

# Porsche Immobilizer Manual

(Created Date: 20220510, the content is subject to change with software updates)

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## **1. Introduction to Porsche Immobilizer**

Support the functions of adding keys, losing all keys, replacing engine computer, cloning engine computer, dismantling and reading front-end/back-end electronic modules for Porsche models.

The Porsche immobilizer system was updated around 2010.

The immobilizer system of Cayenne before 2010 includes KESSY module, Bosch ME7.x engine computer, and Hitag2 chip key. The immobilizer software supports key adding and engine computer replacement functions. To match keys, dealer keys must be generated first.

The immobilizer system of Cayenne after 2011 includes front-end and back-end electronic modules, Siemens engine computer, and HitagPro chip key. The immobilizer software supports front-end/back-end electronic module cloning, partial engine computer cloning, key adding, and all keys lost. Before matching keys, you need to dismantle and read the front-end electronic module and then generate the dealer keys.

## 2. Porsche Cayenne (955) Key Adding

### 2.1 Model Coverage

<b>Model</b>	<b>Year</b>	<b>Chassis</b>	<b>Key Adding</b>	<b>All Keys Lost</b>
Cayenne	2006-2010	955	Supported	Not supported

### 2.2 Requirements

Scheme 1: Launch PAD series comprehensive diagnostic equipment + X-431 GIII immobilizer programmer

Scheme 2: Launch X-431 PRO immobilizer matching tool (expert edition) + X-431 GIII immobilizer programmer

### 2.3 Procedure

The following is about 2010 Cayenne matching keys.

1. Access the Porsche immobilizer software. The main function menus are shown in Figure 2.

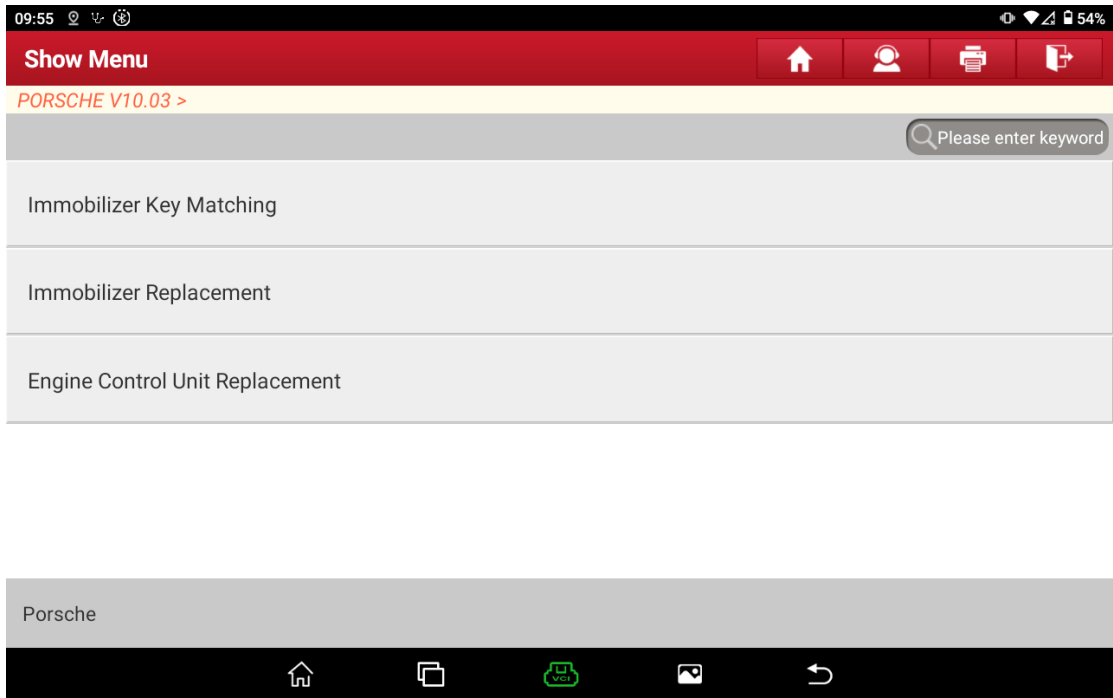


Figure 2 Main function menus

2. Choose [Immobilizer Key Matching] > [Cayenne] > [2006-2010]. The current menu is shown in Figure 3.

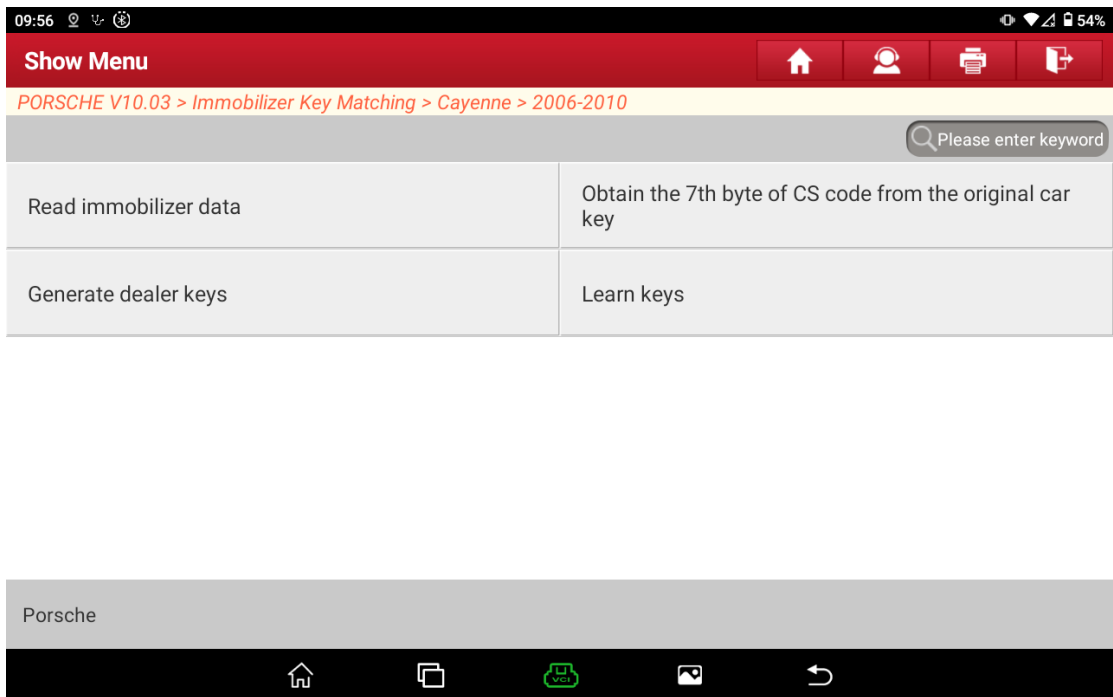


Figure 3 Submenus

- Choose [Read immobilizer data], and follow the prompt in Figure 4 to "turn on the ignition switch" to start reading immobilizer data.

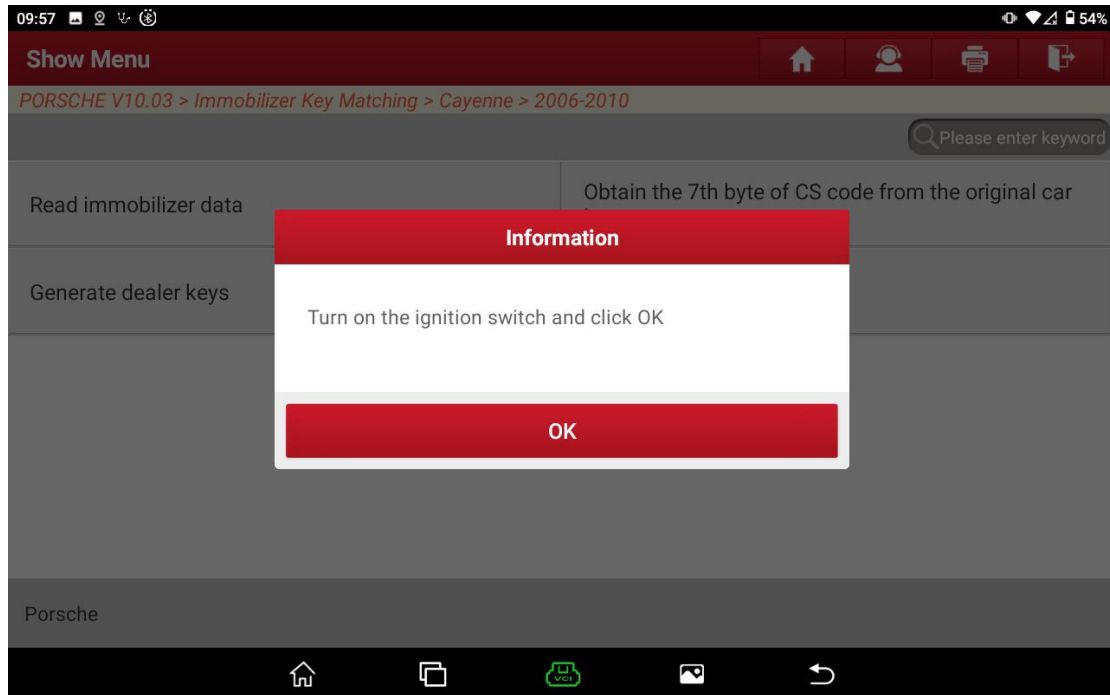


Figure 4 Prompt

- It takes about 5 minutes to read the immobilizer data successfully. The immobilizer data is shown in Figure 5.

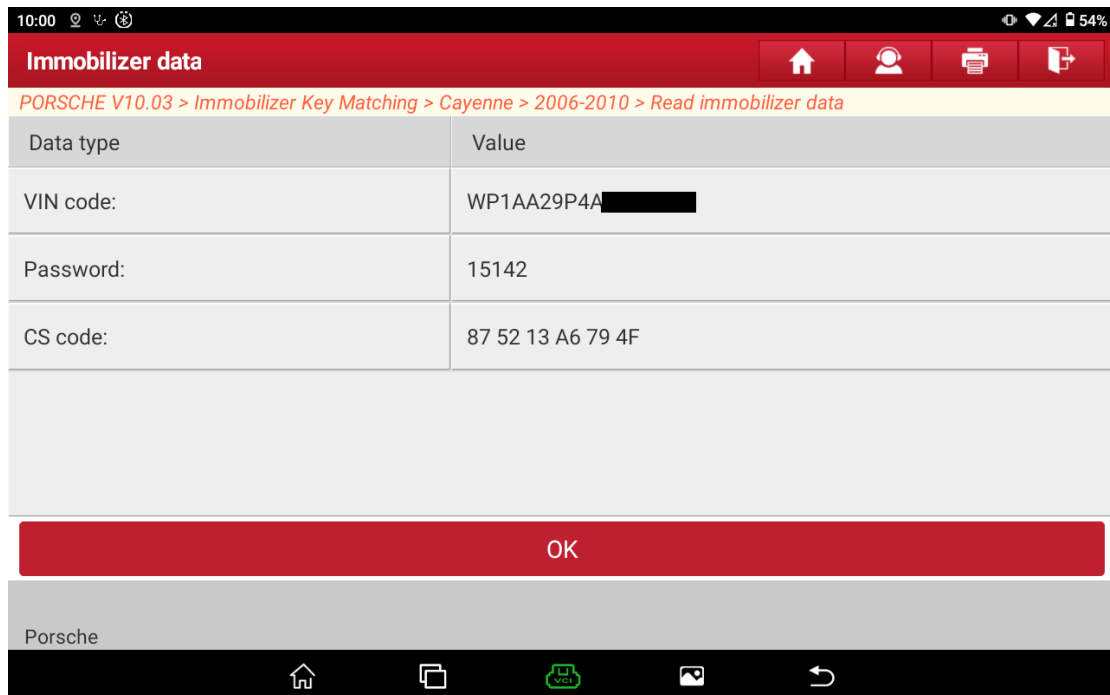


Figure 5 Immobilizer data

5. Choose the [Dealer Key] menu, and put a brand new key into the immobilizer programmer G3 according to the prompt in Figure 6.

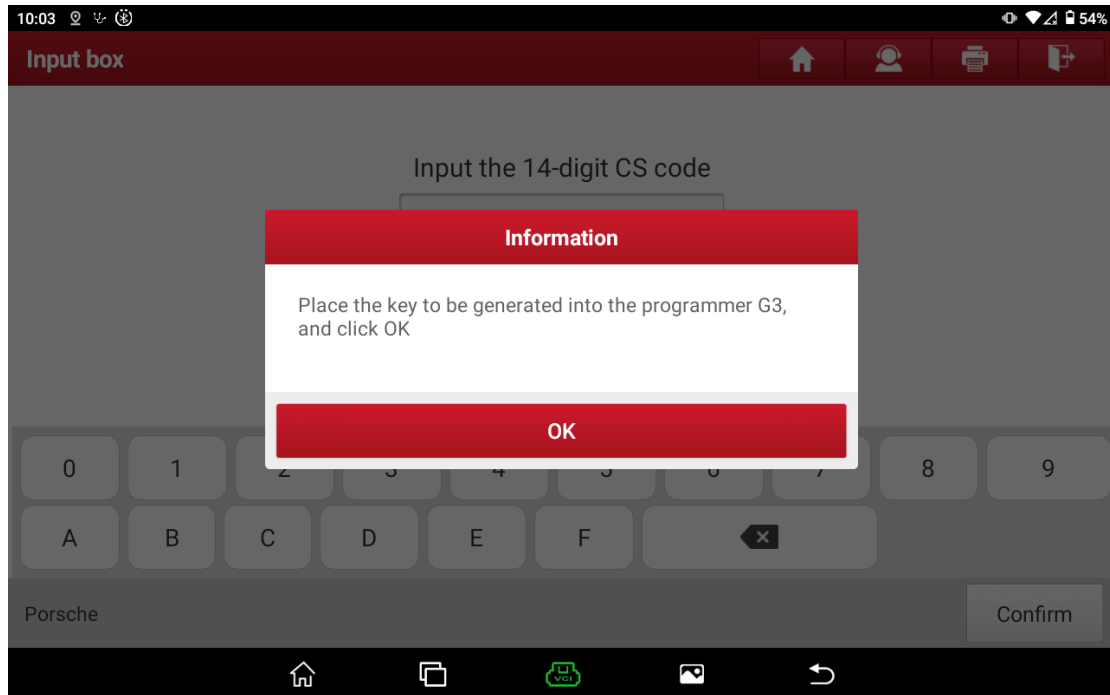


Figure 6 Prompt

6. It takes about 10 seconds for the dealer key to be generated successfully. If you need to add more keys, you need to repeat this function to generate all new keys into dealer keys.

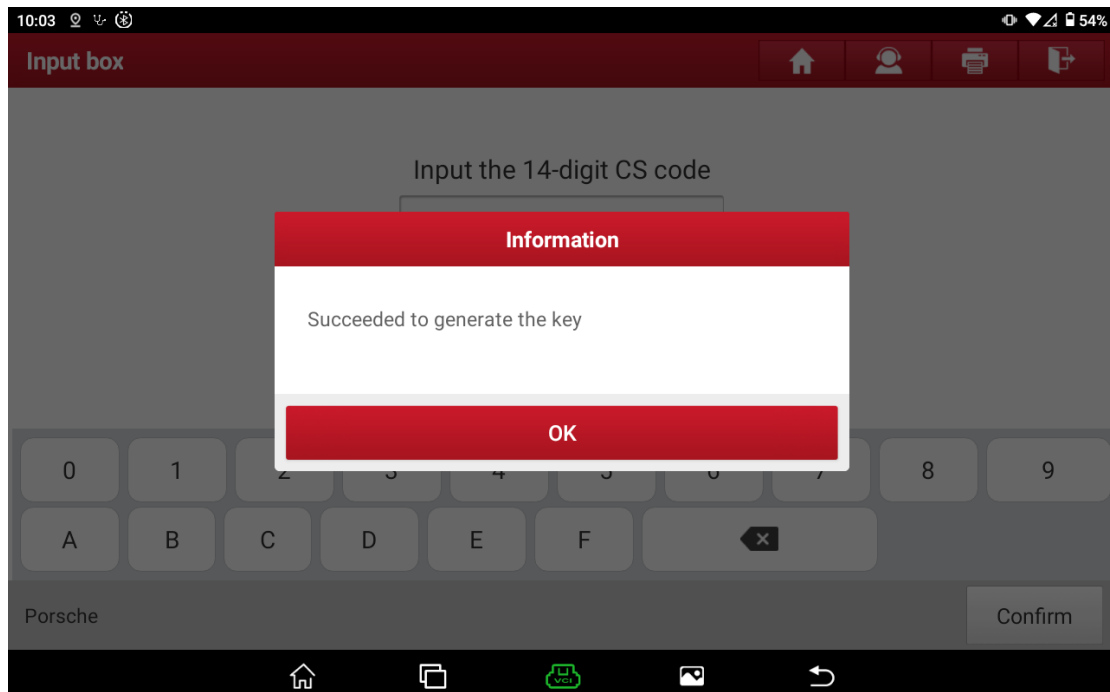


Figure 7 Dealer keys generated successfully

7. Choose [Learn keys]. As shown in Figure 8 and Figure 9, all keys will be re-matched, and the ignition switch needs to be turned on.

