the Diagnostic Tool will scan the vehicle VIN and decode the VIN for vehicle identification automatically.

---

**IMPORTANT:**

It's a common misconception that the Diagnostic Tool can not communicate with a vehicle for diagnostics if it can not detect and/or decode the VIN number. Try other vehicle identification options instead when Auto Scan fails. Use "Manual Selection" as your final but reliable solution.

---

**Note:**

Auto Scan does NOT work on all vehicles. When Auto Scan fails, try other options instead.

---

### 4.8.2 Manual Diagnosis

Click "Manual Diagnosis" icon on the diagnostic screen, the Diagnostic Tool will bring up vehicle selection menu. Click the  icon at the top left corner, and you will see "Auto Scan" and "Manual Input" icons available. Click "Manual Input" to input the vehicle VIN number(17 digits) manually and the Diagnostic Tool will decode the VIN number and identify the vehicle.

---

**Note:**

Some vehicle VIN numbers cannot be decoded. When Auto Scan and Manual Input fails, try Automatic Detection or Manual Selection instead.

---

### 4.8.3 Automatic Detection

Click "Manual Diagnosis"- Select region where the vehicle brand is originated, for example "Americas"- Select the vehicle brand, for example "CADILLAC"- Select "Automatic Detection" to automatically detect and identify the vehicle the Diagnostic Tool is connected to.

---

**Note:**

Automatic Detection does not work on all vehicle models. Select Manual Selection instead if the above all three options above failed.

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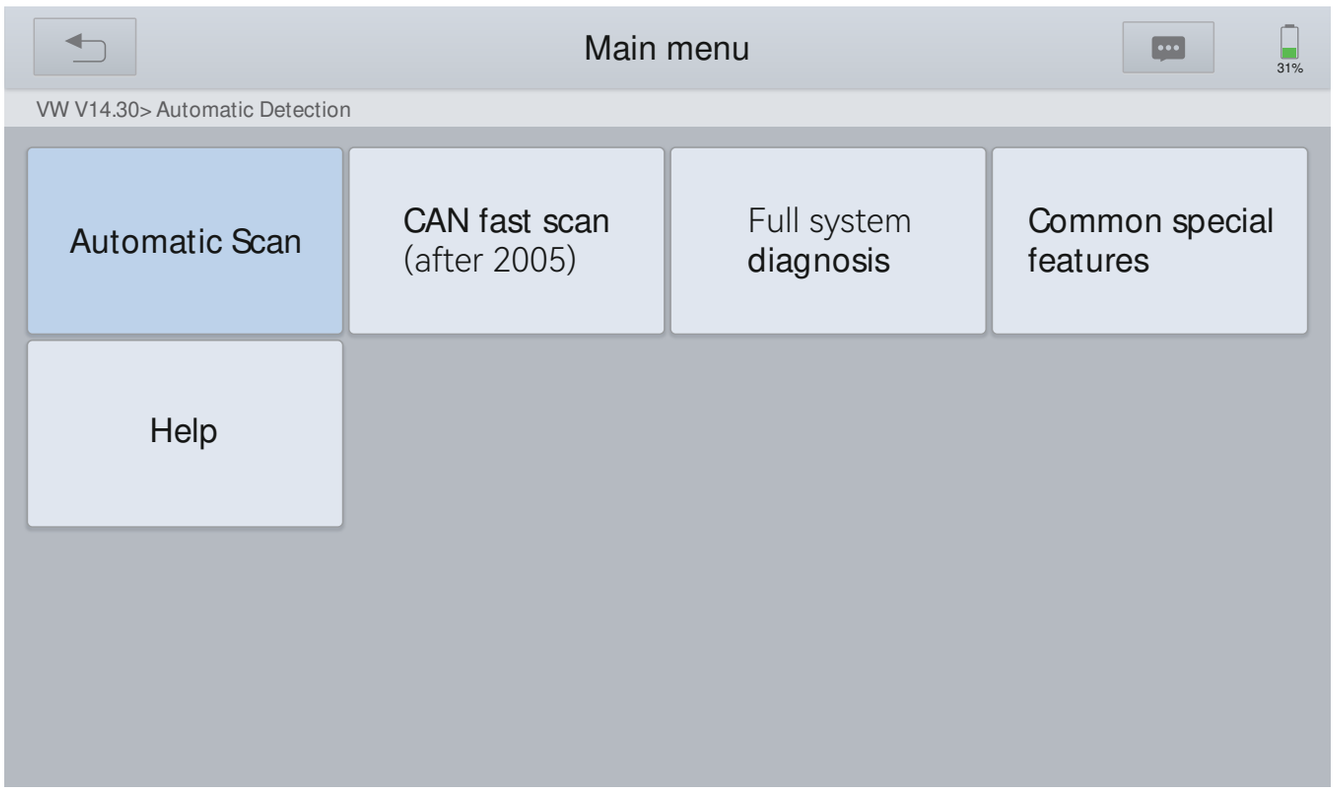
### 4.8.4 Manual Selection

When the “Auto Scan”, “Manual Input” and “Automatic Detection” fails to identify the vehicle, you can always select “Manual Selection” to identify the vehicle and proceed to diagnostics. Manual Selection is the most reliable vehicle identification option.

To identify a vehicle through “Manual Selection”, click “Manual Diagnosis”- Select region where the vehicle brand is originated, for example “Americas”- Select the vehicle brand, for example “CADILLAC”- Select “Manual Selection”- Select the model year- Model Name- and you may go through a few other selections before you see “Automatic Scan” and “System Selection” on the screen.

### 4.8.5 Automatic Scan

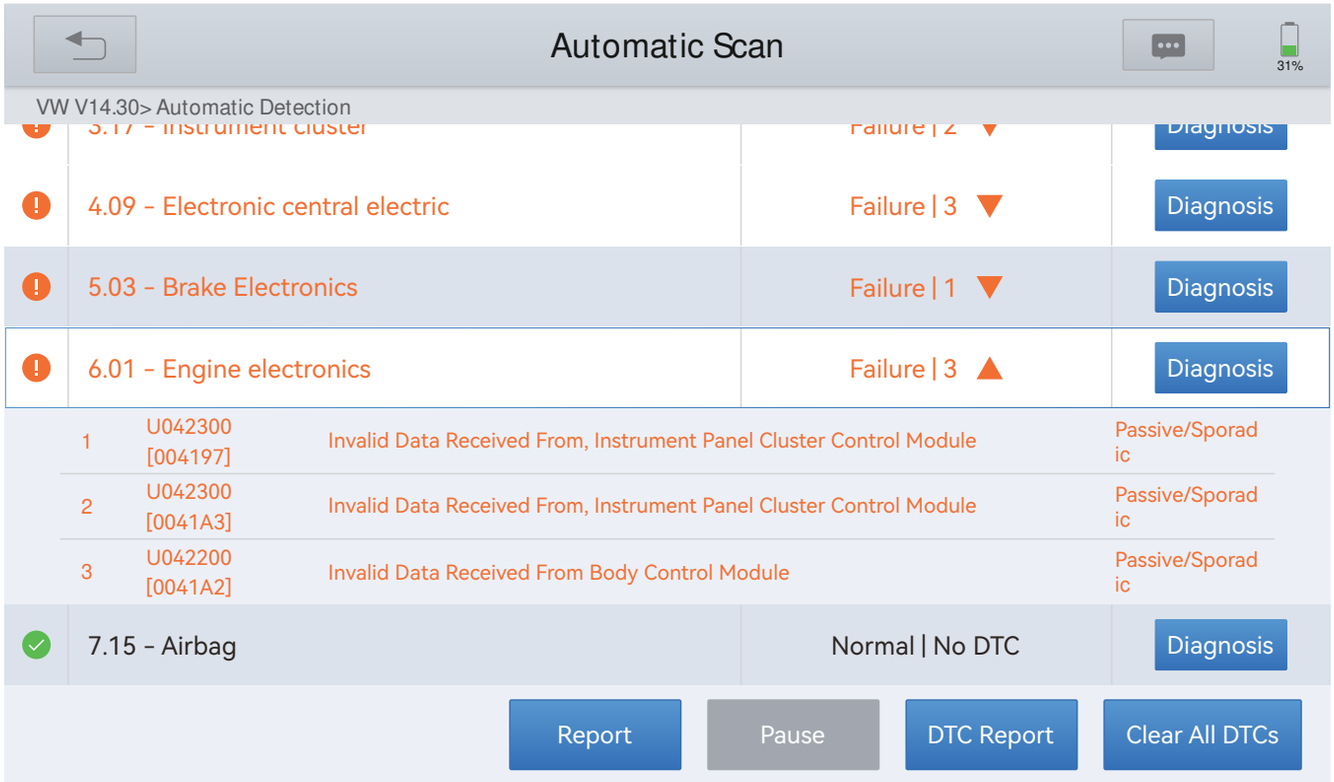
It is to scan all available vehicle modules for diagnostics.




When you have done automatic scan, the Diagnostic Tool will display fault impacted vehicle systems and failure number in orange and on top.

## 4.9 Submit Feedback

Click the message icon on the top right corner will allow you to submit feedback to our support team if you encounter any issues either with the app or the software programs.




## 4.10 CAN Fast Scan

Scan all available vehicle systems for vehicles that use CAN protocol for vehicle communication post 2005 much faster.

## 4.11 System Selection

It's for you to pick an individual vehicle module for diagnostics when you have in mind where the car problems might be.

## 4.12 Diagnostics

When the vehicle has been identified correctly, the Diagnostic Tool will be able to scan and access the vehicle electronic control systems to pull diagnostic trouble codes(DTCs), retrieve PID data(Parameter IDs), freeze frame, ECU information and perform diagnostic tests like active tests(bi-directional controls) and advanced resets, relearns, matchings, adaptations and initializations.

### 4.12.1 Read Codes

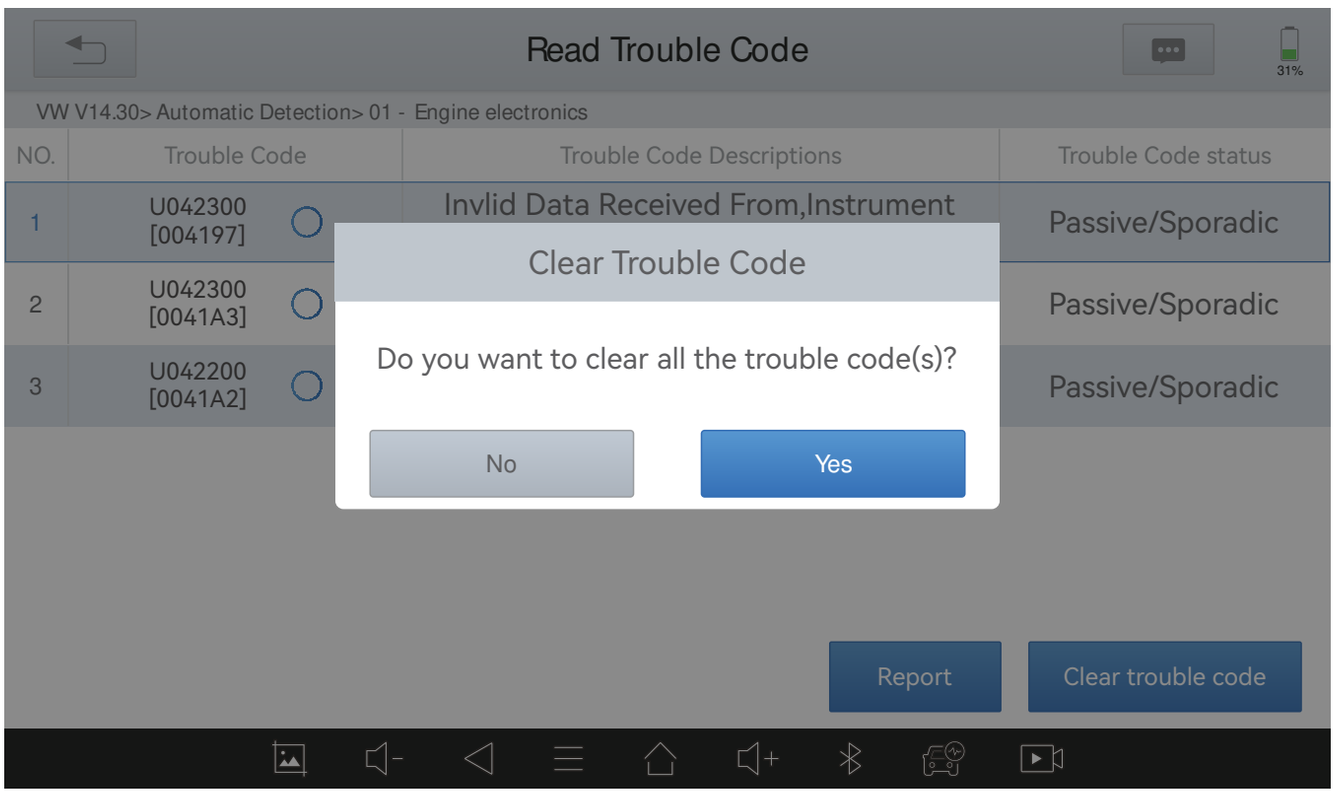
Displays diagnostic trouble code (DTC) records from the vehicle electronic control module. Selecting may open a sub-menu of viewing options.

In the process of diagnosis, if the Diagnostic Tool shows "System is OK" or "No Trouble Code", it either means there is no related fault codes stored in ECU or some faults are not

in that ECU, most faults are mechanical system faults or executive circuit faults. It is also possible that the signal of a sensor may be inaccurate but within limits, which can be examined using Live Data (PID data).

### 4.12.2 Clear Codes

Erases DTC records, both current or history, and other data from the vehicle electronic control module.




When erase command sent through the diagnostic program, the vehicle electronic control module will verify whether the car problem has been fixed or not in a few drive cycles. Some faults are immediately detected by the ECU with the key in the run position and without the engine running. Other faults are not detected until very specific test conditions are met such as engine coolant temperature within a range, speed within a range for a duration of time, throttle percentage within a range, etc.

### 4.12.3 DTC erased while fault remains

If the fault codes are erased while the fault remains unresolved, the fault code will reappear after a few drive cycles.

### 4.12.4 DTC erased and fault fixed- History Code

If the fault has already been fixed but there is a stored trouble code, sometimes the ECU will detect the fix and clear the fault code or more likely, classify it as history code.

### 4.12.5 DTC erased and fault fixed- History Cleared

If the fault is fixed and you cleared the fault codes, the fault history will be cleared. If you intend to have another technician to investigate the car problem, it is not recommended to clear the fault code since doing so may erase information helpful to others who may investigate the problem.

---

## Note:

Clearing codes will erase the freeze frame data.

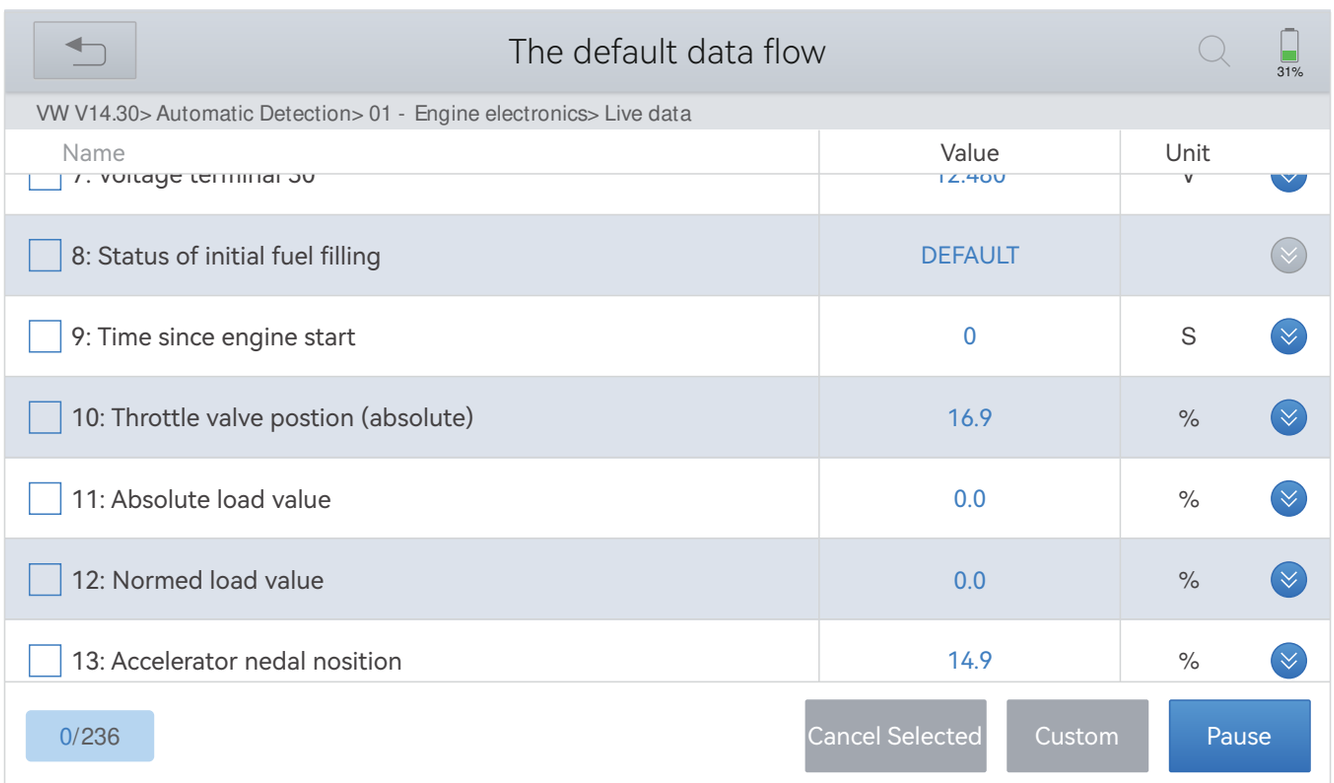
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### 4.12.6 PID Data

Displays PID data for various sensors from the vehicle electronic control module. This Diagnostic Tool allows viewing real-time PID data of various sensors in a list, view individual PID data in graphing, analog dashboard, setting maximum and minimum values, view custom PID data up to 8 sensors in a list, individual graphing and merged graphing.

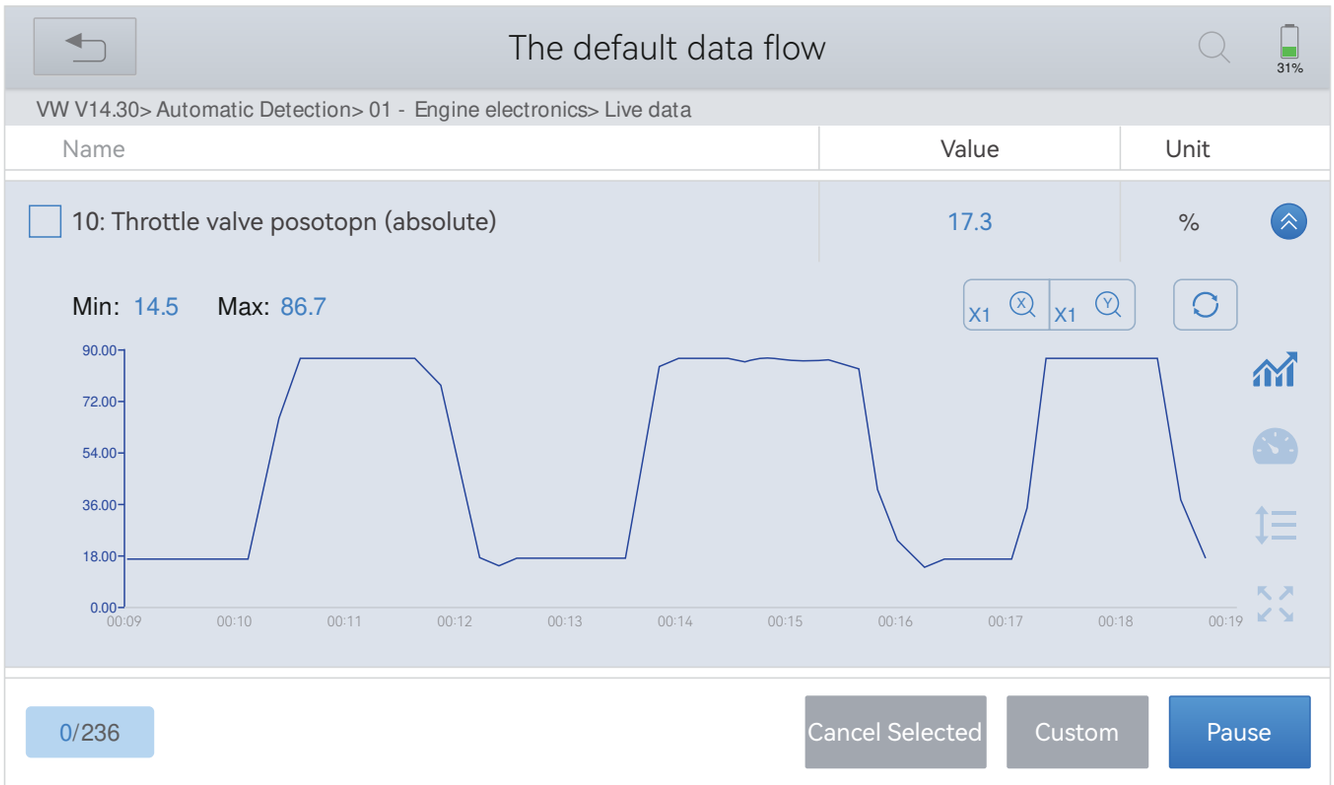
### 4.12.7 PID Data List

Click live data function and the Diagnostic Tool will display a list of PID names and real-time values on the screen as shown in picture below:



### 4.12.8 Individual PID Data Graphing

Click the blue arrow icon on the right to view graphing for individual PID data as shown in picture below:

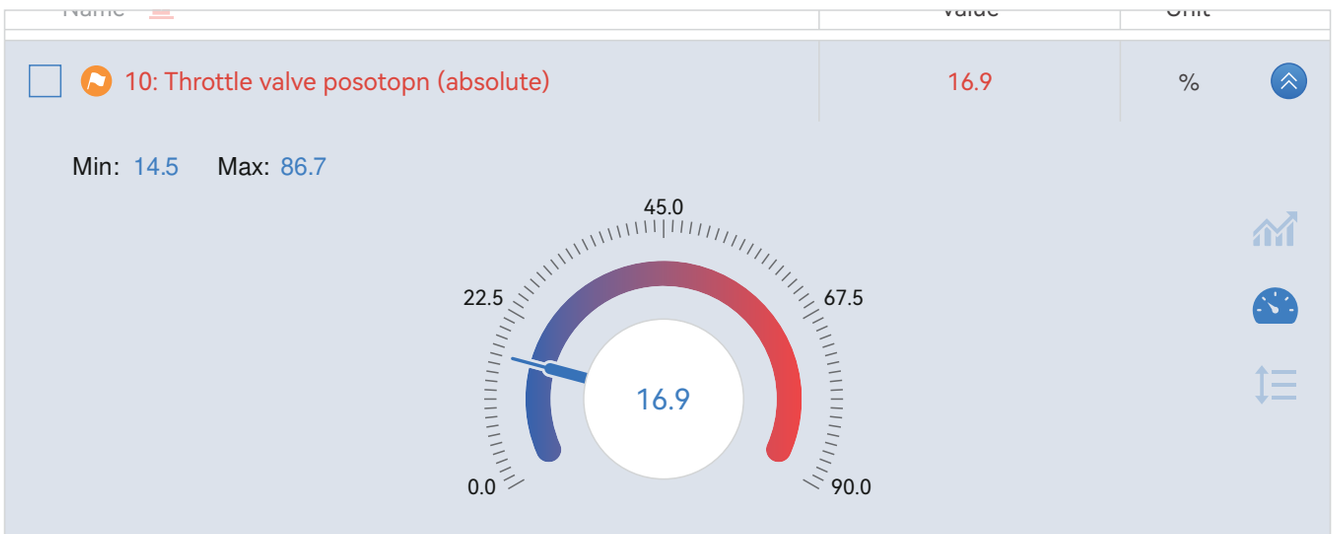



If the blue arrow is gray, it means this PID data is not available to be shown in graphing.



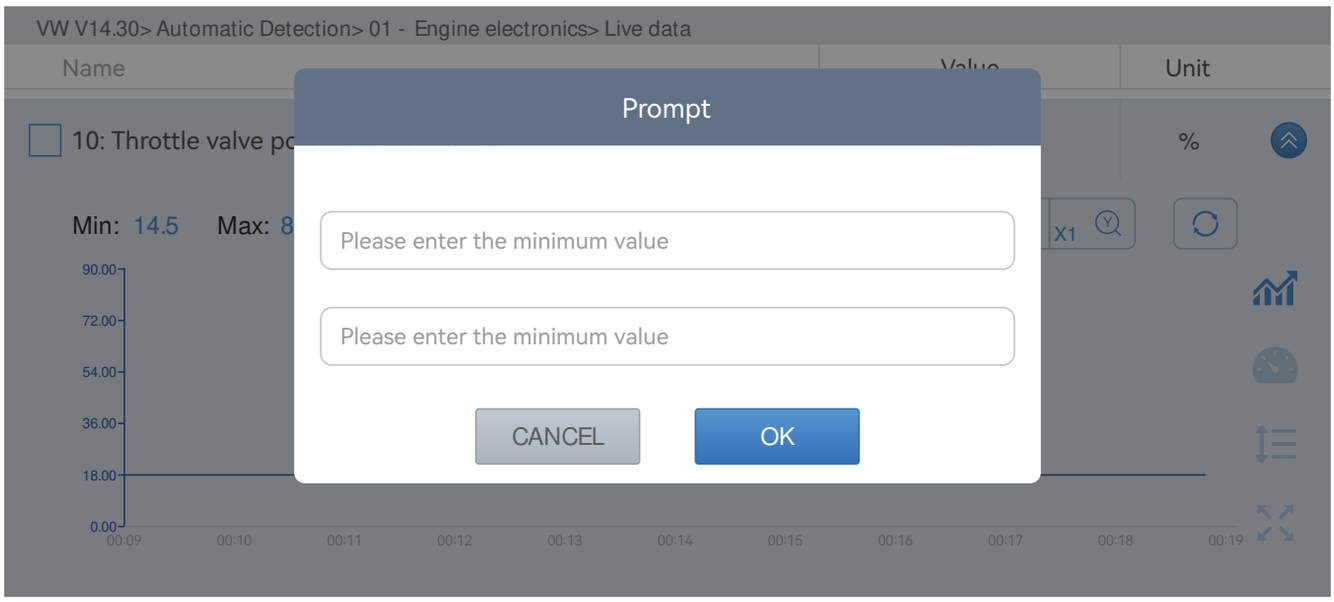

### 4.12.9 Individual PID Data in Analog Dashboard

Click the meter icon and the Diagnostic Tool will show the PID value in analog dashboard as shown in picture below:

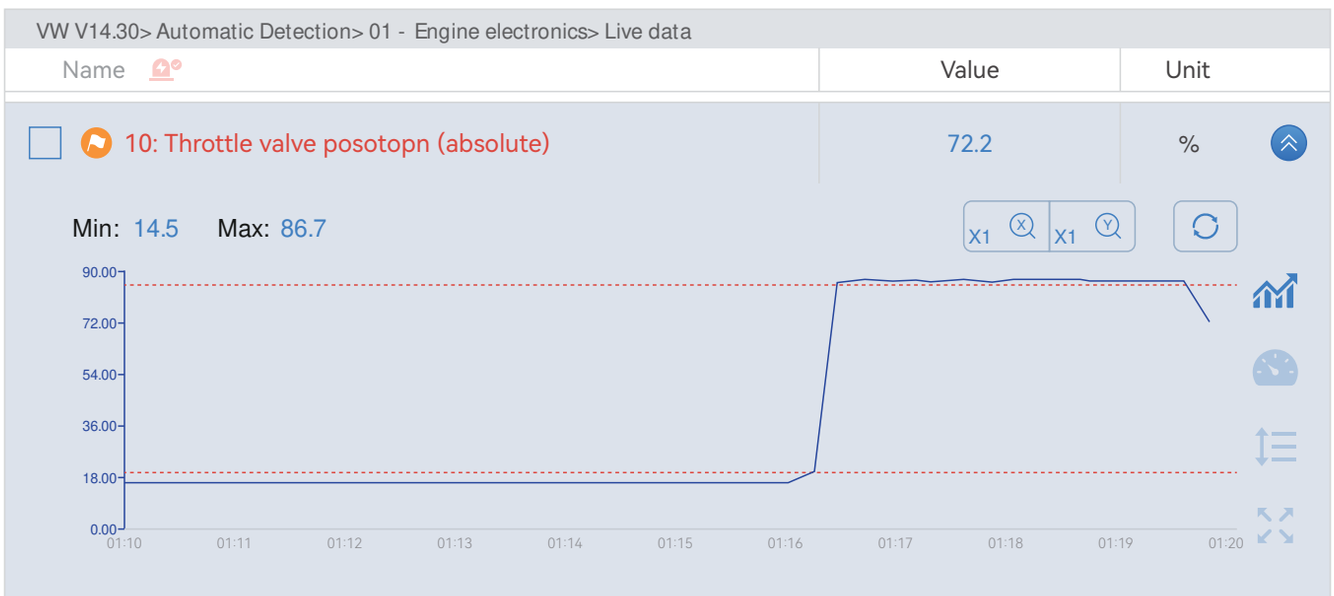


### 4.12.10 Set Maximum & Minimum Value Alarms

Click icon on the right to set maximum and minimum value alarms for individual PID data as shown in picture below:




Once the maximum and minimum values are set on the screen, the Diagnostic Tool will show two dotted red lines on the screen so that you can easily spot whether the PID data rises over the maximum value or drops below the minimum value you just set as shown in picture below:

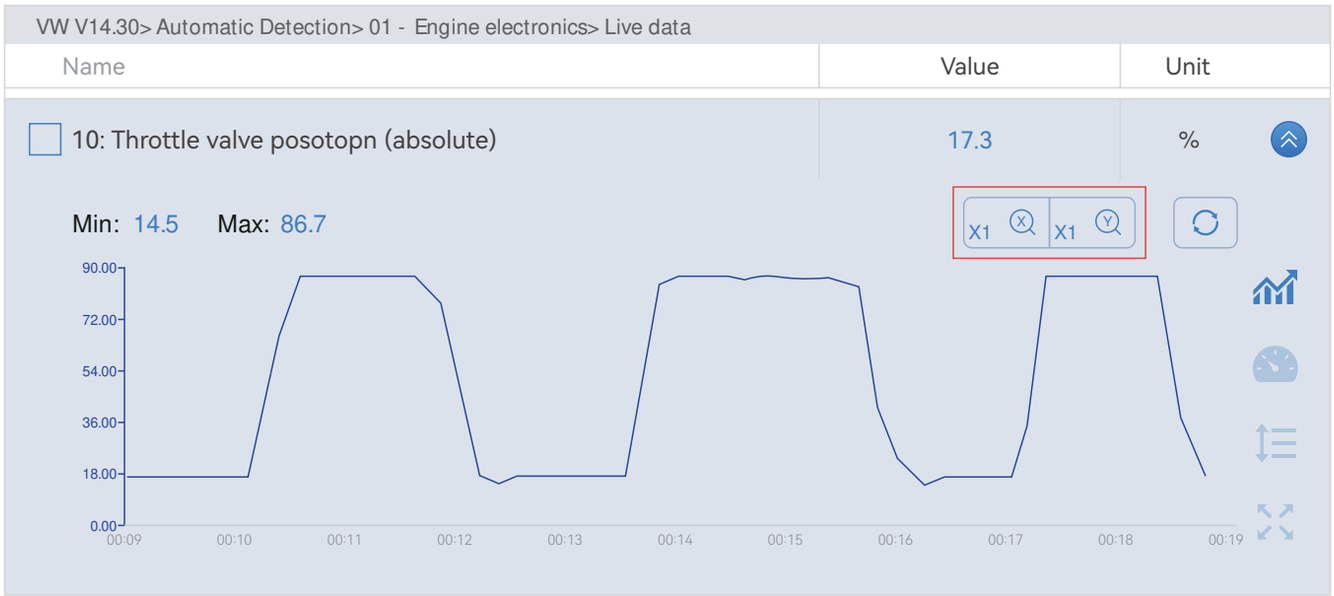



## Note:

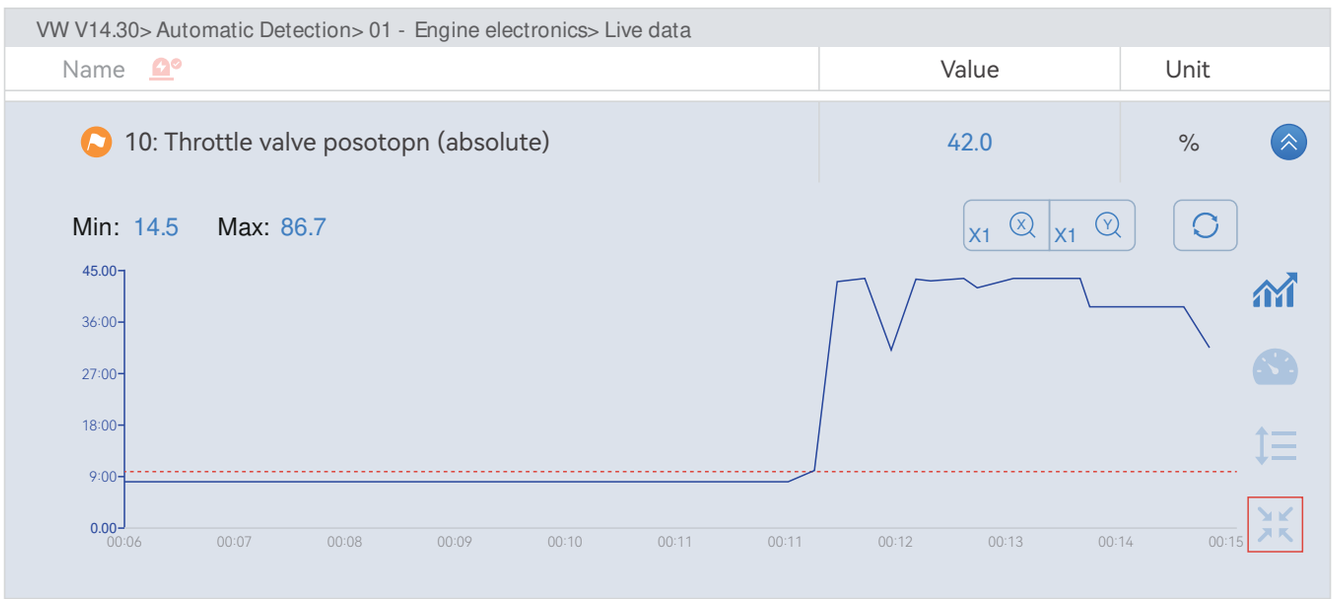
The maximum and minimum values do not have to be within the normal value range for the specific PID data. You may set whatever value you deem fit for you observation.

### 4.12.11 Zoom In & Zoom Out & View In Full Screen

Click the magnifier icon X1 to zoom in the x-axis up to 3 times and click the magnifier icon X1 to zoom in the y-axis up to 3 times. When it shows 3 times for x-axis or y-axis on the screen, press the magnifier icons again and it will show its original size (X1) again.

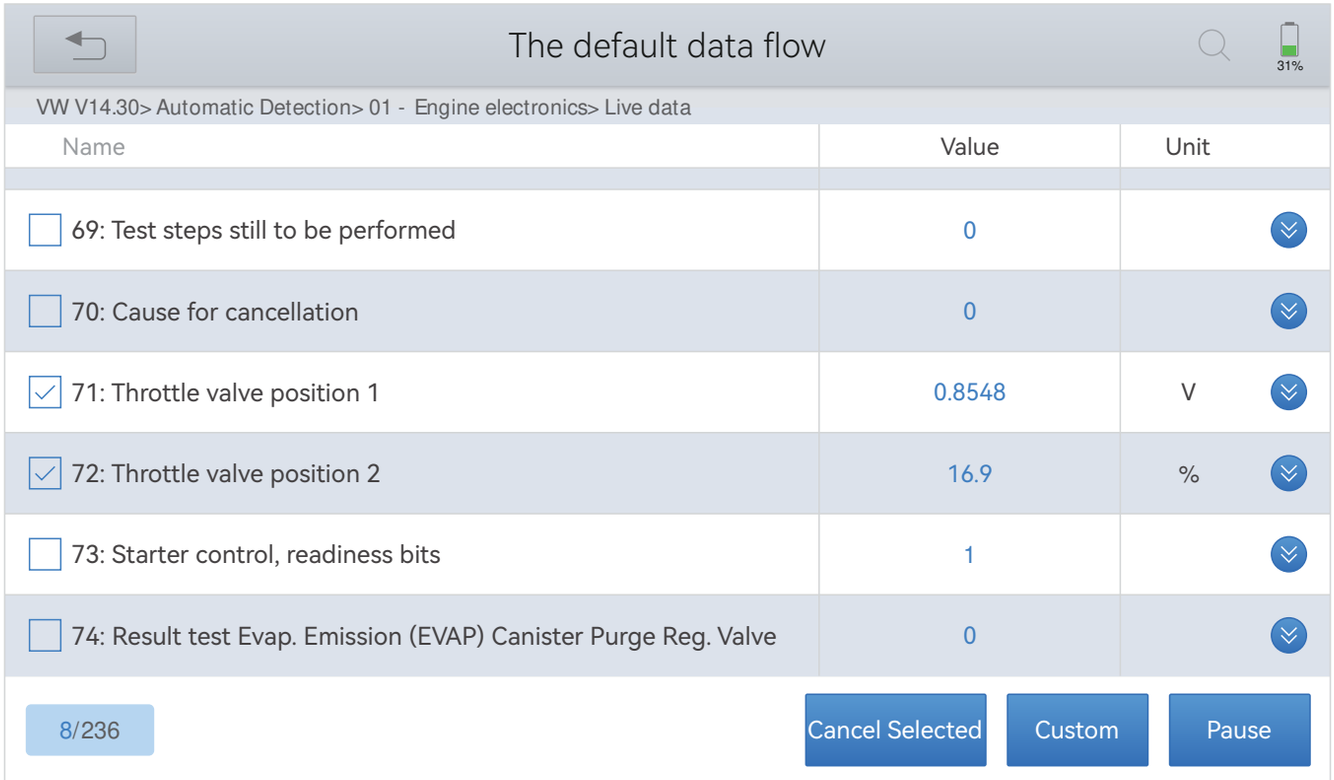



Click the icon on the right will allow you to view the individual graphing in full screen as shown in picture below:




### 4.12.12 Custom Up to 8 PID Data

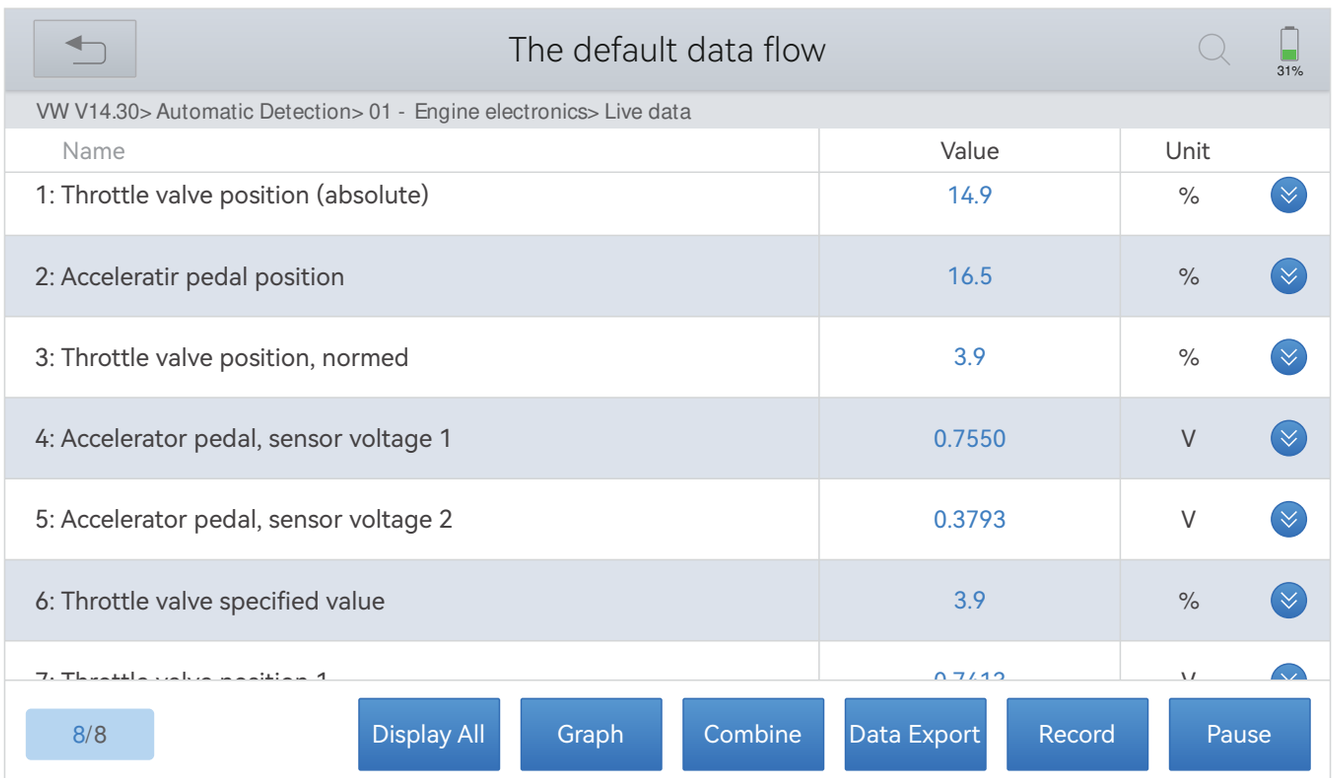
This Diagnostic Tool allows you to tick the boxes for up to 8(eight) PID data and click "Custom" to show custom list of real-time PID data.




Cancel Selected - To cancel the PID data you selected so that you can re-select them.

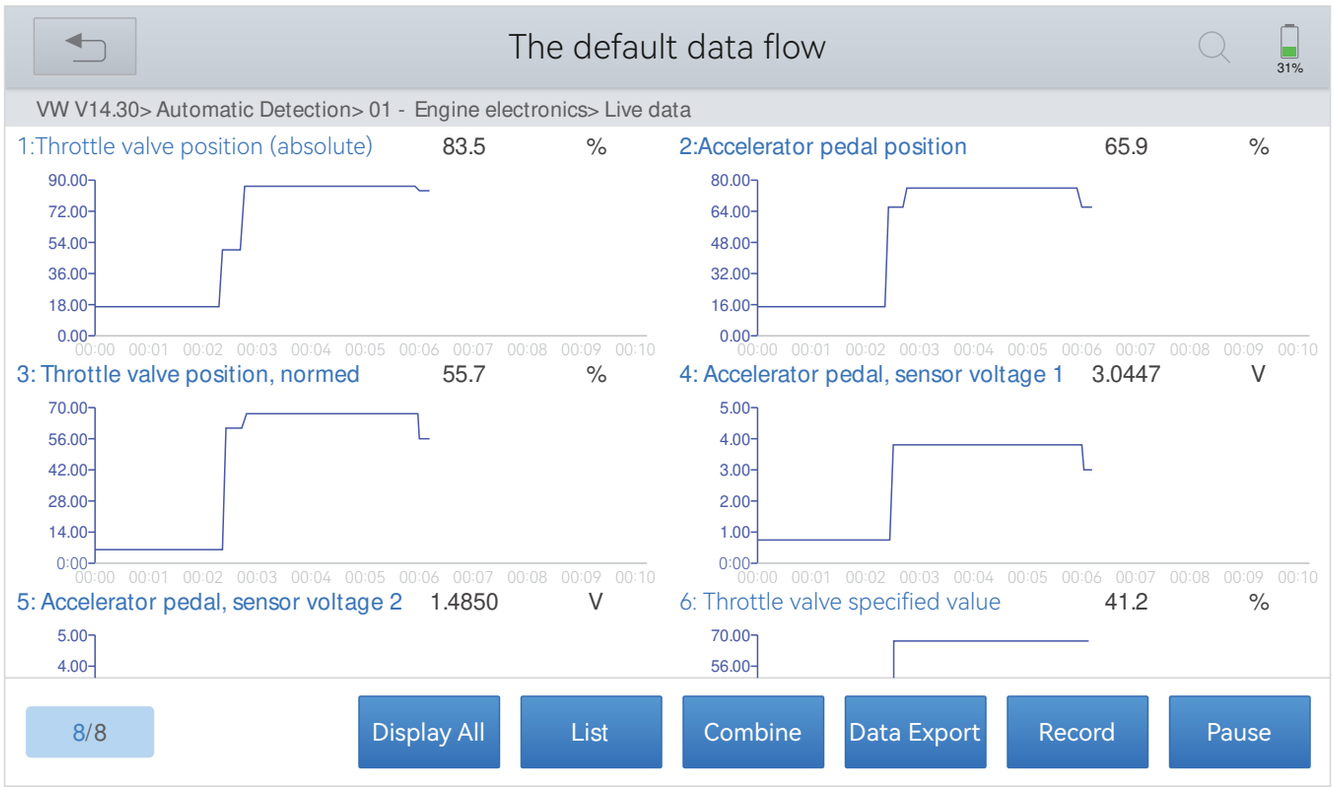
Custom - Proceed to display the custom screen for the PID data you selected.

