SIPS User Manual

For CDC Client

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Chapter 1. Introduction to SIPS For CDC

SAIC integrated program system (hereinafter referred to as SIPS) is different from the previous VDS software, which realizes vehicle service and maintenance by means of online diagnostics for ECU reprogramming, configuration, replacement, etc. It is typically used on passenger vehicle models, with the VDS completing vehicle diagnostic functions such as Read DTC, Live Data, and ECU Info, and the SIPS completing vehicle service and calibration functions (including Reprogramming, Configuration, Replacement, Add Key, Delete Key, etc.).

This manual only introduces the use of SIPS client in detail.

The SIPS mainly consists of three parts: SIPS client, configuration information query, and ECU information query. Details are as follows:

SIPS client: communicate with the vehicle through VDI (Vehicle Diagnostic Interface) to realize vehicle service and calibration function.

Configuration information query: query the configuration information of the vehicle.

ECU information query: query the latest software information of the vehicle serviced in the manufacturer database.

I. Introduction to SIPS Client

The SIPS client is installed on a local computer via an installer and connected to the vehicle through VDI to realize vehicle diagnostics and service.

1. Introduction to SIPS operating environment

In order for SIPS to work properly, the following basic conditions must be met:

- ✓ Computer software and hardware meet the requirements for diagnostic computers with standardized configurations.
- ✓ In the process of SIPS client running, it may be necessary to get information from the manufacturer database. Therefore, ensure that the network connection is normal during SIPS client running.
- ✓ Since the VDS, GDS and SIPS share the same VDI, once the VDI is called by one of them, the other programs will not be able to establish communication with the vehicle. When using the SIPS client, ensure that the VDI works properly and is not occupied by the VDS, GDS, or VCI Manager.

2. SIPS client Home screen

When the SIPS client is launched and opened, a window will pop up first, asking whether to open the Large Size Data Synchronization Tool at the same time, as shown in Figure 1-0. You can click [Yes] or [No] as needed. This function will be introduced in details in **VII. Auxiliary Functions**. The Home screen of the SIPS client defaults to "Vehicle Identification", as shown in Figure 1-1. After vehicle identification is completed, the SIPS interface displays three tabs: Vehicle Information, ECU Information, and Programming and Coding, with the Vehicle Information tab as the default interface, as shown in Figure 1-2.

Table 1-1 describes the main icons, buttons and tab functions of the SIPS. Please refer to "Introduction to SIPS Client Functions" for details.

Figure 1-1

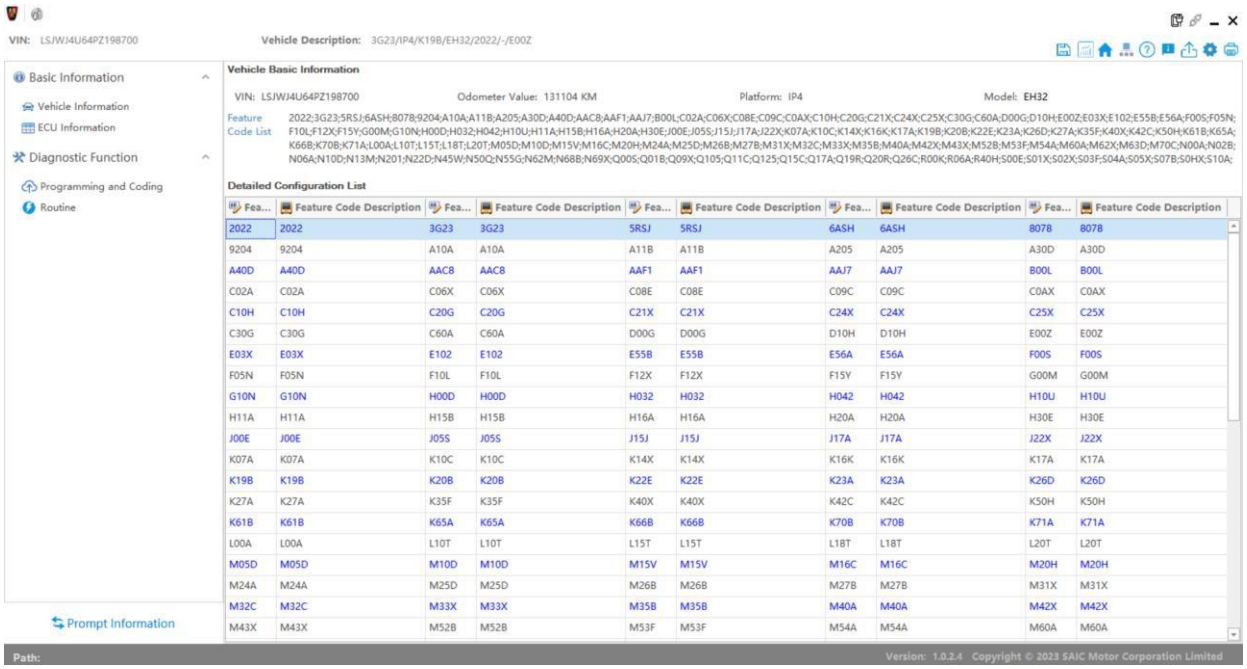


Figure 1-2

Item	Description	Function
	Battery level	Diagnose the computer battery level and charging status.
	VDI connection method	VDI connection status, the connection methods include USB connection, wireless connection, and wired connection.
	Minimize	Minimize the SIPS client window.
	Close	Close the SIPS client window and exit the client.
VIN	VIN	Display the vehicle identification number (VIN) recognized, based on which subsequent operations are performed.
Mileage	Mileage	Display the mileage of the currently serviced vehicle.
Vehicle Description	Vehicle description	Information about the vehicle being serviced.
User	User	Display the account information of the current SIPS user.
	Large size data synchronization	Click to open the large size data synchronization tool.
	CAN bus monitor	Click to open CAN monitor settings.
	Home	During SIPS running, click to return to the Home screen (Figure 1-1).
	VDI Manager	Click to open the VDI Manager.
	Help	Click to open SIPS related help information.
	Version information	Version updates and descriptions.
	Print	Print the current display interface.
	Log export	Export the log file of the SIPS client.
	Settings	Language Settings
During the process, please make sure	Prompt message	Precautions for running the SIPS client
Vehicle Identification	Vehicle identification	Including automatic identification and manual identification.
Version #	Version information	SIPS client version information
Vehicle Information	Vehicle Information tab	Display information about the vehicle.
ECU Information	ECU Information tab	Display the latest ECU information on the vehicle and as released by the manufacturer.
Programming and Coding	Programming and Coding tab	Complete functions of vehicle reprogramming, configuration, and replacement.
Path	Path	Display the path of the currently running SIPS function.
Routine	Routine tab	Complete vehicle self-learning and reprogramming functions.
Baseline Manager	Baseline Manager tab	Complete vehicle baseline configuration and baseline reprogramming functions.

Table 1-1

Chapter 2. Introduction to SIPS Functions

When the SIPS client is launched and opened, the Home screen of "Vehicle Identification" is opened by default. It contains notes on the operation of the SIPS client and the [Vehicle Identification] function button. After completing vehicle identification, it automatically enters the SIPS function interface. It contains two function menus: Basic Information and Diagnostic Function, and five tabs: Vehicle Information, ECU Information, Replacement, Routine, and Baseline Manager.

The main functions of the SIPS client are: Vehicle Identification, Vehicle Information, ECU Information, Replacement, Routine, Baseline Manager and auxiliary functions. This chapter will introduce the interface and operation of each function item in details.

IMPORTANT

1. In the process of SIPS client running, it may be necessary to get information from the manufacturer database. Therefore, ensure that the network connection is normal during SIPS client running.
2. Function execution may take a long time. Therefore, use a USB cable to connect the diagnostic computer to the VDI.

I. Vehicle Identification

When the SIPS client is launched and opened, the Home screen of "Vehicle Identification" is opened by default. Click [Vehicle Identification] to start establishing communication with the vehicle and complete vehicle identification. During vehicle identification, the SIPS automatically skips to the "Vehicle Information" tab and updates the relevant information in the status bar after obtaining relevant data according to the identified VIN.

In vehicle identification, the SIPS will read VINs from key modules of the vehicle (the definition of key modules may vary for different models, typically the SDM, BCM and IPK). SIPS will determine the consistency of above VINs, and perform one of the following 3 operations accordingly:

1) If they are completely consistent (except for all new modules), the SIPS will use the read VIN as the identified VIN for all subsequent operations.
2) If they are not completely consistent, the SIPS will pop up a dialog box asking the user to manually enter the VIN twice and verify their consistency (the entered VIN must be included in the VINs read from key modules). Then, the SIPS will use the manually entered VIN as the identified VIN for all subsequent operations.
3) If there is no normal VIN read from the key modules, the SIPS will pop up a dialog box asking the user to manually enter the VIN twice and verify their consistency.

IMPORTANT

1. After vehicle identification is completed, the SIPS will perform all subsequent operations based on the identified VIN (including writing the VIN to ECUs). Therefore, ensure that the VIN is correct after identification, so as to avoid possible wrong operation or even damage to the ECU.
2. The cause of the failure to read the VIN should be corrected before the vehicle is delivered.
3. You may click the "Home" icon during vehicle service to redirect the system to its Home screen of "Vehicle Identification" for vehicle identification again.

"Automatic Identification" procedures:

Step 1: Use VDI fasteners to connect the vehicle to the diagnostic computer running SIPS.

Step 2: Power on the vehicle and place the vehicle in Run position (position 2).

Step 3: After launching the SIPS client, click [Vehicle Identification] on the Home screen of "Vehicle Identification".

Step 4: Read VIN information from key modules of the vehicle, and display the reading result. The result may appear as follows:

A. If the VINs are completely consistent (except for all new modules), the read VIN will be used as the identified VIN for all subsequent operations.
B. If the VINs are not completely consistent, a dialog box will pop up asking the user to manually enter the VIN twice and verify their consistency (the entered VIN must be included in the VINs read from key modules). Then, the manually entered VIN will be used as the identified VIN for all subsequent operations.
C. If there is no normal VIN read from the key modules, a dialog box will pop up asking the user to manually enter the VIN twice and verify their consistency.

Step 5: Use the VIN determined according to the judgment logic as the identified VIN to read relevant information of the vehicle and get information from the manufacturer database via the Internet.

Step 6: Display the vehicle identification result, and proceed with subsequent operations based on the information. The information displayed includes: VIN, mileage, model year, vehicle model, engine model and gearbox model.

VIN: the result of vehicle identification

Mileage: the odometer value in the IPK of the serviced vehicle

Model year: the corresponding model year of the serviced vehicle

Engine model: the model of the engine fitted to the serviced vehicle

Gearbox model: the model of the gearbox fitted to the serviced vehicle

II. Vehicle Information

Upon completion of vehicle identification, the SIPS will enter its function interface, "Vehicle Information" tab being the default page, as seen in Figure 1-2.

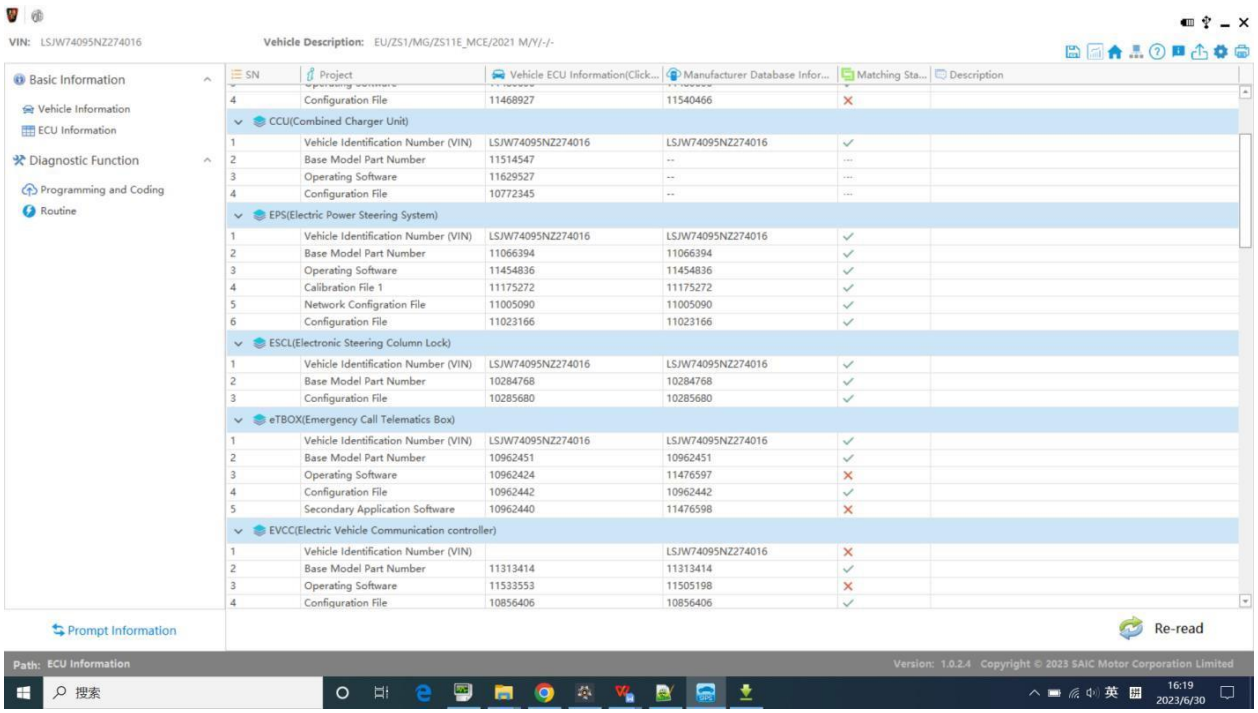
The "Vehicle Information" function is to display vehicle configuration and other relevant information, including: VIN, Odometer Value, Platform, Model, Feature Code List, and Detailed Configuration List.