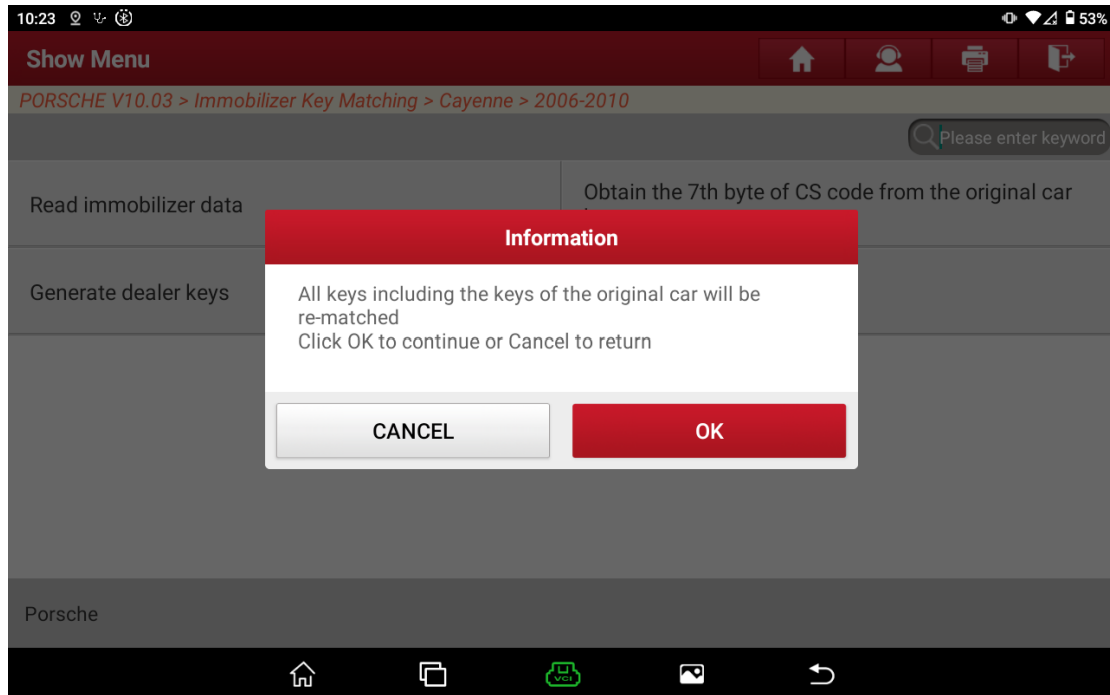


Figure 8 Prompt

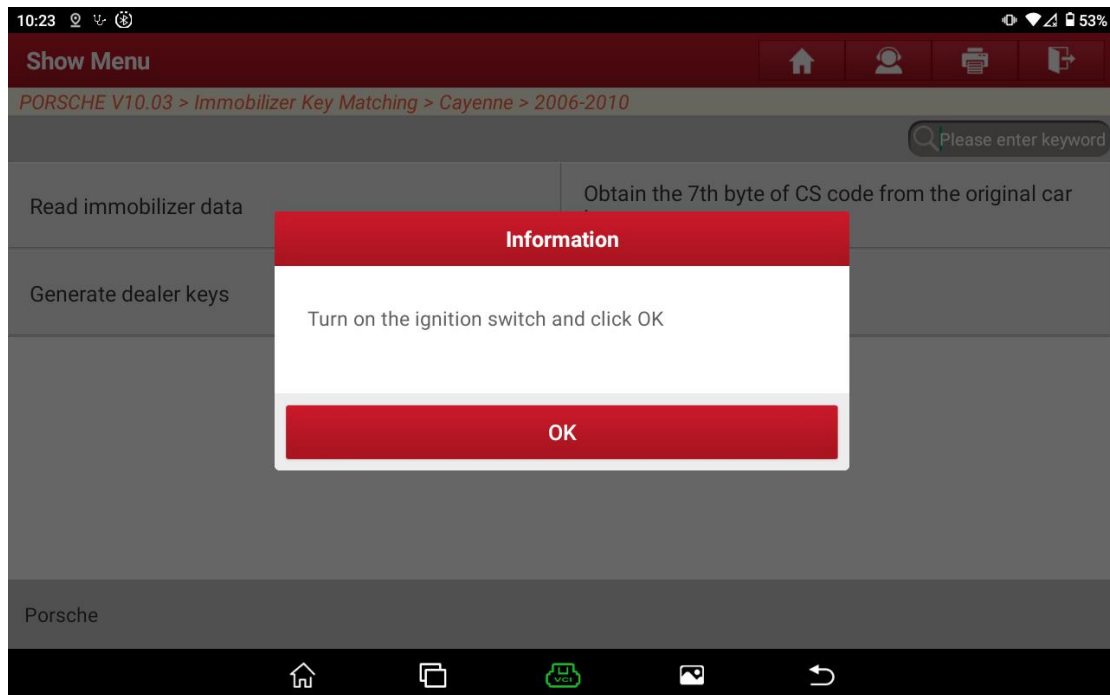


Figure 9 Prompt

8. Input the number of keys to be matched to start key matching.

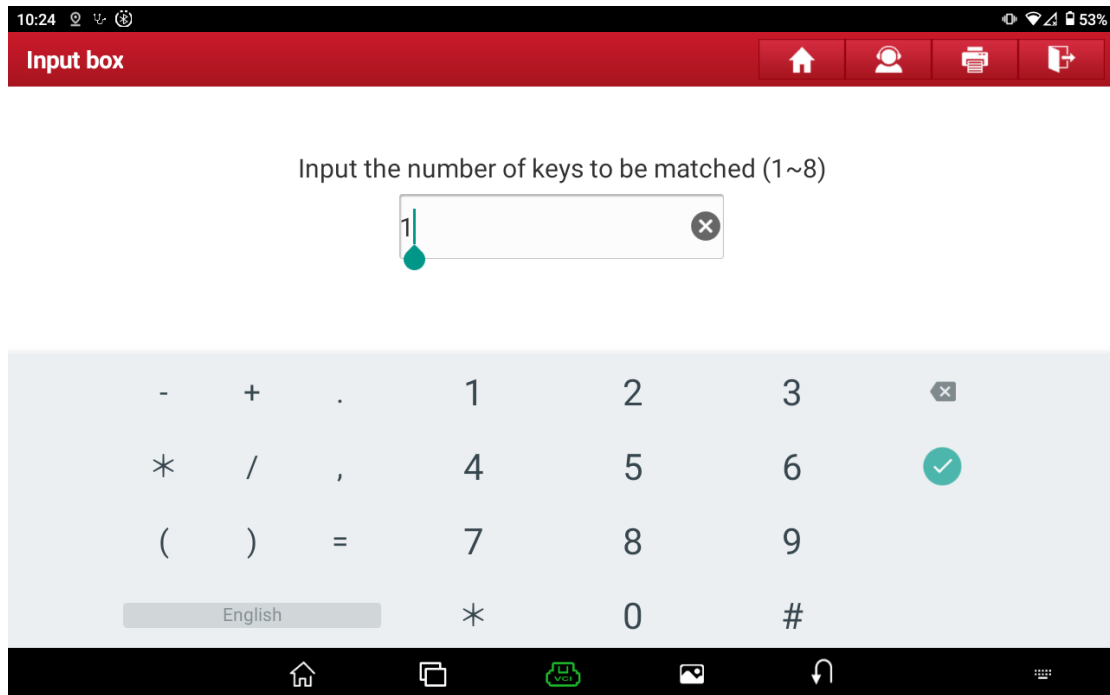


Figure 10 Input box

9. As shown in Figure 11, insert each key in turn, turn on the ignition switch, and wait for about 2 seconds. If the direction lock beeps, it indicates that the key is successfully matched. Then, insert the next key.

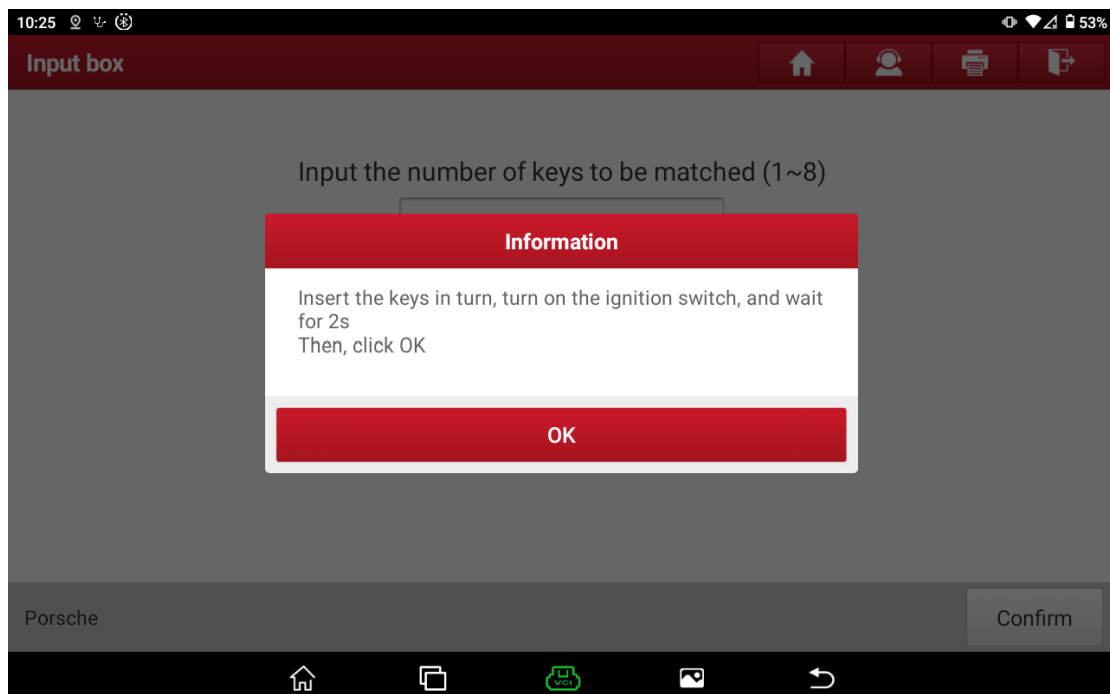


Figure 11 Prompt

10. After all the keys are matched, the matching is completed.

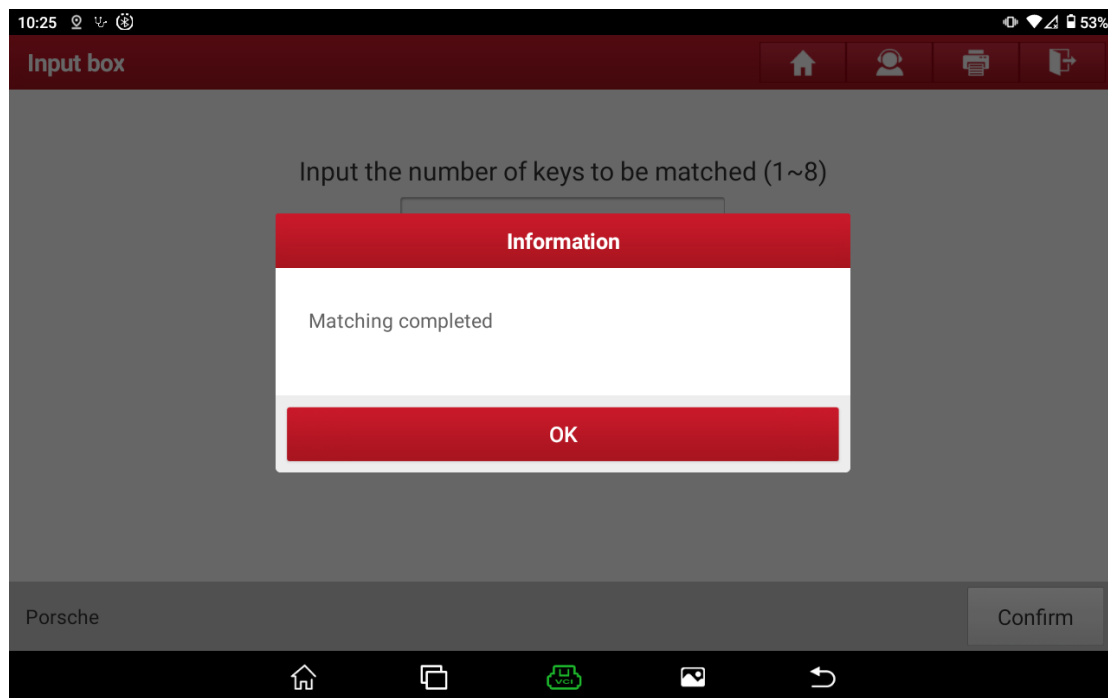


Figure 12 Matching completed

### 3 Porsche 2011-2017 Key Adding/All Keys Lost

#### 3.1 Model Coverage

<b>Model</b>	<b>Year</b>	<b>Chassis</b>	<b>Key Adding</b>	<b>All Keys Lost</b>
911	2013-2017	991	Supported	Supported
Boxster	2013-2017	981	Supported	Supported
Cayman	2013-2017	981	Supported	Supported
Cayenne	2011-2017	957	Supported	Supported
Macan	2014-	95B	Supported	Supported
Panamera	2010-2017	970	Supported	Supported

#### 3.2 Requirements

Scheme 1: Launch PAD series comprehensive diagnostic equipment + X-431



GIII immobilizer programmer

Scheme 2: Launch X-431 PRO immobilizer matching tool (expert edition) + X-431 GIII immobilizer programmer

### 3.3 Procedure

The following is about 2013 Cayenne matching keys.

1. Dismantle the front-end electronic control module of the vehicle, which is located above the accelerator pedal.





2. Dismantle the front-end electronic control module, find the main control chip, and confirm the model. There are 4 types in total: 1L15Y, 1N35H, 2M25J, 5M48H



