Service Technical Information

I. Communication Subject

Communication No.: TW-ALL-DS-2025042401 **Release date:** April 24th,2025

Communication name: IM All-round Diagnostic(ADS) User Manual

Communication type: Technical World

Related vehicle models: ALL

Related vehicles: ALL

II. Communication Content

Preface

IM All-round Diagnostic System(ADS), which is an online diagnostic system used for vehicles with a brand-new electrical architecture

The content of this user manual is based on ADS version1.0.35. Its functions and operations are introduced and explained in two chapters, aiming to help maintenance engineers correctly and fully understand and use the diagnostic tool in their daily work, and improve work efficiency. With the update of the ADS version, a new version of the user manual may be released. At that time, this user manual will automatically become invalid. Please pay attention to the release of the new version of the user manual

Chapter Ⅰ Introduce the functional composition, operating environment and system interface of ADS

Chapter Ⅱ Introduce all the functions of the ADS client and the corresponding operation instructions

This communication adds ADS offline package management function and authorization process introduction on the basis of the original. Effective immediately, the original *TW-ALL-DS-2025022801-IM All-round Diagnostic (ADS) User Manual* is invalid. Please pay attention to it.

Version Information

Version	Date	Revisor	Revision Record
V1.0	2025-2-28	FU Xinliang	1. Compile the first edition of the ADS User Manual
V1.1	2025-4-24	FU Xinliang	1. Add the function introduction of Package Management 2. Add ADS authorization process introduction 3. Optimize some function descriptions

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Chapter I Introduction to IM All-round Diagnostic System(ADS)

The IM All-round Diagnostic System (ADS) realizes the maintenance and upkeep of vehicles through online diagnosis. It provides functions such as vehicle diagnostic functions (including reading fault codes, real-time display, action test, module information, etc.), baseline management, ECU replacement, and routine (functions like add/delete NFC, calibration of intelligent driving cameras, etc.).

The ADS system is composed of three parts: the ADS client, configuration information query, and module information query

- ADS client:Communicate with the vehicle through an OBD (On-Board Diagnostics) network cable to achieve vehicle maintenance and repair functions
- Configuration Information Query:Query the configuration information of the vehicle
- Module information query:Query the latest software information of the vehicle in the database

1.1. Introduction to the ADS Client

After the ADS client is installed on the local computer, connect to the vehicle via an OBD network cable to achieve the maintenance and repair of the vehicle.

1.1.1. Introduction to the Operating Environment of ADS

To ensure the normal operation of ADS, the following basic conditions need to be met:

- ✓ The computer's hardware and software should meet the standardized configuration requirements of the after-sales diagnostic system

Note

For specific requirements, please refer to *TB-EP33L-GE-2025040102-Standardization of After-sales Diagnostic System*

- ✓ The current user needs to have Windows administrator privileges
- ✓ Confirm that the Windows Defender Firewall of the diagnostic computer has been completely turned off
- ✓ Confirm that no antivirus software,PC management software,or similar software is installed on the diagnostic computer
- ✓ During the use of the ADS client, connect the diagnostic computer and the vehicle with an OBD network cable
- ✓ During the use of the ADS client,it is necessary to obtain information from the database,please ensure that the network connection is normal when it is running

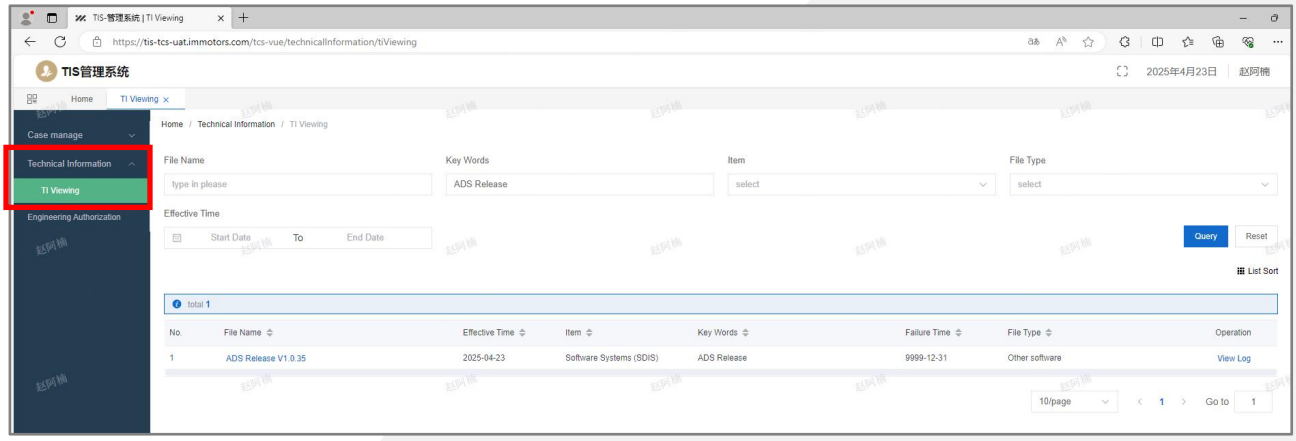
OBD network cable

1.1.2. Installation Process of ADS Software

1.1.2.1. Software Download

a. Log in TIS system

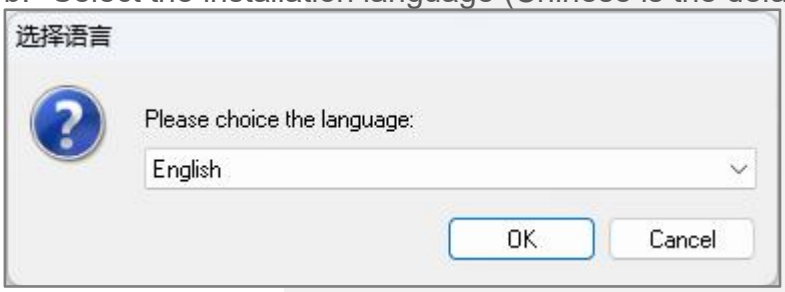
b. Functional path: Technical Information → TI Viewing. Search by the keyword "ADS Release", download the installation package of the ADS software according to the requirements of the technical information, and refer to ***TW-ALL-OS-2024041701-TIS User Manual***



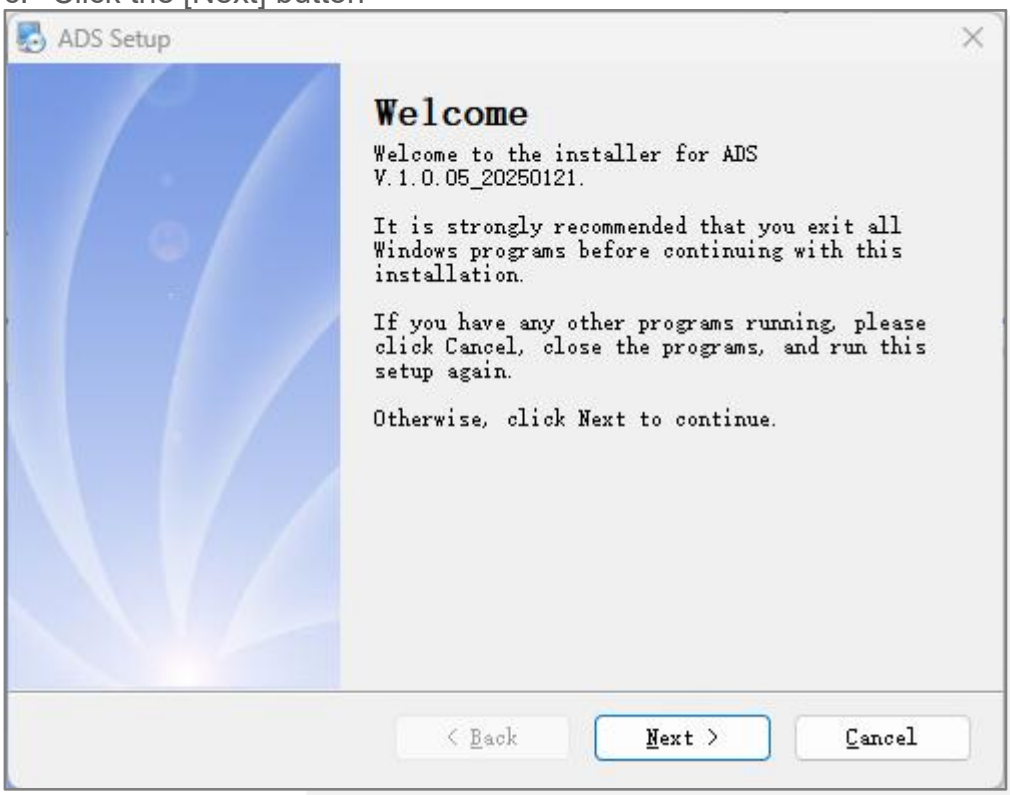
1.1.2.2. Software Installation

a. Double-click the ADS client installation package

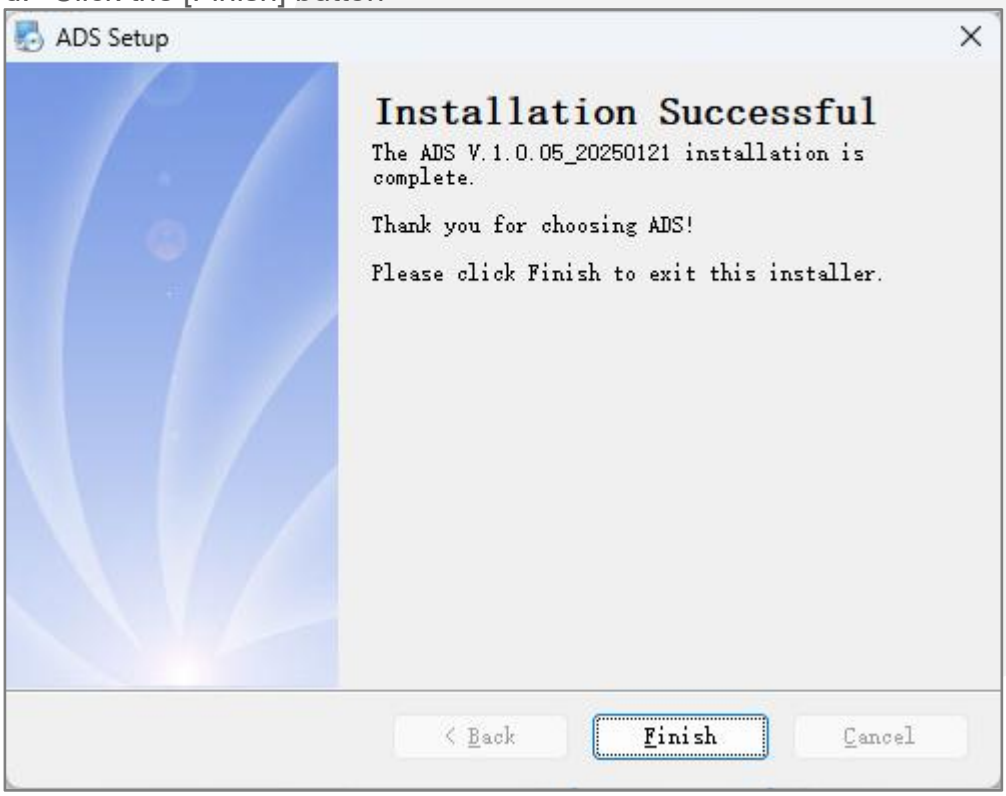
b. Select the installation language (Chinese is the default),and click the [OK] button



c. Click the [Next] button



d. Click the [Finish] button



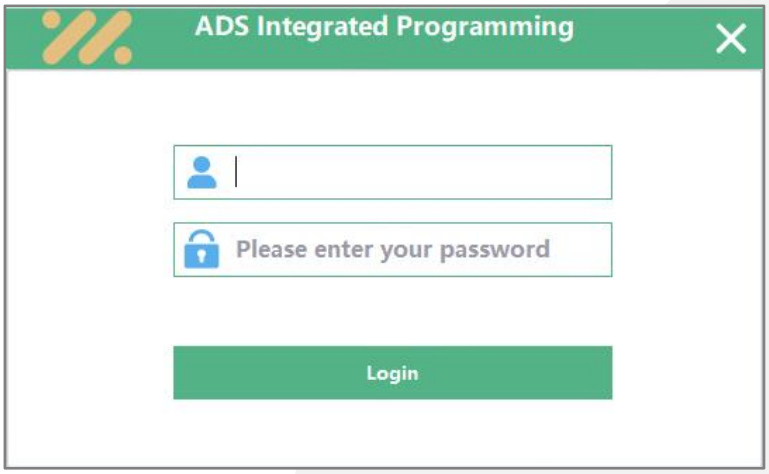
e. Automatically generate a shortcut on the desktop

1.1.3. Login to the ADS Client

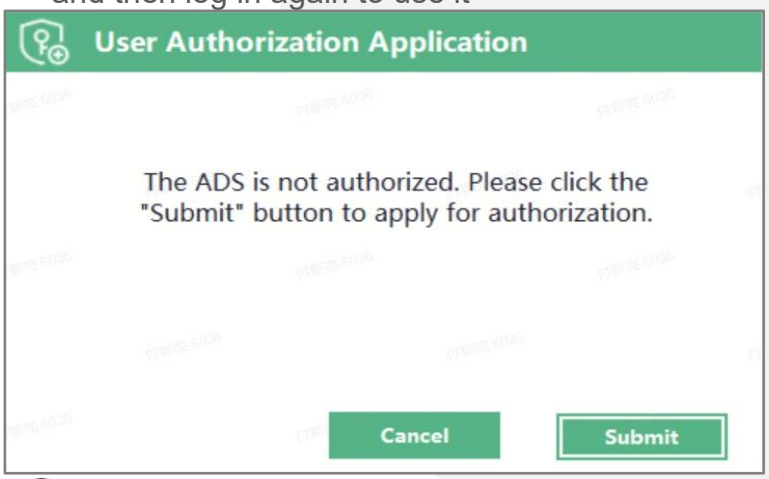
(1) Software Startup

a. Double-click the ADS shortcut to launch the ADS client

b. On the login interface, enter your personal account and password, and click the [Login] button



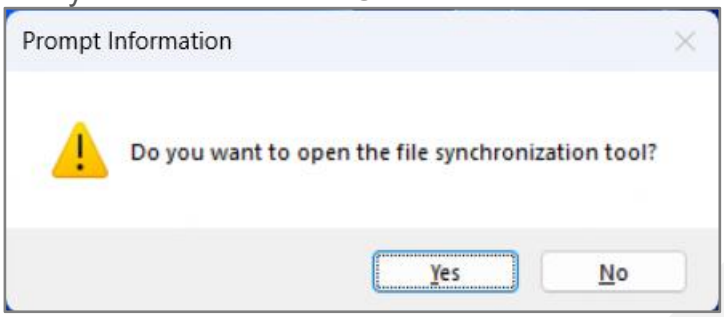
c. Pop up a dialog box,prompting that the ADS is not authorized. Click the [Submit] button, and then log in again to use it



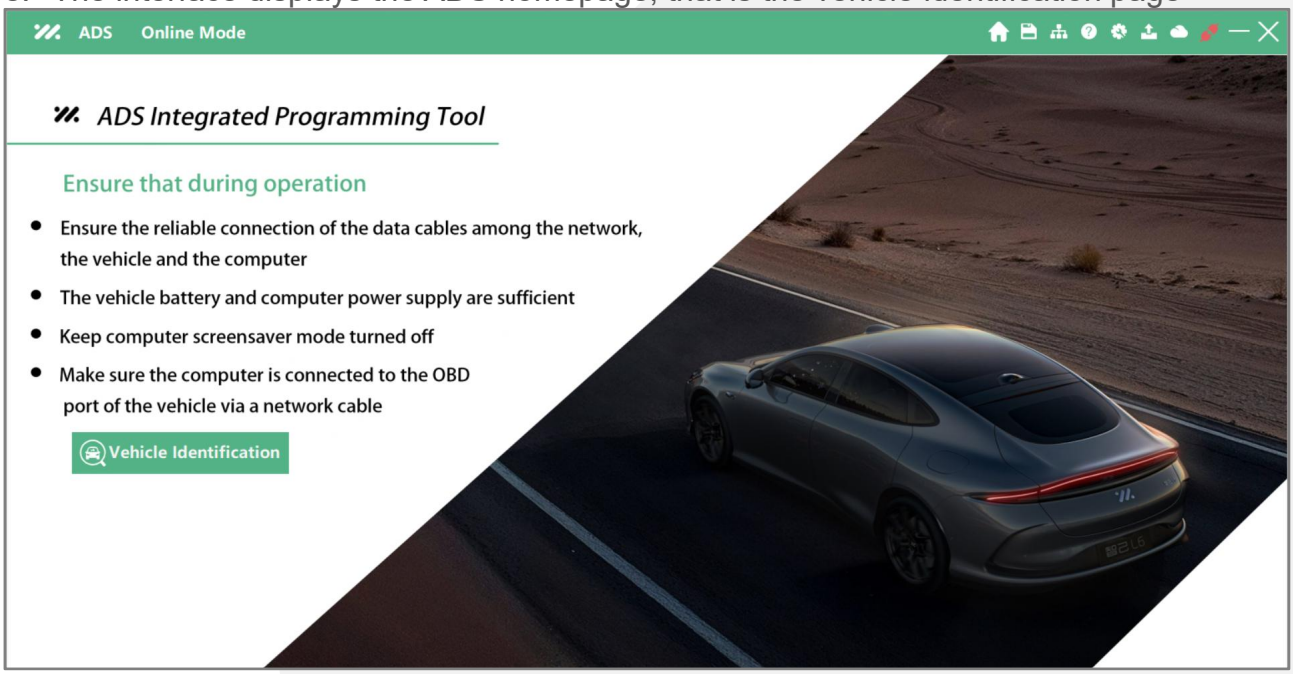
Note

- There are two scenarios that require authorization: a. Install ADS for the first time on a new computer, b. Log in after the authorization expires
- Authorization approval takes some time. Please wait for 3-5 minutes after submitting the application and log in to ADS again

d. After logging in, a dialog box will pop up, prompting whether to open the file synchronization tool. Click the "Yes" or "No" button as needed



e. The interface displays the ADS homepage, that is the vehicle identification page



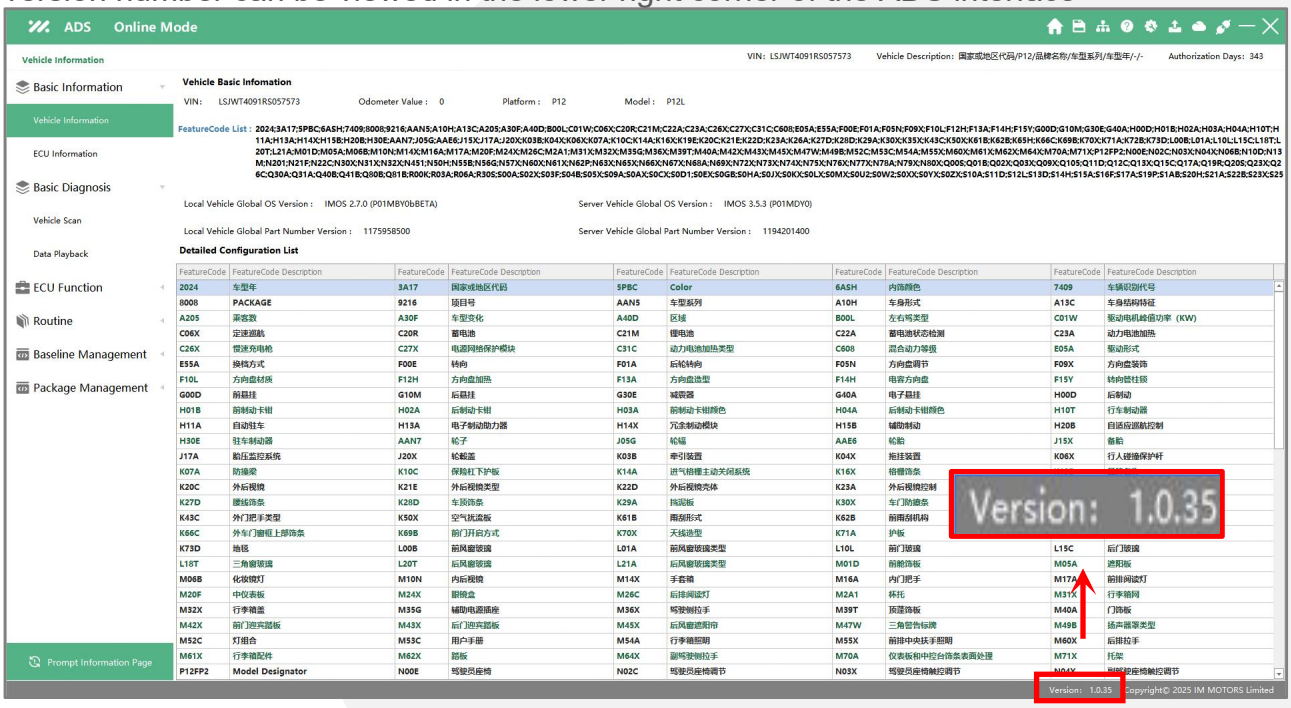
Chapter II Introduction to the Functions of ADS

After the vehicle identification is completed, the system will automatically enter the function interface of ADS. This interface contains six major functional blocks, corresponding to eight functions. The details are shown in the following table.

Basic Information	Basic Diagnosis	ECU Function
Vehicle Information	Vehicle Scan	ECU Replacement
ECU Information	Data Playback	––

Routine	Baseline Management	Package Management
Routine	Baseline Serial	Offline Package

The main functions of ADS are shown in the left menu bar of the figure below, which can be switched by clicking. The content of this manual is based on the ADS V1.0.35, and the version number can be viewed in the lower right corner of the ADS interface



2.1. Vehicle Identification

After the ADS client is opened, the main interface for vehicle identification is displayed by default. Click the [Vehicle Identification] button to start establishing communication with the vehicle and complete the operation of vehicle identification. When identifying the vehicle, after the ADS obtains relevant data according to the identified VIN, it will automatically jump to the "Vehicle Information" tab and update the relevant information in the status bar.

When identifying the vehicle, the ADS reads the vehicle's VIN from the vehicle's key modules (the key modules generally include the ICC/ICB,BCM,and SDM.The definitions of key modules may vary among different vehicle models).

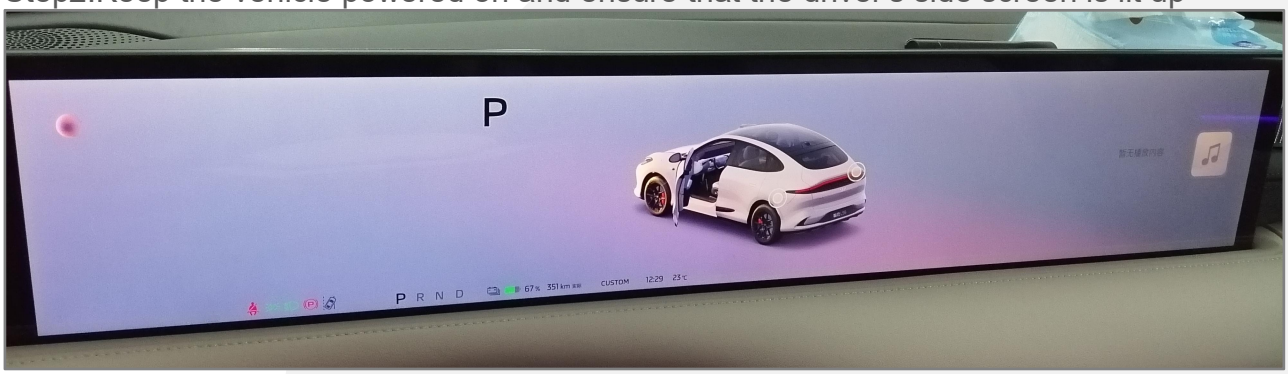
Caution

- After the identification is completed, make sure that the VIN is correct to avoid irreversible consequences such as software or configuration errors, and even damage to the modules.
- During the vehicle maintenance process, you can click to return to the vehicle identification homepage

2.1.1. The steps of "Vehicle Identification"

Step1:Connect the vehicle and the diagnostic computer running ADS with an OBD network cable

Step2:Keep the vehicle powered on and ensure that the driver's side screen is lit up



Step3:Start the ADS client and click the [Vehicle Identification] button on the main interface

Step4:Read the VIN information of the key vehicle modules and display the reading results. The VIN reading results are divided into the following situations:

- ✓ If it is completely consistent (except that all key modules are new parts), the read VIN will be used as the VIN for vehicle identification for all subsequent operations.
- ✓ If it is not completely consistent, a pop-up window will prompt the user to manually enter the VIN(with two verification steps to ensure consistency).Moreover,the entered VIN must be within the range of the VINs read from the key modules. In this case, the manually entered VIN will be used as the VIN for vehicle identification for all subsequent operations
- ✓ When the normal VIN cannot be read for all key modules, a pop-up window is used to prompt the user to manually enter the VIN (with two validations to ensure consistency)

Step5:The VIN finally determined according to the judgment logic shall be used as the VIN for vehicle identification. Use this VIN to read the relevant information of the vehicle, and obtain the relevant information in the database through the network

Step6:After the vehicle identification is completed, enter the ADS function interface, which defaults to the vehicle information interface

2.2. Basic Information

Basic Information function includes Vehicle Information function and ECU Information function

