# ANCEL



## 1、ANCEL Echo

ANCEL Echo is a tool that integrates software and hardware to provide vehicle diagnosis services for users. It supports Bluetooth connection with IOS and Android to achieve OBD diagnosis and system enhanced diagnosis.

Users can easily check the health status of their vehicles without going to the repair shop, quickly locate the cause of vehicle faults, and provide comprehensive application services such as AI service and abnormal warning for users.

## 2、Download and install ANCEL app

①Scan QR code to download or search 'ANCEL Echo' in the App Store or Google Play Store, ANCEL Echo app is free to download.

②ANCEL Echo supports many third-party applications, such as Car Scanner, Torque, OBD Fusion, DashCommand, Infocar, etc. There may also be many applications that have not been mentioned. You can contact us to learn about Echo's compatibility with third-party applications.

## 3、Connection Steps
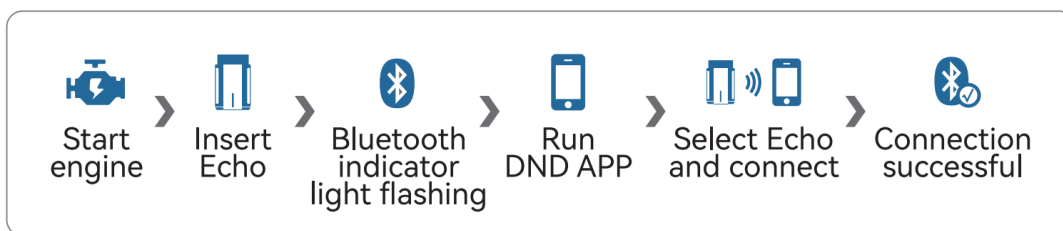


**Description**

3.1 Start the engine.

3.2 Insert Echo into the OBD port.

3.3 Observe the device indicator light, which has three colors: red, blue, and green:

①Green light indicates that power has been applied.

②Blinking blue light indicates that Bluetooth is communicating.

③Continuous blue light indicates connect successfully.

④A flashing red light indicates a software or hardware malfunction.

3.4 Turn on Bluetooth on your phone. If Bluetooth is already on, please skip this step.

3.5 Run ANCEL APP.

3.6 Click on the "+" button, search and connect Echo. (The last 6 digits of the Bluetooth name are the last 6 digits of the device serial number for better identification of the device if there are multiple Echo)
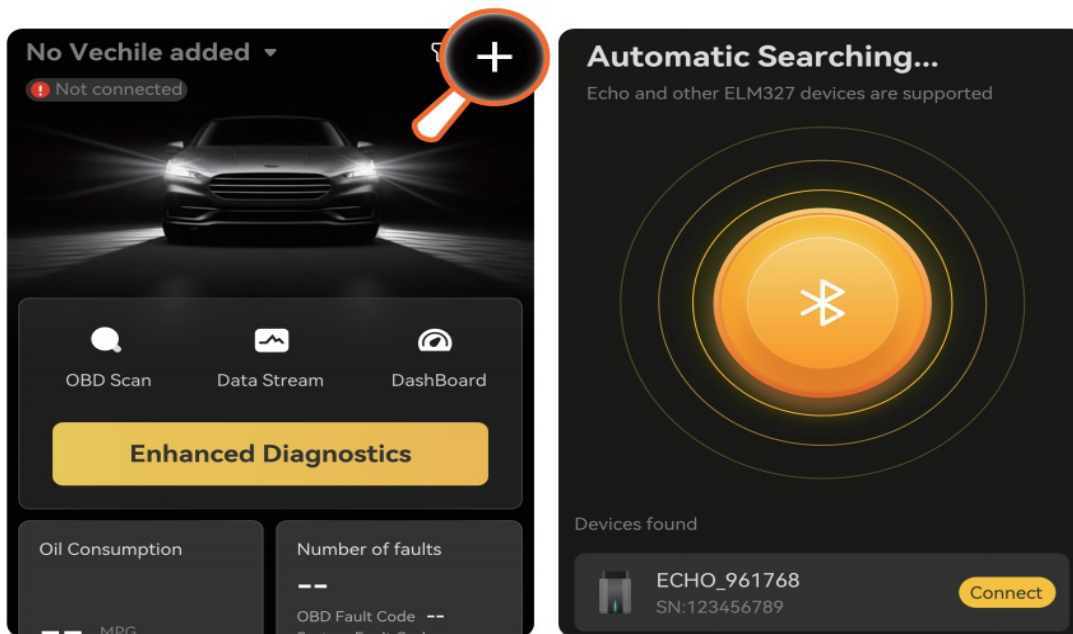
3.7 During the connection process, please ensure that no other phones have established a connection with Echo. After displaying 'connected', it can be used normally.

3.8 If plug in the device but not connect to the phone for a long time, the indicator light will turn off and enter sleep mode, which can be awakened through Bluetooth connection.

## 4、 APP Function Description

### 4.1 OBD Service

**1. Login**

You can use basic functions without login, but you can synchronize data to any device after login.

**2. Read Codes**

Read OBD fault codes. warning light can be reset by clearing the fault codes after the fault is resolved.

The OBD Scan (On Board Diagnostics Scan) function is an advanced technology for diagnosing faults in automotive engine control units. It utilizes the on-board diagnostic system (OBD system) to monitor and diagnose faults in the vehicle in real-time. Mainly includes: reading fault codes, clearing fault codes