Pause - To pause the continuous retrieving process for the real-time PID data.



### 4.12.13 Individual Graphing for Up to 8 PID Data

Click the "Graph" icon on the custom PID data list screen, and the Diagnostic Tool will show individual graphs for up to 8 PID data on one single screen, as shown in picture below:




Display All- To exist the custom PID data screen and display all PID data list with the previous selected PID data boxes still ticked.

Graph- To show the selected PID data in graphing.

List- To show the selected PID graphing in data list.

Combine- To combine the individual graphing into merged graphing.

Data Export- To export the PID data as CSV file for later review in Data View.

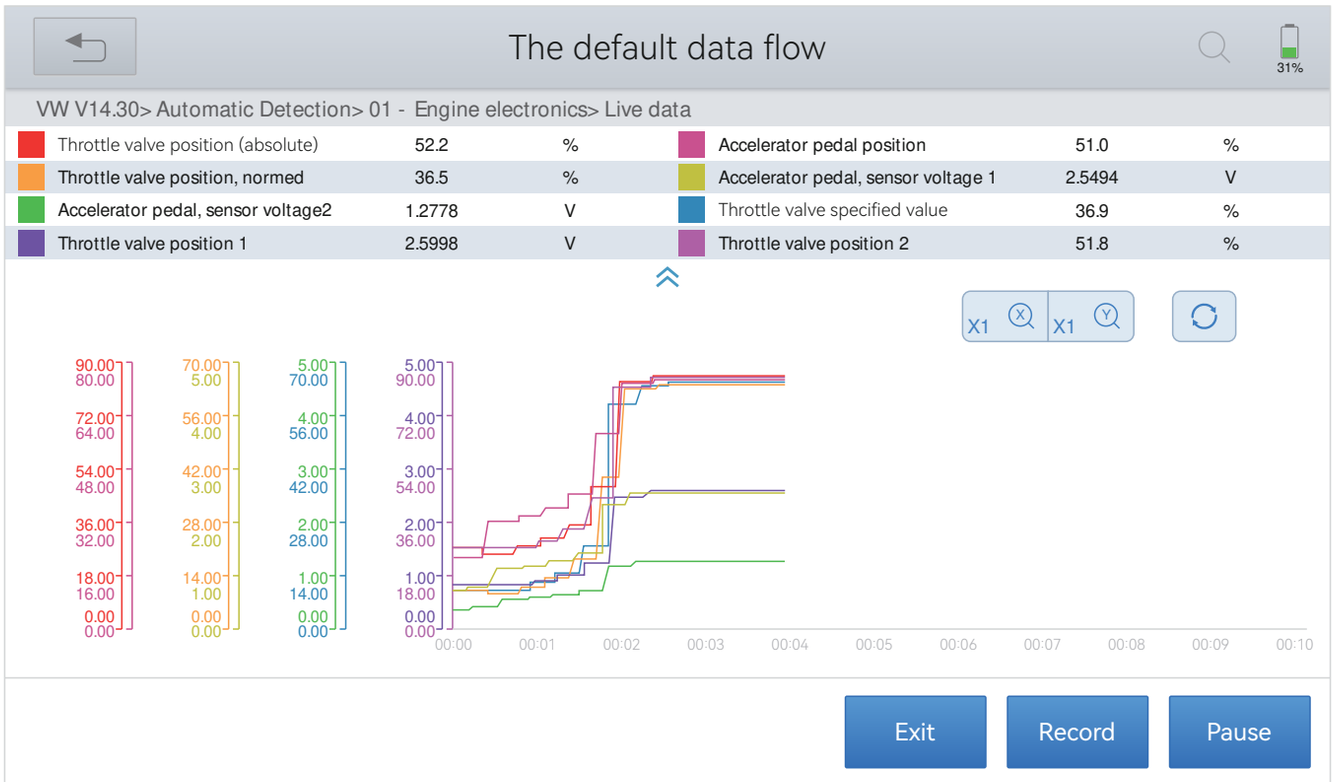
Record- To record the PID data for later review in Data Playback.

Pause- To pause the continuous retrieving process for the real-time PID data.

### 4.12.14 8-In-1 Graphing

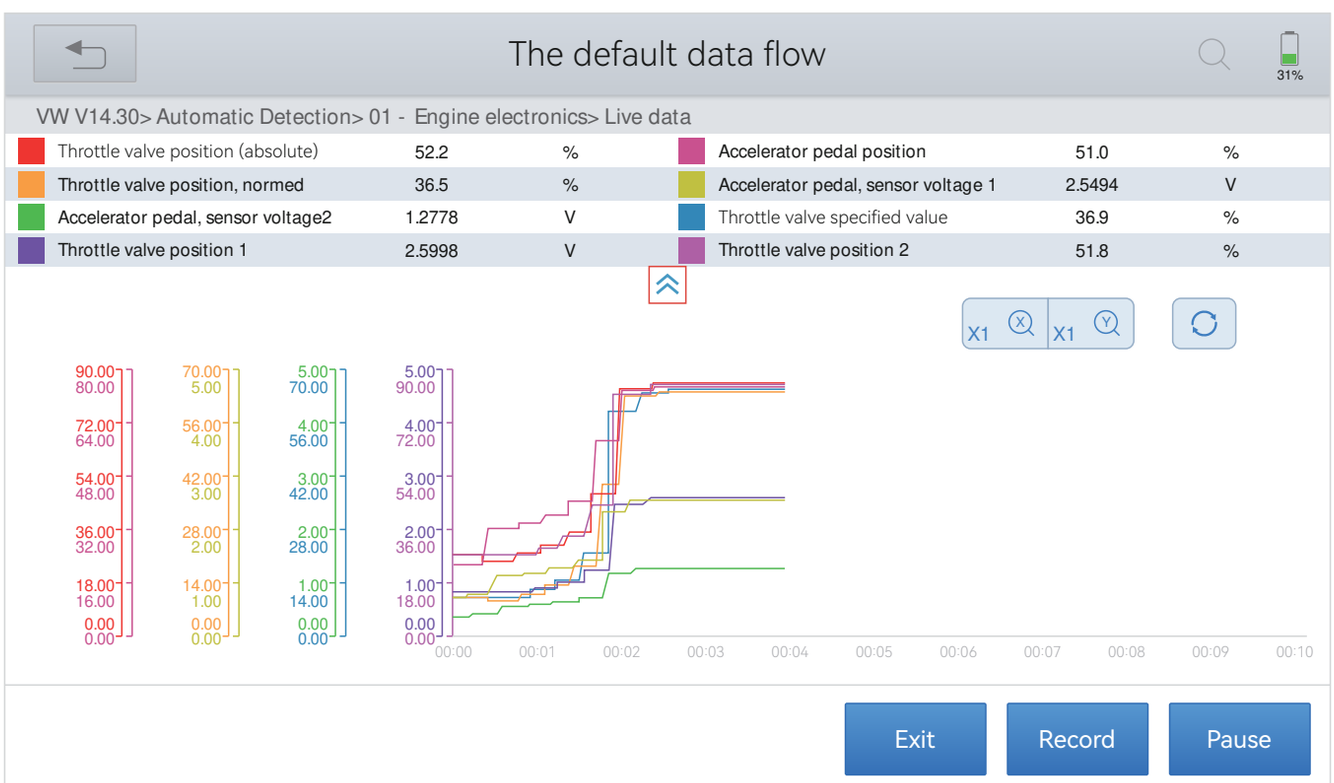
Click the "Combine" icon will merge the individual graphs into one merged graphing screen.

This Diagnostic Tool is capable of graphing up to 8 (eight) PID data on one single screen to view and compare related PID data. Tick the box at the left side for up to 8 (eight) sensor data, then click "Combine" to merge the 8(eight) graphs on one single screen.

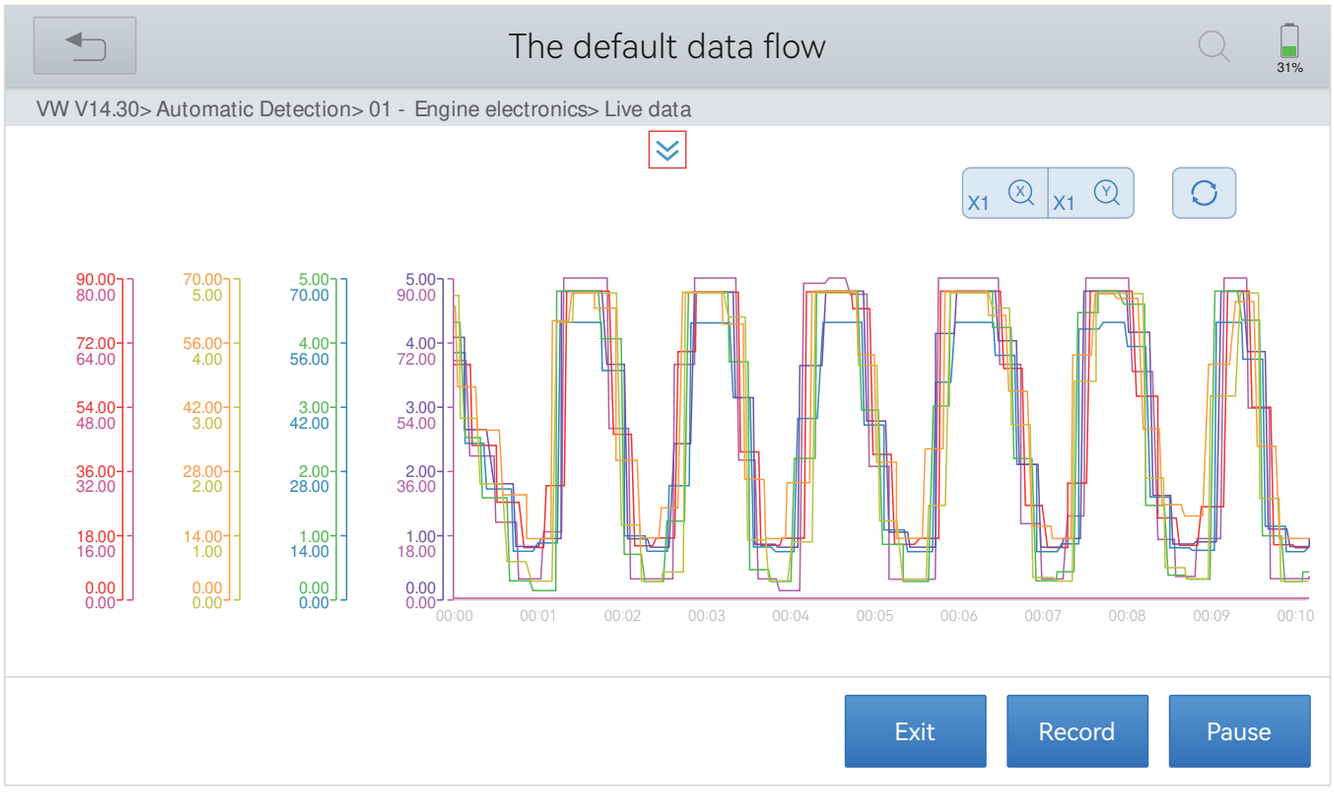



## 4.12.15 Fold & Unfold PID Data Name

This Diagnostic Tool allows you to fold the PID data name list so that you can view the merged graphs in a bigger screen. To fold the PID data name list, click the up arrow icon ⌃⌃ as shown below:

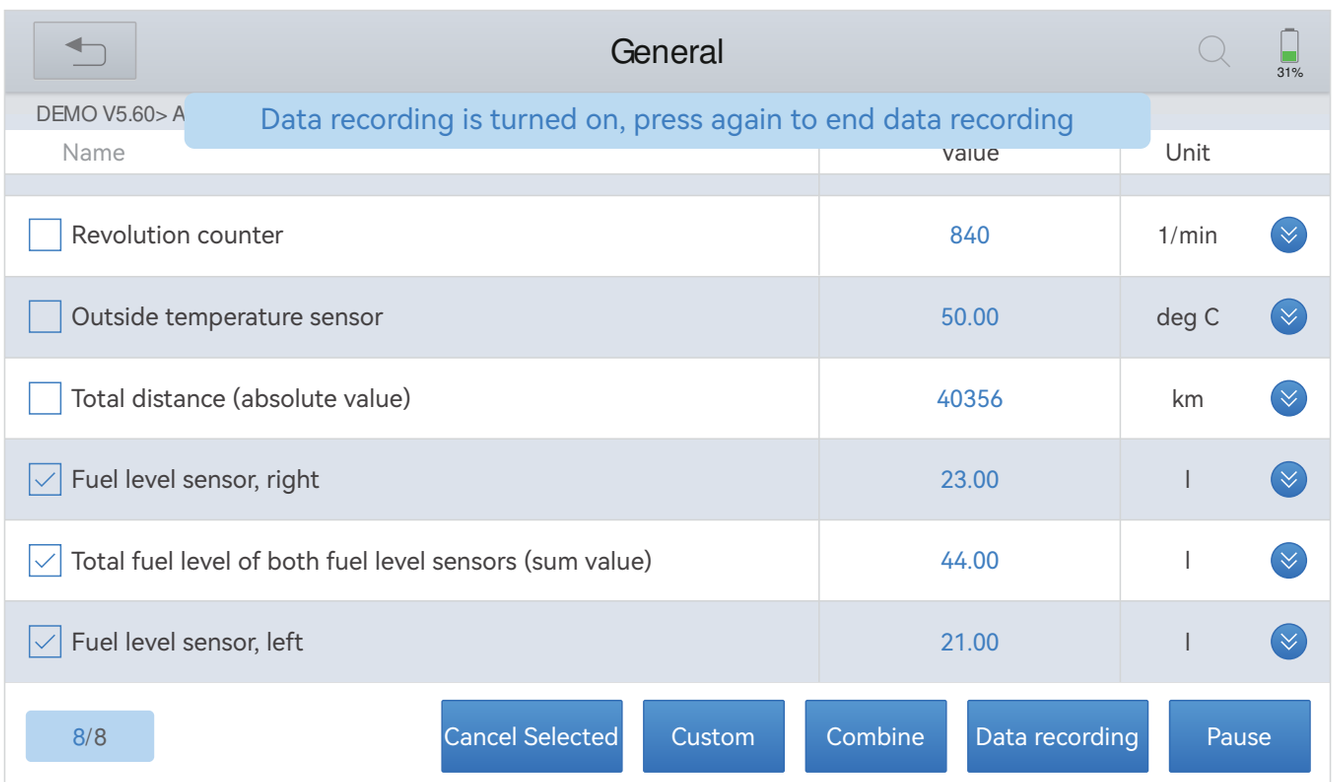


To unfold it, click the down arrow icon if you want to check the names of the PID data.




## 4.12.16 Data Recording & Playback

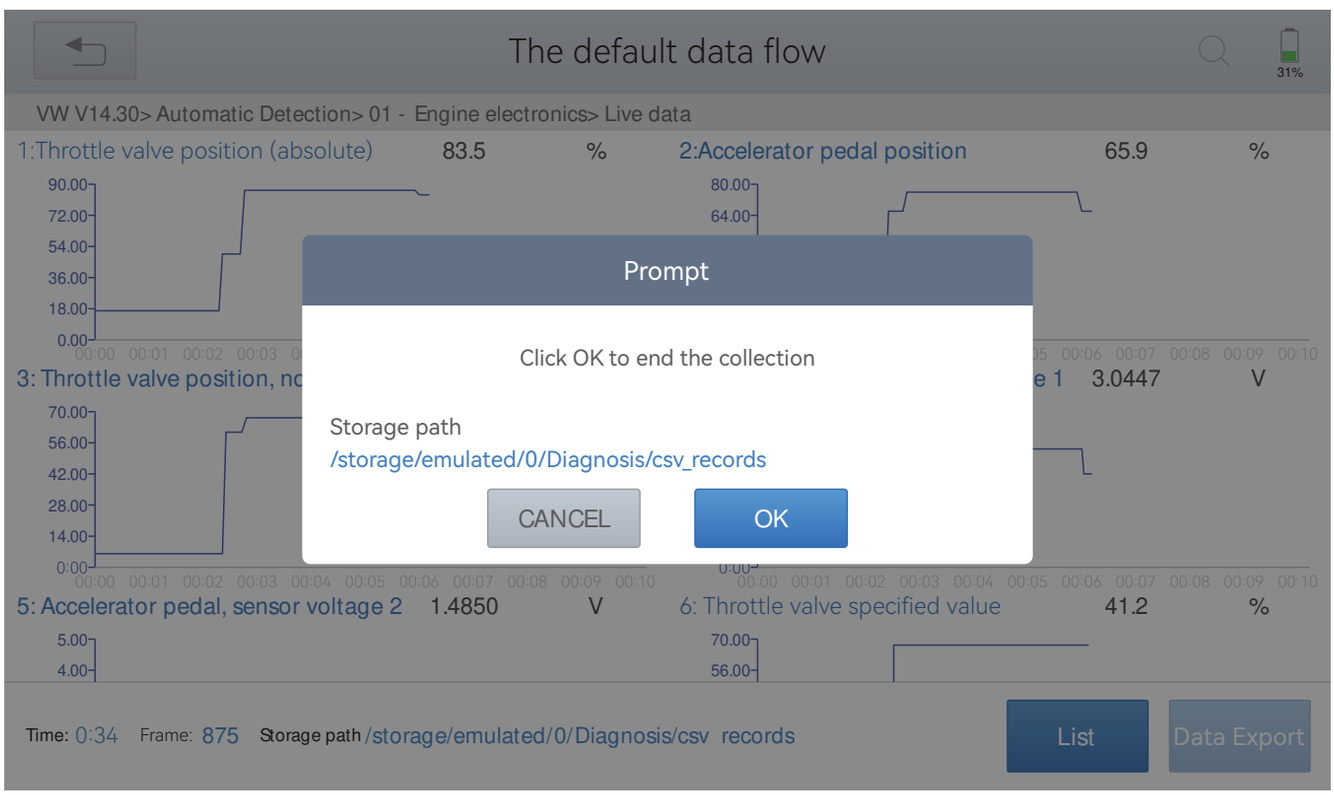
Click the "Record" icon will start recording the PID data for later review through "Data Playback" function.



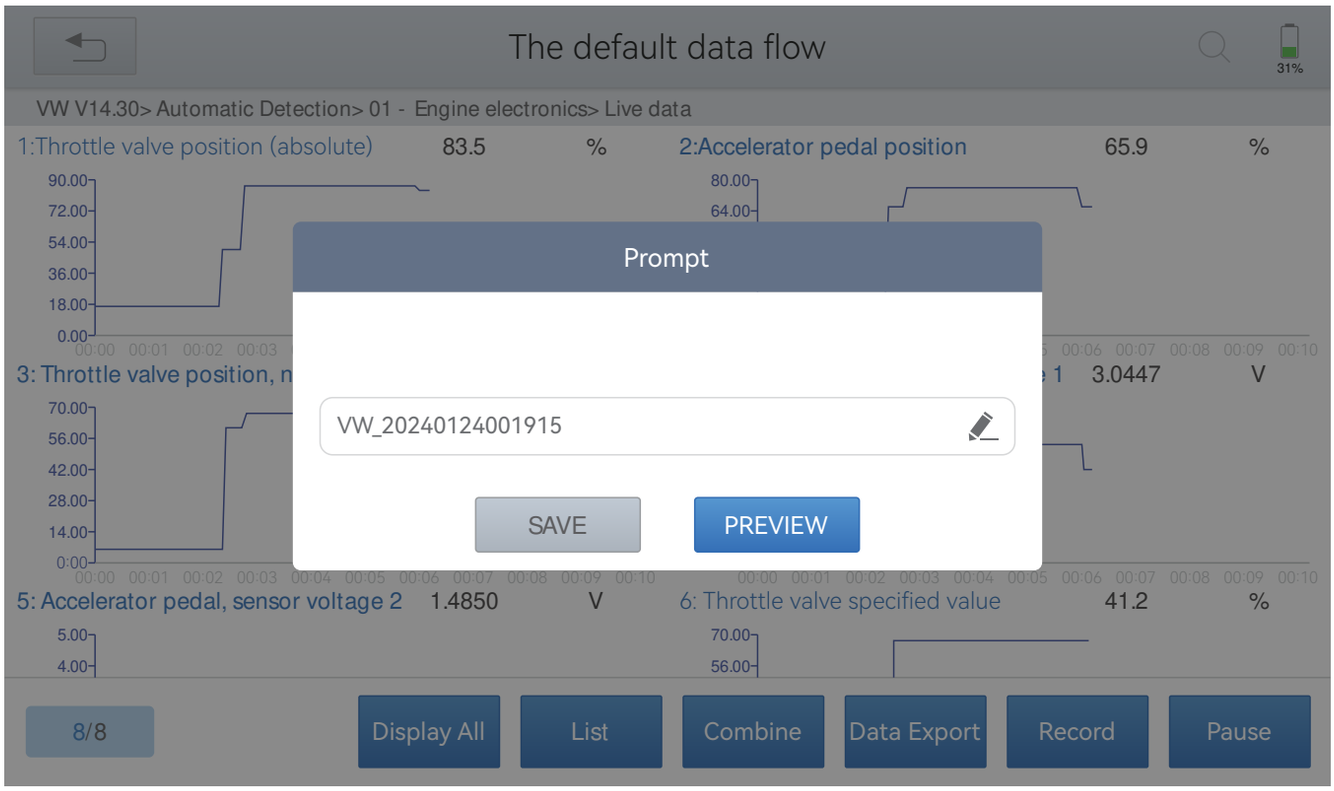
The Diagnostic Tool allows recording the PID data or graphing for later playback. To check recorded PID data, go to Report- Data Playback and click the recorded file to playback.

### 4.12.18 Export Data as CSV & Data View

While you are in the PID data screen, click “Export Data” will start collect the PID data and/or graphing, click “OK” to finish collection. Go to Report- Data View to view the graphing on the right side and PID data value (x-axis value and y-axis value) at the left side.

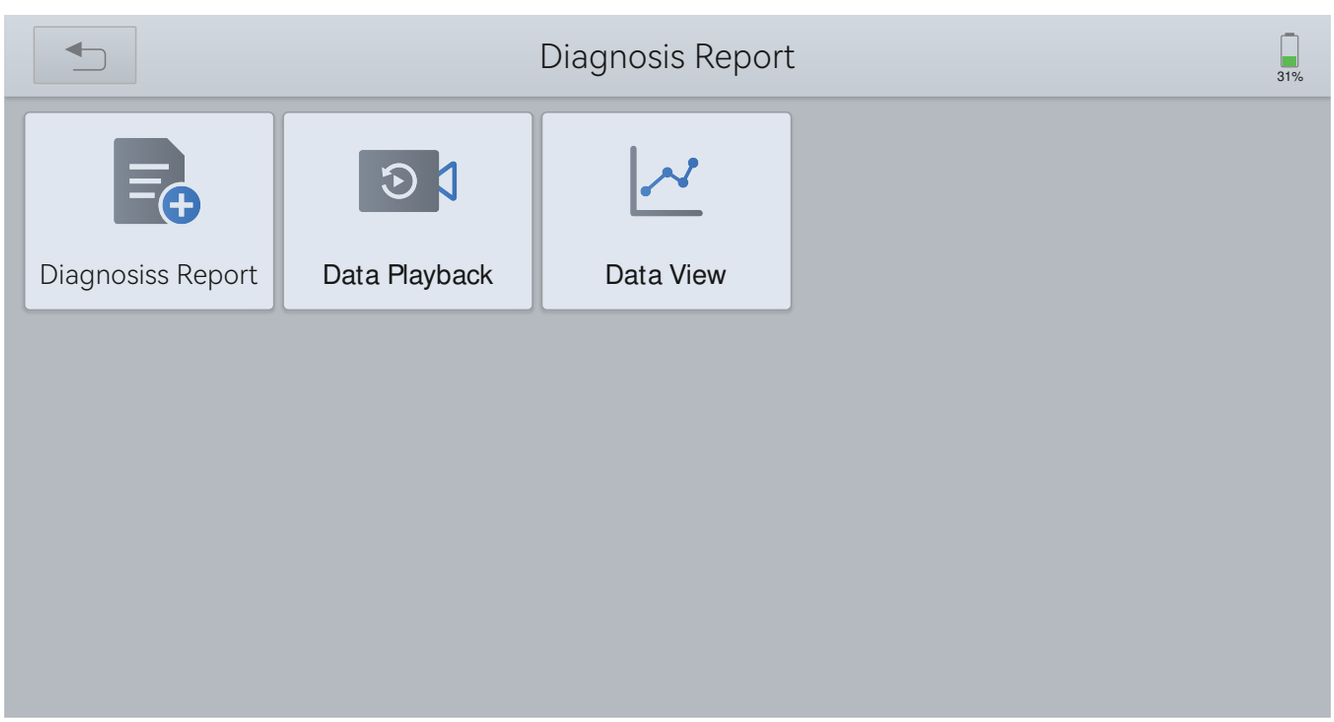


When you have done collecting the PID data, click back icon on the top left and a prompt will pop up on the screen for you to rename the CSV file. Clicking “PREVIEW” will allow you to review the generated CSV file.

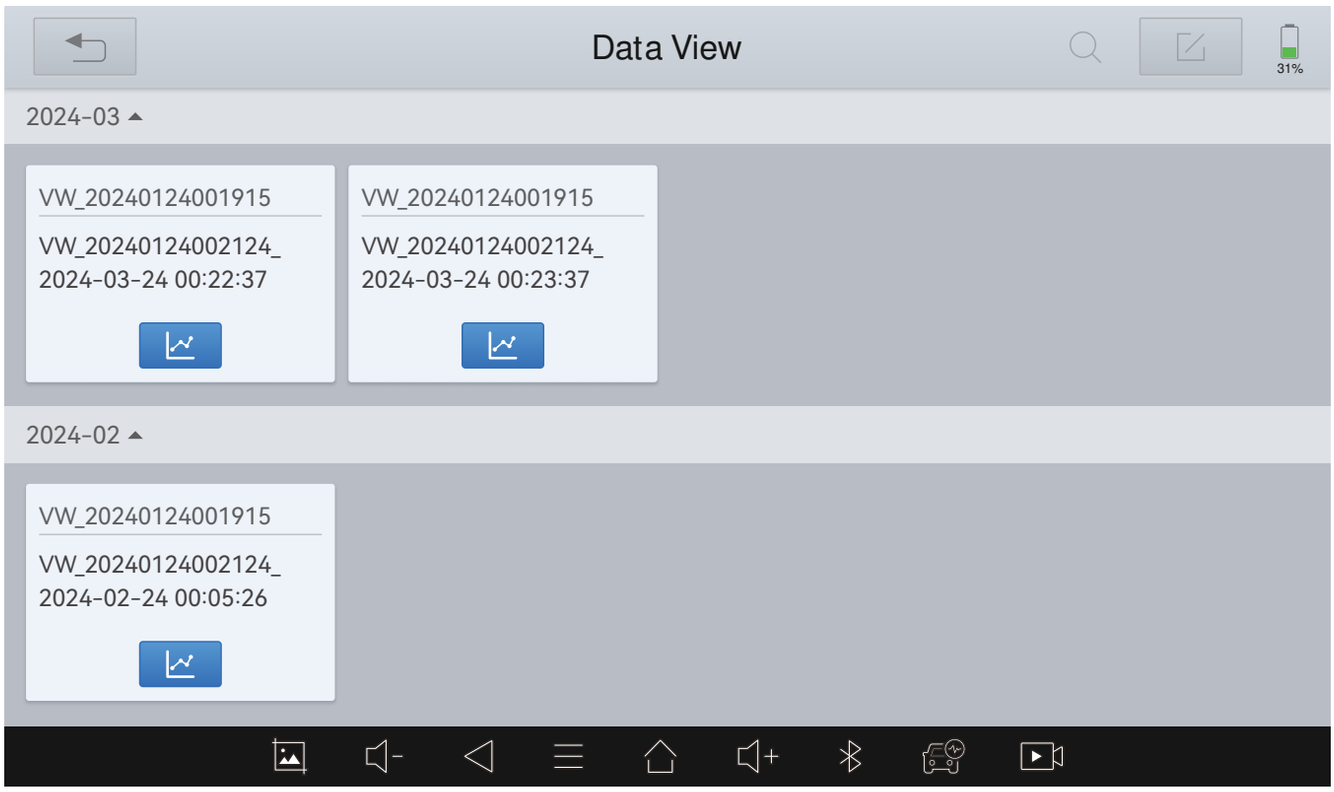



## 4.12.19 Data View

When you have exported the PID data as CSV file, this Diagnostic Tool allows you to view the CSV file on the screen. Go to Main Diagnostic Screen- Report- Data View as shown in picture below:



Click Data View icon and you will see all CSV file exported as in picture below:




Click the file you want to review and the Diagnostic Tool will display as below:



Move your finger or touch screen pen along with the graphing, you will be able to see the real-time values for PID data at the left column, as shown in picture below:




### 4.12.20 Export CSV File to a PC

You may export the exported CSV file to a PC for storage or later review as well. Follow the steps below to find the CSV file:

Step 1: Connect the Diagnostic Tool to a PC through the USB Type-C cable.

Step 2: Swipe down from the upper left/right corner of the Diagnostic Tool and enable “Data Transfer”.

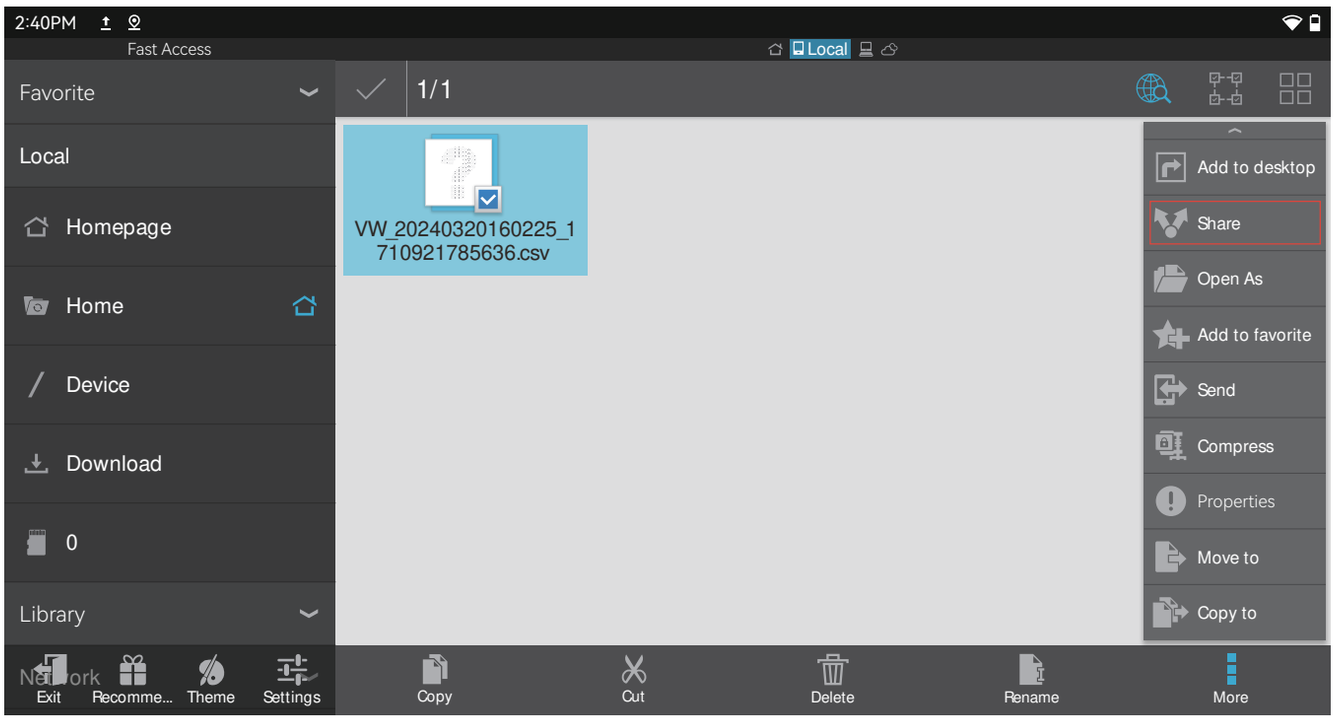
Step 3: Follow the path on your computer and find the CSV file you want to export: My computer- VD70S- Internal Shared Storage- Diagnosis- csv_records, select the csv file you want to export and copy it to your PC memory.

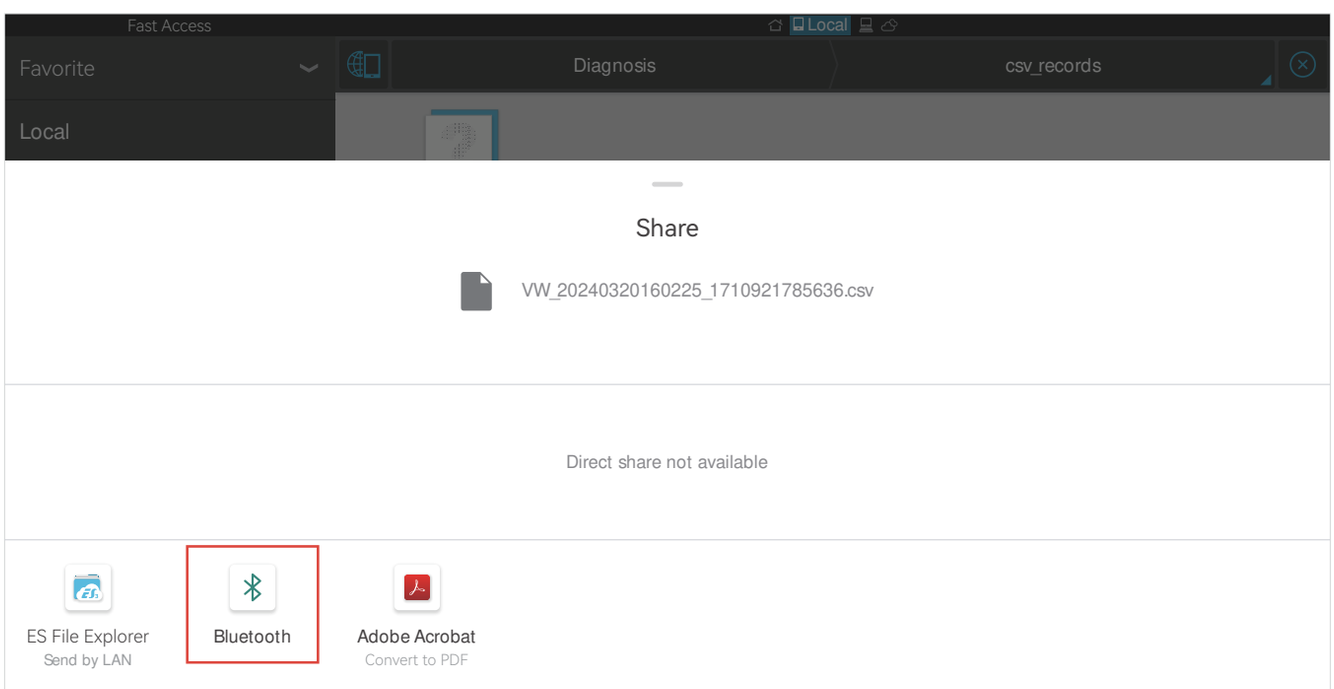
### 4.12.21 Share CSV file via Bluetooth

If you want to share the CSV file to an android tablet or phone, you may follow the path below:

Step 1: Swipe up the hidden toolbar and click home icon to go to main screen of the android tablet.

Step 2: Click "ES File Explorer"- "Local"- "Home"- "Diagnosis"-"csv_records"- Press and hold the csv file you want to export to activate the selection box- tick the box- Click "More" at the bottom left of the screen- "Share"- "Bluetooth"- select the device you want to share to.



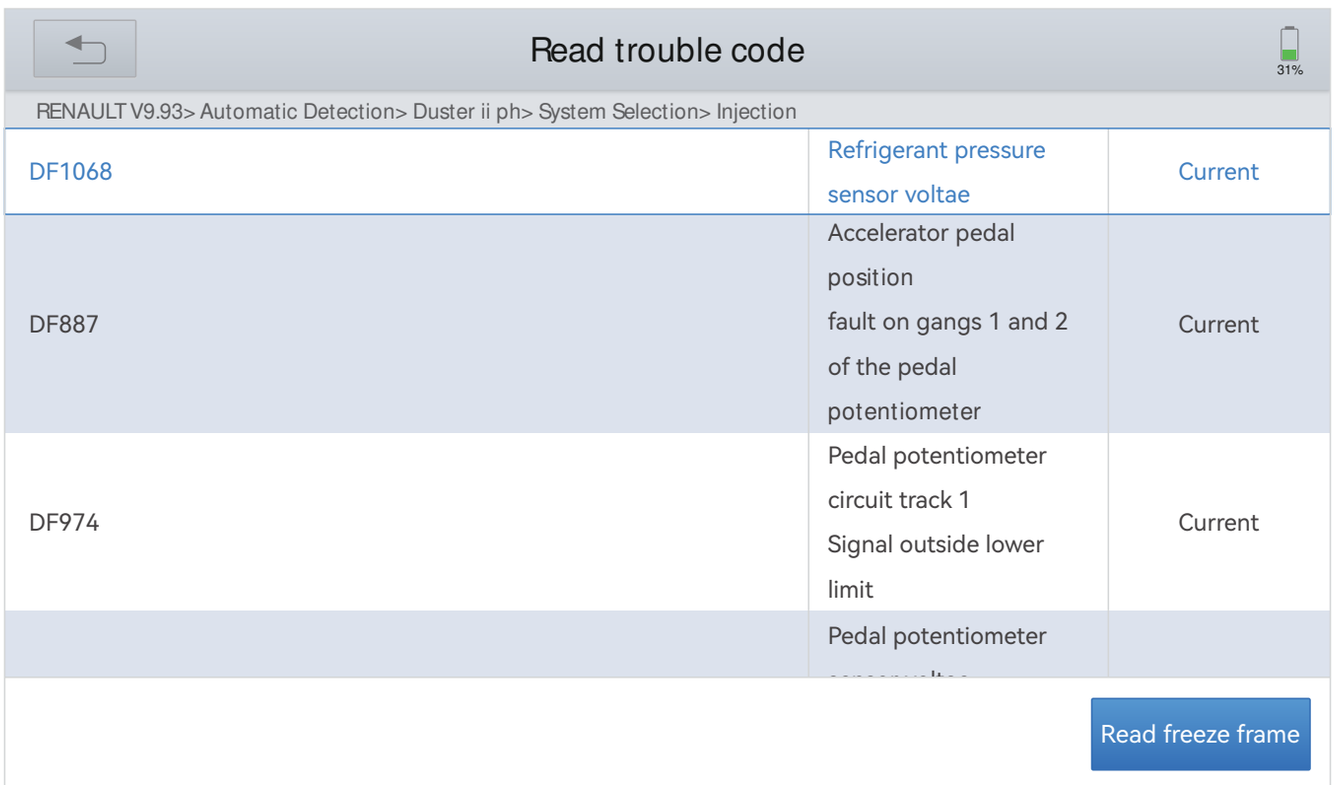
## Note:

You can not share the file to a device that runs iOS system from android tablet.

### 4.12.22 Freeze Frame

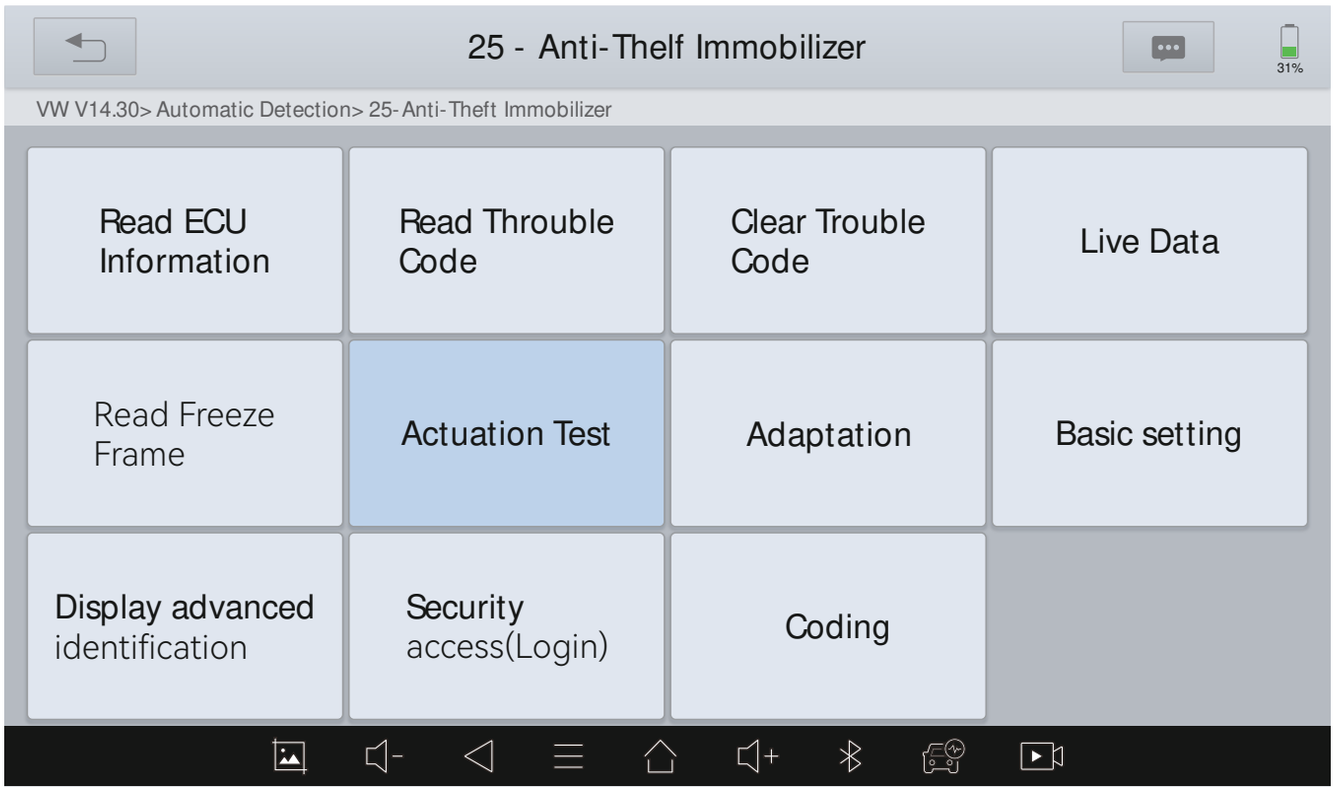
When a fault code is triggered, the vehicle ECU will save related data at that moment to generate a freeze frame. It is usually used to analyze the root cause that triggers the fault code, together with fault codes and PID data.

Freeze frame displayed varies across vehicles. Some vehicles may not have the option of freeze frame which means that the vehicle does not support this function.