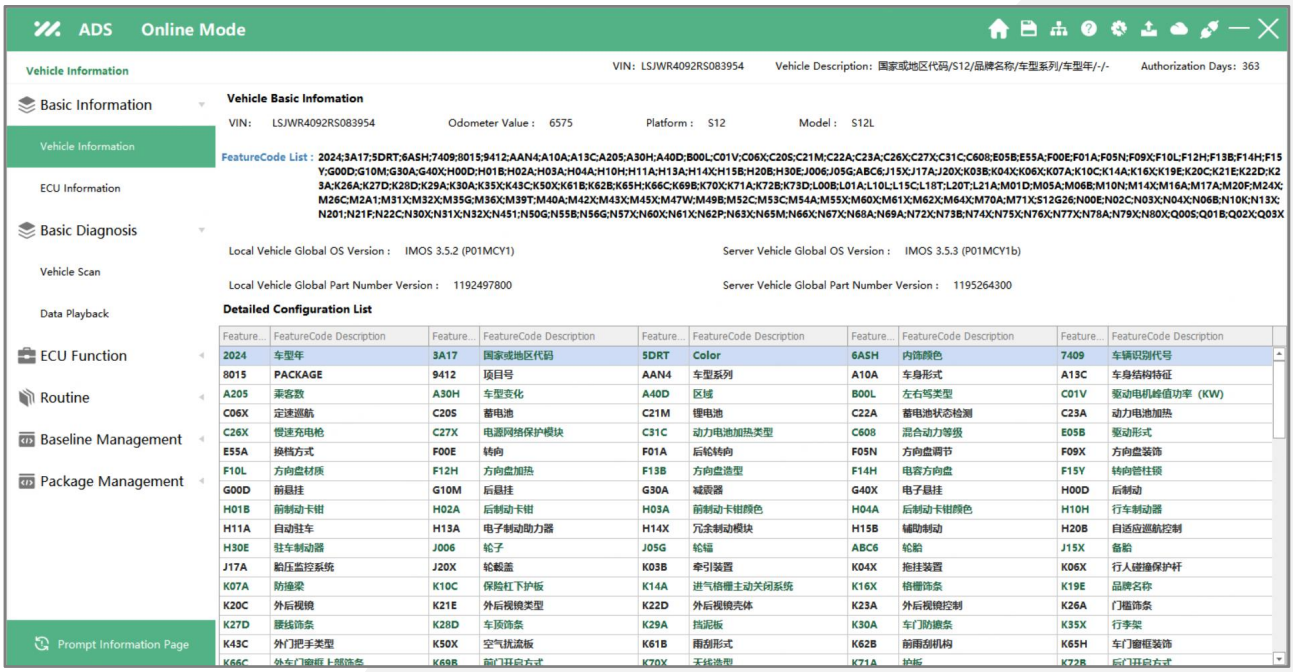
2.2.1. Vehicle Information

Vehicle Information function:Display the vehicle configuration, include VIN, Odometer, Platform, Mode, Feature code list and detailed configuration list

Introduction to the Information Displayed on the Interface

Information	Description
VIN	The VIN (Vehicle Identification Number) of vehicle identification
Odometer value	The mileage of the vehicle
Platform	The platform information corresponding to the VIN of vehicle identification
Model	The model information corresponding to the VIN of vehicle identification
Feature code list	The configuration list corresponding to the VIN of vehicle identification
Local Vehicle Global OS Version	The vehicle global OS version of the current vehicle
Server Vehicle Global OS Version	The latest vehicle OS version in server of the current vehicle
Local Vehicle Global Part Number Version	The vehicle software number of the current vehicle
Server Vehicle Global Part Number Version	The latest software number in server of the current vehicle
Detailed Configuration List	The feature code list and their corresponding descriptive information of the VIN of vehicle identification
Feature Code	The feature code list of the current vehicle
Feature Code Description	Each feature code descriptive information of the current vehicle

Vehicle Information

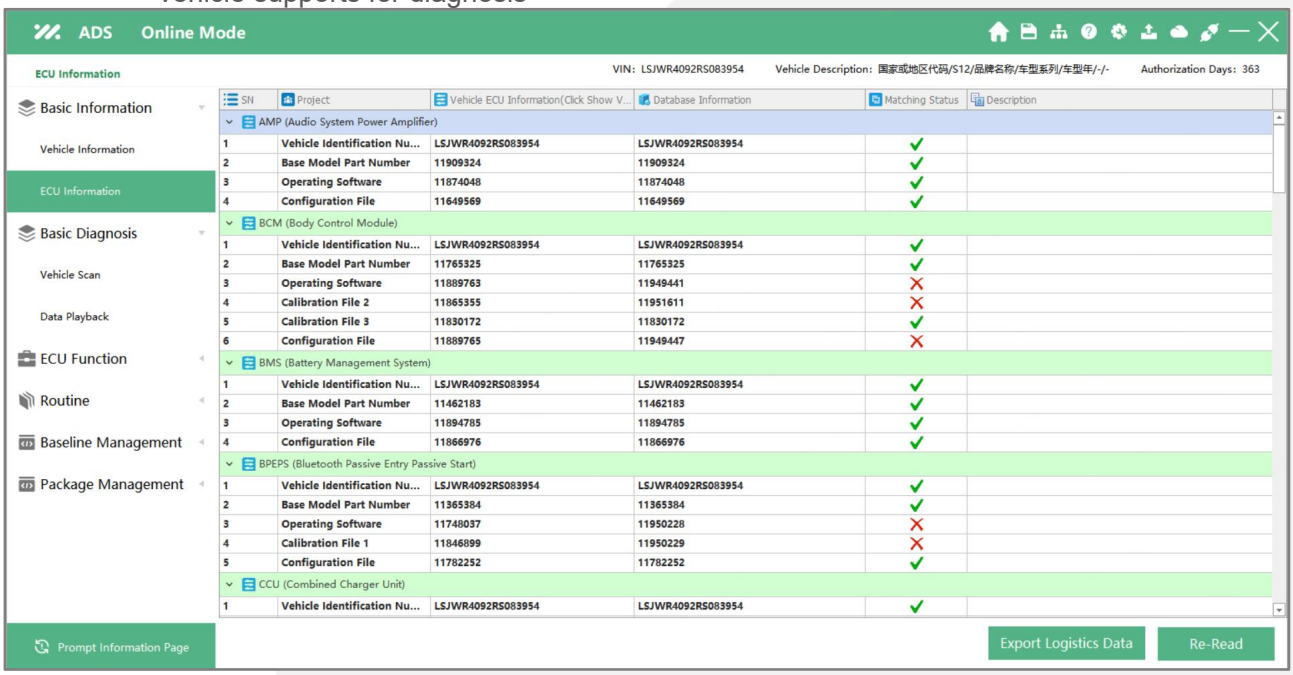


2.2.2. ECU Information

ECU Information function: Taking the controller as a unit, display the software and hardware information read from the vehicle controller and the latest software and hardware data information queried from the database, and show the matching status

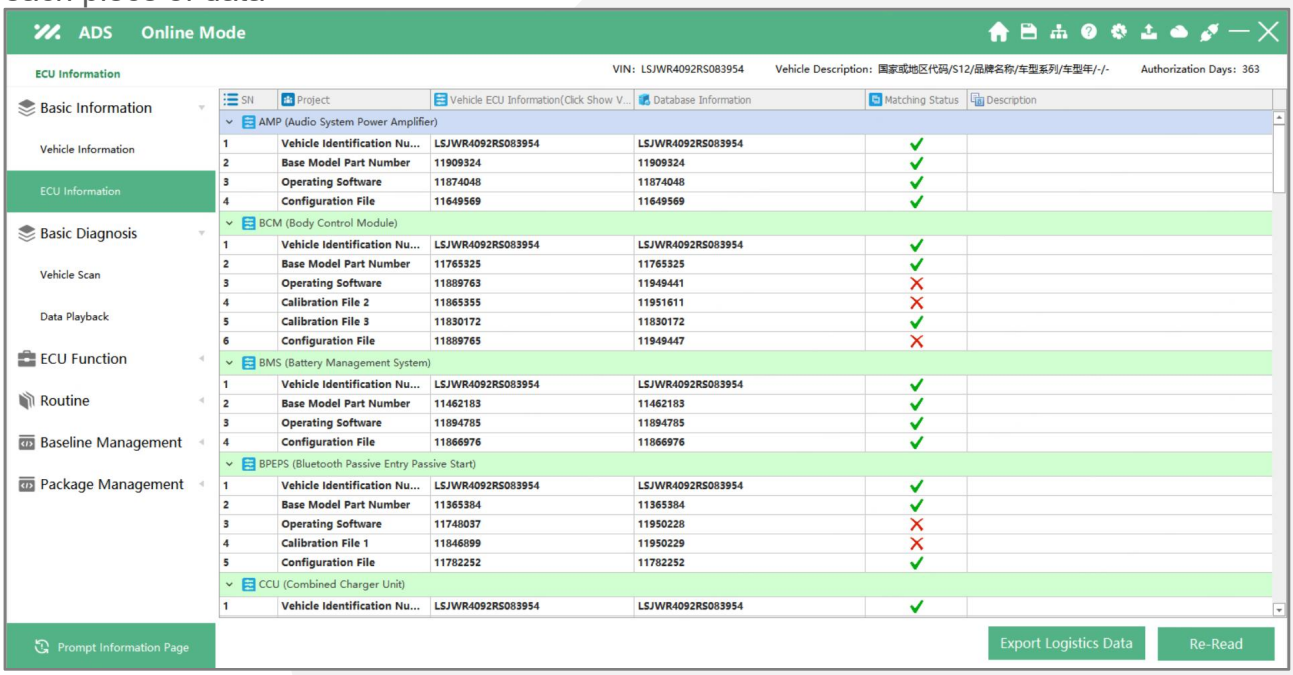
Note

- The VIN code information in the database of each controller is actually the VIN code of vehicle identification
- The list of controllers displayed in this table only shows all the controllers that the current vehicle supports for diagnosis



2.2.2.1. Introduction to the Controller List Information

Project:The controller information data entries supported by each controller. The entry data varies depending on the different controllers
Vehicle ECU Information: The controller information read from the vehicle
Small Version: Click Vehicle ECU Information will display or hide the small version
Database Information:The latest controller information obtained from the database according to the vehicle identification VIN. This data information can be written into the controller through the "diagnostic function"
Matching Status:The comparison results between the "Vehicle ECU Information" and the "Database Information" for each piece of data,include ✓,✗
Description:The explanatory information corresponding to the "database information" of each piece of data



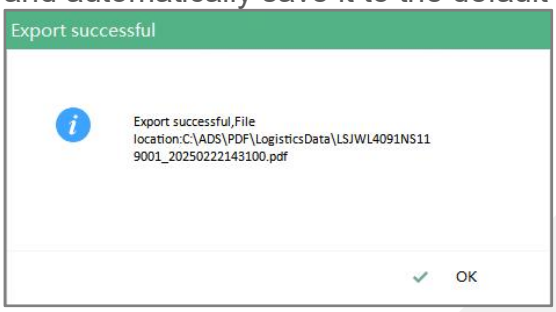
2.2.2.2. Introduction to the Matching Status

✓:The "Vehicle ECU Information" and the "Database Information" corresponding to the data entries are consistent
✗:The "Vehicle ECU Information" and the "Database Information" corresponding to the data entries are inconsistent

2.2.2.3. ECU Information Re-read and Export Function

Re-Read :Re-read the information of all the controllers of the vehicle, and compare it again with the information in the database. Update the display information on this interface. The updates include: the controller list, the data list of each controller, the vehicle ecu information and database information of each piece of data, and update the display

Export Logistics Data :Export the currently read information of the vehicle's overall controllers and automatically save it to the default directory on the disk C

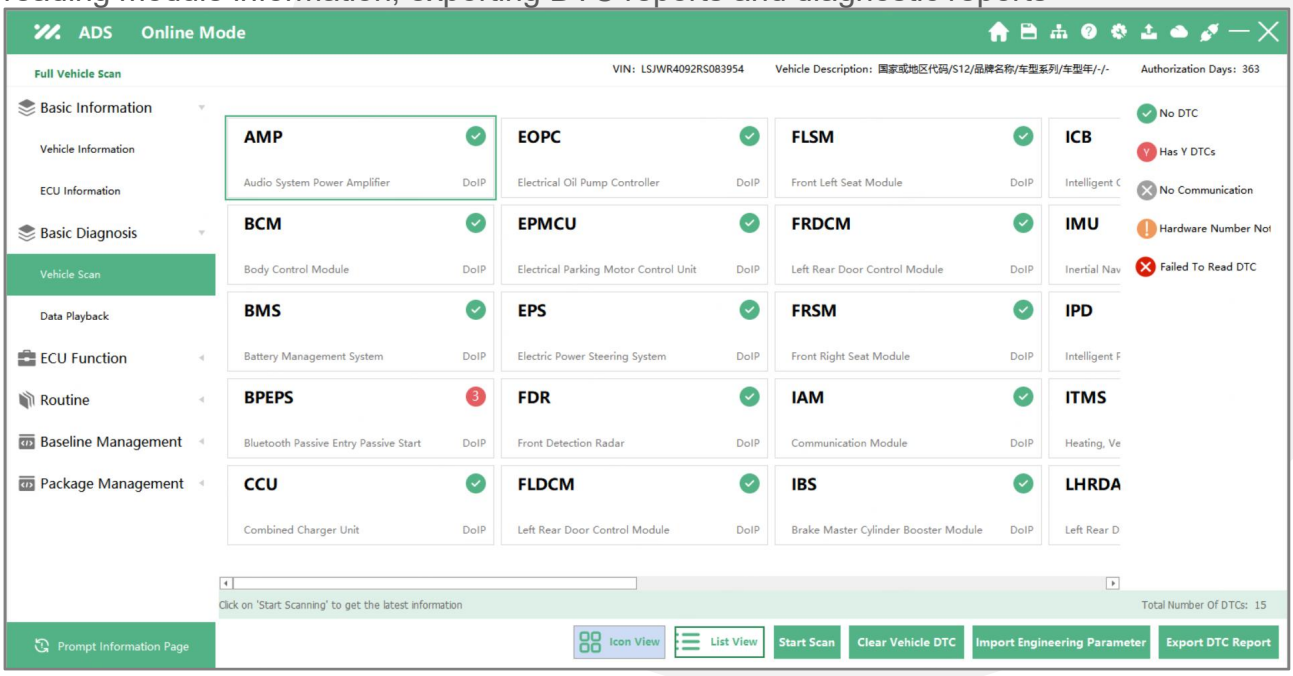


2.3. Basic Diagnosis

Basic Diagnosis includes two functions: Vehicle Scan and Data Playback

2.3.1. Vehicle Scan

Vehicle Scan:It can implement functions such as reading and clearing fault codes, reading the freeze frame of a single controller, real-time display of data streams, action tests, reading module information, exporting DTC reports and diagnostic reports



2.3.1.1. Introduction to the interface of Vehicle Scan

The interface of Vehicle Scan includes functional buttons such as Icon View, List View, Start Scan, Clear Vehicle DTC, and Export DTC Report.

Note

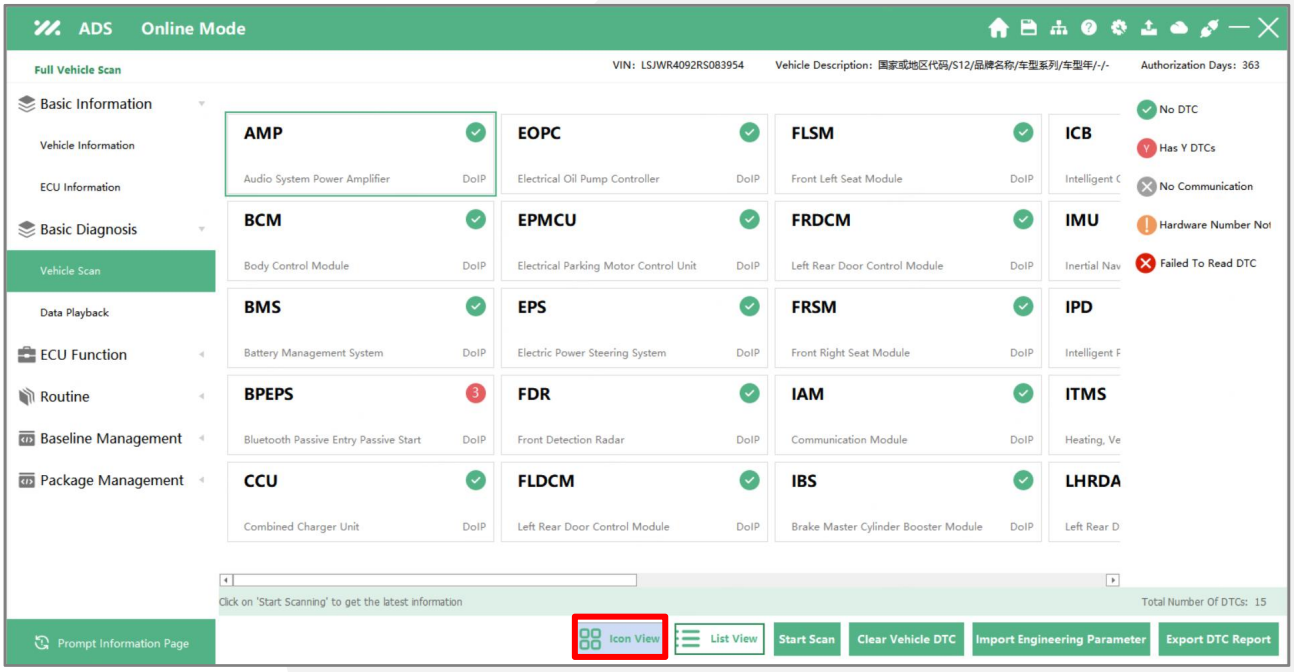
The results of Vehicle Scan will not be retained after re-performing the vehicle identification

2.3.1.2. Controller View of Vehicle Scan

The controller view of Vehicle Scan is divided into an icon view and a list view. The content includes data such as the controller name, status, bus type, and fault situation

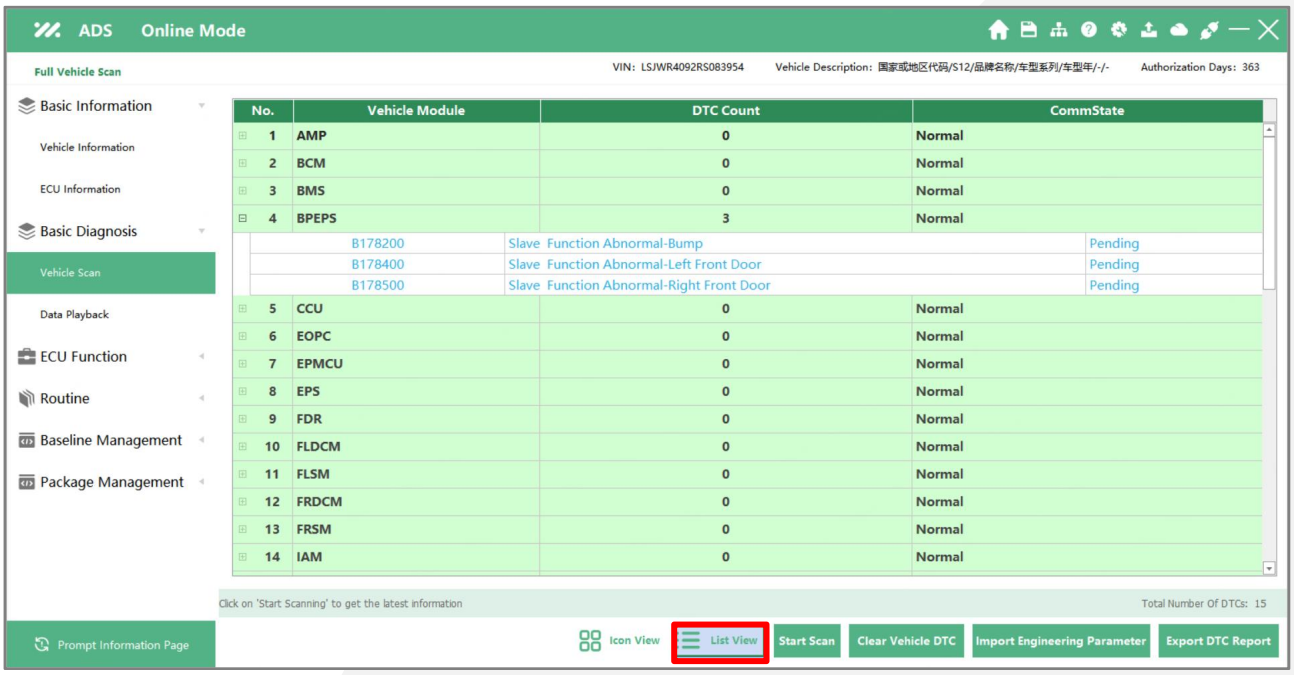
2.3.1.2.1.Icon View

Icon View:



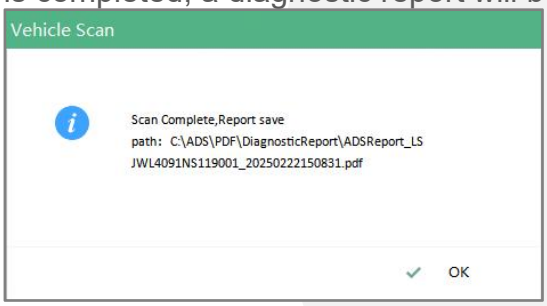
2.3.1.2.2.List View

List View:



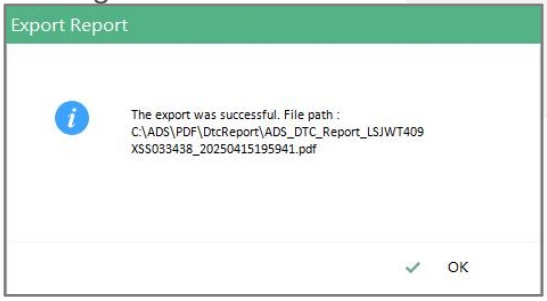
2.3.1.3. Vehicle Scan

Start Scan: After clicking, it will start to read the data of all vehicle modules. Once the scan is completed, a diagnostic report will be generated and saved to the following path



Clear Vehicle DTC:After clicking, it will start to clear the fault codes of the entire vehicle. After the clearing is completed, it will read back the fault codes of the entire vehicle and update the status of the controllers

Export DTC Report:After clicking, a DTC report will be generated according to the current reading result of the fault codes and saved to the following path

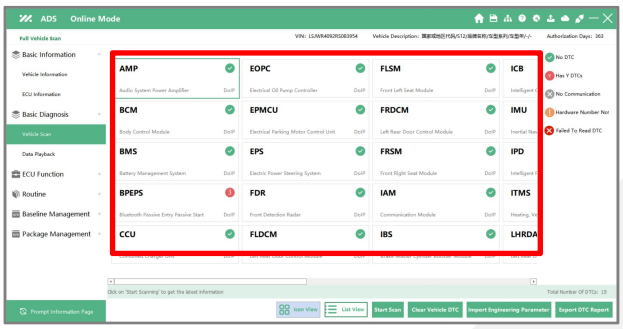


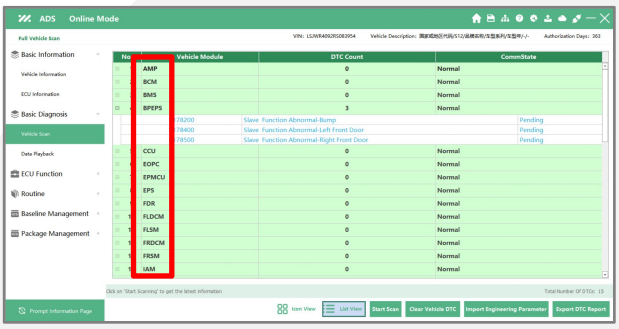
2.3.1.4. ECU Basic Diagnosis Function

1. Click ECU name

Note

- Icon View: click
- List View: double-click

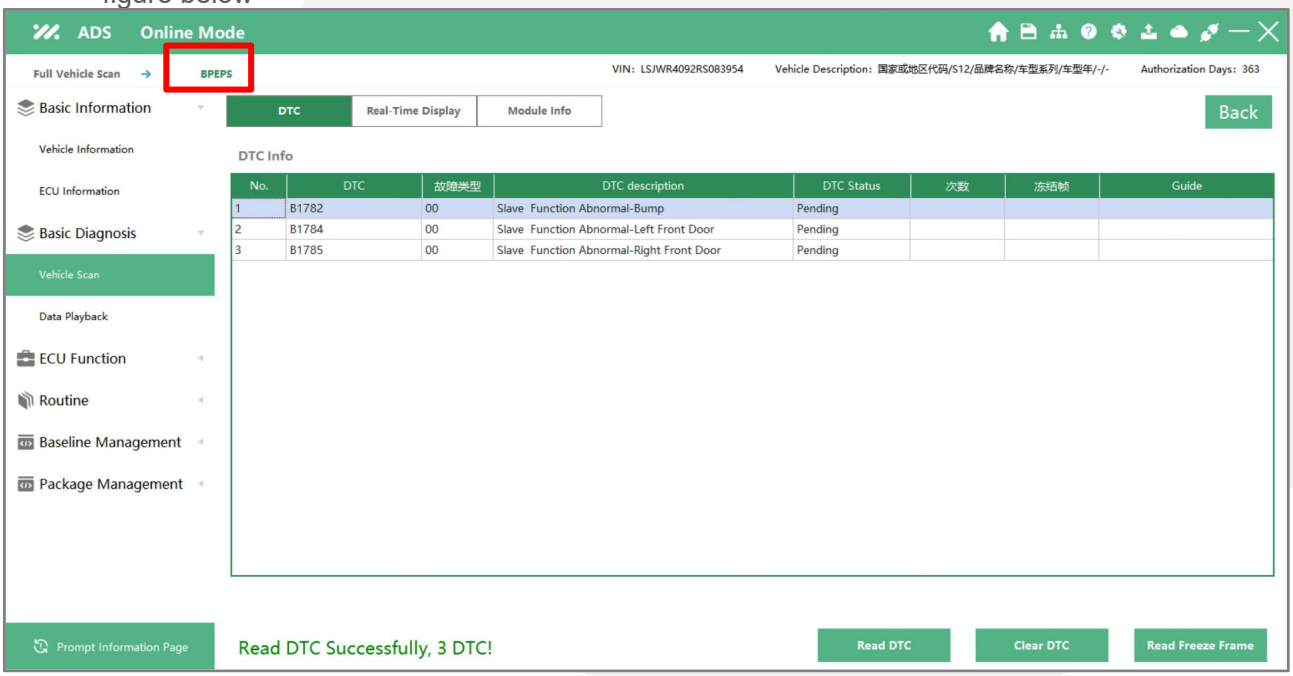




2. Enter the ECU details interface. This interface includes the functions supported by the current ECU itself, such as DTC, Real-Time Display, action test, module info

Note

The ECU name is displayed on the upper left side of the details interface, as shown in the figure below