3. Access the Porsche immobilizer software to display the immobilizer main function menus, as shown in Figure 1-4.

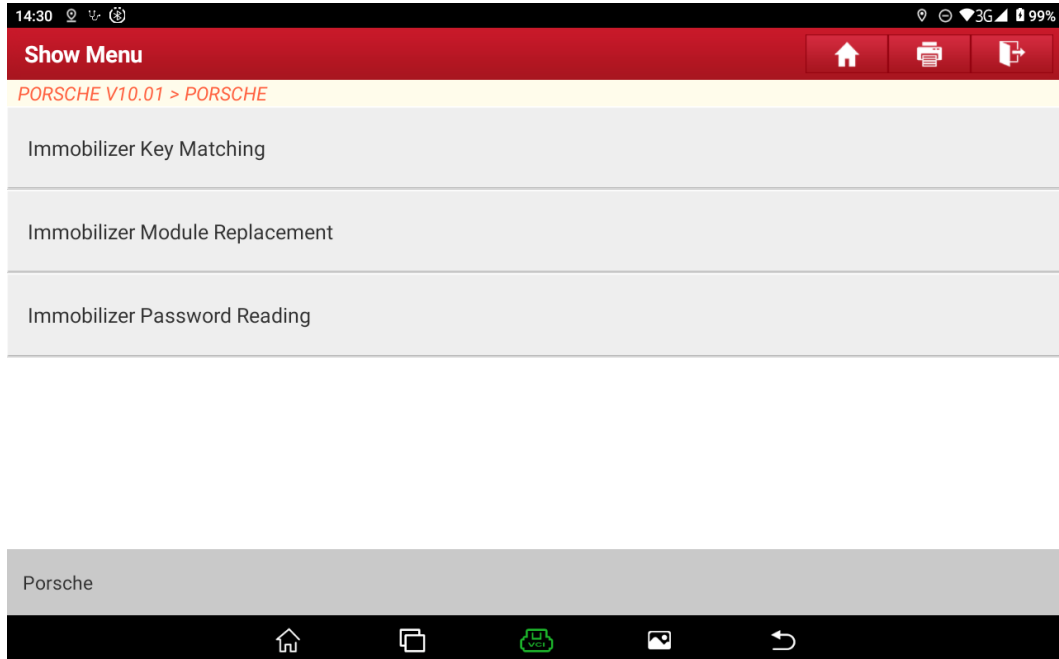


Figure 1-4 Immobilizer main function menus

4. Choose Immobilizer Password Reading > Cayenne > 2011-2017 > 5M48H. The current menu is shown in Figure 1-5.

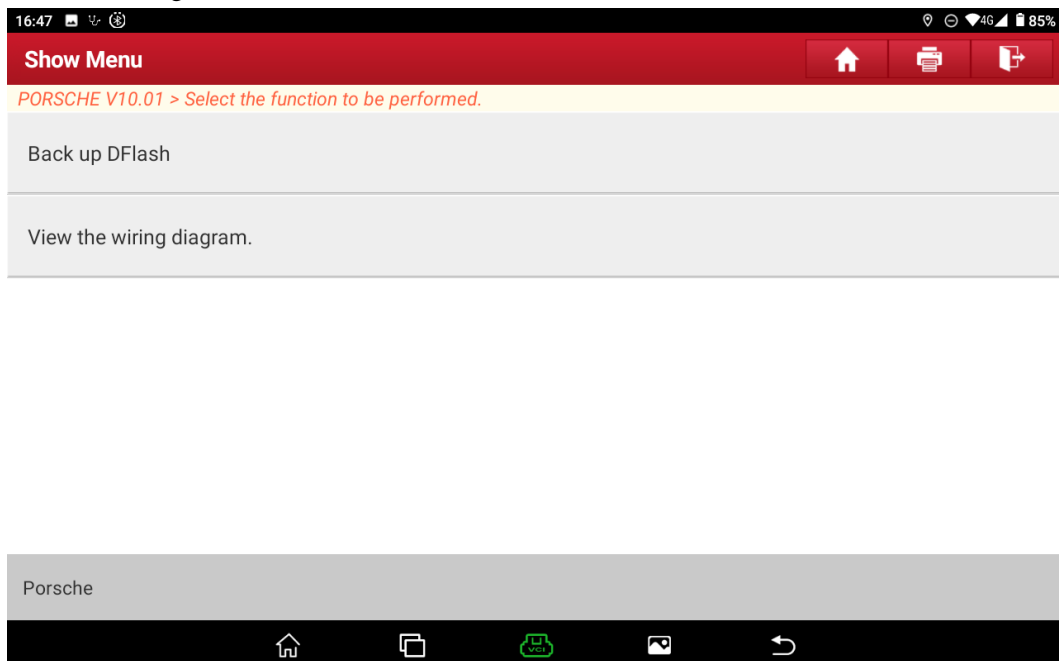


Figure 1-5 Immobilizer Password Reading sub-function menu



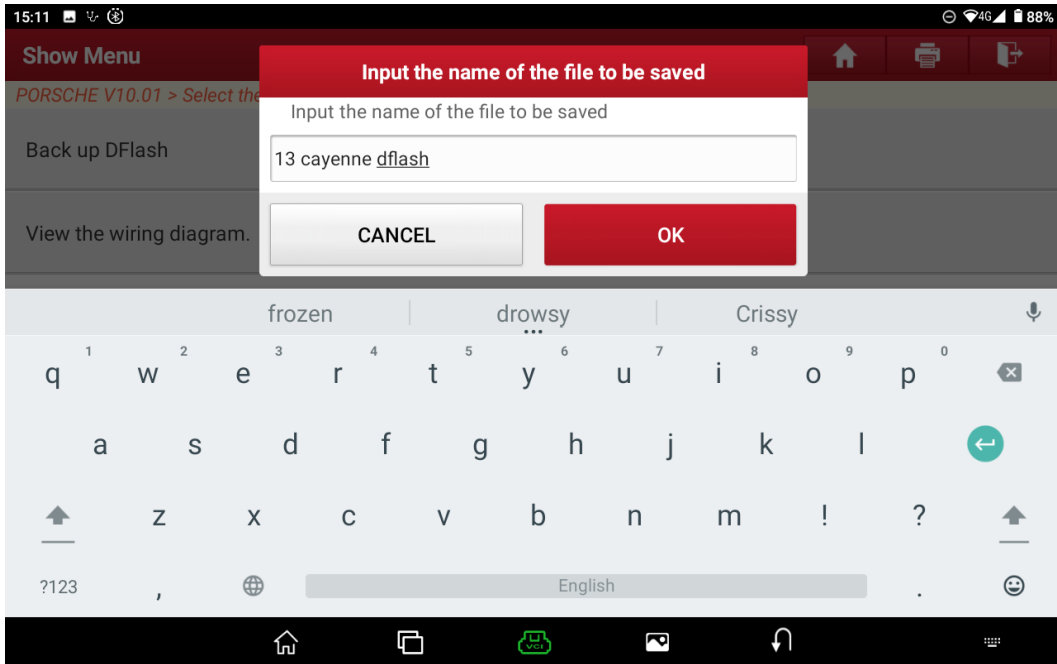


Figure 1-7 Input file name

- 7. The file is saved successfully, and the save path is displayed, as shown in Figure 1-8.

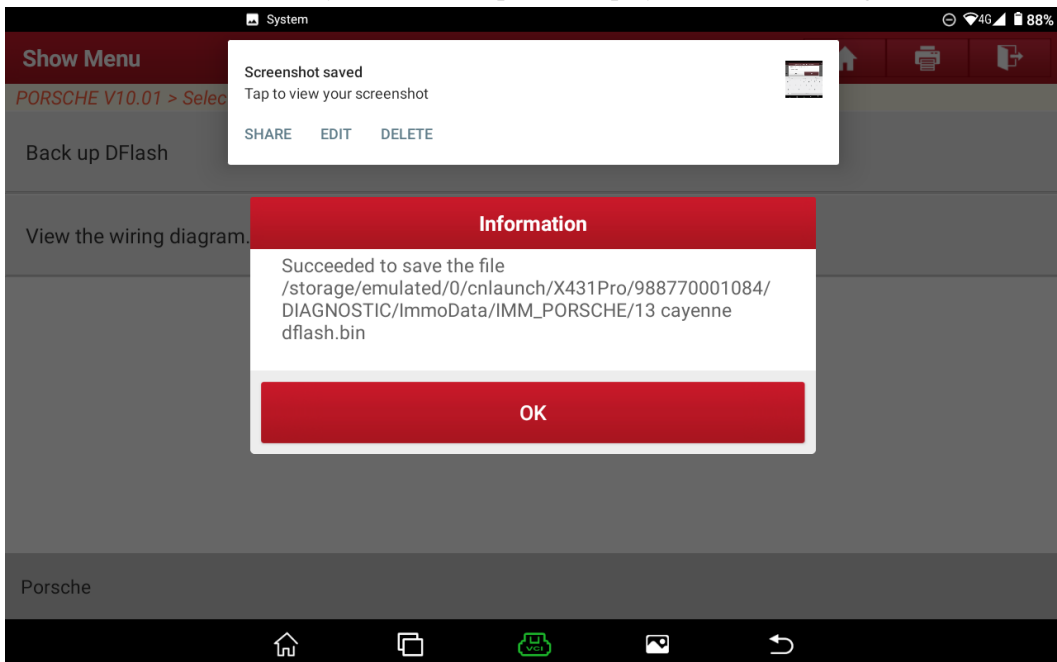


Figure 1-8 File save path

- Return to the main menu of the immobilizer function and choose Immobilizer Key Matching > Cayenne > 2011-2017. The current menu is shown in Figure 2-1.

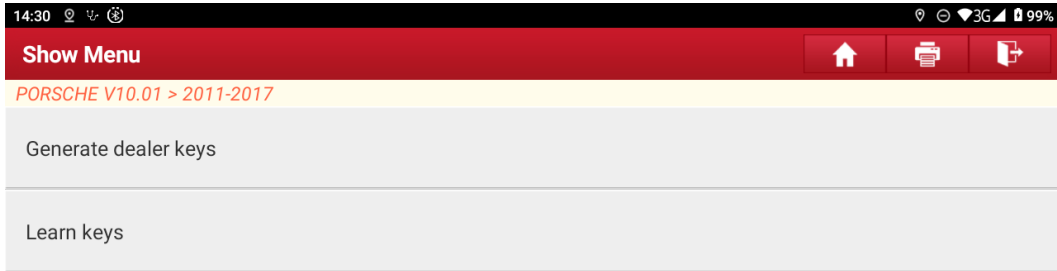


Figure 2-1 Immobilizer Key Matching sub-function menu

- Choose [Generate dealer keys]. A list of backed up immobilizer data files will pop up, as shown in Figure 2-2.

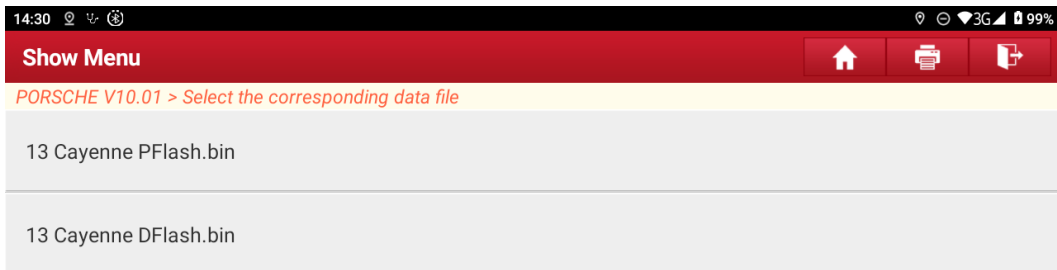


Figure 2-2 Immobilizer data file list

- Choose "13 cayenne dflash.bin" to load the immobilizer data. The following key information is displayed, as shown in Figure 2-3.



Figure 2-3 Key information

- Select a blank key position (ID: FFFFFFFF). The prompt "Please put the key to be generated into the immobilizer programmer G3, and then click [OK]" is displayed. Follow the prompt, as shown in Figure 2-3.



Figure 2-4 Put the key into the immobilizer programmer

15. Click [OK] and wait for about 10 seconds. The generation is successful.
16. Restore the front-end electronic control module, re-solder the soldered components, and connect the cut wires with fly lines. After closing the cover, put them back on the car. If the module is abnormal, the key will not be able to be pulled out when inserted into the ignition switch. Check the module circuit.
17. Choose [Learn Keys]. It will prompt "All keys will be relearned (including original car keys)". Click [OK]. It will prompt "Turn on double flash". Follow the prompts and click [OK].
18. Access the system. A list of backed up immobilizer data files is displayed, as shown in Figure 3-3.

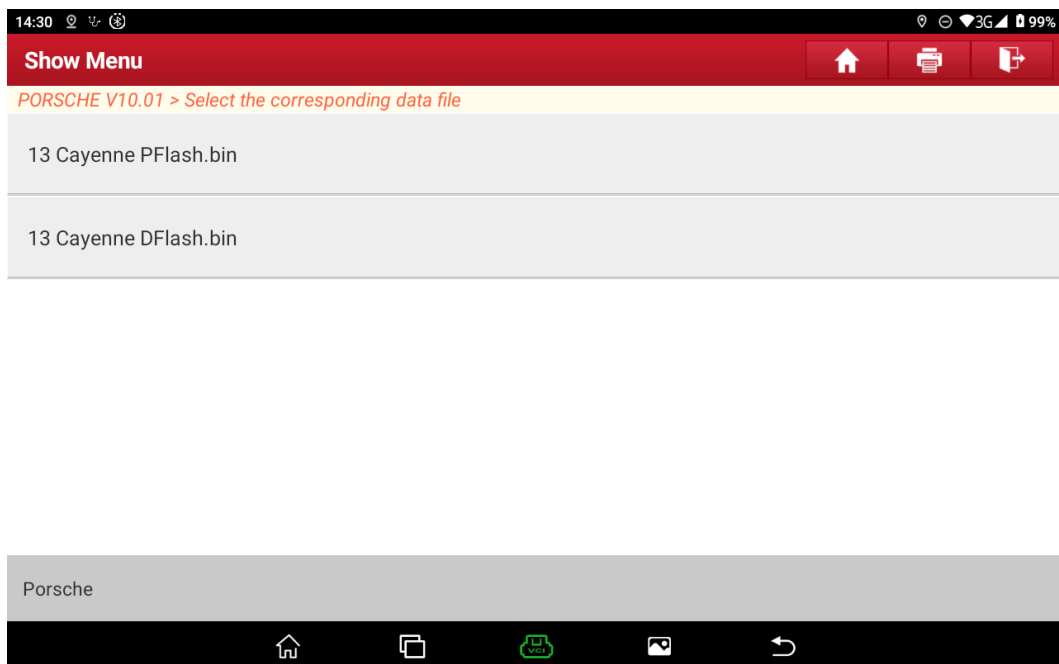


Figure 3-3 Immobilizer data list

19. Choose "13 Cayenne dflash.bin". In the input box that pops up, input the number of keys to be learned (input 2), as shown in Figure 3-4.



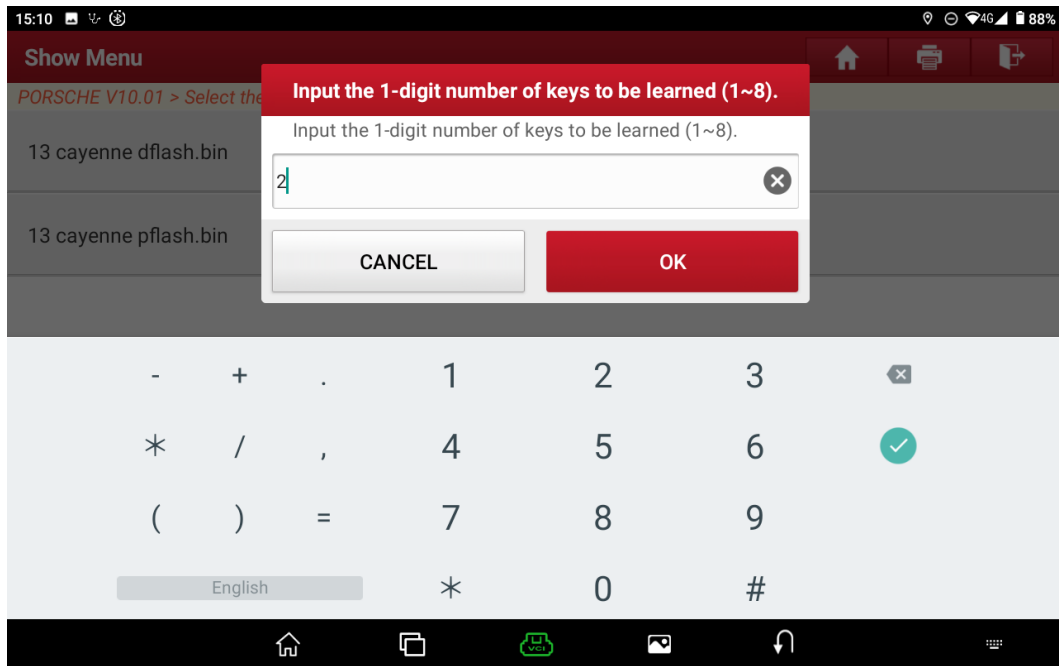


Figure 3-4 Input the number of keys to be learned

20. After you click [OK] for a few seconds, it will prompt "Insert the first key and turn on the ignition switch". At this time, the instrument panel does not light up, and "2-0" is displayed at the mileage, as shown in Figure 3-5.



Figure 3-5 Black-screen instrument panel shows 2-0

21. Insert the first key and then click [OK]. After a few seconds, the instrument panel lights up and "2-1" is displayed at the mileage. The first key is successfully learned, as shown in Figure 3-5.



Figure 3-6 Illuminated instrument panel shows 2-1

22. When it prompts "Insert the second key and turn on the ignition switch", insert the second key and then click [OK]. After a few seconds, the instrument panel lights up and "2-2" is displayed at the mileage. The second key is successfully learned, as shown in Figure 3-7.



Figure 3-7 Illuminated instrument panel shows 2-2

23. Start to configure the system. After about 10 seconds, the learning is completed, and the normal mileage is displayed on the instrument panel, as shown in Figure 3-8.



Figure 3-8 Normal instrument panel

## 4. Bosch ME7.x Engine Computer Replacement

### 4.1 Model Coverage

Model	Year	Engine Computer Replacement
Cayenne	2006-2021	Support Bosch ME7.x replacement
Cayenne	2006-2010	Support Siemens SIMOS8.5 clone
Panamera	2009-2017	Support Siemens SDI6/SDI7/SDI8 clone

### 4.2 Requirements

Scheme 1: Launch PAD series comprehensive diagnostic equipment + X-431 GIII immobilizer programmer

Scheme 2: Launch X-431 PRO immobilizer matching tool (expert edition) +

X-431 GIII immobilizer programmer

## 4.3 Procedure

The following is about Bosch me7.X engine computer replacement.

1. Connect the X431 Pro and other tablet devices to the network, and access the Porsche immobilizer software. The main function menus are displayed, as shown in Figure 1.