### 4.12.23 Active Tests(Bi-Directional Controls)

Active tests, often known as bi-directional controls, checks the operation of certain actuators, such as solenoid, valves and relays.




### 4.12.24 Special Function

The Diagnostic Tool is capable of performing a series of advanced features like resets, relearns, matchings, adaptations, initializations and etc. The menu displayed varies across vehicles.

The special functions listed under diagnostic menu have some in common with “Special Function” on the diagnostic main screen. However, the options available under diagnostics is a lot more than that on the main diagnostic screen.

### 4.12.25 Exiting Diagnostics

Diagnostics remains open as long as there is an active communication link with the vehicle. You must interrupt this communication link in order to exit from tests and turn off the Diagnostic Tool. A warning message displays if you attempt to shut down while the Diagnostic Tool is communicating with the vehicle.

---

**Note:**

Damage to the vehicle electronic control module (ECU) may occur if communication is disrupted. Make sure the main cable is properly connected at all times during testing. Exit all tests before disconnecting the main cable or turning off the Diagnostic Tool.

---

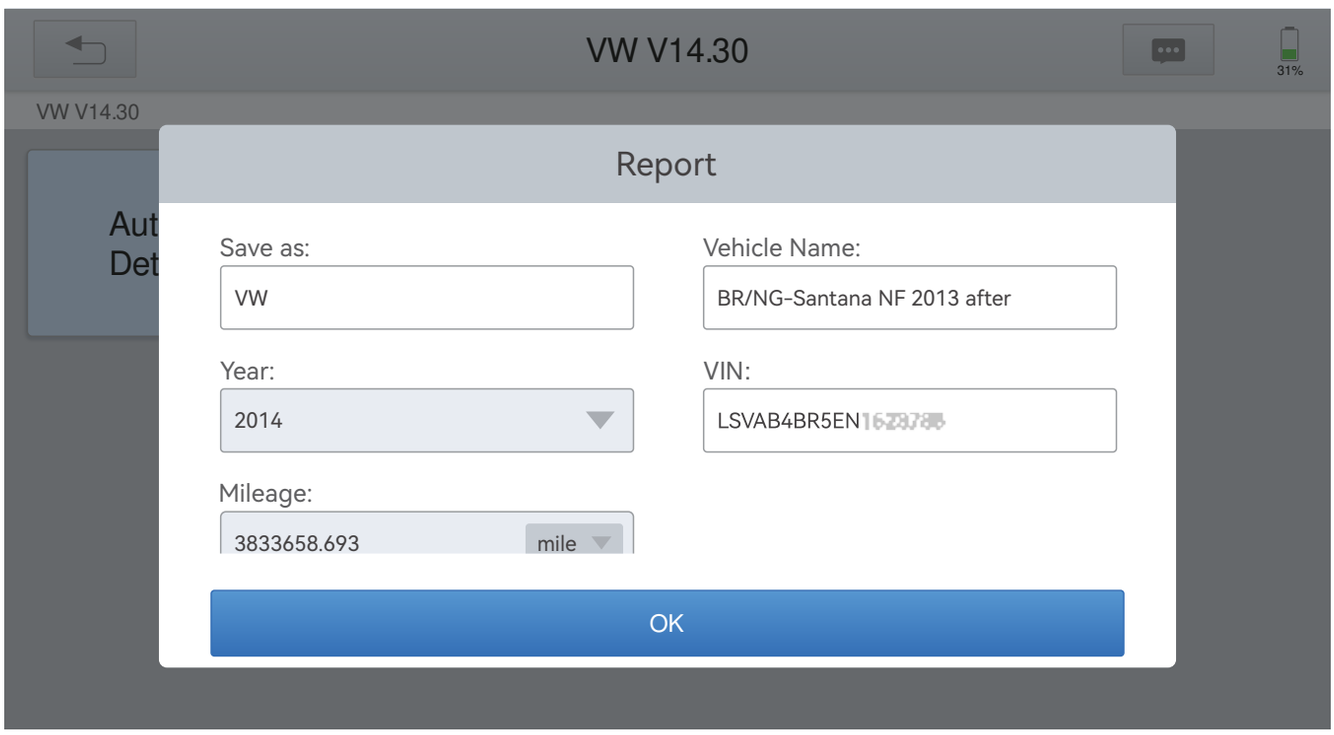
### 4.12.26 To exit the diagnostics:

Click back button on the screen all the way to the main menu or kill the diagnostic program will end interrupt the vehicle communication and exit diagnostics.

## 4.13 Full System Diagnostic Report

When you have done the diagnostics and exit the diagnostics all the way back to the main diagnostic screen, input the VIN number, mileage and model year and click “OK” in the Report generating form to generate a diagnostic report for later review or sharing.

To differentiate the diagnostic report with that generated on vehicle scan/Auto Scan screen, we call this diagnostic report as “Full System Diagnostic Report”.



Go to “Report” on the main diagnostic screen and click “Diagnosis Report” to view all diagnostic reports generated. Click to view the report you would like to review according to the date and time it’s generated or share to an email by clicking “Share by E-mail” or print it out by clicking “Print PDF Report”.

The report lists how many vehicle systems is detected, how many of them are impacted by fault codes, how many fault codes are detected and which systems are fault impacted and which are not. A typical “Full System Diagnostic Report” is as shown in picture below:

# Report

2024-03-08 18:01

## Vehicle information

Vehicle Name : BR/NG-Santana NF 2013 after  Year: 2014  VIN: LSVAB4BR5EN152378

Mileage: 617440km  SN: VD70S-V12345

Diagnosis Route : SHVW->BR/NG-Santana NF 2013 after>2014 (E)

## 01- Engine electronics

### Trouble Code

| NO. | Trouble Code | Trouble Code Descriptions | Trouble Code status |
|---|---|---|---|
| 1 | U042300 [004197] | Invalid Data Received From,Instrument Panel Cluster Control Module | Passive/Sporadic |
| 2 | U042300 [0041A3] | Invalid Data Received From,Instrument Panel Cluster Control Module | Passive/Sporadic |
| 3 | U042300 [0041A2] | Invalid Data Received From Body Conntrol Module | Passive/Sporadic |

### Live Data

| NO. | Trouble Code | Value | Maximum Value | Maximum Value | Unit |
|---|---|---|---|---|---|
| 1 | Voltage terminal 30 | 12.516 | 13.771 | 11.267 | V |
| 2 | Engine rpm | 0 | 0 | 0 | 1/min |
| 3 | Coolant temperature | 23 | 25 | 21 | deg C |
| 4 | Status of actuator test | not active | | | |
| 5 | Number of parameterization attempts | Function not available | | | |
| 6 | Number of successful parameterization attempts | Function not available | | | |
| 7 | Vehicle speed | 0 | 0 | 0 | km/h |
| 8 | Status of initial fuel filling | DEFAULT | | | |
| 9 | Time since engine start | 0 | 0 | 0 | s |
| 10 | Throttle calve position (absolute) | 16.9 | | | % |
| 11 | Absolute load value | 0.0 | | | % |
| 12 | Normed load value | 0.0 | | | % |
| 13 | Accelerator pedal position | 14.9 | | | % |

## 4.14 Fault Code Report

The other way to generate diagnostic report is through the vehicle scan/Auto Scan result screen. When you have done scanning all available vehicle electronic control modules, a generate "Report" option is available at the bottom which generates a simplified version diagnostic report that only displays the fault codes retrieved and the vehicle systems impacted.

We call this report as "Fault Code Report" to differentiate it from the "Full System Diagnostic Report". And a typical "Fault Code Report" is as shown in picture below:



Report

2024-03-08 18:01

Vehicle information

Vehicle Name : BR/NG-Santana NF 2013 after  Year: 2014  VIN: LSVAB4BR5EN152378

Mileage: 617440km  SN: VD70S-V12345

Diagnosis Route : SHVW->BR/NG-Santana NF 2013 after>2014 (E)

01-Engine electronics

Trouble Code

| NO. | Trouble Code | Trouble Code Descriptions | Trouble Code status |
|---|---|---|---|
| 1 | U042300 [004197] | Invalid Data Received From,Instrument Panel Cluster Control Module | Passive/Sporadic |
| 2 | U042300 [0041A3] | Invalid Data Received From,Instrument Panel Cluster Control Module | Passive/Sporadic |
| 3 | U042300 [0041A2] | Invalid Data Received From Body Conntrol Module | Passive/Sporadic |

03-Brake Electronics

Trouble Code

| NO. | Trouble Code | Trouble Code Descriptions | Trouble Code status |
|---|---|---|---|
| 1 | U101300 [00019D] | Control module not coded | Active/static |

09-Electronic central electric

Trouble Code

| NO. | Trouble Code | Trouble Code Descriptions | Trouble Code status |
|---|---|---|---|
| 1 | B141A15 [00100A] | Buld for brake lights,Open circuit/short circuit to B+ | Active/static |
| 2 | B131329 [002308] | Signal for brake lamp,Range/Performance | Active/static |
| 3 | B140C12 [01110A] | Activation for unlocking rear lid,Short circuit to B+ | Active/static |

17-instrument cluster

Trouble Code

| NO. | Trouble Code | Trouble Code Descriptions | Trouble Code status |
|---|---|---|---|
| 1 | B103E1B [903E12] | Fuel level sensor 1,Resistance too high | Active/static |
| 2 | B103F1B [903F12] | Outside temperature sensor,Resistance too high | Active/static |

## Note:

The diagnostic report generated on the vehicle scan/Auto Scan screen, namely "Fault Code Report" is generated to show the fault codes for quick repair. While the diagnostic report generated exiting diagnostic menu is a "Full System Diagnostic Report" to show health conditions of all vehicle systems equipped.

Both of the reports are stored in the "Diagnosis Report" section and there are actually NO such labels attached to the reports to differentiate them as "Full System Diagnostic Report" or "Fault Code Report".

## 4.15 Diagnostic Speed

The Diagnostic Tool provides fast all vehicle modules scan and diagnostics. However, the time it takes to scan & diagnostic all vehicle modules varies across vehicles. Factors that could influence the diagnostic speed includes the vehicle communication protocol the vehicle uses and number of vehicle control modules it's equipped.

Generally speaking, the Diagnostic Tool scans all vehicle modules faster for vehicles using latest vehicle communication protocols than older ones. For example, scanning a vehicle uses CAN bus for vehicle communication takes less time than an older IOS9141 protocol.

And it takes longer time to scan a modern vehicle that has many modules equipped than a less sophisticated vehicle that has just a few modules available.

## 4.16 Integrated Module

In some cases, often seen in older vehicle models, vehicle manufacturers tend to integrate two or more electronic control systems into one vehicle module, which can be confusing at some point.

Listed below are two most common examples:

**Powertrain Control Module(PCM)**- Integrates Engine and Transmission systems.

**Brake Control Module(BCM)**- Integrates ABS and EPB systems.

The information above indicates that you should find transmission oil temperature under PID data(live data) menu of the Powertrain Control Module(or PCM) if Transmission or similar name did not appear in the diagnostic menu. And you should go to Special Function under Brake Control Module(BCM) to find ABS Bleeding feature.

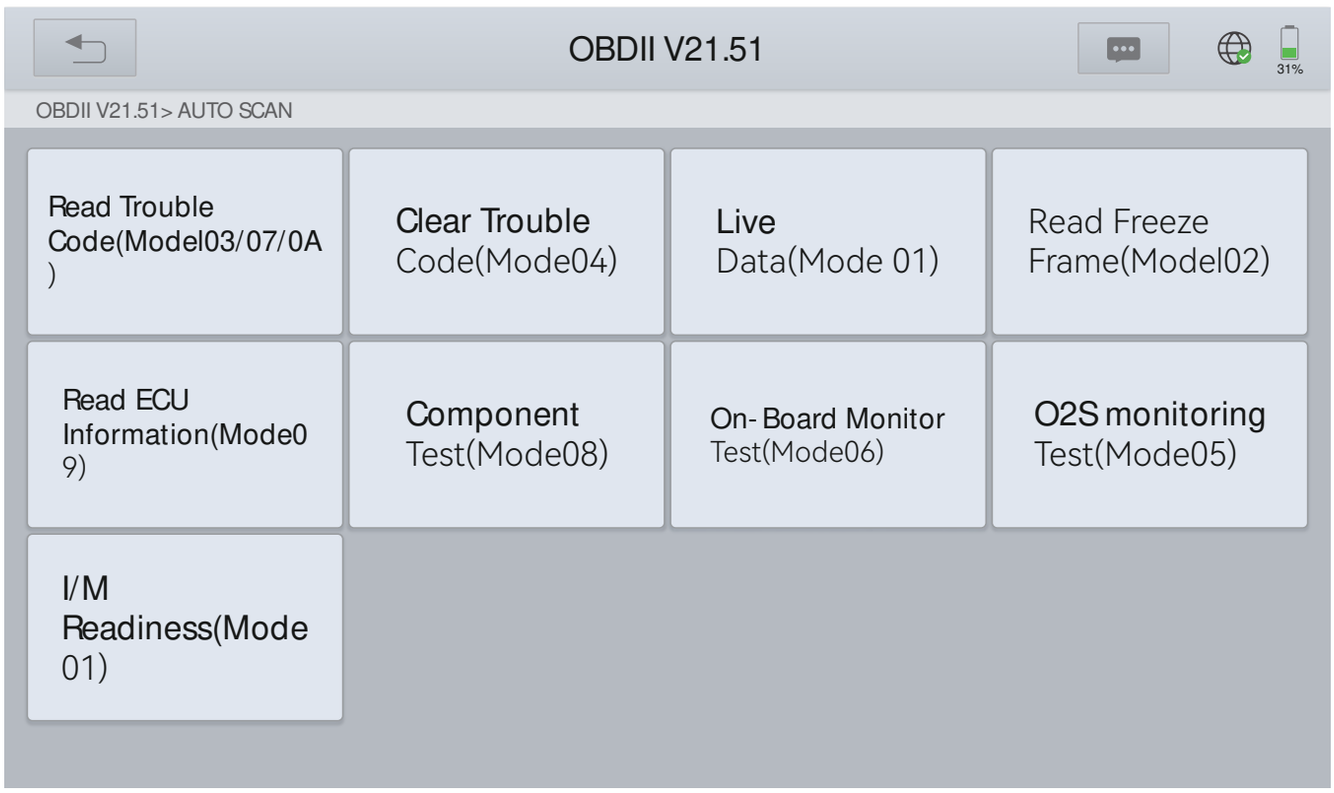
# 5. OBDII/EOBD

This chapter describes the concept, protocols, test functions and the basic operation of the OBDII/EOBD function. To find OBDII/EOBD function, go to MANUAL DIAGNOSIS- Region Selection- OBDII.

This option presents a quick way to check for DTCs, locate the cause of an illuminated malfunction indicator lamp (MIL), check monitor status prior to emissions certification testing, verify repairs, and perform a number of other services that are emissions-related.

The OBDII function allows you to access “generic” OBDII/EOBD data.
Generic OBDII/EOBD data is data limited to emission related diagnostics such as:

- Checking for emissions-related diagnostic trouble codes (DTCs)
- Checking the cause of an illuminated malfunction indicator lamp (MIL)
- Checking monitor status prior to emissions certification testing




To access other available electronic control module (ECU) data for vehicle specific systems, parameters or enhanced diagnostics use the AUTO SCAN or MANUAL DIANGOSIS and enter all systems diagnostics or individual system diagnostics.

The OBDII function are used to access “generic” OBDII/EOBD data for OBDII/EOBD compliant vehicles that are not included in the all systems/individual systems diagnostics.

---

IMPORTANT:
Generic OBDII/EOBD data are not included in the engine system diagnostic data.

---

## 5.1 OBDII Protocols

Global OBD uses 5 communication protocols:

- SAE J1850 PWM
- SAE J1850 VPW
- ISO 14230-4(KWP2000)
- ISO 9141-2
- ISO 15765-4/SAE J2480

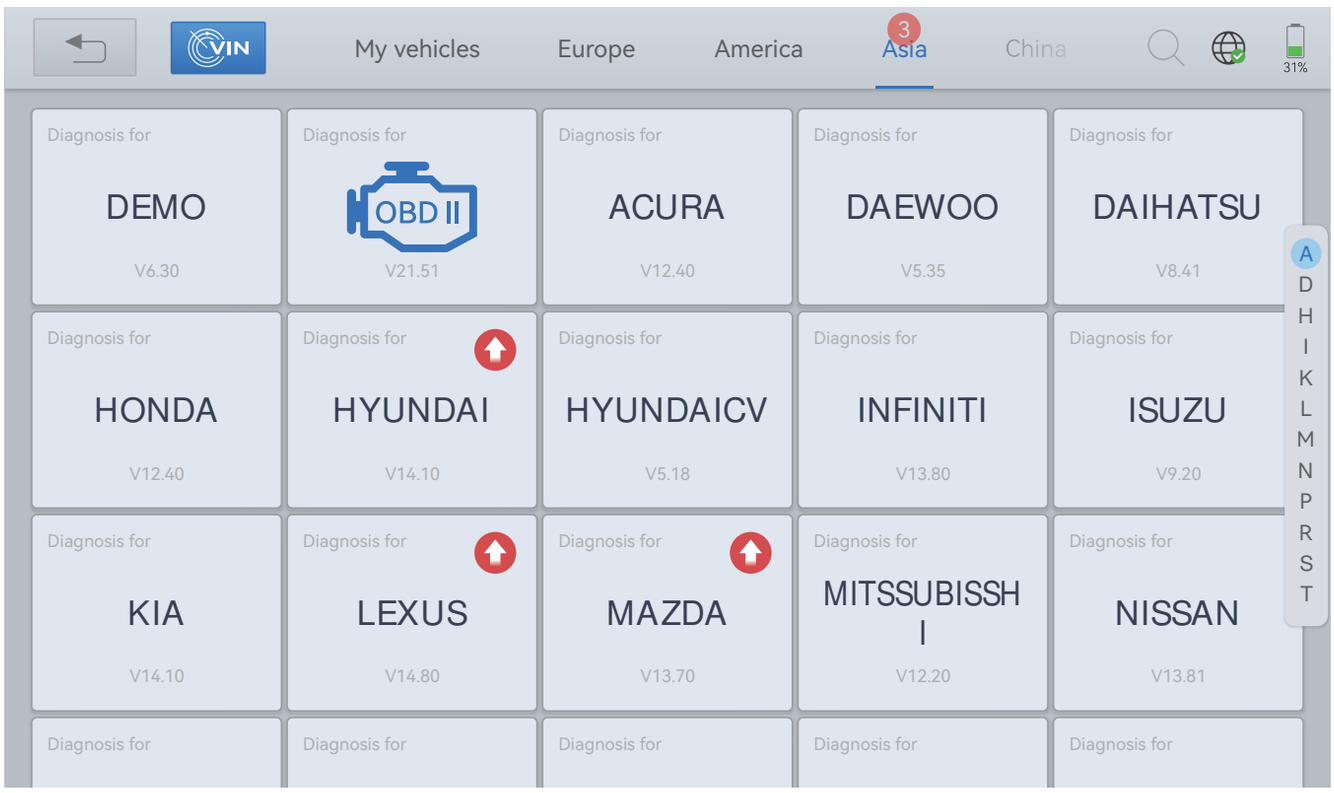
## 5.2 Basic Operations

To access generic OBDII/EOBD data, please follow the steps below:

Step 1: Click MANUAL DIAGNOSIS on the main diagnostic screen

Step 2: Select the region where the vehicle manufacturer is originated

Step 3: Click OBDII icon beside the DEMO



## 5.3 Auto Scan & Protocol Selection

And there are two options to access the OBDII/EOBD data of the vehicle connected.

### 5.3.1 Auto Scan

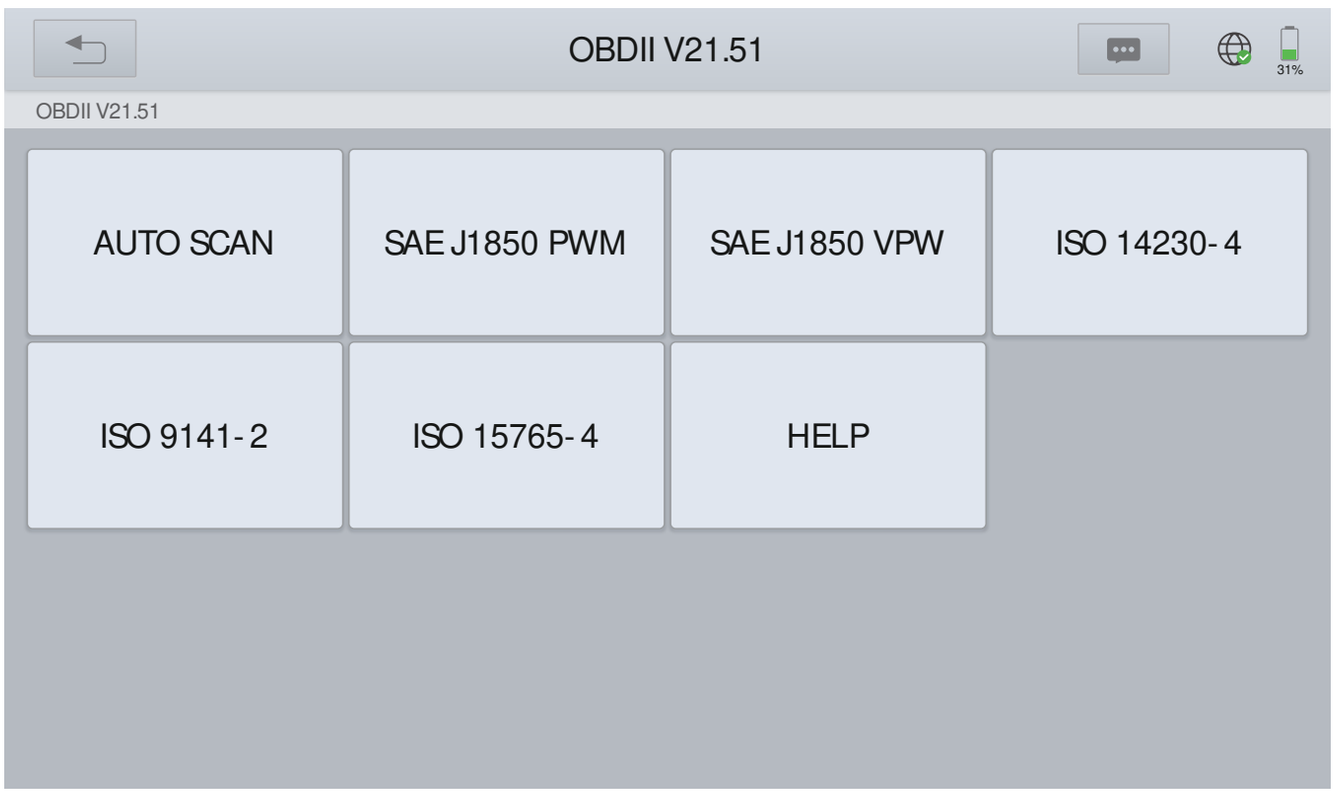
When this option is selected the Diagnostic Tool attempts to establish communication trying each protocol in order to determine which one the vehicle uses for communication.

### 5.3.2 Protocol Selection

A communication protocol is a standardized way of data communication between an ECM and a Diagnostic Tool. If you know which protocol your vehicle uses for communication, select the corresponding protocol directly to establish communication.

### 5.3.3 Help

Describes DLC location, DTC library, Abbreviations and OBD background information like OBDII modes and etc.




## 5.4 10 Modes of OBDII

Mode $01 – Request Live Data
Mode $02 – Request Freeze Frames
Mode $03 – Request Stored Trouble Codes
Mode $04 – Clear/Reset Stored Emissions Related Data
Mode $05 – Request Oxygen Sensors Test Results

Mode $06 – Request On-Board System Tests Results
Mode $07 – Request Pending Trouble Codes
Mode $08 – Request Control of On-Board Systems
Mode $09 – Request Vehicle Information
Mode $0A – Request Permanent Trouble Codes

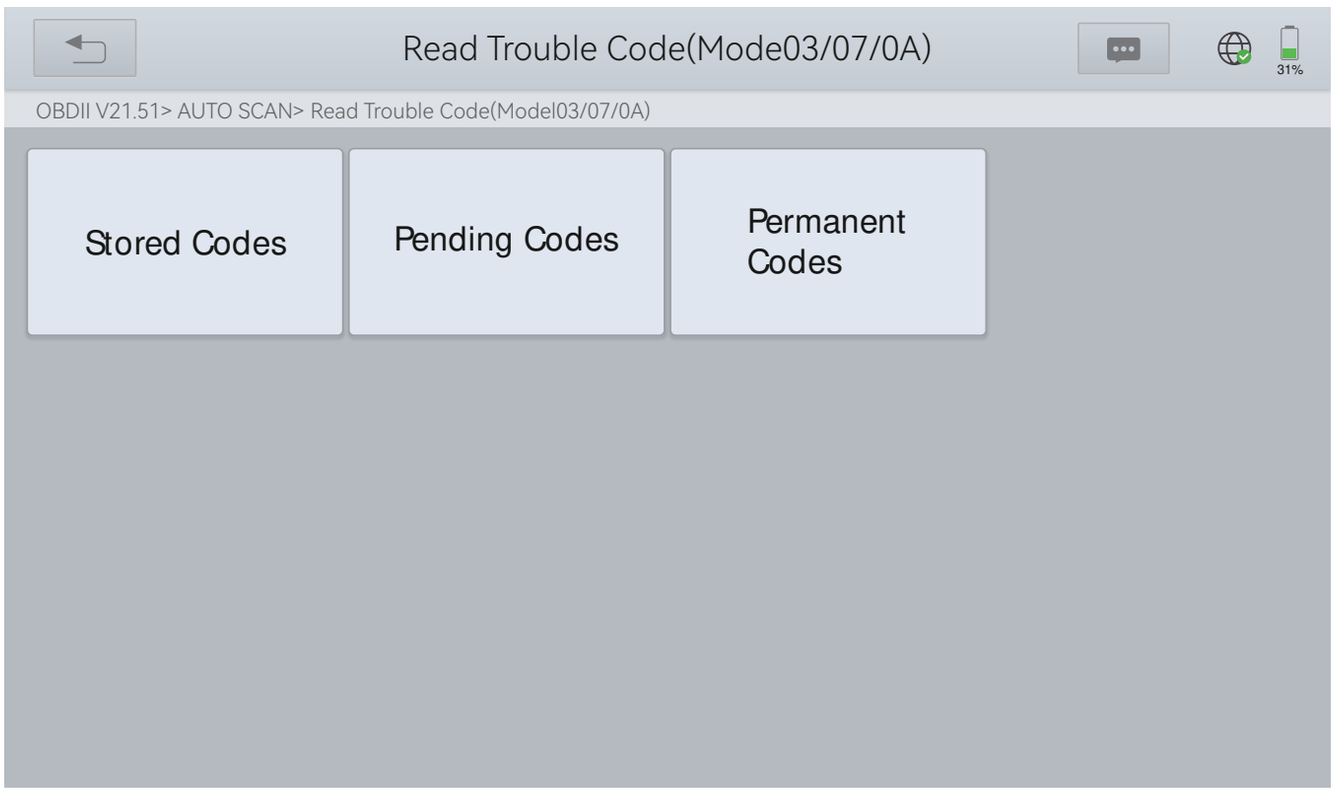
## 5.5 Connecting the Main Cable

Connection of the main cable to the Diagnostic Tool and vehicle OBDII port is required for OBDII/EOBD testing, see Connecting the Main Cable, on page 27.

## 5.6 OBDII/EOBD Menu

### 5.6.1 Read Trouble Code

The "Read Trouble Code" option displays a list of current emission related DTCs, including Stored Codes(Generic Codes and Manufacturer-Specific Codes), Pending Codes, and Permanent Codes.




OBDII/EOBD Codes have a priority according to their emission severity, with higher priority codes overwriting lower priority codes. The priority of the code determines the illumination of the MIL and the code erase procedure. Vehicle manufacturers have implemented the ranking differently, so there are differences between makes.

#### 5.6.1.1 Read Trouble Code

Stored codes are the current emission related DTCs from the ECM of the vehicle.

OBDII/EOBD Codes have a priority according to their emission severity, with higher priority codes overwriting lower priority codes. The priority of the code determines the illumination of the MIL and the code erase procedure. Vehicle manufacturers have implemented the ranking differently, so there are differences between makes.

#### 5.6.1.2 Pending Codes

The purpose of this function is to enable the Diagnostic Tool to obtain "pending" or maturing diagnostic trouble codes. These are codes whose setting conditions were met during the last drive cycle, but need to be met on two or more consecutive drive cycles before the DTC actually sets.

Use this function following a vehicle repair and code clearing procedure to verify test results after a single drive cycle.

- If a test failed during the drive cycle, the DTC associated with that test is reported. If the pending fault does not occur again within 40 to 80 warm-up cycles, the fault is automatically cleared from memory.
- Test results reported by this function do not necessarily indicate a faulty component or system. If test results indicate another failure after additional driving, then a DTC is set to indicate a faulty component or system, and the MIL is illuminated.

#### 5.6.1.3 Permanent Codes

This option displays a record of any "Permanent" codes. A permanent status DTC is one that was severe enough to illuminate the MIL at some point, but the MIL may not be on at the present time.

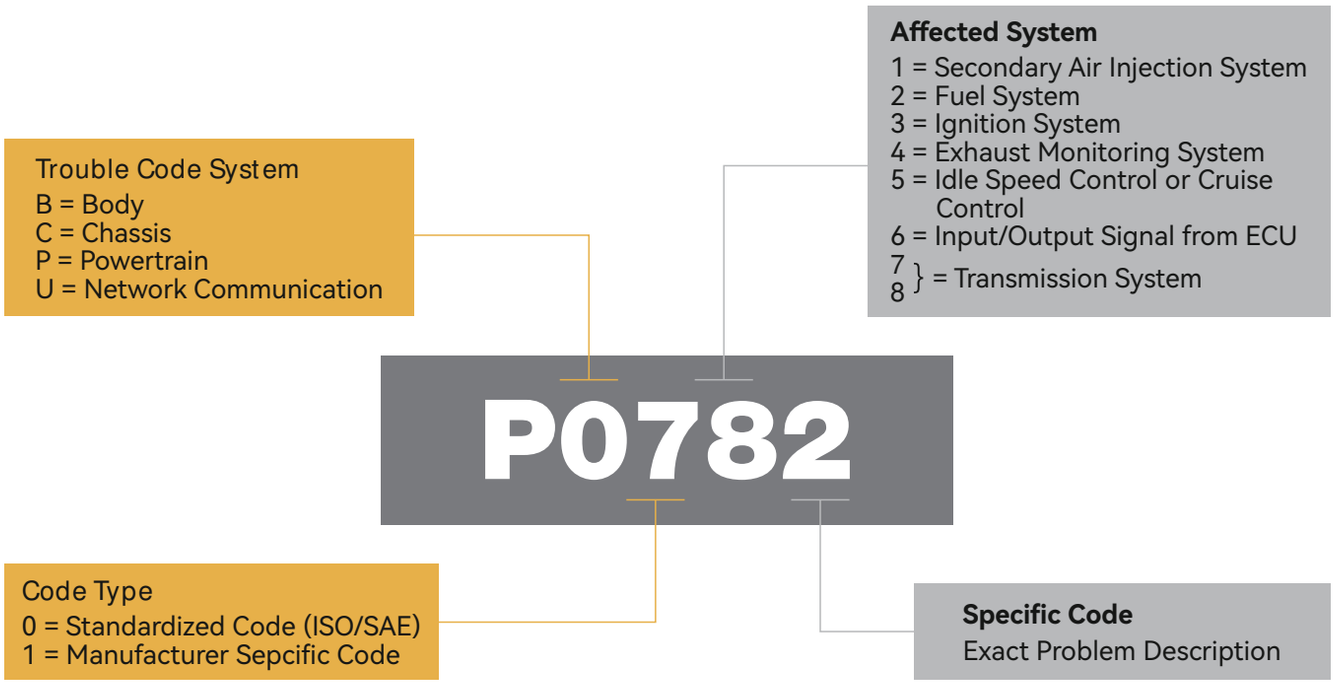
Whether the MIL was switched off by clearing codes or because the setting conditions did not repeat after a specified number of drive cycles, a record of the DTC is retained by the ECM. Permanent status codes automatically clear after repairs have been made and the related system monitor runs successfully.

### 5.6.2 Generic & Manufacturer-Specific Codes

**Code Definitions:**

Diagnostic Trouble Code (DTCs) -- Trouble codes are how OBDII identifies and communicates to technicians where and what on-board problems exist. The first number in the DTC indicates whether the code is an SAE generic code (applies to all OBDII systems) or is specific to the vehicle manufacturer. The remaining three numbers provide information regarding the specific vehicle system and circuit. An analysis of a typical OBDII code is shown below.

Generic Codes -- DTCs with the second character as "0" is a Generic Code.
Manufacturer-Specific Code -- DTCs with second character as "1" is a Manufacturer-Specific Code.




### 5.6.3 Permanent Codes

#### 5.6.3.1 First DTC Character

The first DTC character is always a letter. There are four types of codes:

P codes: "P" indicates a problem with the powertrain. It includes the engine, transmission, drivetrain, and fuel system.

C codes: "C" indicates a problem with the chassis. It refers to mechanical systems outside the passenger compartment, such as steering, suspension, and braking.

B codes: "B" indicates a problem with the body. It covers parts that are found in the passenger compartment area.

U codes: "U" indicates a problem with the vehicle's onboard computers and integration functions that the OBD manages.

#### 5.6.3.2 Second DTC Character

The second DTC character is a numeric digit, either a "0" or a "1":

0: A "0" indicates a standard SAE international code. It's also known as a generic code, meaning that it applies to all vehicles following the OBDII international standard.

1: A "1" represents a code that is specific to the car's make or model. It's known as an

enhanced code, meaning it doesn't fall under an SAE standard. If you see a "1," reach out to the vehicle manufacturer directly for more information.

#### 5.6.3.3 Third DTC Character

If the second DTC character is a "0," then the third character helps you determine which subsystems are malfunctioning. There are eight numbers:

0: Fuel and air metering and auxiliary emission controls
1: Fuel and air metering injection system
2: Fuel and air metering (injection system)
3: Ignition systems or misfires
4: Auxiliary emission controls
5: Vehicle speed control, idle control systems, and auxiliary inputs
6: Computer output circuit
7-8: Transmission

#### 5.6.3.4 Fourth and fifth DTC Character

The fourth and fifth DTC codes are two-digit numbers from 0 to 99, known as the "Specific Fault Index." It identifies the exact malfunction that a vehicle has.

### 5.6.4 Clear Trouble Code(Mode $04)

This option is used to clear all emission related diagnostic data, such as DTCs, freeze frame data, and test results, from the memory of the selected ECM. Although OBDII/EOBD displays generic OBDII/EOBD data only, clearing codes erases all of the stored data, including any enhanced codes and freeze frame information.

A confirmation screen displays when the clear codes function is selected to prevent accidental loss of data. Select Yes from the confirmation screen to continue.

### 5.6.5 Live Data(Mode $01)

Use this function to display the current emission related data from the selected electronic control module (ECM) of the vehicle. The main body of the screen has two main columns; the left-hand column is a description of the parameter and the right-hand column is the parameter value and unit or state.

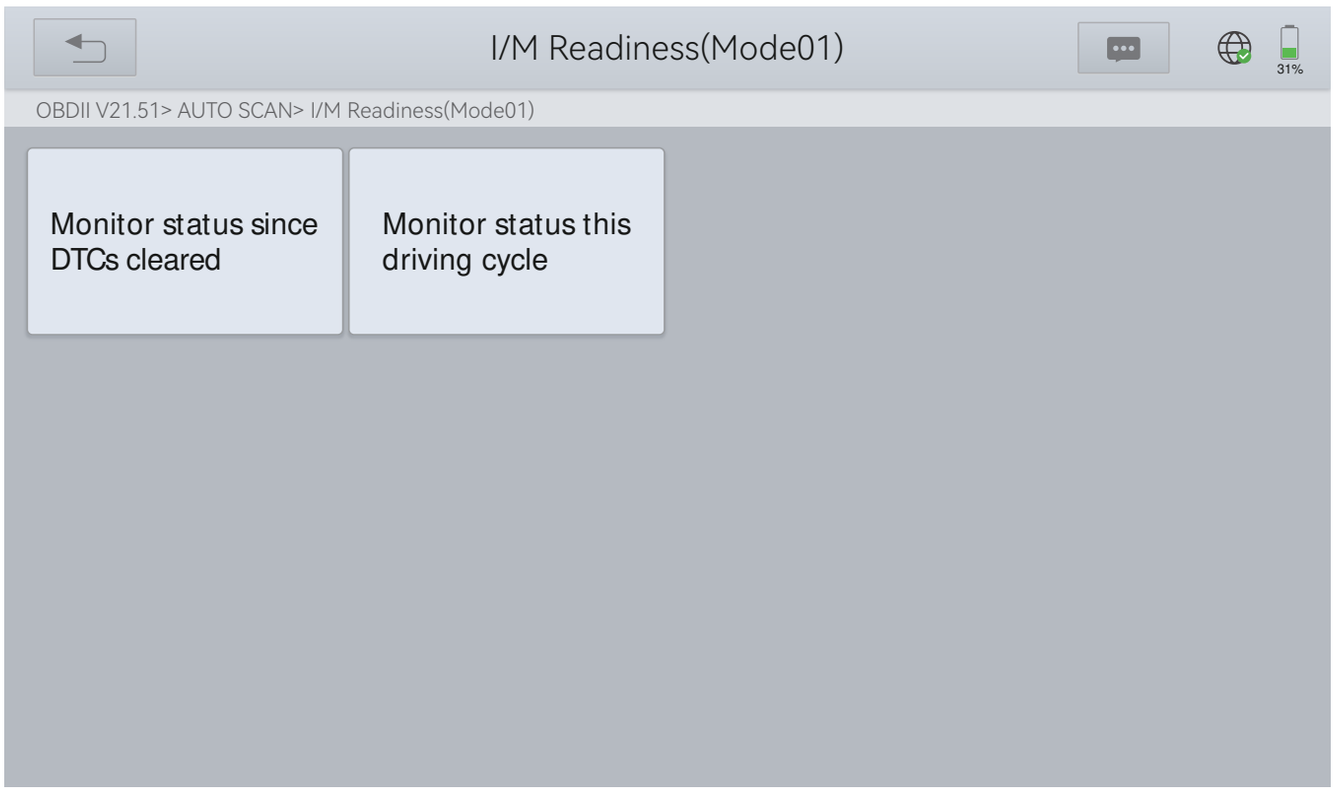
### 5.6.6 Read Freeze Frame(Mode $02)

Freeze frame data provides a "snapshot" of critical parameter values at the time a DTC set. This function is used to display freeze fame data for any stored emission related diagnostic trouble code (DTC). In most cases the stored frame is the last DTC that occurred. Certain

DTCs, those that have a greater impact on vehicle emission, have a higher priority. In these cases, the highest priority DTC is the one for which the freeze frame records are retained.