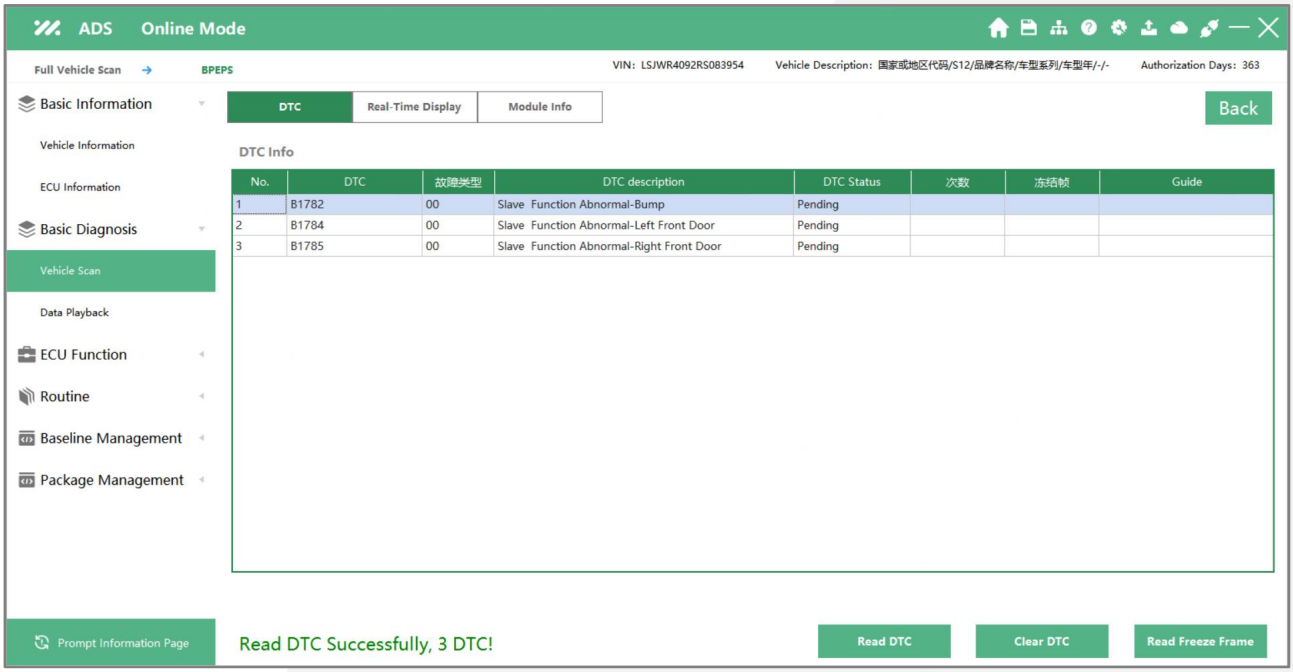


2.3.1.4.1.DTC

Read and clear fault codes and read frozen frames

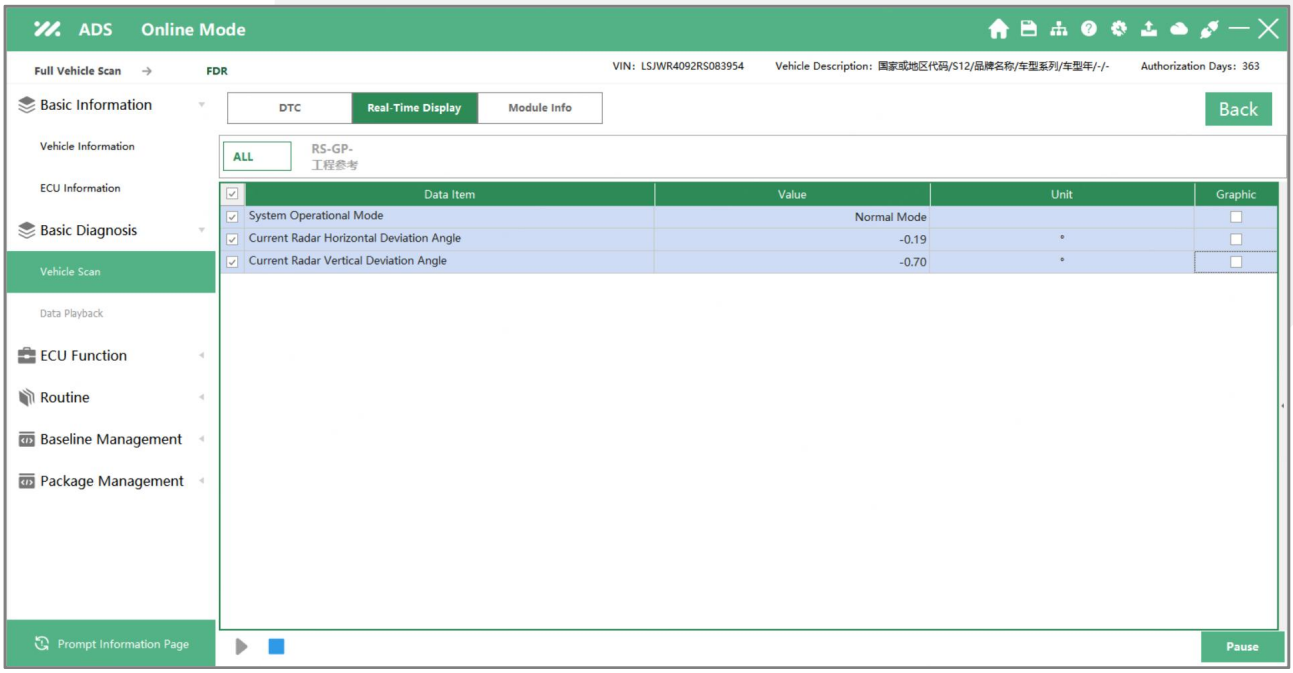
Note

- In the ECU details interface, only support read and clear fault codes of the current ECU
- Select a fault code to read the freeze frame of the fault code

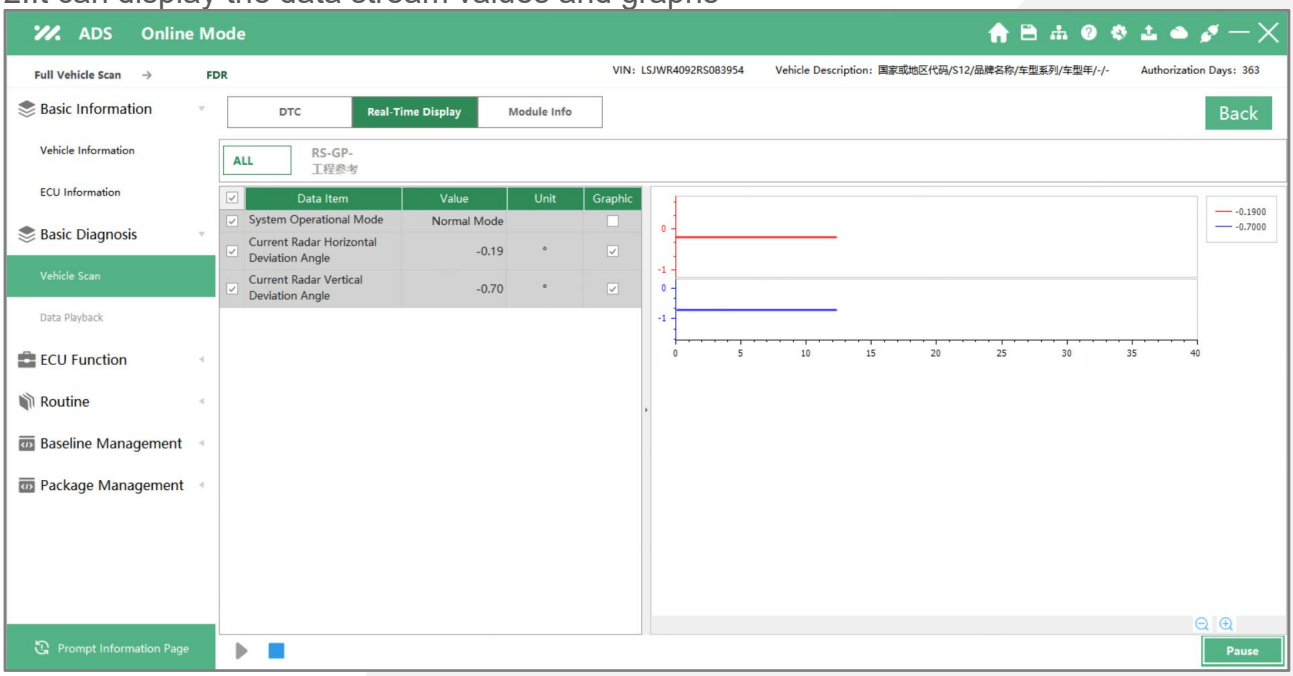


2.3.1.4.2.Real-Time Display

1.Check the data items, click the [Start] button, and the diagnostic tool will automatically read the real-time data stream



2.It can display the data stream values and graphs



3.It supports the recording of the data stream

:Start recording

:End the recording

Start :Start read the data stream

Note

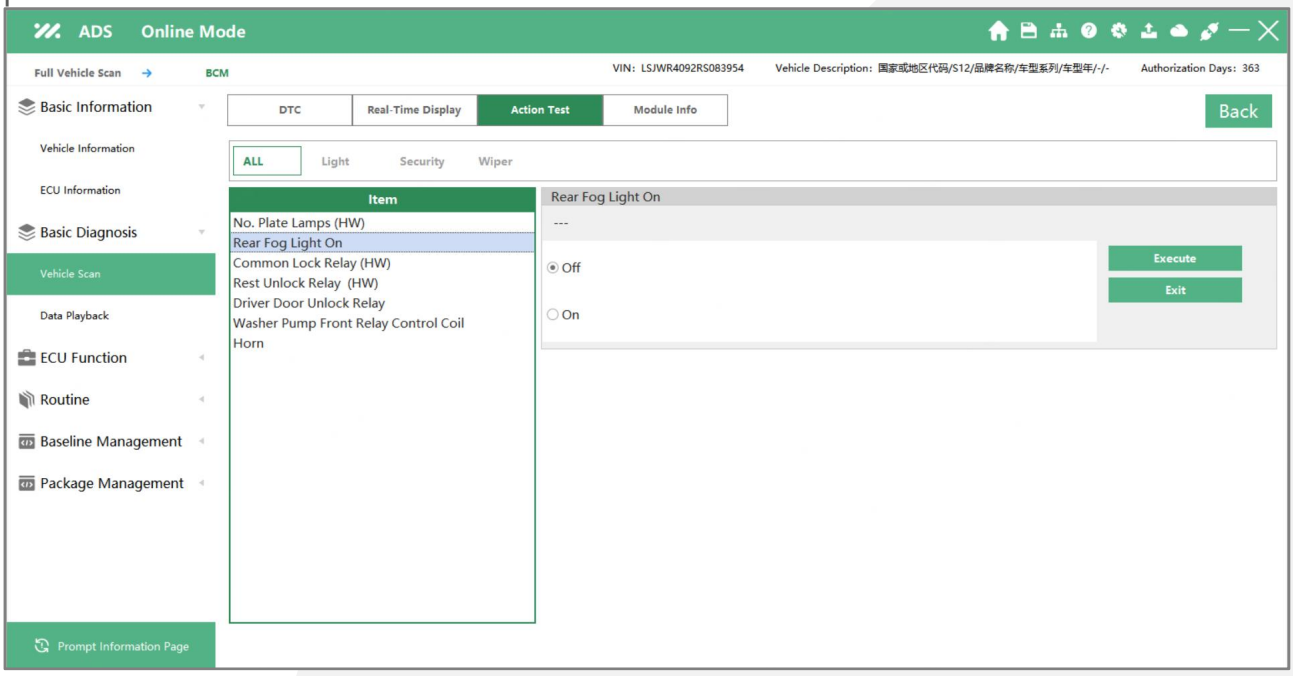
- Before starting the recording and reading, you need to check the corresponding data items in the box ☐ on the far left of the list.
- If you need to display the graphic, you need to check the corresponding data items in the boxes ☐ of the graphic column.

4.After the recording is completed, the ADS will pop up a window prompting you to save the recorded data stream file for data playback (refer to *Chapter II Introduction to the Functions of ADS -> 2.3 Basic Diagnostic -> 2.3.2 Data Playback*)

2.3.1.4.3.Action Test

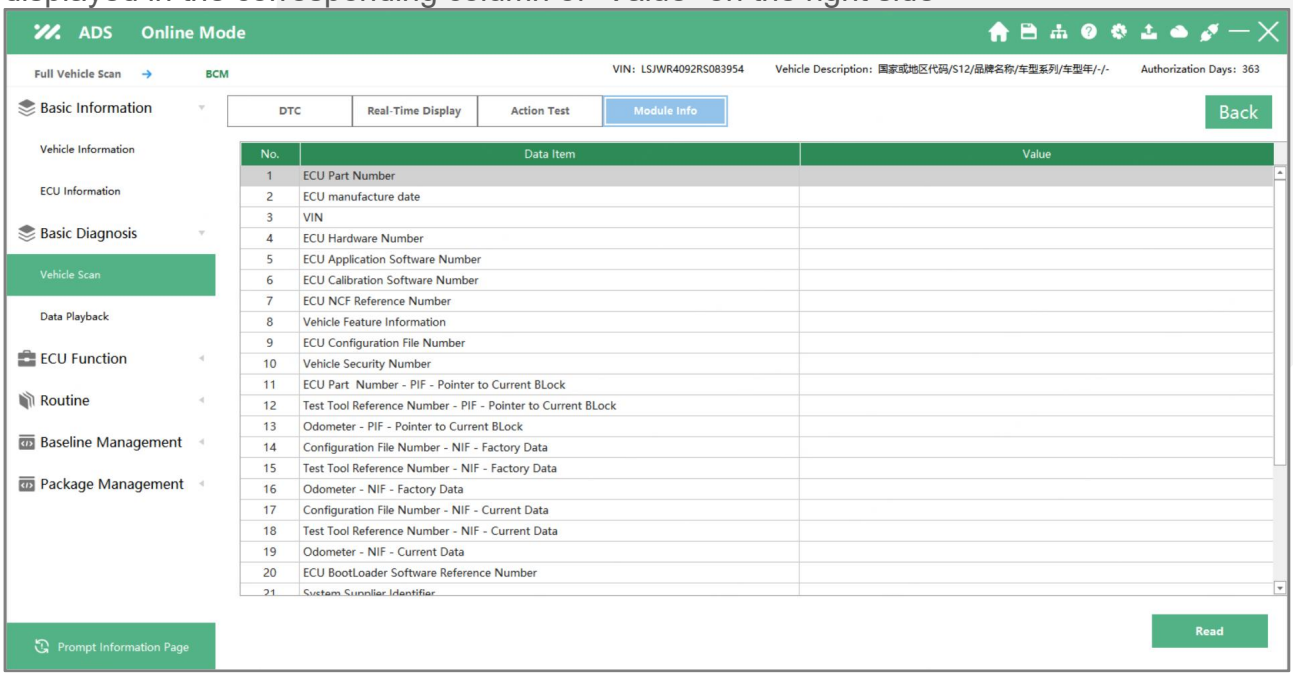
This function is mainly used to force the ECU to perform the action of the selected item and confirm whether its function is normal

Select the item as needed, click the [Execute] button, and check the actual execution performance of the vehicle



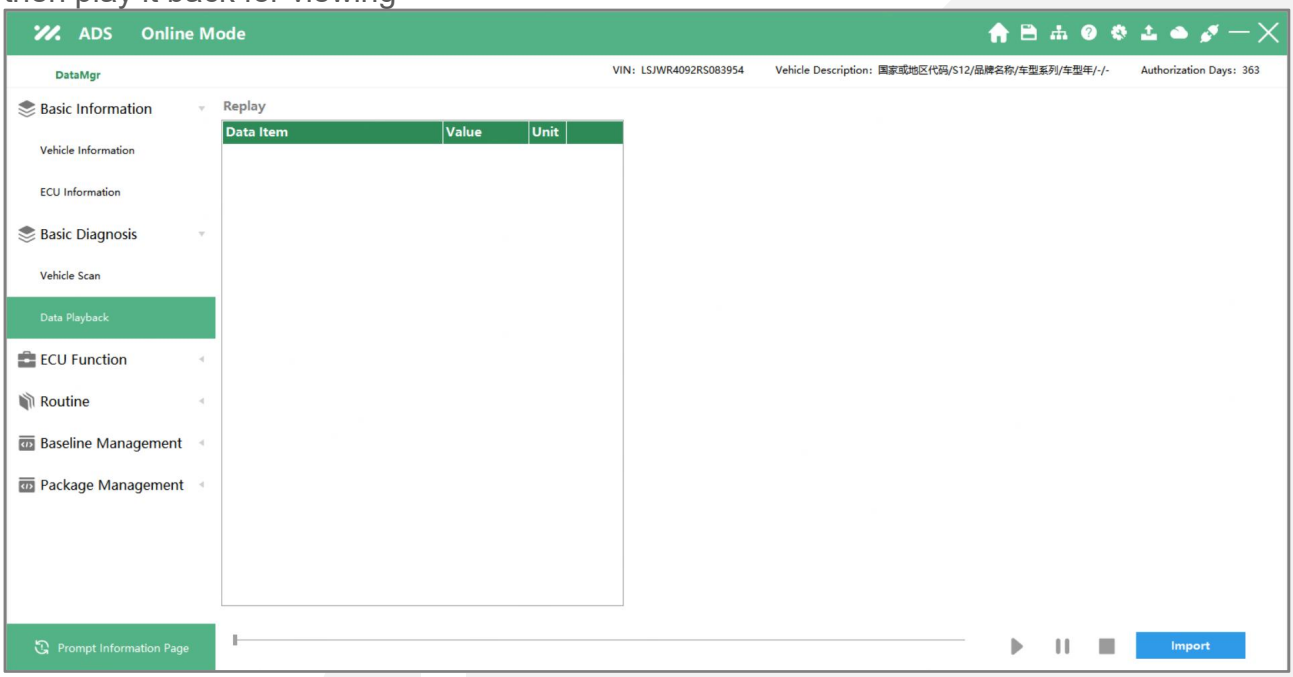
2.3.1.4.4.Module Info

Read the module information of the selected ECU, and the module information will be displayed in the corresponding column of "Value" on the right side

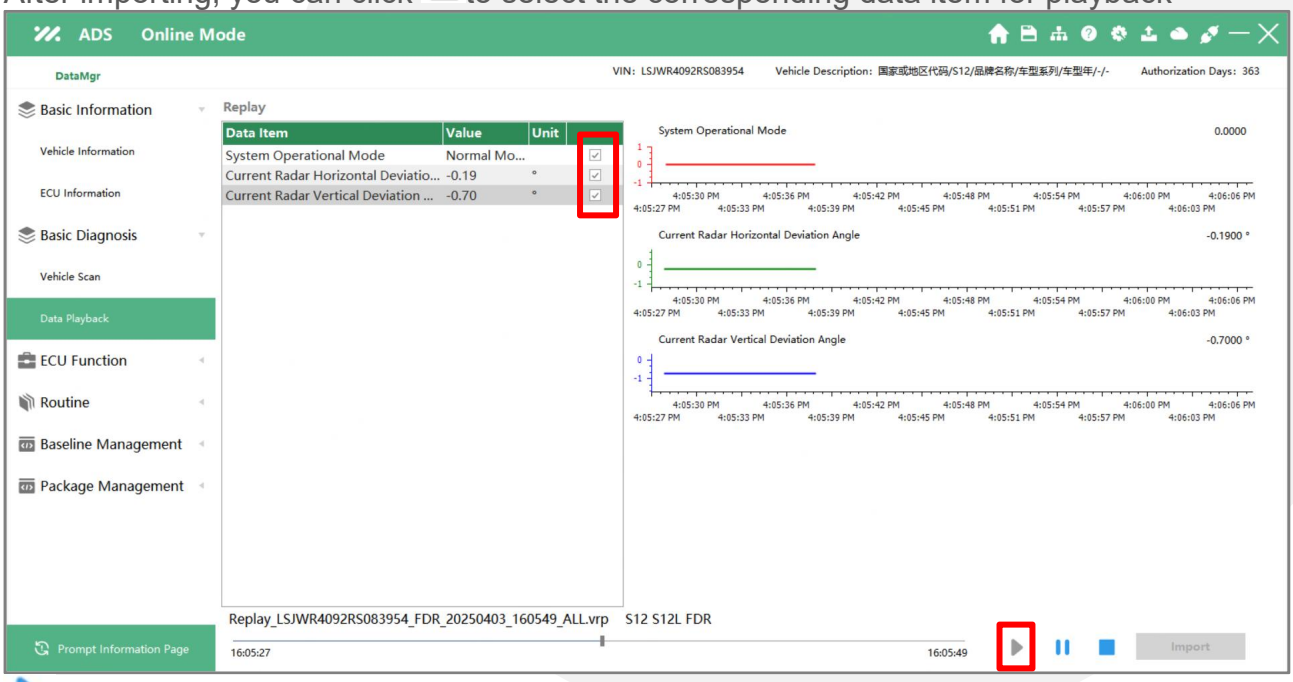


2.3.2. Data Playback

For the recorded data stream file, you can import the file on the data playback page and then play it back for viewing



After importing, you can click ☐ to select the corresponding data item for playback



:Start Playback

:Pause Playback

:End Playback

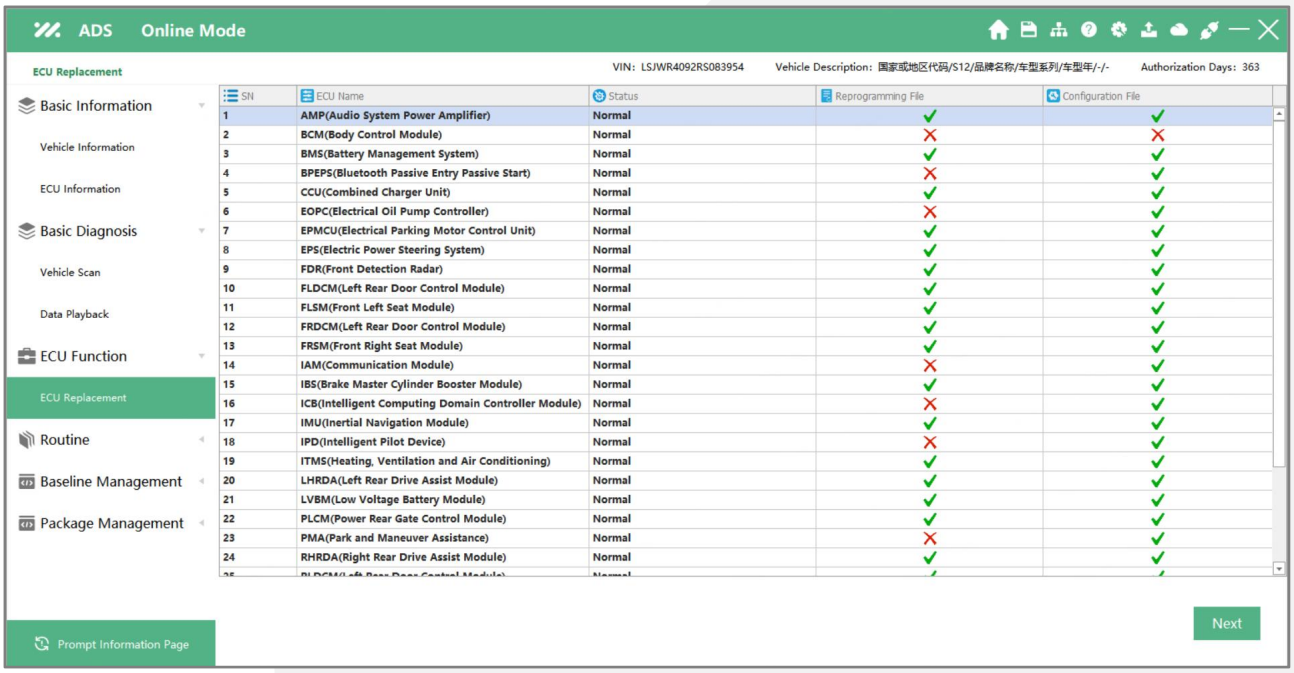
2.4. ECU Function

ECU Function include ECU Replacement

2.4.1. ECU replacement

Click on the "ECU Replacement" tab, and the controller list, information prompt page and other contents will be displayed

ECU Replacement Function:It is mainly used for operations such as ECU reprogramming, configuration, and calibration after replacing the ECU hardware. These operations are to flash the ECU to the state of the local baseline version and enable it to achieve the functions it should have



SN	ECU Name	Status	Reprogramming File	Configuration File
1	AMP(Audio System Power Amplifier)	Normal	✓	✓
2	BCM(Body Control Module)	Normal	✗	✗
3	BMS(Battery Management System)	Normal	✓	✓
4	BPEPS(Bluetooth Passive Entry Passive Start)	Normal	✗	✓
5	CCU(Combined Charger Unit)	Normal	✓	✓
6	EOPC(Electrical Oil Pump Controller)	Normal	✗	✓
7	EPMCU(Electrical Parking Motor Control Unit)	Normal	✓	✓
8	EPS(Electric Power Steering System)	Normal	✓	✓
9	FDR(Front Detection Radar)	Normal	✓	✓
10	FLDCM(Left Rear Door Control Module)	Normal	✓	✓
11	FLSM(Front Left Seat Module)	Normal	✓	✓
12	FRDCM(Left Rear Door Control Module)	Normal	✓	✓
13	FRSM(Front Right Seat Module)	Normal	✓	✓
14	IAM(Communication Module)	Normal	✗	✓
15	IBS(Brake Master Cylinder Booster Module)	Normal	✓	✓
16	ICB(Intelligent Computing Domain Controller Module)	Normal	✗	✓
17	IMU(Inertial Navigation Module)	Normal	✓	✓
18	IPD(Intelligent Pilot Device)	Normal	✗	✓
19	ITMS(Heating, Ventilation and Air Conditioning)	Normal	✓	✓
20	LHRDA(Left Rear Drive Assist Module)	Normal	✓	✓
21	LVBM(Low Voltage Battery Module)	Normal	✓	✓
22	PLCM(Power Rear Gate Control Module)	Normal	✓	✓
23	PMA(Park and Maneuver Assistance)	Normal	✗	✓
24	RHRDA(Right Rear Drive Assist Module)	Normal	✓	✓

2.4.1.1. Introduction to the display of ECU Replacement

2.4.1.1.1.Introduction to the Controller List

The controller list includes: ECU Name, Status, Reprogramming File, and Configuration File

Note

The list of controllers displayed in this table only shows all the controllers that the current vehicle supports for diagnosis

Project	Description
ECU Name	All the controller of the current vehicle support for diagnosis
Status	The status descriptions of the corresponding controllers include: invalid VIN, unable to read VIN, VIN mismatch, hardware number mismatch, unable to read hardware number, unable to communicate with the module, database connection failure, and normal

Project	Description
Reprogramming File	Compare the "ECU Information" and "Database Information" of the controller-related reprogramming file, and the result is shown as ✔,✕,?,…
Configuration File	Compare the "ECU Information" and "Database Information" of the controller-related configuration file, and the result is shown as ✔,✕,?,…

2.4.1.1.2.Introduction to the Controller Status

Compare the VIN and hardware number read from the controller with the VIN (i.e., the VIN for vehicle identification) and hardware number in the database, and display the comparison results in the "Status" column to indicate the status of the controller. The statuses include: VIN not match, hardware number not match, no communication, and normal

Status	Description
Normal	The data information in the controller and the database is obtained normally, and the VIN and hardware number read from the controller are consistent with the VIN and hardware number in the database (including the situation of a brand-new controller that has not had the VIN written into it)
VIN Not Match	The VIN read from the controller is inconsistent with the VIN in the database.
Hardware Number Not Match	The hardware number read by the controller is inconsistent with the hardware number in the database
No Communication	The communication with the controller fails

Caution

- When the controller is in an abnormal state, diagnostic operations cannot be performed
- The VIN and hardware number in the database need to be consistent with the VIN and hardware number in the controller before subsequent operations can be carried out.
- The new controller cannot be read because the VIN has not been written yet, and it will not be determined as being in an abnormal state due to this reason

2.4.1.1.3.Introduction to the matching status

Compare the "ECU Information" and "Database Information" of the controller-related reprogramming file and configuration file, and the result is shown as ✓,✗,?,···

Caution

If there is no reprogramming file or configuration file information in both the "ECU Information" and the "Database Information", the corresponding matching status will also be displayed as "···", and the corresponding functions will not support "Reprogramming " or "Configuration"

Matching Status	Description
✓	The "ECU Information" and "Database Information" of all corresponding reprogramming files or configuration files are consistent, and the data in the controller is already the latest. There is no need to perform the reprogramming or configuration functions, but this does not affect the subsequent operations on the controller
✗	The data version corresponding to this function in the controller on the vehicle is inconsistent with that in the database, but it does not affect the subsequent operations on the controller
?	At least one of the data information of the data version corresponding to this function in the controller on the vehicle and that in the database is empty, so no comparison can be made.
···	There is no data information for at least one of the data versions corresponding to this function in the controller on the vehicle and in the database, so a comparison cannot be made.