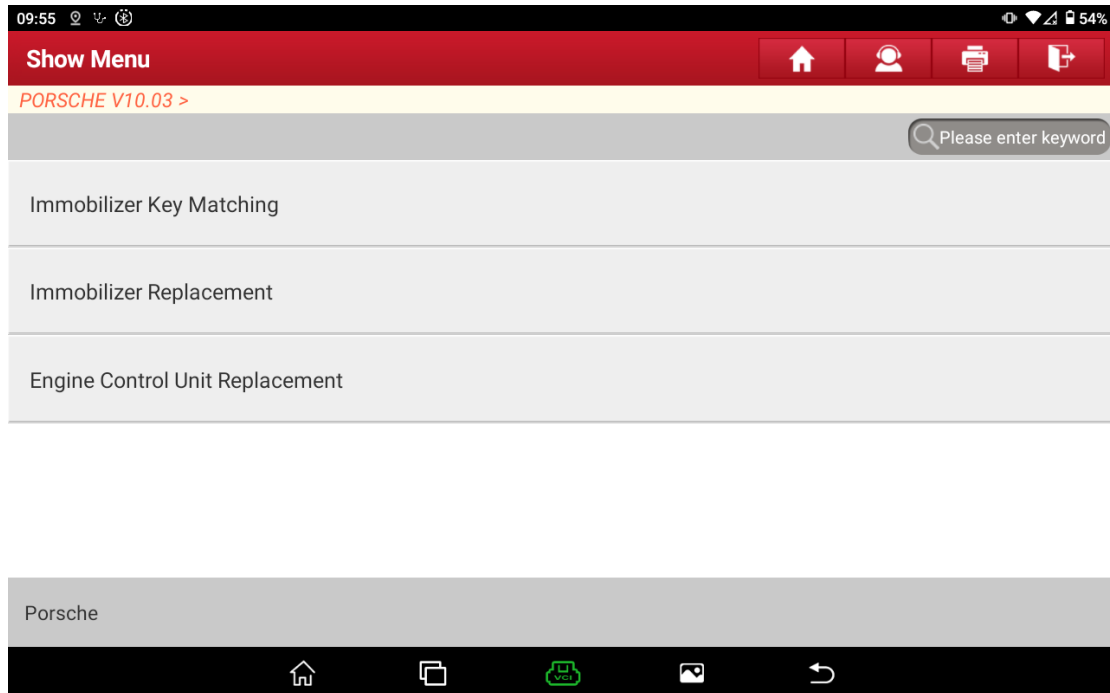


Figure 1 Main function menus

2. Choose [Engine Control Unit Replacement] > [Bosch ME7.x ECU Replacement]. The current menu is shown in Figure 2.

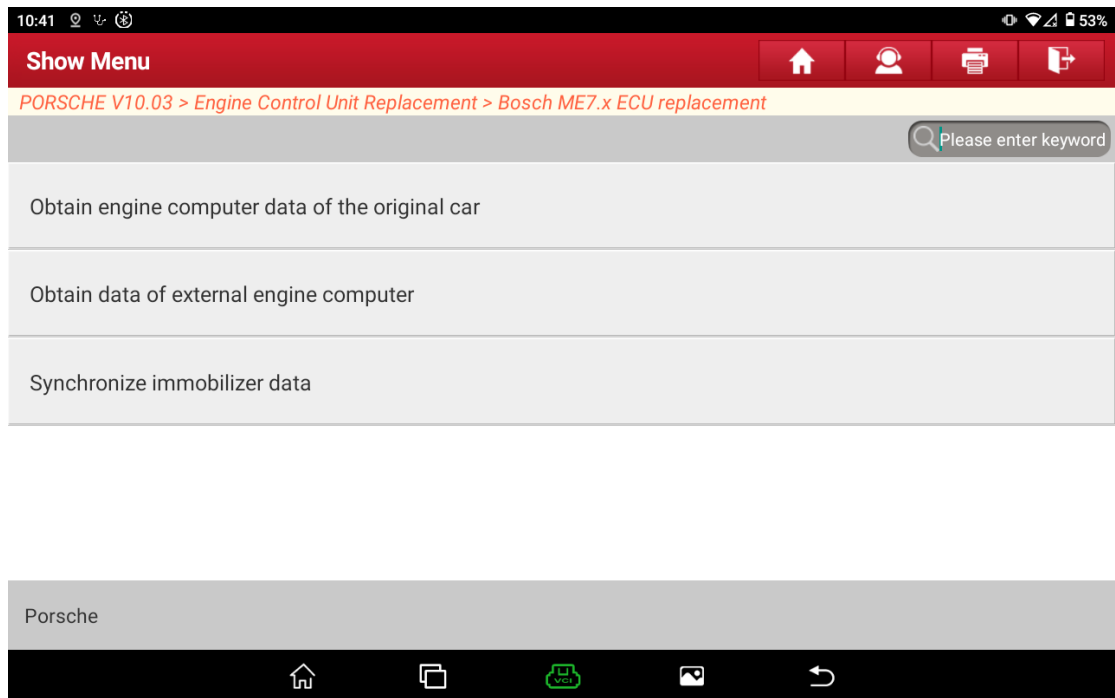


Figure 2 Submenu

3. Choose [Obtain engine computer data of the original car]. You can read the data through OBD or manual input, as shown in Figure 3.

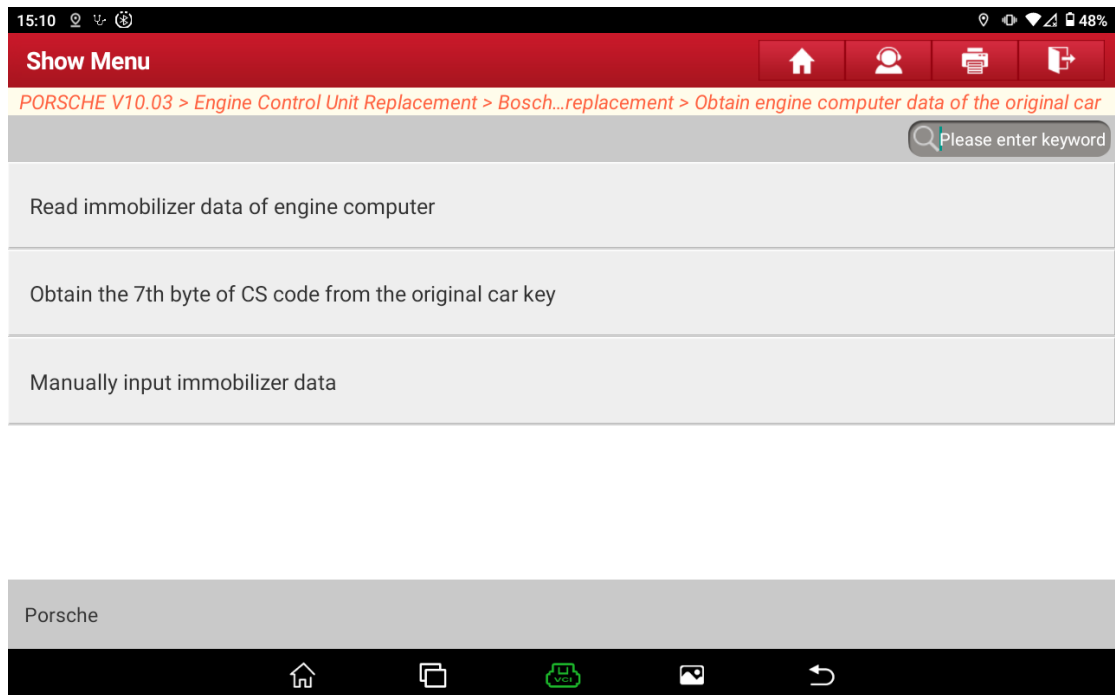


Figure 3 Obtain engine computer data of the original car

- Choose [Manually input immobilizer data], as shown in Figure 4.

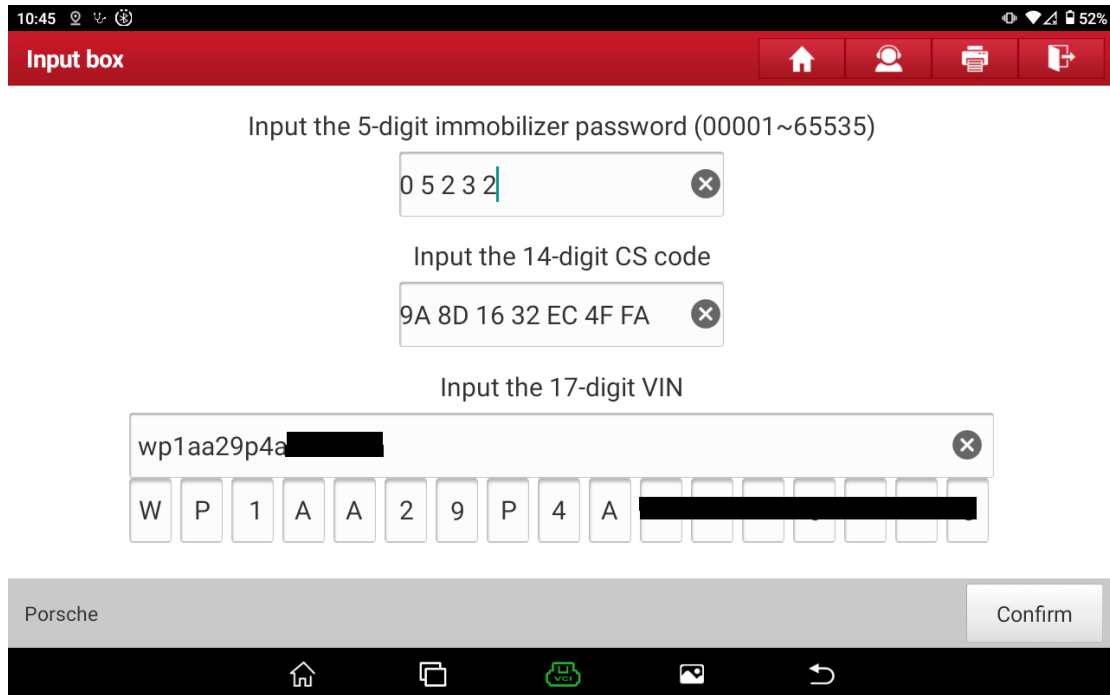


Figure 4 Manually input immobilizer data

- After loading the external engine computer, choose [Obtain data of external engine computer] > [Read immobilizer data of engine computer], and turn on the ignition switch according to the prompt information.