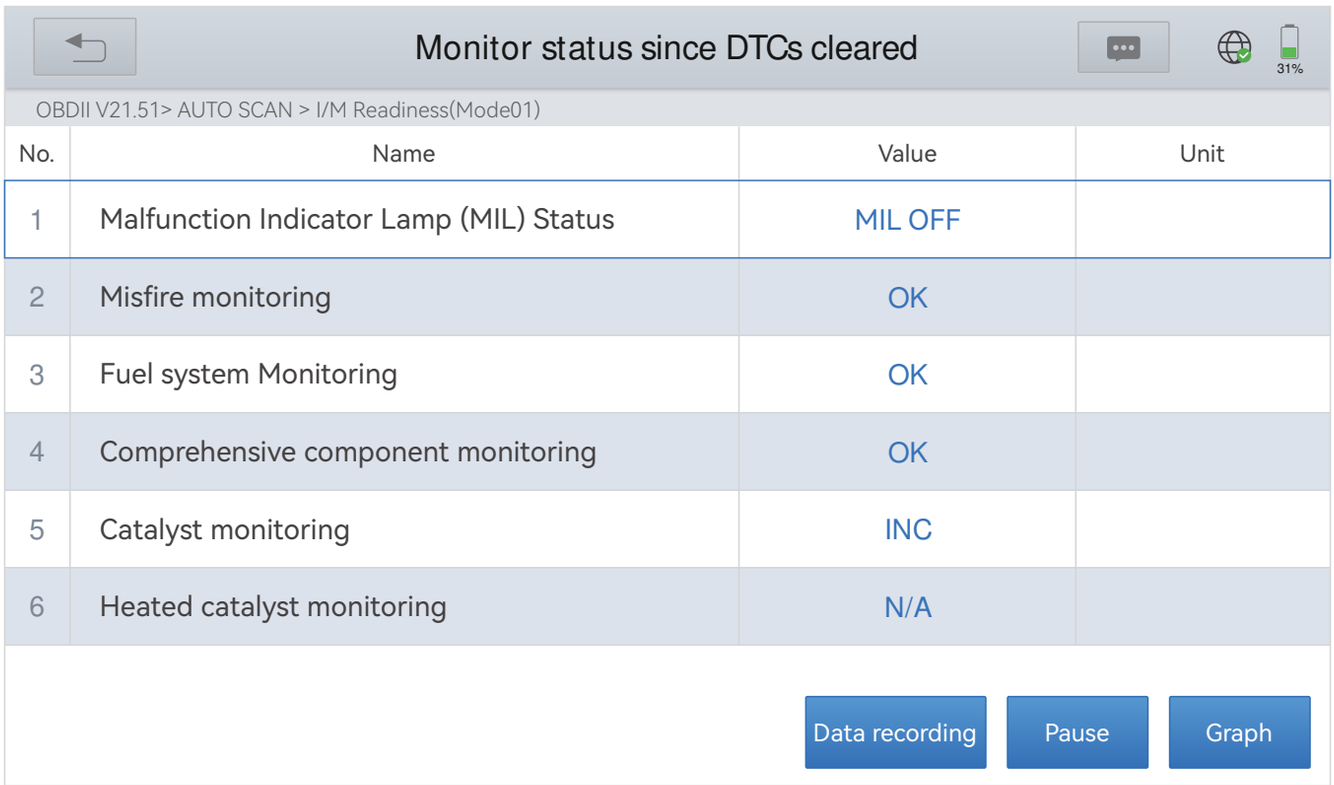
### 5.6.7 I/M Readiness(Smog Check)

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 compliance to a state emissions program. Selecting I/M Readiness opens a sub-menu with two choices:



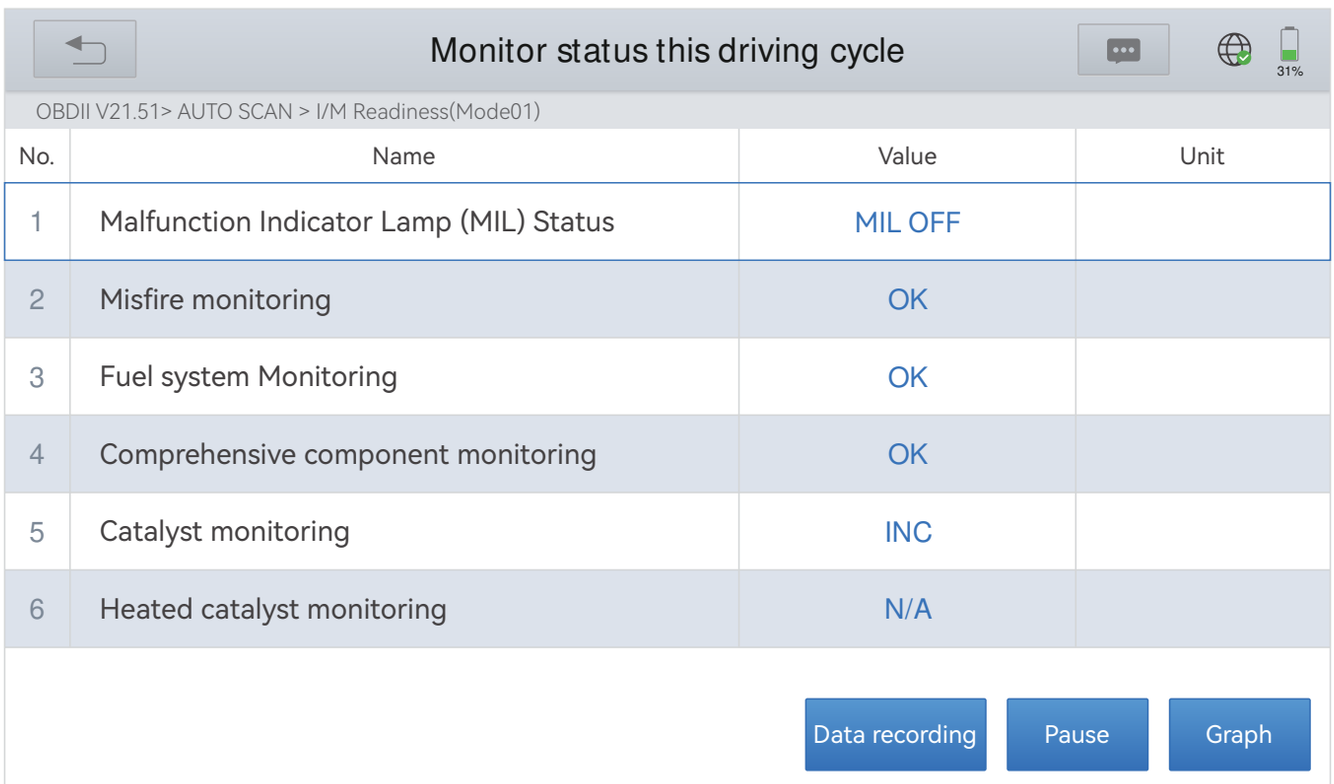
### 5.6.7.1 Since DTCs Cleared

Displays the status of monitors since the last time the DTCs are erased



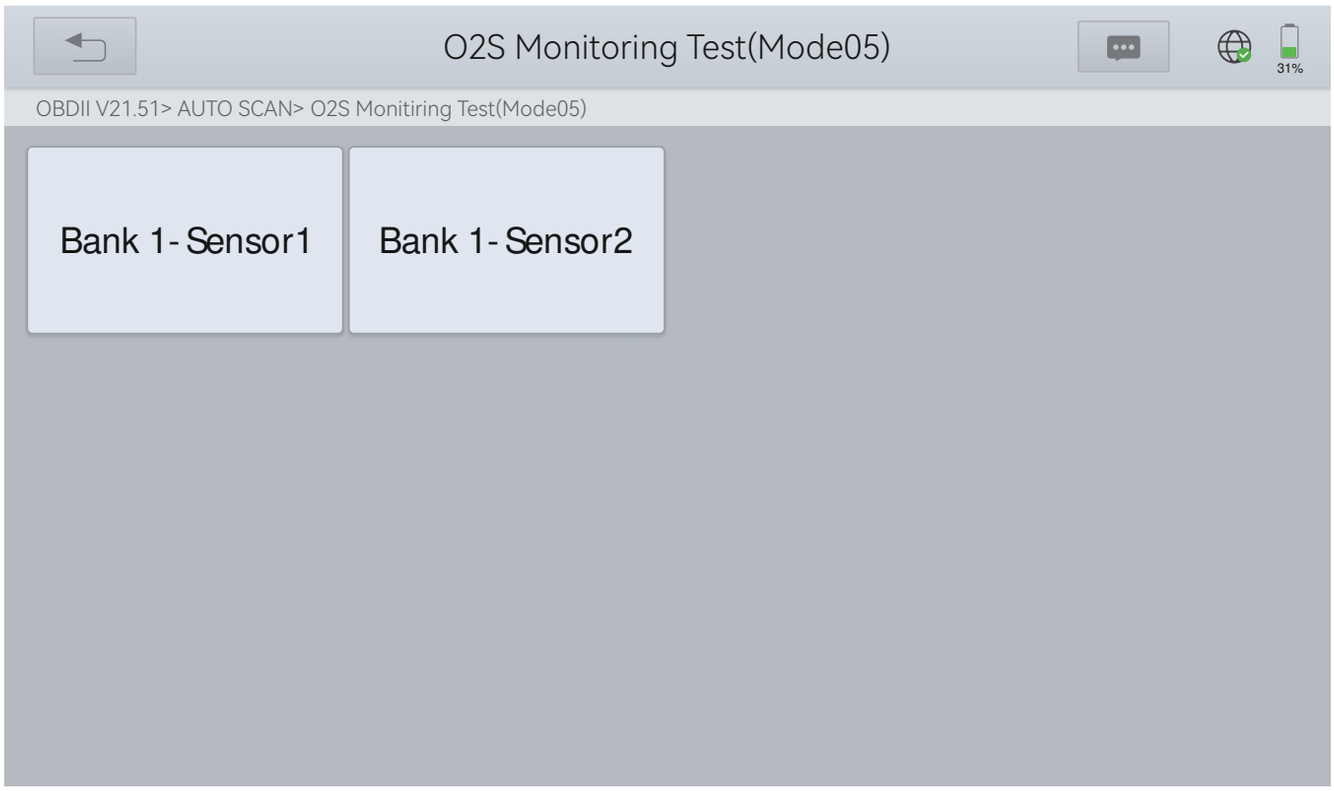

### 5.6.7.2 This Driving Cycle

Displays the status of monitors since the beginning of the current drive cycle.



### 5.6.8 O2S Monitoring Test(Mode $05)

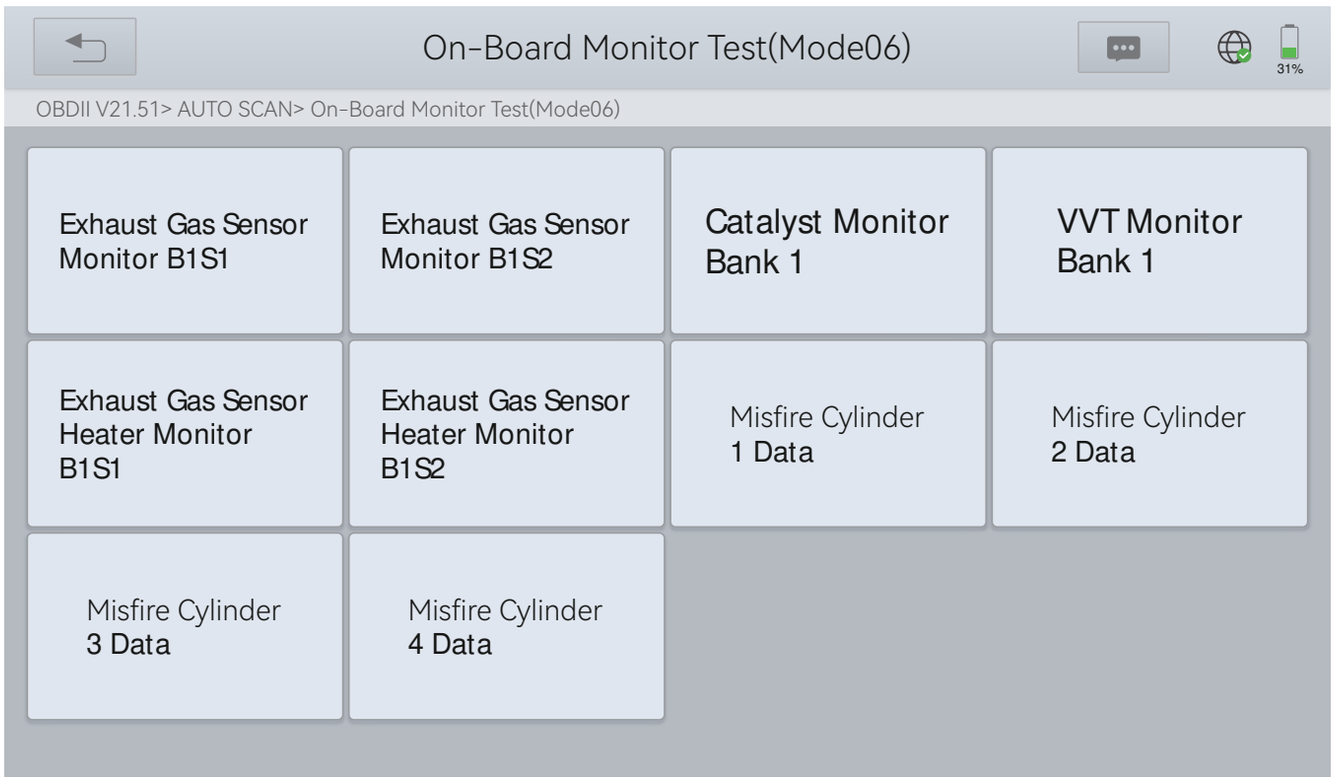
**This option opens a menu of tests available for checking the integrity of the oxygen sen-**sors. Making a selection displays all of the pertinent O2S parameters for the specific test. The test identification (ID) displays at the top of the data list.



### 5.6.9 On-Board Monitor Test (Mode $06)

This function allows you to view the results of On-Board Monitor tests. The tests are useful after servicing or after erasing a vehicle's control module memory.

This function opens a menu of available test results on monitored systems. The data available is for specific systems and components that the onboard diagnostic system either continuously monitors, such as misfire counters, or non-continuously monitors. Making a selection displays the test results.




### 5.6.10 Component Test(Mode $08)

This function enables bidirectional control (to limited extend) of the ECM. The purpose of this function is to allow the Diagnostic Tool to control the operation of an onboard system, test, or component, such as EVAP leakage test or other test. This function is useful in determining whether the ECM responds to a command well.

### 5.6.11 Read Vehicle Information(Mode $09)

The purpose of this function is to enable the Diagnostic Tool to request and display vehicle-specific information, such as the vehicle identification number (VIN), the calibration identification, and the calibration verification number (CVN), of the test vehicle.

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**IMPORTANT:**

All service modes are not supported by all vehicles, so the available menu selections will vary.

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# 6. Special Functions & Maintenance Services

This chapter describes various scheduled service and maintenance functions, or called “Special Function”. A typical special function screen is a series of menu driven executive commands. By following the on-screen instructions to select appropriate execution options, enter correct values or data, and perform necessary actions, the screen prompts will guide you through the complete performance for various special functions.

Because the configuration of each vehicle model varies, it is impossible to list the specific operation steps for each special function.

In general, please follow the prompts on the device screen to perform the required function. If you want more information, please provide the device serial number, vehicle VIN code and the required function to our support team: support@vdiagtool.com.

## 6.1 Oil Reset

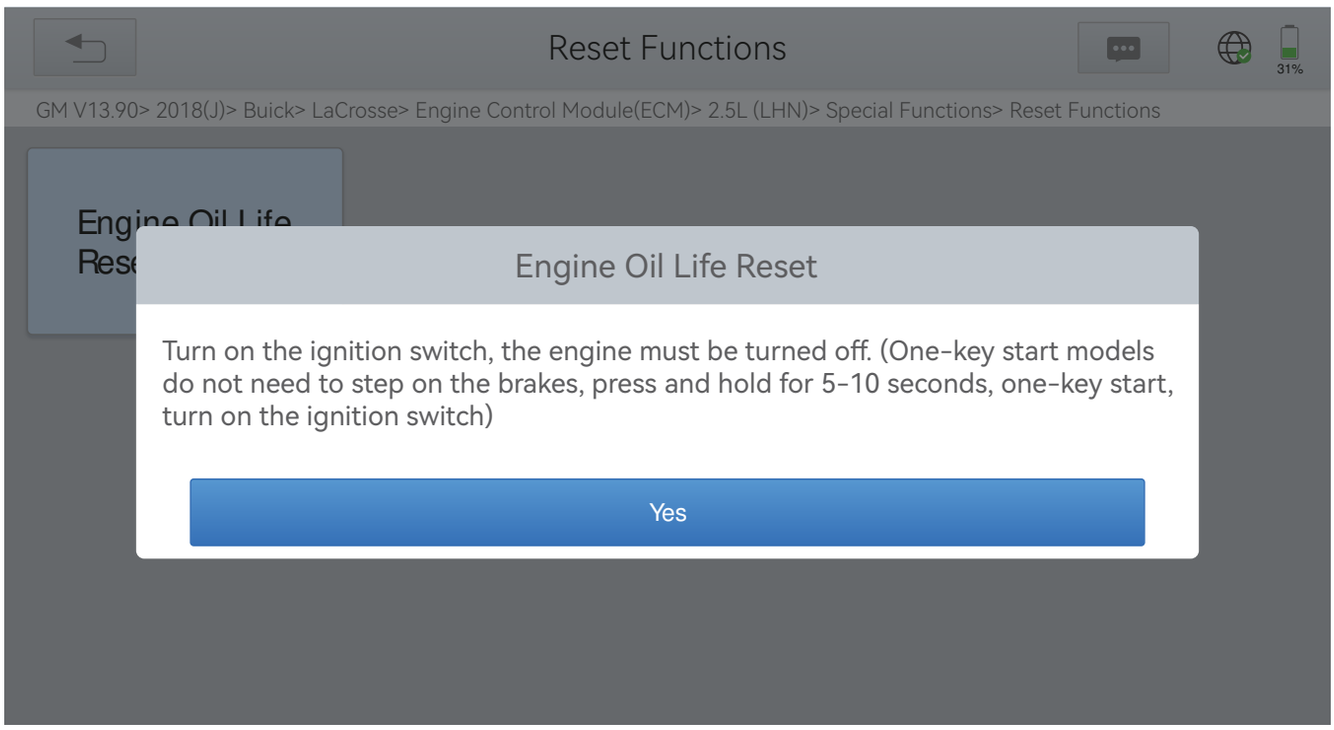
The Diagnostic Tool can be used to reset the engine oil life system, which calculates the optimum oil life change interval based on the vehicle’s driving conditions and climate. The oil life reminder must be reset each time the oil is changed so that the system can calculate when the next oil change is due.

This function can be performed in the following cases:

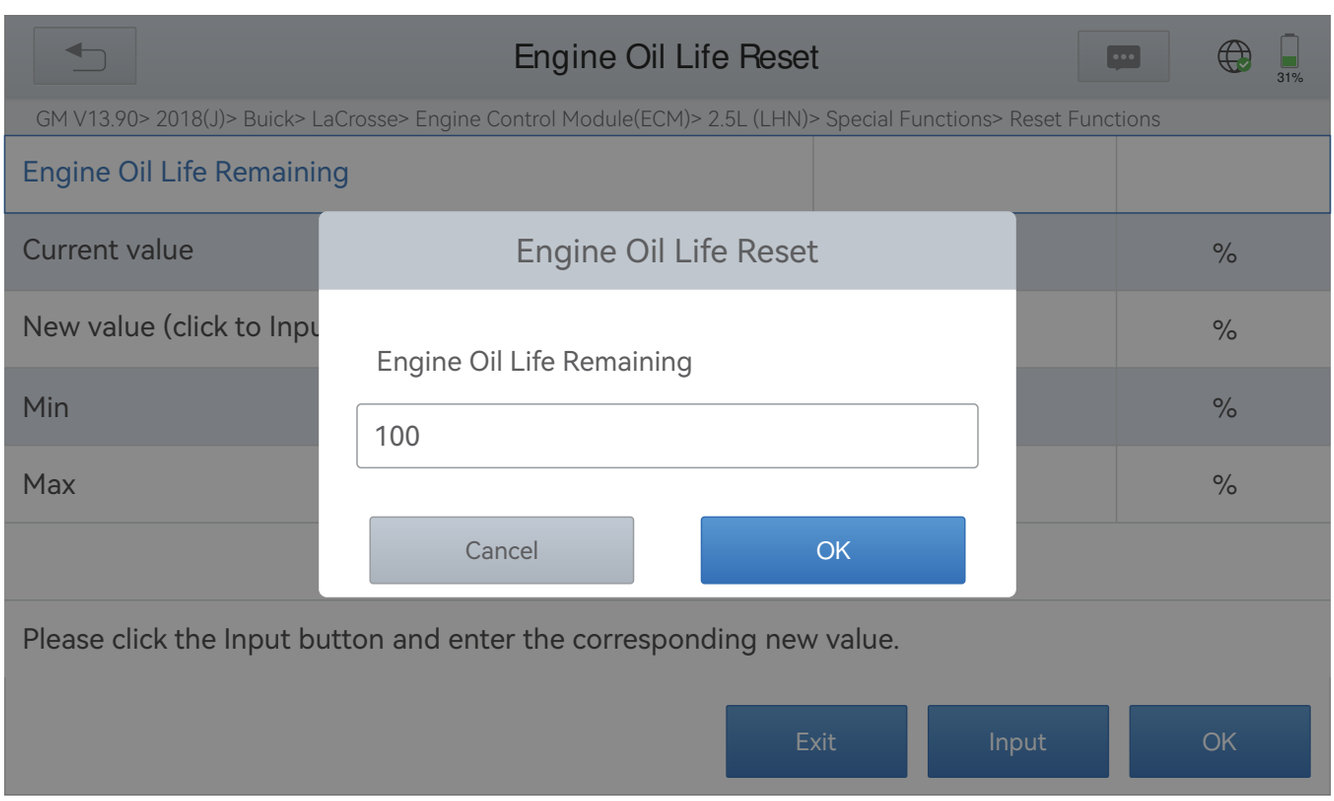
- If the service lamp is on, you must provide service for the car. After service, you need to reset the driving mileage or driving time so that the service lamp turns off and the system enables the new service cycle.
- After changing engine oil or electric appliances that monitor oil life, you need to reset the service lamp.

The operation guidelines of the Oil Reset function are shown as below:

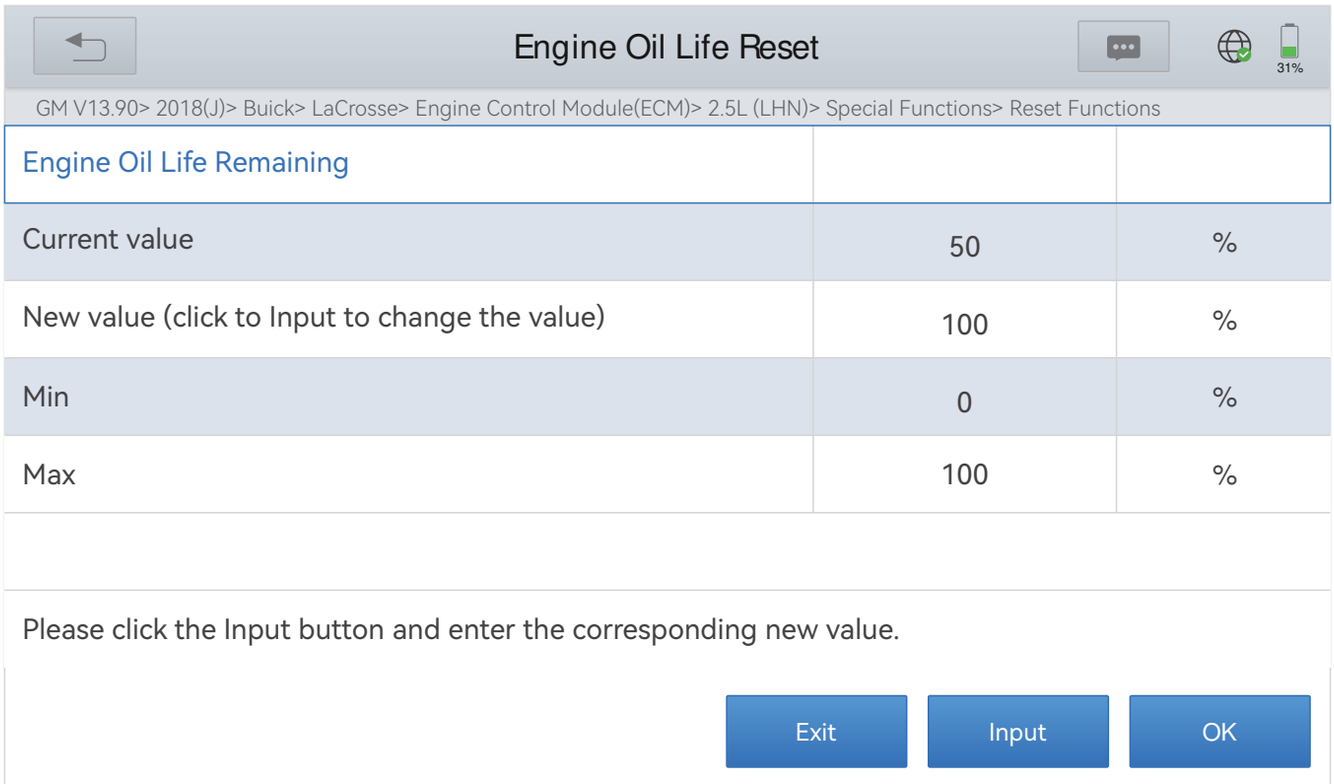
1: Enter the Oil Reset menu and select vehicle model according to the vehicle being tested.
2: Follow the screen prompt instructions displayed that are specific to the vehicle and press OK after completing the instructions shown.



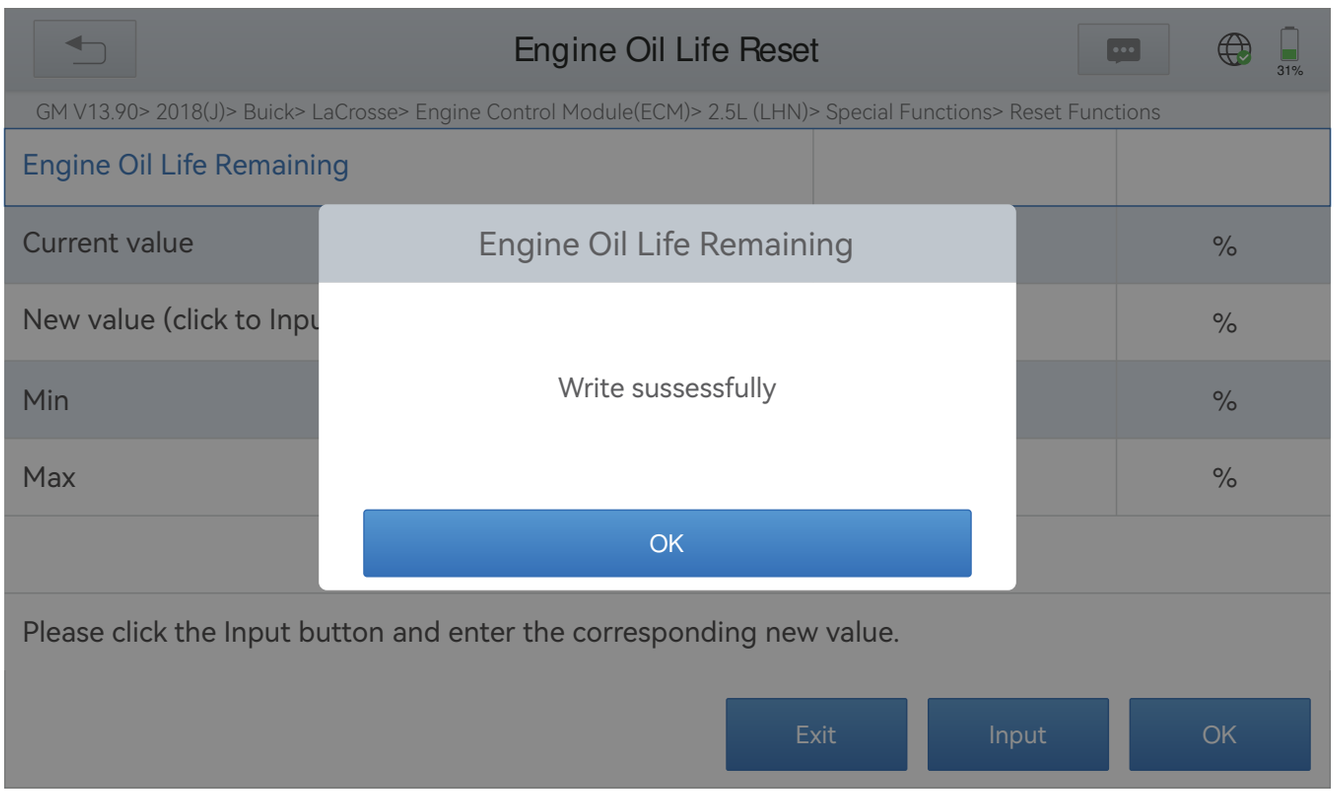

3: Enter maintenance mileage reset menu.
4: Click INPUT and enter a reasonable value of remaining oil life and press OK



5: Confirm the [New Value] you just entered, and then click OK at the bottom right to complete the procedure.




6: Message of 'Write successfully' displays when Oil Reset function has been successfully performed.



## 6.2 EPB

Electronic Parking Brake (EPB) System reset is a commonly performed special function. You can use this function to reset the electronic parking brake system and brake pads (retraction, release of the brake pump), G-sensor and body angle calibration. This function has multiple uses and can safely and effectively maintain the electronic brake system. These applications include deactivating and activating brake control systems, assisting in controlling brake fluid, applying and releasing brake pads, setting brakes after replacing brake discs or brake pads, etc.

1. If the brake pad wears the brake pad sense line, the brake pad sense line will send a signal to the onboard computer asking for replacing the brake pad. After replacing the brake pad, you must reset the brake pad to clear the trouble code.

Otherwise, vehicle will continue to falsely notify the driver that the brake pads are in need of replacement.

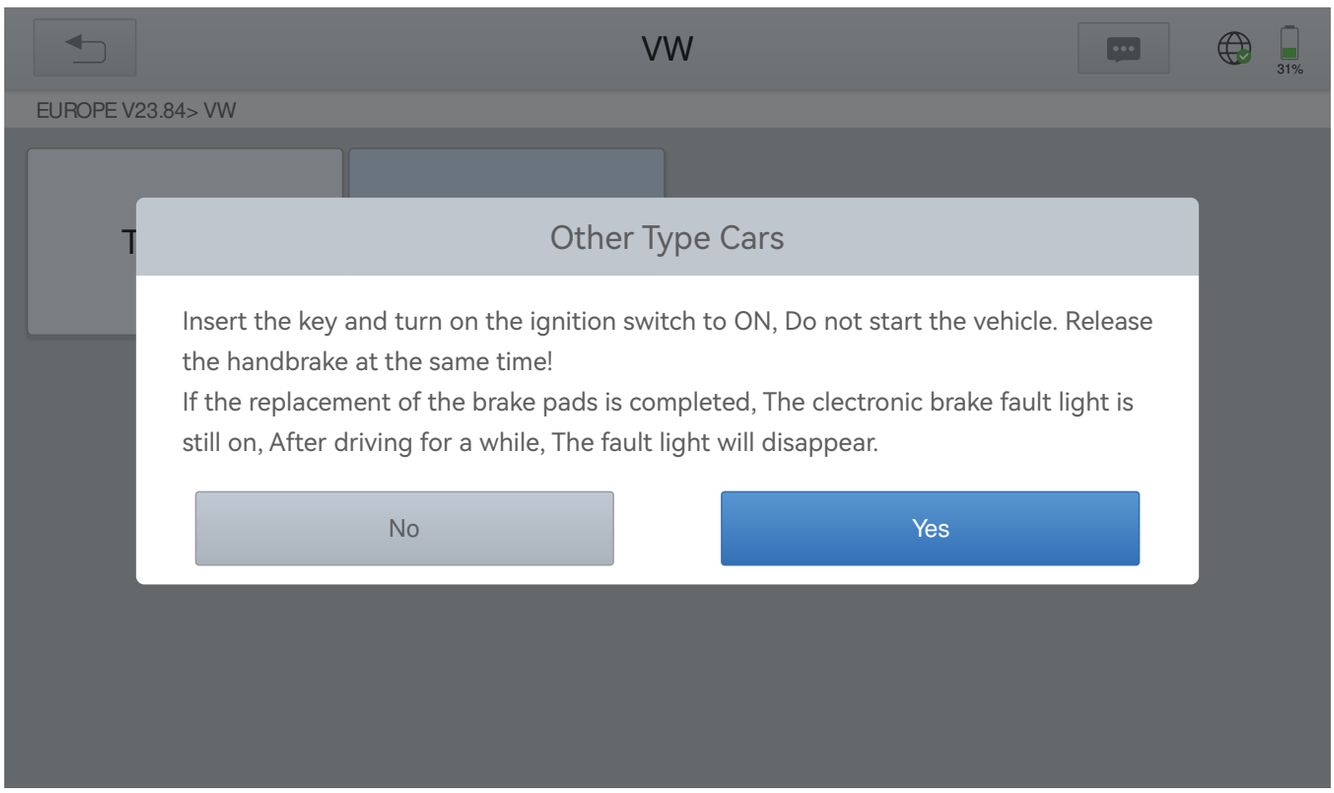
2. A reset must be performed in the following cases:

- The brake pad and brake pad wear sensor are replaced.
- The brake pad indicator lamp is on.
- The brake pad sensor circuit is shorted.
- The servo motor is replaced.

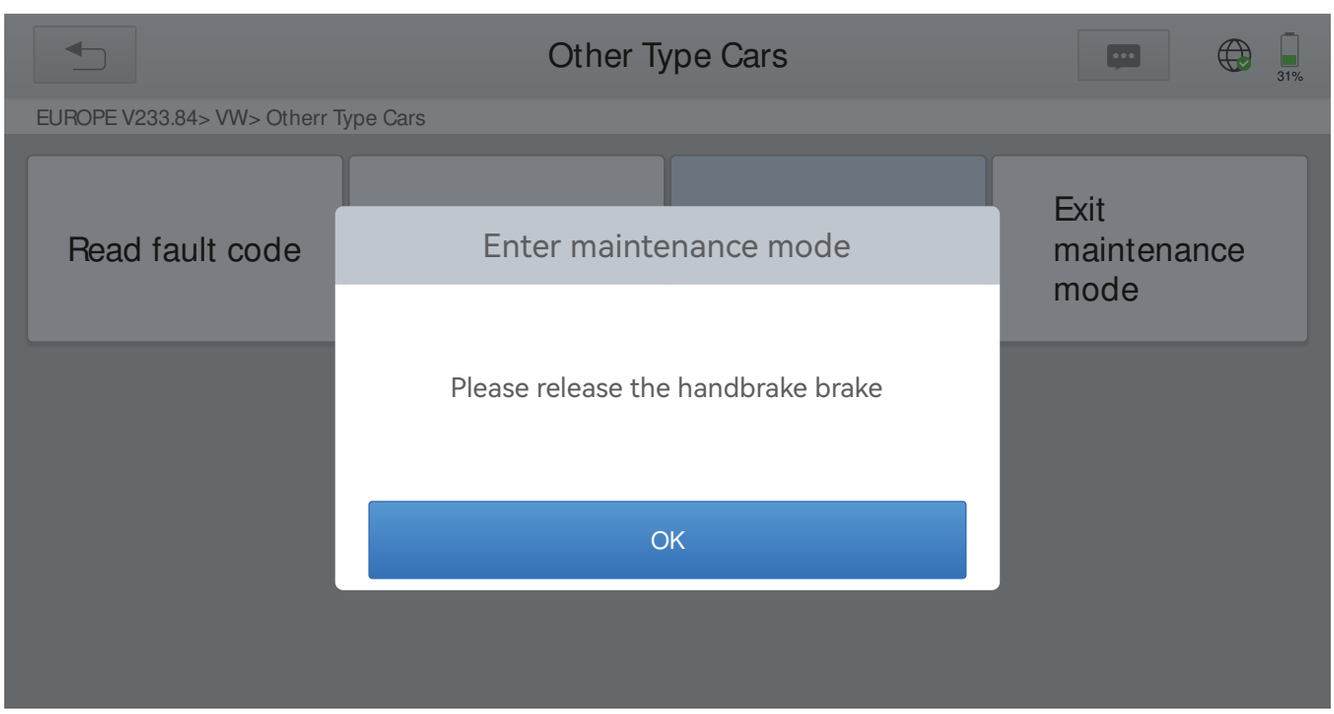
The operation guidelines of the EPB function are shown as below:

Step 1. Enter the EPB menu and choose relevant models according to the vehicle being tested.

Step 2. Follow the instructions displayed and press YES after completing the instructions shown.




Step 3. Enter the Enter maintenance mode menu and release the handbrake brake. And press OK after completing the instructions shown.



Step 4. Wait until the message of "Successful operation" pops up. And press OK to exit the menu.

Step 5. Enter the Exit maintenance mode menu and wait until the message of "Successful operation" pops up.

## 6.3 SAS

Steering Angle Sensors (SAS) System 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 codes will be automatically cleared.

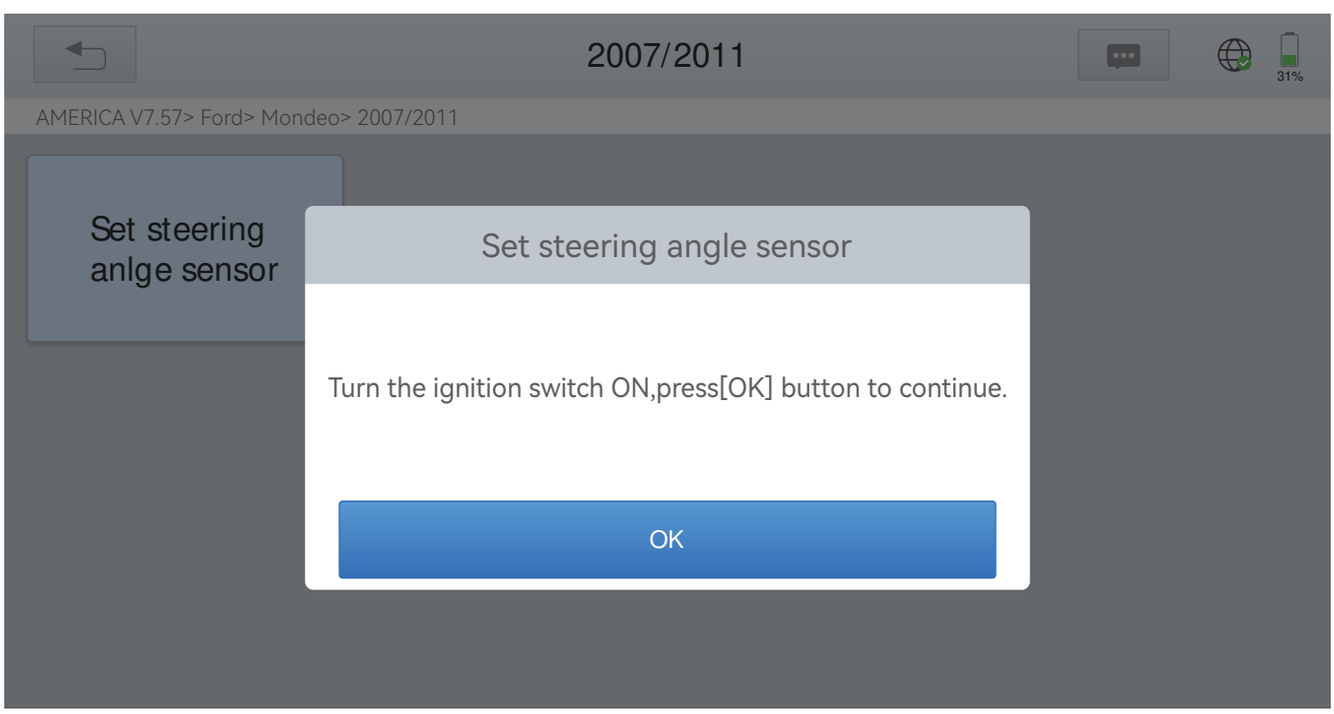
To reset the steering angle, you need to first find the relative zero point position for the vehicle to drive in a straight line. Taking this position as a reference, the ECU can calculate the accurate angle for left and right steering.

After replacing the steering angle position sensor, replacing steering mechanical parts (such as steering gearbox, steering column, end tie rod, steering knuckle), performing four-wheel alignment, or repairing the car body, you must reset the steering angle.

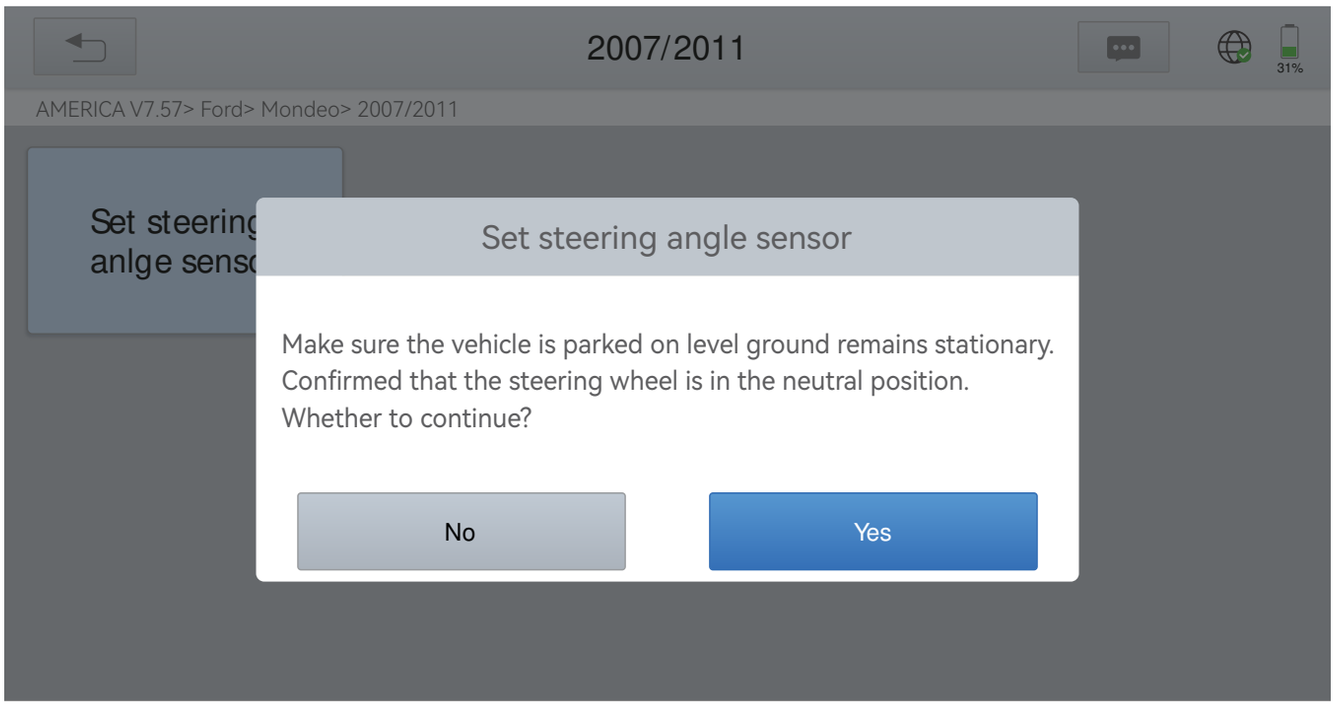
The operation guidelines of the SAS function are shown as below:

Step 1. Enter the SAS menu and choose the vehicle model according to the vehicle being tested.

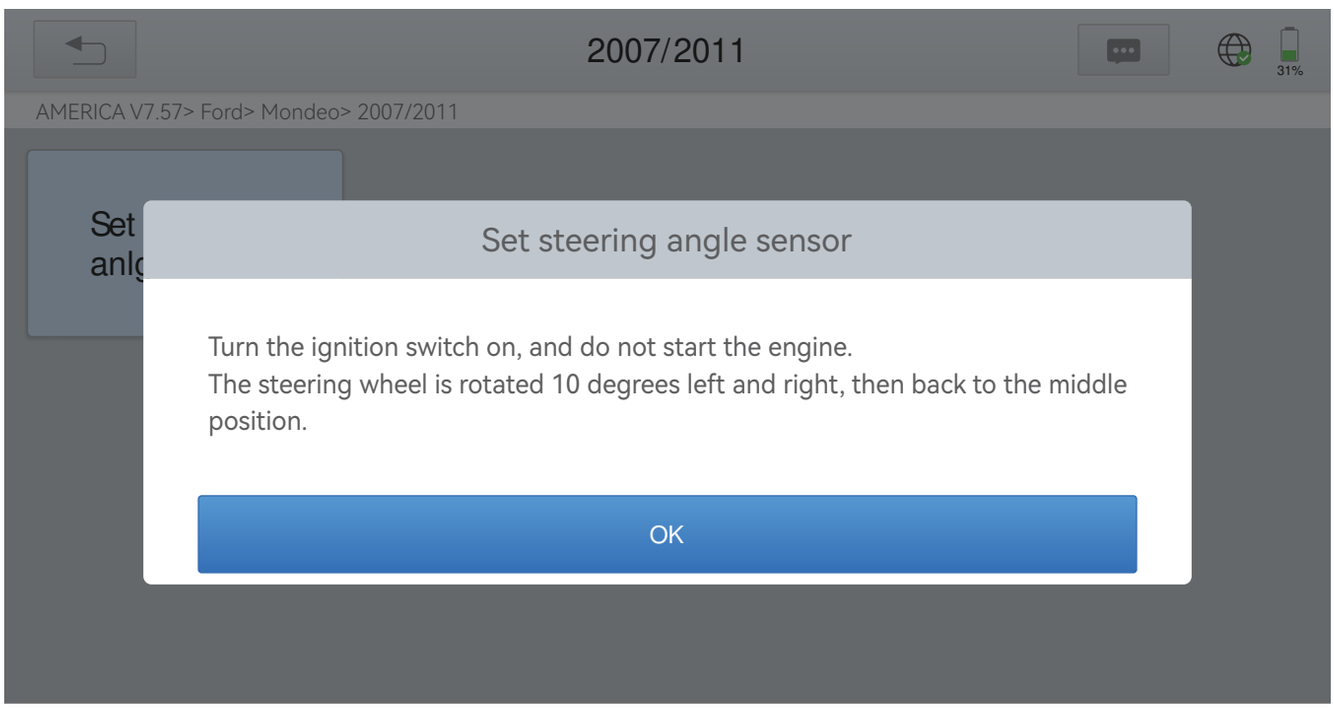
Step 2. Enter the Set steering angle sensor menu and follow the instructions displayed.



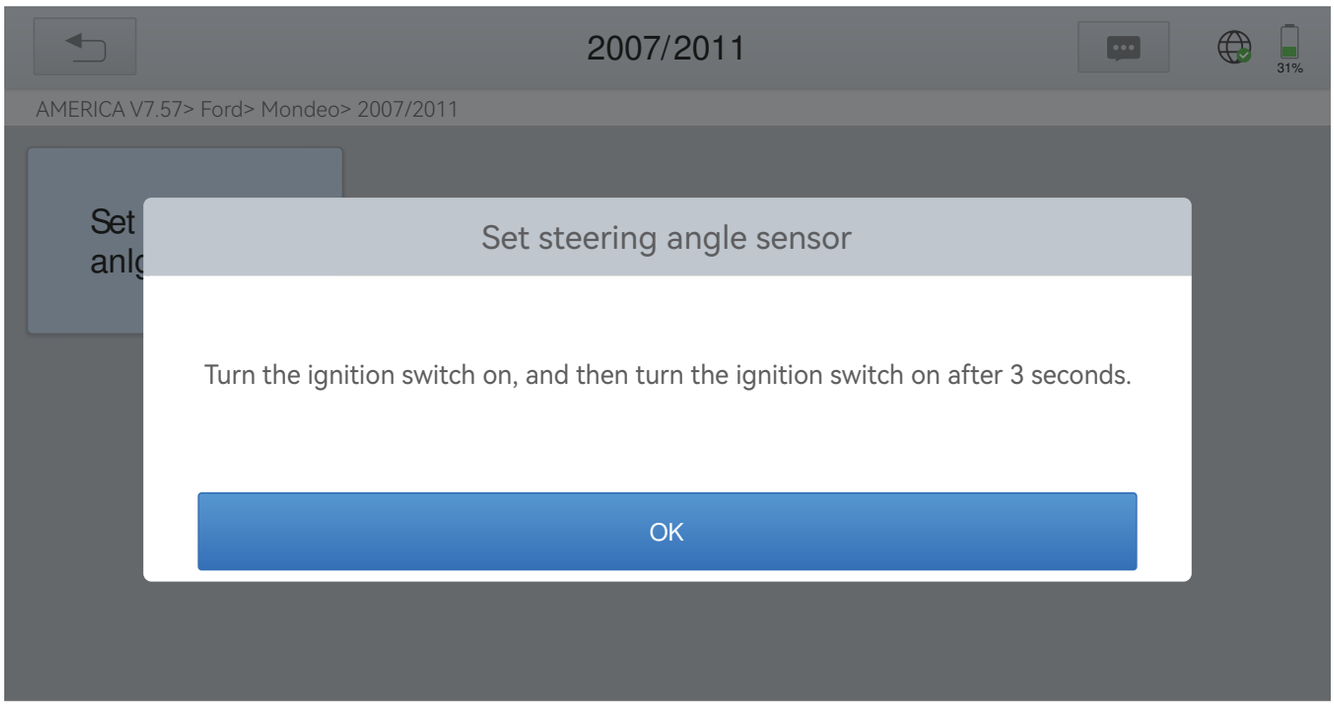
Step 3. Wait until the following instruction is displayed and press Yes after completing the instructions shown.