2.4.1.2. Operation Process of ECU Replacement

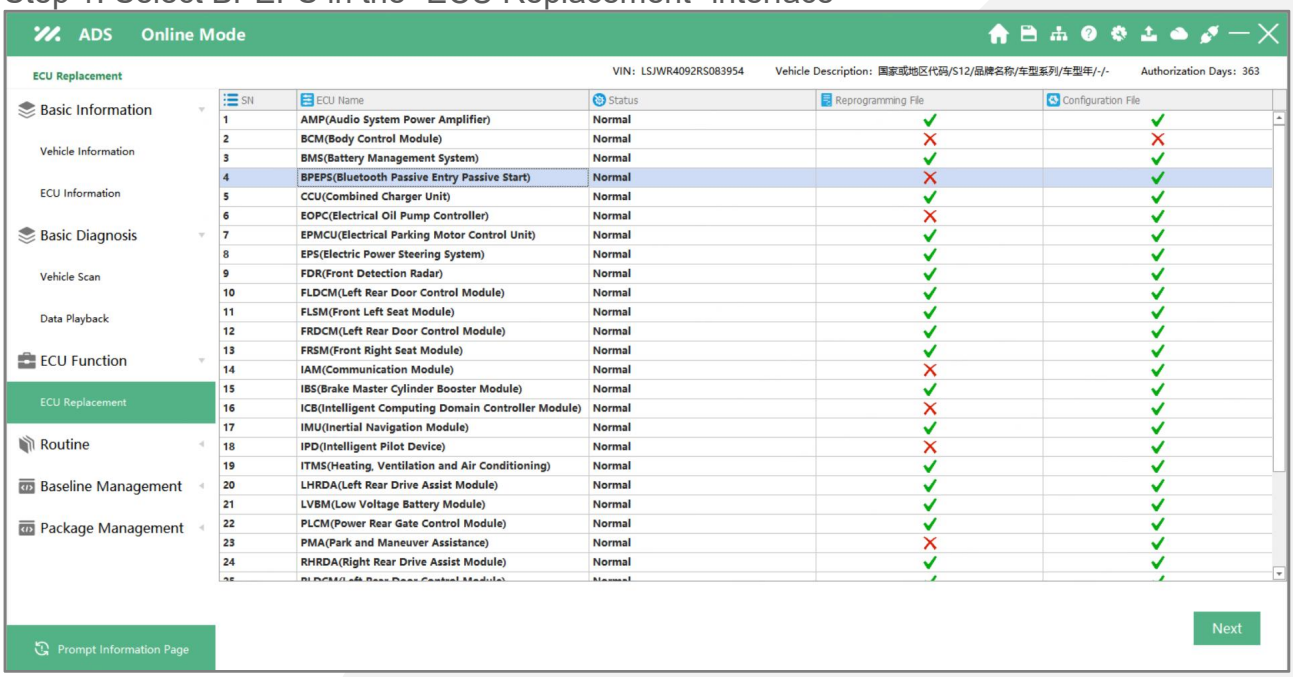
The ECU replacement function is used to perform the programming and coding operations that must be carried out after the controller is replaced, such as software flashing, configuration writing, parameter setting, etc.

This paragraph takes the BPEPS (Bluetooth Passive Entry and Passive Start System) as an example to introduce the operation steps of the ECU replacement function.

Caution

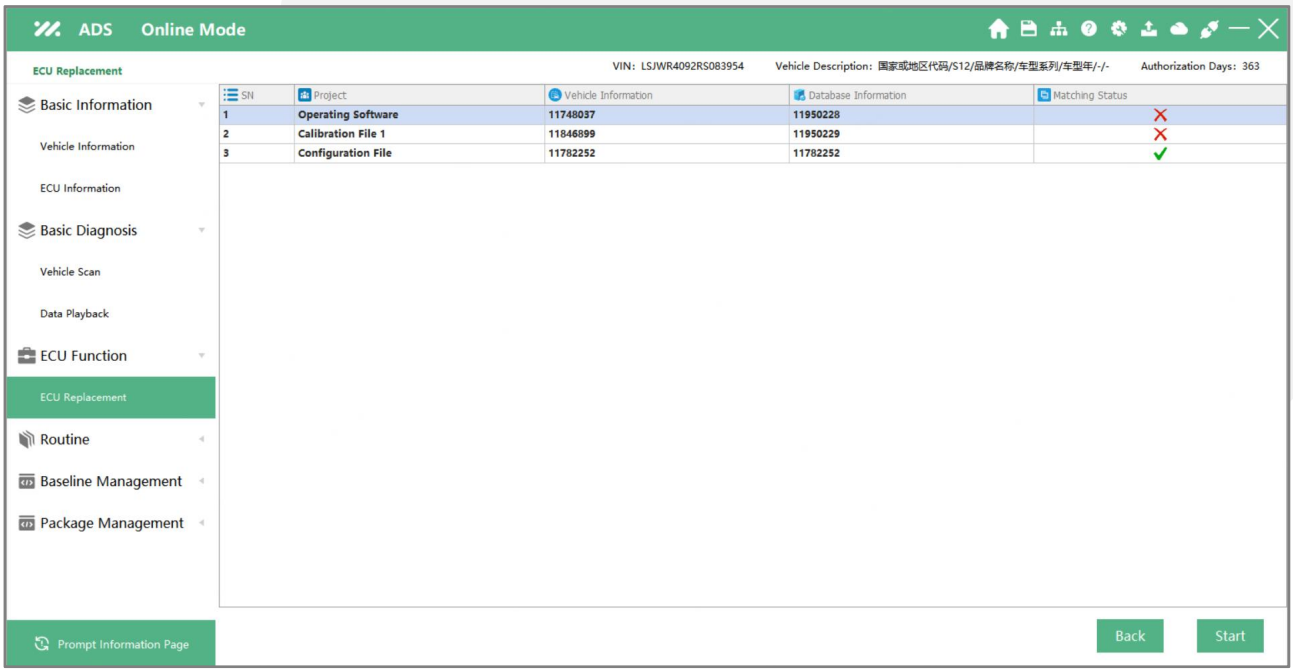
- Each function may include several operation processes. The result will be displayed upon the completion of each operation process. Once all the operation processes are completed, the execution result of the function will be shown.
- The replacement function in the example includes multiple operation processes (such as reprogramming , configuration, setting, etc.) during the replacement operation.

Operation steps of the ECU replacement function:
Step 1: Select BPEPS in the "ECU Replacement" interface



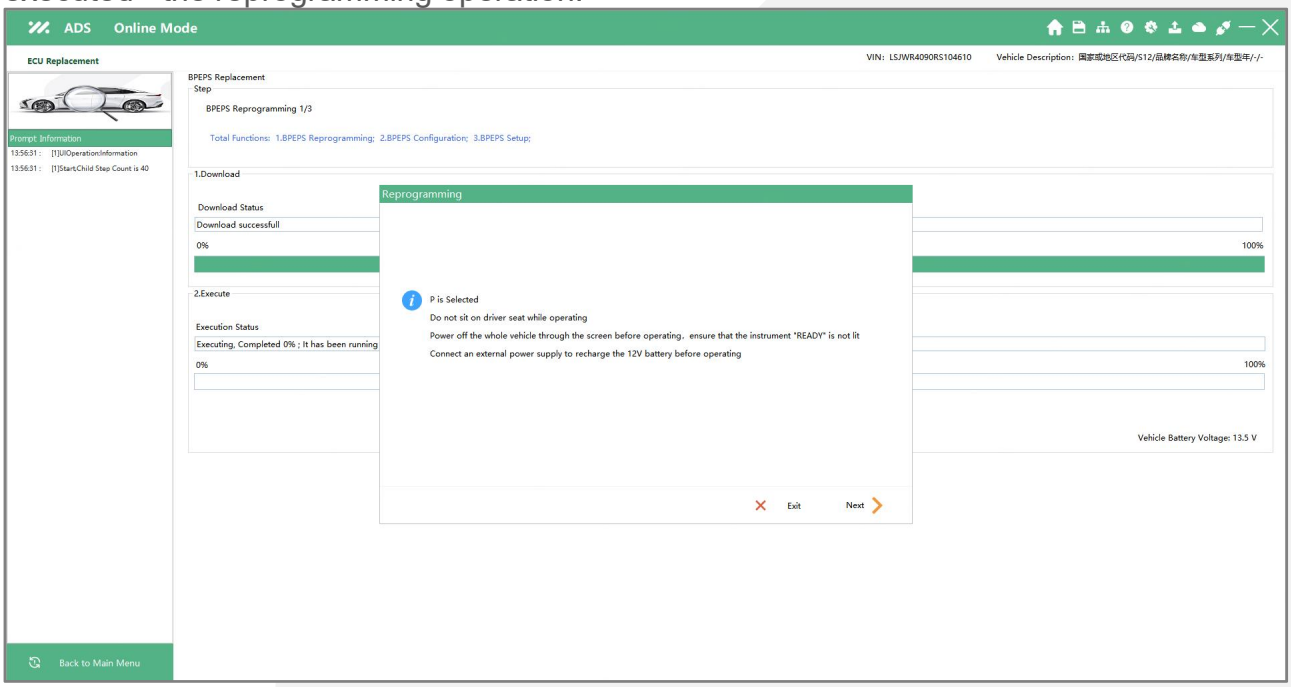
SN	ECU Name	Status	Reprogramming File	Configuration File
1	AMP(Audio System Power Amplifier)	Normal	✓	✓
2	BCM(Body Control Module)	Normal	✗	✗
3	BMS(Battery Management System)	Normal	✓	✓
4	BPEPS(Bluetooth Passive Entry Passive Start)	Normal	✗	✓
5	CCU(Combined Charger Unit)	Normal	✓	✓
6	EOPC(Electrical Oil Pump Controller)	Normal	✗	✓
7	EPMCU(Electrical Parking Motor Control Unit)	Normal	✓	✓
8	EPS(Electric Power Steering System)	Normal	✓	✓
9	FDR(Front Detection Radar)	Normal	✓	✓
10	FLDCM(Left Rear Door Control Module)	Normal	✓	✓
11	FLSM(Front Left Seat Module)	Normal	✓	✓
12	FRDCM(Left Rear Door Control Module)	Normal	✓	✓
13	FRSM(Front Right Seat Module)	Normal	✓	✓
14	IAM(Communication Module)	Normal	✗	✓
15	IBS(Brake Master Cylinder Booster Module)	Normal	✓	✓
16	ICB(Intelligent Computing Domain Controller Module)	Normal	✗	✓
17	IMU(Inertial Navigation Module)	Normal	✓	✓
18	IPD(Intelligent Pilot Device)	Normal	✗	✓
19	ITMS(Heating, Ventilation and Air Conditioning)	Normal	✓	✓
20	LHRDA(Left Rear Drive Assist Module)	Normal	✓	✓
21	LVBM(Low Voltage Battery Module)	Normal	✓	✓
22	PLCM(Power Rear Gate Control Module)	Normal	✓	✓
23	PMA(Park and Maneuver Assistance)	Normal	✗	✓
24	RHRDA(Right Rear Drive Assist Module)	Normal	✓	✓

Step 2: After selecting BPEPS, click the [Next] button in the lower right corner of the interface, and it will jump to the interface shown in the following figure. The comparison and difference between the current vehicle's BPEPS software version and the latest baseline BPEPS software version in the database will be listed

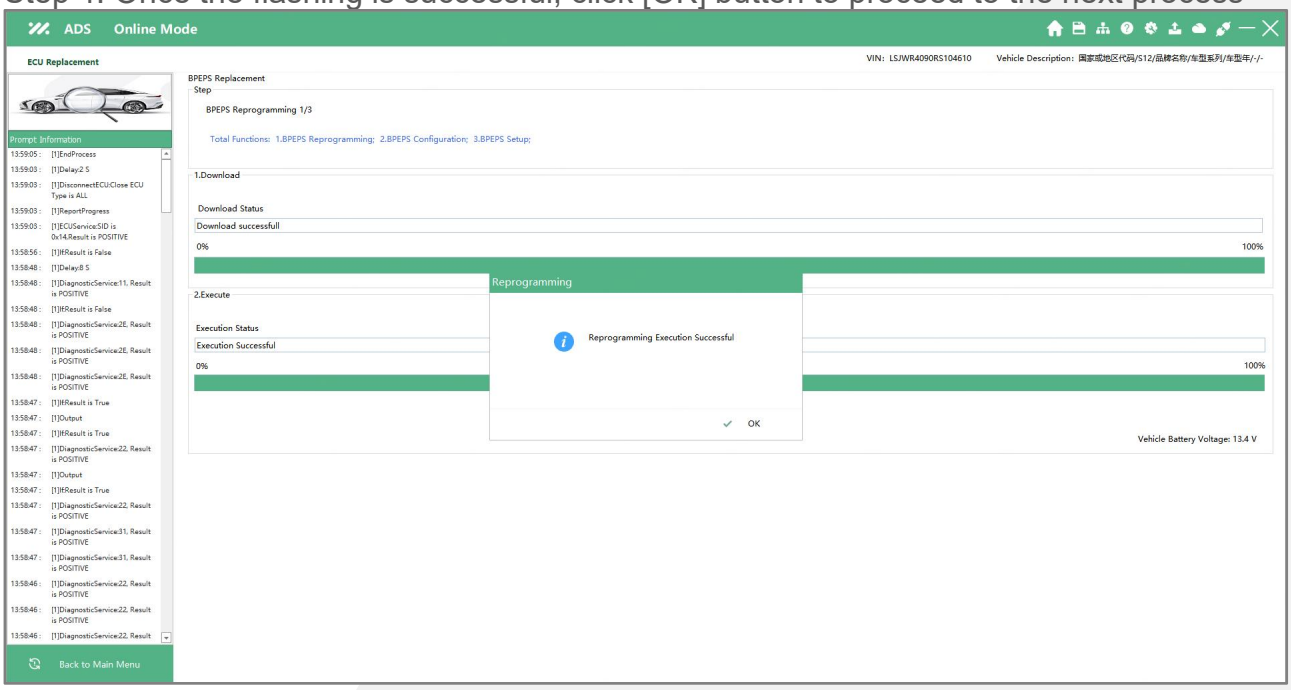


SN	Project	Vehicle Information	Database Information	Matching Status
1	Operating Software	11748037	11950228	✗
2	Calibration File 1	11846899	11950229	✗
3	Configuration File	11782252	11782252	✓

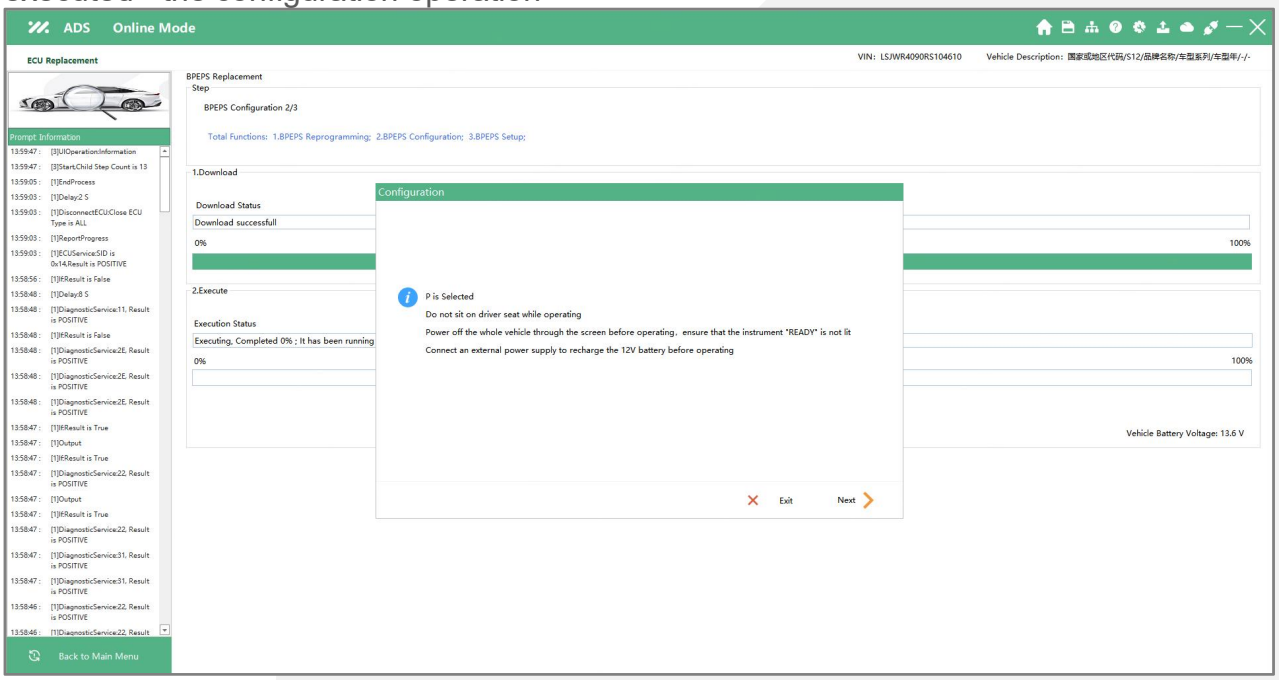
Step 3: Click the [Start] button on the interface to enter the ECU replacement details interface. After performing operations on the vehicle according to the instructions in the pop-up window, click the [Next] button to start the reprogramming process during the replacement. The ADS will automatically execute the reprogramming process required for the ECU replacement.
"Reprogramming Operation 1/3" in the step: It indicates that the BPEPS replacement function has three operation processes, and currently the first operation process is being executed - the reprogramming operation.

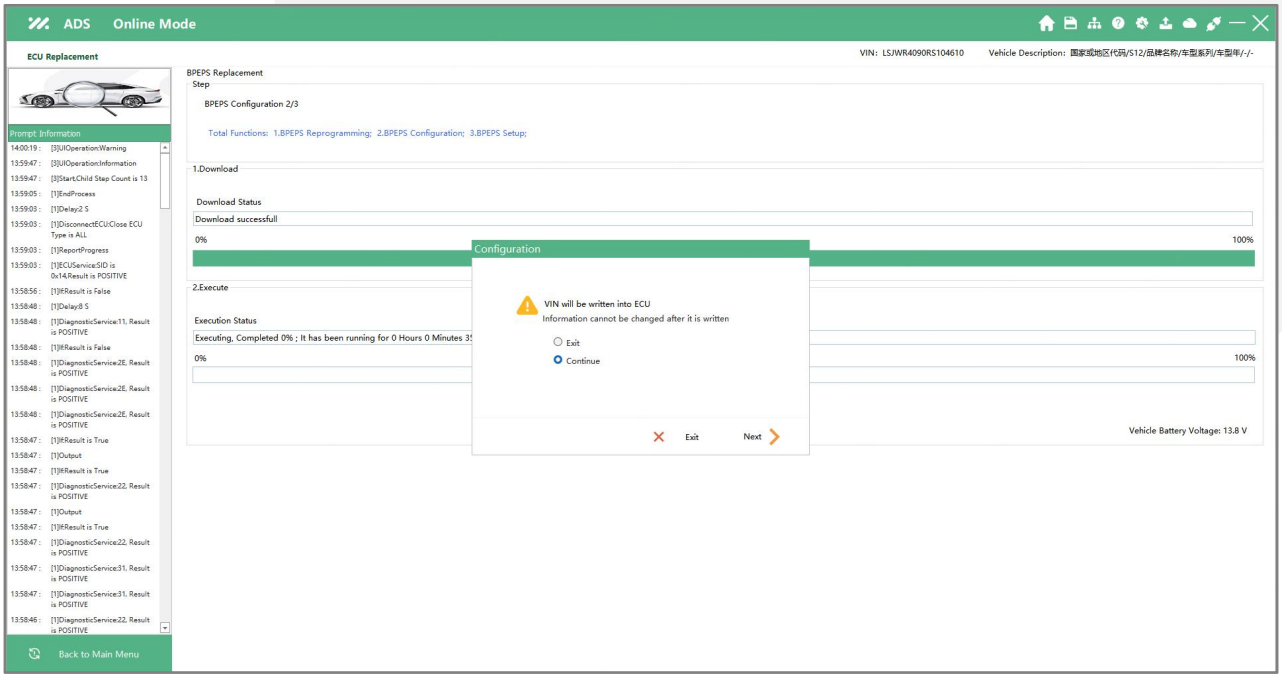


Step 4: Once the flashing is successful, click [OK] button to proceed to the next process

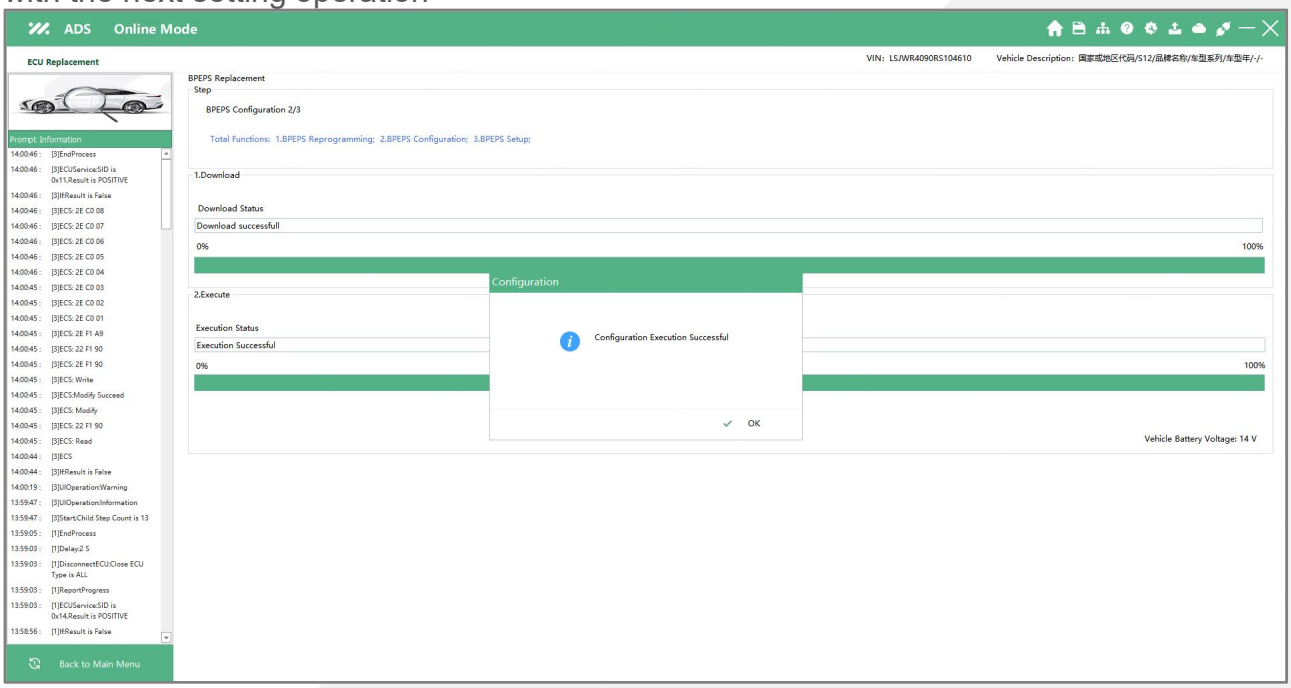


Step 5: After performing operations on the vehicle according to the instructions in the pop-up window shown in the following figure, click the [Next] button. In the ADS pop-up window, select "Continue" to start the configuration process during the replacement. The ADS will automatically execute the configuration process required for the ECU replacement.
"Configuration operation 2/3" in the step: It indicates that the BPEPS replacement function has three operation processes, and currently the second operation process is being executed - the configuration operation