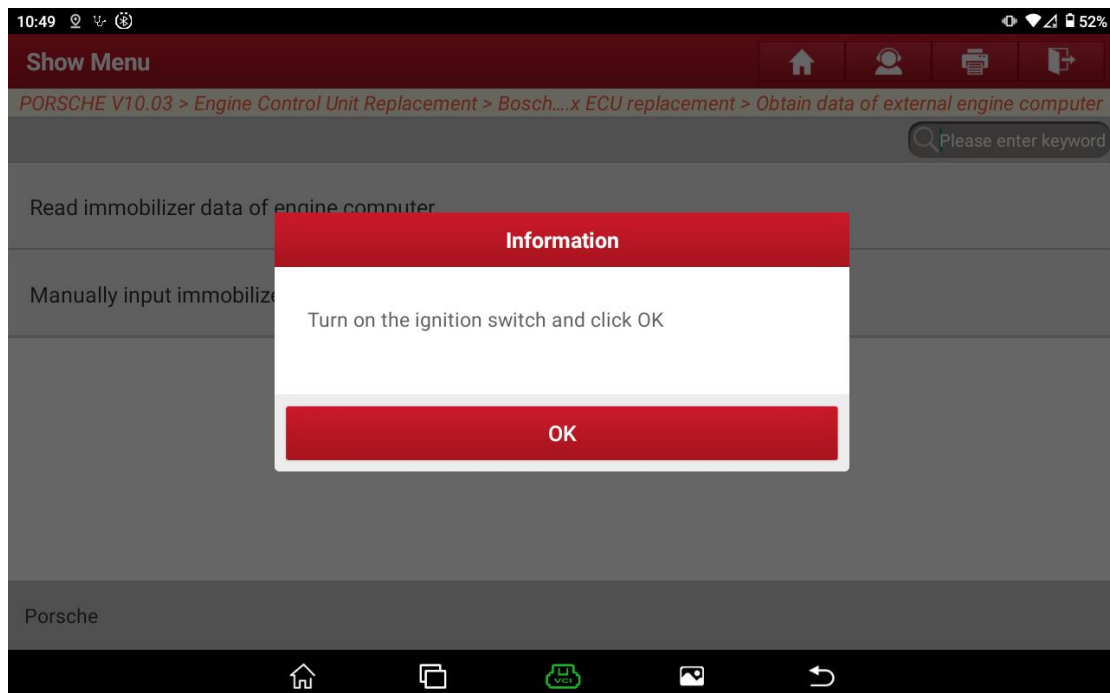


Figure 5 Prompt information

6. It takes about 10 seconds to read the immobilizer data successfully, as shown in Figure 6.

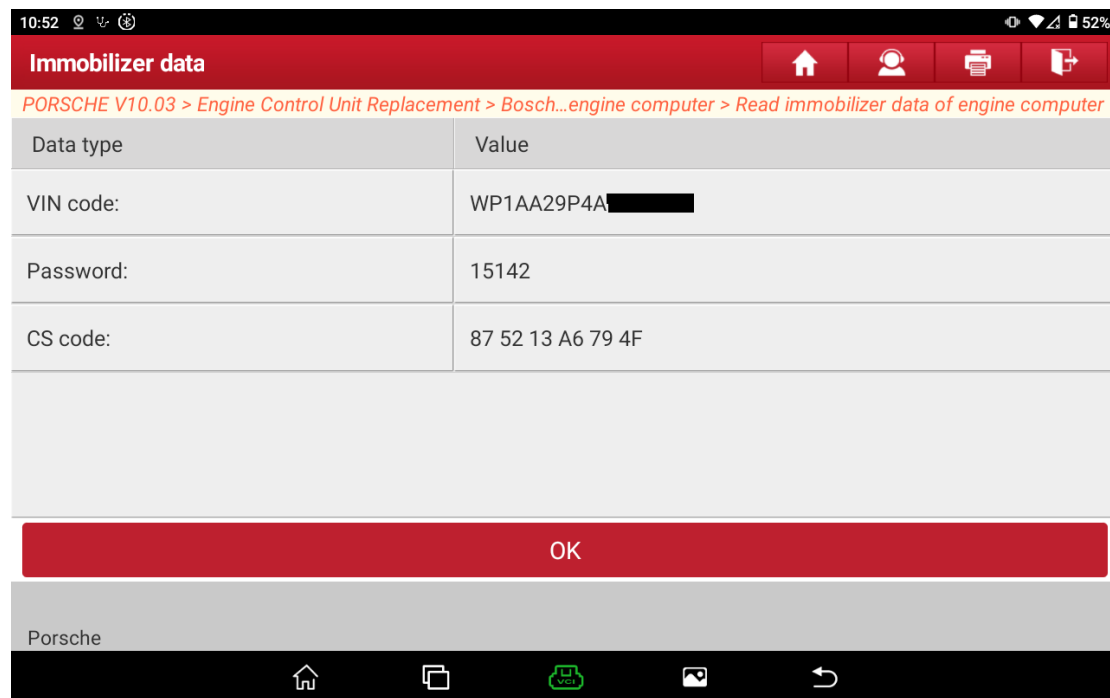


Figure 6 Immobilizer data of external engine computer

7. Choose [Synchronize immobilizer data] and turn on the ignition switch according to the prompt information.

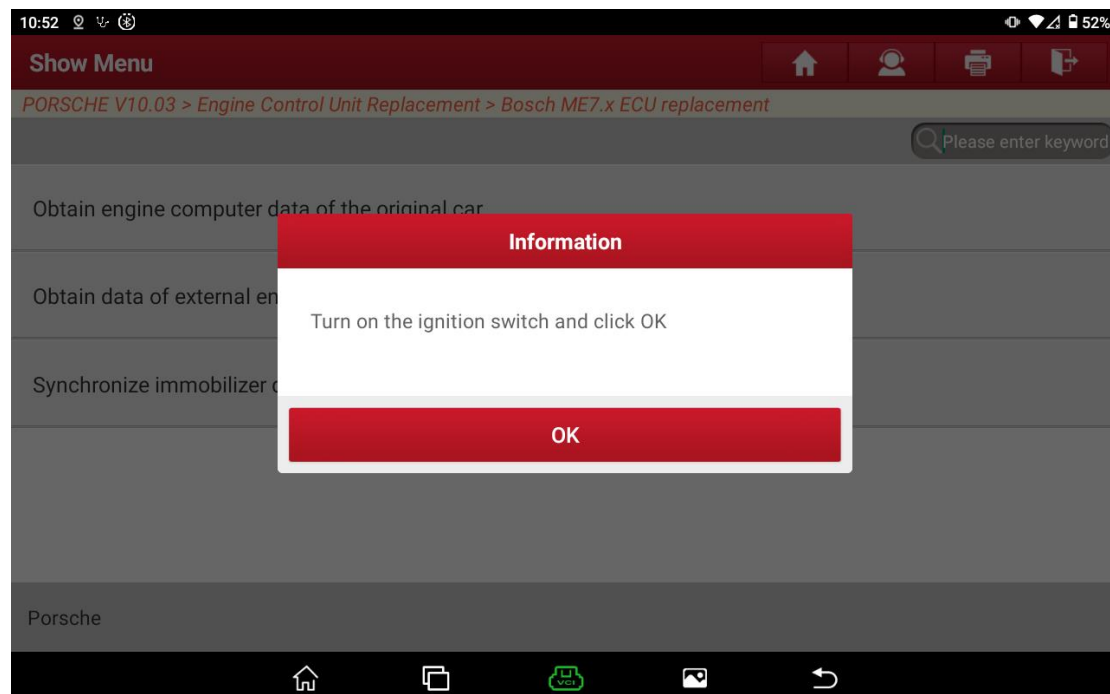


Figure 7 Prompt information

8. The synchronization process takes a long time, up to 30 minutes. Please ensure that the vehicle has sufficient power.

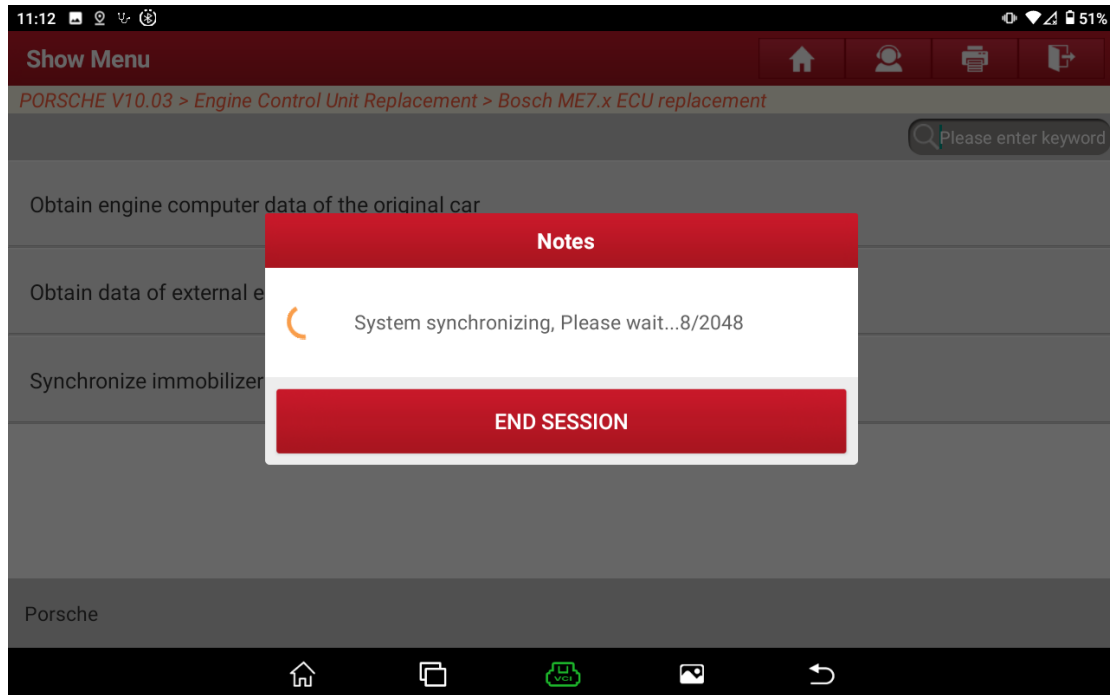


Figure 8 Synchronize immobilizer data

9. The synchronization is successful. Start the vehicle to verify the result.

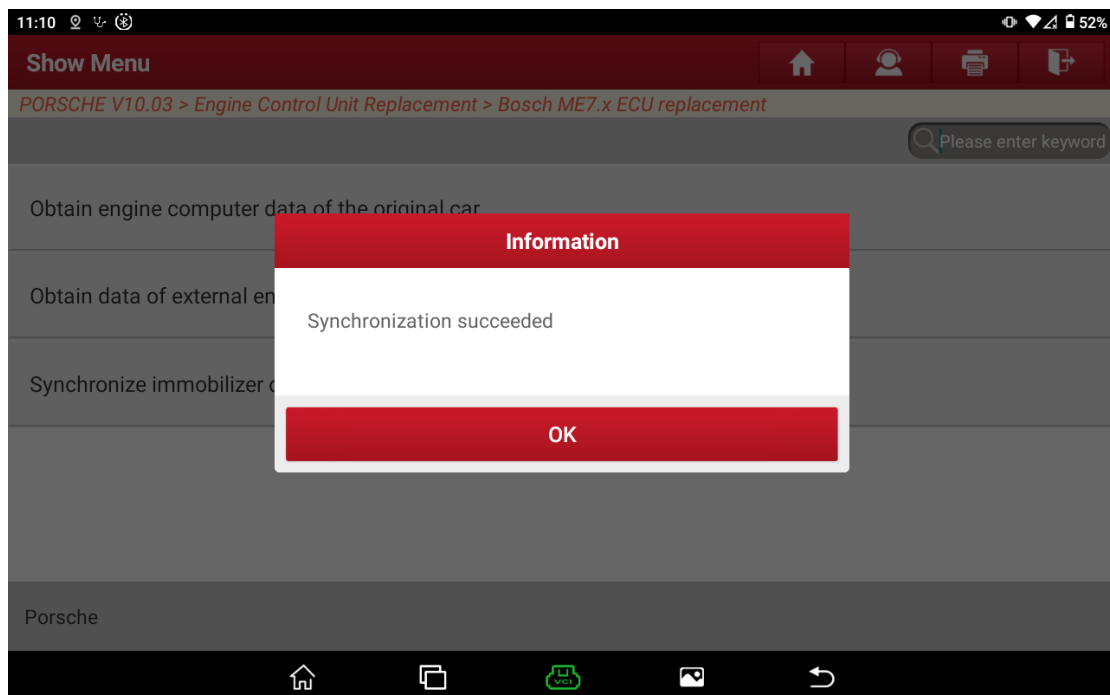


Figure 9 Synchronization successful



## 5. Siemens Engine Computer Clone

### 5.1 Model Coverage

Model	Year	Engine Computer Clone
Cayenne	2011-2017	Support Siemens SIMOS8.5 clone
Panamera	2010-2017	Support Siemens SDI6/SDI7/SDI8 clone

### 5.2 Requirements

Scheme 1: Launch PAD series comprehensive diagnostic equipment + X-431 GIII immobilizer programmer

Scheme 2: Launch X-431 PRO immobilizer matching tool (expert edition) + X-431 GIII immobilizer programmer

### 5.3 Procedure

**The following is about Siemens simos8.5 engine clone.**

1. Remove the original car engine computer, which is located under the co-pilot wiper, and prepare a good external engine computer.
2. Access the Porsche immobilizer software (need to connect the immobilizer programmer G3), and choose [Engine Control Unit Replacement] > [Clone Engine Compute] > [Continental SIMOS8.5]. The current menu is shown in Figure 1.

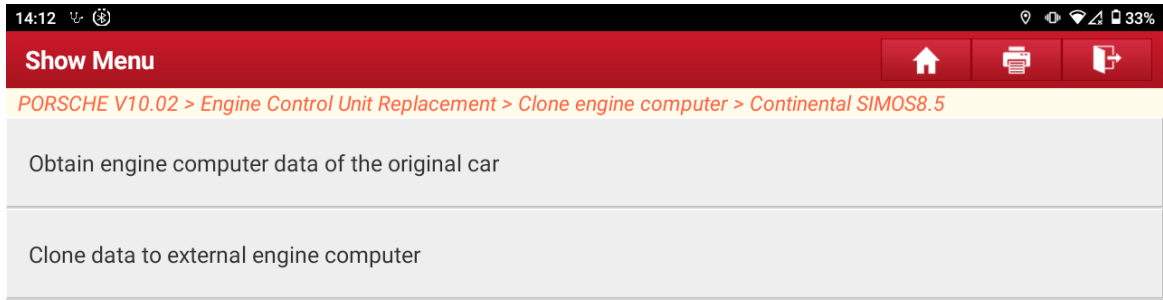


Figure 1

3. Choose [Obtain engine computer data of the original car]. The current menu is shown in Figure 2.



Figure 2

- Choose [View Wiring Diagram], as shown in Figure 3. According to the wiring diagram, connect the original car engine computer and the immobilizer programmer G3 (in order to improve the communication speed and stability, use a USB cable to connect the Android device and the Bluetooth connector).

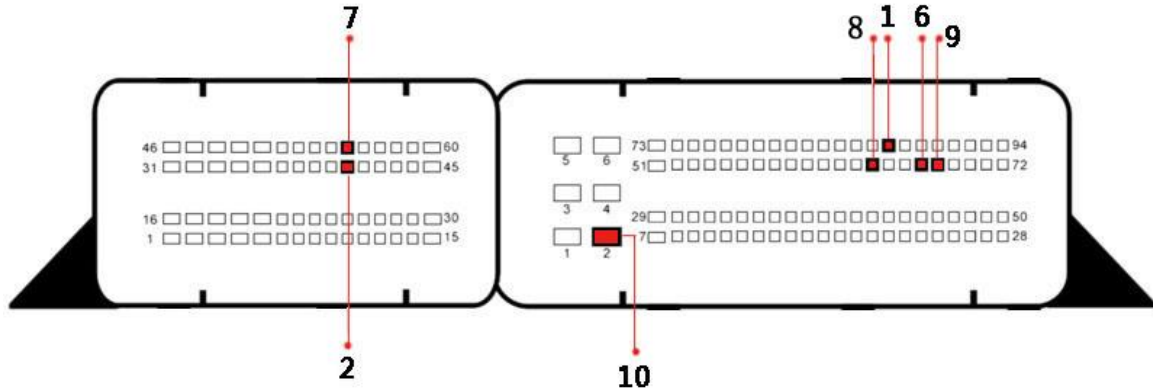


Figure 3

- Choose [Connect] to enter the BENCH mode, as shown in Figure 4 and Figure 5.

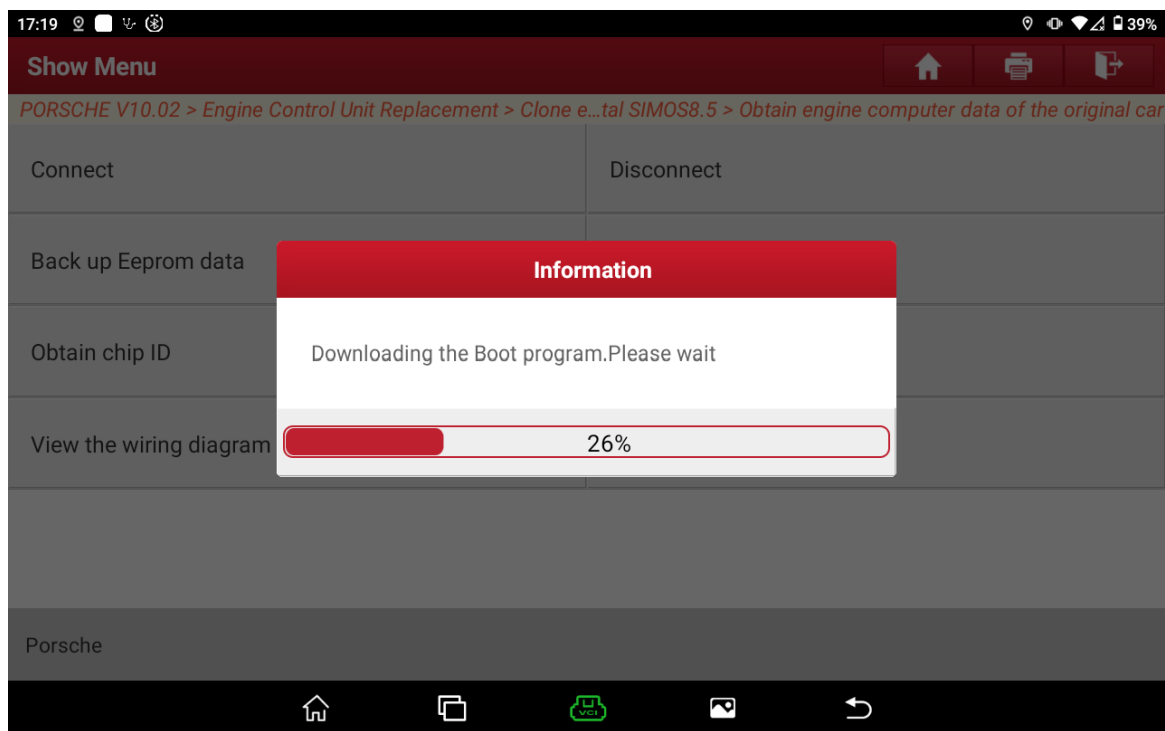


Figure 4

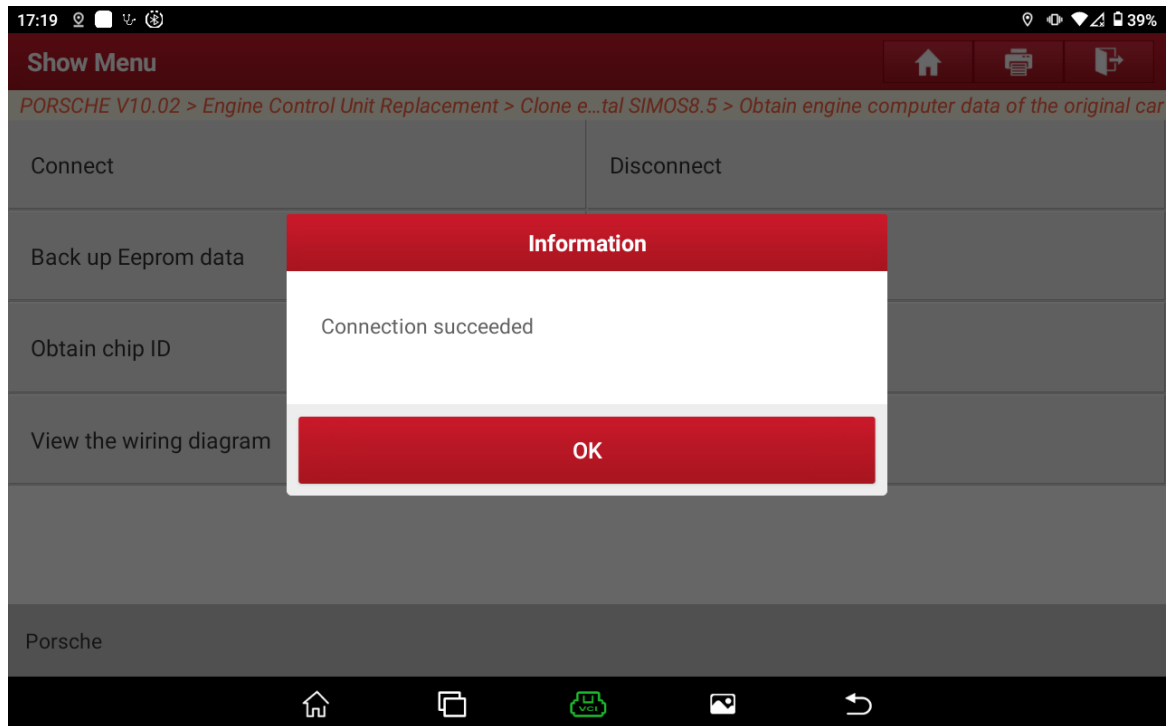


Figure 5

6. Choose [Back up Eeprom data], input the name of the file to be saved, and save the Eeprom data, as shown in Figure 6, Figure 7, and Figure 8.