*Operating steps:*

*① Read the fault code: Insert the device, connect via Bluetooth successfully, and click the "OBD Scan" button,*
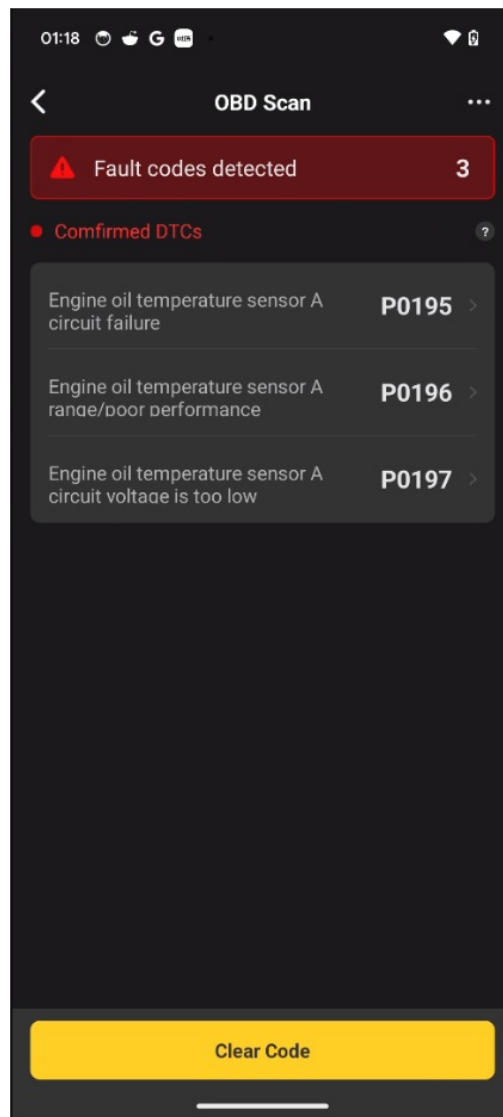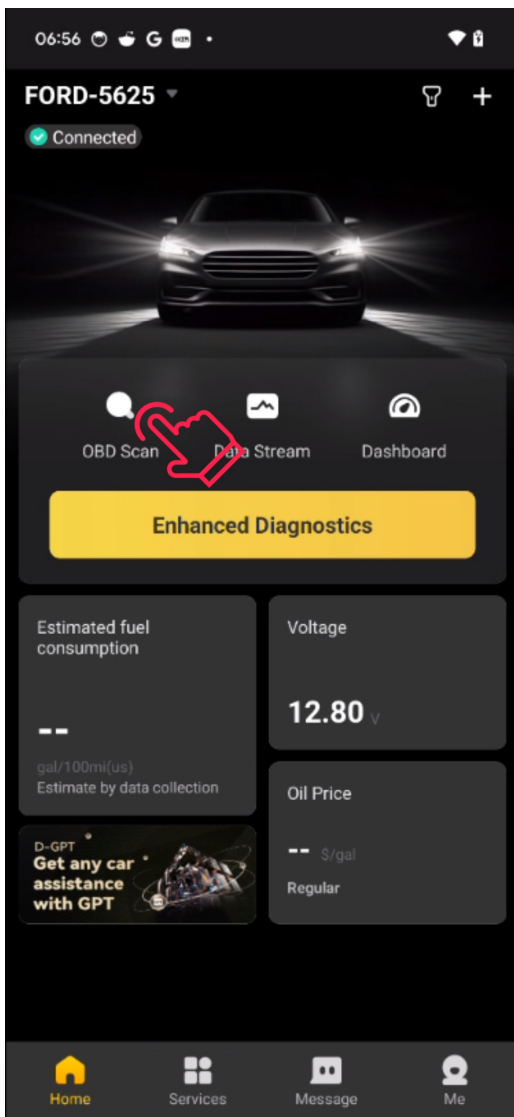
① Clear fault code: After reading the fault code, click the "Clear Code" button and click "Clear" to complete the operation.
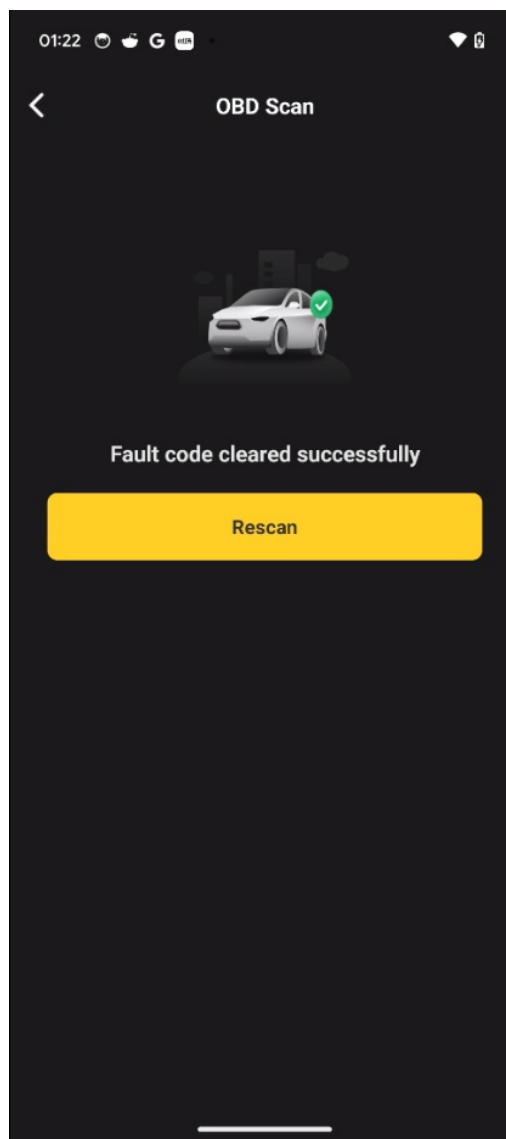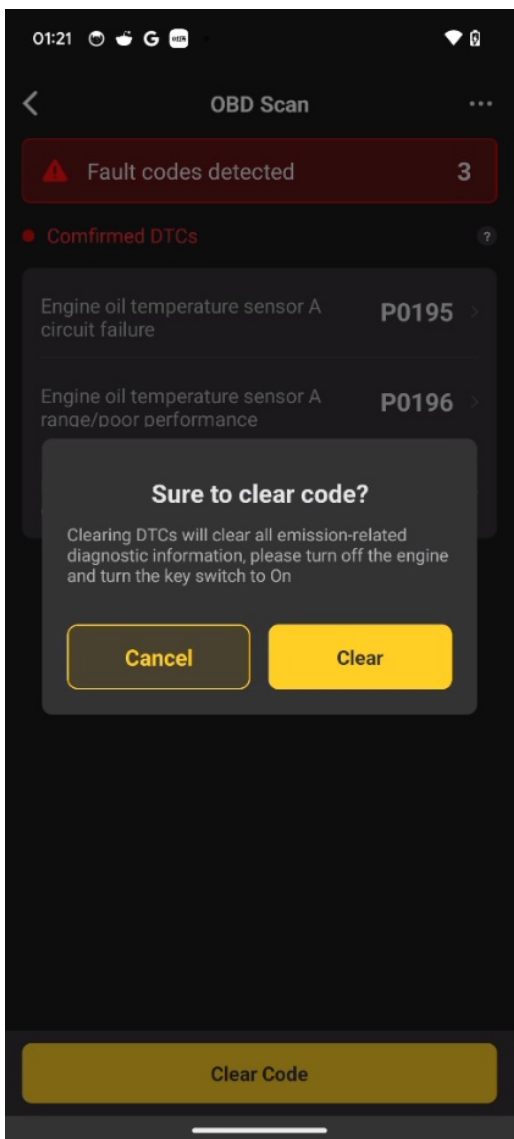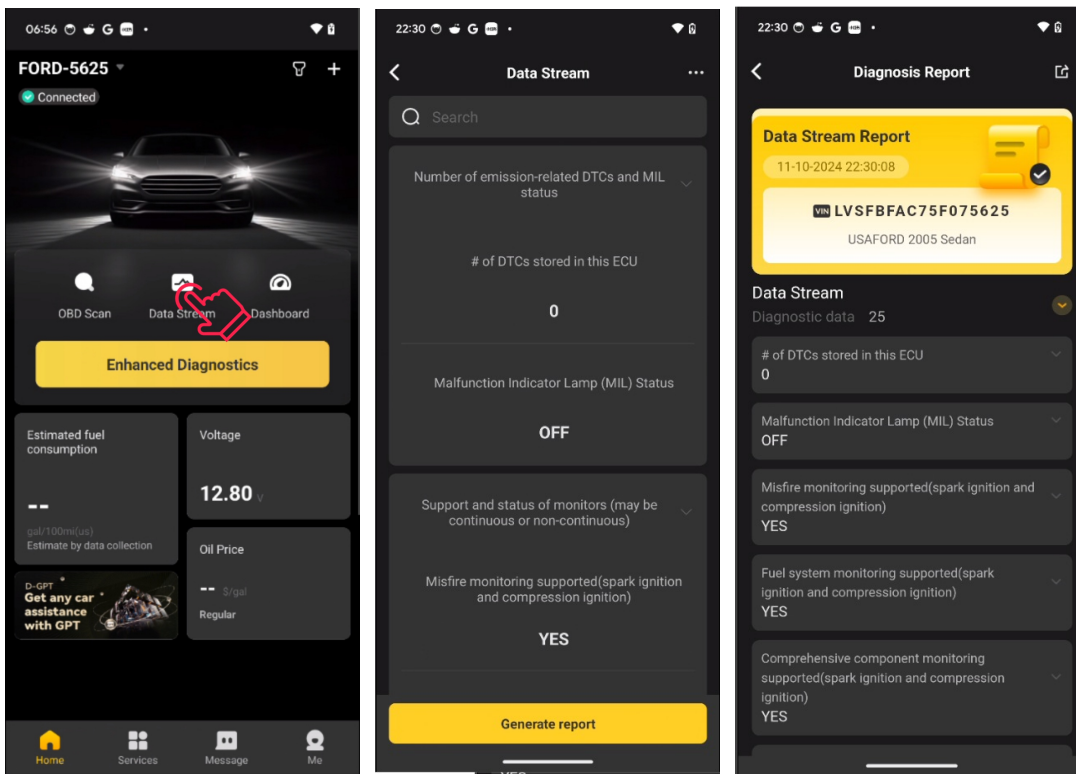
## 3. Data Stream

View OBD real-time data flow, you can select more data and combined data through the button in the upper right corner.

In the field of automotive diagnostics, data flow refers to the data parameters exchanged between electronic control units (ECUs), sensors, and actuators, which are read by specialized diagnostic instruments through diagnostic interfaces. The data stream changes with time and working conditions, providing real-time information on the working status of various systems and components of the vehicle for automotive maintenance technicians. The following are the main functions of data flow in automotive diagnosis: fault location, performance analysis, preventive maintenance, cylinder control, providing maintenance guidance, data analysis, etc

*Operating steps:*

*1. Insert the device, connect via Bluetooth successfully, click the "Data Stream" button on the homepage, read the data stream, and output the data stream report.*

Tips: ① The system adds 10 commonly used data streams by default in the initial state. Users can click on the upper right corner to select and display more data streams. ② Data streams can generate reports.