Step 4. Follow the instructions displayed and press OK after completing the instructions shown.



Step 5. Wait until the following instruction is displayed and press OK after completing the instructions shown.




Message of "Function execution is completed" displayed when SAS reset function has been successfully completed.

## 6.4 BMS Reset

The Battery Management System (BMS) allows the Diagnostic Tool to evaluate the battery charge state, monitor the close-circuit current, register the battery replacement and activate the rest state of the vehicle.

This function enables you to perform a resetting operation on the monitoring unit of the vehicle battery, in which the original low battery fault information will be cleared and battery matching will be performed.

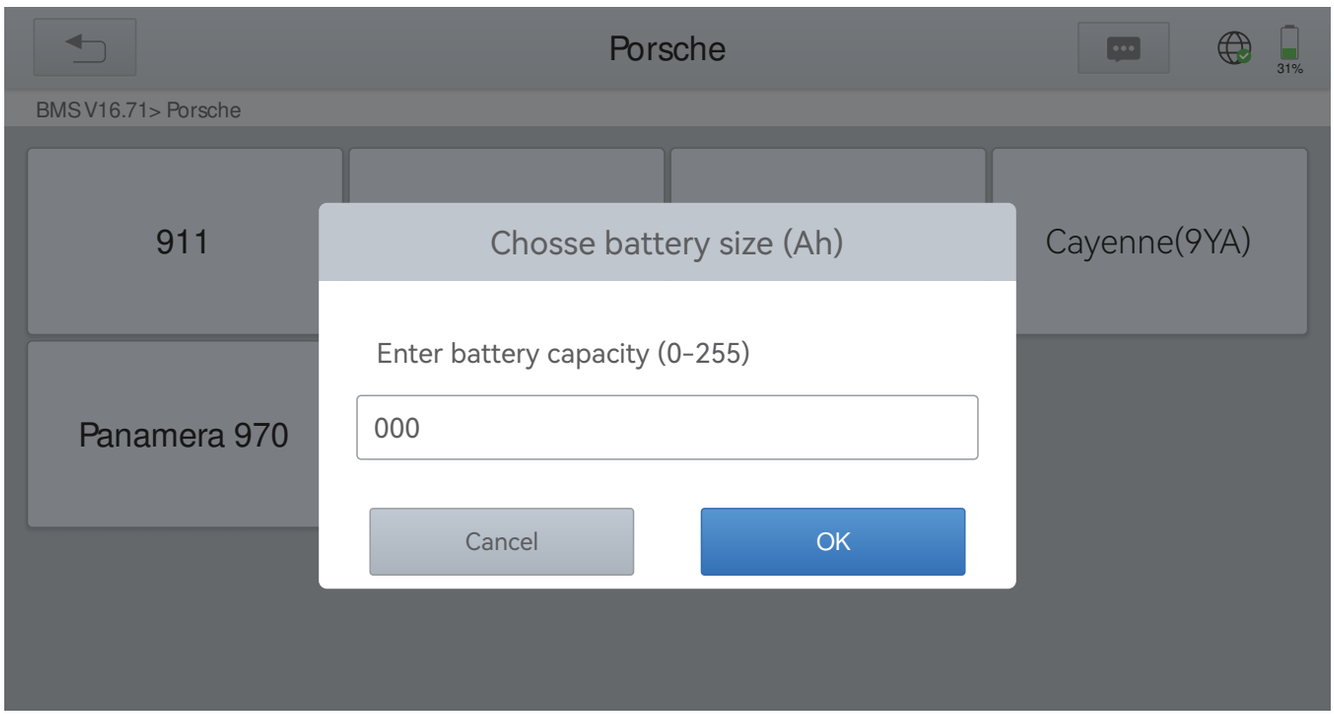
Battery matching must be performed in the following cases:

- The main battery is replaced. Battery matching must be performed to clear original low battery information and prevent the related control module from detecting false information. If the related control module detects false information, it will invalidate some electric auxiliary functions, such as automatic start & stop function, sunroof without one-key trigger function or power window without automatic function.

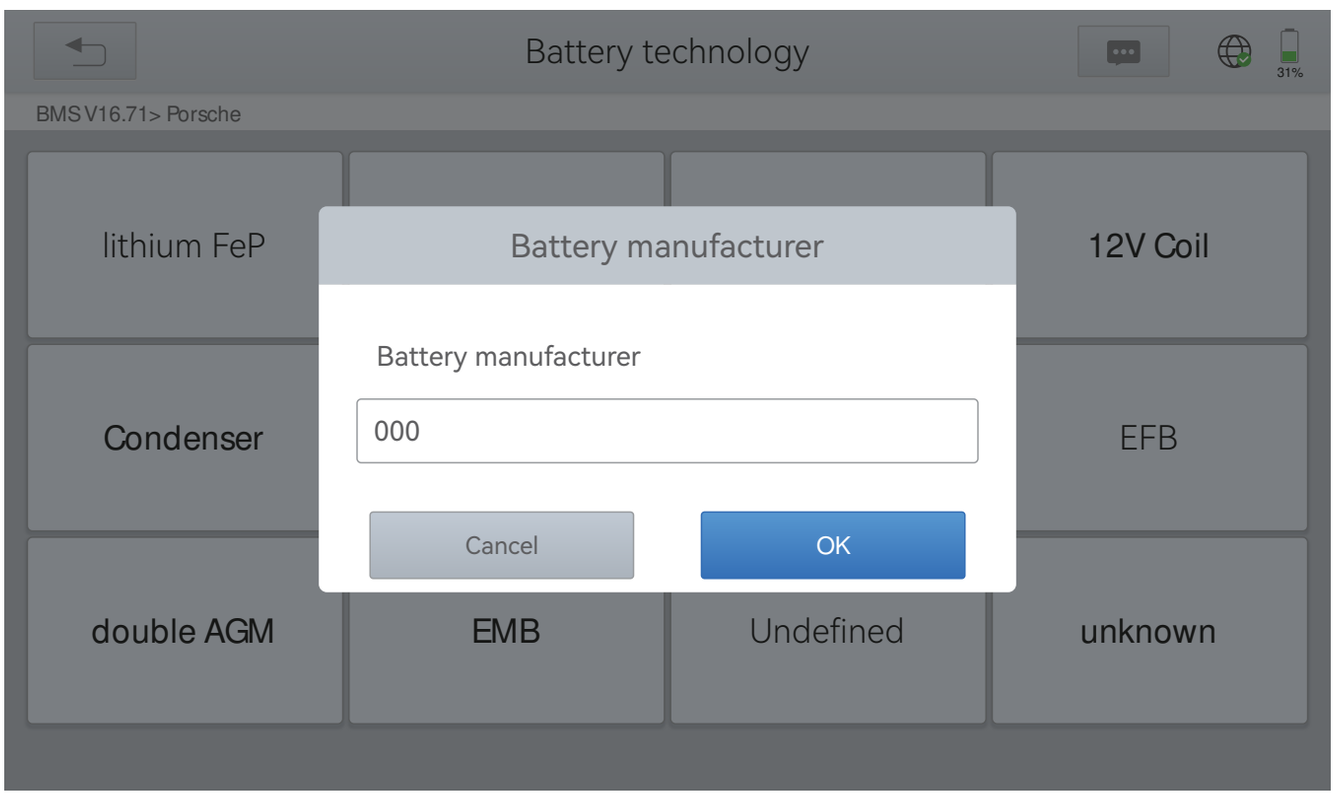
- Battery matching is performed to re-match the control module and motoring sensor to detect battery power usage more accurately, which can avoid an error message displayed on the instrument cluster

The operation guidelines of the BMS Reset function are shown as below:

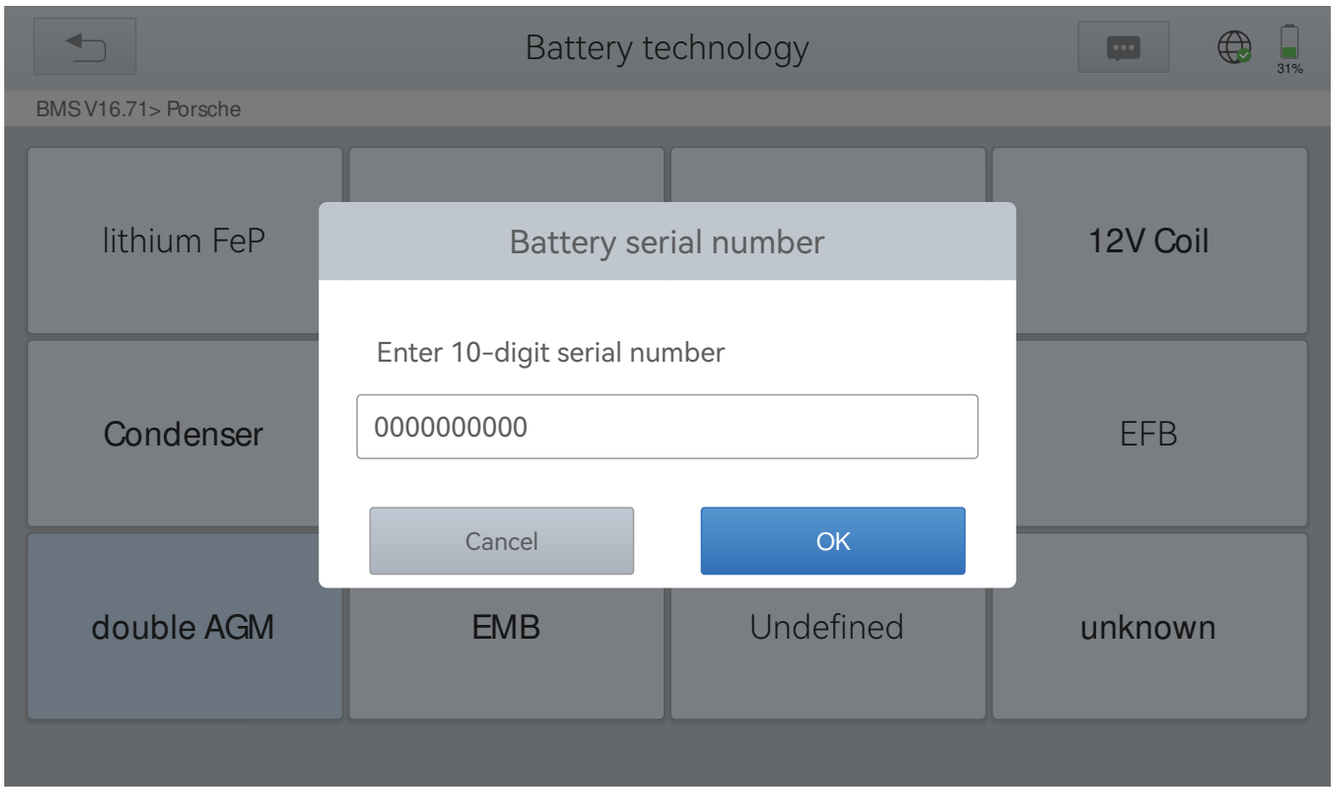
1. Enter the BMS Reset menu and choose relevant models according to the vehicle being tested.
2. Turn on the ignition switch.
3. Press OK to continue the BMS function.
4. Enter battery capacity (within the given range) and press OK after the input.




5. Enter the battery manufacturer and press OK after the input.



6. Enter the 10-digit battery serial number and press OK after the input.




## 6.5 Injector Coding

This function can write the identification code of the fuel injector into the ECU so that the ECU can recognize the new injector.

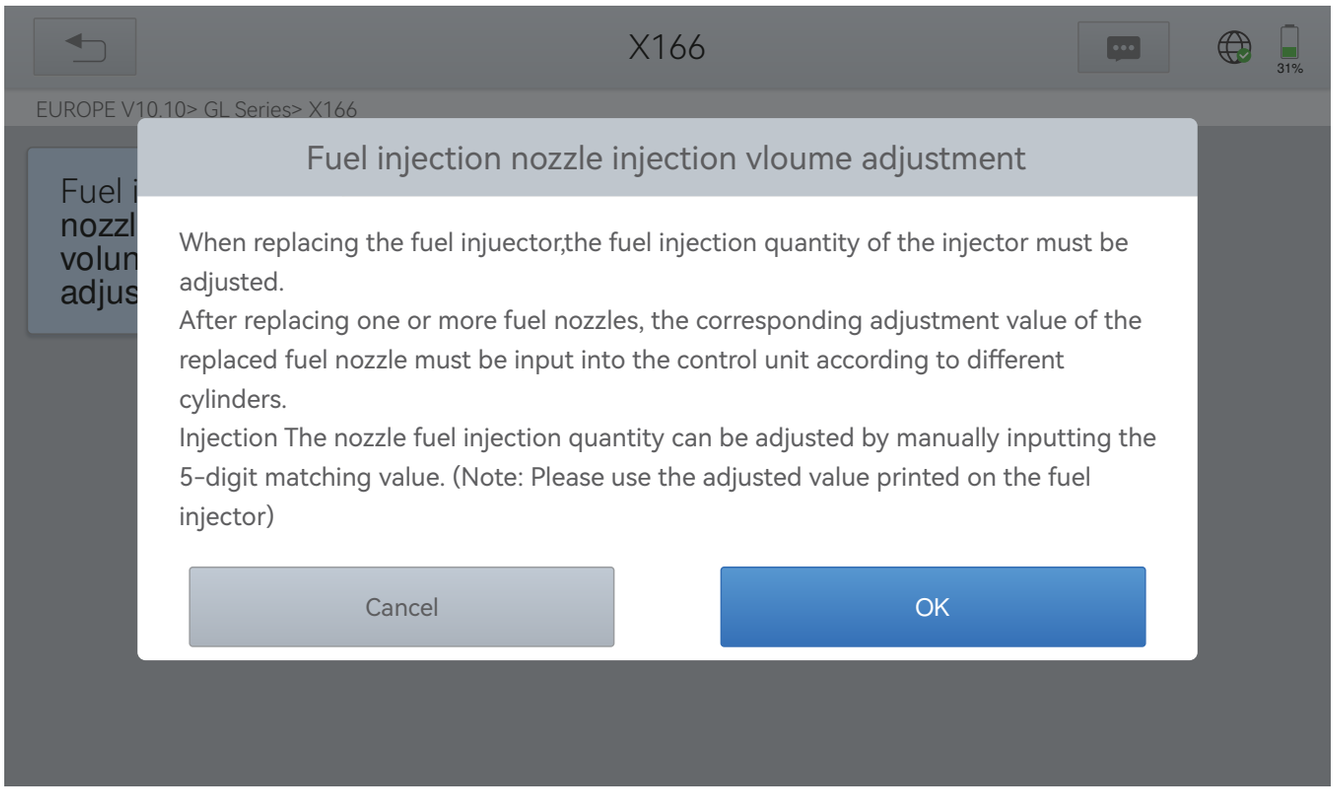
After the ECU or injector is replaced, the injector code of each cylinder must be confirmed or re-coded so that the cylinder can better identify injectors to accurately control fuel injection.

In general cases, there is no need to perform the coding matching function after cleaning;

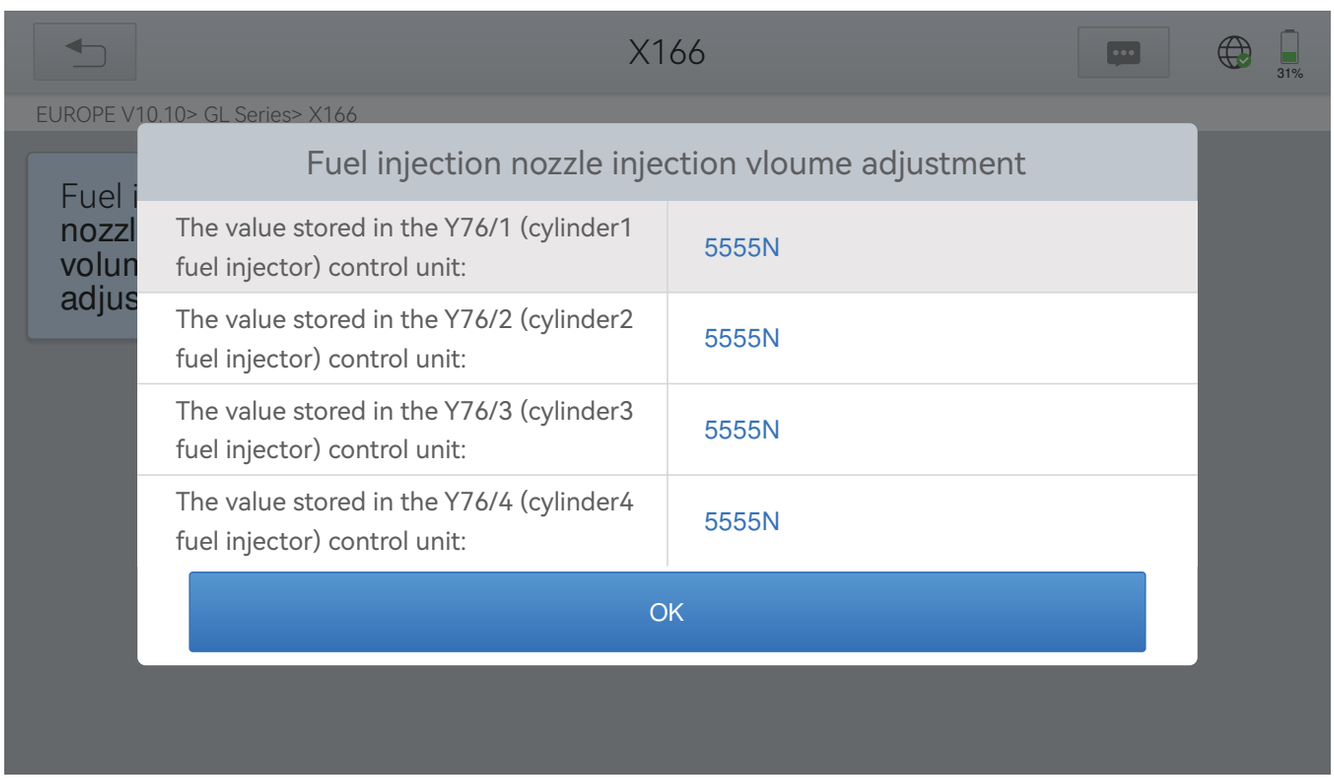
The identification of the fuel injector includes its working accuracy value and type value. When replacing an injector you need to find the corresponding model for replacement; At present, mainstream cars support injector coding functions

The operation guidelines of the Injector Coding function are shown as below:

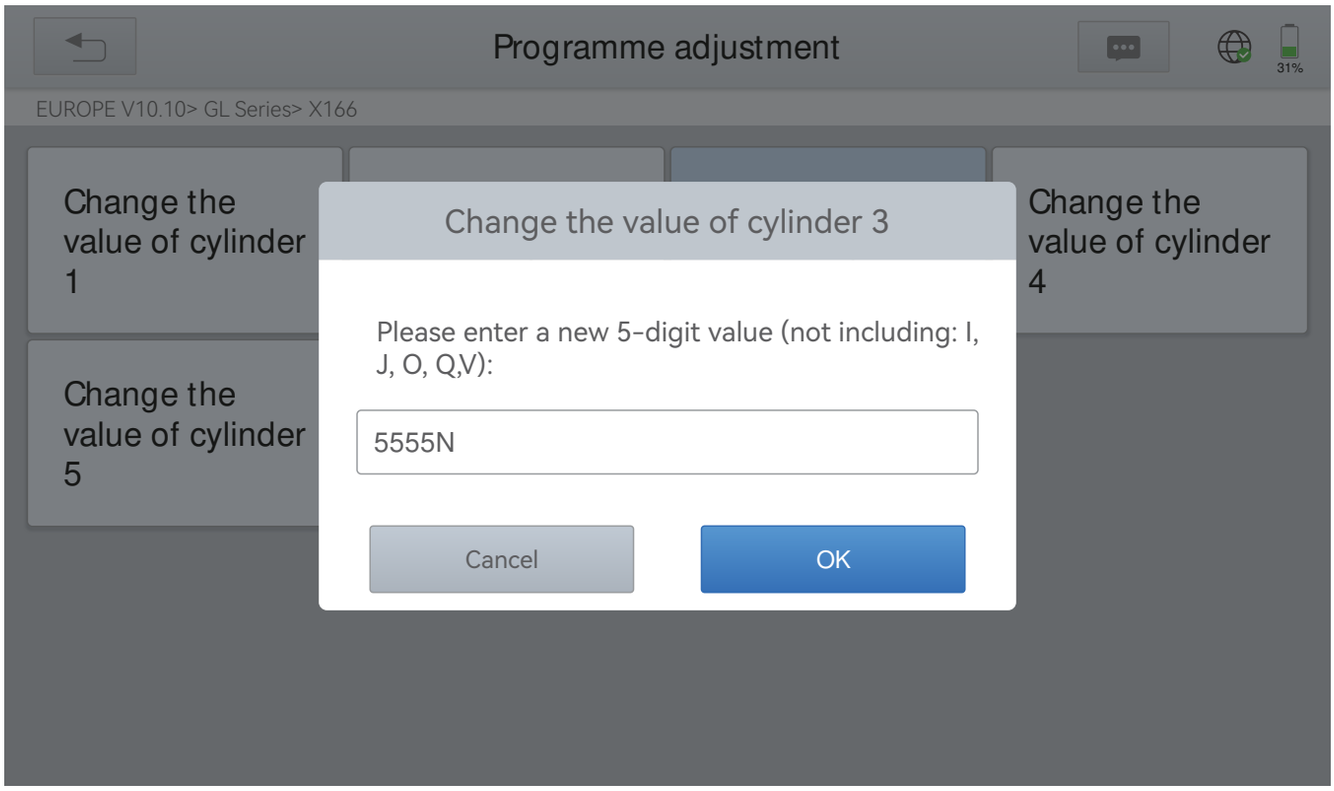
1. Enter the Injector coding menu and choose relevant chassis models according to the vehicle being tested.
2. Enter the Fuel injection nozzle injection volume adjustment menu.
3. Read the note displayed carefully and press OK after the reading.




4. Read and confirm the value stored in the cylinders.

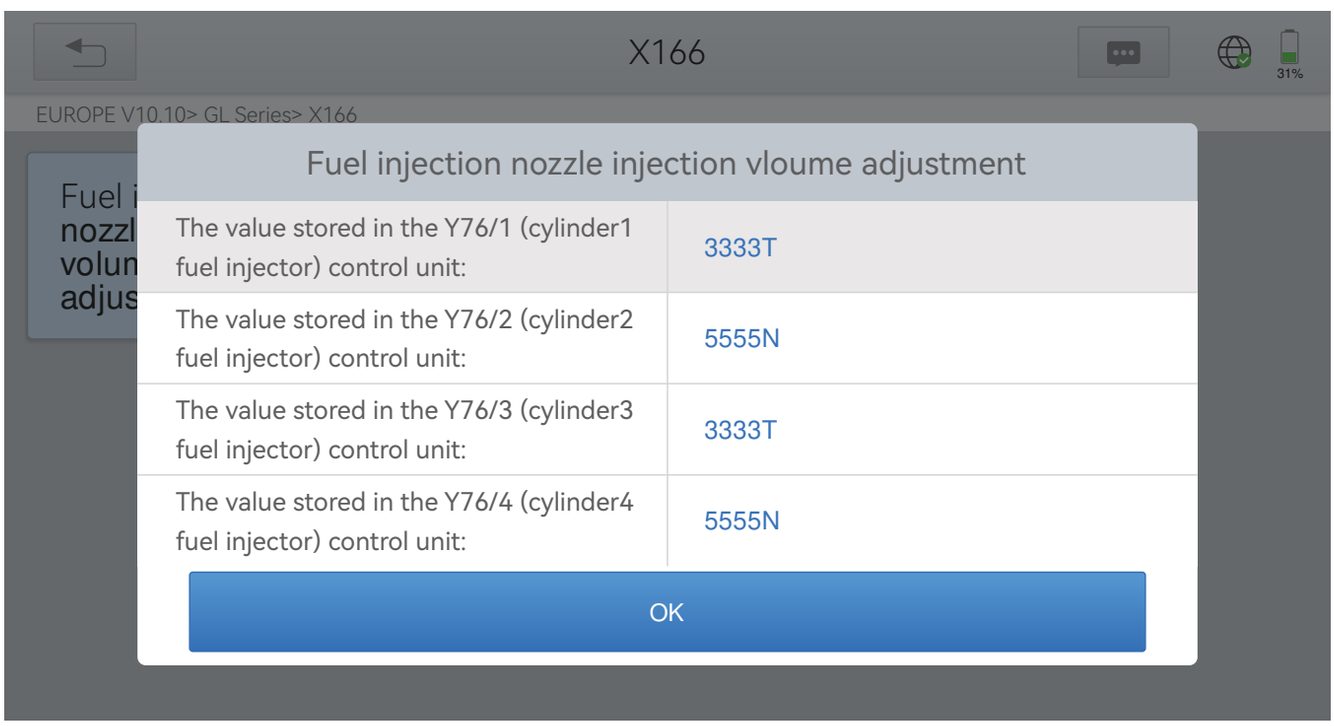


5. Enter the Change the value of cylinder menu of the replaced injector(s), enter the new 5-digit value, and then press OK.




Wait until the message “Write successfully” pops up.

6. Turn off the ignition switch.
7. Wait until the message asks you to turn on the ignition switch.
8. Re-enter the Fuel injection nozzle injection volume adjustment menu to check whether the new value(s) are shown.



## 6.6 TPMS Reset

This function allows to perform the learning and matching and resetting functions of the tire pressure sensor.

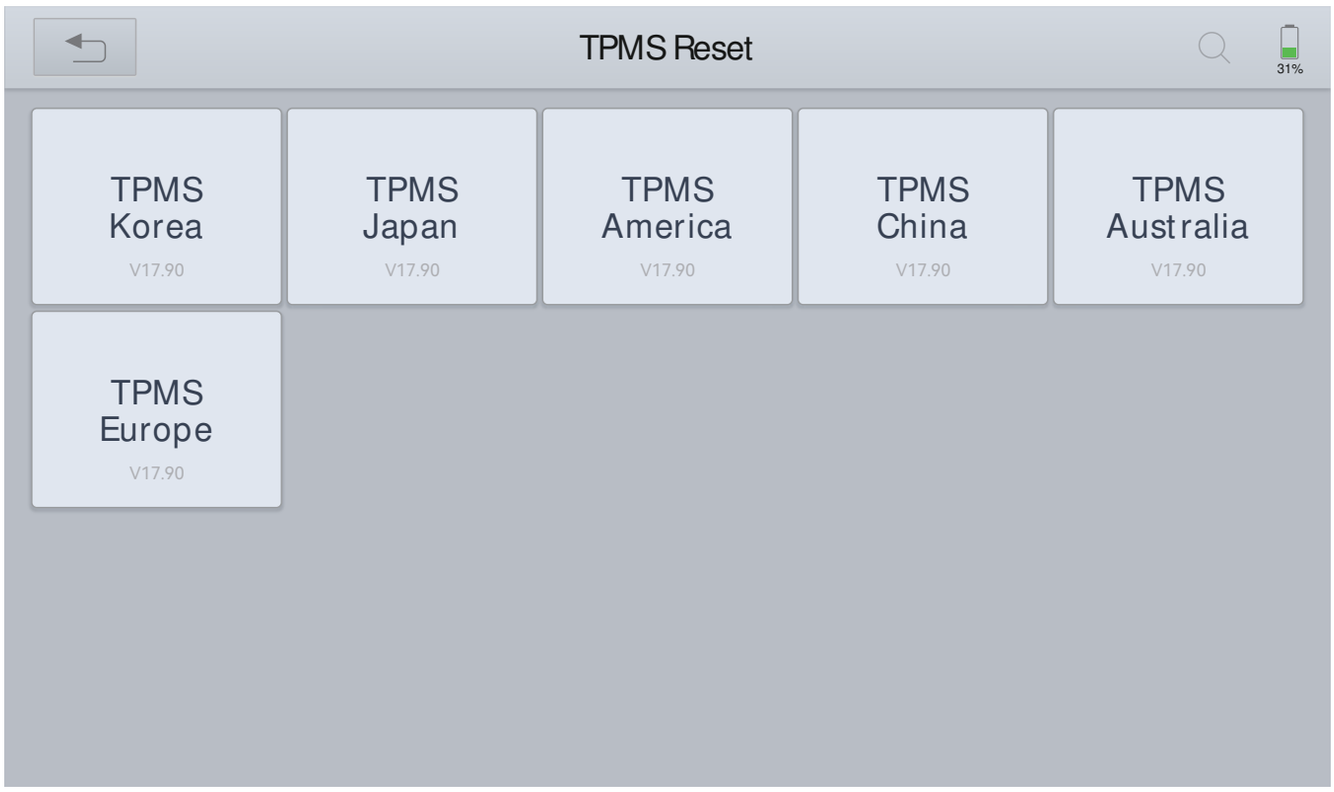
TPMS Reset may be performed in the following cases:

- Tire replacement
- After troubleshooting tire pressure related problems
- Other causes of loss of signal from the tire pressure sensor

The operation guidelines of this function are shown as below:

1. For tire pressure sensor matching, some vehicle models may need the TPMS activation tool;
2. After learning process, you may need to run the car for some while before the fault light goes off;
3. Tire pressure imbalance may also cause the tire pressure light;
4. This function is only available for activated tire pressure sensors. If you have a brand-new sensor, please use the professional tire pressure device.

Even for the same model, its tire pressure system may differ by the region where it is manufactured. Therefore, under the TPMS Reset function, we provide 6 menus for the major automotive manufacturing regions, including Korea, Japan, USA, China, Australia and Europe, as shown below.



And then please enter the sub-menu by the origin region of car make and select the vehicle model you need




TPMS reset can be further divided into 4 methods, such as Automatic Relearn, Static Relearn, Copy ID and OBD Relearn, which is depending on the specific model. Also, even if the relearning methods are the same, the learning procedure may differ.

- Automatic Relearn
  1. Install tire pressure sensor appropriately
  2. Adjust all TPMS sensors to the standard value
  3. Keep the vehicle at a complete standstill status for more than 20 minutes (with the engine off and power off)
  4. Drive at 30-100km/h for more than 15 minutes
  5. The vehicle will automatically relearn the value, after that, the tire pressure warning will disappear
  6. If the relearn procedure fails, please repeat steps 2-5

- Static Relearn
  1. Install all tire pressure sensors appropriately
  2. Pull up the parking brake
  3. Turn the ignition to ON/RUN with the engine off
  4. Enter the tire pressure learning mode through the instrument panel on vehicle. There will be the corresponding prompt, which are differ from different car make and model, please subject to the vehicle manual or consult a professional)
  5. Starting from the left front wheel (some models flash the turn signal at the corresponding position), use the TPMS Activation Tool to activate the sensor, and the vehicle will sound the horn or flash the turn signal at the corresponding position after successful activation.

---

Note:

The first sensor should be learned within 2 minutes, otherwise please repeat step 4

---

  6. After the left front wheel sensor is successfully relearned. For the remaining, please activate the remaining tire pressure sensors in the order of right front, right rear and left rear. The prompt and activation success status are the same as step 5

---

Note:

The remaining sensor learning needs to be completed within 3 minutes, otherwise please repeat the relearn procedure from step 4!

---

- OBD Relearn

1. A TPMS Activation Tool is needed
2. Install tire pressure sensor appropriately
3. Adjust all TPMS sensors to the standard value
4. Activate all sensors in the order of left front, right front, right rear, left rear
5. Connect TPMS Activation Tool to the OBD port of vehicle and perform the OBD relearn function to write the sensor ID
6. Connect TPMS Activation Tool to the OBD port of vehicle and perform the OBD relearn function to write the sensor ID
7. Keep the vehicle powered off for more than 25 minutes
8. Drive at 30- 100km/h for more than 15 minutes. If relearn successful, the tire pressure warning light will go off. Otherwise, please repeat steps 4-7.

- Copy ID Relearn

Note: This learning method of the vehicle can only copy ID to the new sensor through the following three methods to replace the original sensor, if the new sensor cannot change its own ID, then the sensor can only be replaced by the OEM equipment!

Method 1:

1. Use a TPMS Activation Tool to activate the original sensor, copy the sensor ID to the tire pressure activation device
2. And then program the copied ID into the new sensor through the TPMS Activation Tool (The binary of ID format should be the same as the original sensor)
3. Remove the original sensor that has been just copied the ID, install the new sensor that has just been programmed, and put the tire back on

Method 2:

1. Use the TPMS Activation Tool to connect the vehicle OBD port, enter the tire pressure system, copy the ID of the sensor to be replaced
2. And then program the copied ID into the new sensor through the TPMS Activation Tool (The binary of ID format should be the same as the original sensor)
3. Remove the original sensor that has been just copied the ID, install the new sensor that has just been programmed, and put the tire back on

Method 3:

1. Remove the original sensor
2. Use the TPMS Activation Tool to copy the original sensor ID into the new sensor manually (The binary of ID format should be the same as the original sensor)

3. Install the new sensor to the tire correctly, set the tire pressure to the standard value, and put the tire back on the vehicle

Note:

a) Tire pressure standard is usually displayed in these places:

- Vehicle owner's manual
- Label next to the driver's door (near the B-pillar)
- Drawer next to the driver's seat of the vehicle
- Fuel tank cap

b) This Scan Tool is not a replacement for the TPMS activation tool, and it only provide TPMS Reset/Relearn function but activation of TPMS sensors. If you need a professional TPMS activation tool, please consult your local dealer.

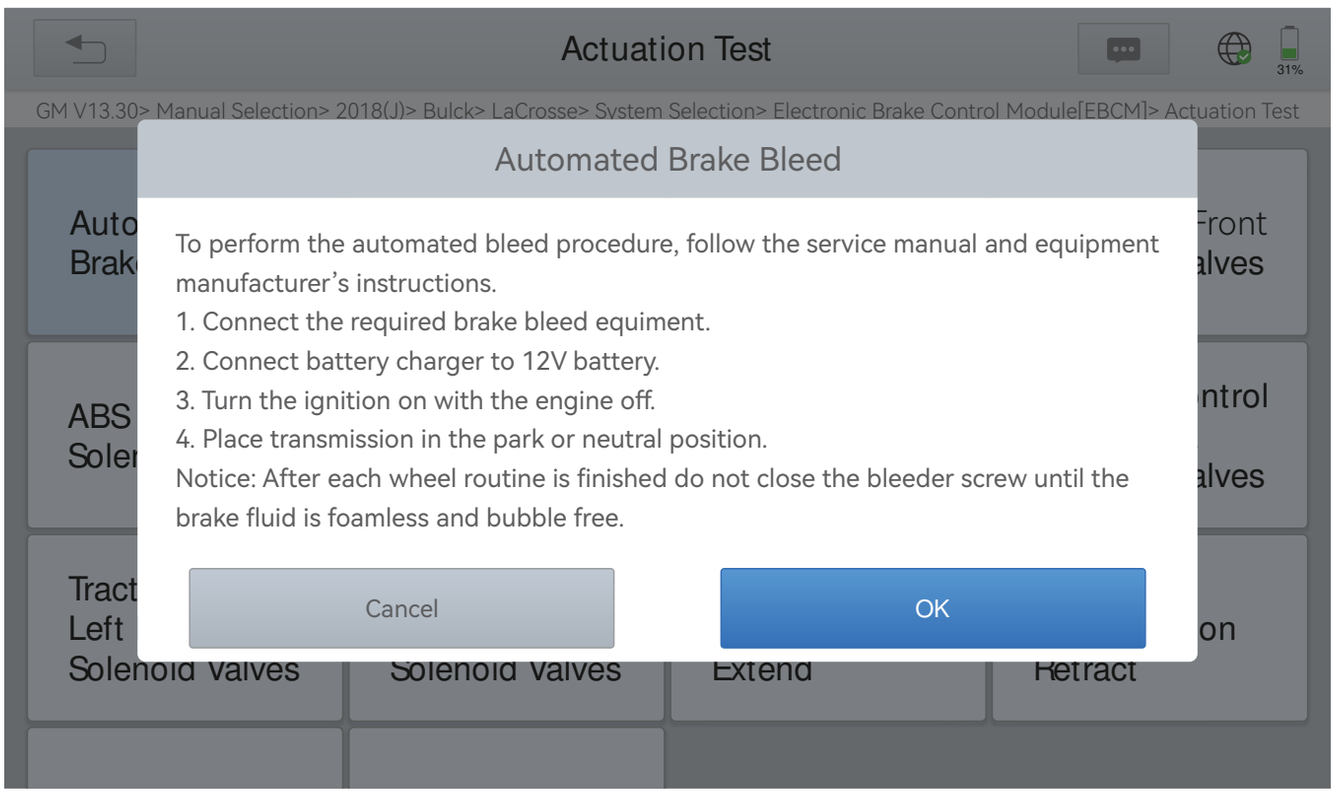
## 6.7 ABS Bleeding

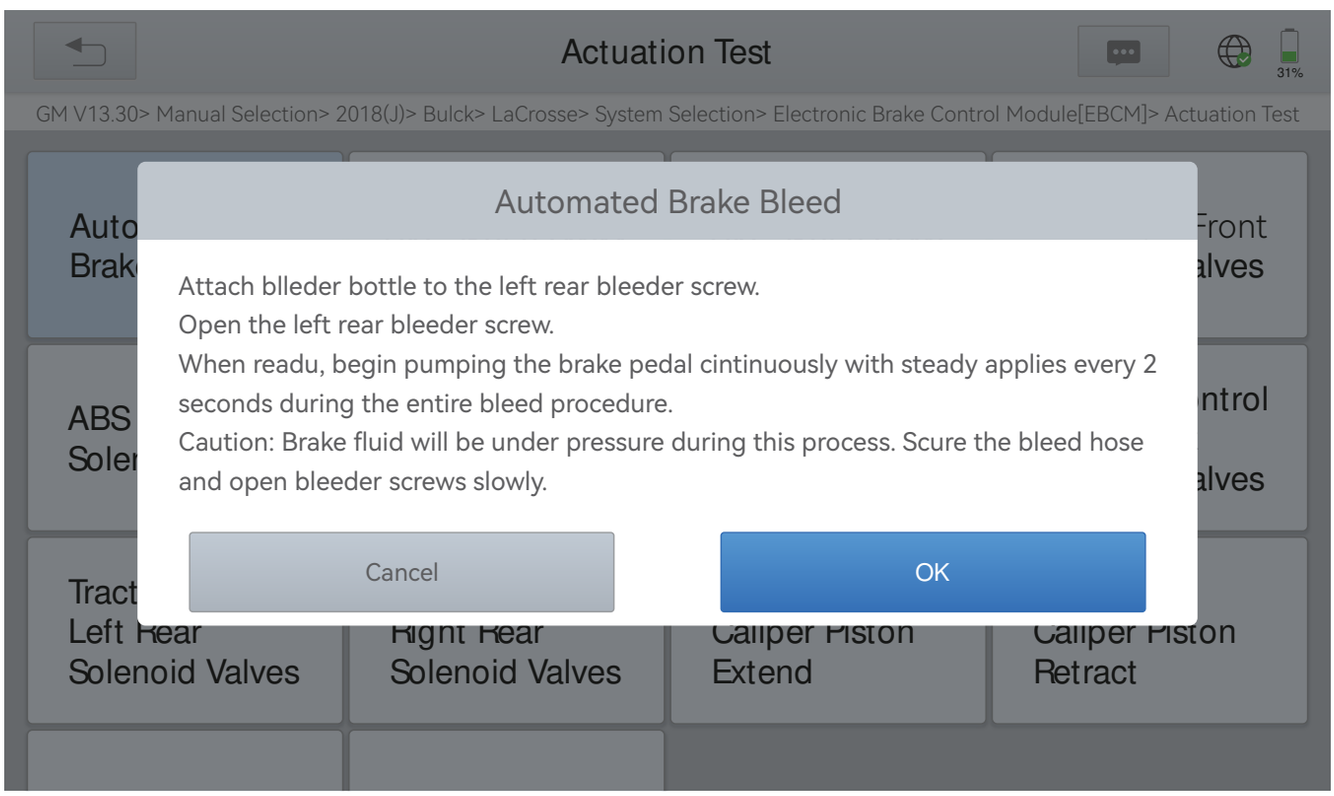
Anti-Lock Braking System keeps the tires from locking up immediately when there are brakes. Keeping ABS in good condition can give full play to the effectiveness of the brakes, shorten the braking time and distance, prevent the vehicle from skidding and tailing during emergency braking, ensure good driving stability and steering maneuverability, and avoid violent friction between the tires and the ground to reduce tire wear. When the ABS contains air, the ABS bleeding function must be performed to bleed the brake system to restore ABS brake sensitivity. ABS Bleeding can be performed in the following cases:

- Replace the rear brake distributor pump or the front brake distributor pump. 2.
- Severe brake fluid shortage
- Change the brake fluid

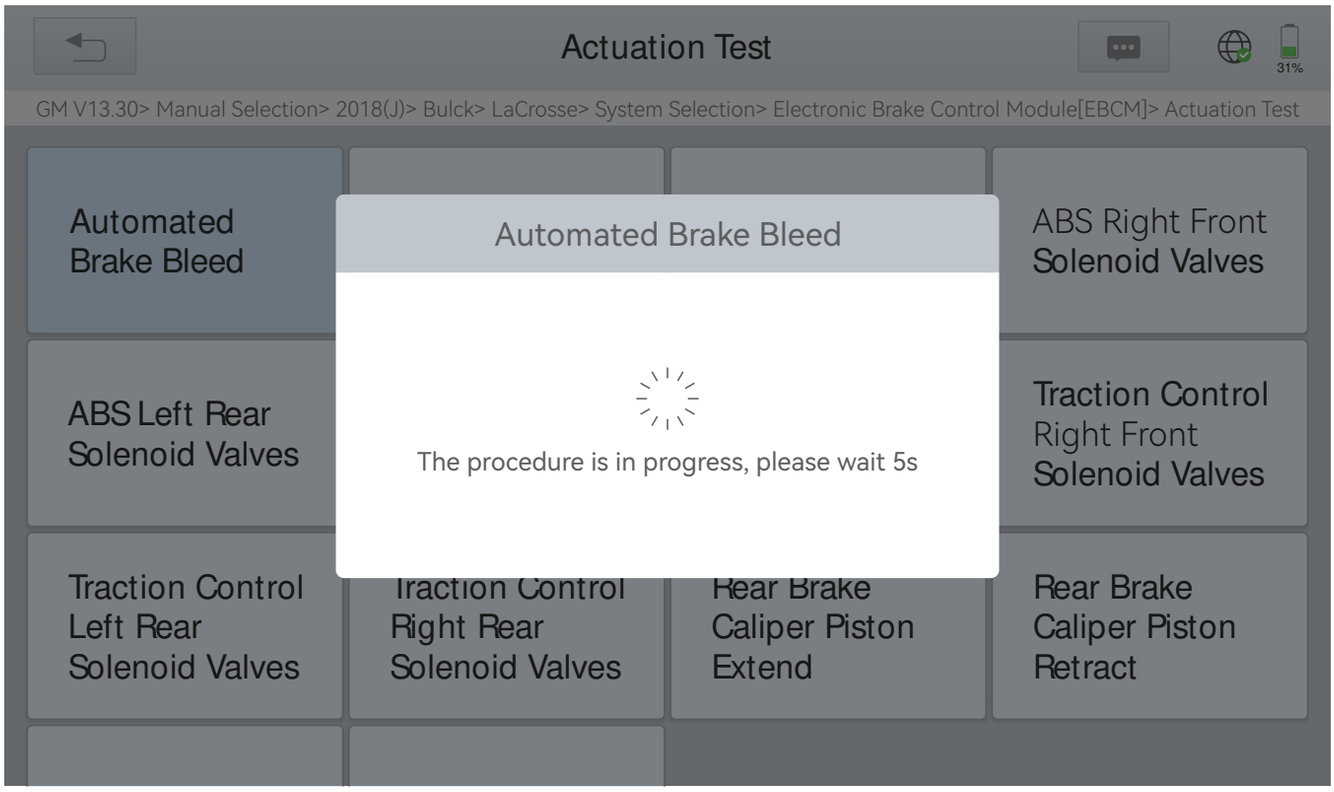
The operation guidelines of the ABS Bleeding function are shown as below:

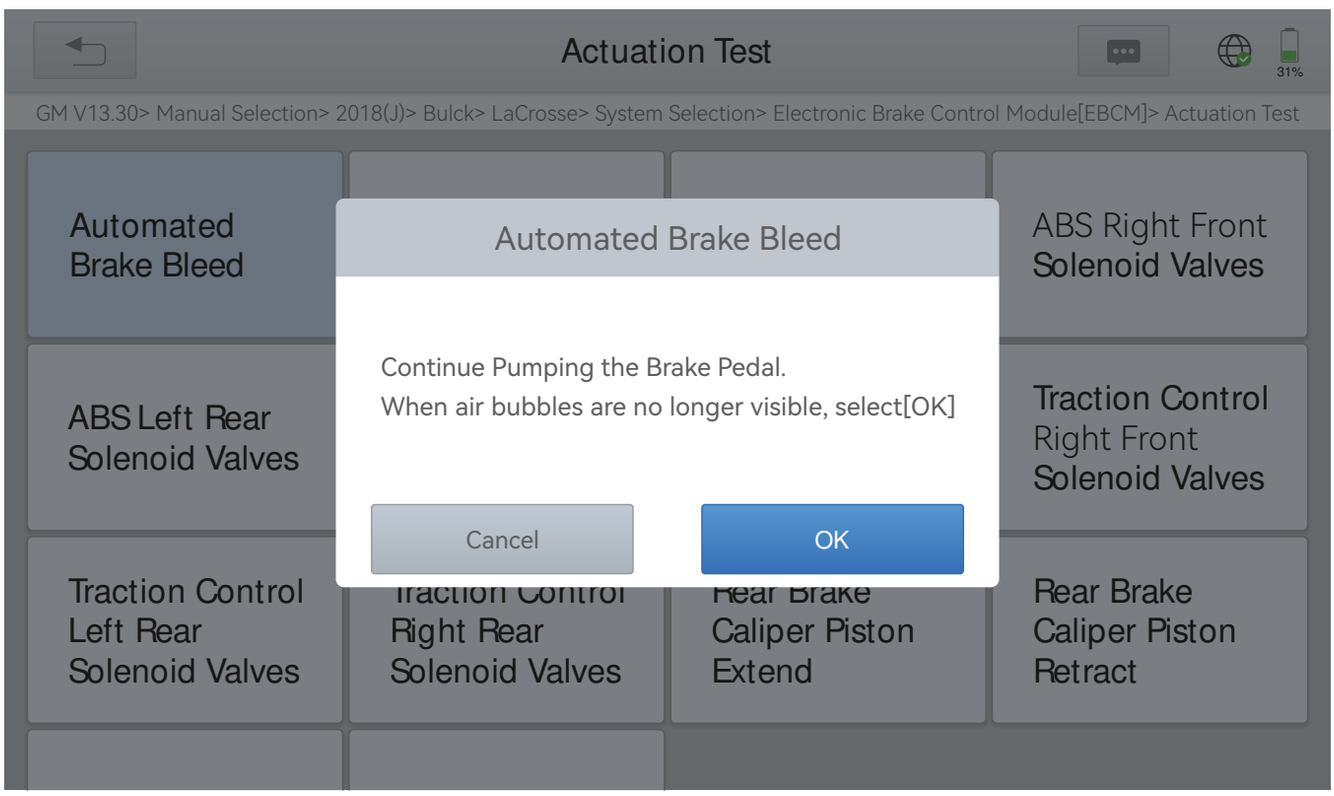
1. Read the operating instructions and precautions that appear on the screen carefully before performing the operation to ensure that the equipment and car are in the correct condition
2. Attach bleeder bottle to the left rear bleeder screw.
3. Open the left rear bleeder screw.