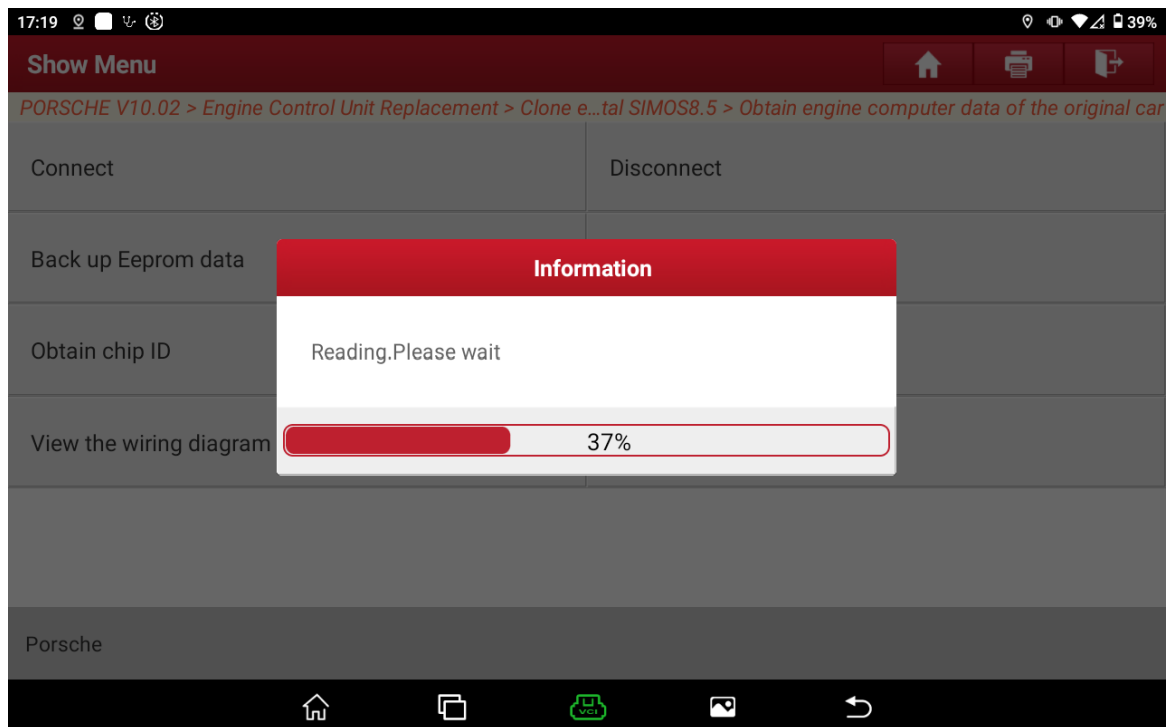


Figure 6

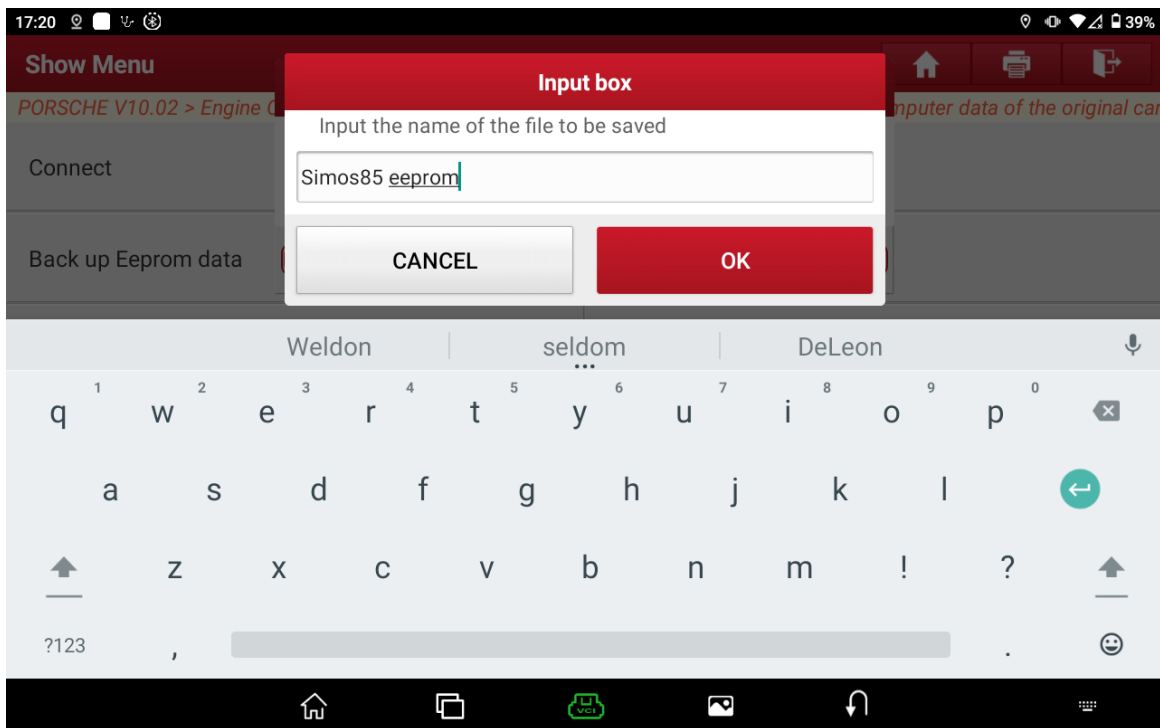


Figure 7

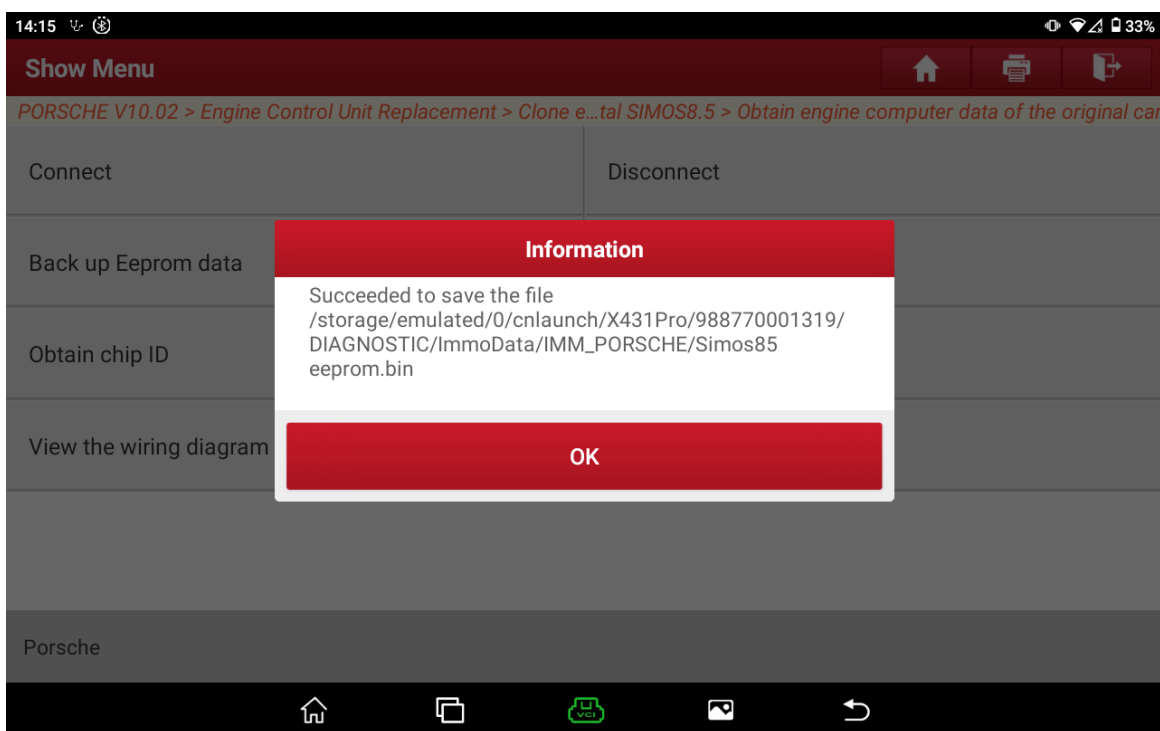


Figure 8

- 7. Choose [Back up Flash Data], input the name of the file to be saved, and save the Flash data, as shown in Figure 9, Figure 10, and Figure 11. The Flash data is large and takes a long time. Please wait patiently.

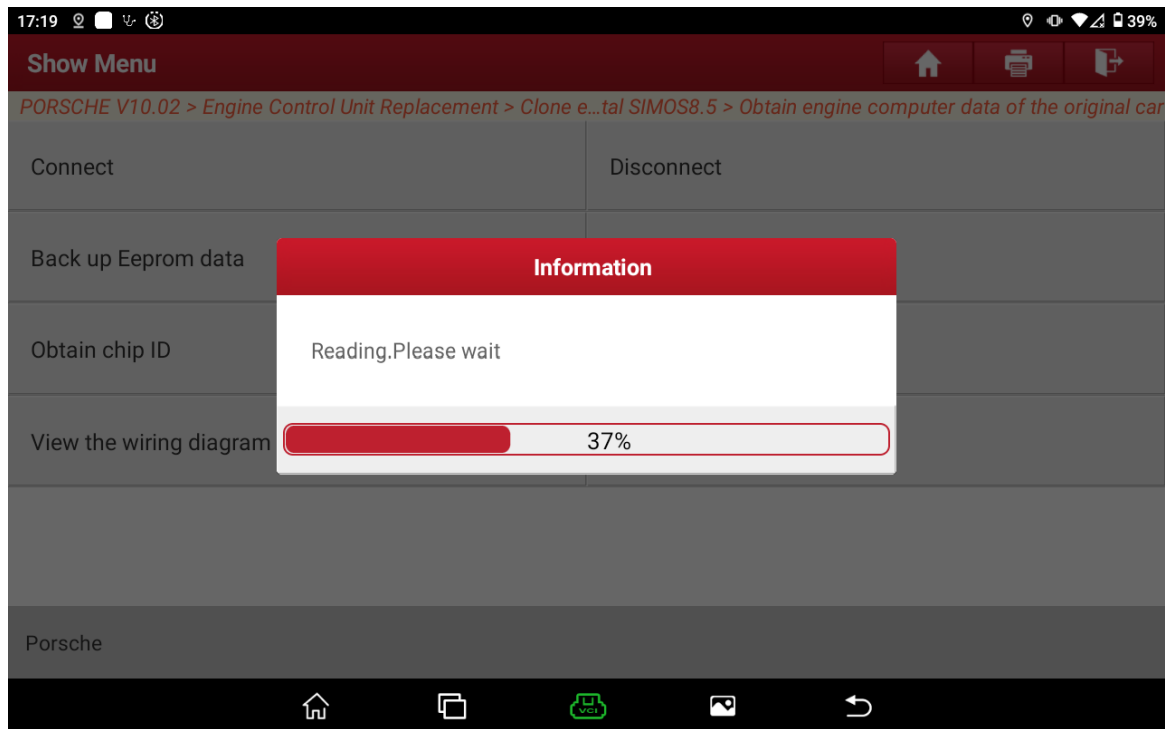


Figure 9

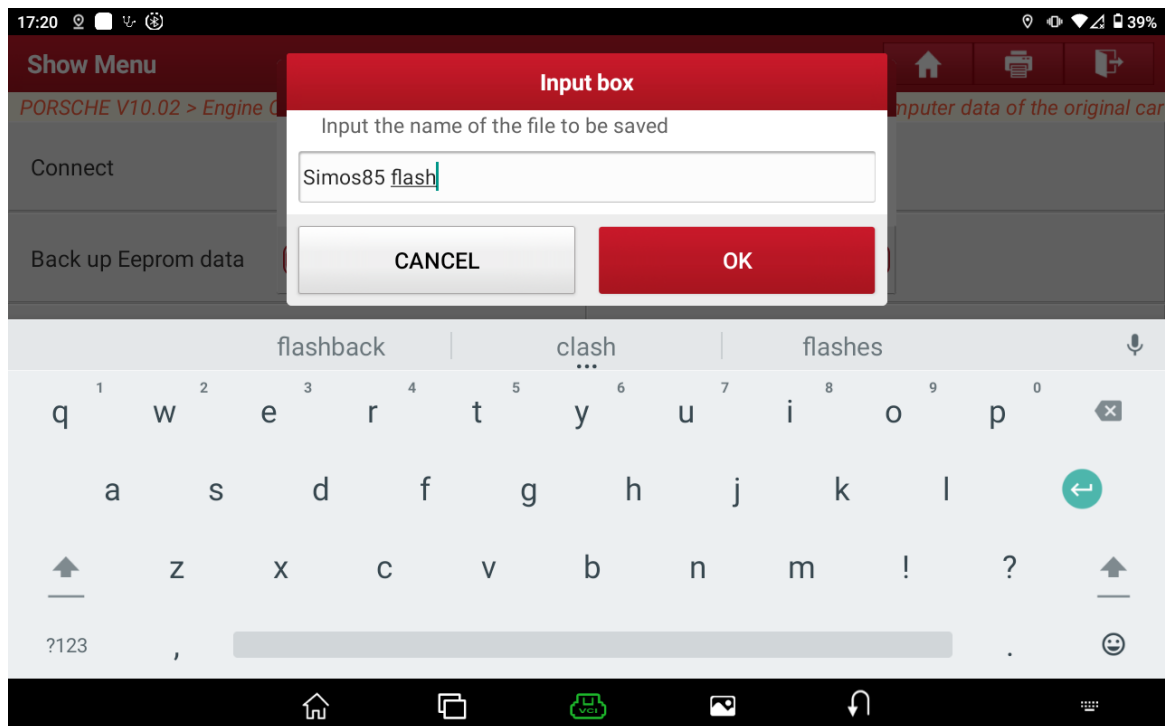


Figure 10

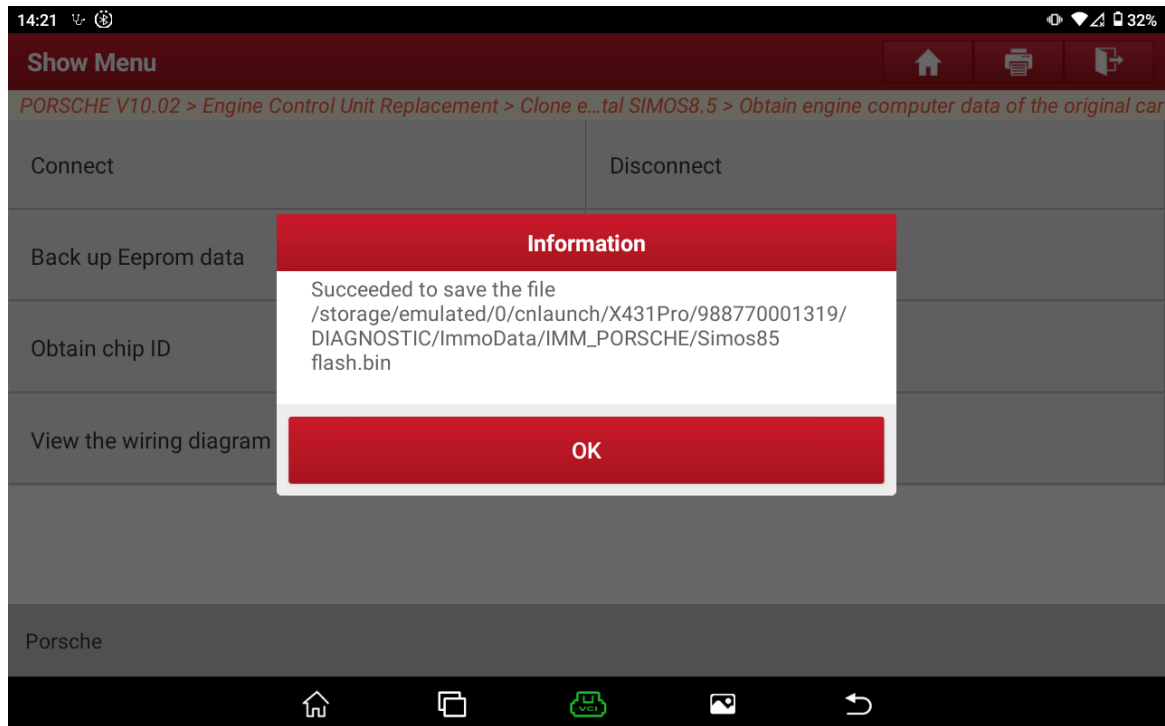


Figure 11

8. Choose [Decrypt immobilizer data] and load the backed-up data file, as shown in Figure 12 and Figure 13. The decryption result is shown in Figure 14.