2. To view the visualization interface of the combined data stream:

① Click the "····" button in the upper right corner. ② Click the "Combined data" button, select the data stream option (cannot exceed 4 choices) that needs to be displayed, and click the "OK" button
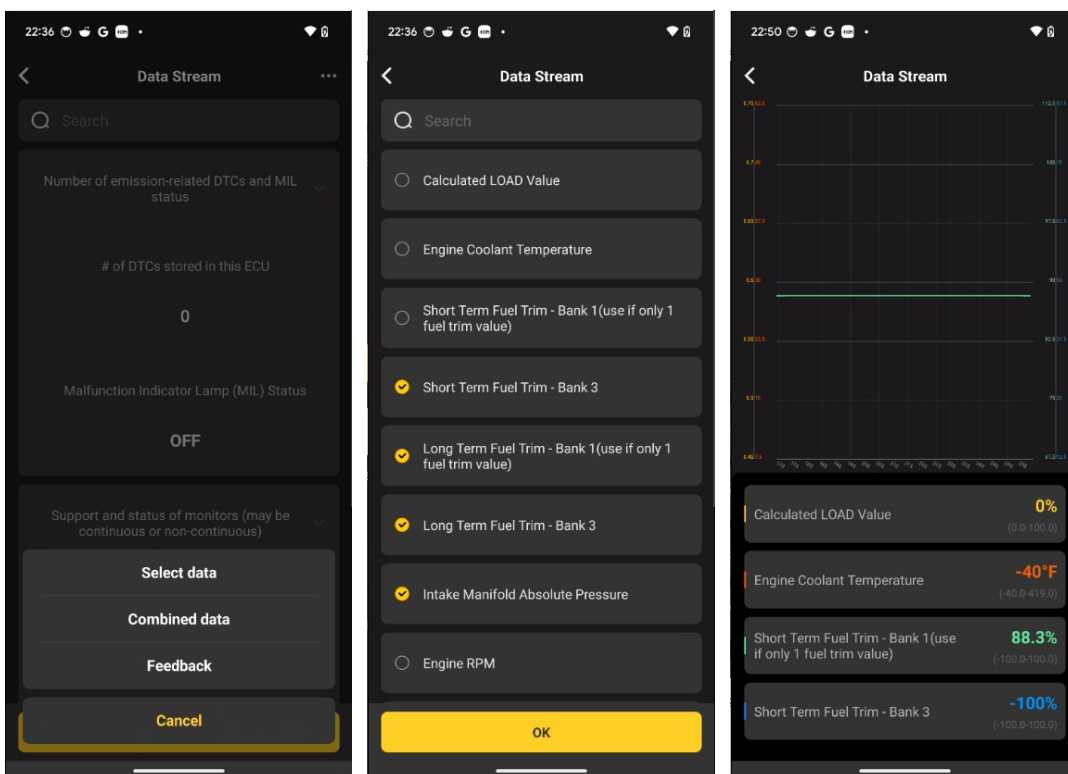


## 4. Smog Test

The main purpose of smoke testing is to check whether the vehicle's exhaust emissions meet the emission

standards set by the local government. This type of testing is an important part of the vehicle transaction, registration, or annual inspection process, aimed at reducing air pollution and protecting the environment.

*Operating steps:*

*1. Insert the device, connect via Bluetooth successfully, click on the "Smog Test" icon button on the service page, and read the test data.*
*2. Click on 'Generate report' to output the test report.*
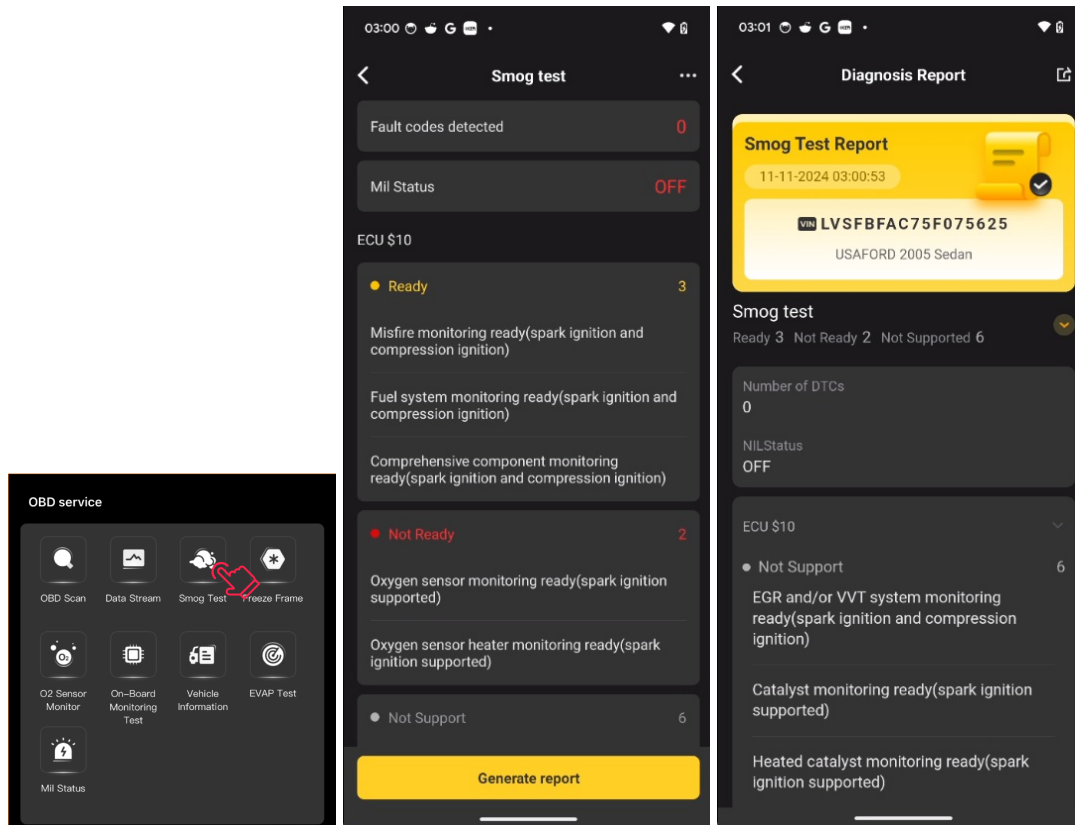


## 5. Freeze Frame

When the ECU of a vehicle detects a fault and triggers a fault code (DTC), it will automatically record and save the vehicle's status information at the time of the fault occurrence. These pieces of information include real-time data from multiple sensors, such as engine speed, vehicle speed, coolant temperature, etc., which are frozen at a specific point in time to form a detailed data snapshot. The function is mainly used for fault analysis, maintenance guidance, and overall vehicle performance evaluation.

*Operating steps:*

*1. Insert the device, connect via Bluetooth successfully, click on the "Freeze Frame" icon button on the service page, and read the freeze frame data.*
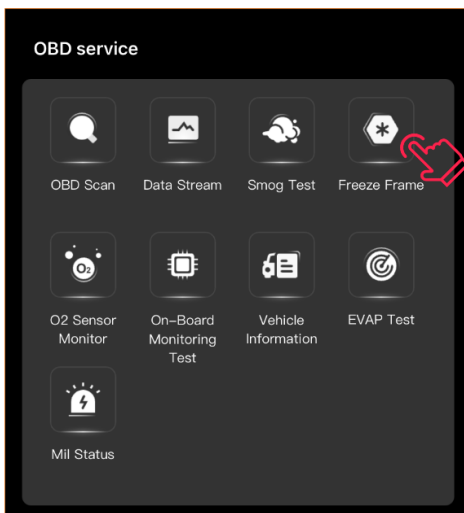
## 6. O2 Sensor Monitor

O2 Sensor Monitor function refers to the ability of the car's electronic control system to use the data provided by the oxygen sensor to optimize the combustion process when it recognizes the presence of the oxygen sensor and confirms its readiness. Oxygen sensor is one of the most important emission control devices in engine control systems. It adjusts the air-fuel ratio by measuring the amount of oxygen escaping from the exhaust, thereby improving combustion efficiency and reducing harmful gas emissions.