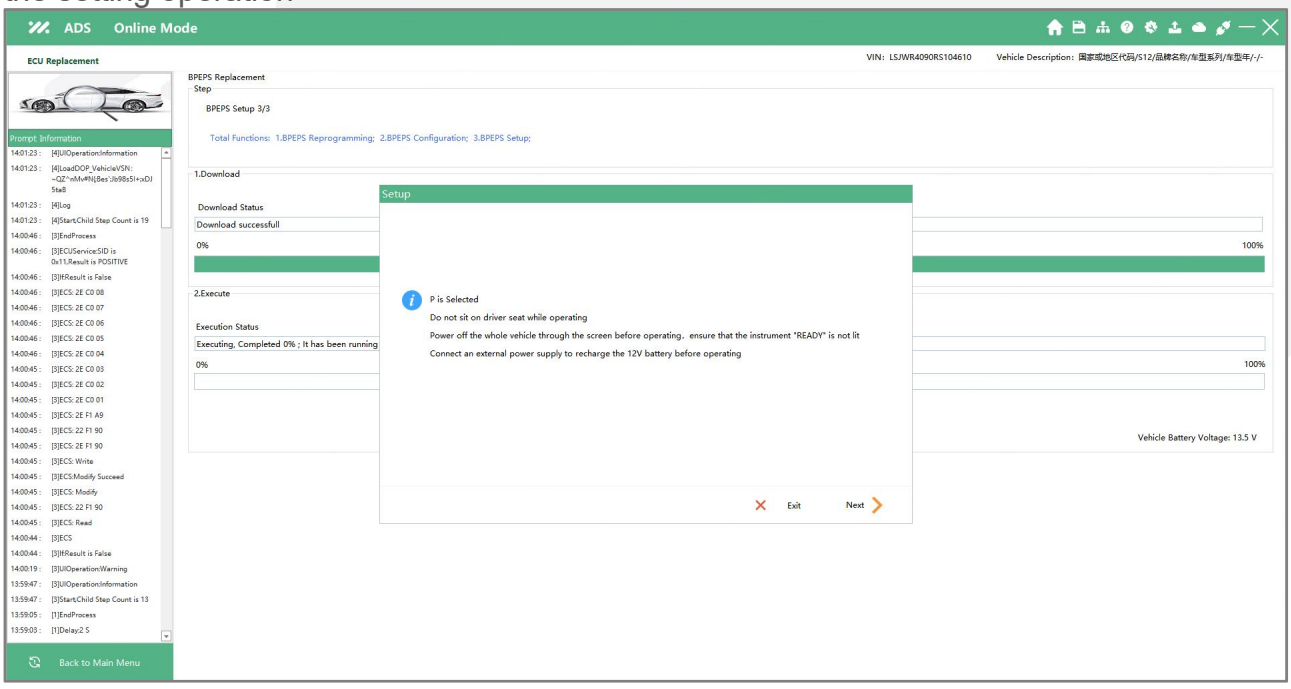




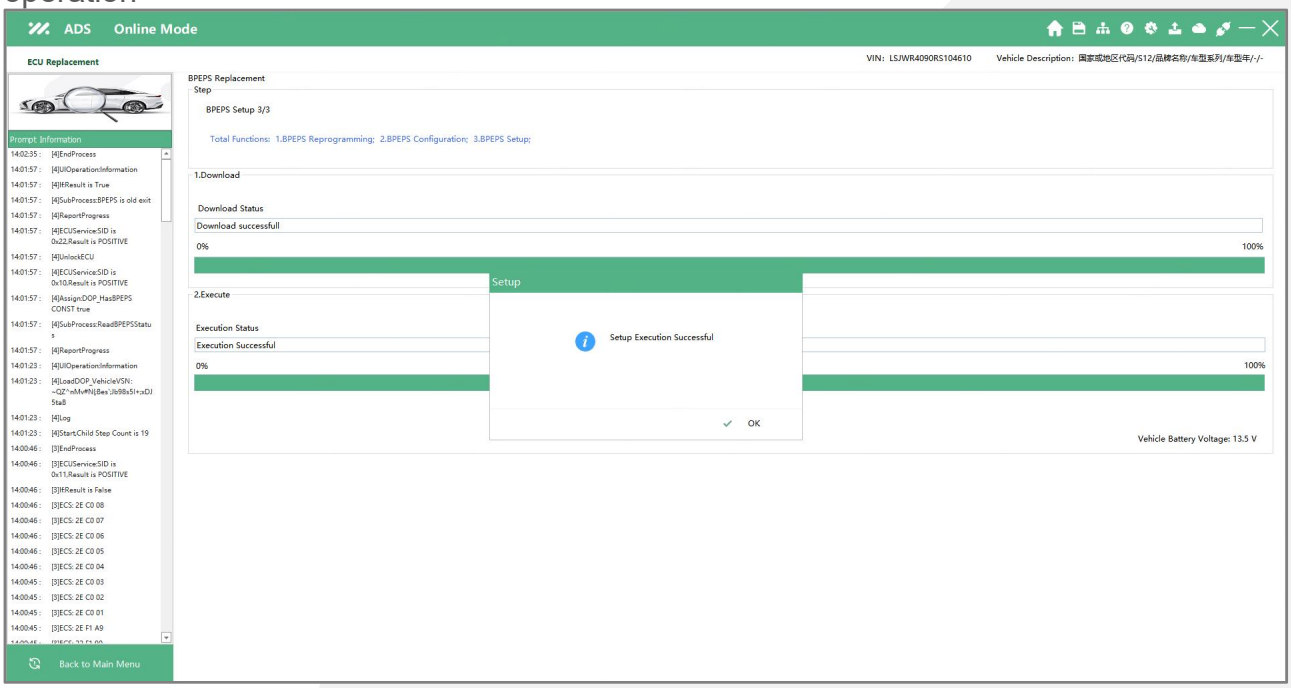
Step 6: After completing the configuration operation, a prompt will indicate that the configuration operation has been successfully executed. Click the [OK] button to proceed with the next setting operation



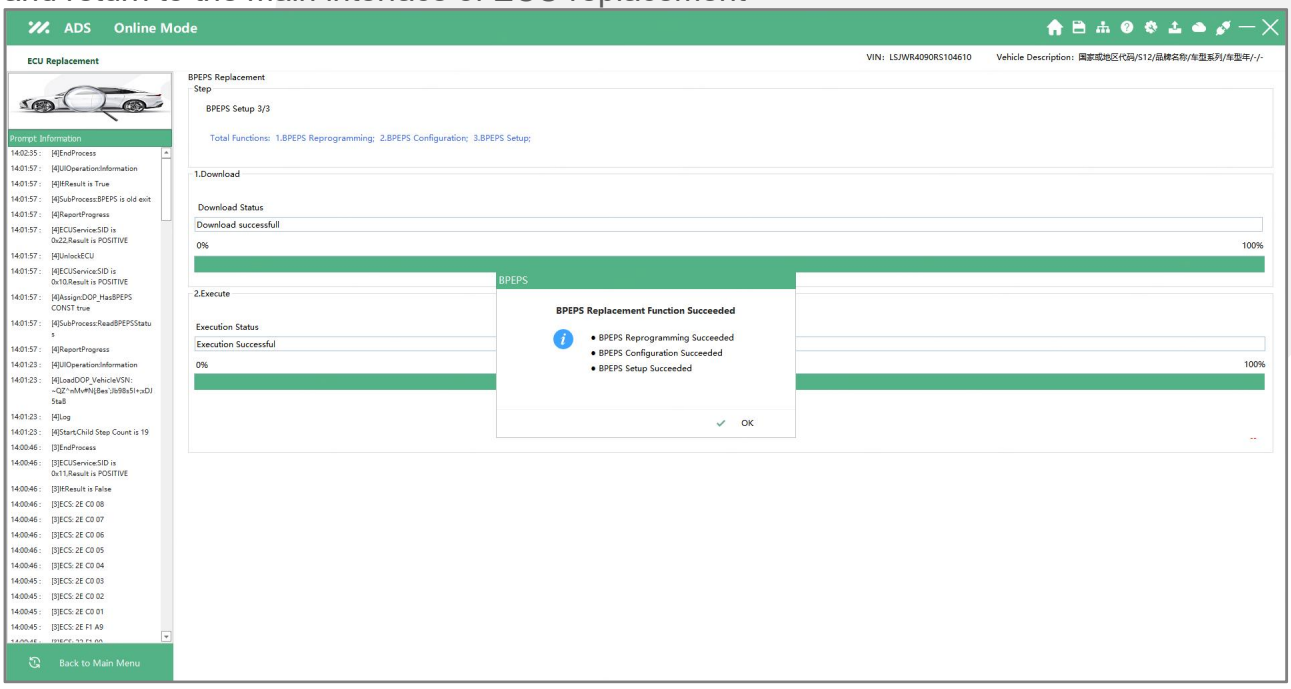
Step 7: A prompt for the setting operation will be shown. Click the [Next] button
"Setting operation 3/3" in the step: It indicates that the BPEPS replacement function has three operation processes, and currently the third operation process is being executed - the setting operation



Step 8: After completing the setting operation, a prompt will indicate that the setting operation has been successfully executed. Click the [OK] button to proceed to the next operation



Step 9: After the setting operation is completed, as shown in the following figure, the ADS client will display the execution result of the replacement function and list the execution results of each operation process. Clicking the [OK] button will end the function process and return to the main interface of ECU replacement

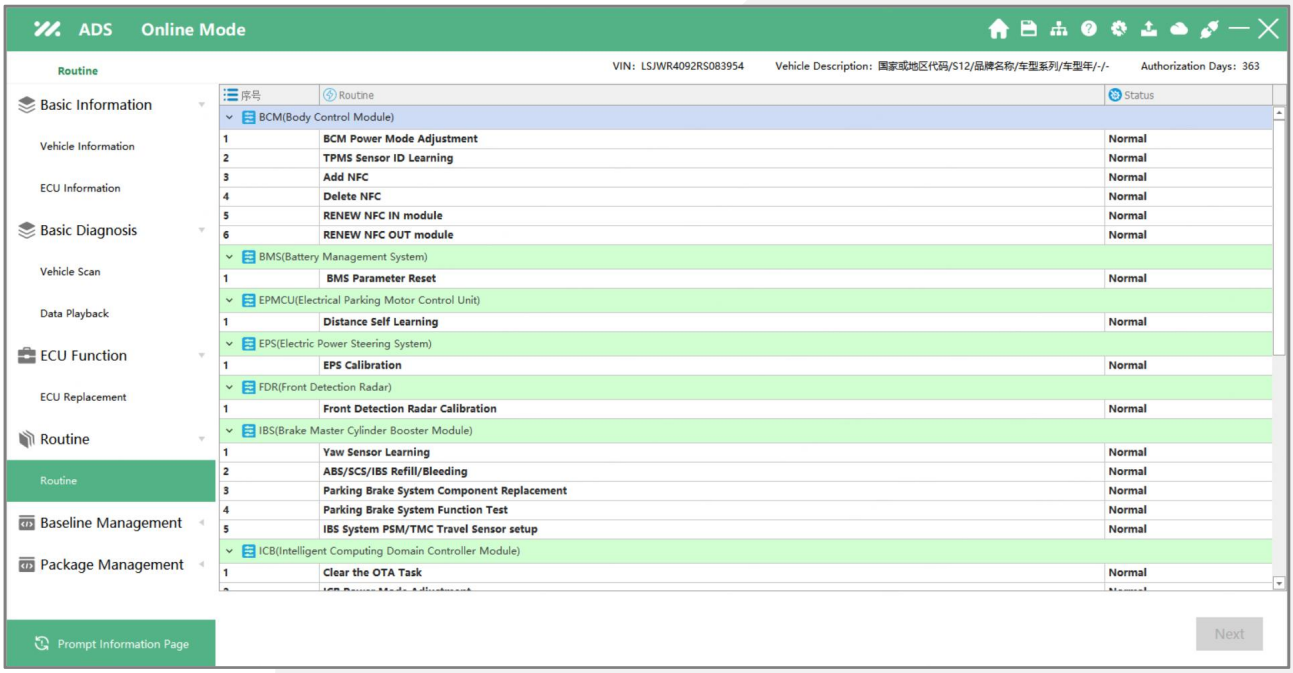


2.5. Routine

2.5.1. Introduction to the interface of Routine

Routine function is used for the quick maintenance process after the disassembly, assembly or replacement of sensors and actuators.

The Routine interface includes the execution of different special functions of parts for all the controllers of the current vehicle. The functions include, but are not limited to, adding/deleting NFC cards, controller self-learning, liquid filling and exhaust, and special calibration



The Routine list is classified according to the controllers and includes: Routine and Status.

Note

The Routine list only displays the self-learning functions supported by the currently vehicle

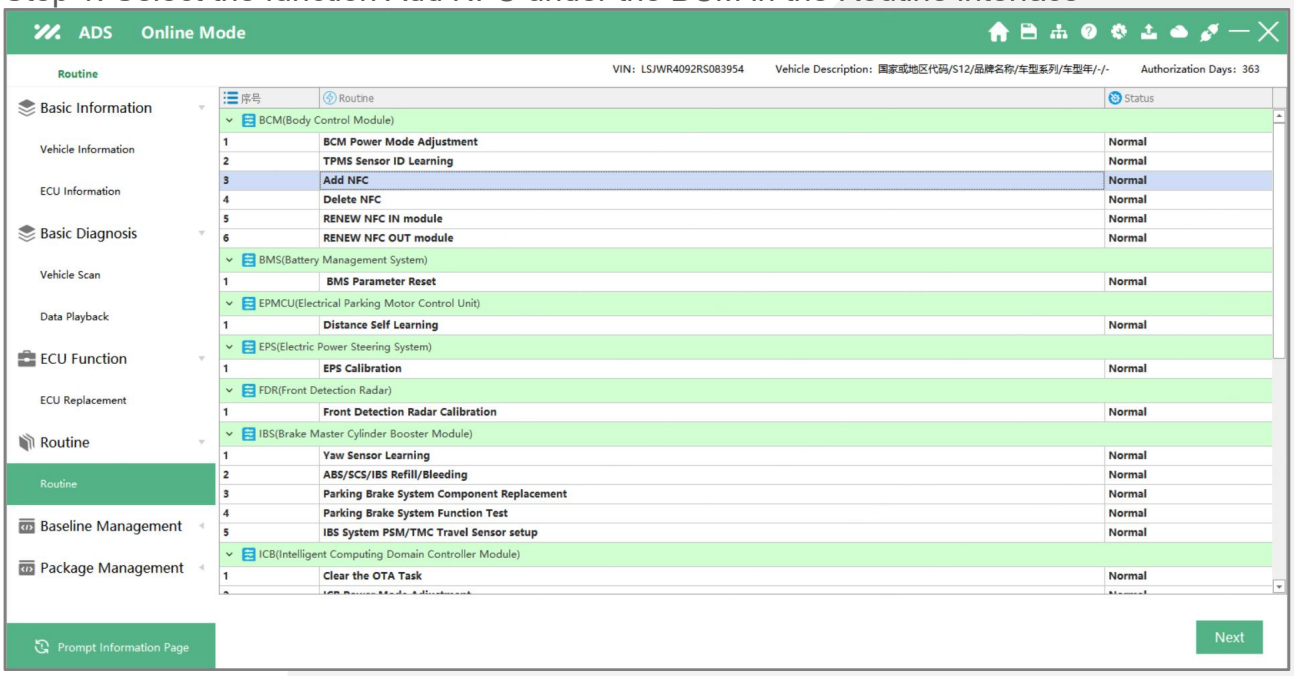
Project	Description
Routine	Self-learning items supported by the current vehicle controller
Status	The status description of the corresponding module, including no communication, normal, hardware number not match, etc.

2.5.2. Routine - Operation Steps for Add NFC

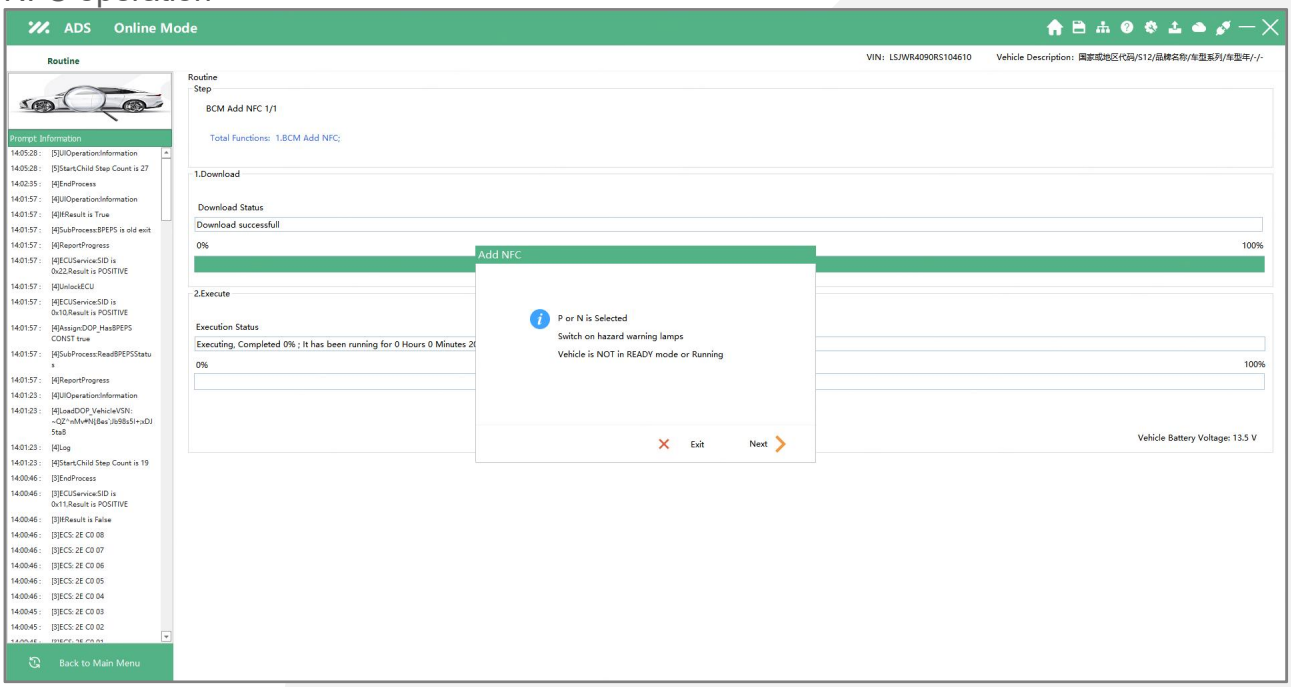
This paragraph will introduce the operation steps by taking the addition of an NFC card as an example. The function Add NFC can add an NFC card to the vehicle

Operation steps of Add NFC

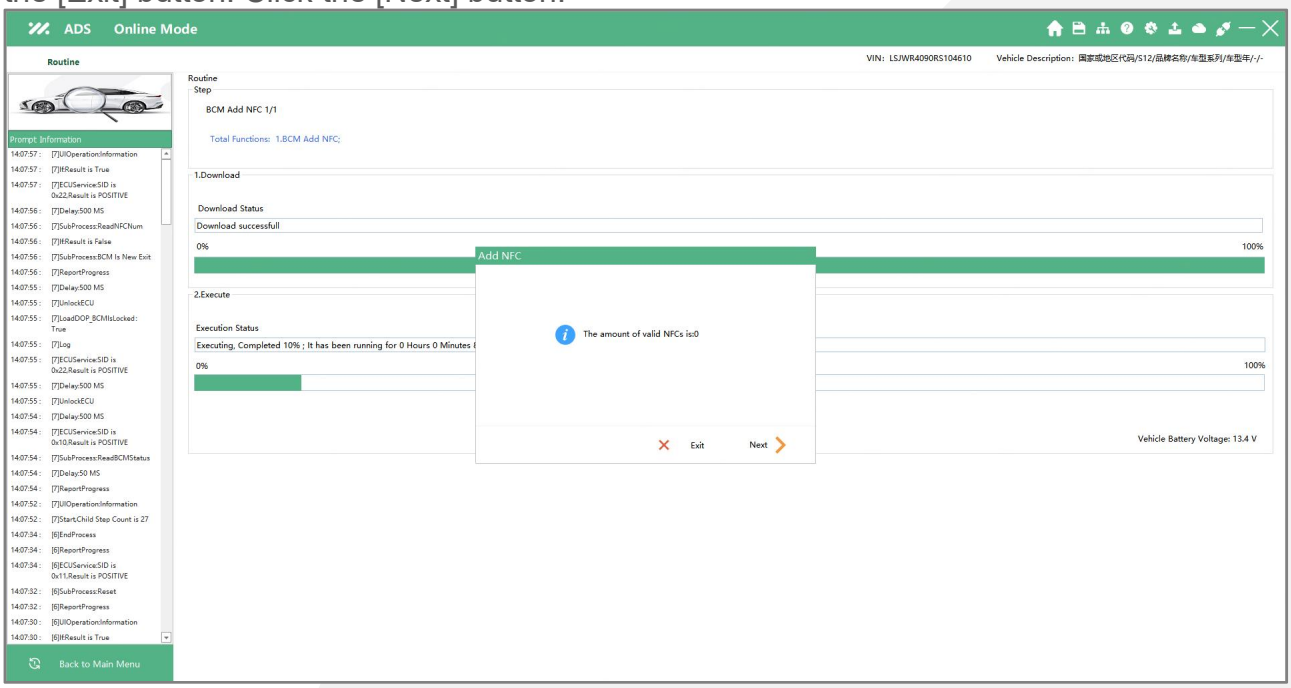
Step 1: Select the function Add NFC under the BCM in the Routine interface



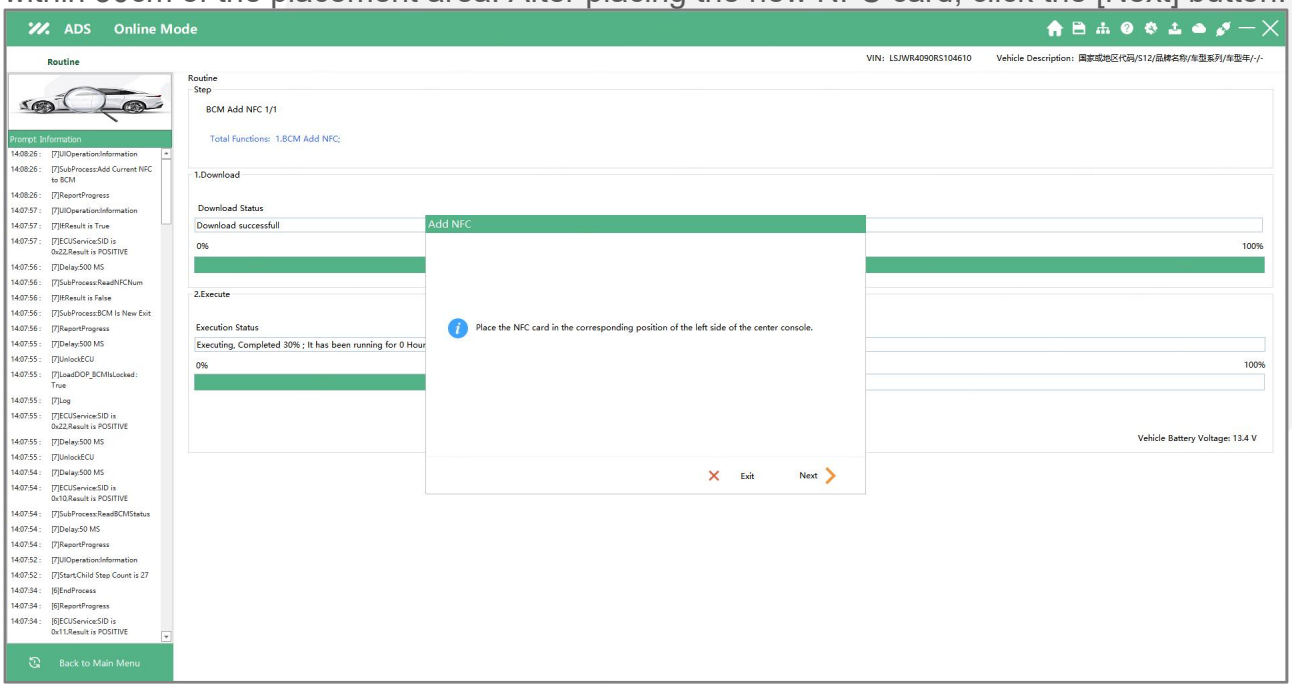
Step 2: Click the [Next] button to start the Add NFC operation. A pop-up window will prompt you with the precautions for the operation. Please be sure to follow the prompts. After confirming that the conditions in the prompts are met, click the [Next] button.
"Add NFC operation 1/1" in the step: It indicates that the function of Add NFC has one operation process, and currently the first operation process is being executed - the Add NFC operation



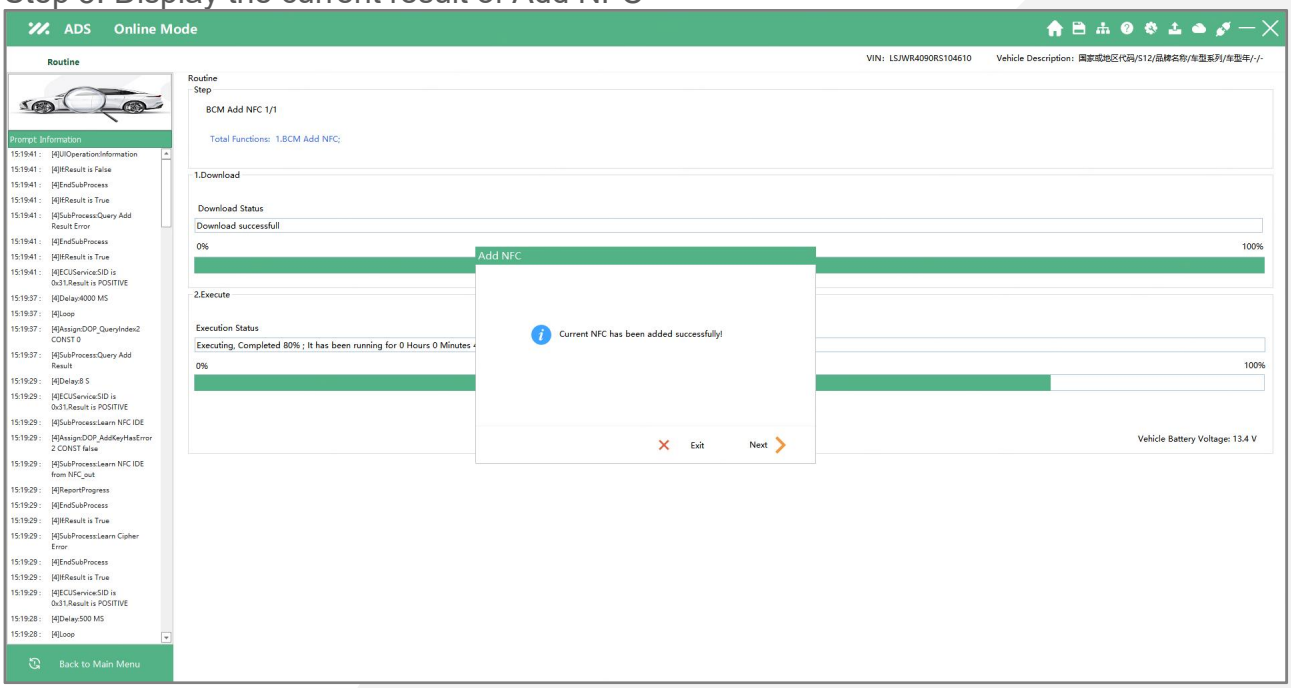
Step 3: It will prompt the current number of valid NFC cards. If there are still NFC cards to be added, you need to click the [Next] button; if there are no new NFC cards to add, click the [Exit] button. Click the [Next] button.