Introduction to the interface display information:

VIN: the result of vehicle identification
Odometer Value: the odometer value in the IPK of the vehicle
Platform: platform information corresponding to the identified VIN
Model: model information corresponding to the identified VIN
Feature Code List: list of configurations corresponding to the identified VIN
Detailed Configuration List: configuration feature codes and descriptions corresponding to the identified VIN
Feature Code: configuration feature codes of the currently serviced vehicle
Feature Code Description: description of each configuration feature code of the currently serviced vehicle
Path: the path information of the current interface

III. ECU Information

Click the "ECU Information" tab to enter the "ECU Information" interface, as shown in Figure 1-3.



SN	Project	Vehicle ECU Information(Click...	Manufacturer Database Infor...	Matching Sta...	Description
4	Configuration File	11468927	11540466	✗	
	CCU(Combined Charger Unit)				
1	Vehicle Identification Number (VIN)	LSJW74095NZ274016	LSJW74095NZ274016	✓	
2	Base Model Part Number	11514547	--	...	
3	Operating Software	11629527	--	...	
4	Configuration File	10772345	--	...	
	EPS(Electric Power Steering System)				
1	Vehicle Identification Number (VIN)	LSJW74095NZ274016	LSJW74095NZ274016	✓	
2	Base Model Part Number	11066394	11066394	✓	
3	Operating Software	11454836	11454836	✓	
4	Calibration File 1	11175272	11175272	✓	
5	Network Configration File	11005090	11005090	✓	
6	Configuration File	11023166	11023166	✓	
	ESCL(Electronic Steering Column Lock)				
1	Vehicle Identification Number (VIN)	LSJW74095NZ274016	LSJW74095NZ274016	✓	
2	Base Model Part Number	10284768	10284768	✓	
3	Configuration File	10285680	10285680	✓	
	eTBOX(Emergency Call Telematics Box)				
1	Vehicle Identification Number (VIN)	LSJW74095NZ274016	LSJW74095NZ274016	✓	
2	Base Model Part Number	10962451	10962451	✓	
3	Operating Software	10962424	11476597	✗	
4	Configuration File	10962442	10962442	✓	
5	Secondary Application Software	10962440	11476598	✗	
	EVCC(Electric Vehicle Communication controller)				
1	Vehicle Identification Number (VIN)		LSJW74095NZ274016	✗	
2	Base Model Part Number	11313414	11313414	✓	
3	Operating Software	11533553	11505198	✗	
4	Configuration File	10856406	10856406	✓	

Figure 1-3

The "ECU Information" function is to display the latest data read from the ECU and that queried from the SAIC database on an ECU basis.

IMPORTANT

1. Since the data read from the database is based on the VIN of vehicle identification result, the "Manufacturer Database Information" corresponding to the VIN information of each ECU is shown as the identified VIN.
2. The ECU list only shows those that support the "Programming and Coding" function in the currently serviced vehicle. Therefore, the list does not cover all ECUs fitted to the vehicle.

Introduction to the ECU list information:

Item: ECU information data entries of each ECU. Different ECUs have different data entries.

Vehicle ECU Information: each piece of ECU information read from the vehicle

Manufacturer Database Information: each piece of ECU information data retrieved from the database according to the identified VIN, which can be written to the ECU through the appropriate function of "Programming and Coding"

Matching Status: the result of comparing Vehicle ECU Information and Manufacturer Database Information for each data item, including ✓, ✗, ?, and --

Description: description information of "Manufacturer Database Information" for each data item

Introduction to the matching status:

✓: "Vehicle ECU Information" and "Manufacturer Database Information" for the data item are the same, i.e., the data in the ECU is consistent with that in the database.

: "Vehicle ECU Information" and "Manufacturer Database Information" for the data item are different.

: At least one of the "Vehicle ECU Information" and "Manufacturer Database Information" for the data item is null and cannot be compared.

: At least one of the "Vehicle ECU Information" and "Manufacturer Database Information" for the data item does not have data and cannot be compared.

Reloading the "ECU Information" interface:

: Re-read the information of all vehicle ECUs, re-compare it with the information in the database, and update the display information in the interface. The update includes: ECU list, data list for each ECU, vehicle information and database information for each data item, and the display is refreshed.

After clicking 

, a dialog box pops up, prompting "All module information of the vehicle will be re-read, please confirm!". Select [OK] to read the vehicle information; select [Cancel] to end the reading process and return to the previous interface.

IV. Programming and Coding

Click the "Programming and Coding" tab to enter the "Programming and Coding" interface, as shown in Figure 2-1, which includes the ECU list, functions, channels, Prompt Information page and so on.

The "Programming and Coding" function is to realize the functions of "ECU Reprogramming", "Configuration", "Replacement", "Add Key", "Delete Key", "Clear DTC", etc.

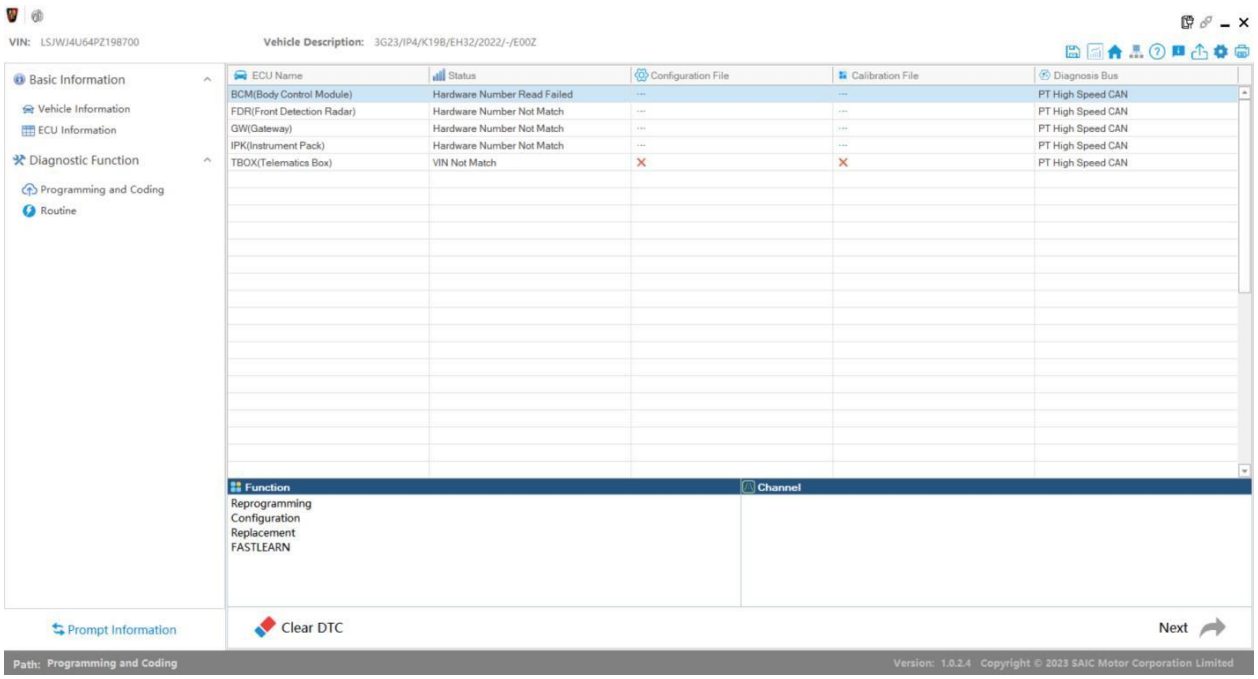


Figure 2-1

1. Introduction to the "Programming and Coding" interface

The "Programming and Coding" interface includes a Prompt Information display page, a ECU list, a function list, a channel list, and a Clear DTC function button.

IMPORTANT

The channel involves the function selected and the function involves the ECU selected. Therefore, the order of operation must be selecting the ECU, and then selecting the function, and then selecting the channel.

Prompt Information: Display and log information on the execution of the "Programming and Coding" function. The information will be cleared when vehicle identification is re-executed.

ECU List: Display all ECUs of the vehicle that support the "Programming and Coding" function, the status of each ECU, the matching results of the calibration file and the configuration file, and the diagnosis bus.

Function List: Display the functions supported by the currently selected ECU, generally including: "Reprogramming", "Configuration", "Replacement", "Add Key" and "Delete Key".

Channel List: Display the channel types supported by the currently selected function, including "Normal".

清故障码 : Clear all DTCs.

1) Introduction to the ECU list:

The ECU list contains: ECU name, status, configuration file, calibration file, and diagnosis bus.

IMPORTANT

The ECU list only shows those that support the "Programming and Coding" function in the currently serviced vehicle. Therefore, the list does not cover all ECUs fitted to the vehicle.

ECU Name: Names of all ECUs that support the "Programming and Coding" function in the currently serviced vehicle.
Status: Description of status of the corresponding ECU, including "VIN Invalid", "VIN Read Failed", "VIN Not Match", "Hardware Number Not Match", "Hardware Number Read Failed", "Module Communication Failed", "Database Connection Failed", and "Normal".
Configuration File: Comparing the "Vehicle ECU Information" and "Manufacturer Database Information" in the ECU related configuration file, the result is displayed as , , , or .
Calibration File: Comparing the "Vehicle ECU Information" and "Manufacturer Database Information" in the ECU related calibration file, the result is displayed as , , , or .
Diagnosis Bus: Information of the diagnosis bus of the corresponding ECU.

A. Introduction to the ECU status:

Comparing the VIN and hardware number read from the ECU with the VIN (i.e., the identified VIN) and hardware number in the manufacturer database, the result is displayed in the "Status" column, representing the ECU's status. The status includes: "VIN Invalid", "VIN Read Failed", "VIN Not Match", "Hardware Number Not Match", "Hardware Number Read Failed", "Module Communication Failed", "Database Connection Failed", and "Normal".

IMPORTANT

1. The status of the ECU determines whether or not the function can be continued.
2. The VIN and hardware number in the manufacturer database must match those in the ECU before the function list will be made under "Function" for subsequent operations.
3. In case of a new ECU, "VIN Not Written" and "ECU VIN/Hardware Number Read Failed" will be considered as special cases that allow subsequent operations.

Normal: The data in the ECU and database is acquired normally, and the VIN and hardware number read from the ECU match those in the manufacturer database (including the new controller with no VIN written).
VIN Invalid: The VIN read from the ECU is incorrect, e.g., the VIN is not 17 bits.
VIN Read Failed: The VIN information in the ECU cannot be read.
VIN Not Match: The VIN read from the ECU does not match that in the manufacturer database.
Hardware Number Not Match: The hardware number read from the ECU does not match that in the manufacturer database.
Hardware Number Read Failed: The hardware number information in the ECU cannot be read.
Module Communication Failed: Controller communication fails.
Database Connection Failed: The SIPS client failed to connect to the manufacturer database.

B. Description of the matching status:

Comparing the "Vehicle ECU Information" and "Manufacturer Database Information" in the ECU related configuration/calibration file, the result is displayed as , , , or .

IMPORTANT

If neither "Vehicle ECU Information" nor "Manufacturer Database Information" has calibration file or configuration file information, the matching status will be displayed as , and accordingly, the "Function" will not support "Reprogramming" or "Configuration".

: The "Vehicle ECU Information" and "Manufacturer Database Information" in all of the corresponding calibration/configuration files are consistent, the data in the ECU is up-to-date, and there is no need to perform the reprogramming or configuration function. However, subsequent operations on the ECU are not affected.