Effect:

- Real time monitoring: Real time monitoring of the status and data of the oxygen sensor to ensure the accuracy and timeliness of the data.
- Optimize combustion: Utilize data provided by oxygen sensors to optimize the combustion process of the engine, improve fuel efficiency, and reduce exhaust emissions.
- Fault detection: If the oxygen sensor malfunctions or has abnormal data, the O2 Sensor Monitor function can promptly detect and trigger corresponding fault codes, making it easier for technicians to diagnose and repair.

*Operating steps:*

*1. Insert the device, connect via Bluetooth successfully, and click on the "O2 Sensor Monitor" icon button on the service page.*
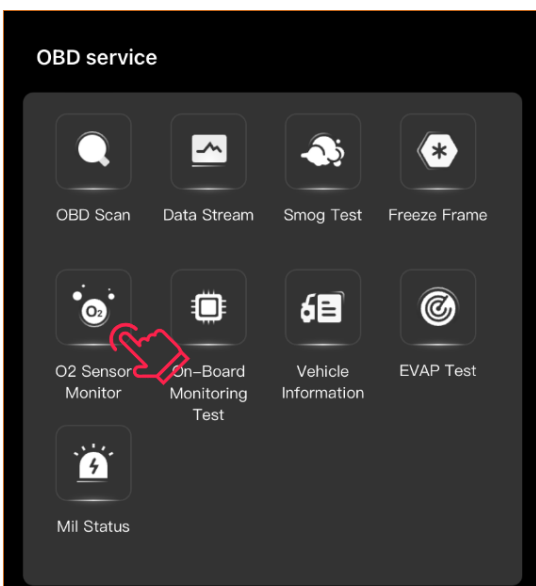
## 7. On-Board Monitoring Test

The on-board monitoring and testing function refers to the ability of the OBD system to test specific systems it monitors and report test results. The purpose of this feature is to assist maintenance personnel in quickly and accurately diagnosing vehicle emission related faults, ensuring that the vehicle meets environmental requirements.

The OBD system monitors vehicle emissions related systems such as the engine, catalytic converter, oxygen sensor, etc. through sensors and controllers. When these systems malfunction, the OBD system will record fault codes (DTCs) and communicate with external devices through diagnostic interfaces. Maintenance personnel can use professional diagnostic tools to connect to the vehicle ECU (electronic control unit) through the OBD interface and request on-board monitoring test results.

Effect: Through the on-board monitoring and testing function, maintenance personnel can quickly and accurately diagnose vehicle emission related faults, improving maintenance efficiency.

*Operating steps:*

*1. Insert the device, connect via Bluetooth successfully, click on the "On Board Monitoring Test" icon button on the service page, and read the data. 2. Click on 'Generate report' to view the report.*
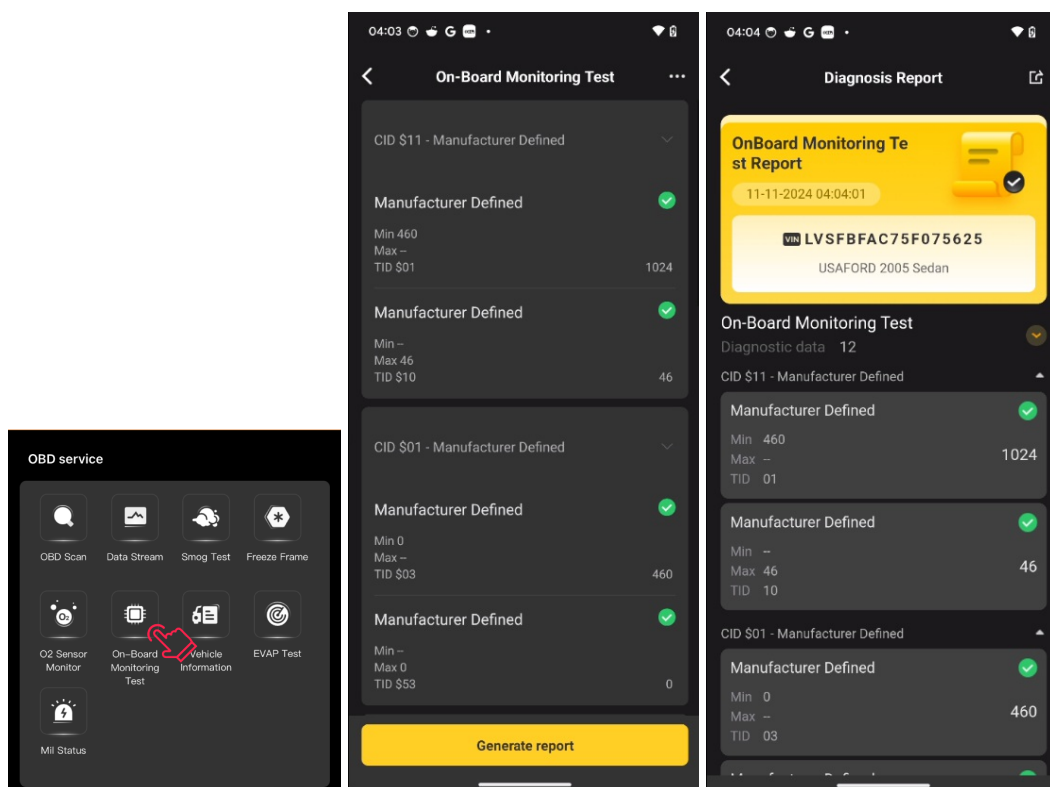


## 8. Vehicle information

The Vehicle Information function can obtain various information about the vehicle, including the Vehicle Identification Number (VIN), engine model, etc.

*Operating steps:*

*1. Insert the device, connect via Bluetooth successfully, click on the "Vehicle Information" icon button on the service page, and read the data.*

*2. Click on 'Generate report' to view the report.*
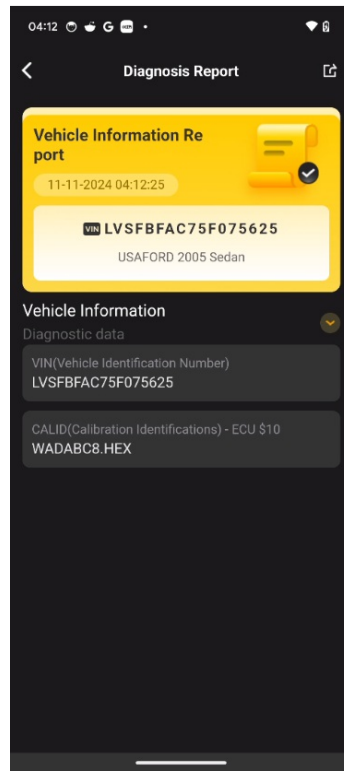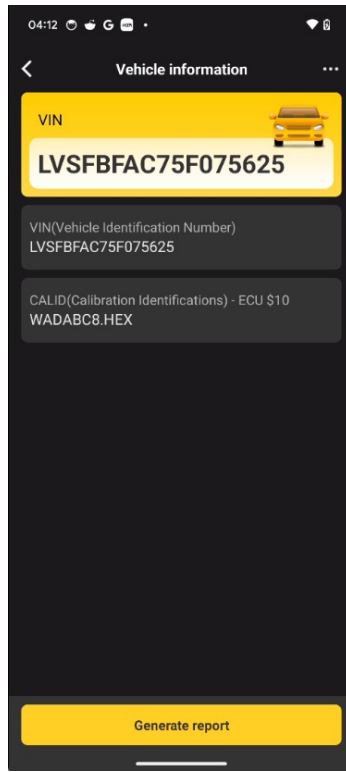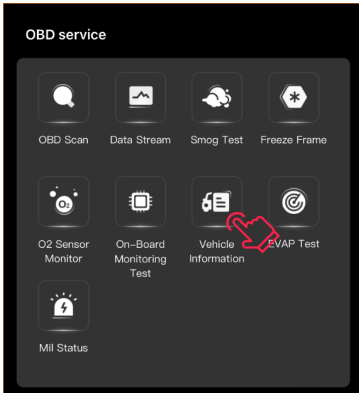
## 9. VAP Test

The EVAP Test function refers to the comprehensive testing and analysis of the vehicle's fuel evaporation control system through specific diagnostic equipment and methods, in order to confirm whether the system has faults or performance degradation. The purpose of this function is to ensure that the fuel evaporation control system can work properly, prevent fuel vapor from leaking into the atmosphere, and ensure the effective use of fuel and reduce emission pollution.