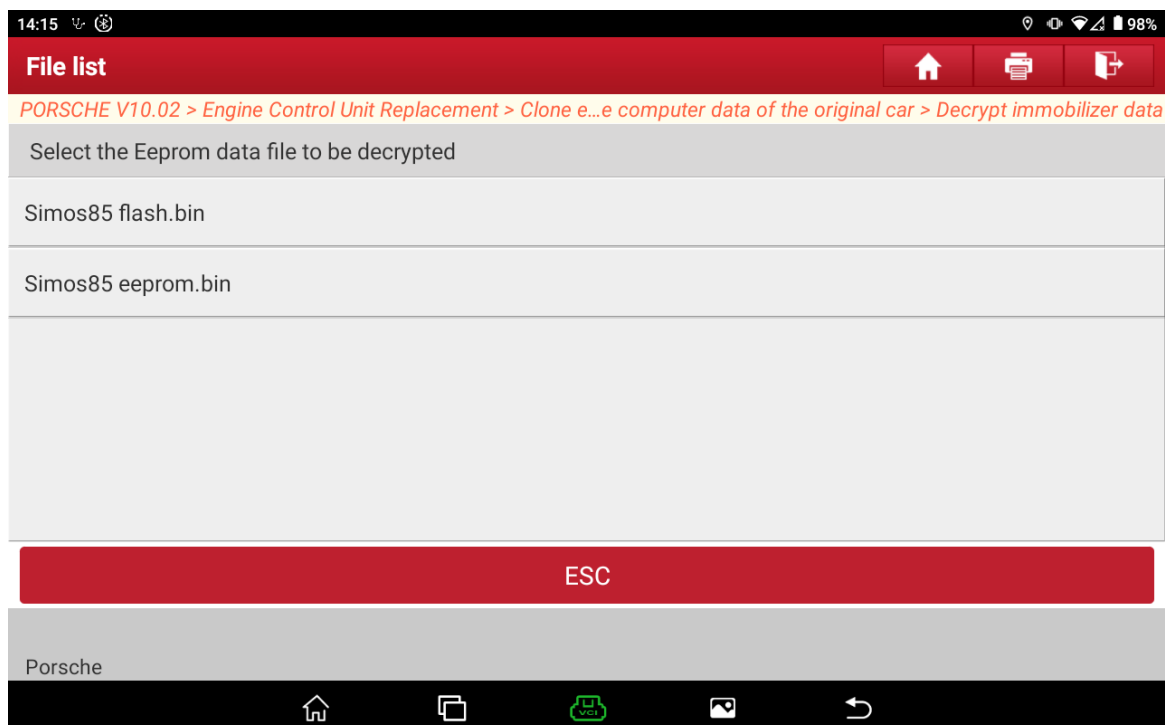


Figure 12

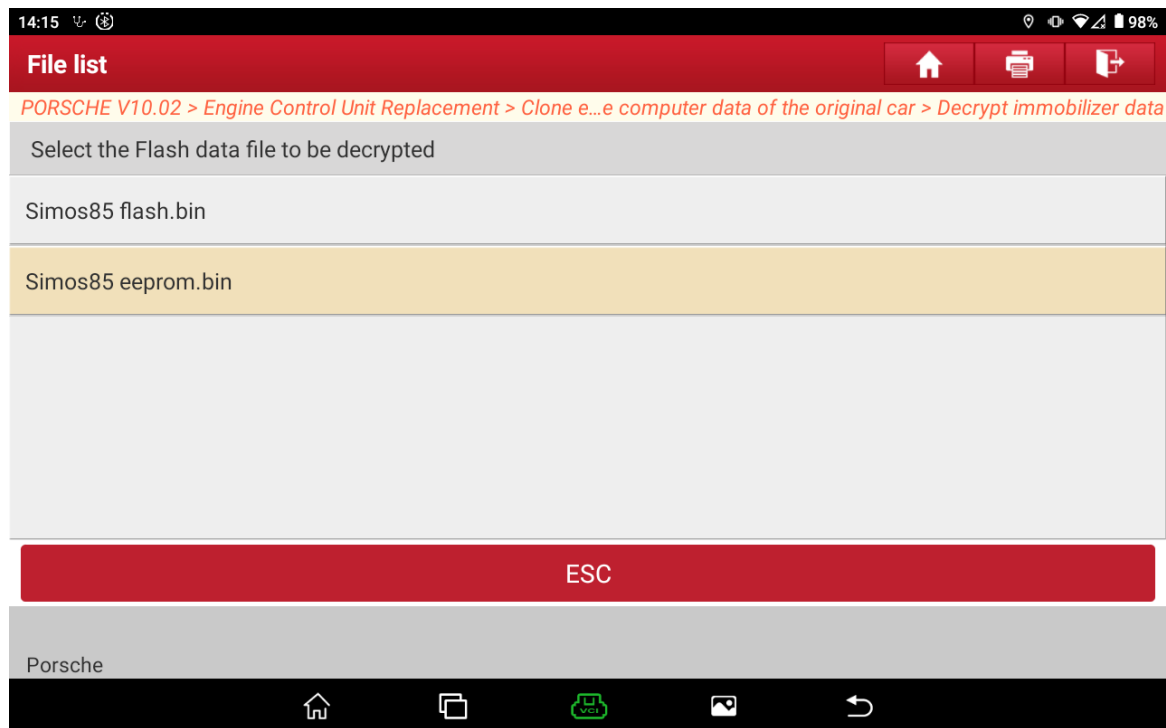


Figure 13

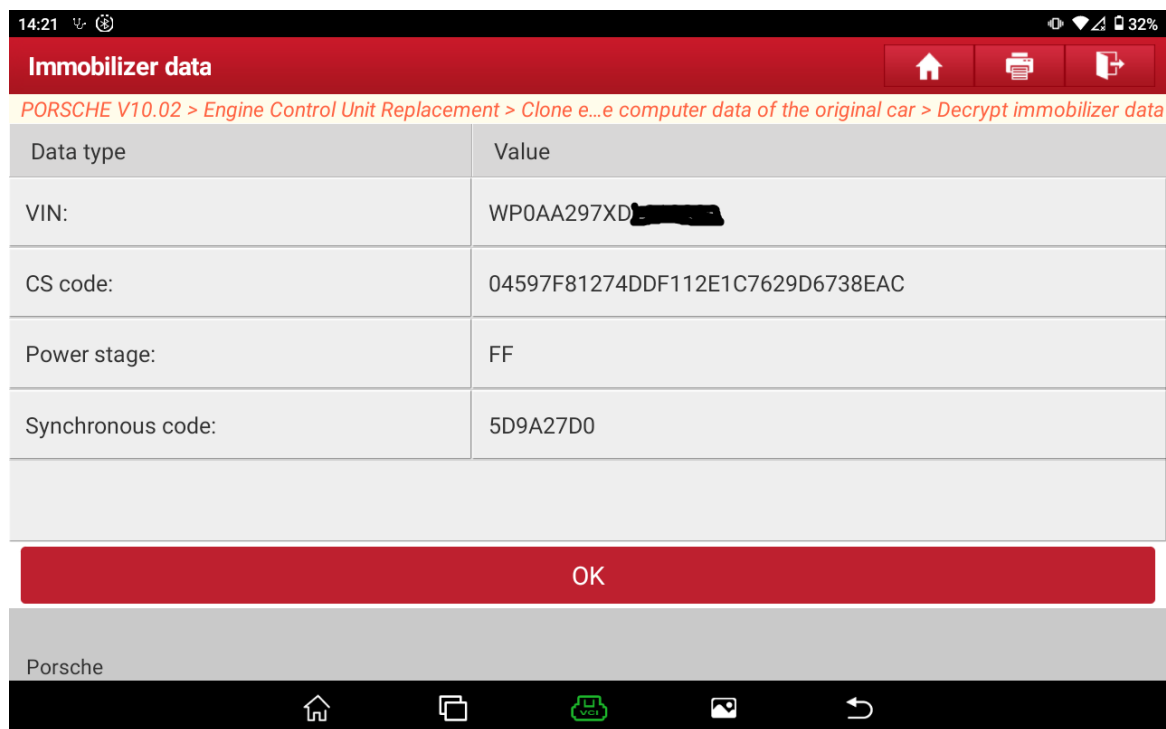


Figure 14



9. After the engine computer data of the original car is obtained, return to the previous menu and choose [Clone data to external engine computer]. The current menu is shown in Figure 15.

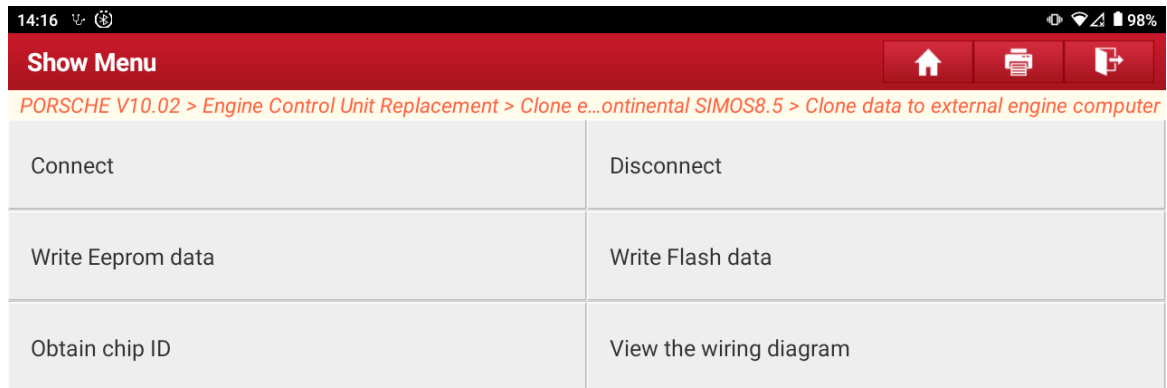


Figure 15

10. As shown in step 4 and step 5, connect the engine ECU according to the wiring diagram and execute the [Connect] function.
11. Execute [Write Eeprom data] and select the backed-up Eeprom data file, as shown in Figure 16, Figure 17, and Figure 18.

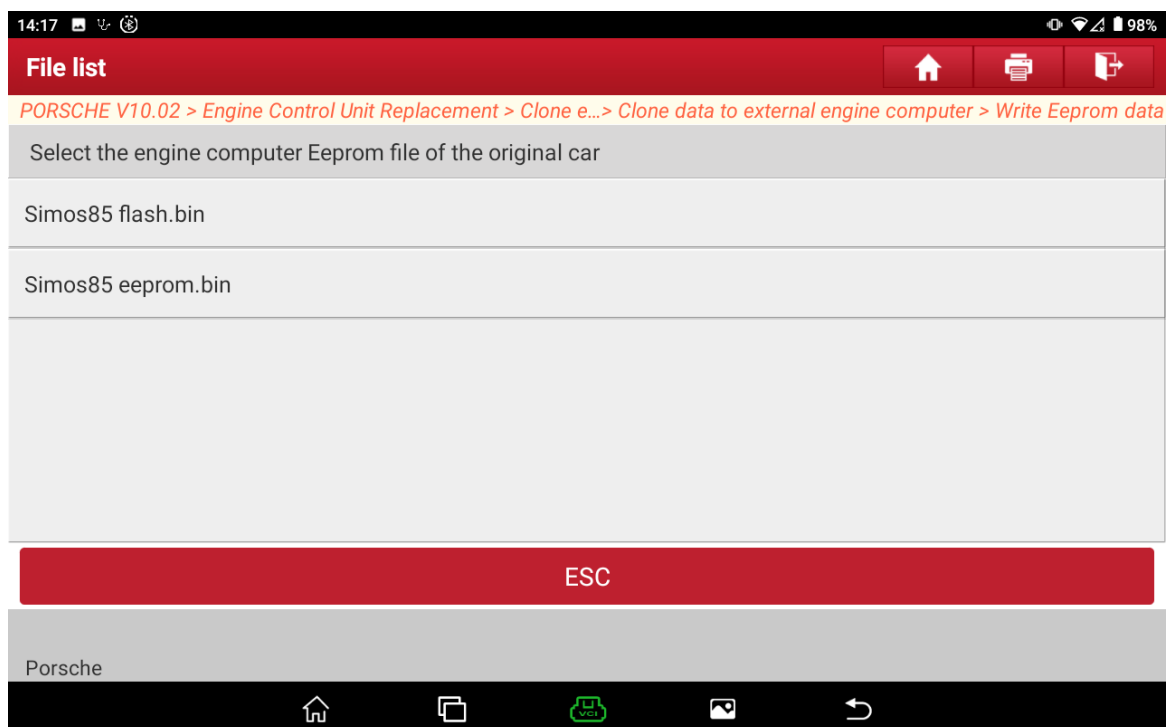


Figure 16

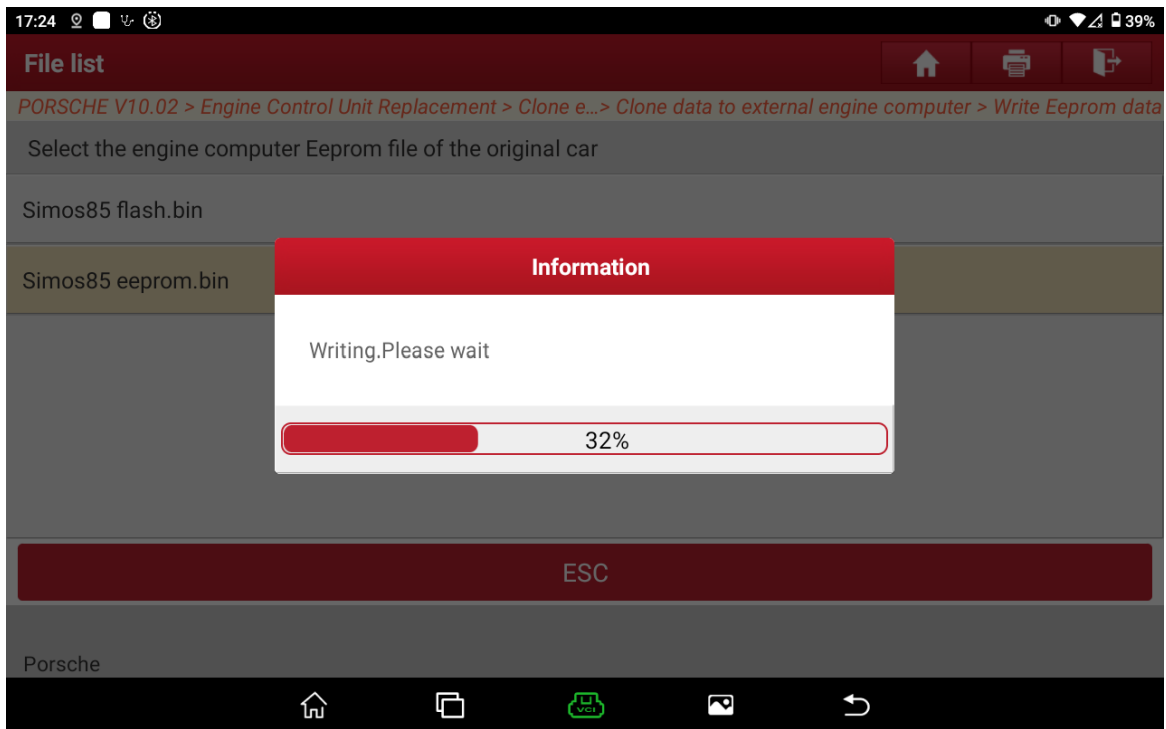


Figure 17

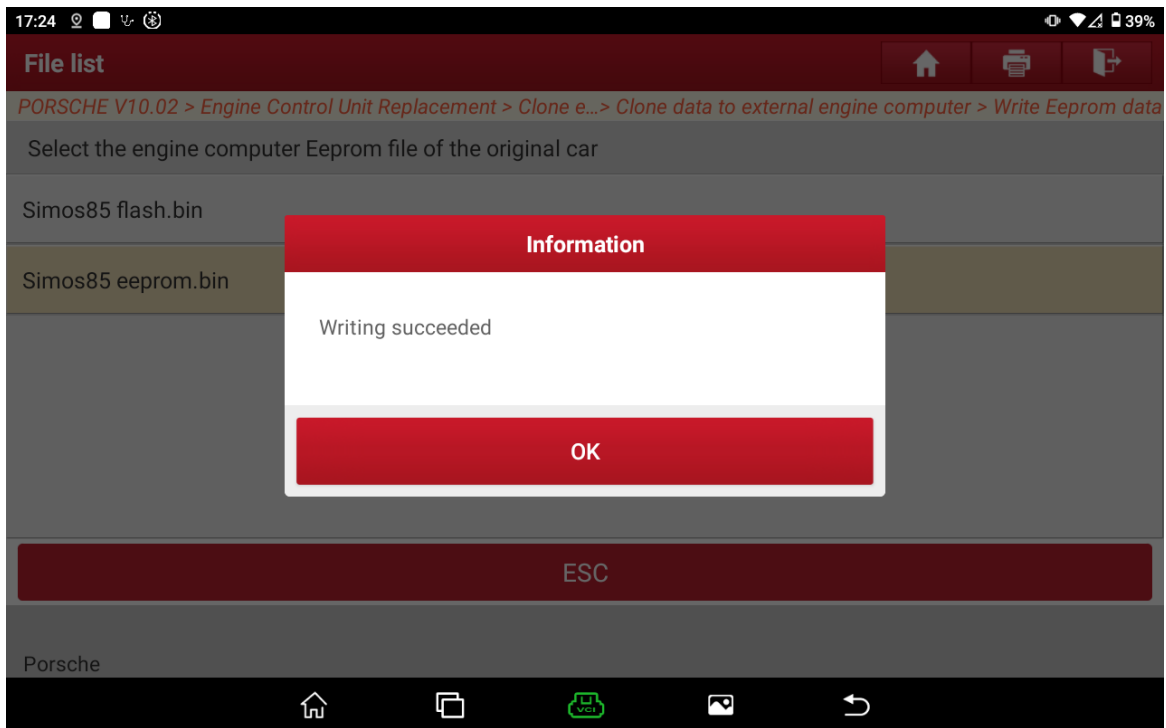


Figure 18

- 12. Execute [Write Flash data] and select the backed-up Flash data file, as shown in Figure 19, Figure 20, and Figure 21.