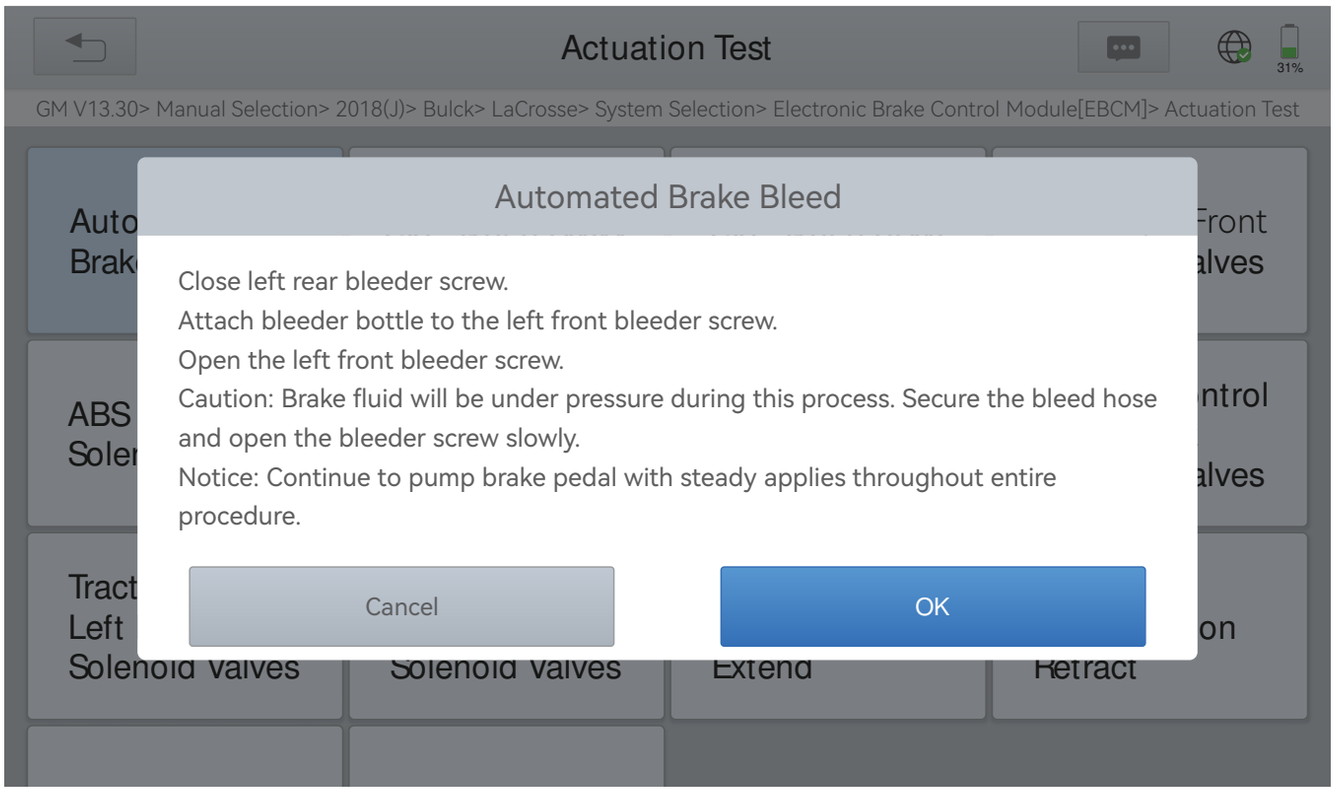



4. When ready, click "OK" to enter the bleed procedure, and pumping the brake pedal continuously with steady applies every 2 seconds during the entire procedure



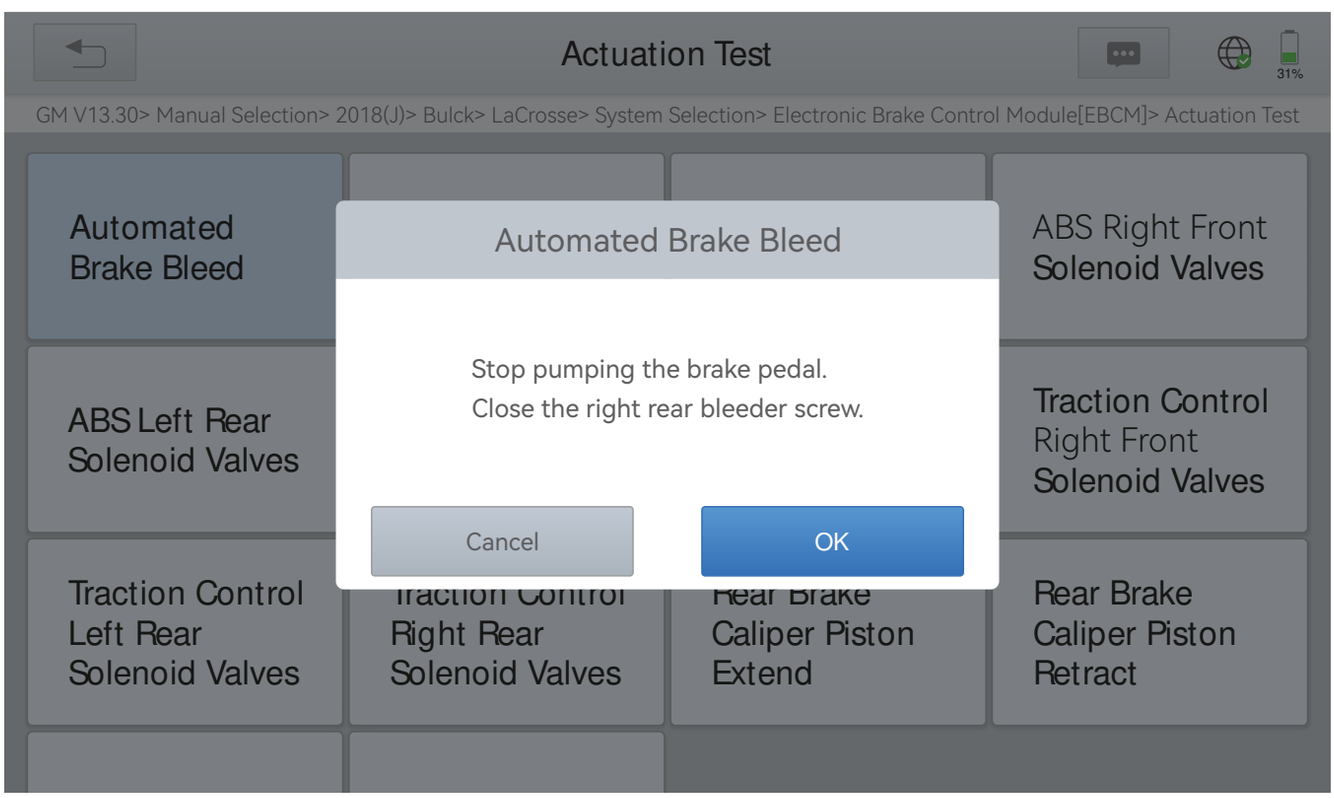




5. Continue pumping the brake pedal, when air bubbles are no longer visible, select OK to enter next bleed procedure for left front wheel

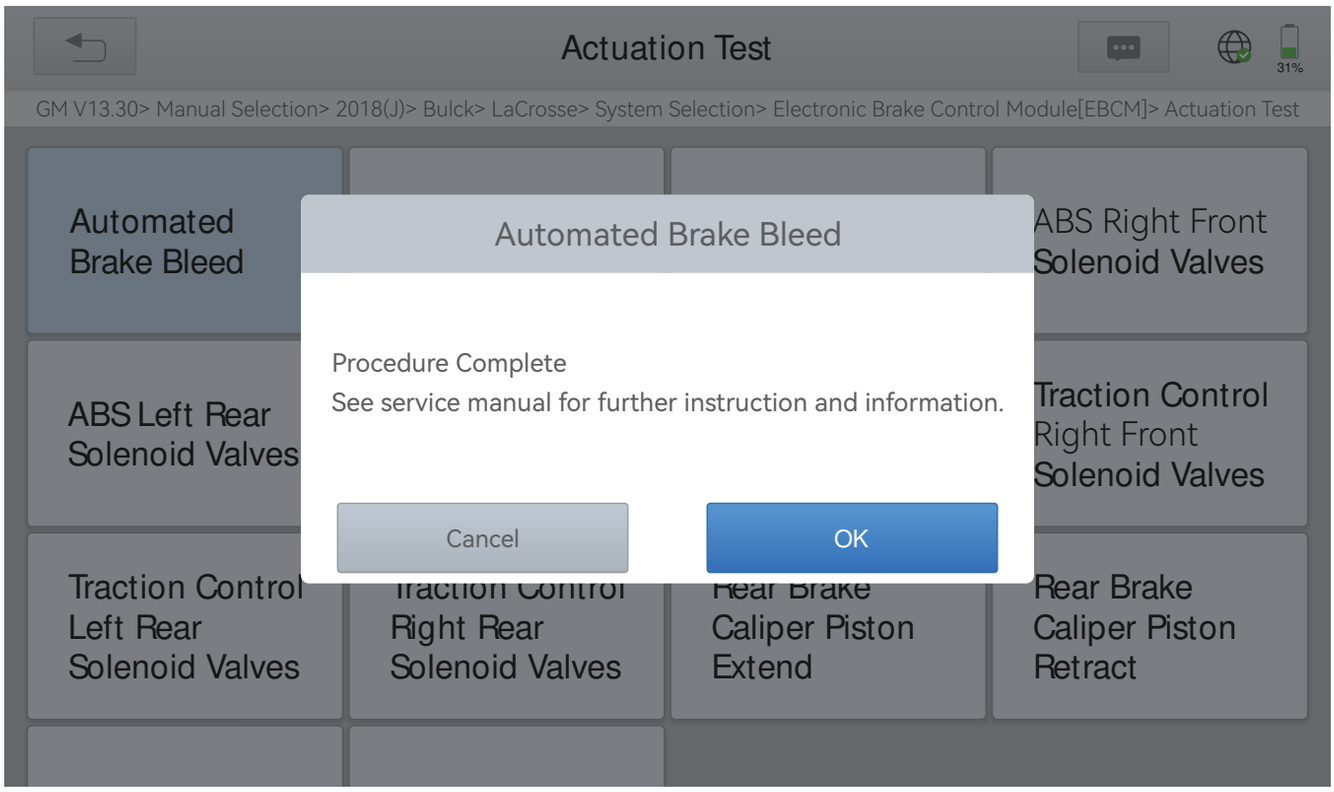



6. 6.Repeat the operation 3 times to complete the bleed procedure for the left front wheel, right front wheel and right rear wheel in turn.

7. Stop pumping the brake pedal, and close the right rear bleeder screw




8. Click OK to complete the entire bleed procedure




Caution

- The ABS pump screw needs to be unscrewed
- Brake fluid will be under pressure during this process. Secure the bleed hose and open bleeder screws slowly
- Some vehicles do not support automatic bleeding, but manually bleeding

## 6.8 Power Balance

This function is to shut down individual injector and monitor the power output drop by RPM to determine the relative power contributed by each cylinder and decide which cylinder malfunctions.

## 6.9 Seat Calibration

Or called Seat Configurations. This function is applied to match or configure the seats with memory function that are replaced and repaired.

## 6.10 EEPROM

This function works together with EEPROM adapter which is not included in this package to read and write data into EEPROM. This function is used in Key Programming or Instrument Cluster function for some vehicle models.

## 6.11 Language Change

This function is to change the system language of the instrument cluster or control console.

## 6.12 Transport Mode

During shipment from the factory, a vehicle is put in a partially activate state called Transport Mode to reduce the drain on the battery. And when it arrives at the dealership, this function is applied to deactivate or disable the Transport Mode.

## 6.13 Control Unit Reset

This function is to reset the ECU software when fault occurs due to abnormal working temperature or voltage change.

## 6.14 Throttle

Also called Throttle Reset or Throttle Match. This function enables you to reset the throttle actuators and the learned values stored on ECU to the default state. Doing so can accurately control the actions of regulating throttle (or idle engine) to adjust the amount of air intake.

## 6.15 Rain/Light Sensor

This function is to reset the rain/light sensor after the replacement of the rain/light sensor or the front windshield.

## 6.16 A/F Reset

This function is to reset or relearn the air/fuel ratio parameters.

## 6.17 HV Battery

This function is used to check the voltage of individual battery pack.

## 6.18 Gearbox Match

This function can complete the self-learning of the gearbox and improve the shift quality, when the gearbox is disassembled or repaired which may cause shifting delay or impact.

## 6.19 Speed Limit

This function is to remove speed limit for imported vehicle, vehicle for government agencies or police.

## 6.20 Crank Sensor Relearn

This function enables you to perform tooth learning for the vehicle, to turn off the MIL.

It needs to be performed in the following cases:

1. After the engine ECU, crankshaft position sensor, or crankshaft flywheel is replaced.
2. The DTC 'tooth not learned' is present.

## 6.21 Clutch Adaption

This function is to reset the clutch after the replacement of clutch or gear shifting motor.

## 6.22 Stop/Start Reset

This function is used to open or close the automatic Start/Stop function via setting the hidden function in ECU (The precondition is vehicle equipped with hidden function and hardware is in place).

## 6.23 FRM Reset

This function is to reset the Footwell Room Module when unstable voltage triggered fault and the doors, windows, headlight malfunctions.

## 6.24 EGR Relearn

Also called EGR Adaption. This function is used to learn the EGR (Exhaust Gas Re- Circulation) valve after it is cleaned or replaced.

## 6.25 A/C Relearn

AC system relearn must be performed when the vehicle AC ECU or actuator is replaced or the ECU memory is lost.

## 6.26 Headlight

Also called Headlight Adjustment, Headlight Matching or AFS Reset. This function can initialize the adaptive headlight system. The headlight system can decide whether to automatically turn on the headlights based on the ambient light intensity, monitor the vehicle's driving speed, body posture, etc., and adjust the headlight lighting angle.

## 6.27 SRS

This function is to reset the acceleration sensor when it's replaced or it's providing wrong data which is used for SRS system, anti- theft system or navigation system.

## 6.28 Windows Initialization

When the vehicle battery is disconnected, the windows may not work right. This function is used to perform door window matching to recover the ECU initial memory, and recover the automatic ascending and descending function of power window.

## 6.29 VGT Relearn

Also called VGT Turbo Calibration. This function is used to calibrate the newly installed component. This needs to be done every time there's an initial installation or swap of the VGT. This is always done when the component has been detected as operating "out of range".

## 6.30 Coolant Bleeding

Also called Electric Water Pump Activation. This function is used to activate the electric water pump after it's replaced.

## 6.31 Suspension

This function can adjust the vehicle body height sensor for level calibration after replacing the vehicle height sensor or control module in the air suspension system, or when the vehicle level is not correct.

## 6.32 Airbag Reset

This function is used to reset the airbag system, airbag warning light when airbag has been replaced and clear crash data.

---

Note:

Clear crash data is available to specific vehicles only.

---

## 6.33 Tire Size Reset

This function is to reset the tire size when it's replaced or upgraded.

## 6.34 Sunroof Initialization

When the vehicle battery is disconnected, the windows may not work right. This function is used to perform sunroof matching to recover the ECU initial memory, and recover the automatic ascending and descending function of power window.t

## 6.35 Camshaft Learning

This function refers to the process of calibrating the engine control unit(ECU) to match the actual camshaft position with the expected position. This is crucial for ensuring proper engine timing, as the camshaft dictates when the valves open and close, which directly affects fuel injection and ignition.

# 7. Settings

This chapter describes the settings diagnostic software or the tablet including language of the tablet, units used in the diagnostic program, USB port mode setting, and etc.

## 7.1 Language

Go to “Settings”- “Language” to change the language of the android tablet into the language you want to use.

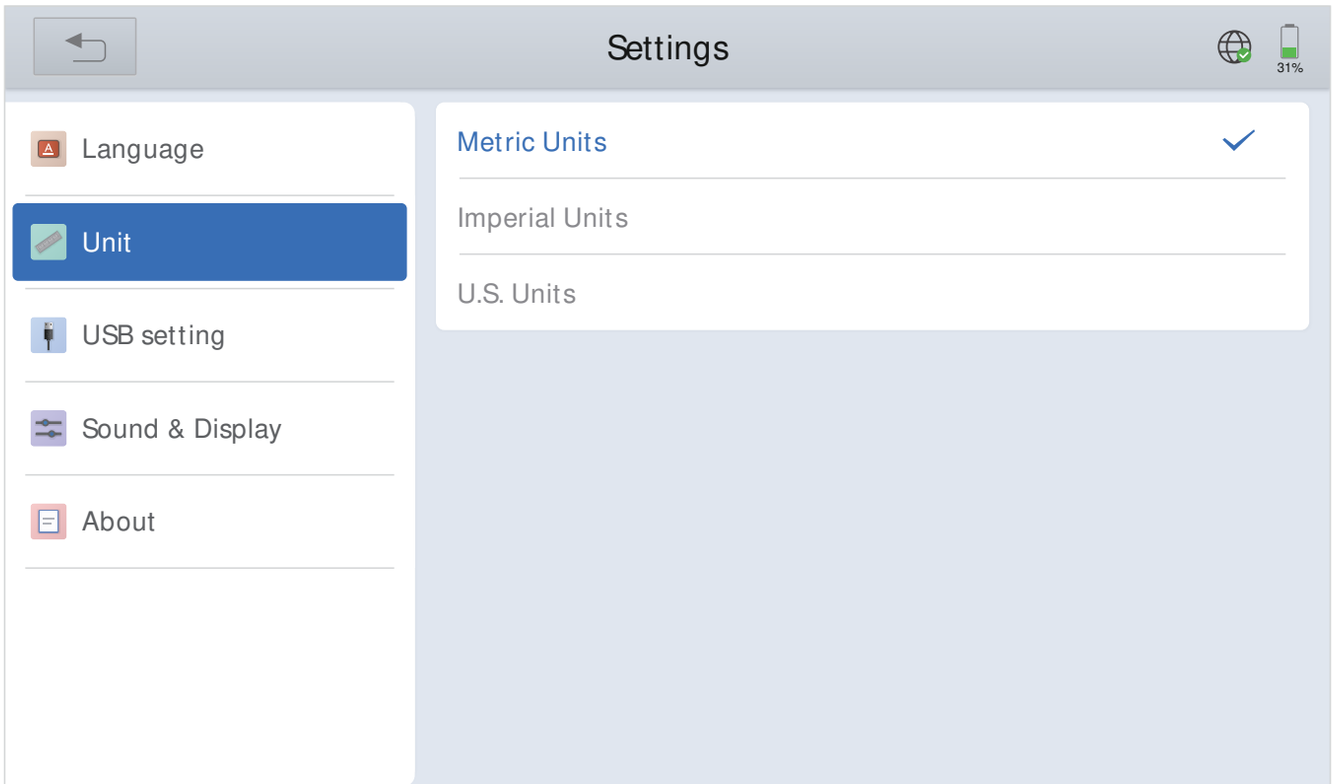



However, to use the diagnostic program in the desired language, please reach support team and provide the S/N of the Diagnostic Tool to authorize the desired language software program. When it’s authorized, you need to download all software programs for the new language and set the language of the android tablet as indicated in the paragraph above.

## 7.2 Unit

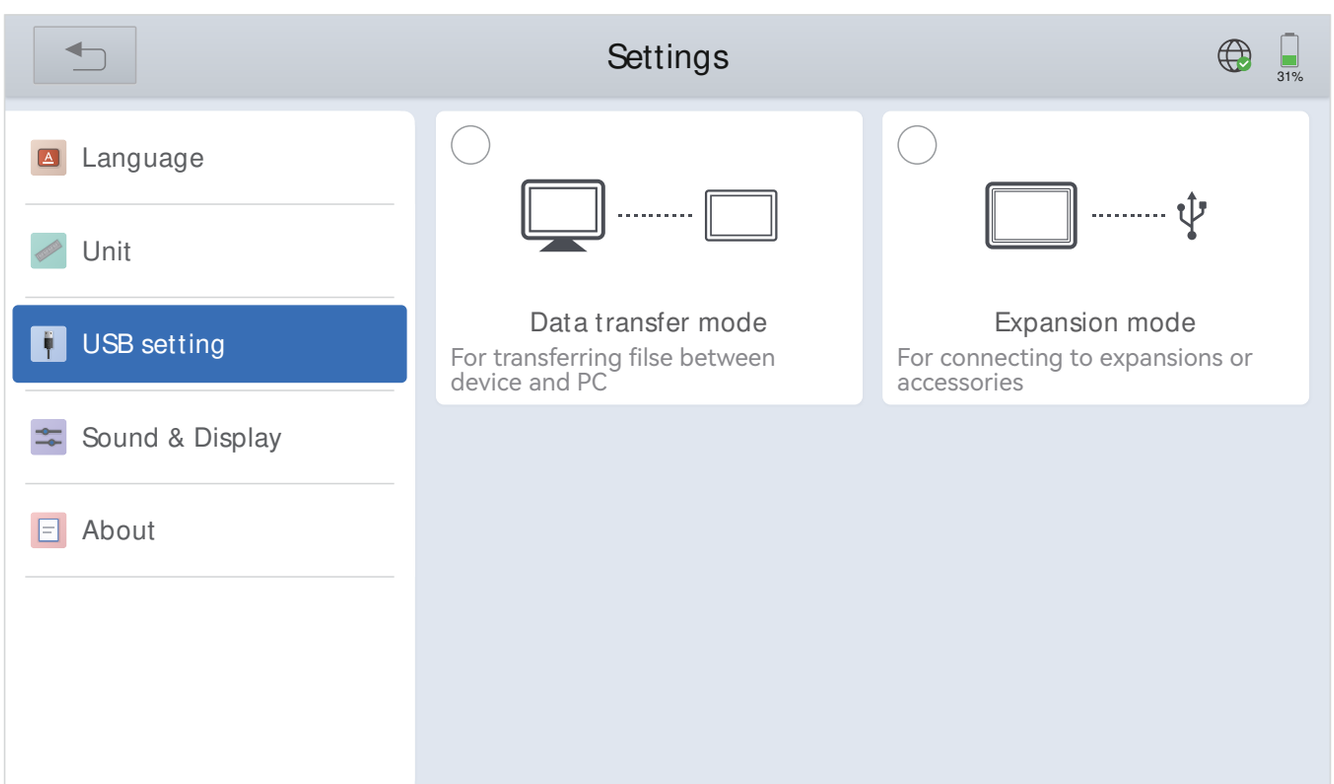
This setting provides 3(three) sets of units to measure various sensor values.

**Metric Units:** Centimeters, kilometers, grams, kilo,℃,litres, pa, kpa
**Imperial Units:** Inch, foot, yard, oz, lb, ℉,PSI, mile, galon
**US Units:** Inch, foot, yard, oz, lb, ℉, PSI, mil, mile




## 7.3 USB Setting

This section enables you to set the USB Type-C mode between “Data Transfer Mode” and “Expansion Mode”.

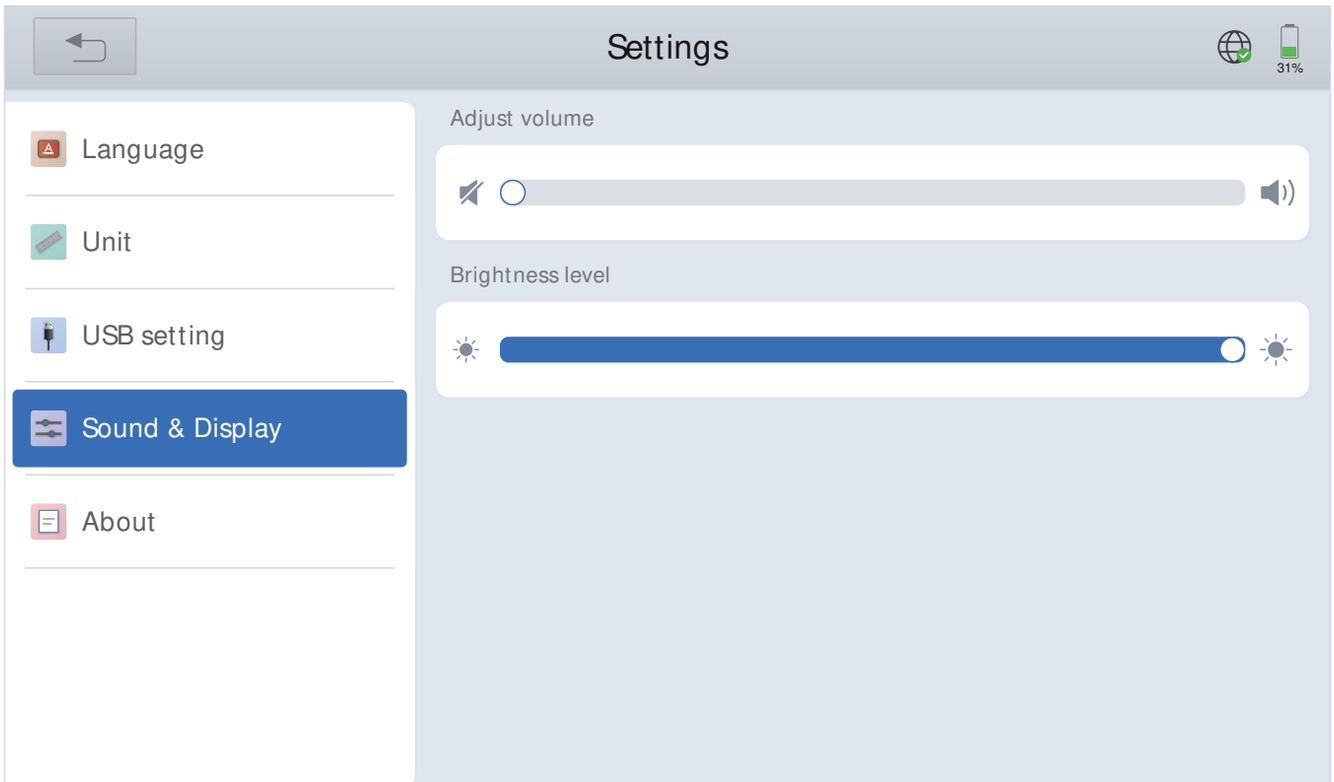



Data Transfer Mode: To transfer data between the android tablet and a PC.

Expansion Mode: To work with extension accessories like EEPROM adapter.

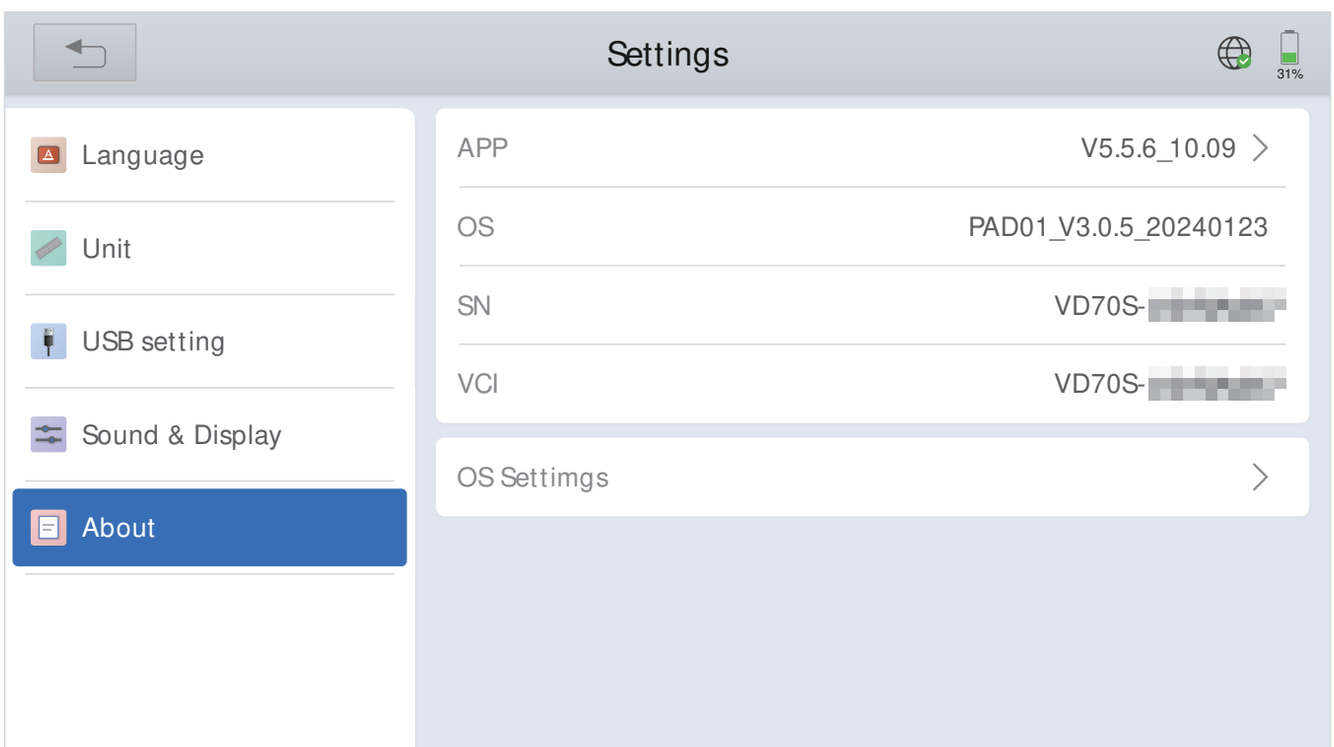
## 7.4 Sound & Display

This section enable you to set the sound level of the built-in speaker and the brightness of the screen.




## 7.5 About

This section describes the app version, OS version, S/N of the Diagnostic Tool, VCI name, and set the O.S.



# 8. Software Updates

This chapter describes how the software subscription works and the basic software update operations.

- The subscription is a yearly fee for all makes and models that it's compatible with, not by individual model or by individual function.
- When the subscription expires, you have the choice to whether renew it or not, whether to renew it now or skip the years that you are not ready to update. If you don't renew the subscription, the old software programs stay on the Diagnostic Tool, just not being able to update to the date.

You can update the software programs while it's connected to a Wi-Fi or mobile phone hotspot. Mobile phone hotspot is recommended as it has less network provider restrictions when home Wi-Fi fails.

If "Network abnormal" prompt pops up on the screen, try another Wi-Fi or check the router settings or seek help from our support team via support@vdiagtool.com.

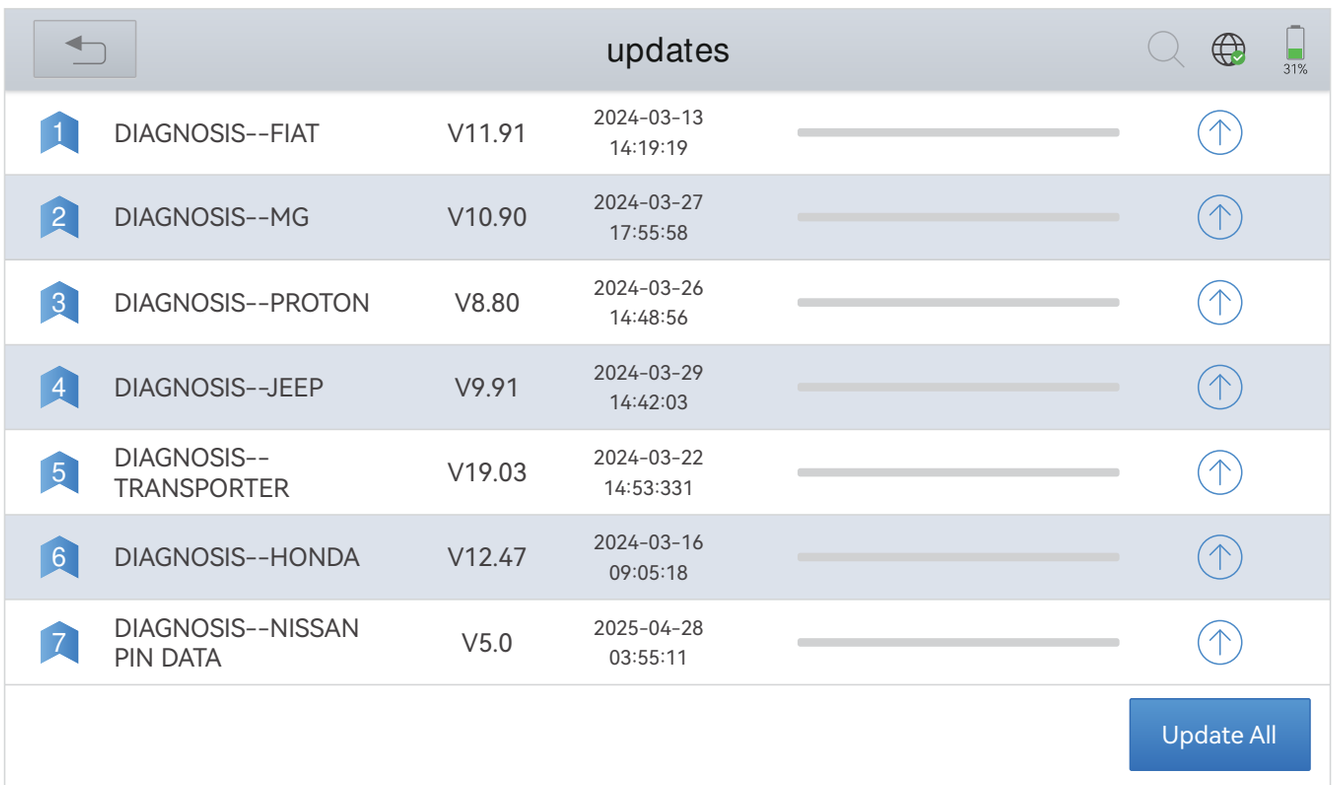
To update the software programs, you have 2(two) options:

Option 1: Update All Software Programs

Update all by clicking "Update All" at the bottom right of the update menu

Option 2: Update Individual Software Program

Update specific software program by clicking the " ↑ " icon at the right side of the corresponding software program. If the update is interrupted, click the " ↑ " icon again to proceed.



Delete Software Program:
When the diagnostic tablet has taken up too much memory and become slow, the solution is to delete the software programs you rarely use to free up some space.

Delete diagnostic software program:
To delete rarely used diagnostic software program, click "Manual Diagnosis"- Select Region- Press and hold the vehicle maker icon that you rarely use to activate the job menu- Click "Delete" to delete the software program.

**Delete key programming program:**
If you want to delete key programming program for a specific vehicle manufacturer, please click Manual Diagnosis- Search the vehicle manufacturer on the search bar- Find the software program icon that has "Key Programming" at the bottom- Press and hold the icon- Click "Delete" to delete it.

---

IMPORTANT:
Do NOT delete the software programs if the subscription is near. It's recommended to download all software programs you deleted before the subscription expires.

---

# 9. More

This chapter describes "More" options on the main diagnostic menu including your user account, workshop information, subscription start and end date, firmware information, endoscope and user manual.

## 9.1 Profile

This section allows you to set the user account, workshop and check subscription information.

- Account Information- Allows you to set the user name, product registration mailbox, reset password and log out the account so that you can log in with another account.
- Workshop- Allows technician or workshop to set the workshop name, address, phone, mailbox and website which will appear in the diagnostic report they share to their customers.
- Subscription- Displays the S/N of the Diagnostic Tool, the subscription start date and expiration date so that you can make necessary preparations before it expires like to update all software programs to the latest.

## 9.2 User Manual

We plan to update and improve the user manual frequently to better serve our customers. Physical copies of user manual tend to be out-of-date in a short time of period. Plus the

User Manual in PDF file version adds the option to search the specific information from the substantial content of this manual. Hence, we decide to add this section to update the User Manual from time to time.

---

## Note:

We update and upload the latest User Manual to our website more frequently than we update the App of the Diagnostic Tool. Please refer to our website www.vdiagtool.com for the latest possible version of User Manual.

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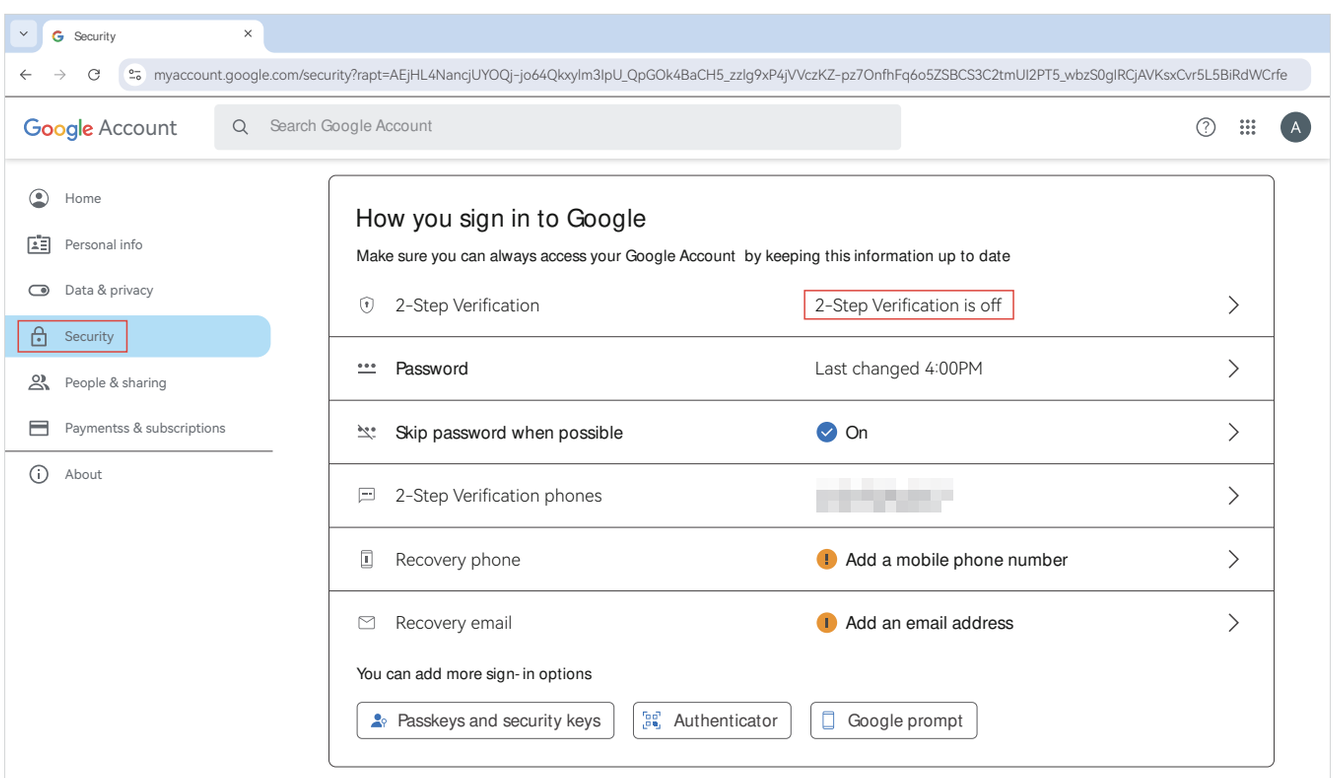
### 9.3 Vehicle Coverage

This functions allow you check the compatibility between your vehicle and the Diagnostic Tool. However, this is for reference only. For better compatibility confirm, please provide your device S/N, your vehicle VIN and the desired functions to our tech support team at support@vdiagtool.com.