## 10. Mil Status

The Mil Status function uses professional diagnostic equipment or systems to monitor the status of the MIL lights on the vehicle in real time through DND, including whether they are on, flashing patterns, etc., to determine whether there are potential faults or abnormalities in the vehicle. The purpose of this feature is to assist maintenance personnel in quickly and accurately locating faults, improving maintenance efficiency, and ensuring the safety and reliability of vehicles.
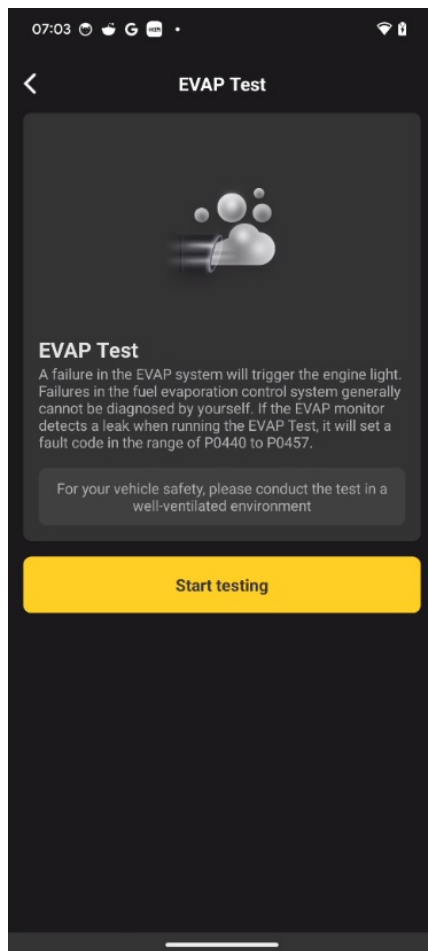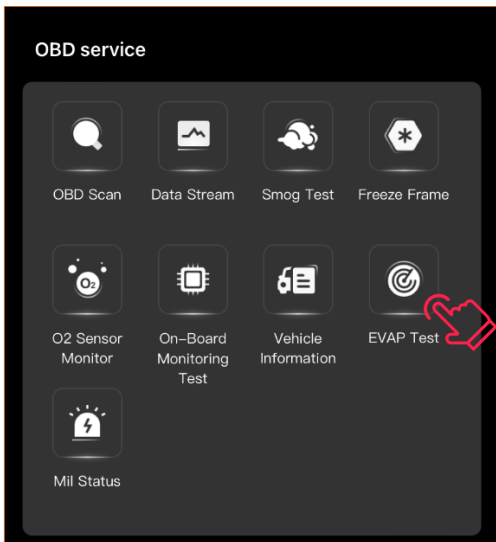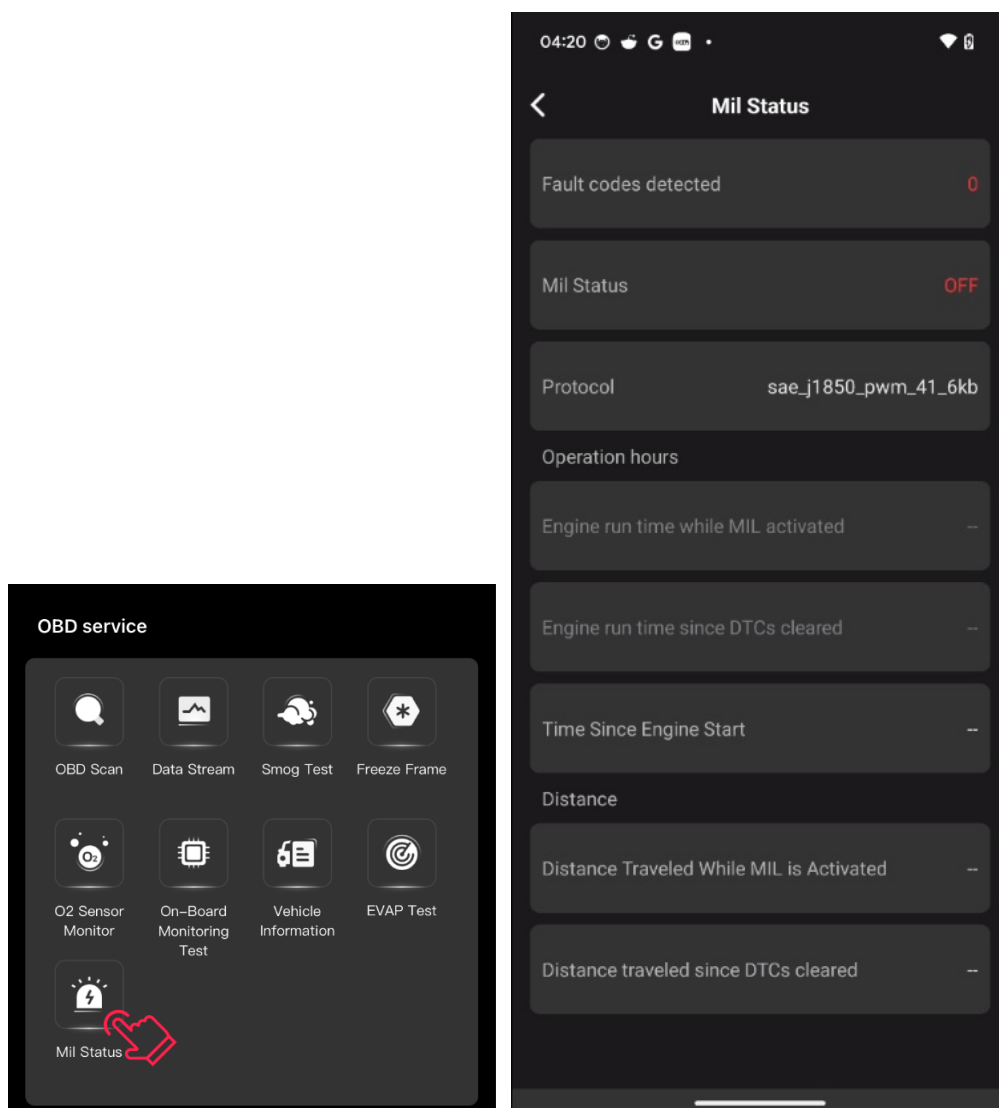
*Operating steps:*

*1. Insert the device, connect via Bluetooth successfully, click on the "Mil Status" icon button on the service page, and read the data.*



## 11. DTC Library

Quickly search for fault causes and repair suggestions by inputting fault codes.

## 4.2 Premium Service

### 1. Enhanced Diagnosis:

Support full system diagnosis for mainstream North American car models, including quick diagnosis, system selection, and deep scan. Please download 'OEM add-on' from My Vehicle before entering.

①Quick Diagnosis: Read vehicle system fault codes and determine the cause of vehicle faults. The warning light can be reset through the clear code function after the fault is resolved.

②System Selection:Select vehicle system for diagnosis and view data flow.

③Deep Scan: The latest equipped and supported systems for deep scanning vehicles.

*Tips:*

*①If your vehicle does not have a VIN code, please confirm whether the selected vehicle in the upper left corner is correct before running enhanced diagnosis. If a vehicle has not been created, please create it first.*

*②The next run of 'Quick Diagnosis' and' System Selection 'will include the latest equipped vehicle system after completing the deep scan.*

*1.1 Operating steps:*

*① Start the engine and insert Echo into the OBD port.*

*② Observe the device indicator light.*

- *Green light indicates that power has been applied.*
- *Blinking blue light indicates that Bluetooth is communicating.*
- *Continuous blue light indicates connect successfully.*