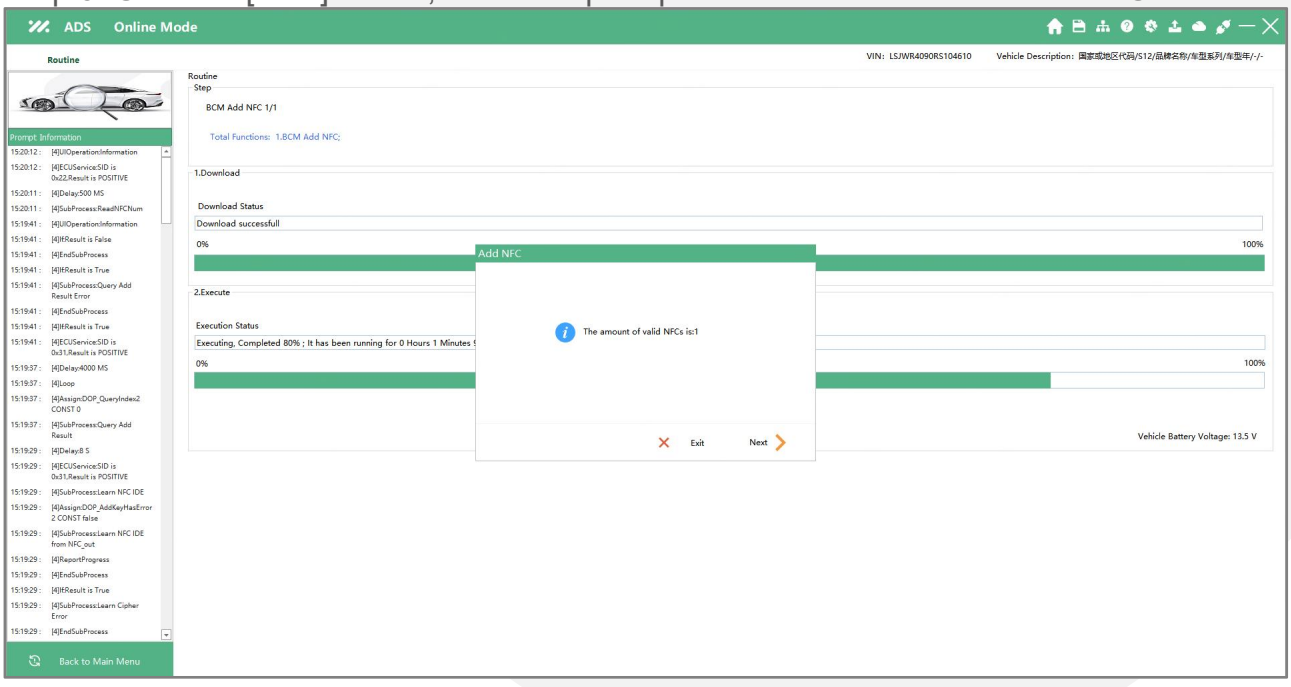
Step 4: It will prompt you to place a new NFC card. Other cards should not be placed within 30cm of the placement area. After placing the new NFC card, click the [Next] button.



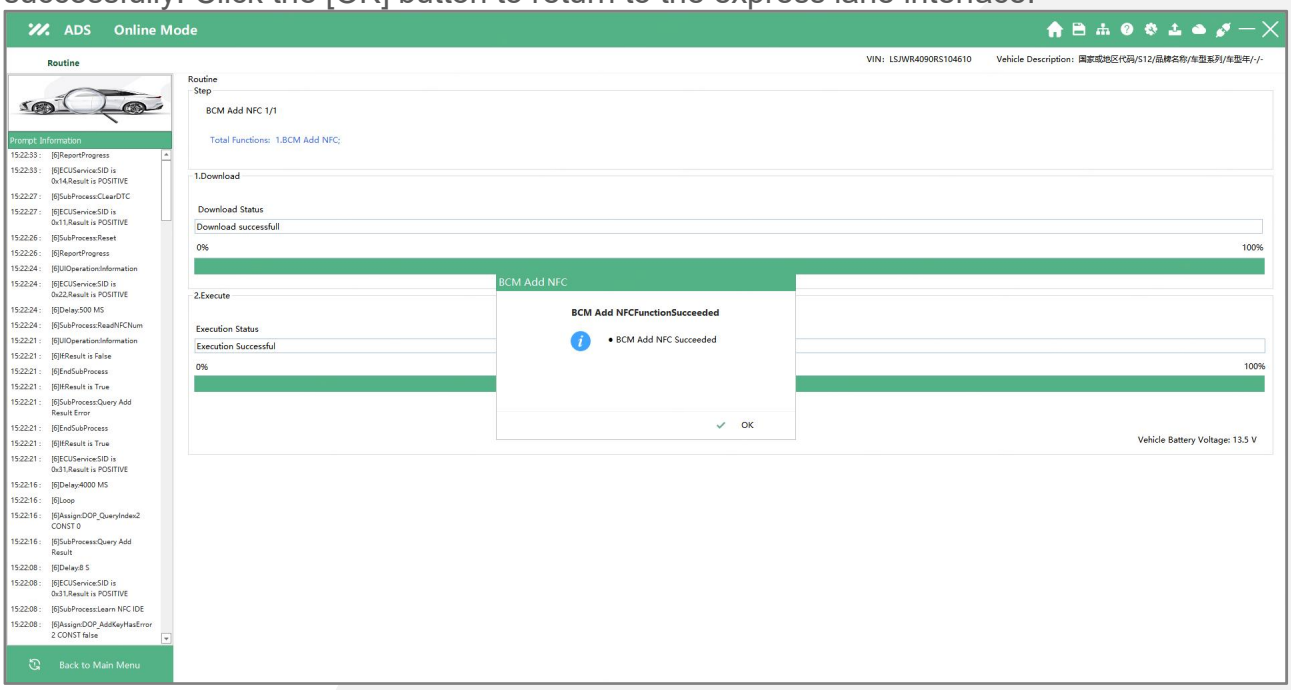
Step 5: Display the current result of Add NFC



Step 6: Click the [Next] button, and it will prompt the current number of valid NFC cards.



Step 7: Click the [Next] button. It will prompt that the NFC card has been added successfully. Click the [OK] button to return to the express lane interface.



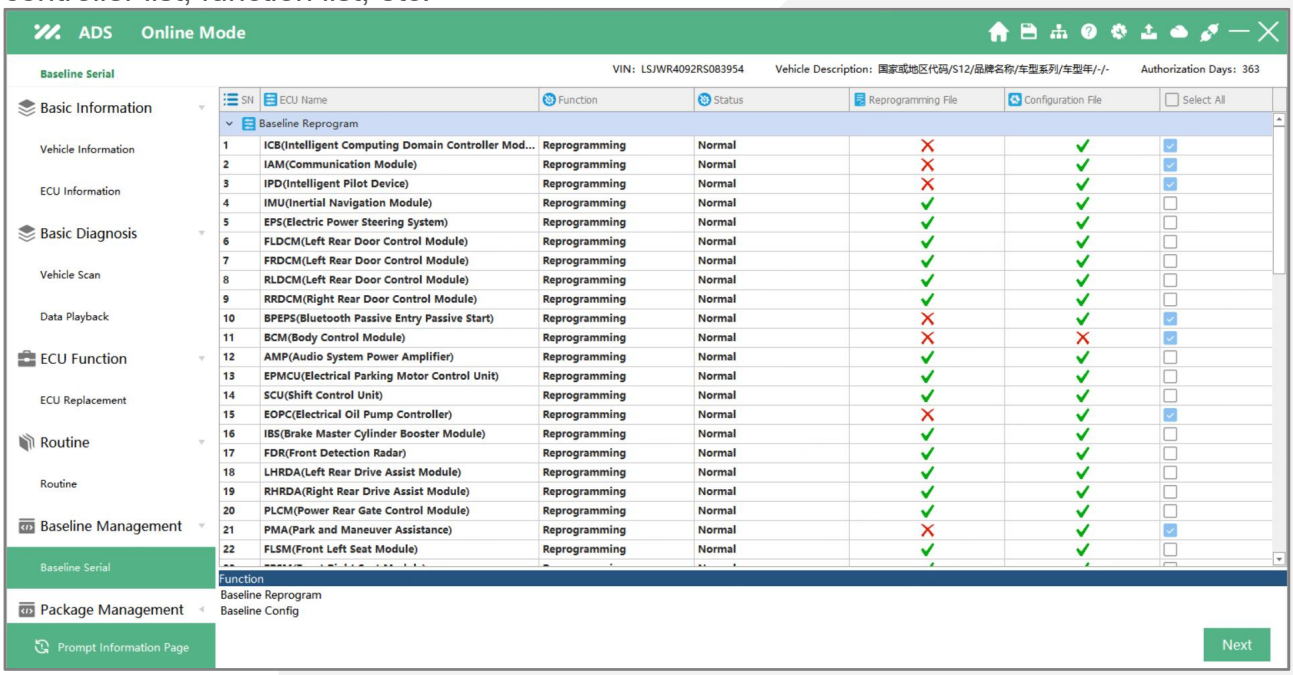
2.6. Baseline Management

Baseline Management includes Baseline Serial

2.6.1. Baseline Serial

Baseline Serial includes two functions:Baseline Reprogram and Baseline Config

The Baseline Serial interface includes contents such as the information prompt page, controller list, function list, etc.



Caution

There is no need to select a controller on this page. You can directly select Baseline Reprogram or Baseline Config from the function list, and then click "Next".

2.6.1.1. Introduction to the Controller List

The Controller List includes two directories, namely Baseline Reprogram and Baseline Config. Each directory contains a sub-function list corresponding to the controller

The names of each column in the list are "ECU Name", "Function", "Status", "Reprogramming File", "Configuration File", and "Select All"

Caution

- Only the "Forced Refresh Configuration" in each column is editable, and it must be in the state where the background is white and the checkbox is not checked
- The list of controllers displayed in this table only shows all the controllers that the current vehicle supports for diagnosis

Project	Description
ECU Name	All controllers of the current vehicle that support the "Baseline Serial " function
Function	The function description of the corresponding controller, including Baseline Reprogram and Baseline Config
Status	The status descriptions of the corresponding controllers include: invalid VIN, unable to read VIN, VIN mismatch, hardware number mismatch, unable to read hardware number, unable to communicate with the module, database connection failure, and normal
Reprogramming File	Compare the "ECU Information" and "Database Information" of the controller-related reprogramming file, and the result is shown as ✓, ✗, ?, ···
Configuration File	Compare the "ECU Information" and "Database Information" of the controller-related configuration file, and the result is shown as ✓, ✗, ?, ···
Select All	According to the comparison results of the reprogramming file and the configuration file, it is displayed as ■, □, ☑, and if it is actively checked, it will be displayed as ☑

2.6.1.1.1.Introduction to the Controller Status

Compare the VIN and hardware number read from the controller with the VIN (i.e., the VIN for vehicle identification) and hardware number in the database, and display the comparison results in the "Status" column to indicate the status of the controller. The statuses include: VIN not match, hardware number not match, no communication, and normal

Status	Description
Normal	The data information in the controller and the database is obtained normally, and the VIN and hardware number read from the controller are consistent with the VIN and hardware number in the database (including the situation of a brand-new controller that has not had the VIN written into it)
VIN Not Match	The VIN read from the controller is inconsistent with the VIN in the database.
Hardware Number Not Match	The hardware number read by the controller is inconsistent with the hardware number in the database
No Communication	The communication with the controller fails

Caution

- When the controller is in an abnormal state, diagnostic operations cannot be performed
- The VIN and hardware number in the database need to be consistent with the VIN and hardware number in the controller before subsequent operations can be carried out.
- The new controller cannot be read because the VIN has not been written yet, and it will not be determined as being in an abnormal state due to this reason

2.6.1.1.2.Introduction to the matching status

Compare the "ECU Information" and "Database Information" of the controller-related reprogramming file and configuration file, and the result is shown as ✓,✗,?,···

Caution

If there is no reprogramming file or configuration file information in both the "ECU Information" and the "Database Information", the corresponding matching status will also be displayed as "···", and the corresponding functions will not support "Reprogramming " or "Configuration"

Matching Status	Description
✓	The "ECU Information" and "Database Information" of all corresponding reprogramming files or configuration files are consistent, and the data in the controller is already the latest. There is no need to perform the reprogramming or configuration functions, but this does not affect the subsequent operations on the controller
✗	The data version corresponding to this function in the controller on the vehicle is inconsistent with that in the database, but it does not affect the subsequent operations on the controller

Matching Status	Description
?	At least one of the data information of the data version corresponding to this function in the controller on the vehicle and that in the database is empty, so no comparison can be made.
...	There is no data information for at least one of the data versions corresponding to this function in the controller on the vehicle and in the database, so a comparison cannot be made.

2.6.1.1.3.Introduction to Select All

When performing baseline reprogram and baseline config, by default, the vehicle controllers with the same part numbers as those of the server will be automatically skipped, and the functions will only be executed for the controllers with inconsistent part numbers. This column indicates whether to perform a forced reprogram or config. Users can choose whether to perform a forced reprogram or config for this controller

This column can only be checked when the status of the controller hardware number is normal and the part number is consistent with that of the server. In other cases, the ADS will automatically set whether it is selected or not, and it cannot be manually selected. The detailed description is as follows.

There are a total of four states for this column:

Status	Description
	The status of the corresponding controller is incorrect, and it cannot be selected for forced reprogram or config. Moreover, as long as there is any controller in this state in the list, it will cause the baseline reprogram or baseline config to be unable to proceed
	The status of the corresponding controller is normal, and the part number is consistent with that of the server side. By default, baseline reprogram and baseline config are not required, but it can be manually selected to force baseline reprogram and baseline config
	The state of the above button after being manually selected represents that the forced reprogram or config has been manually chosen. Clicking it again will cancel the forced reprogram or config
	It is mainly applied when the status of the controller is normal, but the part number is inconsistent with that of the server side. In this case, the ADS automatically sets to force baseline reprogram and baseline config, and it cannot be manually selected or cancelled.

2.6.1.2. Introduction to Function List

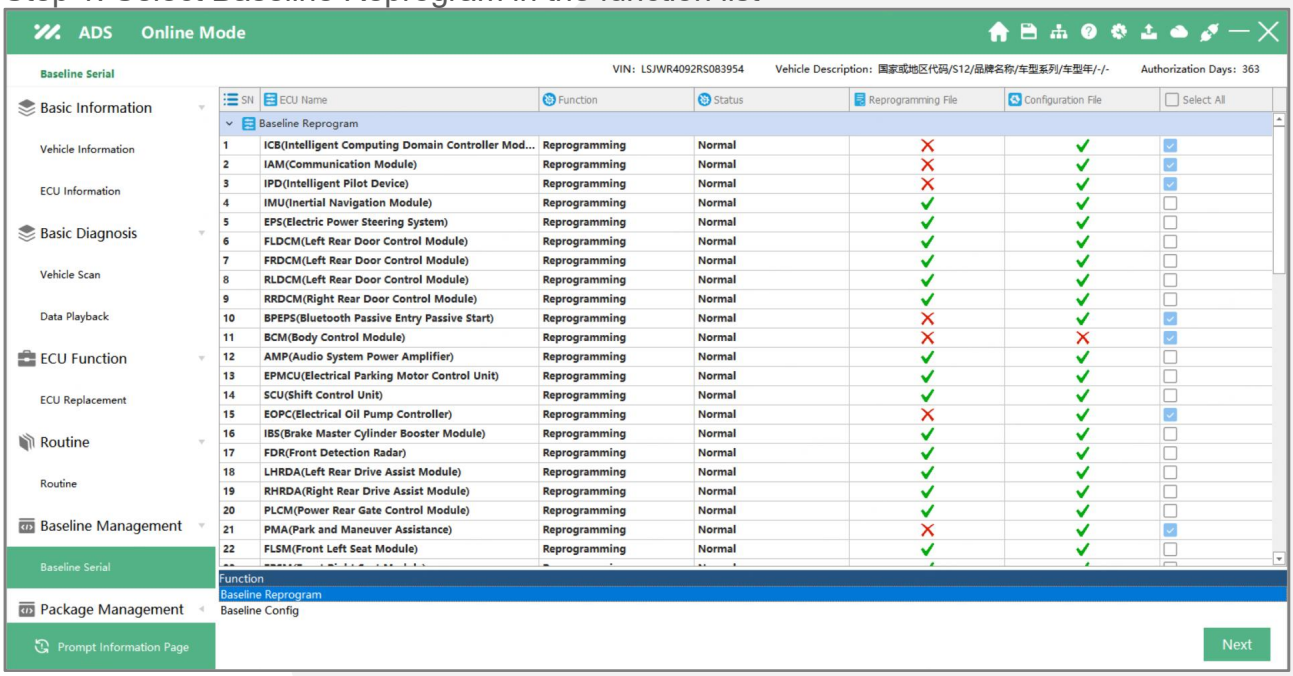
Function List includes: Baseline Reprogram and Baseline Config
Perform software upgrades on controllers that are not of the latest baseline version
Baseline Reprogram:
Baseline Config: Perform configuration writing for controllers that are not of the latest baseline version.

2.6.1.3. Introduction to the Operation Steps of Baseline Serial

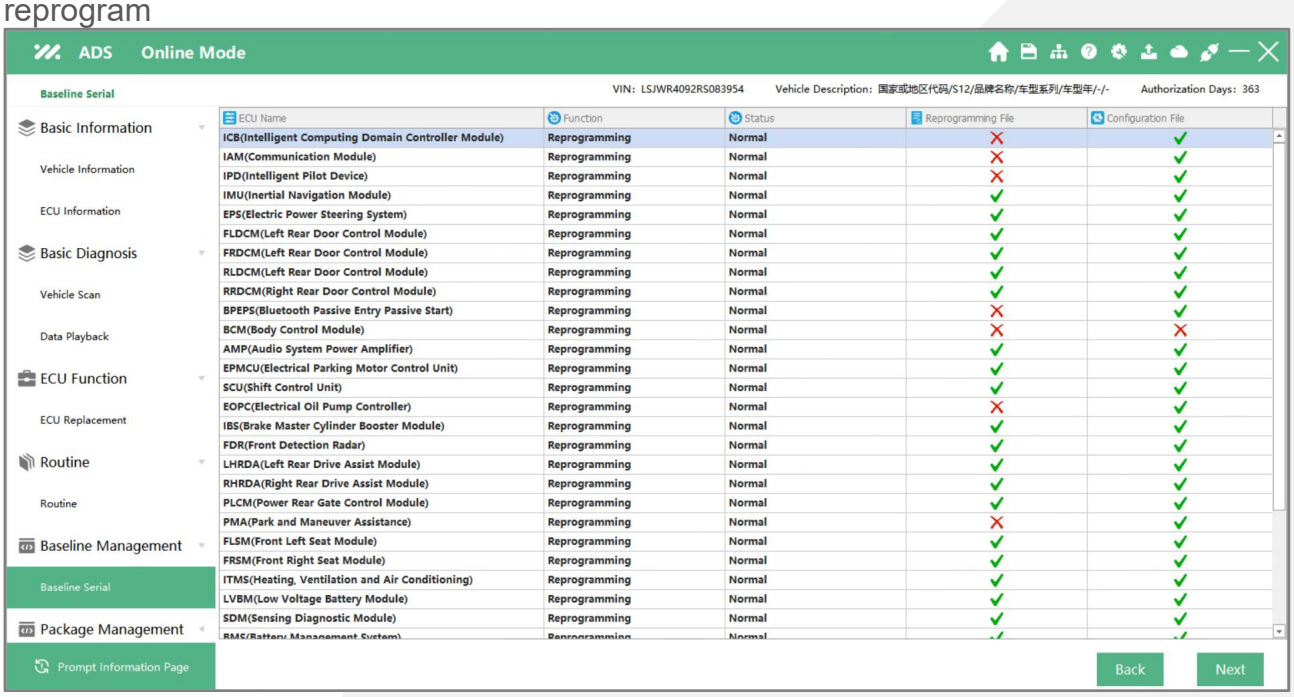
This paragraph will introduce the operation steps by taking the baseline reprogram as an example.

Operate steps of Baseline Reprogram

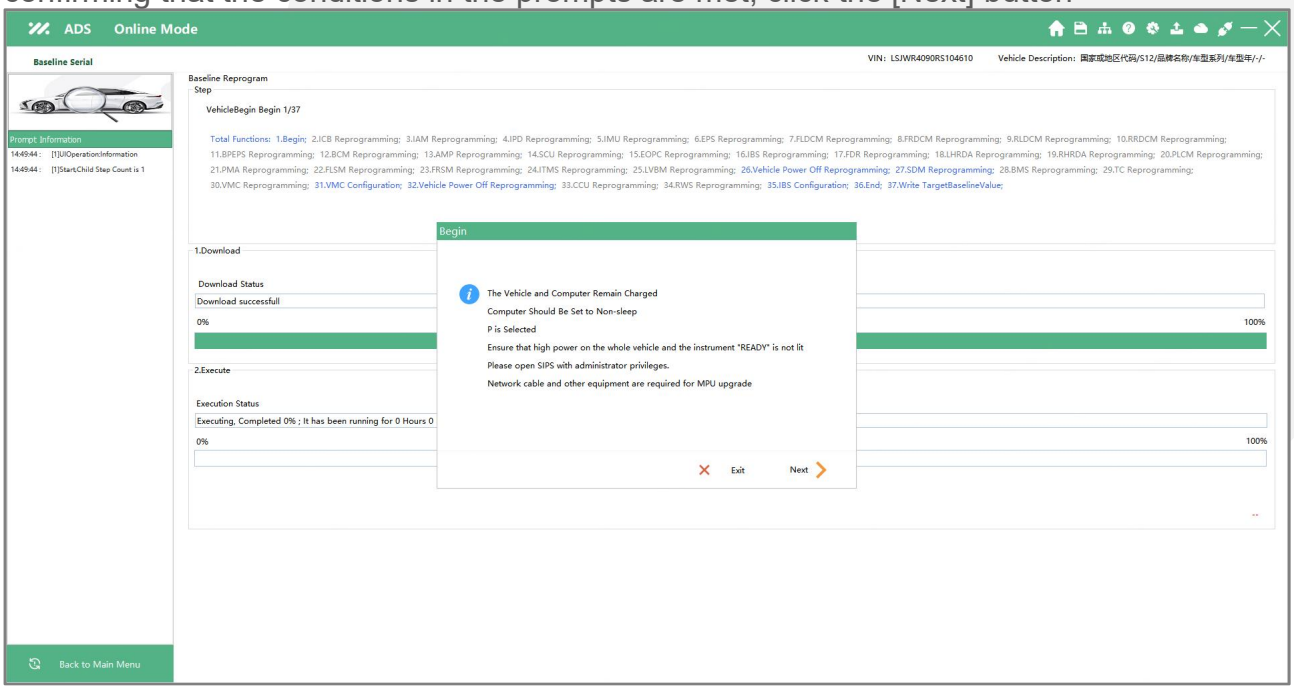
Step 1: Select Baseline Reprogram in the function list



Step 2: If the status of all controllers is normal, click the [Next] button to start the baseline reprogram

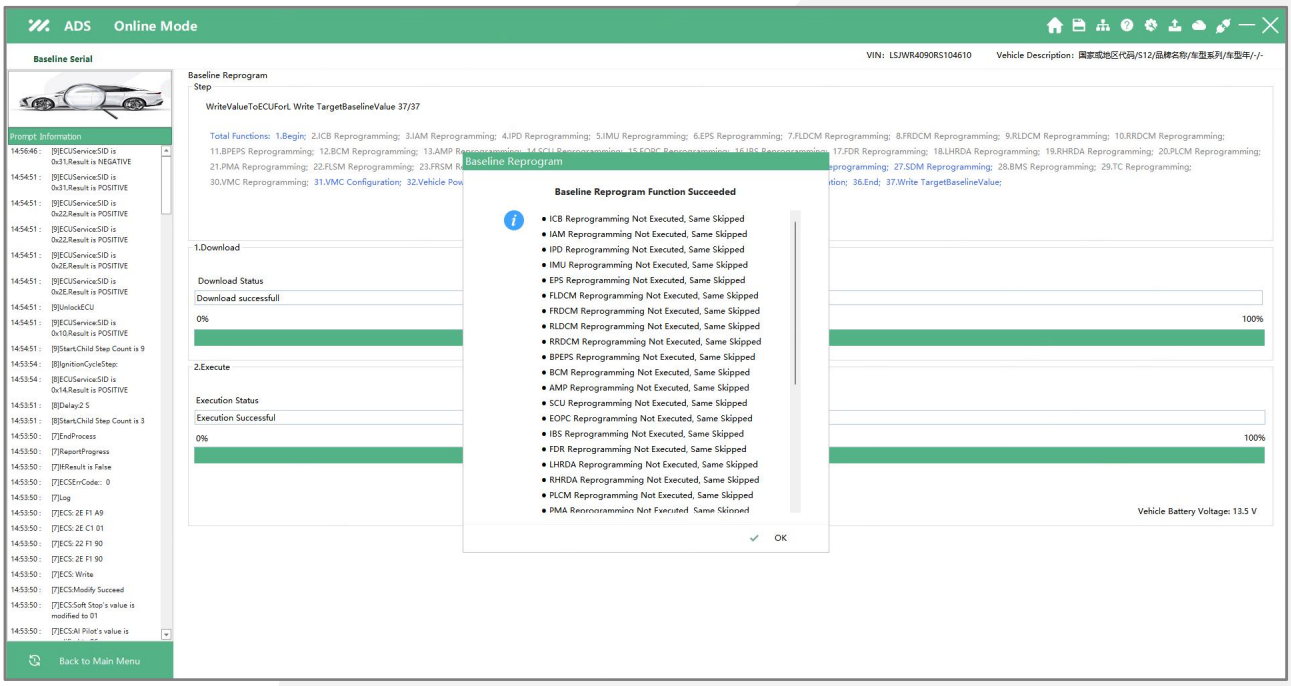


Step 3: The ADS automatically downloads the reprogram file and prompts the precautions for the baseline reprogram. Please be sure to operate according to the prompts. After confirming that the conditions in the prompts are met, click the [Next] button



Step 4: Start to automatically execute all the reprogram and config functions in the sub-function list of the baseline reprogram. During this process, if a pop-up window appears, please be sure to operate according to the prompts or click the [Next] button.