: The version of the data corresponding to the ECU function is inconsistent with the SAIC Motor database. Therefore, it is necessary to perform the reprogramming or configuration function to update the ECU calibration/configuration to the latest version.

: At least one of the data version corresponding to the ECU function and the relevant data in the SAIC Motor database is null and cannot be compared.

: At least one of the data version corresponding to the ECU function and the relevant data in the SAIC Motor database is missing and cannot be compared.

2) Introduction to the Function list:

When an ECU is selected, its supported functions will be listed under "Function", which generally includes: "Reprogramming", "Configuration", "Replacement", "Add Key" and "Delete Key".

IMPORTANT

The "Programming and Coding" function supported by each ECU may not be the same. The supported functions will be listed according to the actual situation.

Replacement: Perform necessary programming and coding related operations such as calibration software upgrade and configuration write-ins for the replacement ECU.
Add Key: Complete the function of adding a new key.
Delete Key: Complete the function of deleting a designated key.

3) Introduction to the Channel list:

When a function is selected, its supported channels will be listed under "Channel", including "Normal".

IMPORTANT

At present, the channel type supports "Normal" channels.

Normal: The data and files that need to be used are found from the manufacturer database in the normal way.

2. Functions of ECUs supporting "Programming and Coding" function

This section will take an ECU as an example to introduce the operation procedures of "Reprogramming", "Configuration", "Replacement", "Add Key", and "Delete Key" functions.

IMPORTANT
Each function may contain more than one operation procedures. The result of each operation procedure will be displayed upon each completion. And after all operation procedures of the function is completed, the execution result of the function is displayed.

1) Reprogramming

The "Reprogramming" function is used to upgrade the software of the original/new ECU. Taking the IPK (Instrument Pack) as an example, the function procedures are introduced as follows.

IMPORTANT
The example below contains only the "Reprogramming" procedure.

Reprogramming procedure:
Step 1: Select "IPK (Instrument Pack)" in the "Programming and Coding" interface, and a list of functions supported by IPK is displayed under "Function". At the IPK's "Calibration File" column, ✖ is shown, indicating that the calibration software of the ECU needs to be upgraded. Select "IPK (Instrument Pack)" in the "Programming and Coding" interface, and a list of functions supported by IPK is displayed under "Function". Select the "Reprogramming" function, and the "Normal" channel is shown under "Channel" and is selected by default.

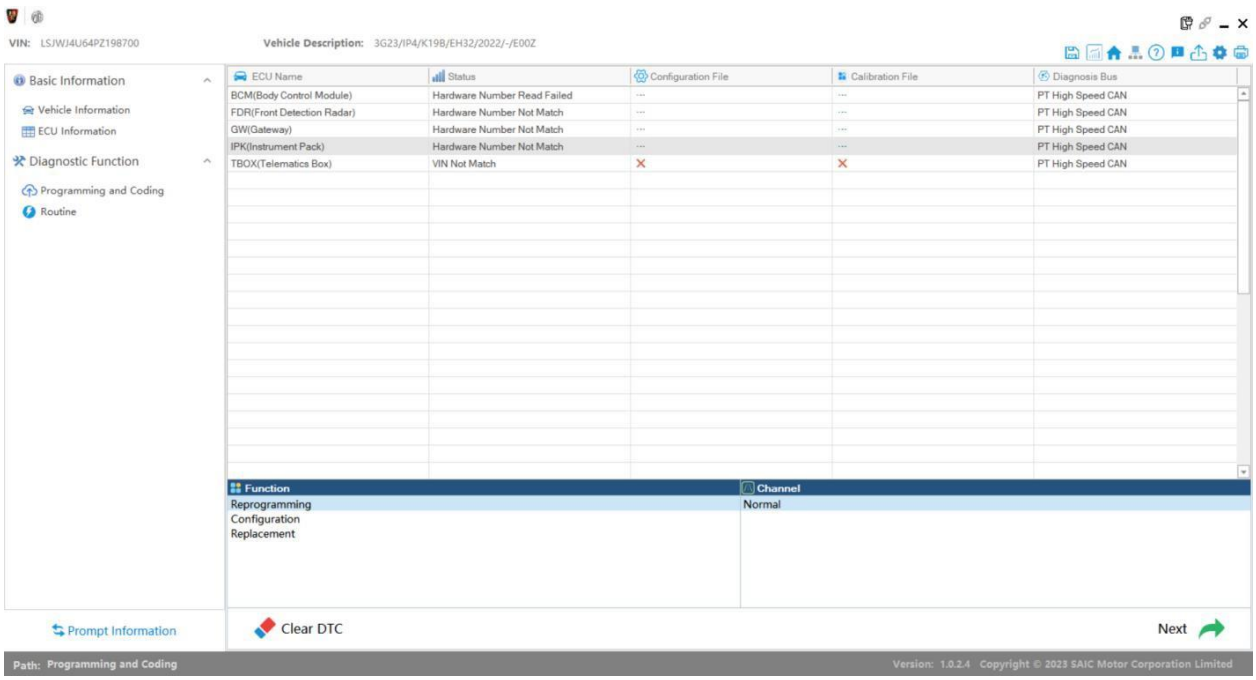


Figure 2-2
Step 2: Click [Next], and you will be prompted to download the related files.
Step 3: The data file information for IPK reprogramming is shown. The "Vehicle ECU Information" column displays information on the current calibration version in IPK, and the "Manufacturer Database Information" column displays information on the calibration version currently available in the database (i.e., calibration information to be written to the ECU). Through the matching status, we can get the file that needs to be upgraded: "ECU Application Software", "ECU Calibration Software" and "Network Configuration File".

Icons in the interface:

Quit : Back to the "Programming and Coding" Home screen

Next : Next

Step 4: Click [Next] to download the related files.

Step 5: Start reprogramming after the download. A pop-up box will prompt the precautions for reprogramming. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Exit: Exit reprogramming and end the procedure.

Next: Continue reprogramming.

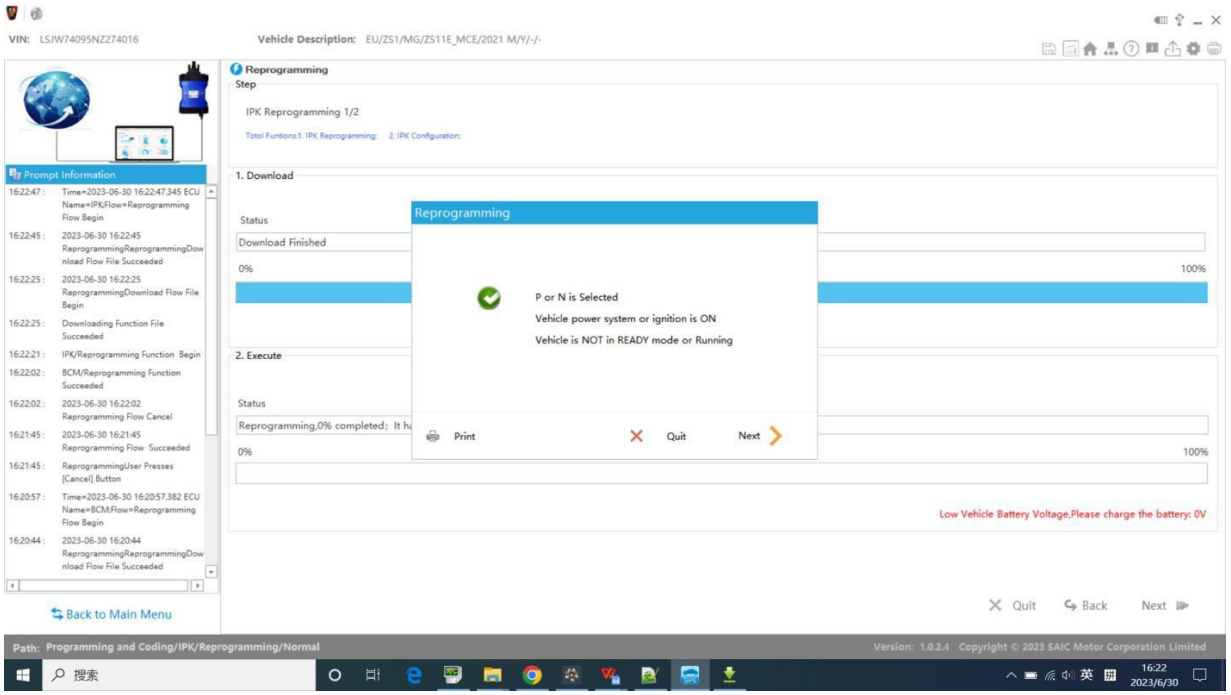


Figure 2-3

Step 6: Execute reprogramming and write new calibration software to IPK.

Step 7: Perform an ignition cycle as prompted.

Step 8: "Reprogramming Successful" is shown.

Step 9: The result of reprogramming execution (Successful) and a list of execution results of all operation procedures are shown. Click [OK] to end the function procedure. The SIPS will return to the "Programming and Coding" Home screen and automatically refresh the display information of IPK in the ECU list.

2) Configuration

The "Configuration" function is used to write and set up configuration to the ECU supporting servicing configuration. Taking the IPK (Instrument Pack) as an example, the operation procedures are introduced as follows.

IMPORTANT

1. The example below contains only the "Configuration" procedure.
2. Both the version of the configuration file and the vehicle configuration feature code used in configuration affect writing configuration to the ECU. Therefore, "√" at the corresponding ECU's "Configuration File" column does not represent that the ECU does not need configuration operations, but only means that the version of the configuration file matches.

Configuration procedure:

Step 1: Select "IPK (Instrument Pack)" in the "Programming and Coding" interface, and a list of functions supported by IPK is displayed under "Function". ✖ indicates that the configuration of the ECU needs to be upgraded, which can be realized through the "Configuration" function. Select the "Configuration" function, and the "Normal" channel is shown under "Channel" and is selected by default. The Next button illuminates.

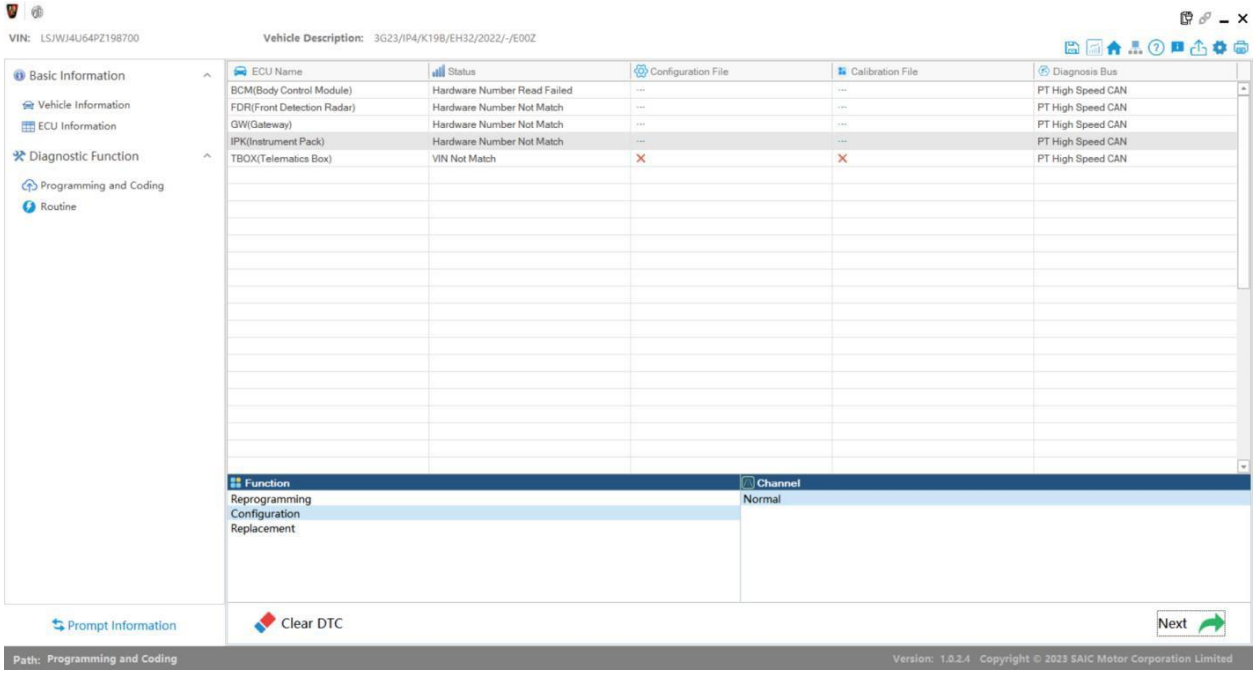


Figure 2-4

Step 2: Click [Next], and you will be prompted to download the related files.