*③ Run DND APP and click on the "+" button, search and connect Echo. (The last 6 diqits of the Bluetooth name are the last 6 digitsof the device serial number for better identification of the device if there are multiple Echo)*
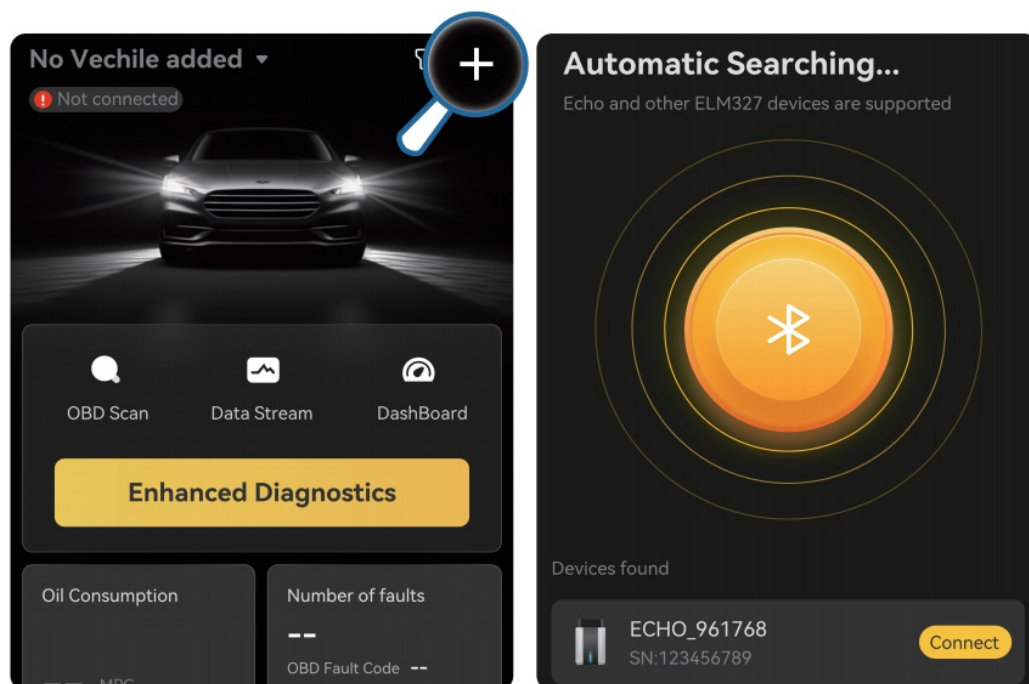


*④ Create a vehicle (if the automatic recognition of the vehicle VIN code fails, manual input of the VIN code is required)*
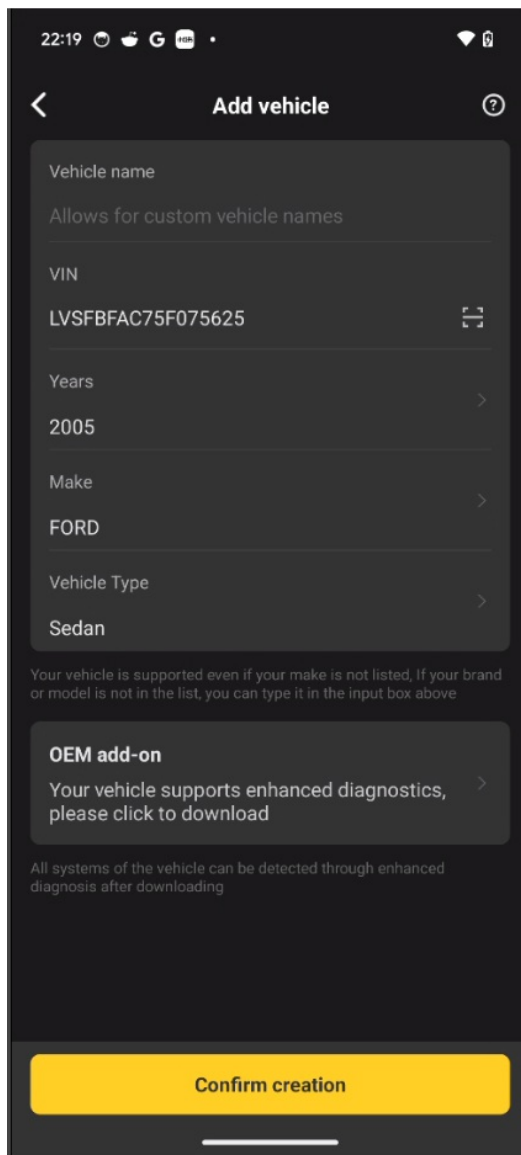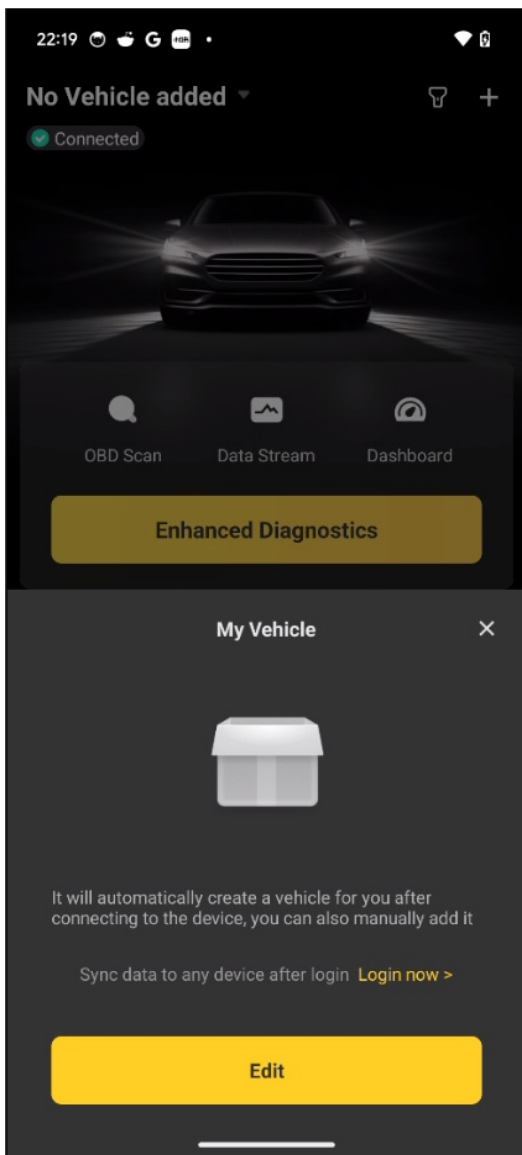
⑤ Click the Enhance Diagnosis button to enter the diagnosis interface and select System Diagnosis.

**Screen 1 (left):**

FORD-5625

Connected

OBD Scan    Data Stream    Dashboard

**Enhanced Diagnostics**

Estimated fuel consumption

--

gal/100mi(us)
Estimate by data collection

Voltage

**12.80** v

D-GPT
Get any car assistance with GPT

Oil Price

-- $/gal
Regular

Home    Services    Message    Me

**Screen 2 (right):**

System and function

**System Diagnosis**
Quickly detect faults in all vehicle systems

**System Scan**
Scan your vehicle to check if is equipped with the latest system modules

**System Selection**
Select system for separate diagnosis and data flow viewing

System diagnosis /**System Selection**

[System diagnosis] and [System Selection] will scan the system equipped by default on the vehicle. You can also use [System Scan] to check whether the vehicle has the latest system after completing the diagnosis

**System Scan**

The next time you execute the [System diagnosis] and [System Selection] functions after completing the [System Scan], the latest system equipped on the vehicle will be updated and scanned.

**Got it**

○ Don't show again

## 2. Oil Reset

The Oil Reset function refers to the ability to reset the vehicle's oil life indicator or oil change reminder light to its initial state through specific operations or devices. The purpose of this function is to clear the existing oil life data after the vehicle completes oil change and maintenance, in order to recalculate the next oil change cycle.

Operation steps:

1. Insert the device, connect via Bluetooth successfully, and click the "Oil Reset" icon button on the service page.

2. Choose "Diagnosis" button

3. Select the vehicle model for diagnosis.

4 Click "ok" button 5 Choose "Special Function"

6 Choose "Reset Service".

7 Select "Auto Reset"

8 Choose "Oil Reset (Minor Maintenance)".

9 Choose "7500 KM/180 Days (Without T)". (Choose based on the maintenance mileage or interval days of the selected oil brand)