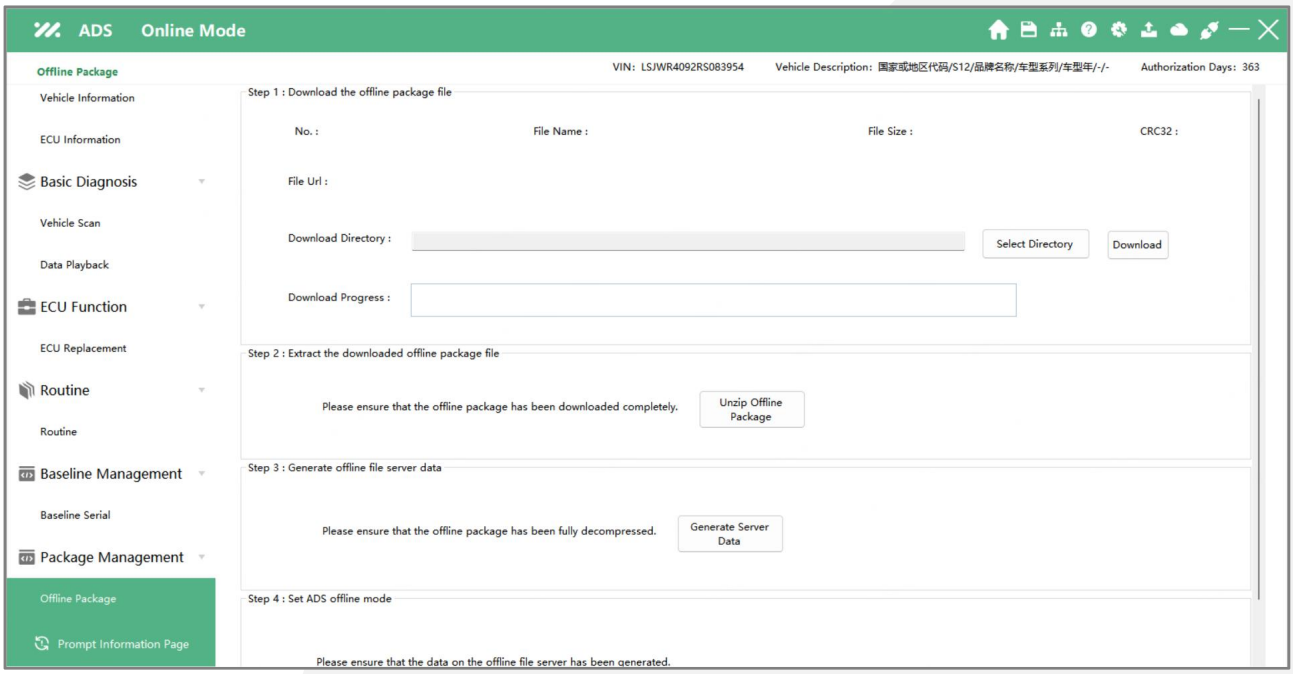
Step 5: After all the functions have been executed, the execution results of all functions will be displayed. Please ensure that the software prompts that the baseline reprogram function is successful.



2.7. Package Management

2.7.1. Offline Package

When the offline package is officially released later, the specific usage method of this function will be attached



2.8. Auxiliary Functions

The auxiliary function icons of the ADS client are displayed in the upper right corner of the page, including: Home Page, Open the File Synchronization Tool, Open VCI Manager, Help Documentation, Setting, Export Logs, and Connect Status. This section introduces the operation steps of the auxiliary functions.

Icon	Description
	Return to home page
	open the file synchronization tool
	open the VCI Manager
	Open the relevant help documents of the ADS
	Modify the language settings. Currently, it supports switching between two languages, Chinese and English
	Export the log file of the ADS client
	Switch between online mode and offline mode
	This icon shows the connection status of the VDI.

2.8.1. Home Page

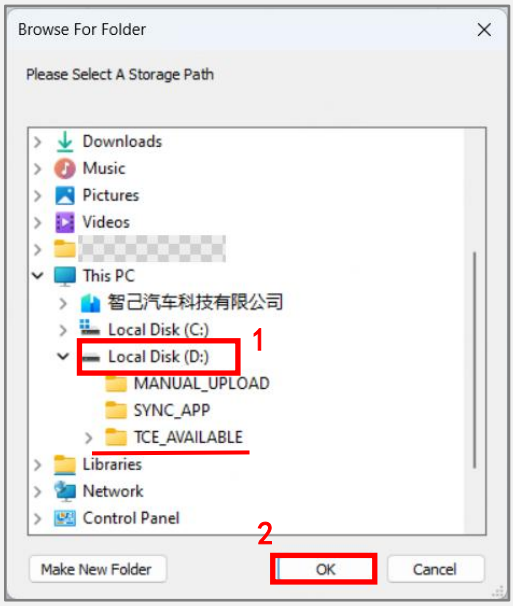
The button in the upper right corner of the ADS client is the "Home Page" function: When the ADS client is in use, clicking this button will take you back to the vehicle identification interface.

Caution

- This function cannot be used during the communication process between the ADS client and the vehicle or the server side
- After returning to the home page, the information of the last vehicle identification will be cleared

2.8.2. Open the File Synchronization Tool

The button in the upper right corner of the ADS client is the function of "Opening the File Synchronization Tool": Download large-sized data to the local device



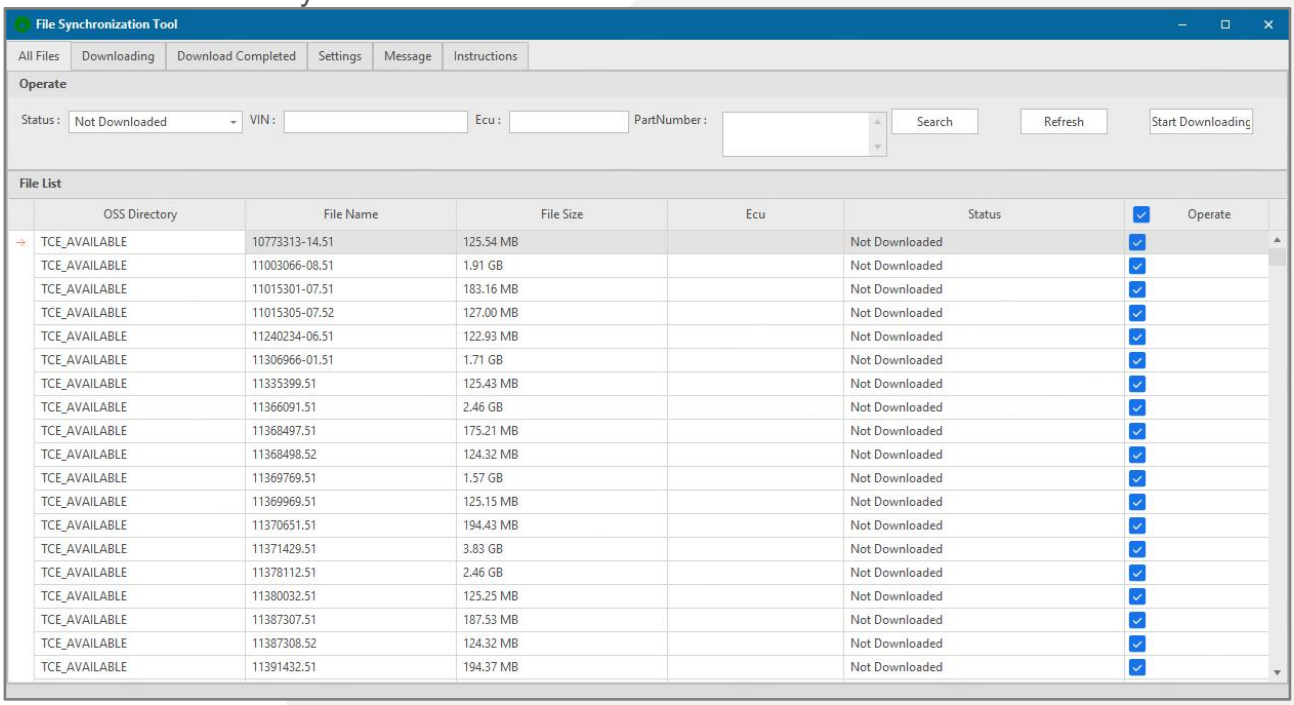
Caution

- When the ADS is launched for the first time after installation, the file synchronization tool will prompt you to set the storage path. Please set it reasonably according to the actual hard disk capacity of the diagnostic computer. After selecting the storage path, the tool will create a folder under this path, and the file synchronization tool window will pop up
- To ensure the stable operation of the diagnostic computer system, do not set the storage path for large-sized files in the partition where the Windows system is installed.
- If there are already large-sized files on the local computer, you can set the storage path according to their existing location, that is, the parent level of the TCE_AVAILABLE folder
- If you change the storage path for large-sized files, you need to modify the storage path first and then migrate the historical files

After clicking, the file synchronization tool will pop up, click the [Start Download] button

Caution

- Please turn off the hibernation/sleep function of the diagnostic computer to ensure that the diagnostic computer remains in operation throughout the download process
- In order to enhance the customer experience and reduce the maintenance waiting time, please perform a full synchronization of large-sized data at least once a day



2.8.3. Open VCI Manager

This function is only applicable in the scenario where the diagnostic computer and the vehicle are connected via the VDI (Vehicle Communication Interface)
When the vehicle is connected using an OBD network cable, this function cannot be used

2.8.4. Help Documentation

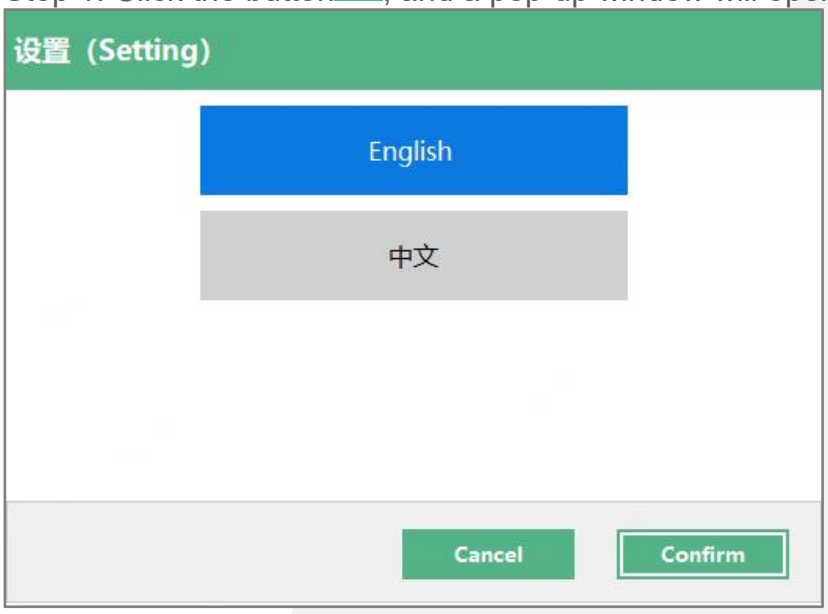
The button in the upper right corner of the ADS client can be used to open the help documentation of ADS.

2.8.5. Setting

The button in the upper right corner of the ADS client can be used to set the display language of the ADS client. Currently, it supports switching between Chinese and English.

The operation steps for language setting

Step 1: Click the button, and a pop-up window will open the language settings interface.



Step 2: Select the language you need to set, click "OK", and the ADS client will automatically restart

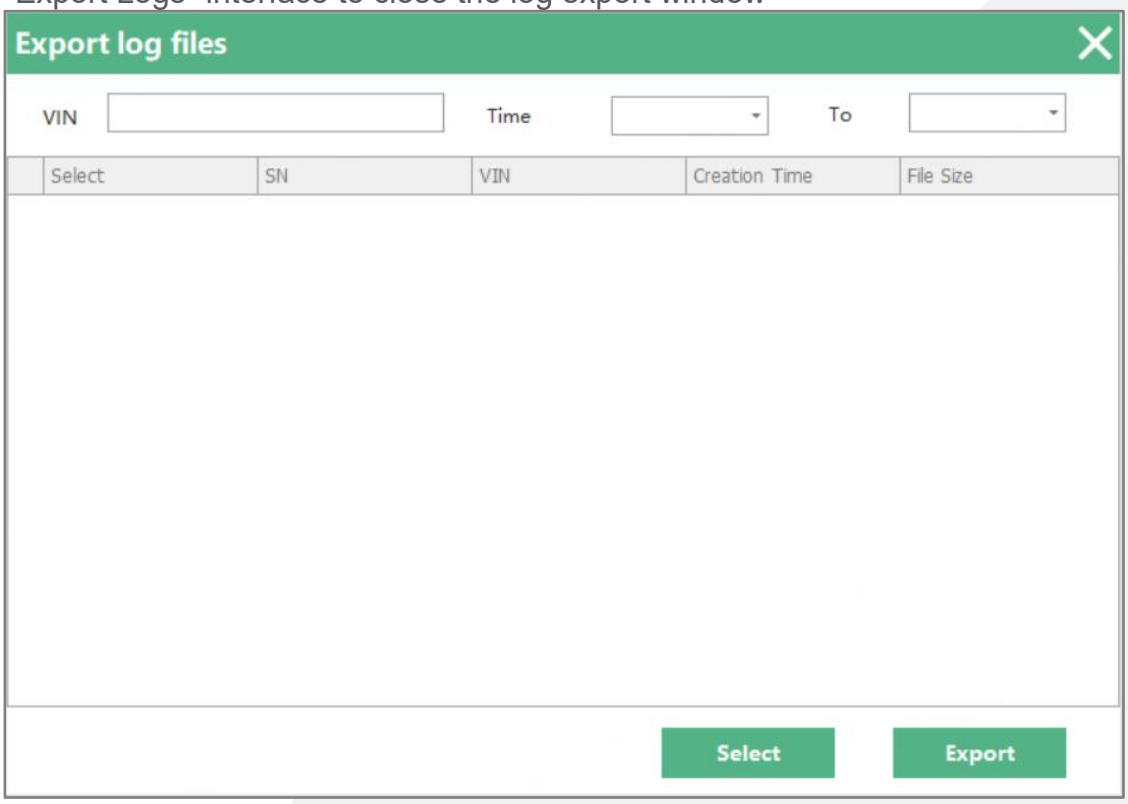
2.8.6. Export Logs

The button in the upper right corner of the ADS client is the "Export Log" function: to export the log file of the ADS client

The operation steps for exporting the log

Step 1: Click the button, and a pop-up window will open the interface for exporting logs
Step 2: Enter at least one query condition, either the VIN or the time, and press Enter to list the log files that meet the conditions. The displayed log file information includes the VIN, generation time, and file size
Step 3: The log files are named after the VIN and the generation time. Please confirm and select the file you need to export according to the VIN and the generation time. Click the [Export] button, select the export path, and save the file after clicking "OK".

Step 4: Click on the corresponding element (such as a close button or icon) within the "Export Logs" interface to close the log export window



2.8.7. Online/Offline Mode Switching

This function will be released in later version

2.8.8. Connect Status

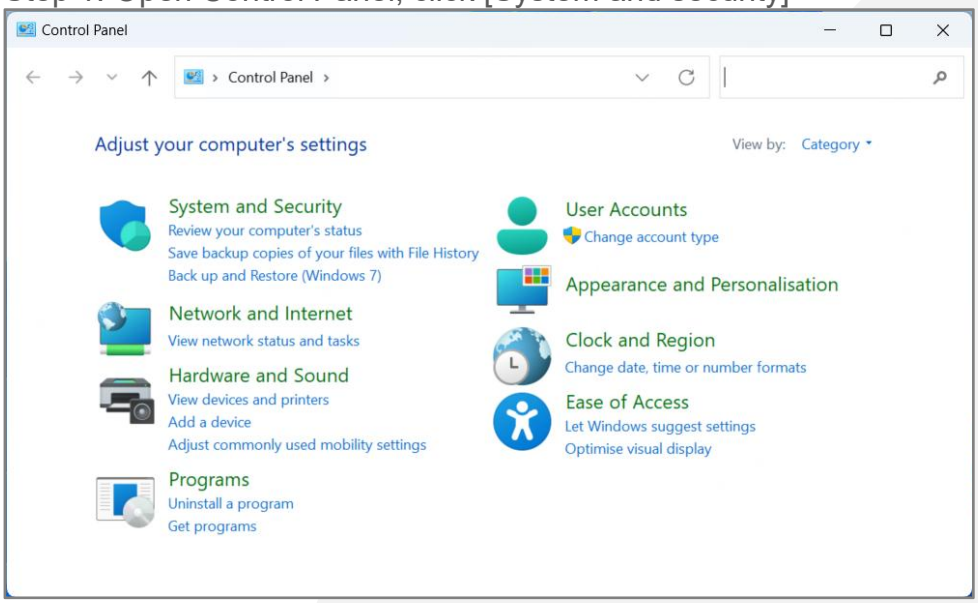
The button in the upper right corner of the ADS client shows the connect status of VDI, you can ignore it when connecting the vehicle with the OBD network cable

Chapter III Other Matters

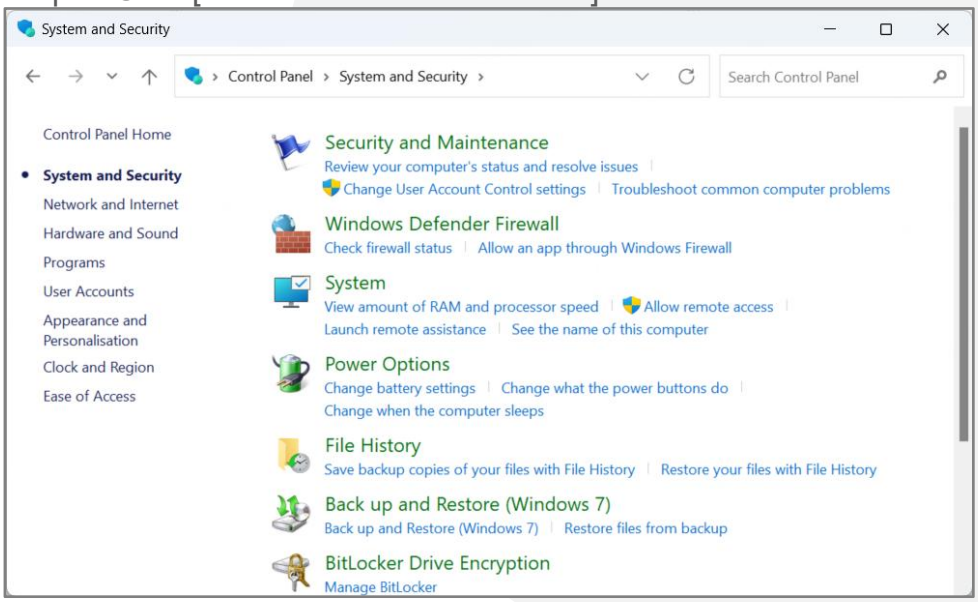
3.1. Environmental Settings

3.1.1. Steps for Firewall Settings

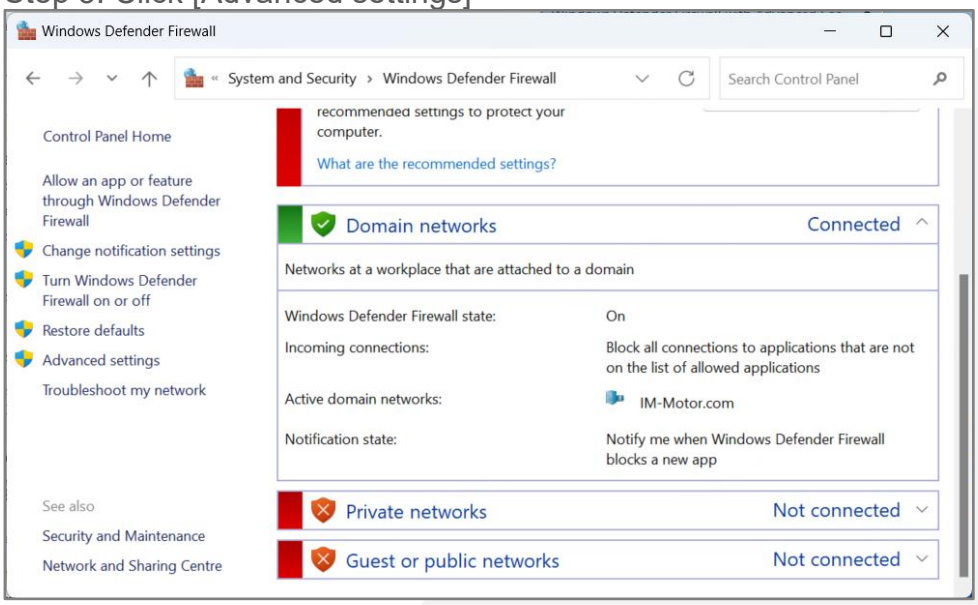
Step 1: Open Control Panel, click [System and security]



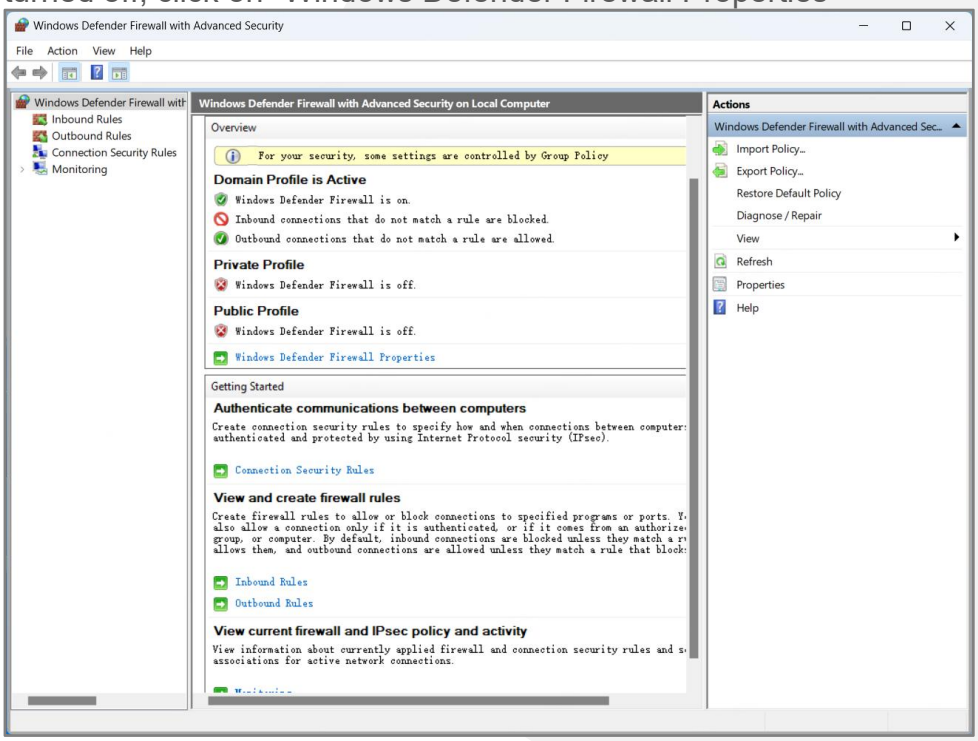
Step 2: Click [Windows Defender Firewall]



Step 3: Click [Advanced settings]

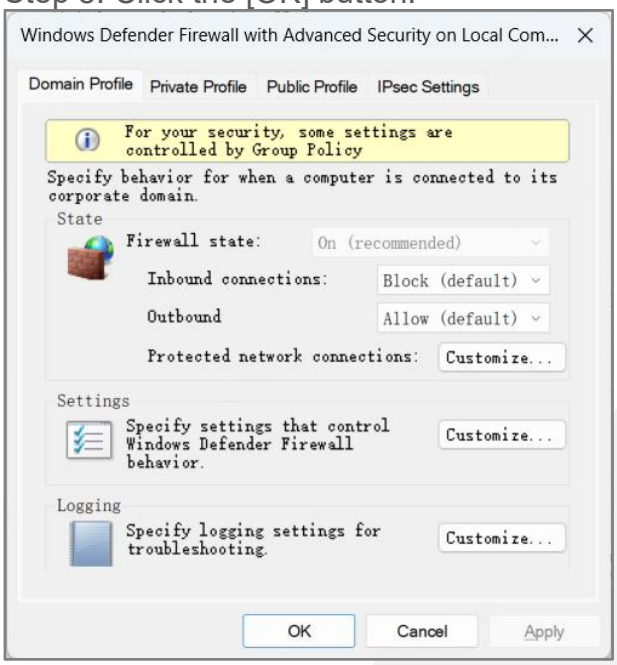


Step 4: Confirm whether the firewall has been completely turned off. If it has not been turned off, click on "Windows Defender Firewall Properties"



Step 5: Select the "Domain Profile", set the firewall state to "Off", click the [Apply] button
Step 6: Select the "Private Profile" , set the firewall state to "Off", click the [Apply] button
Step 7: Select the "Public Profile", set the firewall state to "Off", click the [Apply] button

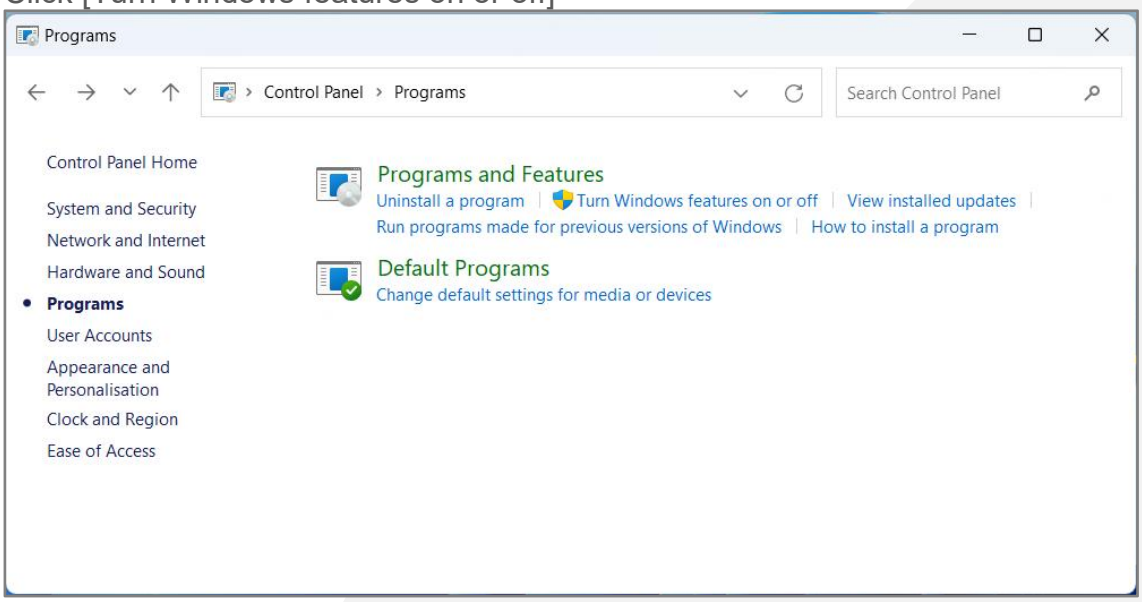
Step 8: Click the [OK] button.