Step 3: The data file information for IPK configuration is shown. The "Vehicle ECU Information" column displays information on the current configuration file version in IPK, and the "Manufacturer Database Information" column displays information on the configuration file version currently available in the database (i.e., configuration information to be written to the ECU).

Icons in the interface:

✖ Quit : Back to the "Programming and Coding" Home screen

Next : Next

Step 4: Click [Next] to download the related files.

Step 5: Start configuration after the download. A pop-up box will prompt the precautions for configuration. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Exit: Exit configuration and end the procedure.

Next: Continue configuration.

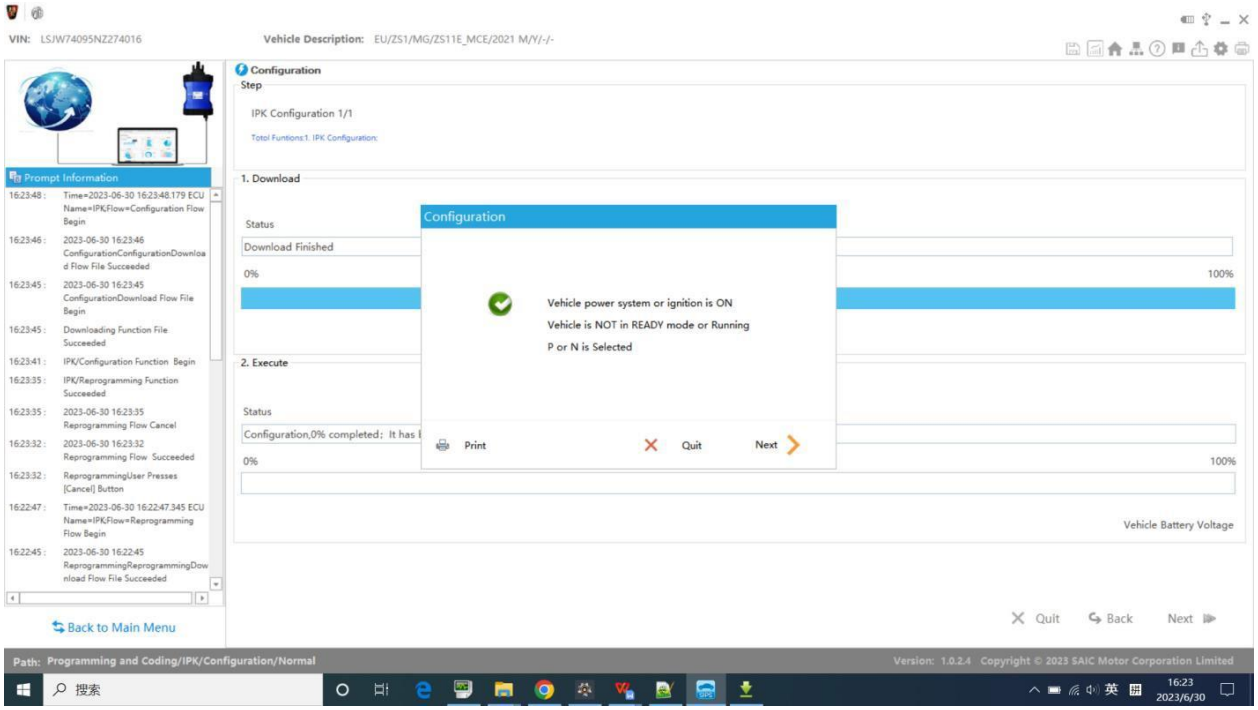


Figure 2-5

Step 6: A prompt box shows: The identified VIN will be written to the IPK and cannot be changed once written. Select "Continue" and click [Next] to continue the procedure.

Exit: Select this option, and then click [Next] to exit the configuration procedure.

Continue: Select this option, and then click [Next] to continue the configuration procedure.

Quit: End the configuration procedure.

Next: Execute as selected.

Step 7: Execute the configuration procedure.

Step 8: Perform an ignition cycle as prompted.

Step 9: "Configuration Successful" is shown.

Step 10: The result of configuration execution (Successful) and a list of execution results of all operation procedures are shown. Click [OK] to end the function procedure. The SIPS will return to the "Programming and Coding" Home screen and automatically update the display information of IPK in the ECU list.

3) Replacement

The "Replacement" function is used to complete the programming and coding operations that must be performed after the ECU is replaced, such as software upgrade, configuration writing, and parameter setting.

IMPORTANT

The following example of BCM replacement function contains five operation procedures: Reprogramming, Configuration, Setup, Add Key and BCM Fast Learn. The procedure for the "Replacement" function differs for each model and each ECU.

Replacement procedure:

Step 1: Select "BCM (Body Control Module)" in the "Programming and Coding" interface, and a list of functions supported by BCM is displayed under "Function". ✖ indicates that the configuration/calibration of the ECU needs to be upgraded, which can be realized through the "Replacement" function. Select the "Replacement" function, and the "Normal" channel is shown under "Channel" and is selected by default. The 下一步 button illuminates.

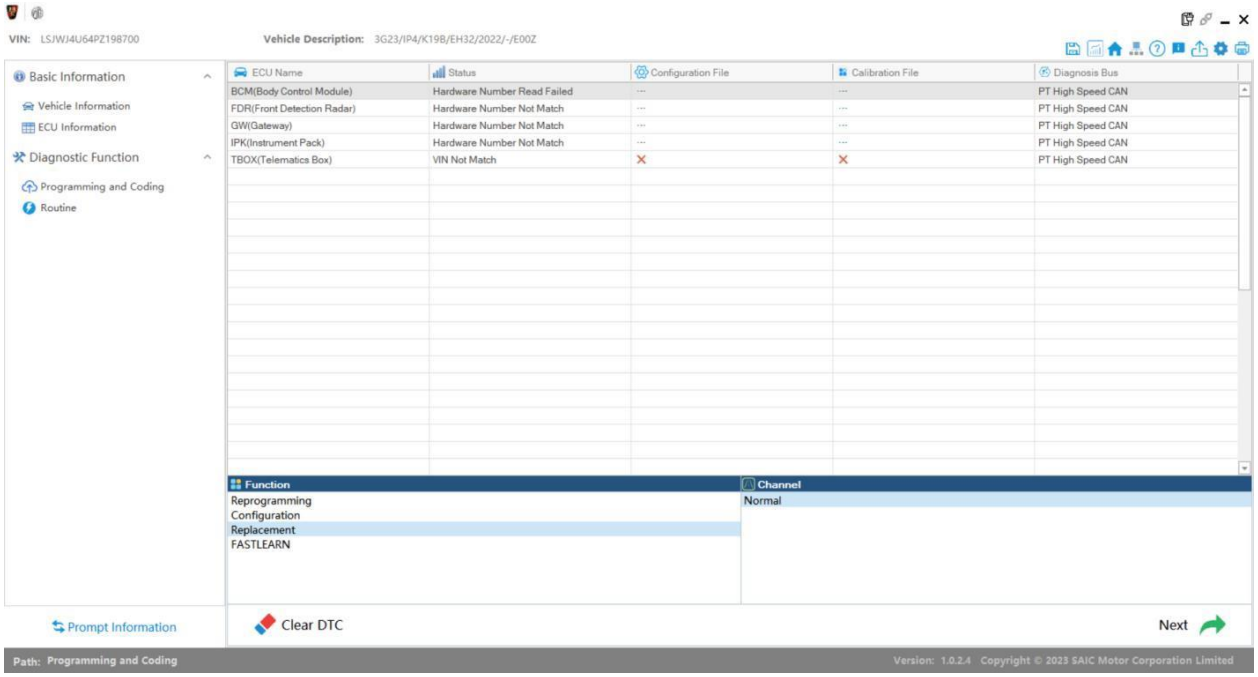


Figure 2-6

Step 2: Click [Next], and you will be prompted to download the related files.

Step 3: The data file information for BCM replacement is shown. The "Vehicle ECU Information" column displays information on the current version in BCM, and the "Manufacturer Database Information" column displays information on the version currently available in the database (i.e., version information to be written to the ECU). Through the matching status, we can get the file that needs to be upgraded: "ECU Reprogramming Procedure File", and "ECU Configuration File".

Icons in the interface:

Quit : Back to the "Programming and Coding" Home screen

Next : Next

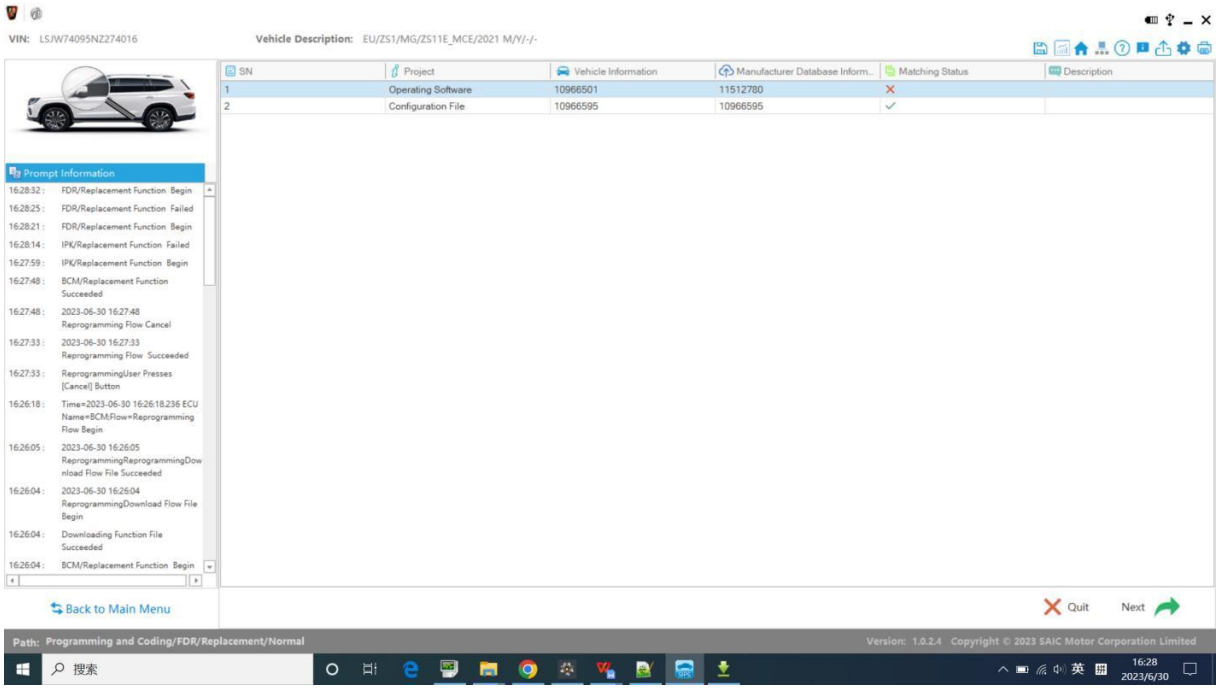
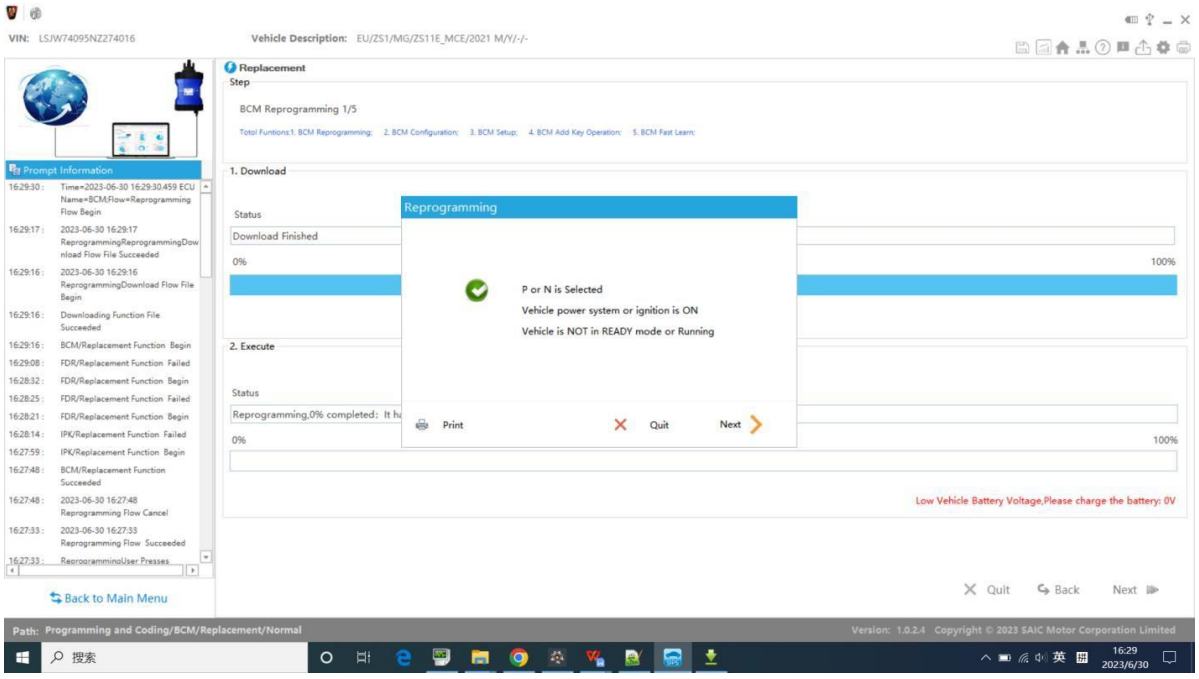


Figure 2-7

Step 4: Download the related files.