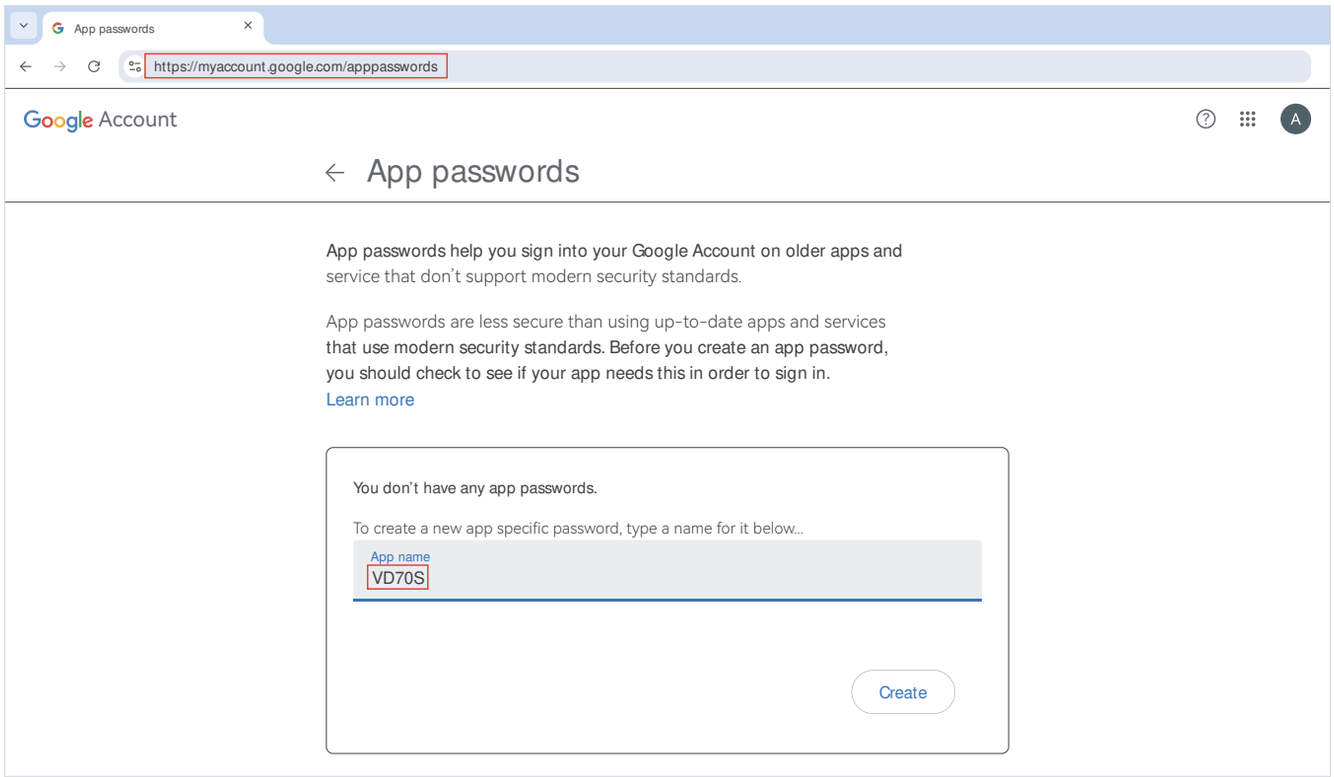
# 10. Other Settings

## 10.1 Email Settings

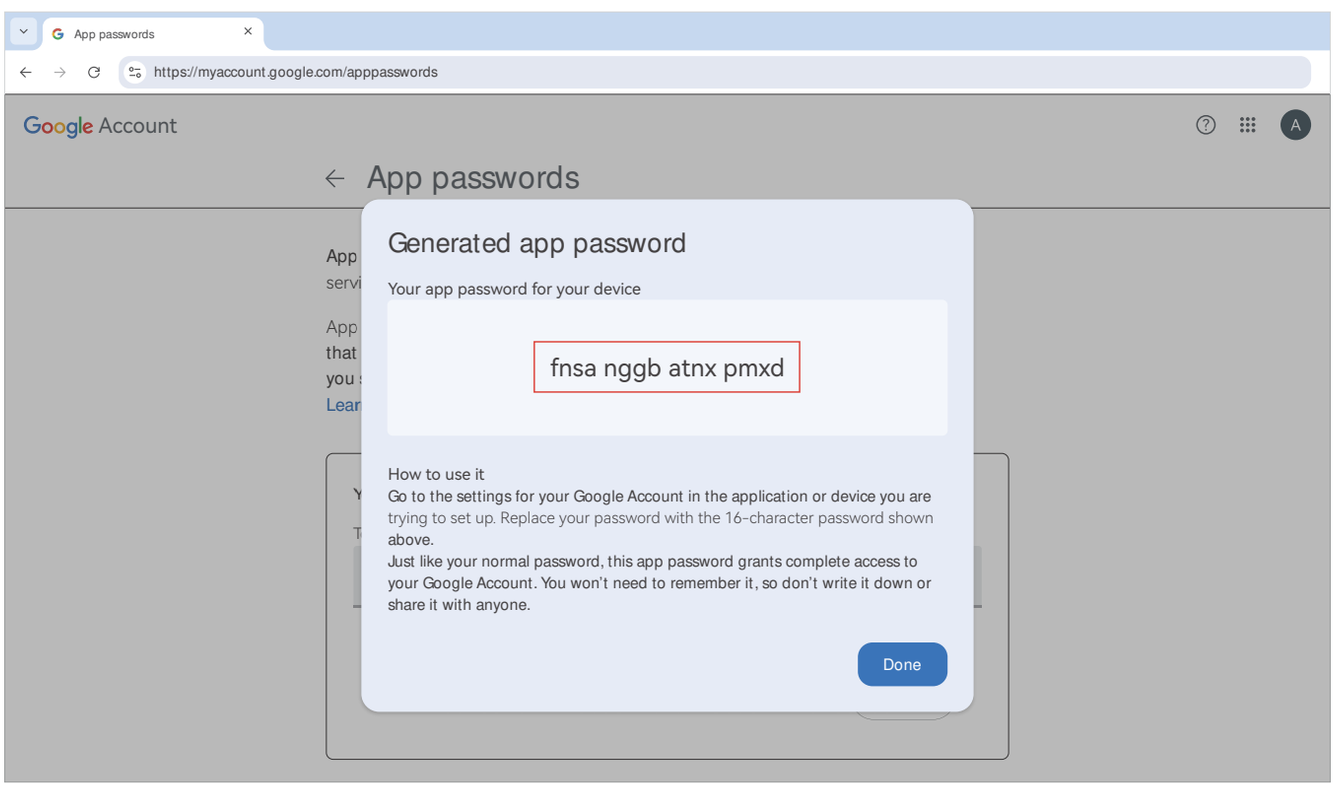
Step 1: Log into your Google Account and click “Security”- “2-Step Verification”- Click “Get Started” to set up 2-Step Verification- Set up a backup phone and turn on 2-Step Verification.



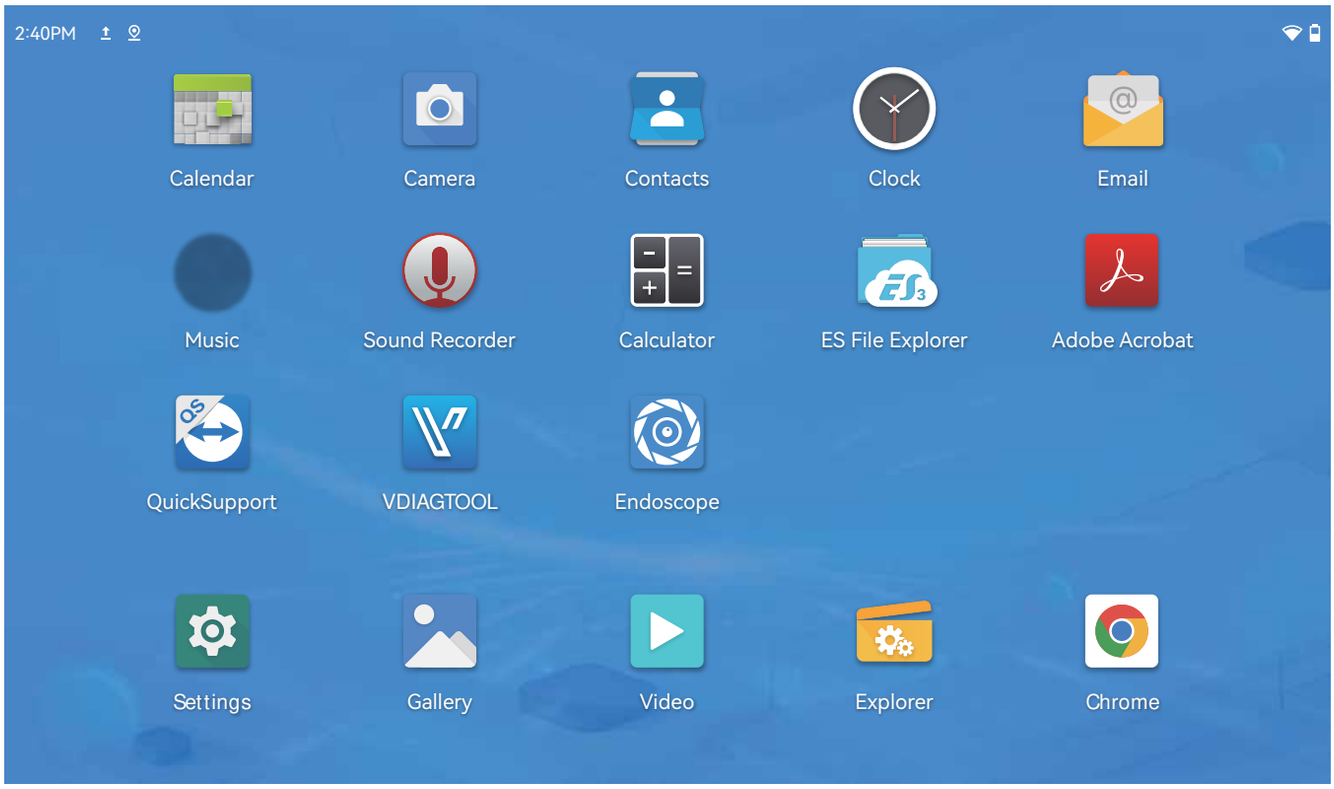
Step 2: When the 2-Step Verification is turned on, visit the link below to set up App password. https://myaccount.google.com/apppasswords



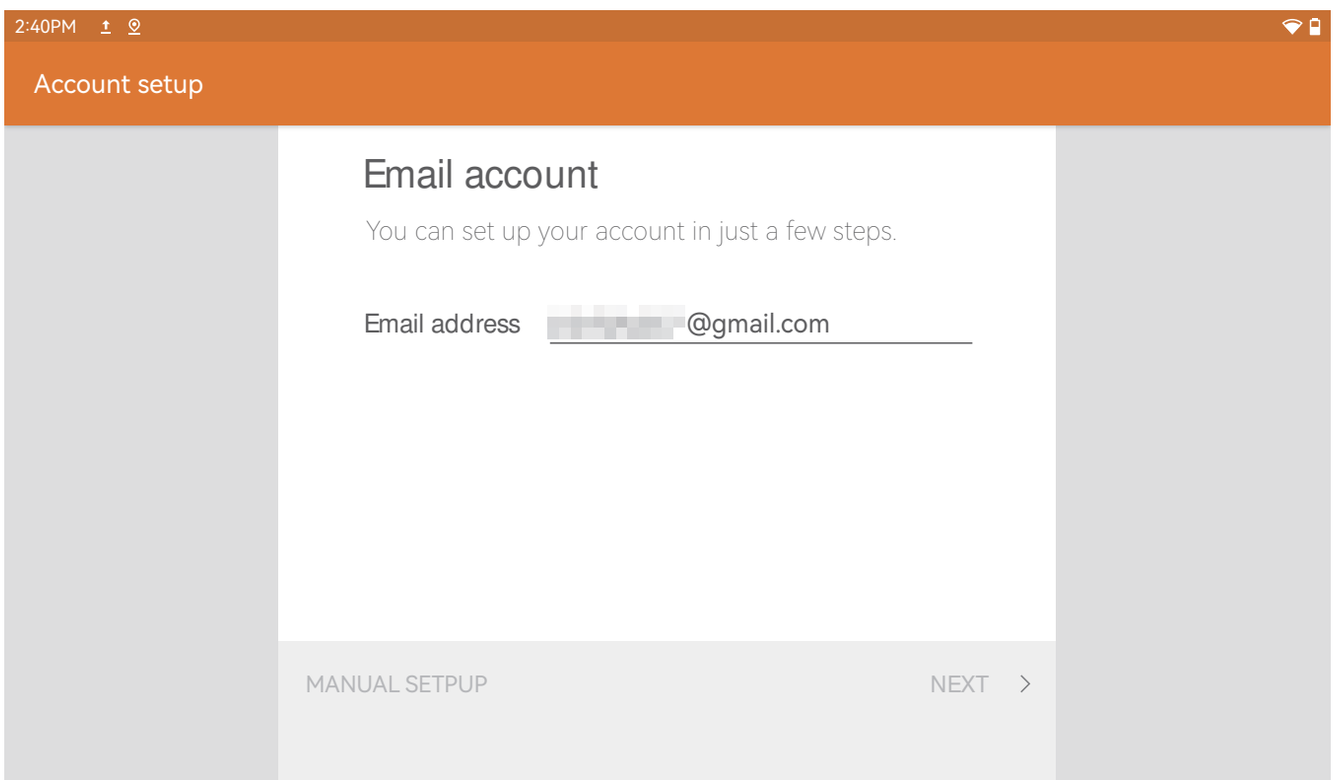

Step 3: Set up a custom app name(VD70S as in example above), to generate a password(16 letters) to log into this custom app. Copy and save this password.

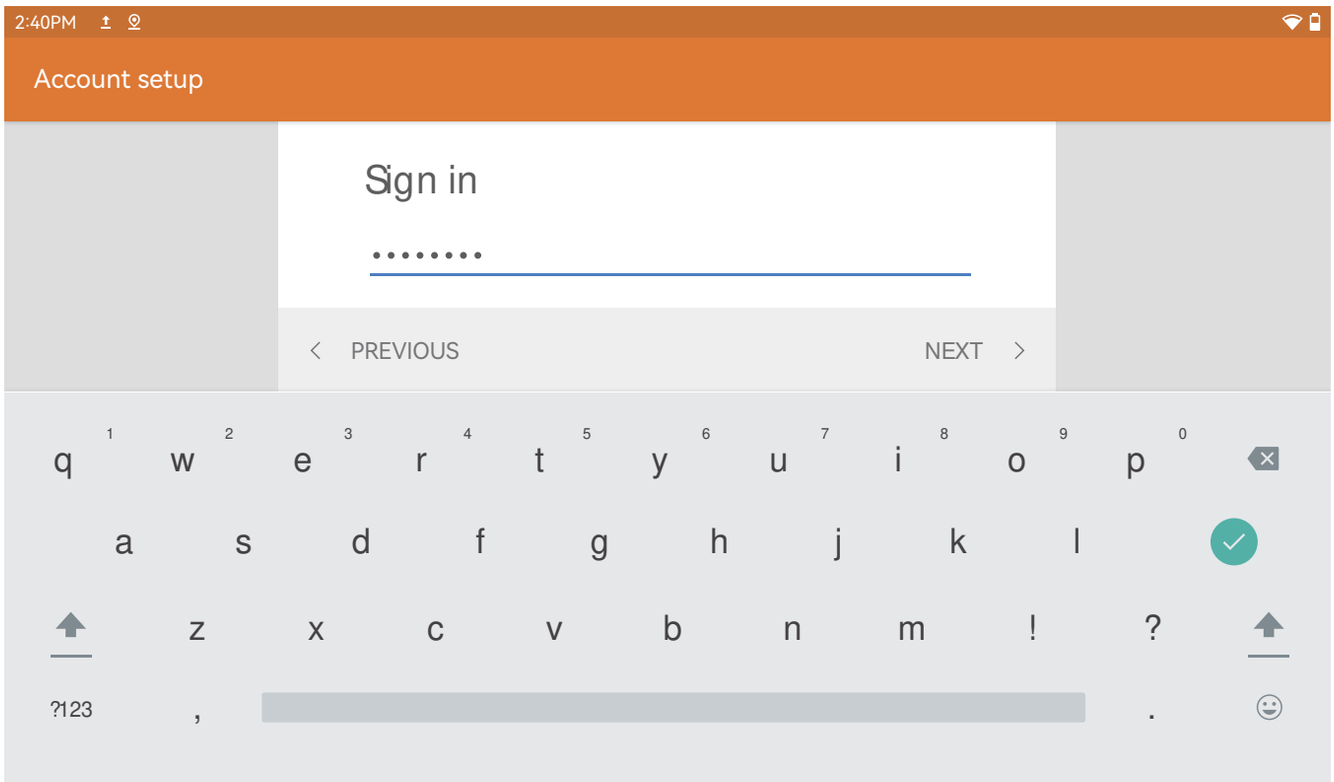


Step 4: Go to your Diagnostic Tool, swipe up to bring up the hidden toolbar menu and click the “ ” icon to add a new G-mail account.

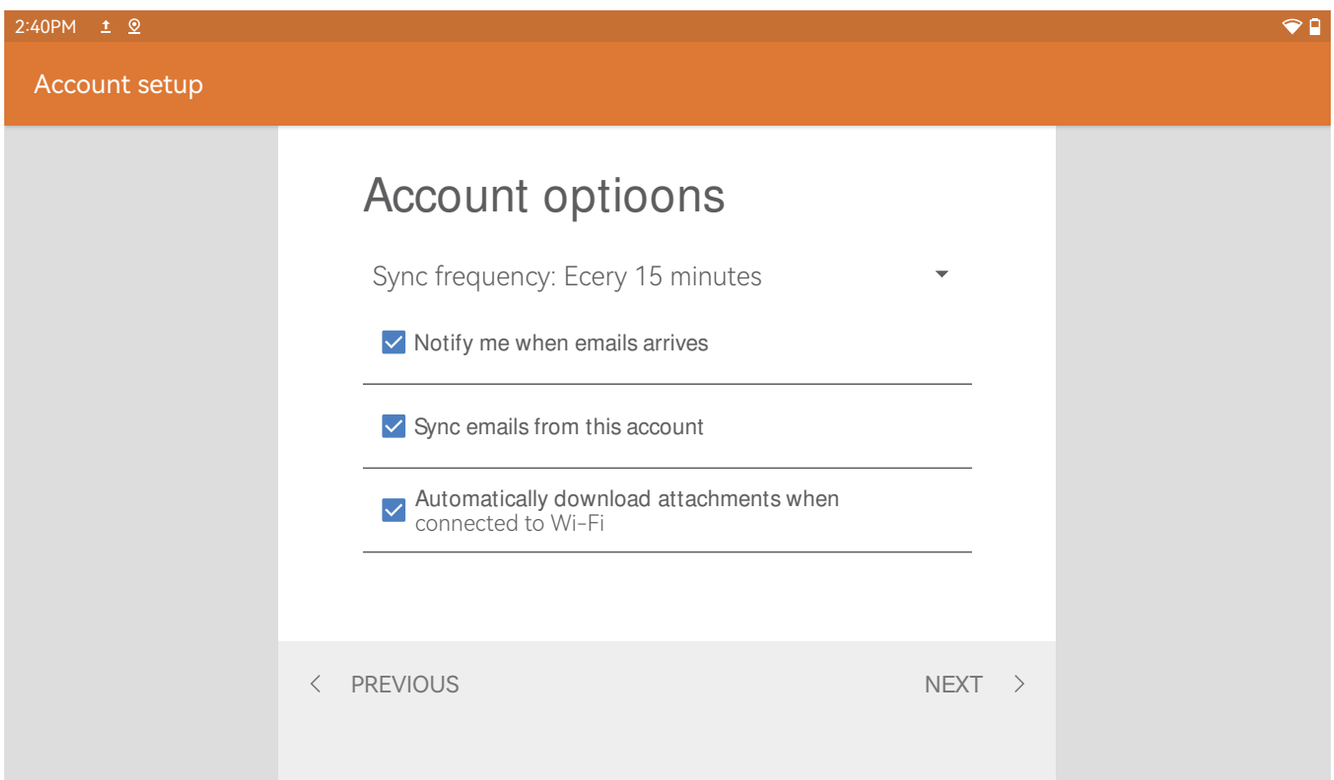


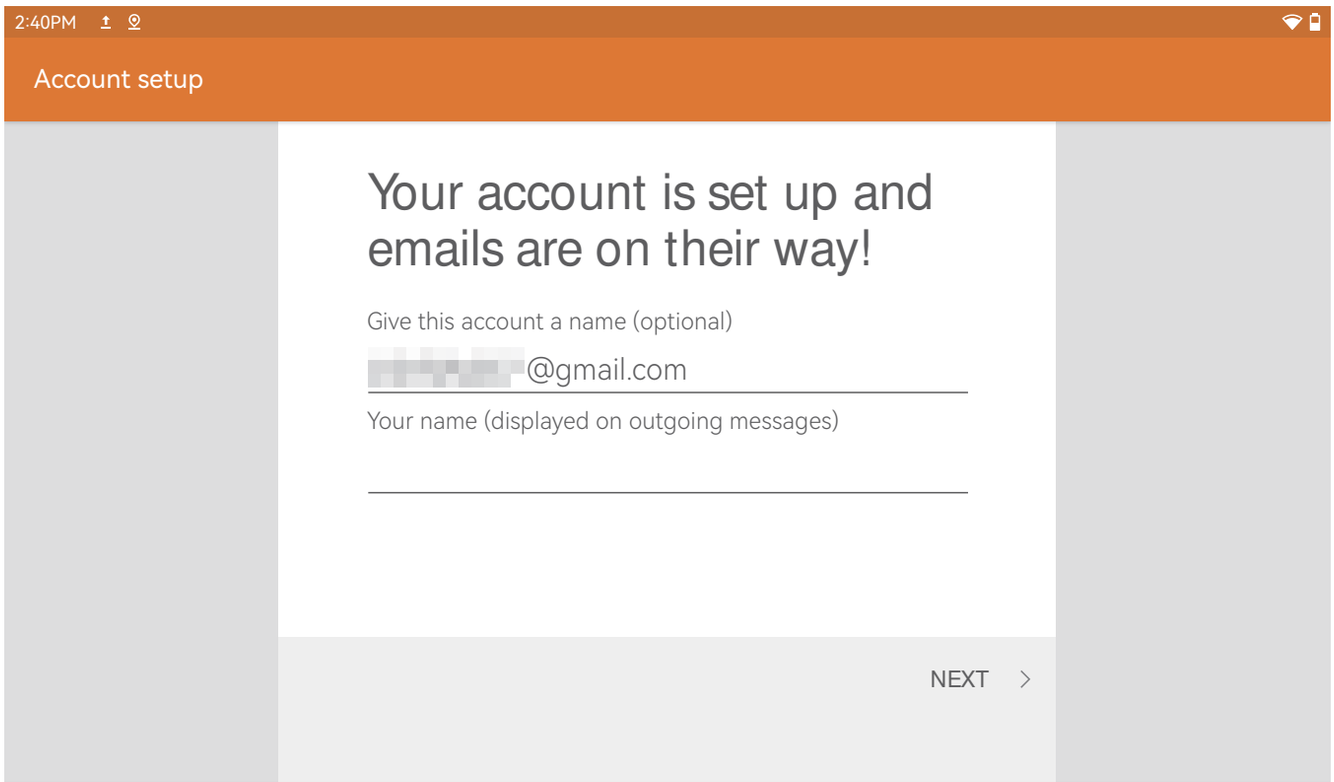

Step 5: Input your G-mail account and the app password(16 letters) and click “NEXT”






Step 6: Set the sync frequency and click “NEXT” until it displays “Your account is set up and emails are on their way”.



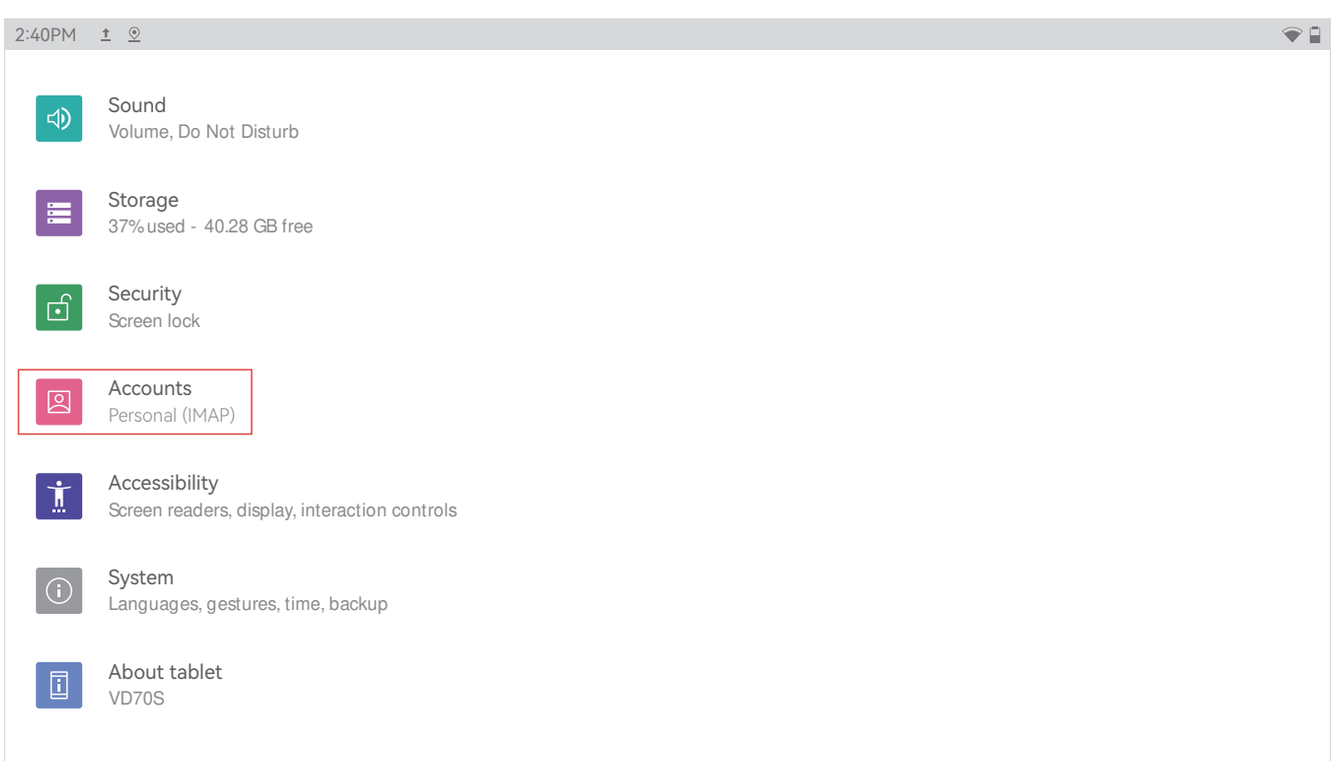



## To Share Diagnostic Report via G-mail Account:

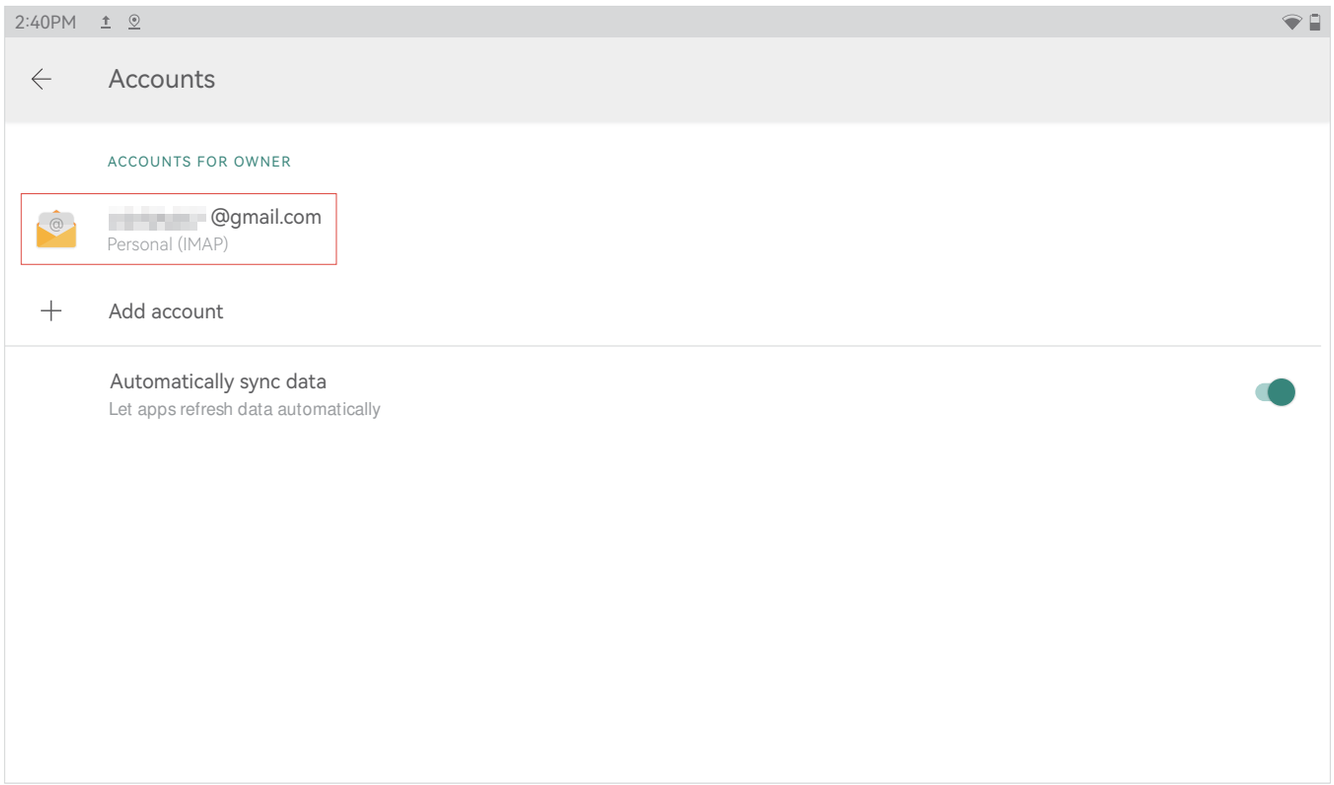
Go to Report- select the report you want to print- click "Print PDF Report"- click the job menu icon on the top right corner- Click "Share"- "Email" to go to Email composing page and sent the report via G-mail account.

## 10.2 Delete Email Account

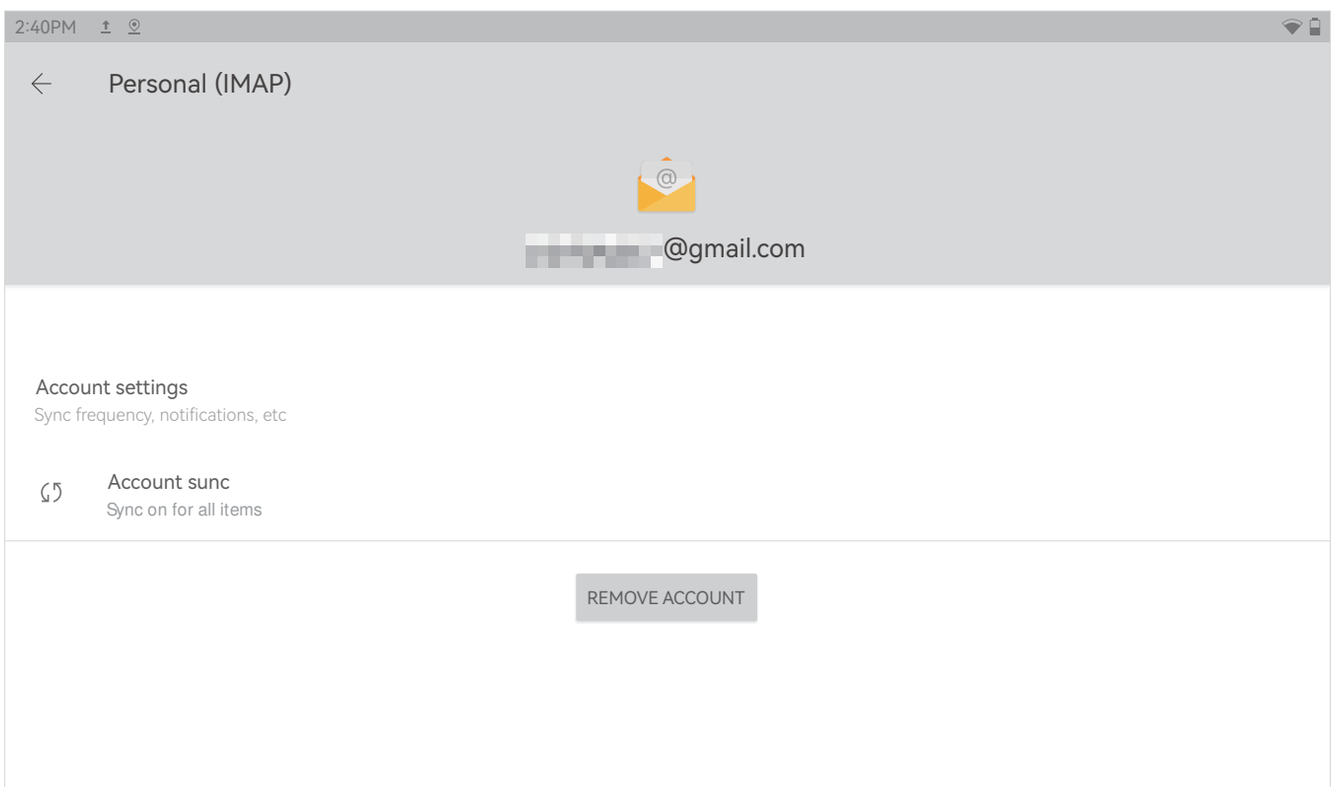
Step 1: Swipe up the hidden toolbar menu and click "Accounts".

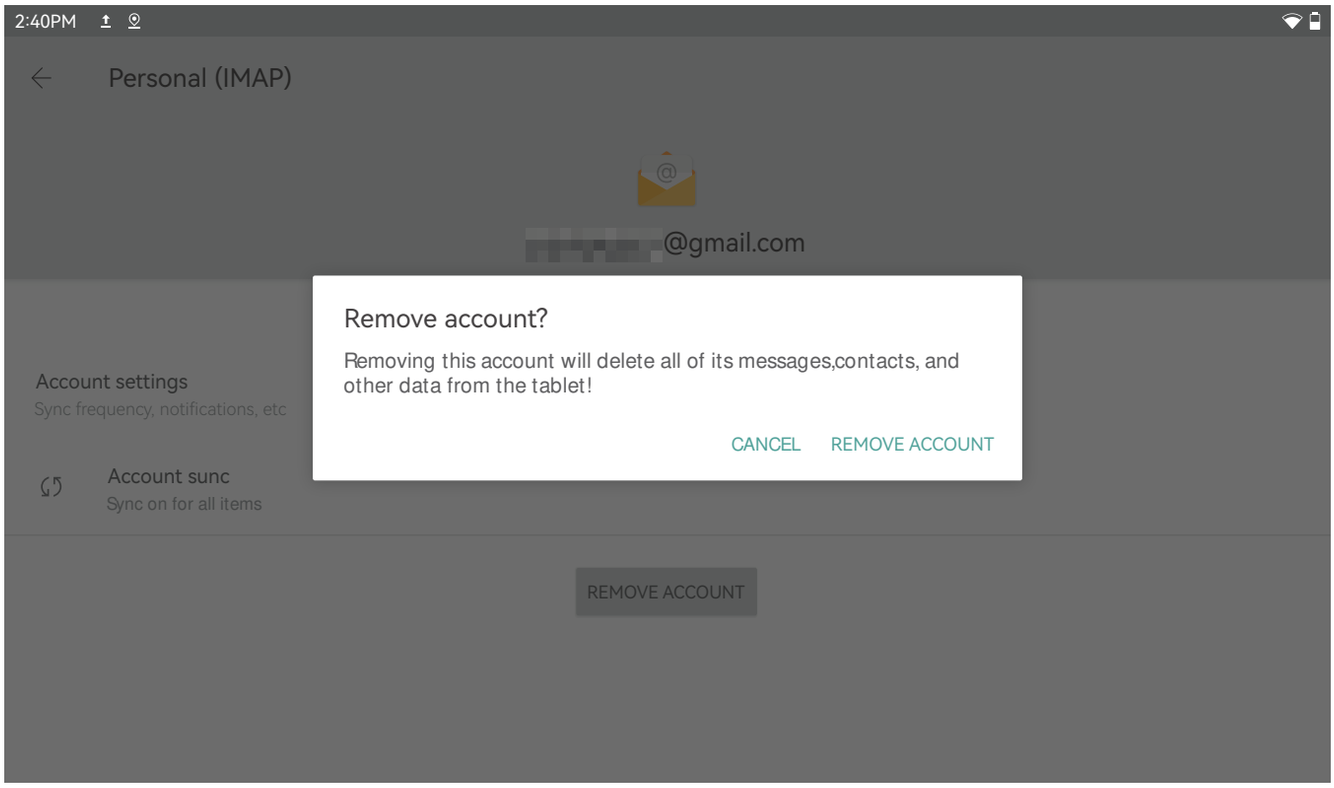


Step 2: Select the G-mail account you added.




Step 3: Click “REMOVE ACCOUNT” and confirm.






## 10.3 Printing Settings

To enable printing service on the Diagnostic Tool, you need to install Print Service App/Print Driver first. Please go through below checklist before the installation of the printing service:

### 10.3.1 Checklist for Installing Printing Service:

- Make sure your printer supports Wi-Fi connection(Wi-Fi Direct)
- Check the brand, model of your printer
- Install a printing service (printer driver) that is compatible with your printer. You have two options:

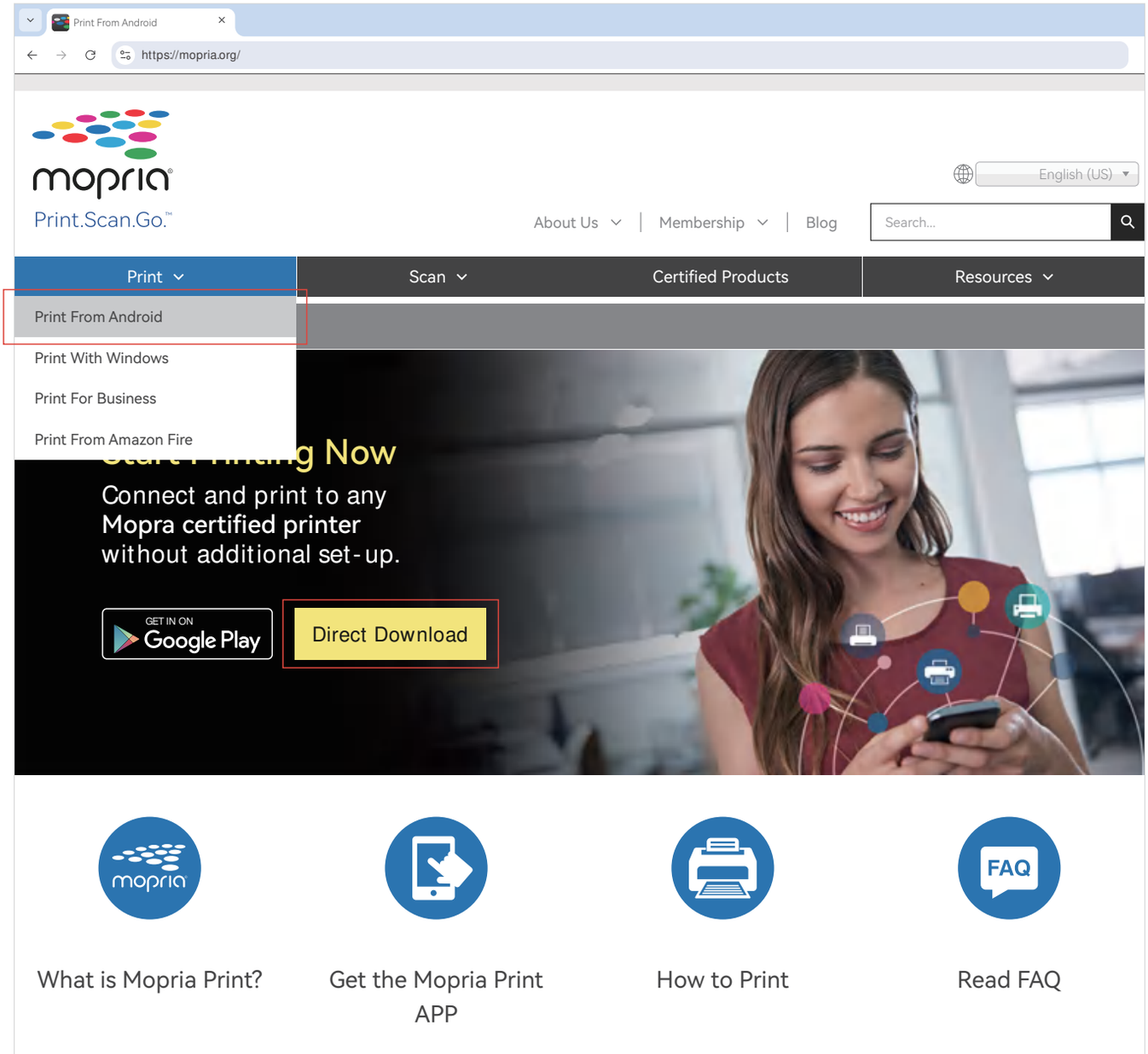
  Option 1: Install universal printer service app like Mopria

  Option 2: Install official apk installation package for your printer. For example, HP Printing Service Apk for HP printer.

### 10.3.2 Download Mopria Print Service APK File from Mopria website or download the specialized printer driver for your printer:

Step 1: Visit Mopria official website (or visit the printer website) or click link https://mopria.org/on your PC or laptop.