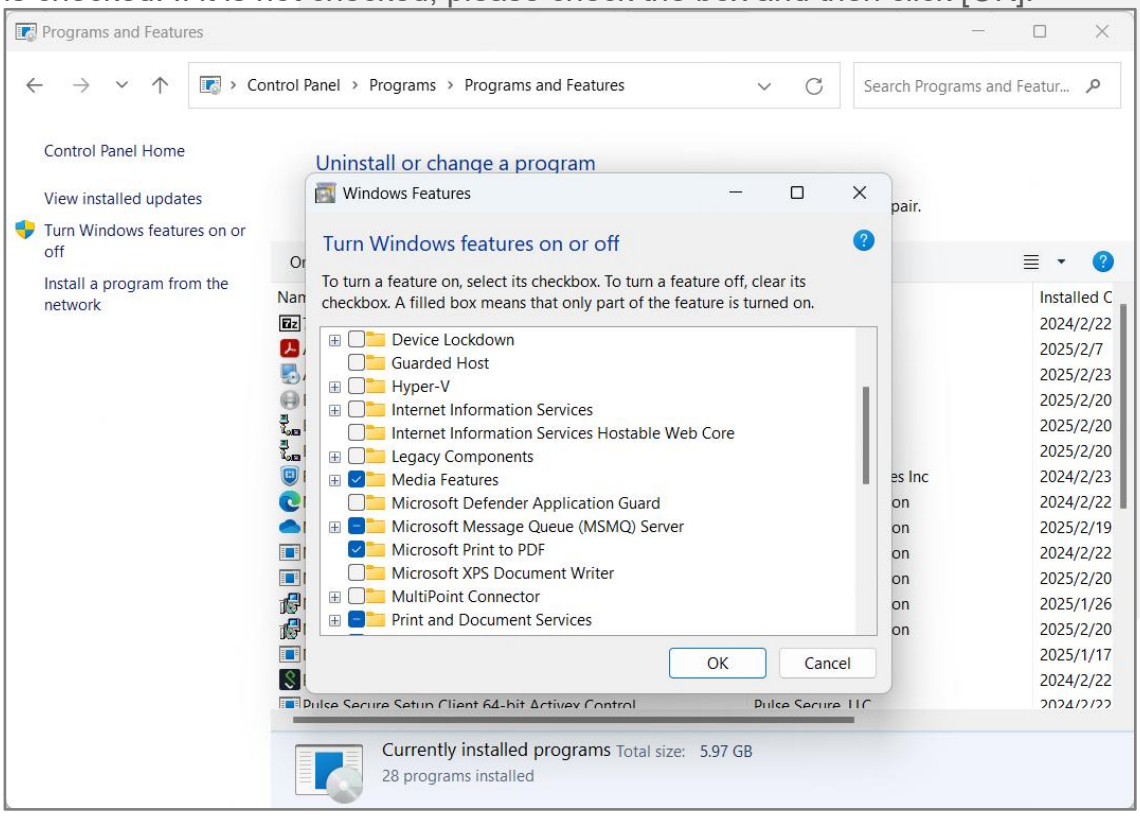
Step 9: Confirm the firewall again. It must be completely turned off in all aspects

3.1.2. MSMQ (Microsoft Message Queue) Settings

Step 1: Select the Windows Features path on the diagnostic computer: Start → Control Panel → Programs → Programs and Features.
Click [Turn Windows features on or off]



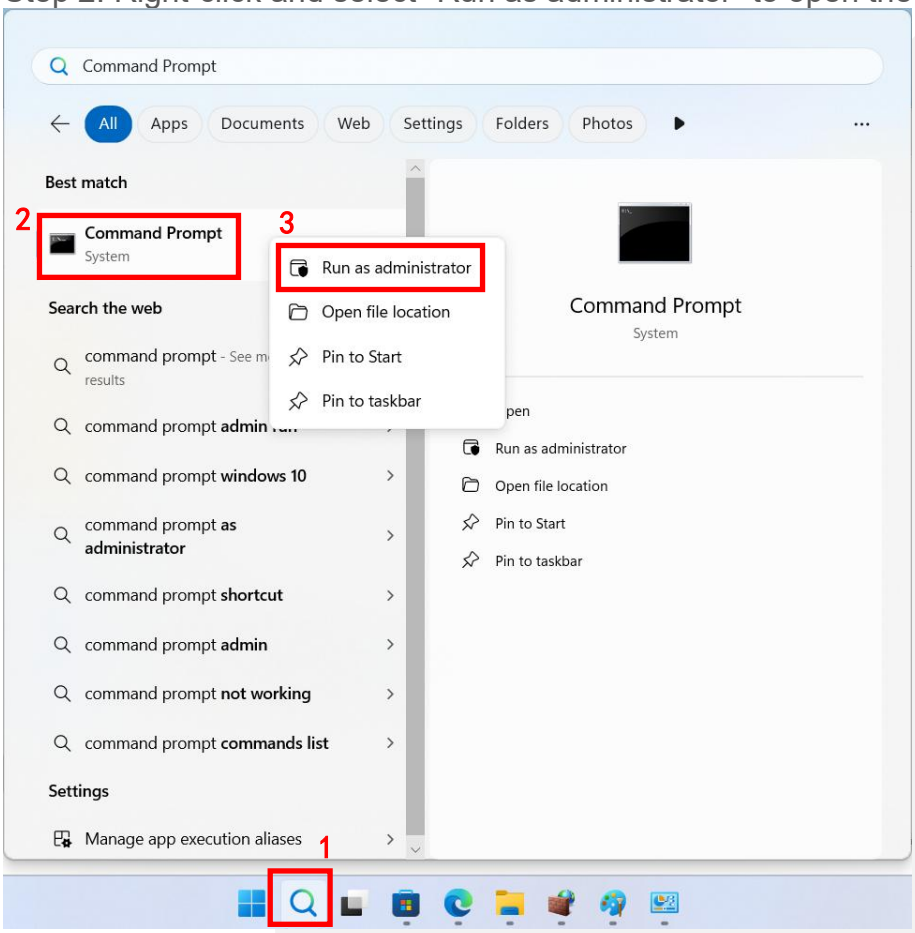
Step 2: Locate "Microsoft Message Queue (MSMQ) Server" in the list. Confirm whether it is checked. If it is not checked, please check the box and then click [OK].



3.1.3. Route Settings

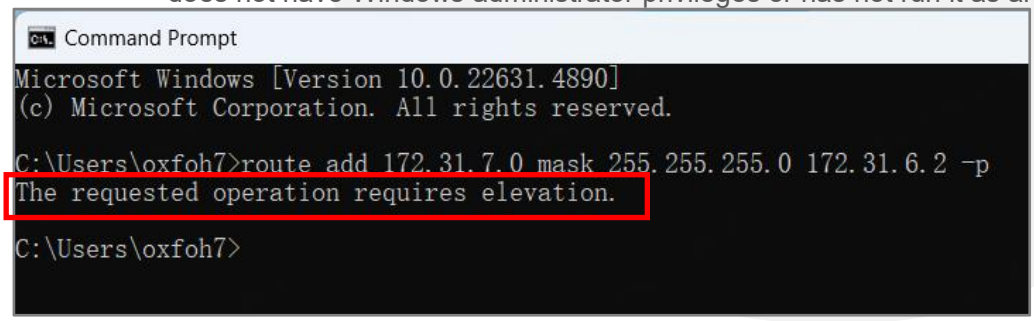
Step 1: Enter "Command Prompt" in the search bar

Step 2: Right-click and select "Run as administrator" to open the Command Prompt

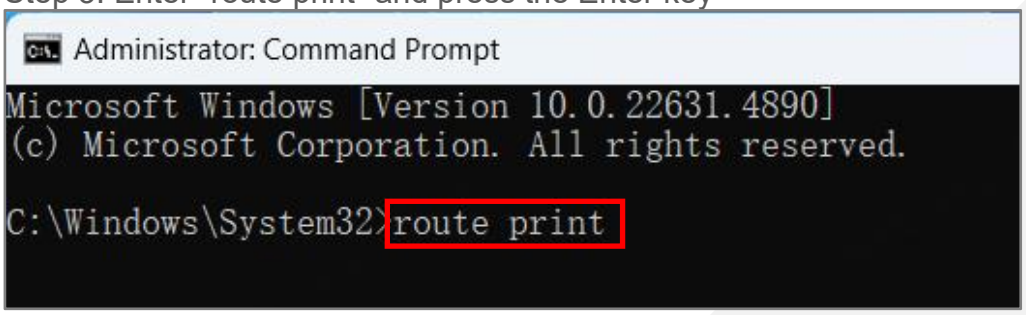


Caution

- Be sure to run the Command Prompt as an administrator
- If it is prompted that the requested operation requires elevation, it indicates that the user does not have Windows administrator privileges or has not run it as an administrator



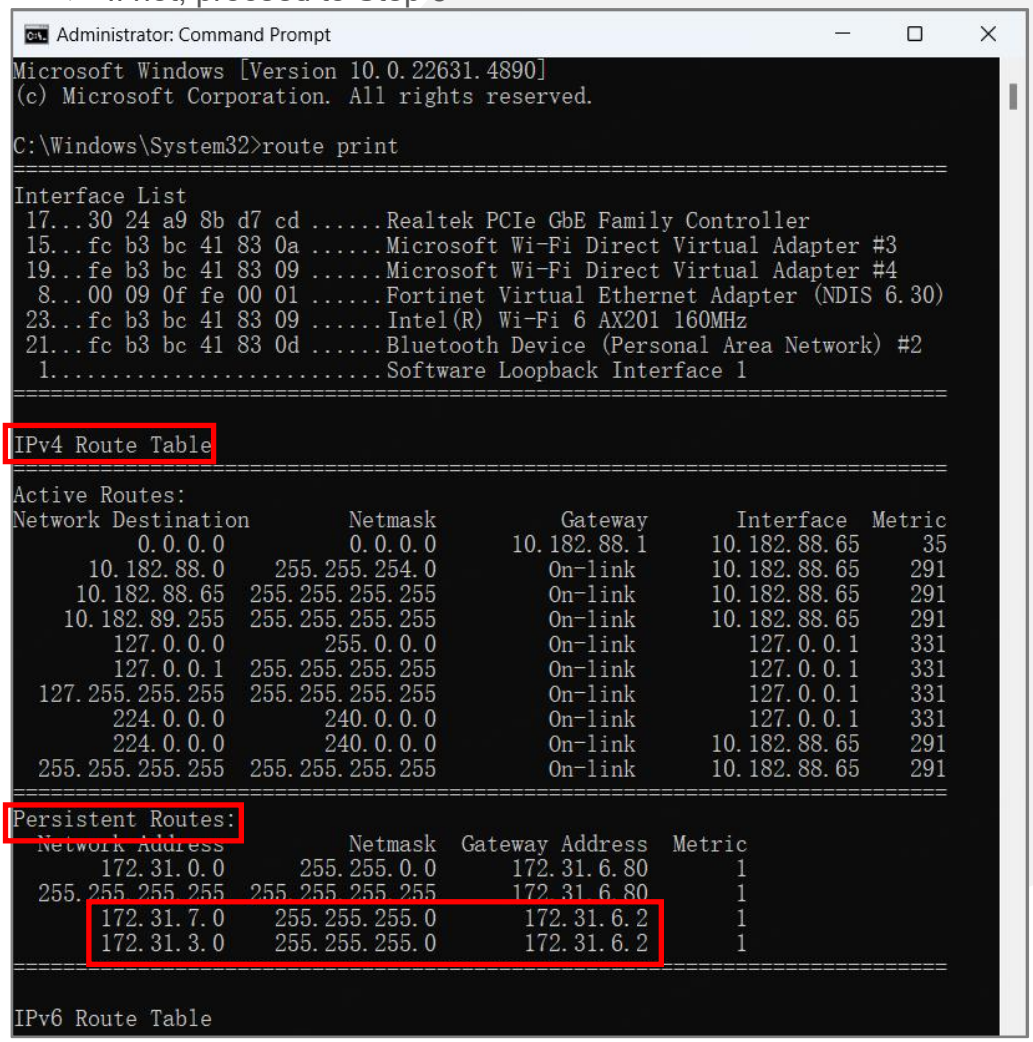
Step 3: Enter "route print" and press the Enter key



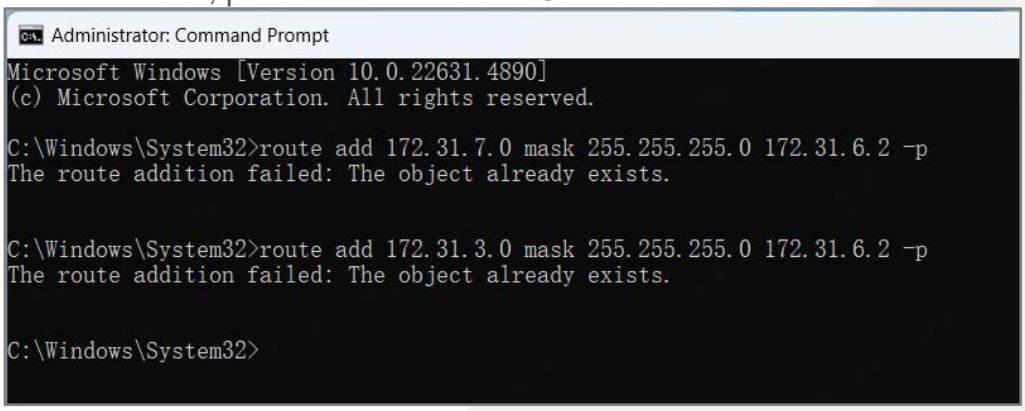
Step 4: Check whether there are the following two permanent routes in the IPv4 routing table.

Network Address	Netmask	Gateway Address
172.31.7.0	255.255.255.0	172.31.6.2
172.31.3.0	255.255.255.0	172.31.6.2

- If there are, the Route has been set
- If not, proceed to Step 5

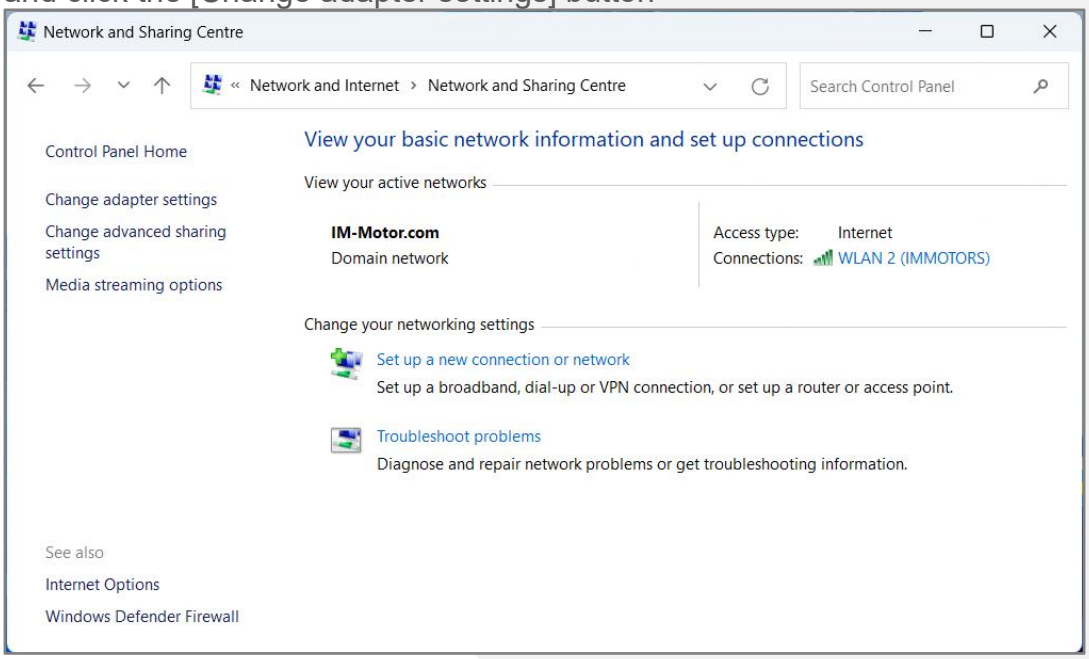


Step 5: Enter the following two lines of commands respectively and press the Enter key:
route add 172.31.7.0 mask 255.255.255.0 172.31.6.2 -p
route add 172.31.3.0 mask 255.255.255.0 172.31.6.2 -p
If the operation is completed, re-execute Steps 3-4
If it fails, please contact the TAC

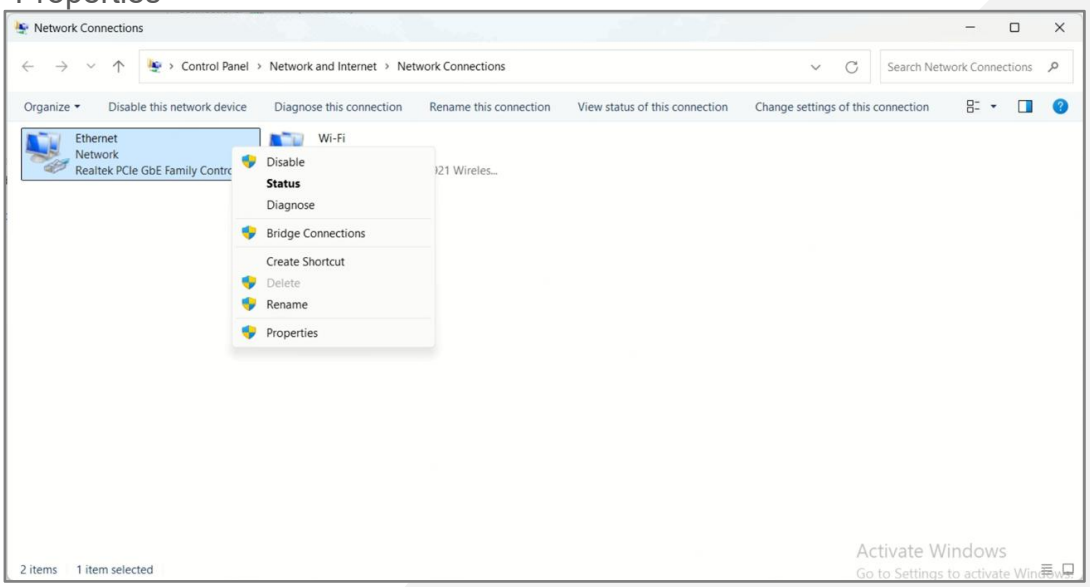


3.1.4. Computer's IP Address Setting

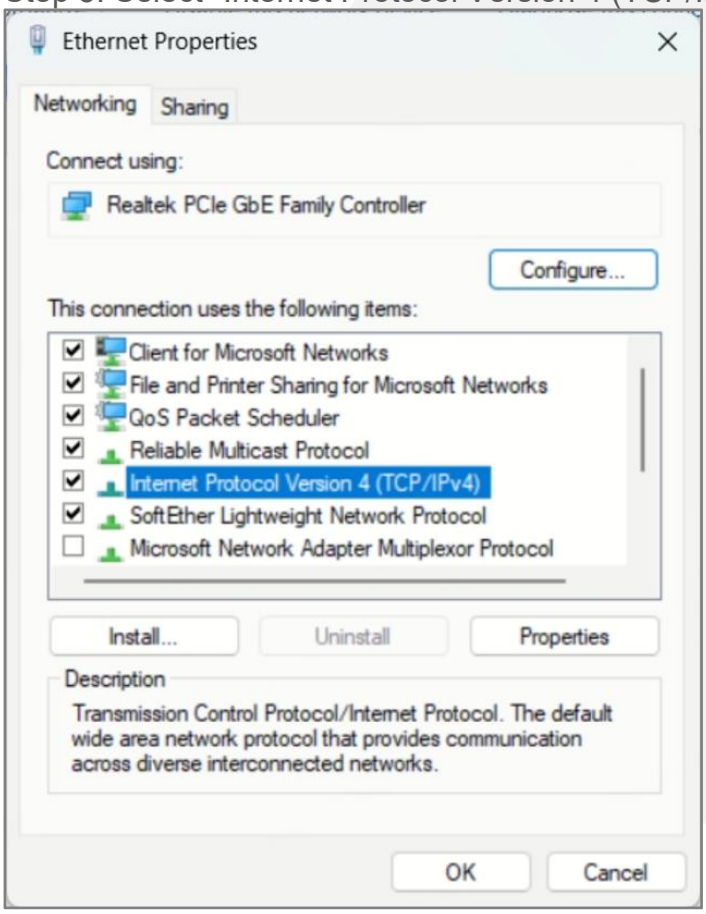
Step 1: Navigate through the Windows features path: Control Panel → Network and Internet → Network and Sharing Center. Check the currently active Ethernet connection, and click the [Change adapter settings] button



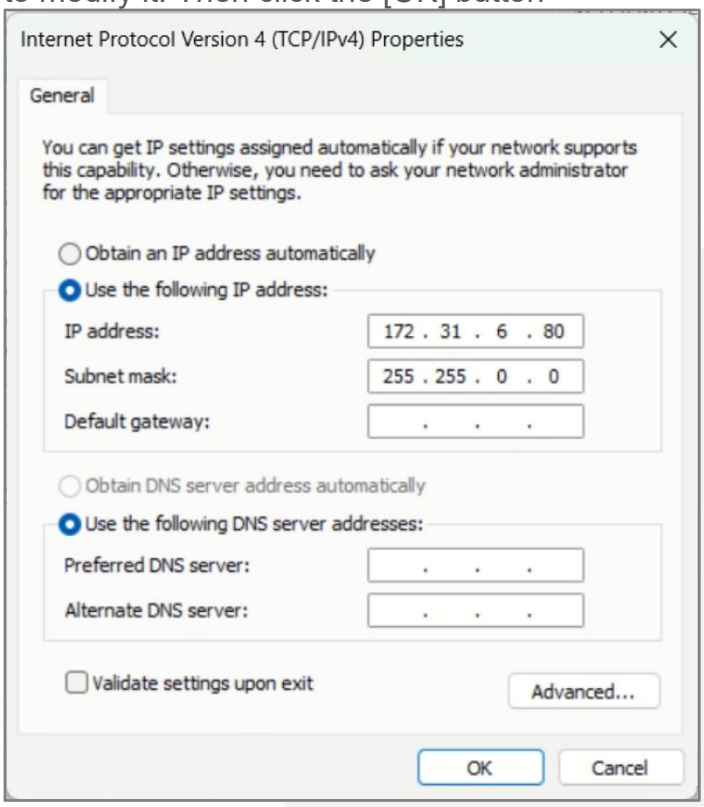
Step 2: Locate the currently active Ethernet connection, right-click on it and select "Properties"



Step 3: Select "Internet Protocol Version 4 (TCP/IPv4)" and click the [Properties] button



Step 4: Select "Use the following IP address". Enter the IP address: 172.31.6.80. After clicking in the Subnet Mask field, the system will automatically fill it in and there is no need to modify it. Then click the [OK] button

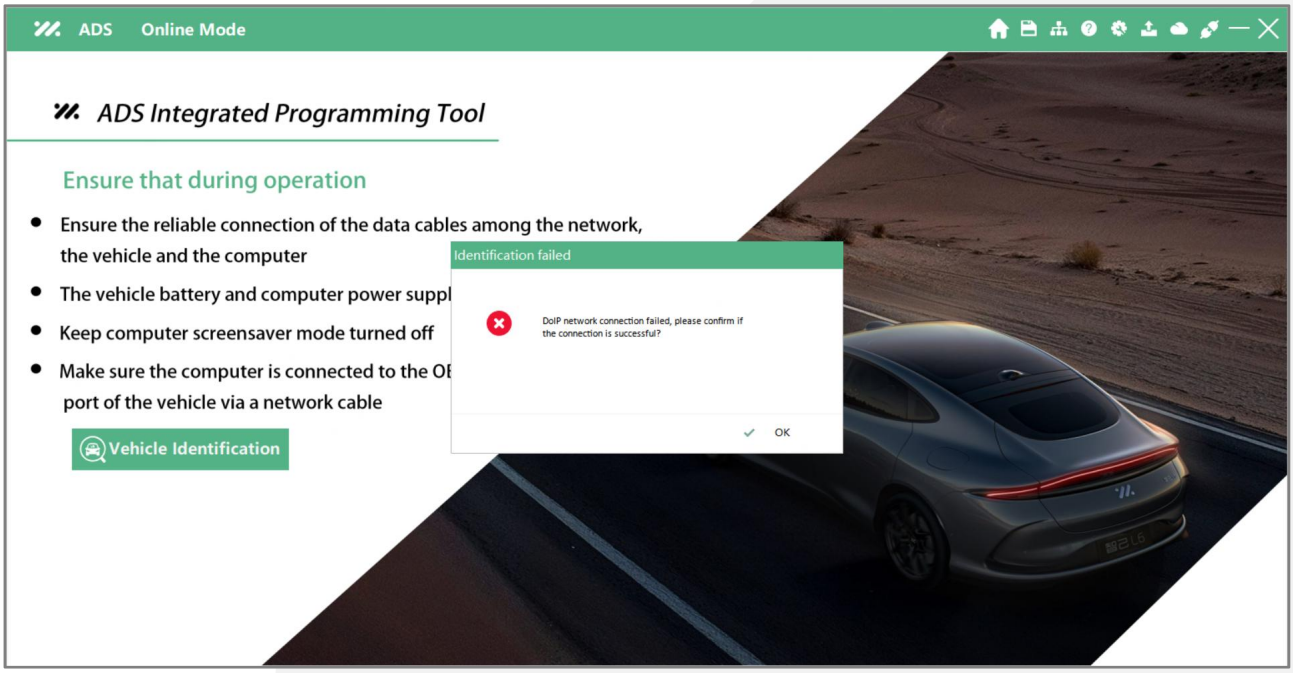


3.2. Frequently Asked Questions

3.2.1. The vehicle cannot be identified and prompts "DoIP network connection failed"

Cause analysis: ADS has high requirements for the diagnostic computer environment. If the parameter settings are incorrect, the vehicle cannot be recognized

Recommended action: Check the environment and re-identify it, see *Chapter III Other Matters - > 3.1 Environmental Settings*



3.3. Any question, please contact the TAC of the corresponding region

Note

Refer to ***TB-ALL-GE-2024102502-Announcement on the Adjustment of the On-site TAC Region***