Step 5: Start reprogramming after the download. A pop-up box will prompt the precautions for reprogramming. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Reprogramming 1/5: It means that there are a total of five operation procedures for BCM replacement function, and now the first operation procedure - Reprogramming is in progress.

Quit: Exit reprogramming and end the procedure.

Next: Continue reprogramming.

Step 6: Execute reprogramming and write the new calibration file to BCM.

Step 7: Perform an ignition cycle as prompted.

Step 8: The result of reprogramming execution is shown (Successful). Click [OK] to continue.

Step 9: Download the related files.

Step 10: Start configuration after the download. A pop-up box will prompt the precautions for configuration. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Configuration 2/5: It means that there are a total of five operation procedures for BCM replacement function, and now the second operation procedure - Configuration is in progress.

Quit: Exit configuration and end the procedure.

Next: Continue configuration.

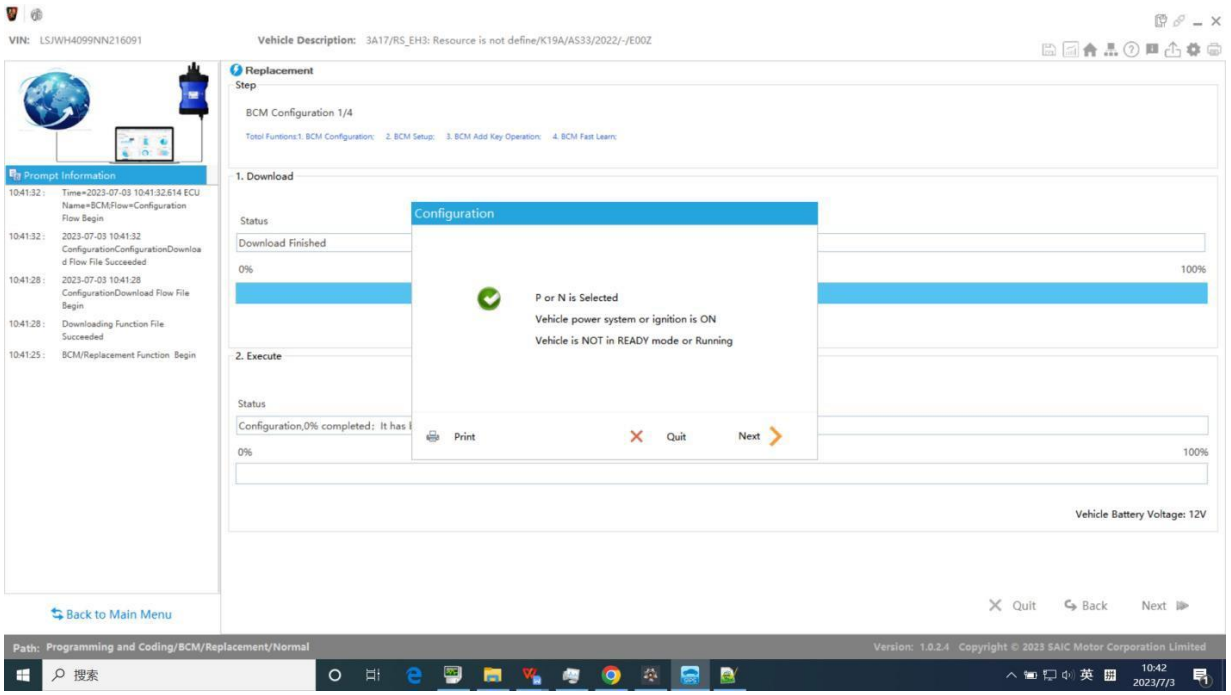


Figure 2-8

Step 11: A prompt box shows: The identified VIN will be written to the BCM and cannot be changed once written. Select "Continue" and click [Next] to continue the procedure.

Exit: Select this option, and then click [Next] to exit the configuration procedure.

Continue: Select this option, and then click [Next] to continue the configuration procedure.

Quit: End the configuration procedure.

Next: Execute as selected.

Step 12: Execute configuration and write the configuration information to BCM.

Step 13: Perform an ignition cycle as prompted.

Step 14: The result of configuration execution is shown (Successful). Click [OK] to continue.

Step 15: Download the related files.

Step 16: Start setup after the download. A pop-up box will prompt the precautions for setup. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Setup 3/5: It means that there are a total of five operation procedures for BCM replacement function, and now the third operation procedure - Setup is in progress.

Quit: Exit setup and end the procedure.

Next: Continue setup.

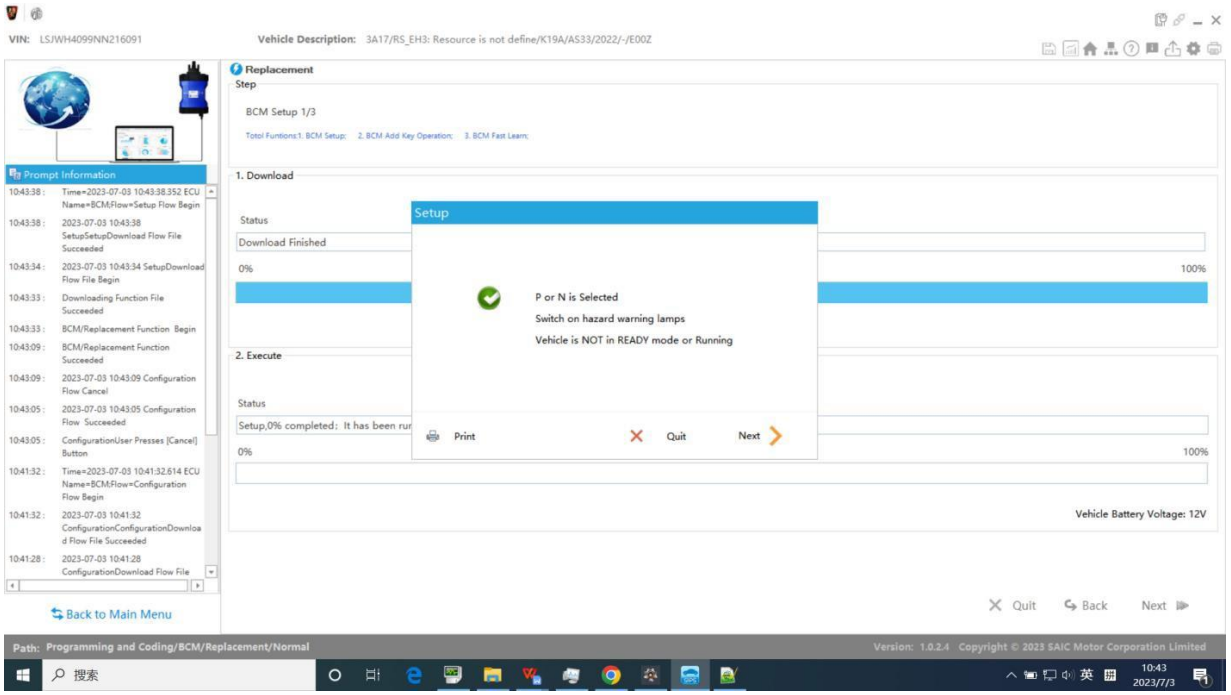


Figure 2-9

Step 17: Execute the setup procedure.

Step 18: A dialog box pops up to prompt the setup of learning results of related modules.

Quit: End the setup procedure.

Next: Continue setup.

Step 19: Perform an ignition cycle as prompted.

Step 20: The result of setup execution is shown (Successful). Click [OK] to continue.

Step 21: Download the related files.

Step 22: Start the Add Key operation after the download. A pop-up box will prompt the precautions for adding a key. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Add Key Operation 4/5: It means that there are a total of five operation procedures for BCM replacement function, and now the fourth operation procedure - Add Key is in progress.

Quit: Exit the Add Key operation and end the procedure.

Next: Continue the Add Key operation.

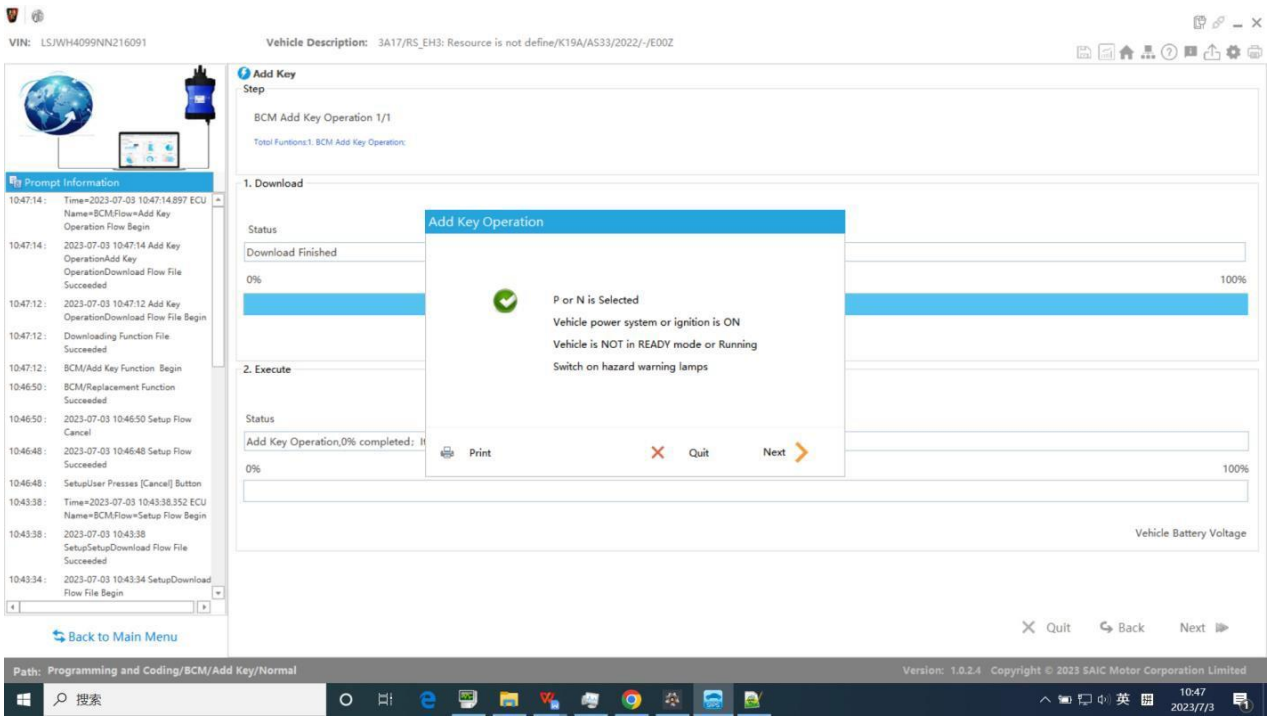


Figure 2-10

Step 23: A prompt box shows the number of currently valid keys. If there are keys to add, select "Yes" and click [Next].

No: There are no new keys to add.

Yes: There are new keys to add.

Quit: Exit the Add Key operation.

Next: Continue the Add Key operation.