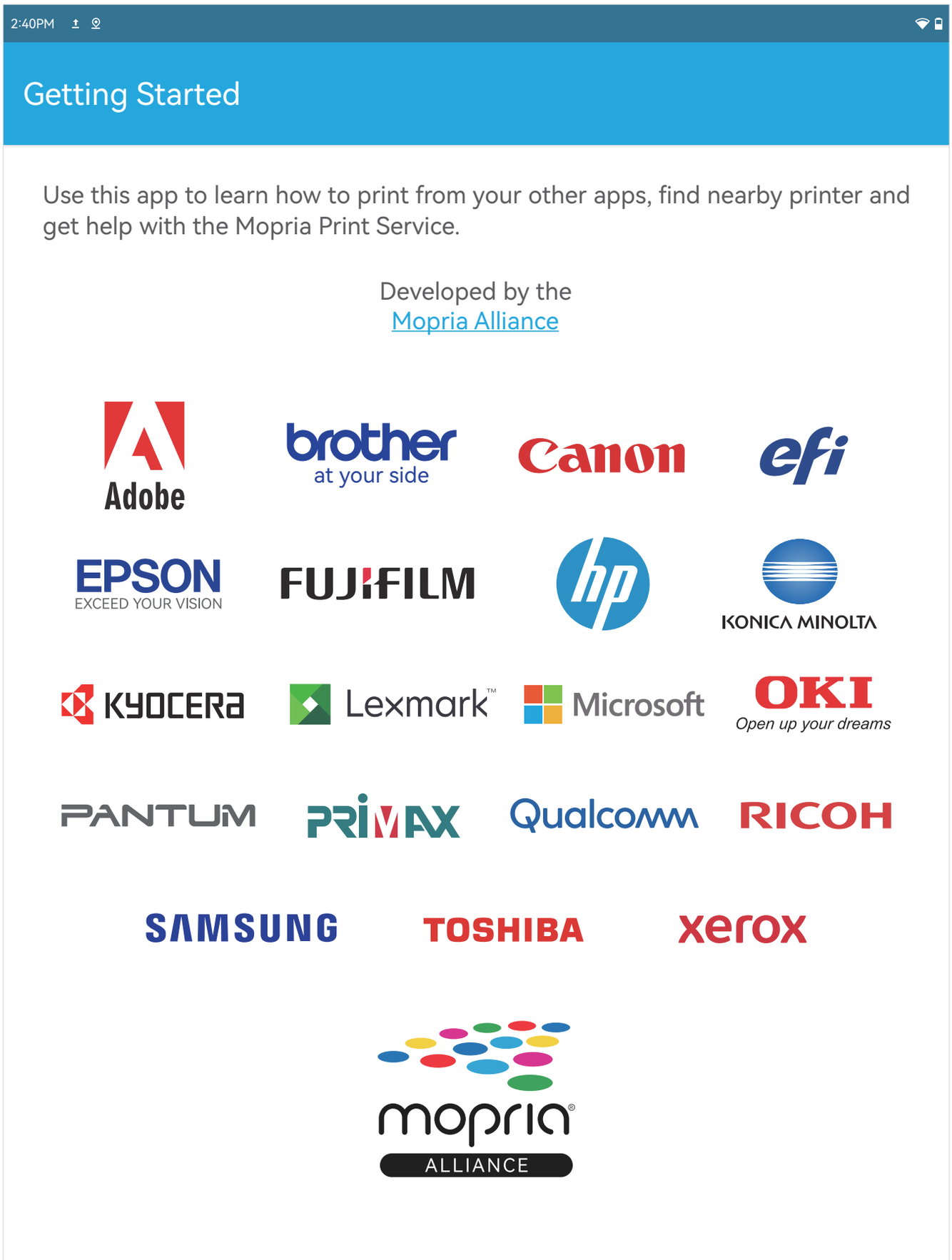
Step 2: Click Print- Print from Android- Direct Download



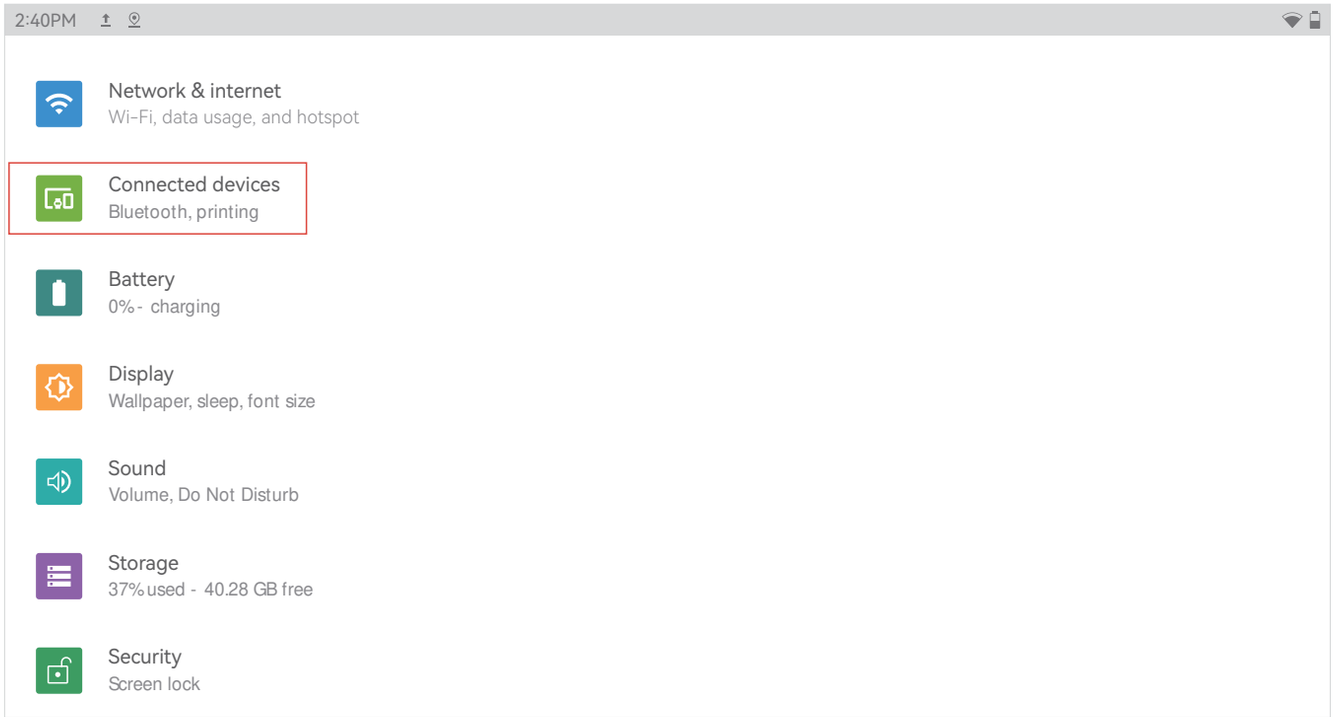

Step 3: Connect the Diagnostic Tool to your PC or laptop through USB Type-C cable attached and enable data transfer by swiping down from the upper left/right corner on the Diagnostic Tool.

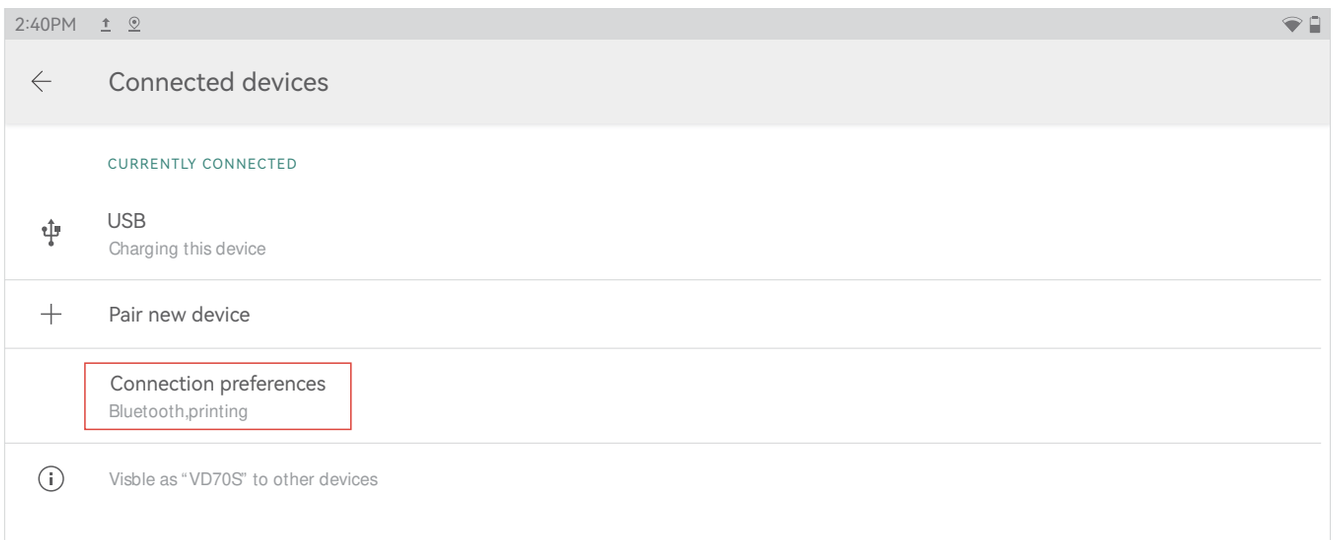
Step 4: Move the Mopria Print Service apk file to the Diagnostic Tool internal storage through Path: VD70S- Internal Shared Storage- Download.

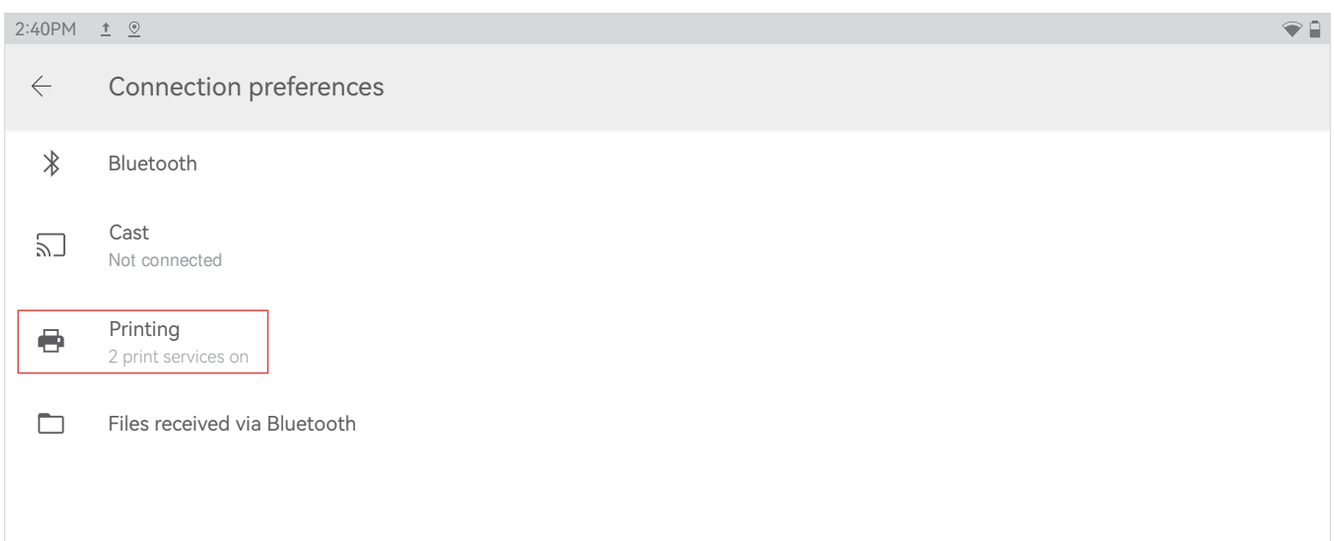
Step 5: Disconnect the Diagnostic Tool from the PC or laptop and go to ES File Explorer- Local- Home - Download to locate the apk file and click it to install on the Diagnostic Tool.

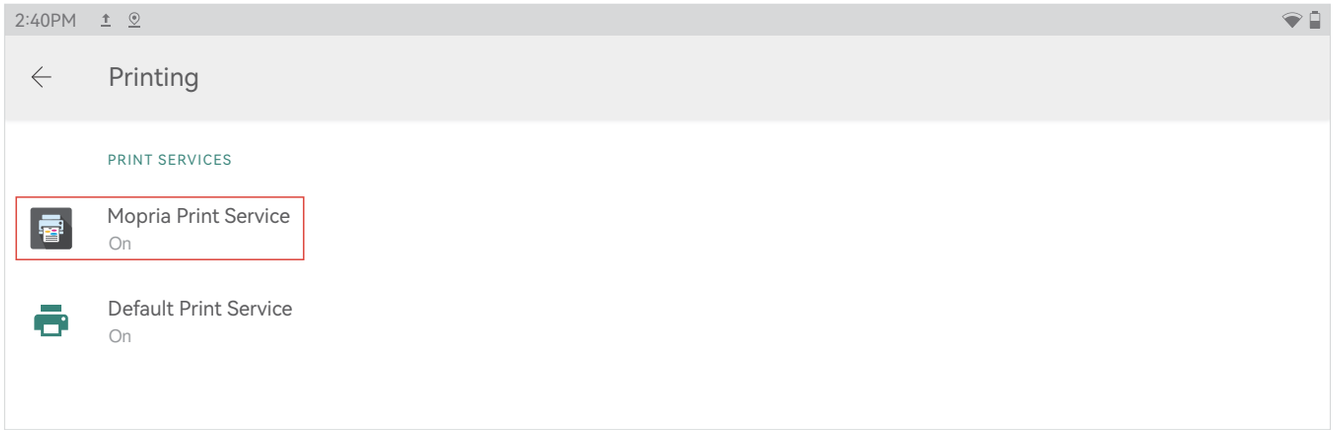


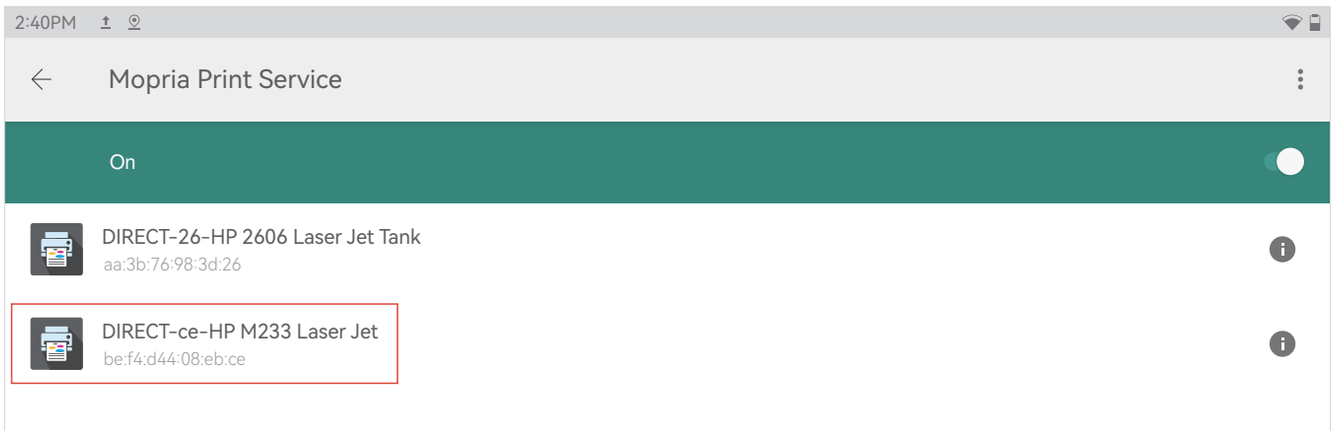

Step 6: Go to Settings- Connected Devices- Connection Preferences- Printing- Mopria Print Service-Switch to On position- Select Printer- Accept the connection on the printer control panel.


2:40PM
Network & internet
Wi-Fi, data usage, and hotspot
Connected devices
Bluetooth, printing
Battery
0% - charging
Display
Wallpaper, sleep, font size
Sound
Volume, Do Not Disturb
Storage
37% used - 40.28 GB free
Security
Screen lock

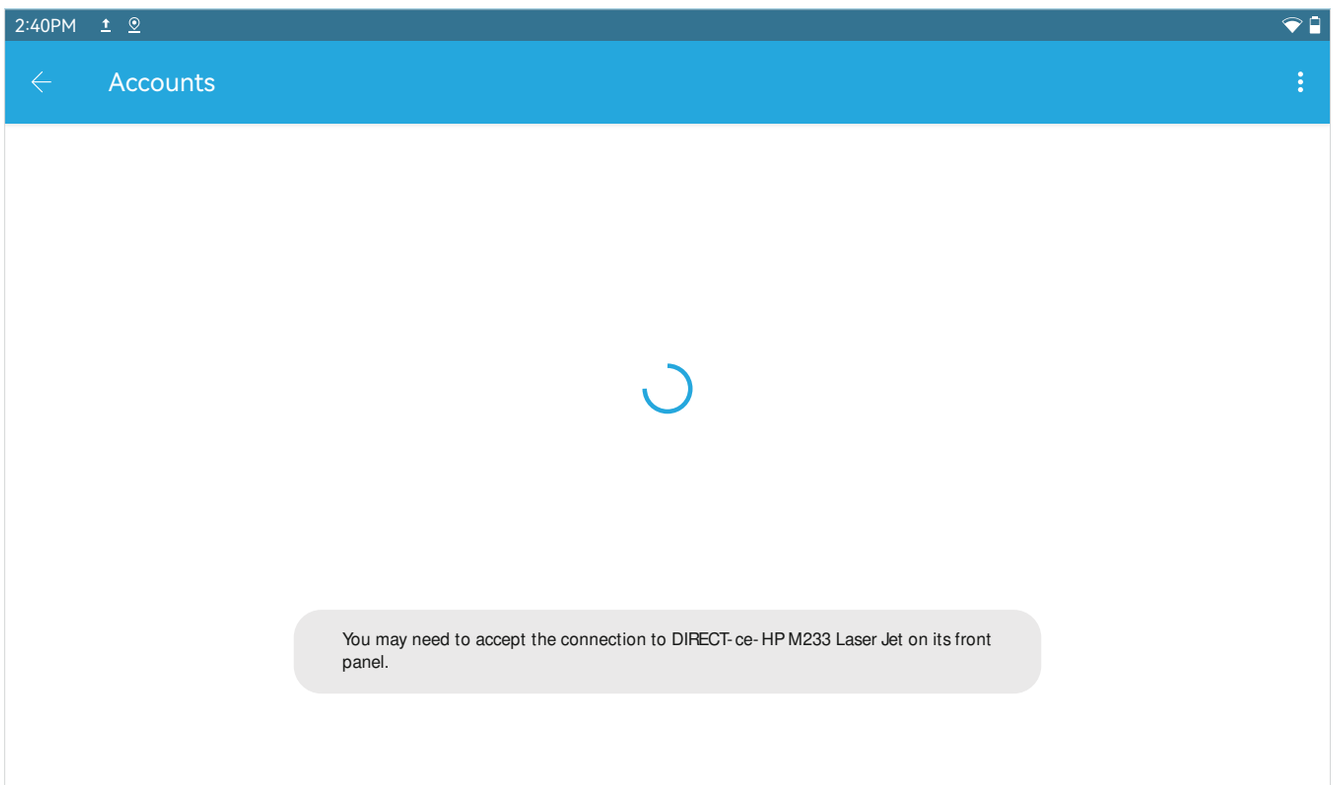

2:40PM
Connected devices
CURRENTLY CONNECTED
USB
Charging this device
Pair new device
Connection preferences
Bluetooth,printing
Visble as "VD70S" to other devices


2:40PM
Connection preferences
Bluetooth
Cast
Not connected
Printing
2 print services on
Files received via Bluetooth




You may need to accept the connection to the printer on the printer front panel.

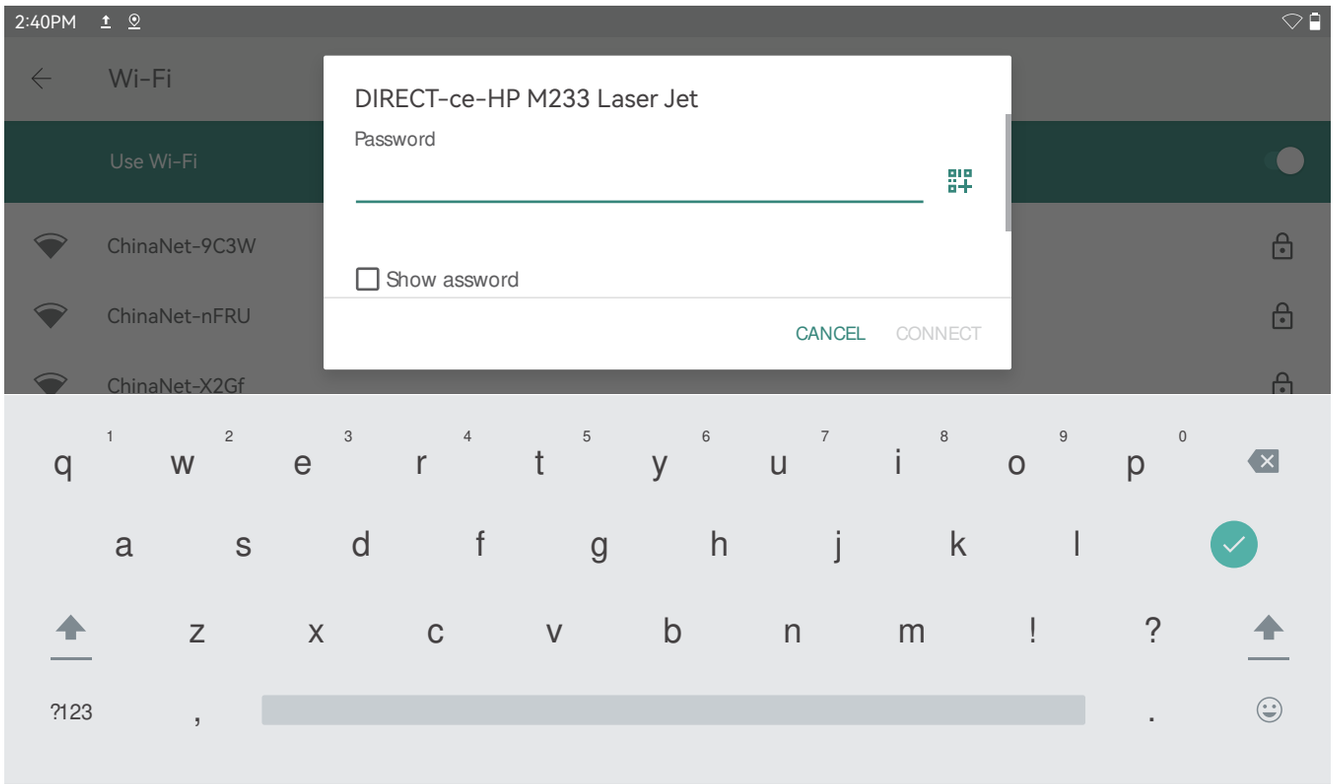


## 10.4 For Printer with Wi-Fi Direct

If your printer supports Wi-Fi Direct, please follow the steps below to connect the Diagnostic Tool to the printer directly:

Step 1: Swipe up the hidden toolbar menu and click “Settings”.

Step 2: Click Network & internet- Wi-Fi and click the printer Wi-Fi.




Step 3: Check the SSID and password on the printer front panel and use it for Wi-Fi connection. If your printer does not come with front panel, print the printer information page on a piece of paper and use it for Wi-Fi connection.

---

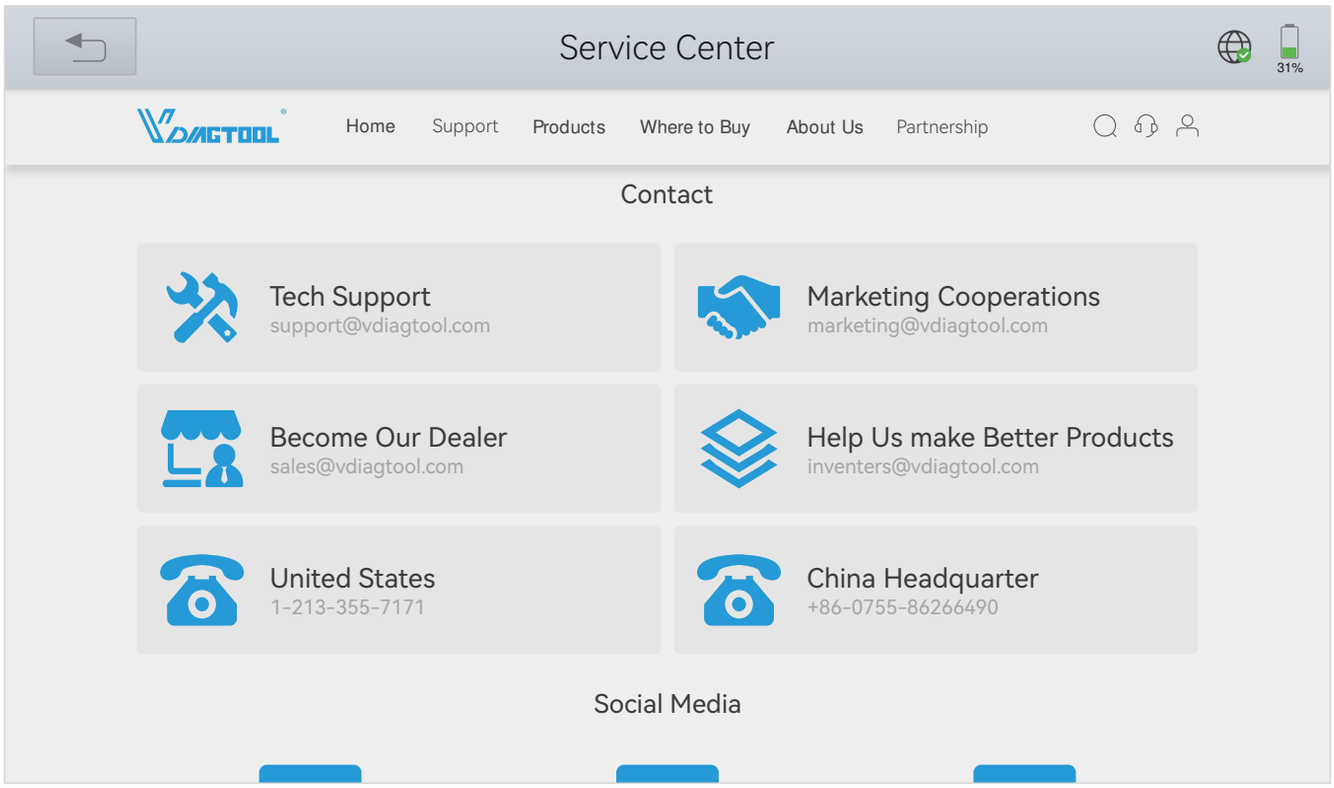
### Note:

If you need tech support setting up printer on your Diagnostic Tool, please reach out to our support team via support@vdiagtool.com and provide us with your printer name, model.

---

## 11. **Service Center**

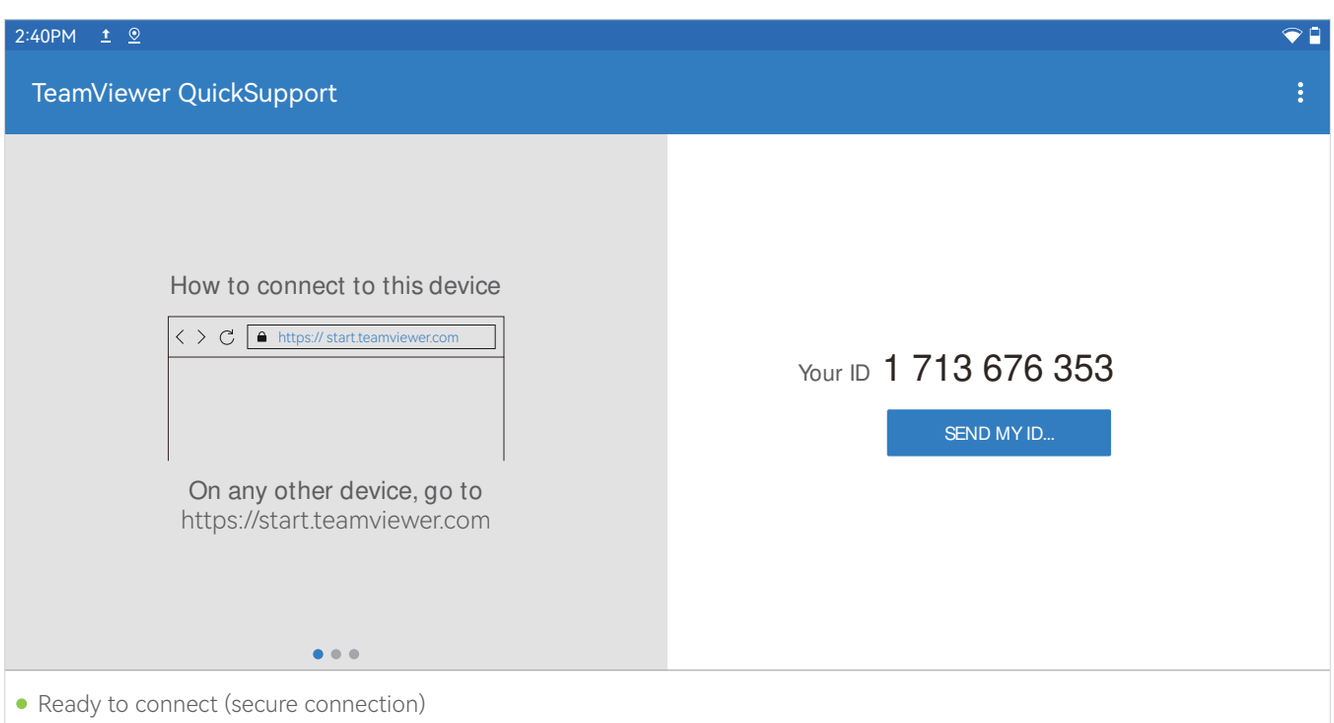
This chapter displays the various ways that you can reach out to us for warranty claims, tech support, tutorials, marketing cooperation, business opportunities or join us in improving the Diagnostic Tool you own and etc.




## 11.1 Remote Control

This function enable you to seek remote assistance from our tech team to control the Diagnostic Tool for operations that you are not familiar with.

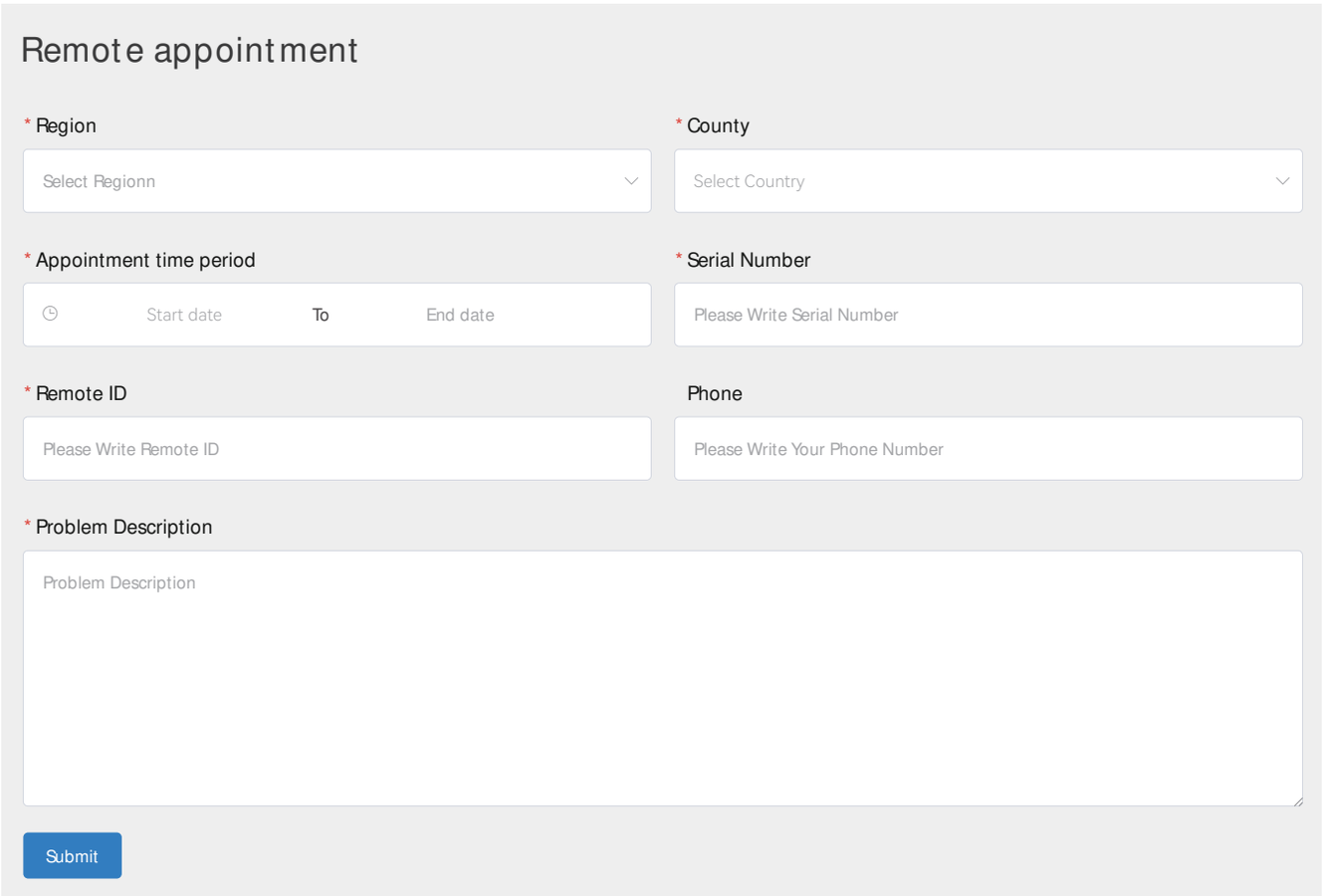
Make sure the Diagnostic Tool is connected to Wi-Fi, then click “Remote Control” icon to run the TeamViewer and wait until it shows “Ready to connect(secure connection)” at the bottom left. Write down the TeamViewer ID which is at the center right of the screen and schedule a remote assistance with us in advance.



## 11.2 Schedule a Remote Control

This section describes the procedure to schedule a remote assistance with us on our website.

Visit our website www.vdiagtool.com and click “Support” → “Tech Support” or click the direct url https://www.vdiagtool.com/support/tech-support and fill out the “Remote appointment” form below:




Region- The region where you and the Diagnostic Tool are currently located.

Country- The country where you and the Diagnostic Tool are currently reside in.

Appointment Time Period- The time of period you are ready for remote assistance.

Serial Number- Serial Number of the Diagnostic Tool.

Remote ID- TeamViewer ID.

Phone- Phone number or mobile phone number through which our tech can contact you for steps that requires your operation of the Diagnostic Tool or the vehicle during the remote assistance session.

Problem Description- Describe the problem with the Diagnostic Tool or the vehicle why you need the remote assistance session so that our tech can be prepared with the information or tools before it. Useful information also can include your instant messengers.

## 11.3 Data Logging

For software issues like vehicle communication issue, function failed issue, and etc, data logging are quite often the most decisive information for a successful tech support session.

So please make sure your Diagnostic Tool is connected to Wi-Fi for over 15 minutes and provide the S/N with the form above so that our tech could locate the data logging from the server and start analyzing the problem for a solution.

## 11.4 App Logging

For app issues, please request a app logging collecting app from our tech support team whether or not a remote assistance session is to be scheduled.

## 11.5 FAQ Database

This section describes how to access our FAQ database on our website. Visit www.vdiag-tool.com and then click "Support"- "FAQs" or click direct link url https://www.vdiag-tool.com/support/faqs.

## 11.6 Training Center

To access our training videos, please visit our website www.vdiagtool.com and click "Support"- "Training Center" or click the direct link url https://www.vdiagtool.com/support/training-center.

## 11.7 User Programs

This section describes the programs we have for our customers.

## 11.8 Corporate Purchase

Whether you represent a company, school, government agency, or NGOs and you want to buy in bulk, reach us through this program and get a bulk discount.

## 11.9 Inventers and Testers Program

Whether you are a professional automotive technician or DIY mechanic that have the expertise or knowledge in the Diagnostic Tool, you are welcomed to become our product testers before they hit market, or inventers to build with us the product you like. Even if you are a foreign language genius that can help us improve the User Manual in other languages, you are welcome to reach us through this program.

## 11.10 U-Fluncer Program

Whether you are an influencer that have large number of social media subscribers or amateurs that love to post content on social media platforms to help the community on how to perform diagnostics , this program is for you.

## 11.11 Become a Distributor

If you liked our product and are interested to make a living selling it, reach us through this program.

# 12. Warranty

## Limited Two Years Warranty

This warranty is expressly limited to buyer who purchase VDIAGTOOL VD70s product for purposes of resale or use in the ordinary course of the buyer's business.

VDIAGTOOL VD70s is warranted against defects in materials and workmanship for two years (24 months) from date of delivery to the buyer. This warranty does not cover any part that has been abused, altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with instructions regarding use. The exclusive remedy for any tool found to be defective is repair or replacement, and it shall not be liable for any consequential or incidental damages.

# 13. Contact Us

## Warranty & Support

E-mail: support@vdiagtool.com

Website: www.vdiagtool.com

## For wholesale business or become our distributors:

E-mail: sales@vdiagtool.com

**Invent with us, test products before they hit market, help us make better products for everyone:**

E-mail: inventers@vdiagtool.com

Create social media content, post online and help our community:

E-mail: marketing@vdiagtool.com

## Follow Us on Social Media

**Facebook Page:** Search for "vdiagtool"
**Facebook User Group:** Search for "VDIAGTOOL OFFICIAL User Group"
**Instagram:** Search for "vdiagtool_official"
**TikTok:** Search for "vdiagtool_us"
**YouTube:** Search for "Vdiagtool Official"

# 14. Appendix

## 14.1 Navigation Path Quick Check

Misfire Counters: MANUAL DIAGNOSIS- Region- OBDII- Auto Scan/Protocol Selection-On-Board Monitoring Test- Misfire Counters

Fuel Loop Status: MANUAL DIAGNOSIS-OBDII-Live Data- Fuel System 1, Fuel System 2

Readiness Status(Smog Check): MANUAL DIAGNOSIS- OBDII- I/M Readiness Status

Transmission Oil Temperature: MANUAL DIAGNOSIS- REGION- Make- Model- Year- Transmission or Powertrain -Live Data- Transmission Oil Temperature or Transmission Fluid Temperature

Cam Crank Relearn: MANUAL DIAGNOSIS- Region- Vehicle Selection- System Selection-Engine or ECT or Powertrain- Special Function- Cam Crank Relearn or Crank Pattern Learning

Crankshaft Position Variation Sensor Relearn: MANUAL Diagnosis- Region- Vehicle Selection- System Selection- Engine Control Module/Powertrain- Special Function- Crankshaft Position Variation Learn

Service Bay Test: MANUAL DIAGNOSIS- Region- Vehicle Selection- System Selection-Engine Control Module/Powertrain- Actuation Test or Special Function- EVAP Service Bay Test

VGT Turbo Calibration: MANUAL DIAGNOSIS- Region- Vehicle Selection- System Selection-Drive Train Control Module- Special Function- Turbo Actuator Pre-Align/Self Calibrate

## 14.2 Terms & Terminology Quick Check

LTFT= Short for Long Term Fuel Trim

STFT= Short for Short Term Fuel Trim

MIS= Short for misfire

I/M Readiness Status= Technical term for Smog Check

VGT Turbo Actuator Calibration= Turbo Actuator Pre-Align/Self Calibrate

Cam Crank Relearn= Cam Pattern Relearn

Crankshaft Position Variation Learn= Crankshaft Relearn= CASE Learning= Gear Learning

Actuation Test= Active Test=Component Test= Bi-Directional Control

## 14.3 FAQs

Q1: I haven't found I/M readiness in the menu.

A: Please enter Manual Diagnosis>Select America/Europe/Asia>Click the "OBDII" icon on the top left of the screen>Auto Scan/Select OBDII Protocol>I/M Readiness

**Q2: Unable to find live sensor data as the generic OBD2 scanner, like short-term/long-term fuel trim.**

A: Please enter Diagnosis>Select America/Europe/Asia>Click the "OBDII" icon on the top left of the screen>Auto Scan/Select OBDII Protocol>Live Data>LTFT, STFT or similar term

**Q3: Unable to find the misfire data for my Ford/Dodge/Chrysler/Jeep cars?**

A: Please Select Manual Diagnosis-America/Europe/Asia>OBDII (On the top left of the screen)>Auto Scan or Select OBDII Protocol for your car>On Board Monitor Test>Select "Misfire Cylinder Data" or similar term

**Q4: How to export live data as CSV files?**

A:

How to generate CSV files: live data>custom>data export

How to find the CSV files: ES File Explorer> internal storage> diagnosis> csv_records

**Q5: I can not charge the battery now. I plugged in the cord, it's not charging. The battery is almost dead, only about 10% left.**

A: Please charge it for over an hour, unplug it from the charger, then press and hold the power button for 15 seconds and see if it solves the issue. Please unplug the USB-C cable from the Diagnostic Tool and press and hold the power button for 15s, and check if it can power up successfully.

**Q6: Can scanner tune up car?**

A: Sorry, VD70S Diagnostic Tool does not have the capability to tune up car.

**Q7: Can this scanner still be used once the 3 year free updates are finished?**

A: Yes of course, you can still use its last updated software when it expires, even when it expires after three years.

**Q8:It was frozen until the battery went flat even I tried the reset button and the power button.**

A: Please make sure you have updated the App to the latest version(To update the App to the latest, go to Settings- About- App- click the arrow at the right side to check the latest App version and update to the latest.). If yes, please reset to factory settings and check again. If it still does not work, please reach us directly via support@vdiagtool.com.

**Q9: I cannot update, I've tried wi-fi and cell phone as hotspot, however, keep telling me failure connection.**

A: This problem could reside with the setting of your router firewall or the network provider in your region that restricts access to the server, please check if your router firewall can access the server or not. If the problem still exists, please reach us via support@vdiag-tool.com.

Q10. Any chance to install Google play store?
A:We are sorry that this diagnostic tool does not support installing Google Play store. However, if you want to install a third-party app, you can download apk file and install it on the diagnostic tool. We don't recommend installing third-party apps as it may slow down its running speed.

Q11. Why should I connect the scanner to internet once a month?
A:Due to the powerful key programming capabilities of our device, it's a government policy compliant requirement to connect the device to Wi-Fi once a month to report IP location to prevent the device being used for illegal activities. If connecting it to Wi-Fi did not solve the issue, please reach us directly via support@vdiagtool.com asap.

Q12: The auto vin cannot work on my vehicle.
A: As for auto scan/VIN, it does not cover all vehicles as some vehicles did not store VIN # in the ECU, some VIN # is not included in our coverage database, and some vehicles like Dodge work in "sending command, answering command" mode for vehicle communication. You can try below alternative navigation methods:

1: Turn on the ignition and not start the engine to try auto scan. For older vehicles, please turn on the ignition and start the engine and try auto scan.
2: Manual input VIN #.
3: Diagnosis-America/Europe/Asia-Vehicle Selection-Automatic Detection.
4: Diagnosis-America/Europe/Asia-Vehicle Selection-Manually Selection.

Q13: My diagnostic tool cannot connect to WIFI.
A:If it shows “times out”, please check your router and make sure that your router selected WPA2, not WPA3(maximum compatibility), and that it has not blocked the outgoing network traffic to non-US regions like China. Switching to mobile phone hotspot will most likely solve the registration issue. You can switch back to home Wi-Fi for software downloads when activation is done.

The second method is to connect to the Wi-Fi extender. If you have the WiFi main modem and the extender. You can try to disconnect the diagnostic tool from the main WiFi and connect it to the internet via the extender.

The second method is to connect to the Wi-Fi extender. If you have the WiFi main modem and the extender. You can try to disconnect the diagnostic tool from the main WiFi and connect it to the internet via the extender.

If it has connected to the internet but shows “connect internet to sync your device”, the problem is that the country and time zone (china time zone) in the android system didn’t match what the network time zone was (pacific time zone) and is preventing it from syncing. Please just correct the time zone to pacific time zone by entering main screen- settings-System-Date & Time-"select time zone".

Q14: How can I change the menu language into Spanish?

A: To change the menu language, please send the S/N of the diagnostic tool to our support team via support@vdiagtool.com and get Spanish software program authorization. When the authorization is done, go to Settings on the diagnostic menu- language- Spanish to change the language of the android tablet into Spanish, then go to Updates- download all software programs. When all software programs in Spanish have been downloaded and installed, you may use the diagnostic tool in Spanish

Q15:Why the scanner shows the report shared successfully but the email box did't receive the report?

A: All the reports are sent by our email: noreply@service-vdiagtool.com, the email may be blocked even the device shows "send successfully".

Since you use gmail, you can follow below instructions to whitelist our sending mailbox: noreply@service-vdiagtool.com

https://downtimemonkey.com/blog/how-to-whitelist-an-email-address-in-gmail.php

Not everyone needs to set up the whitelist, since not all the email from our mailbox will be blocked by received mailbox. You may also check your junk email to see if there is any email from noreply@service-vdiagtool.com.

Q16:When you enter the diagnosis software program, it shows 'license exception' or 'Failed' error message.

A:Please try to delete the software programs by press and hold it and then re-download it again under the 'Updates' to check whether this issue is solved or not. If not, please contact the our support team via support@vdiagtool.com with the S/N of the diagnostic tool.

Q17:Browser can access internet normally, but can not download the updates under "Updates", prompted to 'check the network connection' in the Update.

A: Please switch to mobile hotspot or other Wi-Fi and try again.

Q18:The device cannot be charged/powered on when connected with the car or plugged into the charger.

A:Please charge for more than one hour first, unplug the charger, press and hold the power button for 15 seconds and to check if it will turn on, and also confirm whether the device screen will light up when charging and try to press and hold the power button for more than 10s to try several times while charging. If the device still won't turn on, please contact our support team with S/N.

Q19:When activating the device, shows error message "registration failure" after entering your email address.

A: Try mobile hotspot(recommended) or a different network to activate.

Q20: Received a used device with a lock screen password, unable to open the device
A:Contact our support team with the device's S/N via support@vdiagtool.com to resolve the issue.