10 Reset succeed, click "OK".
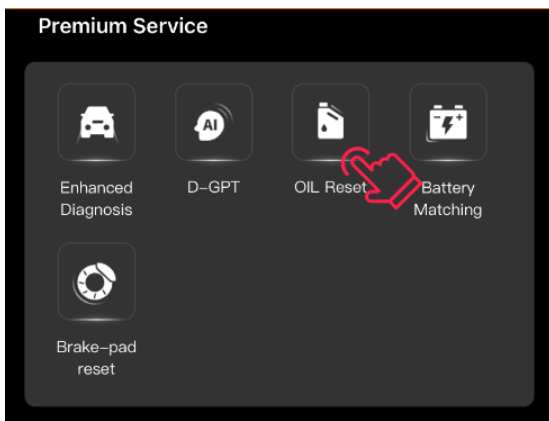
## 3. Battery Matching

The Battery Matching function refers to a series of technical means to ensure that each battery cell in the battery pack achieves a certain degree of performance matching, in order to improve the overall performance of the battery pack, extend its service life, and ensure safety. Its main purpose is to solve the problem of inconsistency in battery packs, including differences in battery capacity, internal resistance, voltage, and SOC (state of charge).
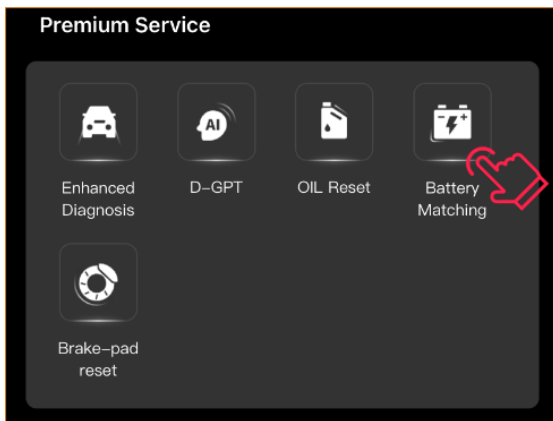


## 4. Brake-pad reset

Brake pads are important components in the vehicle braking system and will gradually wear out over time. When the brake pads wear out to a certain extent, the vehicle's brake pad warning system will issue a warning, indicating that the driver needs to replace the brake pads. However, if the reset operation is not performed after replacing the new brake pads, the warning system may continue to issue warnings because the system still considers the old and worn brake pads to be in use. Therefore, the purpose of the Brake pad reset function is to eliminate this false alarm and enable the warning system to accurately reflect the status of the new brake pads.

*Operation steps:*

*1. Insert the device, and after successful Bluetooth connection, click the "Brake pad reset" icon button on the service page.*

*2. Select vehicle brand.*

*3. Make sure the ignition is on and click "OK".*

*4. Confirm that the VIN code is correct and click "OK.*

*5. Ensure the conditions are met and click "OK".*

*6. Select vehicle model.*

*7. Select "03 BRAKE Electronics".*

*8. Select "Open Rear Brake Calipers".*

*9. Read the prompts carefully and click "OK"*

*10. Read the prompts carefully, click "OK" to continue.*

*11. After the replacement is complete, select "Close Rear Brake Calipers"*

*12. Read the prompts carefully and click "OK".*

*13. Click "OK" after reading the instructions carefully.*

*14. Click "Read Fault Codes"*

*15. No Fault Code is displayed, click "OK" to complete the operation.*
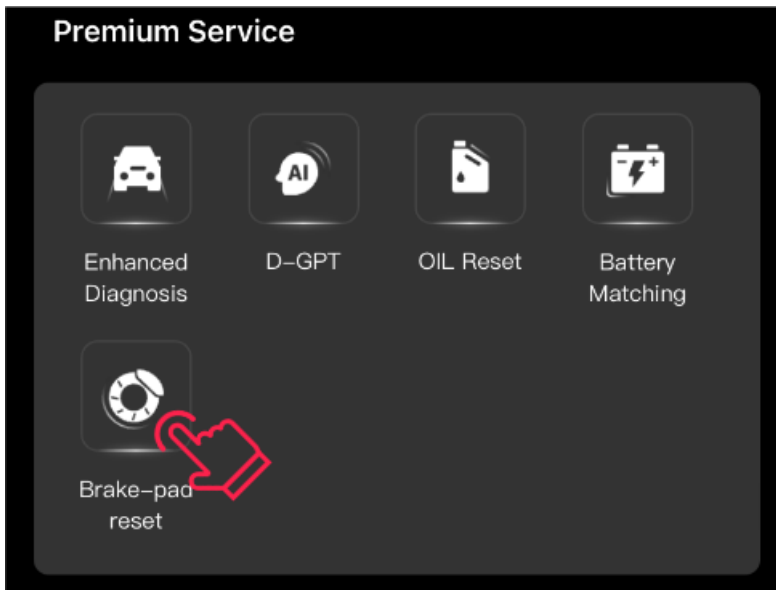


## 5. D-GPT

You can ask any questions about products, vehicle maintenance, or DIY guidelines from D-GPT.

## 6. More services inpreparation.

## 4.3 Personalized Service

## 1. Dashboard

Personalized dashboard, supporting custom data, dashboard styles, and dashboard quantity.

The dashboard function is designed to simulate and display the actual dashboard information of a car, in order to assist users in monitoring and diagnosing the vehicle's status. The dashboard function in automotive diagnostic apps typically serves the following core purposes:
a、 Display vehicle operating parameters
b、 Monitor the status of the vehicle system
C、 Assist in fault diagnosis
d、 View and manage various information of vehicles

*Operating instructions：*

Click the "Dashboard" button on the homepage to enter the dashboard interface and select the dashboard data to be displayed.

Tips:

- Each page can display up to 6 dashboards.
- Long press the dashboard to edit or delete it.
- Swipe left or right to switch dashboard pages.
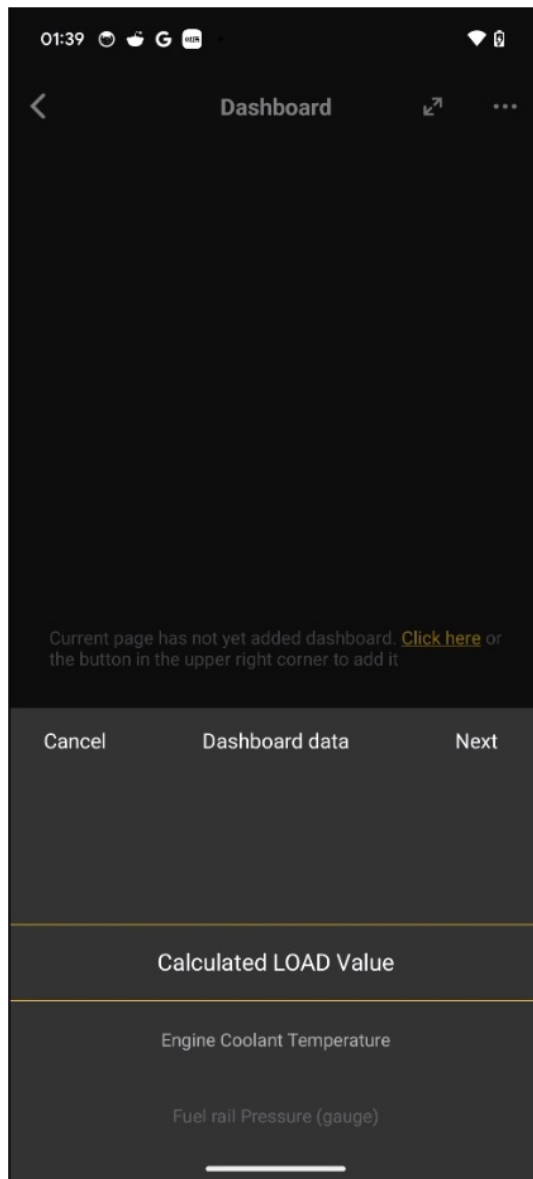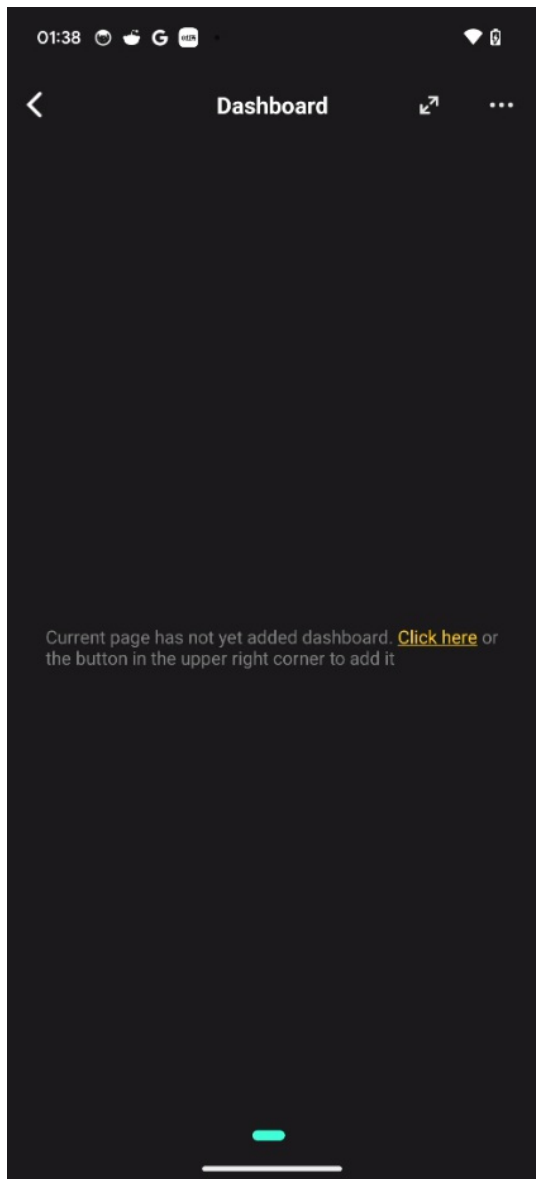
2. Diagnostic Report: View historical diagnostic reports.
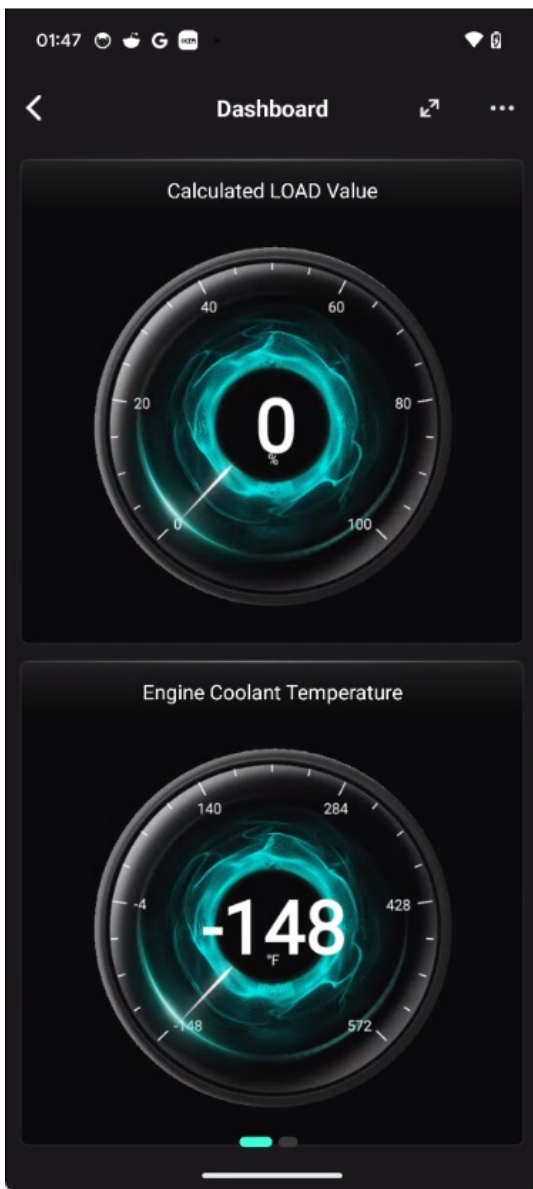
3. Oil Prices: View real-time oil prices and historical trends in your region.