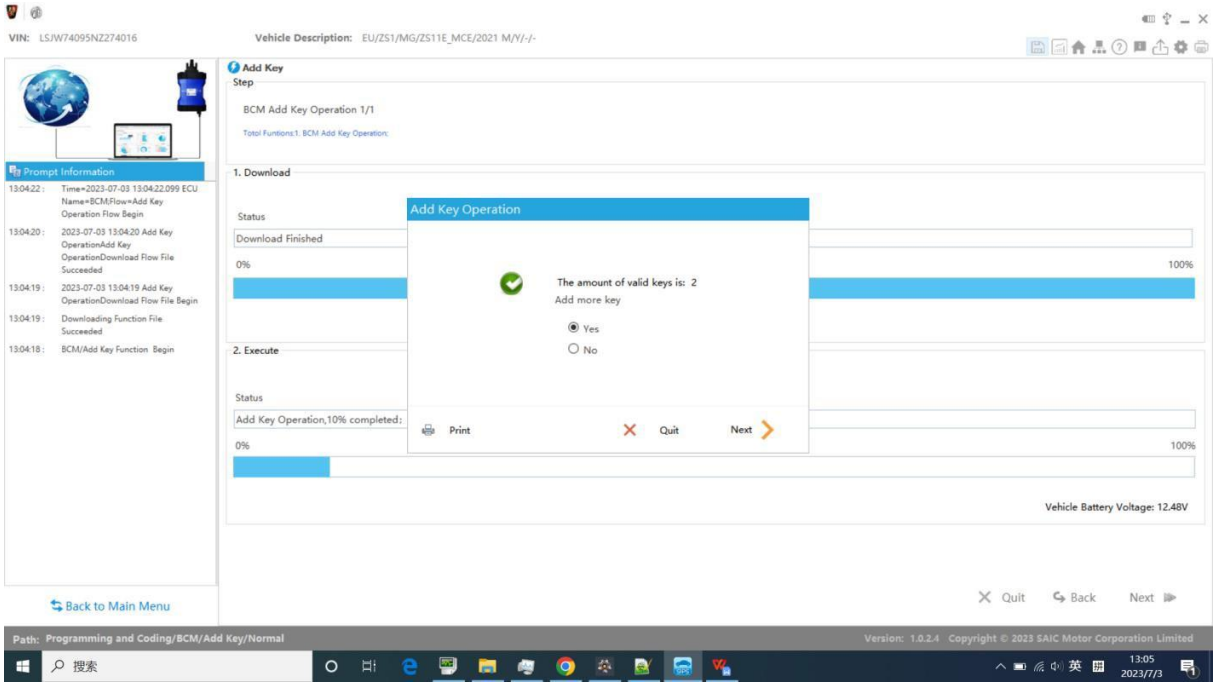


Figure 2-11

Step 24: A prompt box shows: Place the key to be added in the START/STOP Switch or the immo back up starting position. Other key placed outside of the vehicle. After operating as prompted, click [Next] to continue.

Quit: Exit the Add Key operation.

Next: Execute as selected.

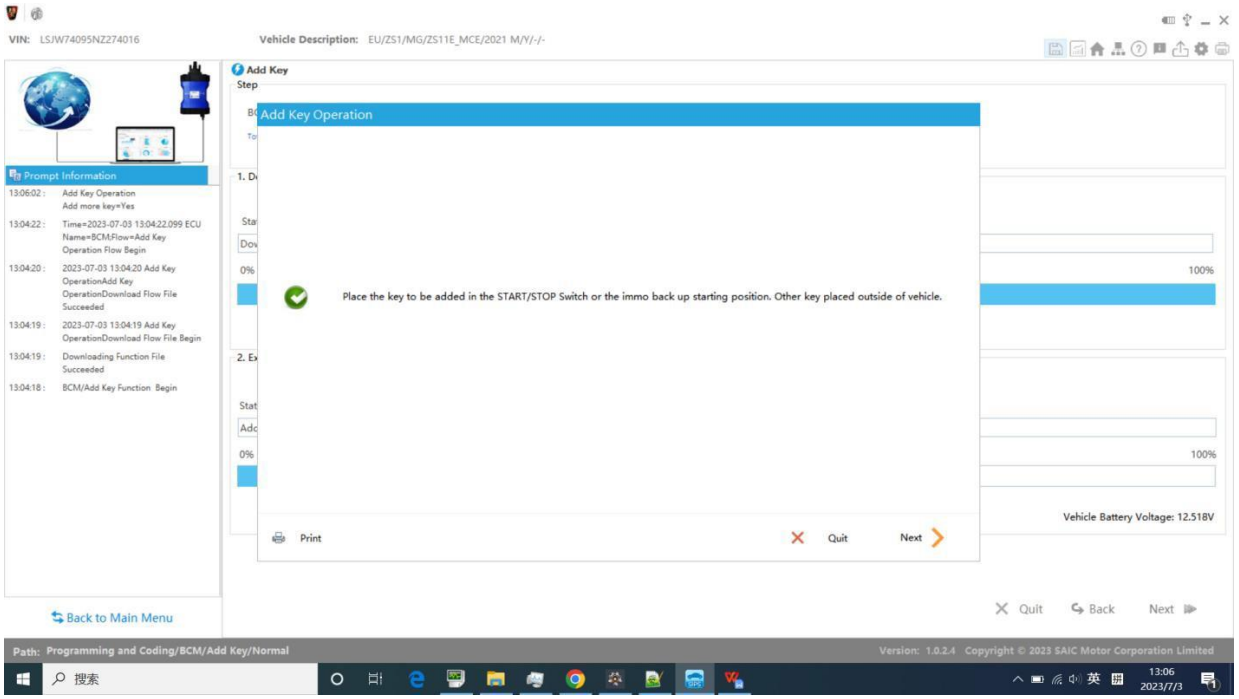


Figure 2-12

Step 25: You are prompted for the number of currently valid keys and whether or not there are any more keys to be added. If there are still keys to add, select "Yes"; if there are no new keys, select "No", and click [Next].

No: There are no new keys to add.

Yes: There are new keys to add.

Quit: Exit the Add Key operation.

Next: Continue the Add Key operation.

Step 26: The result of Add Key operation is shown. Click [OK] to continue.

Step 27: The result of Add Key operation is shown (Successful). Click [OK] to continue.

Step 28: Download the related files.

Step 29: Start the BCM Routine operation after the download. A pop-up box will prompt the precautions for Routine. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Fast Learn 5/5: It means that there are a total of five operation procedures for BCM replacement function, and now the fifth operation procedure - Fast Learn is in progress.

Quit: Exit fast learn and end the procedure.

Next: Continue fast learn.

Step 30: Execute fast learn.

Step 31: Perform an ignition cycle as prompted.

Step 32: The result of configuration execution is shown (Successful). Click [OK] to continue.

Step 33: The result of replacement execution (Successful) and a list of execution results of all operation procedures are shown. Click [OK] to end the function procedure. The SIPS will return to the "Programming and Coding" Home screen and automatically update the display information of BCM in the ECU list.

4) Add Key

The "Add Key" function is used to add a new key to the vehicle or re-activate a previously disabled key.

IMPORTANT
The example below contains only the "Add Key" procedure.

Procedure for the "Add Key" function:

Step 1: Select "BCM (Body Control Module)" in the "Programming and Coding" interface, and a list of functions supported by BCM is displayed under "Function". Select the "Add Key" function, and the "Normal" channel is shown under "Channel" and is selected by default. The 下一步 button illuminates.

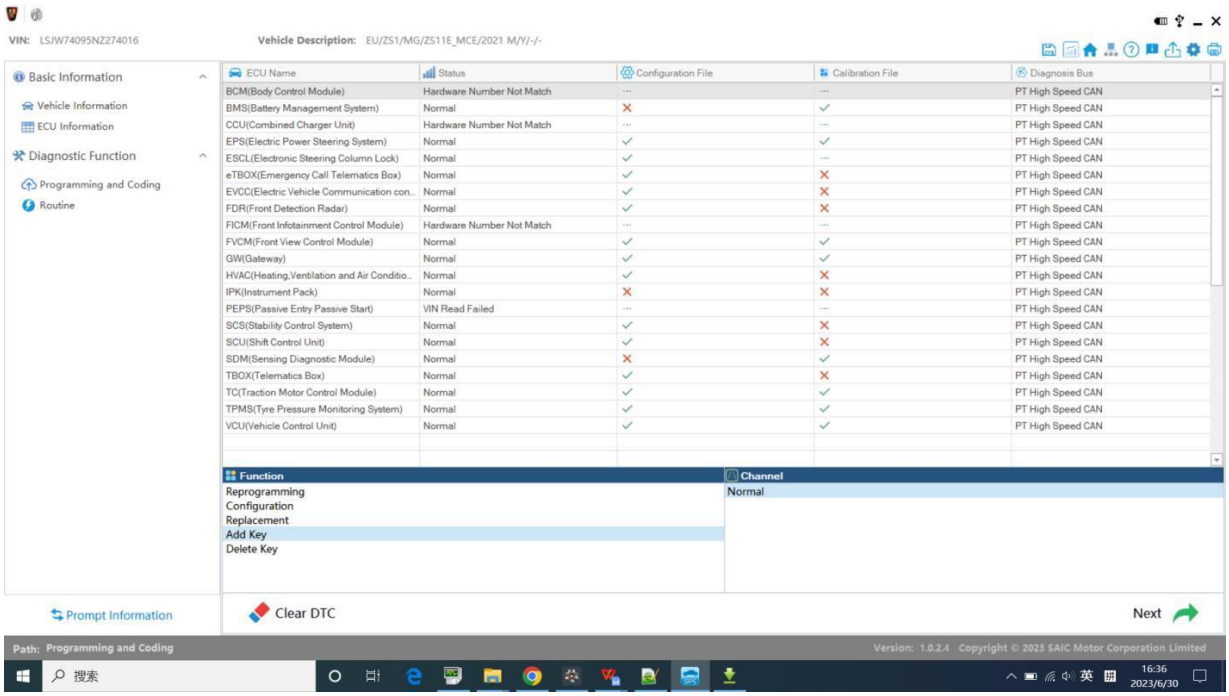


Figure 2-13

Step 2: Click [Next], and you will be prompted to download the related files.

Step 3: Download the related files.

Step 4: Start the Add Key operation after the download. A pop-up box will prompt the precautions for adding a key. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Add Key Operation 1/1: It means that there is a total of one operation procedure for the "Add Key" function, and now the first operation procedure - Add Key is in progress.

Quit: Exit the Add Key operation and end the procedure.

Next: Continue the Add Key operation.

Step 5: You are prompted for the number of currently valid keys and whether or not there are any more keys to be added. If there are still keys to add, select "Yes"; if there are no new keys, select "No", and click [Next].

No: There are no new keys to add.

Yes: There are new keys to add.

Quit: Exit the Add Key operation.

Next: Continue the Add Key operation.

Step 6: A prompt box shows: Place the key to be added in the START/STOP Switch or the immo back up starting position. Other key placed outside of the vehicle. After operating as prompted, click [Next] to continue.

Quit: Exit the Add Key operation.

Next: Execute as selected.

Step 7: You are prompted for the number of currently valid keys and whether or not there are any more keys to be added. If there are still keys to add, select "Yes"; if there are no new keys, select "No", and click [Next].

No: There are no new keys to add.

Yes: There are new keys to add.

Quit: Exit the Add Key operation.

Next: Continue the Add Key operation.

Step 8: The result of Add Key operation is shown (Successful). Click [OK] to continue.

Step 9: The result of the Add Key operation (Successful) and a list of execution results of all operation procedures are shown. Click [OK] to end the function procedure. The SIPS will return to the "Programming and Coding" Home screen.

5) Delete Key

The "Delete Key" function is used to disable a valid key on the vehicle.

IMPORTANT

The "Delete Key" function is realized by deleting all keys of the vehicle first, and then adding the keys that need to be retained. Therefore, this function contains two operation procedures: "Add Key" and "Delete Key".

Procedure for the "Delete Key" function:

Step 1: Select "BCM (Body Control Module)" in the "Programming and Coding" interface, and a list of functions supported by BCM is displayed under "Function". Select the "Delete Key" function, and the "Normal" channel is shown under "Channel" and is selected by default. The 下一步 button illuminates.

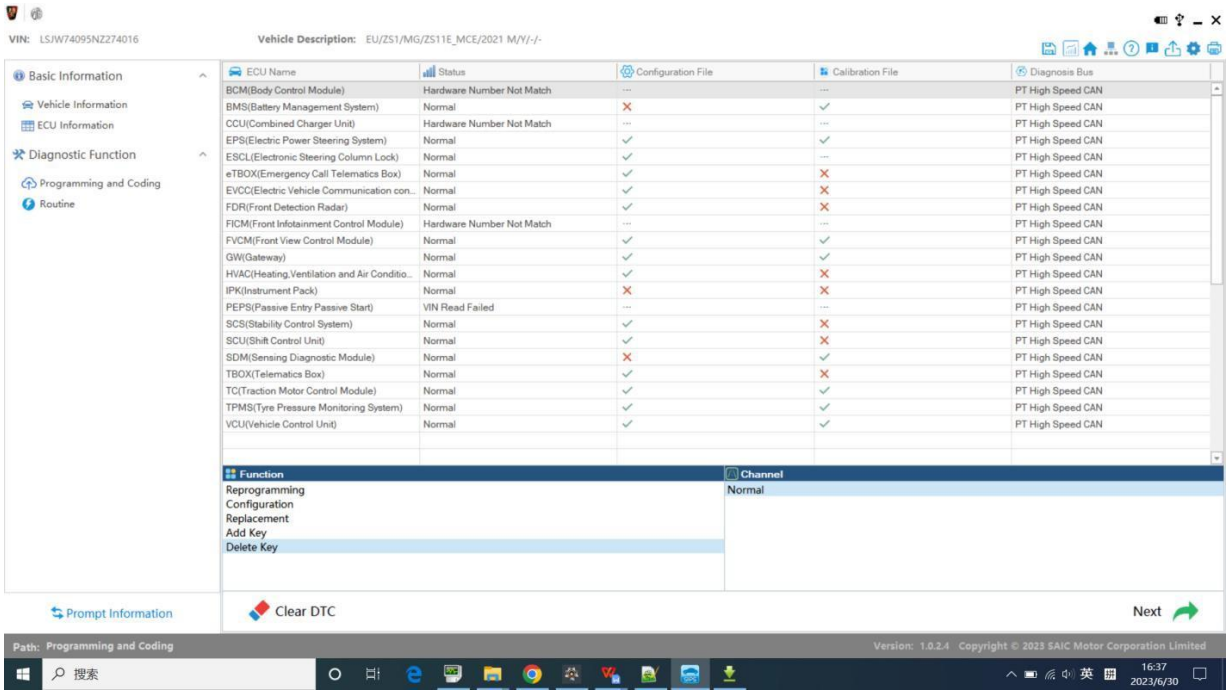


Figure 2-14

Step 2: Click [Next], and you will be prompted to download the related files.

Step 3: Download the files related to the Delete Key operation.

Step 4: Start the Delete Key operation after the download. A pop-up box will prompt the precautions for deleting a key. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Delete Key 1/2: It means that there are a total of two operation procedure for the "Delete Key" function, and now the first operation procedure - Delete Key is in progress.

Quit: Exit the Delete Key operation and end the procedure.

Next: Continue the Delete Key operation.

Step 5: Prepare the keys to be retained, and click [Next].

Quit: Exit the Delete Key operation.

Next: Continue the Delete Key operation.

Step 6: Execute the Delete Key operation to delete all keys of the vehicle (except for the currently used key).

Step 7: Perform an ignition cycle as prompted.

Step 8: "Deleting Key Successful" is shown. Click [OK].

Step 9: Download the files related to the Add Key operation.

Step 10: Start the Add Key operation after the download. A pop-up box will prompt the precautions for adding a key. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Step - BCM Add Key Operation 2/2: It means that there are a total of two operation procedures for the Delete Key function, and now the second operation procedure - Add Key is in progress.

Quit: Exit the Add Key operation and end the procedure.

Next: Continue the Add Key operation.

Step 11: You are prompted for the number of currently valid keys and whether or not there are any more keys to be added. If there are still keys to add, select "Yes"; if there are no new keys, select "No", and click [Next].

No: There are no new keys to add.

Yes: There are new keys to add.

Quit: Exit the Add Key operation.

Next: Continue the Add Key operation.

Step 12: A prompt box shows: Place the key to be added in the START/STOP Switch or the immo back up starting position. Other key placed outside of the vehicle. After operating as prompted, click [Next] to continue.

Quit: Exit the Add Key operation.

Next: Execute as selected.

Step 13: You are prompted for the number of currently valid keys and whether or not there are any more keys to be added. If there are still keys to add, select "Yes"; if there are no new keys, select "No", and click [Next].

No: There are no new keys to add.

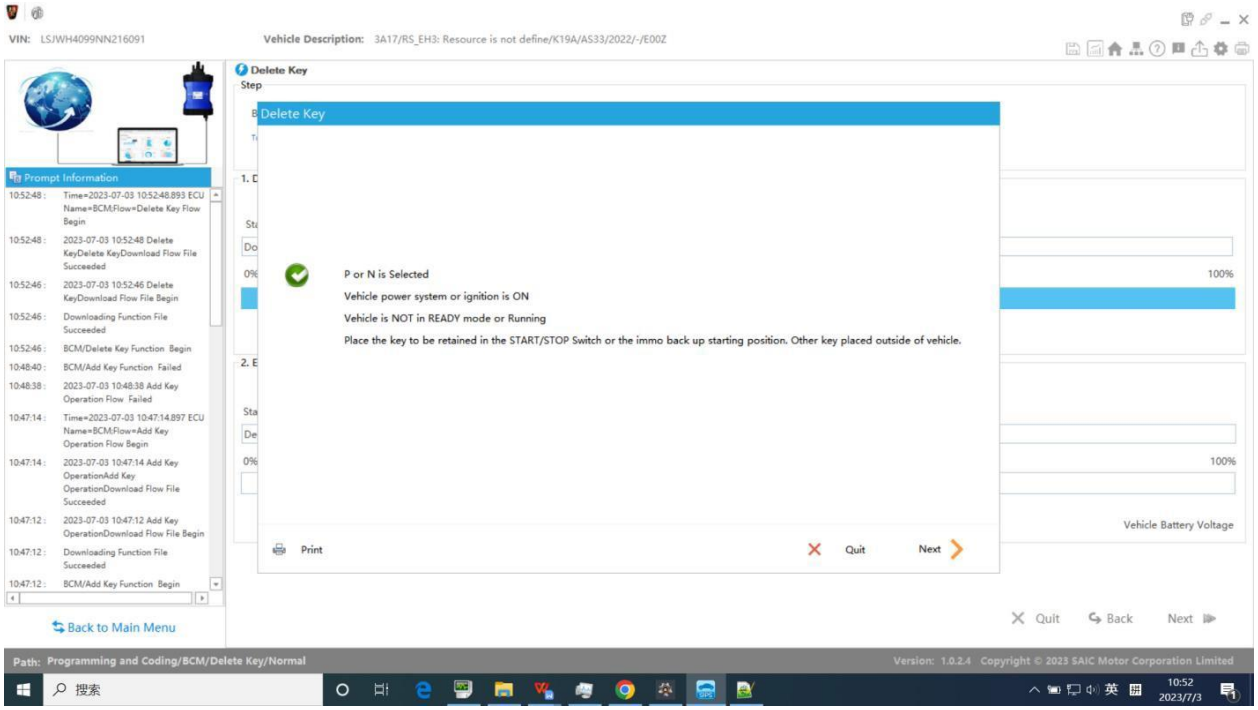
Yes: There are new keys to add.

Quit: Exit the Add Key operation.

Next: Continue the Add Key operation.

Step 14: The result of Add Key operation is shown (Successful). Click [OK] to continue.

Step 15: The result of the Delete Key operation (Successful) and a list of execution results of all operation procedures are shown. Click [OK] to end the function procedure. The SIPS will return to the "Programming and Coding" Home screen.



3. Clear DTC

In order to clear the false DTCs that may occur during programming and coding, the 

button in the "Programming and Coding" interface provides the function of clearing DTCs.

Procedure for clearing DTCs:

Step 1: Click the 

button in the "Programming and Coding" interface.
Step 2: A pop-up box prompts that all DTCs will be cleared. Click [OK] to continue; or, click [Cancel] to exit from clearing all DTCs and return to the "Programming and Coding" Home screen.
Step 3: "Clearing DTCs, please wait!" is shown.
Step 4: "Clearing DTCs Successful" is shown. Click [OK] to return to the "Programming and Coding" Home screen.

V. Routine

Click the "Routine" tab to enter the "Routine" interface, as shown in Figure 3-1, which includes the Prompt Information page, the Routine list and so on.

The "Routine" function is to realize the functions of ECU learning, clearing DTCs, etc.

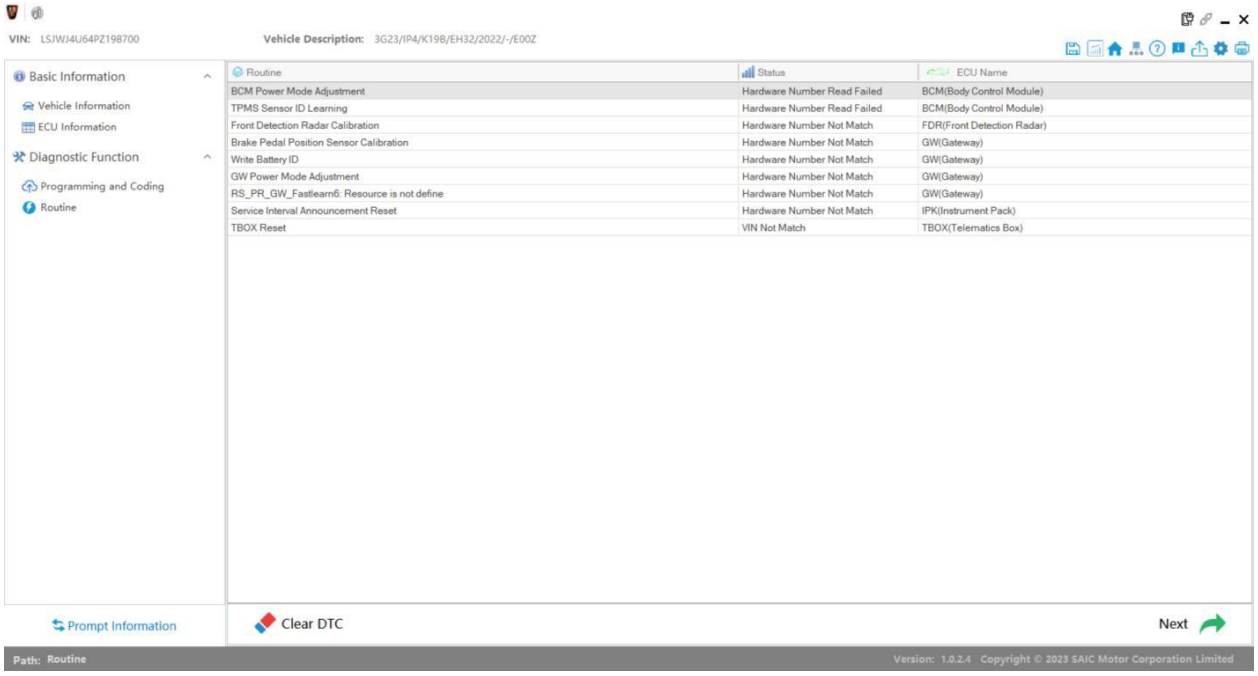


Figure 3-1

1. Introduction to the "Routine" interface:

The "Routine" interface includes a Routine list, and a Clear DTC function button.

Prompt Information page: Display and log information on the execution of the "Routine" function. The information will be cleared when vehicle identification is re-executed.
Routine list: Display the currently selected learning items.

: Clear all DTCs.

Introduction to the Routine list:

The Routine list contains: routine name, status, and ECU name.

IMPORTANT

The Routine list only shows the learning items supported by the function of the currently serviced vehicle. Therefore, the list does not cover all learning items for the vehicle.

Routine Name: Names of learning items supported by the currently serviced vehicle.

Status: Description of status of the corresponding learning item, including "Module Communication Failed" and "Normal".

ECU Name: Names of modules involved in the learning items.

2. Introduction to the Learning procedures

Taking the "BCM Power Mode Adjustment" learning item as an example, the function procedures are introduced as follows.

Learning procedures:

Step 1: Select "BCM Power Mode Adjustment" in the "Routine" interface, and click the Next button to download the related files.