**4.4 User Center**

**1. My Device**

Manage connected devices, support changing device Bluetooth names and unbinding.

**2. My Vehicle**

Create and manage vehicle information. If your vehicle supports enhanced diagnosis, please click 'OEM add on' to download the software package. Please check if the vehicle configuration information is correct on the current page after download (if a configuration item appears).

*Tips:*

*If your vehicle does not have a VIN code, please manually create the vehicle first to avoid affecting your use of enhanced diagnostic functions.*

## 3. Alarm

Manage overspeed warning, coolant temperature warning, and fatigue driving warning. When the set value is exceeded, APP will give an alarm prompt, and the function can be turned offif not needed.
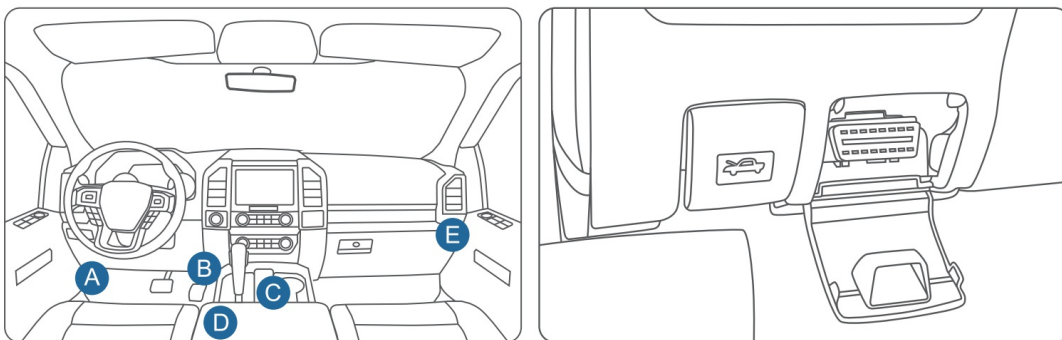
## 4. Help and feedback

View usage help and feedback.

## 5. Settings

Change units, clear cache, and upgrade device firmware. If you encounter problems during use, you can try repairing the device firmware.

## 5、FAQ

5.1 The position of the OBD port may vary between different vehicle models, and the possible positions are as follows:



5.2 Does my vehicle support enhanced diagnosis?

Echo supports mainstream North American & Europe models and is constantly updating. For detailed support models, please visit our official website at "www.odb.ai" or contact "support@obd.ai".

5.3 Does my vehicle support OBD diagnosis?

Echo supports all vehicles equipped with the OBDII/EOBD protocol after 1996.

5.4 What should I do if the connection between Echo and my phone fails?

①Check if the Bluetooth on the phone is turned on.

②Check that the vehicle's ignition key has been turned on.

③Check if the Echo indicator light is on and there is a beep sound when inserting into the OBD port.

④Try unplugging and closing the app, reinserting it, and then running the app to try connecting.

If the above operation still fails to connect, please contact us for assistance "support@obd.ai" we will provide you with assistance as soon as possible.

5.5. Will Echo consume my vehicle battery?

No, ANCEL has developed the DiagSwift™ intelligent sleep algorithm, which automatically enters sleep mode when

the device is not connected or operated for a long time without consuming the vehicle's battery.

5.6 Does Echo need firmware upgrade?

Yes, it does. When the Echo is connected via Bluetooth to your smartphone, it will automatically check if the firmware on your device is the latest version. If it's not, it will upgrade automatically.

5.7 Can I use enhanced diagnosis if my vehicle does not have a VIN code?

Firstly, please confirm whether the vehicle model supports it. If so, after successfully connecting to Echo, please manually create the vehicle and download "OEM add on", and ensure that the vehicle is currently selected to use the enhanced diagnostic function.

## 6、Attention

6.1 ANCEL has full intellectual property rights to the software used in this product. For the behavior of cracking this product, We will stop the product and reserve the right to pursue legal responsibility.

6.2 Do not drop, puncture, insert foreign objects or place heavy objects on the equipment from high place, as vulnerable components inside may be damaged.

6.3 The equipment is a sealed device without user repairable components inside. Repairs must be carried out by authorized repair agencies or authorized technicians. Attempting to disassemble or modify the equipment will be out of the warranty.

6.4 Avoid wetting the equipment and do not immerse it in water or place it in a location that may absorb moisture or other liquids.

## 7、Warranty Card

7.1 Your Echo is covered for 1 years from the date of purchase.

7.2 If you are having problems with Echo, please contact us with description of the problem you are having, we will solve the problem for you as soon as possible.

Official Website: www.anceltech.com

Customer Service Email: support@anceltech.com

Federal Communications Commission (FCC) Statement
This device complies with part 15 of the FCC Rules. Operation is subject to the following two
conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
●Reorient or relocate the receiving antenna.
●Increase the separation between the equipment and receiver.
●Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
●Consult the dealer or an experienced radio/TV technician for help.
Warning: Changes or modifications made to this device not expressly approved by

may void the FCC authorization to operate this device.
Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

RF exposure statement:
The transmitter must not be colocated or operated in conjunction with any other antenna or
transmitter. This equipment complies with the FCC RF radiation exposure limits set forth for
an uncontrolled environment. This equipment should be installed and operated with a Minimum distance of 20cm between the radiator and any part of your body.