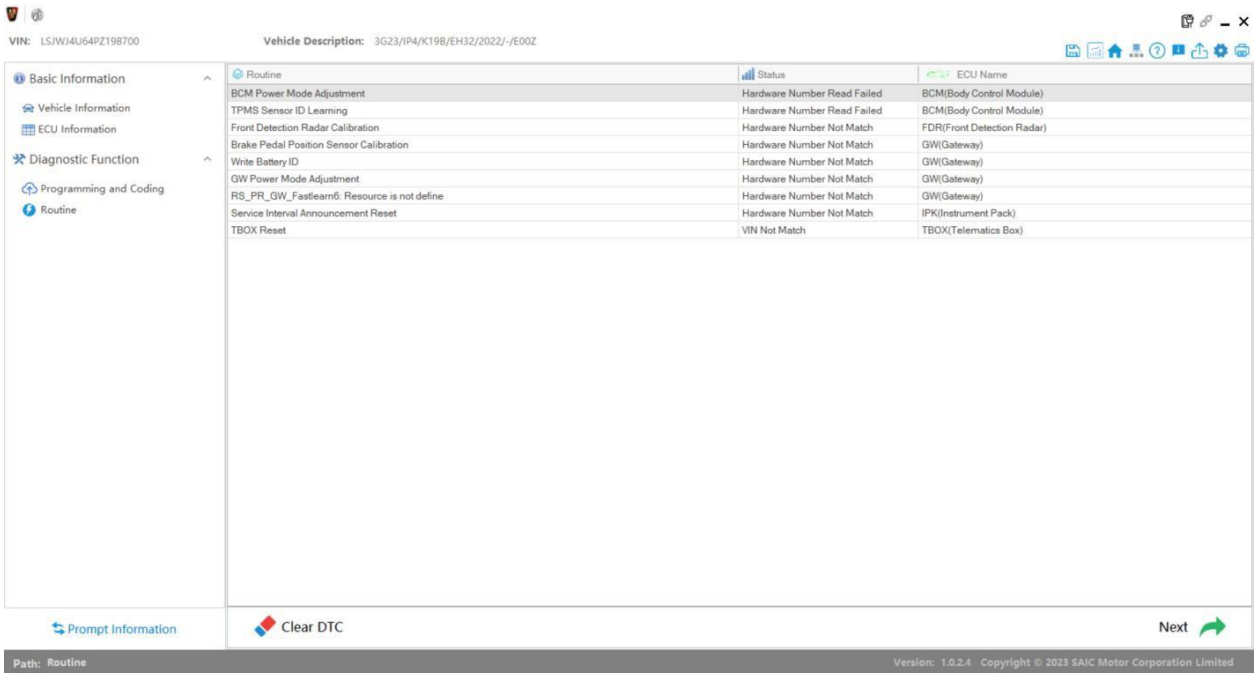


Figure 3-2

Step 2: Start reprogramming after the download. A pop-up box will prompt the precautions for reprogramming. Please follow the prompts. Click [Next] after confirming that the conditions are met.

Quit: Exit learning.

Next: Execute as selected.

Step 3: Execute learning.

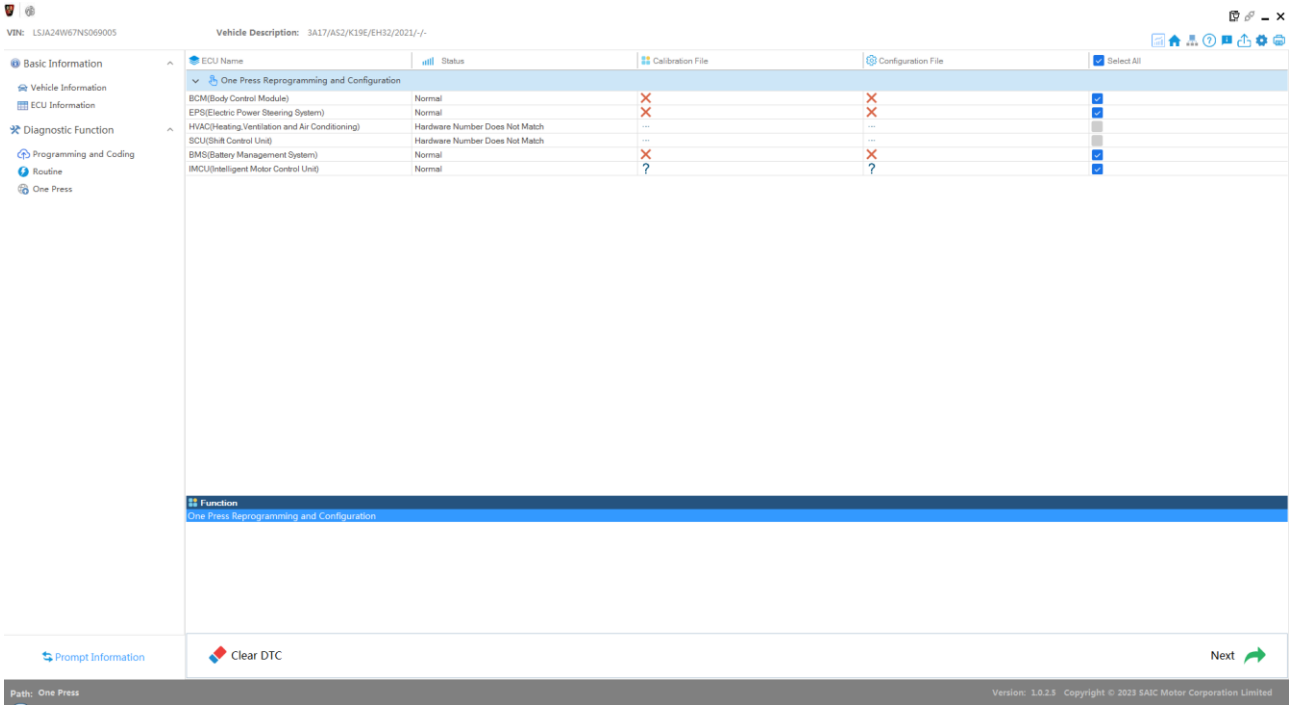
Step 4: Perform an ignition cycle as prompted.

Step 5: The result of learning execution (Successful) is shown. Click [OK] to end the function procedure. The SIPS will return to the "Routine" Home screen.

VI. One Press (Optional)

Click the "One Press " tab to enter the "One Press Reprogramming and Configuration" interface, which includes the ECU list, functions, channels, Prompt Information page and so on.

The "One Press Reprogramming and Configuration" function is to realize the functions of one press reprogramming and one press configuration for the selected ECUs.



1. Introduction to the "One Press Reprogramming and Configuration" interface

The " One Press Reprogramming and Configuration" interface includes a Prompt Information display page, a ECU list, a function list, and a Clear DTC function button.

IMPORTANT

The channel involves the function selected and the function involves the ECU selected. Therefore, the order of operation must be selecting the ECU, and then selecting the function, and then clicking [Next].

Prompt Information page: Display and log information on the execution of the "One Press Reprogramming and Configuration" functions. The information will be cleared when vehicle identification is re-executed.

ECU List: Showing all ECUs of the vehicle that support the "One Press Reprogramming and Configuration" functions, functions and status of each ECU, the matching result of calibration file and configuration file, and selected status.

Function List: Display the "One Press Reprogramming and Configuration" functions supported by the currently select ECU, generally including: "One Press Reprogramming and Configuration".

: Clear all DTCs.

1) Introduction to the ECU list:

The ECU list shows the ECU name, functions, status, configuration file, calibration file, and selected status.

IMPORTANT

The ECU list only shows those that support the "One Press Reprogramming and Configuration" function in the currently serviced vehicle. Therefore, the list does not cover all ECUs fitted to the vehicle.

ECU Name: Names of all ECUs that support the "One Press Reprogramming and Configuration" function in the currently serviced vehicle.

Function: Description of functions of the corresponding ECU, including configuration and reprogramming.

Status: Description of status of the corresponding ECU, including "VIN Invalid", "VIN Read Failed", "VIN Not Match", "Hardware Number Not Match", "Hardware Number Read Failed", "Module Communication Failed", "Database Connection Failed", and "Normal".

Configuration File: Comparing the "Vehicle ECU Information" and "Manufacturer Database Information" in the ECU related configuration file, the result is displayed as , , , or .

Calibration File: Comparing the "Vehicle ECU Information" and "Manufacturer Database Information" in the ECU related calibration file, the result is displayed as , , , or .

Force reprogramming/configuration: Based on the comparison of the configuration file and the calibration file, the result is displayed as , , , or .

A. Introduction to the ECU status:

Comparing the VIN and hardware number read from the ECU with the VIN (i.e., the identified VIN) and hardware number in the manufacturer database, the result is displayed in the "Status" column, representing the ECU's status. The status includes: "VIN Invalid", "VIN Read Failed", "VIN Not Match", "Hardware Number Not Match", "Hardware Number Read Failed", "Module Communication Failed", "Database Connection Failed", and "Normal".

IMPORTANT

1. The status of the ECU determines whether or not the function can be continued.
2. The VIN and hardware number in the manufacturer database must match those in the ECU before the function list will be made under "Function" for subsequent operations.
3. In case of a new ECU, "VIN Not Written" and "ECU VIN/Hardware Number Read Failed" will be considered as special cases that allow subsequent operations.

Normal: The data in the ECU and database is acquired normally, and the VIN and hardware number read from the ECU match those in the manufacturer database (including the new controller with no VIN written).

VIN Invalid: The VIN read from the ECU is incorrect, e.g., the VIN is not 17 bits.

VIN Read Failed: The VIN information in the ECU cannot be read.

VIN Not Match: The VIN read from the ECU does not match that in the manufacturer database.

Hardware Number Not Match: The hardware number read from the ECU does not match that in the manufacturer database.

Hardware Number Read Failed: The hardware number information in the ECU cannot be read.

Module Communication Failed: Controller communication fails.

Database Connection Failed: The SIPS client failed to connect to the manufacturer database.

B. Introduction to the matching status:

Comparing the "Vehicle ECU Information" and "Manufacturer Database Information" in the ECU related configuration/calibration file, the result is displayed as , , , or .

IMPORTANT

If neither "Vehicle ECU Information" nor "Manufacturer Database Information" has calibration file or configuration file information, the matching status will be displayed as , and accordingly, the

"Function" will not support "Reprogramming" or "Configuration".

: The "Vehicle ECU Information" and "Manufacturer Database Information" in all of the corresponding calibration/configuration files are consistent, the data in the ECU is up-to-date, and there is no need to perform the reprogramming or configuration function. However, subsequent operations on the ECU are not affected.

: The version of the data corresponding to the ECU function is inconsistent with the SAIC database. Therefore, it is necessary to perform the reprogramming or configuration function to update the ECU calibration/configuration to the latest version.

: At least one of the data version corresponding to the ECU function and the relevant data in the SAIC database is null and cannot be compared.

: At least one of the data version corresponding to the ECU function and the relevant data in the SAIC database is missing and cannot be compared.

C. Introduction to select:

Based on the comparison of the configuration file and the calibration file, and manual selected status, the result is displayed as 、 or .

: The corresponding ECU is not selected. And it can be manually selected because the status of ECU is normal.

: The corresponding ECU is not selected. And it cannot be selected because the status of ECU is not normal.

: The corresponding ECU is selected. And the status of ECU is normal.

2) Introduction to the Function list:

The functions supported by "One Press Reprogramming and Configuration" are listed under "Function", generally including: one press reprogramming and one press configuration for selected ECUs.

VII. Auxiliary Functions

Auxiliary functions of the SIPS client include: returning to the Home screen, printing and exporting logs. This section describes how to perform auxiliary functions.

1) Back to Home screen

The icon in the upper right corner of the SIPS client is the function of "Back to Home screen" - when the SIPS client is in use, return to the Vehicle Identification screen and re-identify the vehicle.

IMPORTANT

1. When the client is communicating with the vehicle or the server, the is grayed out, which means the function is not available.
2. After executing the function of "Back to Home screen", the last vehicle identification information will be cleared.

Clicking , a dialog box pops up prompting that the SIPS will go back to the Vehicle Identification screen. You

may click [OK] to go back to the Vehicle Identification screen, or click [Cancel] to give up the returning operation and stay in the current interface.

2) Print

Both the icon in the upper right corner of the SIPS client and the 打印 button in the pop-up box can realize the print function - to print the screen into PDF format.

IMPORTANT
The diagnostic computer using SIPS must be installed with the PDF Printer client!

Print procedure:

Step 1: Click the or 打印 button to pop up the print screen.
Step 2: Click the button in the upper left corner, select the save path and define the file name, and click [Save] to generate the PDF file.
Step 3: Click to close the print window and return to the SIPS client screen.

3) Export logs

The icon in the upper right corner of the SIPS client is the function of "Export logs" - to export the log file of the SIPS client.

Procedure for exporting logs:

Step 1: Click the button to pop up the "Export Log File" screen.

Step 2: Enter at least one query condition, VIN or time, and click [Search] to list the log files that meet the condition.

The log file information displayed includes VIN, generation time, and file size.

Step 3: Since the log file is named after the VIN (the identified VIN) and generation time, locate and select the file to be exported according to the VIN and generation time, click [Export], select the export path, and click [OK] to save the file.

Step 4: Click on the "Export Log File" screen to turn off the log export function and return to the SIPS interface.

4) Language settings

The icon in the upper right corner of the SIPS client is the function of "Language settings" - to set the display language of the SIPS client.

Procedure for language setting:

Step 1: Click the icon to pop up the language setting interface.

Step 2: Select the language you want to set, and click [OK]. The SIPS client will be re-launched automatically.