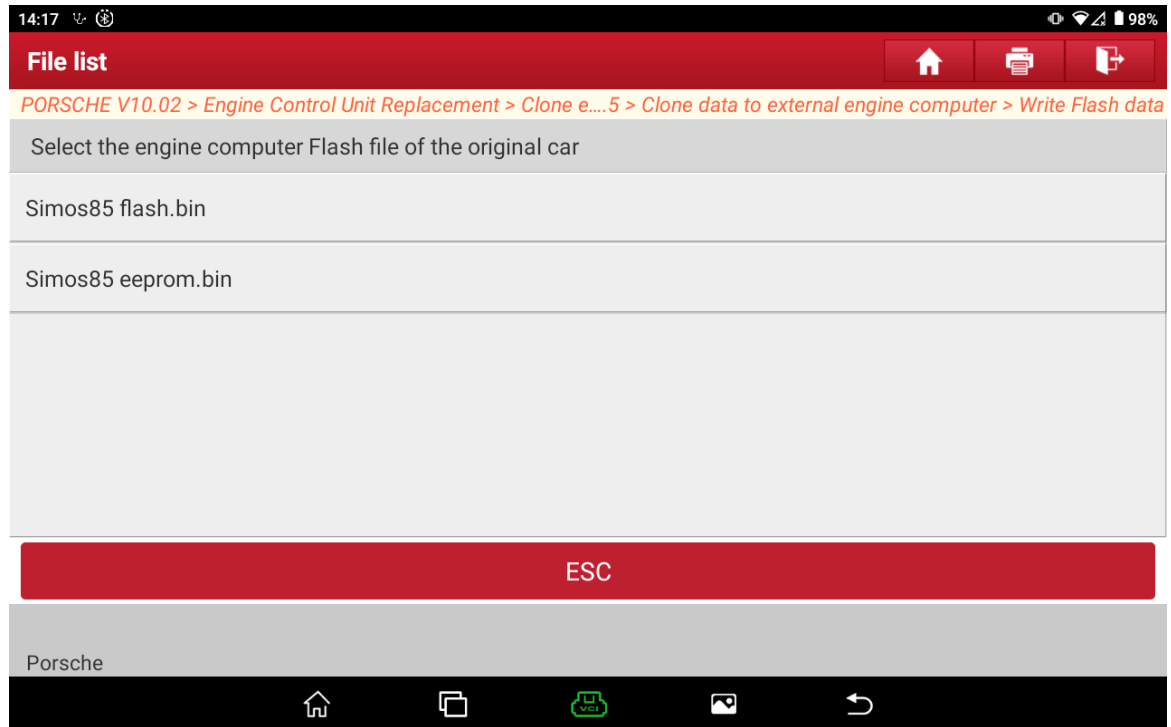


Figure 19

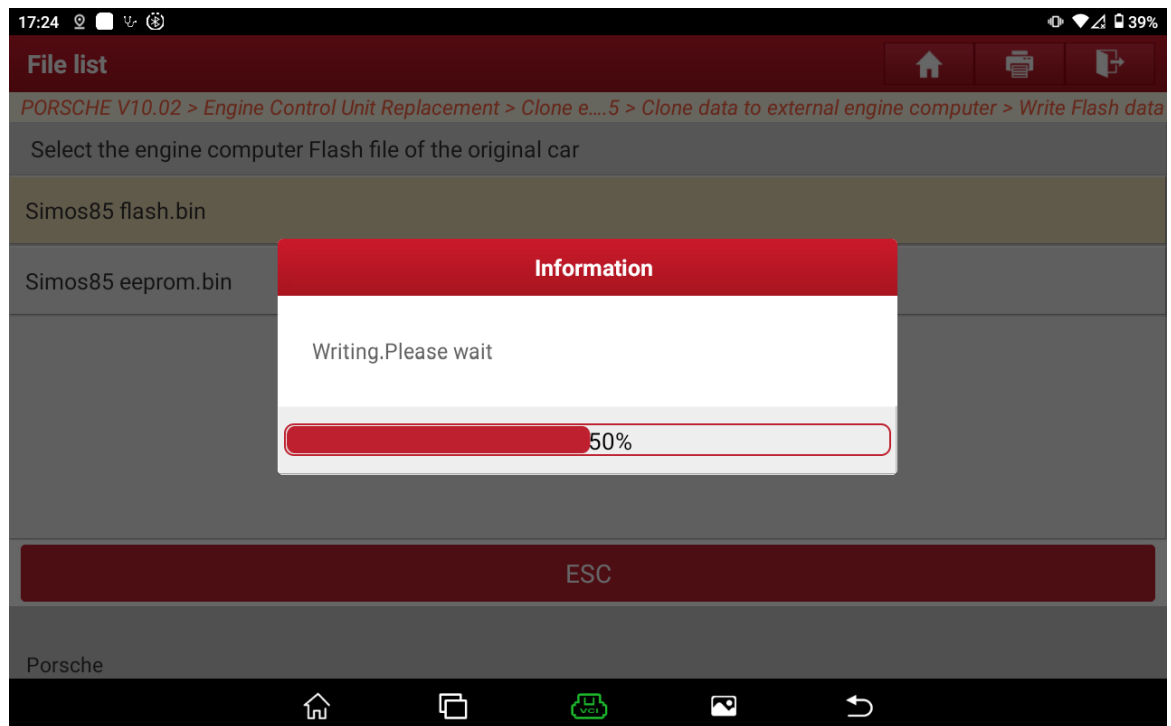


Figure 20

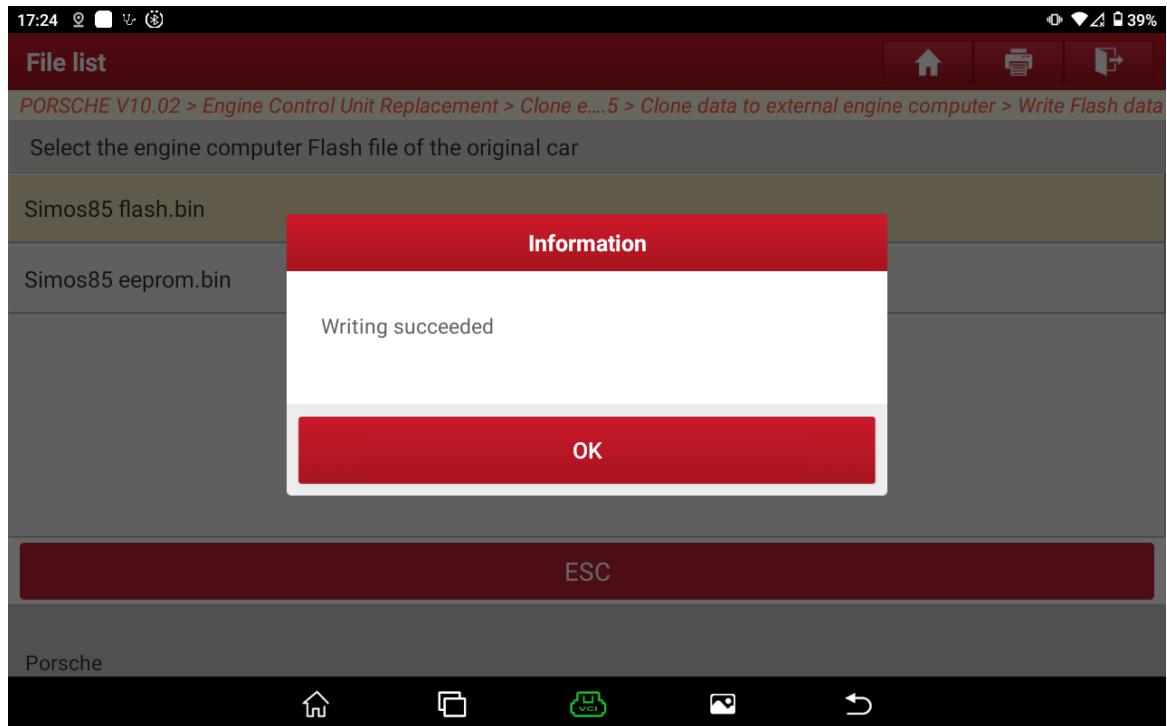


Figure 21

13. After the operations are completed, load the external engine computer onto the car for testing.

## 6. Front-end Electronic Module Clone

### 6.1 Model Coverage

Front-end Electronic Module Clone
Support 1L15Y 1N35H 2M25J 5M48H models

## 6.2 Requirements

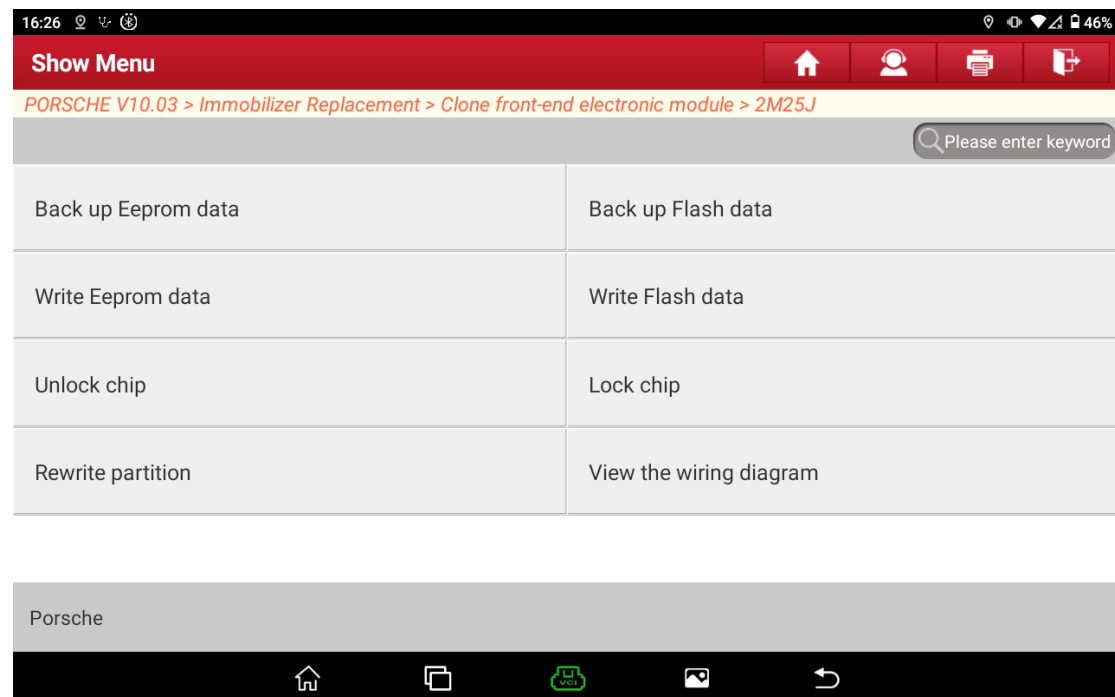
Scheme 1: Launch PAD series comprehensive diagnostic equipment + X-431 GIII immobilizer programmer

Scheme 2: Launch X-431 PRO immobilizer matching tool (expert edition) + X-431 GIII immobilizer programmer

## 6.3 Procedure

The following is about Porsche 2011-2017 front-end electronic module clone (dismantling and reading).

1. Dismantle the front-end electronic module of the original car, which is located above the accelerator pedal. Open the cover to find the main control chip, determine the main control chip model (1L15Y/1N35H/2M25J/5M48H), and prepare a new module of the same model.
2. Access the Porsche immobilizer software (need to connect the immobilizer programmer G3), choose [Immobilizer Replacement] > [Clone front-end/back-end electronic module], and choose the corresponding chip model. The current menu is shown in Figure 1.



- 3. Choose [View the wiring diagram], as shown in Figure 2. Connect the front-end electronic module to the immobilizer programmer G3.

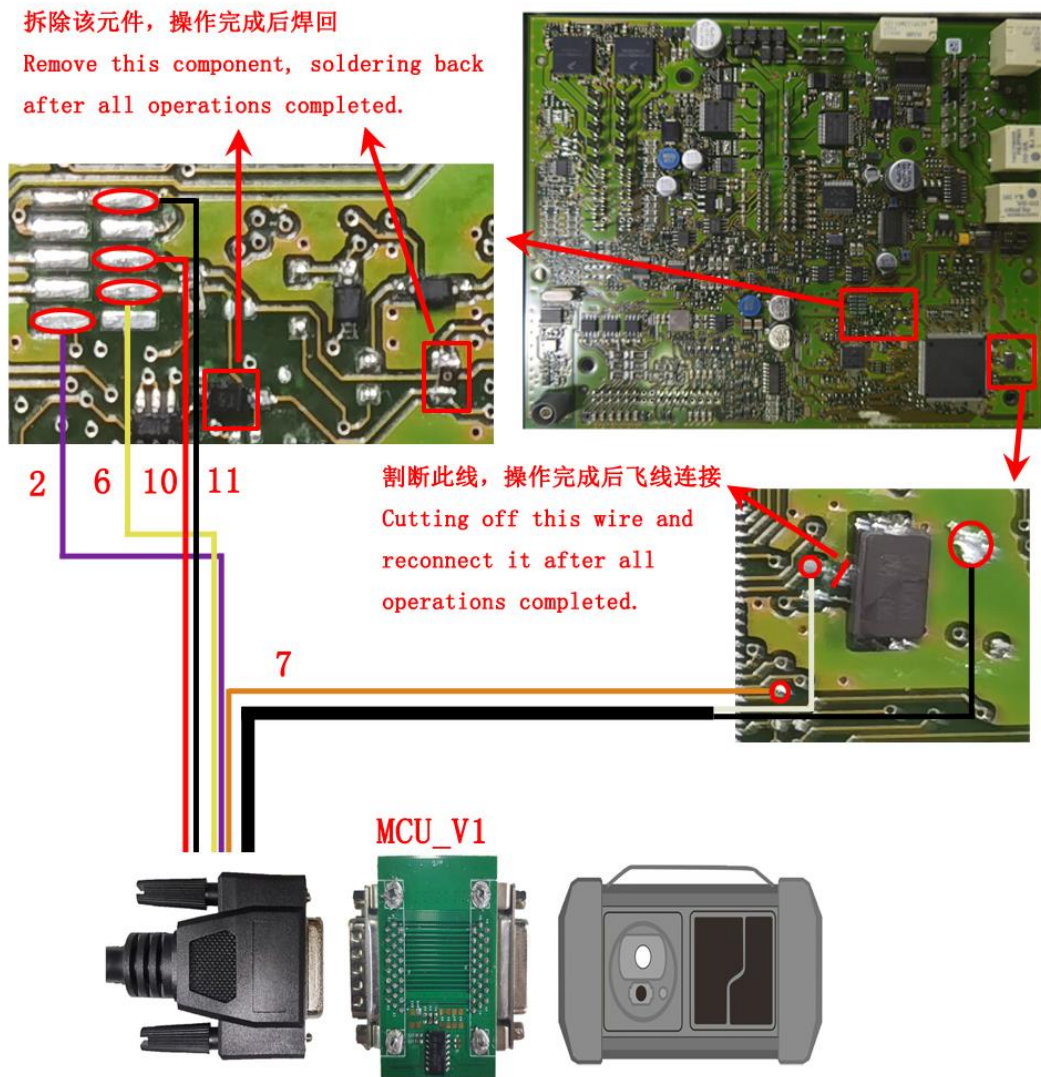


Figure 2

4. Choose [Back up Eeprom data], as shown in Figure 3.

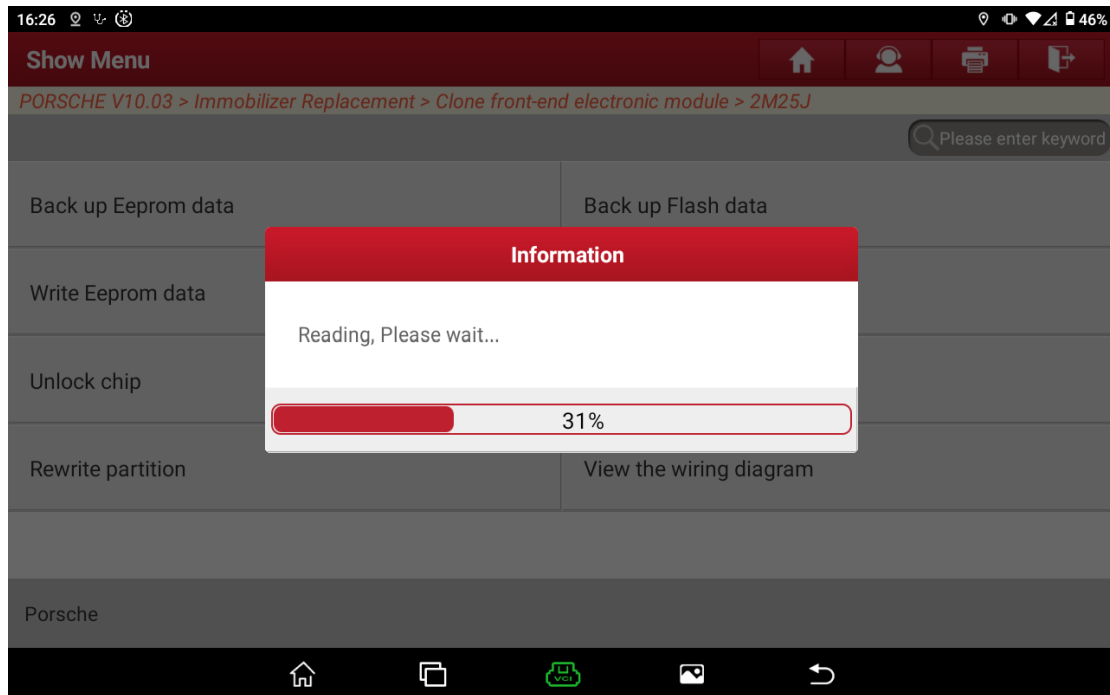


Figure 3

5. After about 10 seconds, the EEPROM data backup is successful. Input the file name and save the EEPROM data file, as shown in Figure 4 and Figure 5.

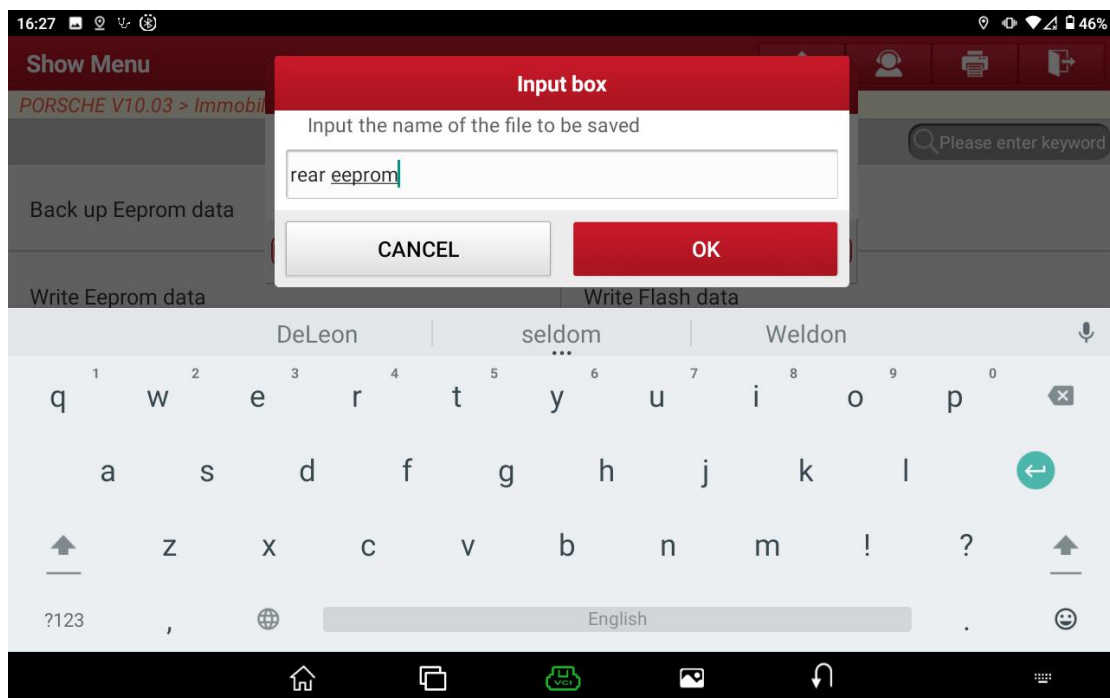


Figure 4

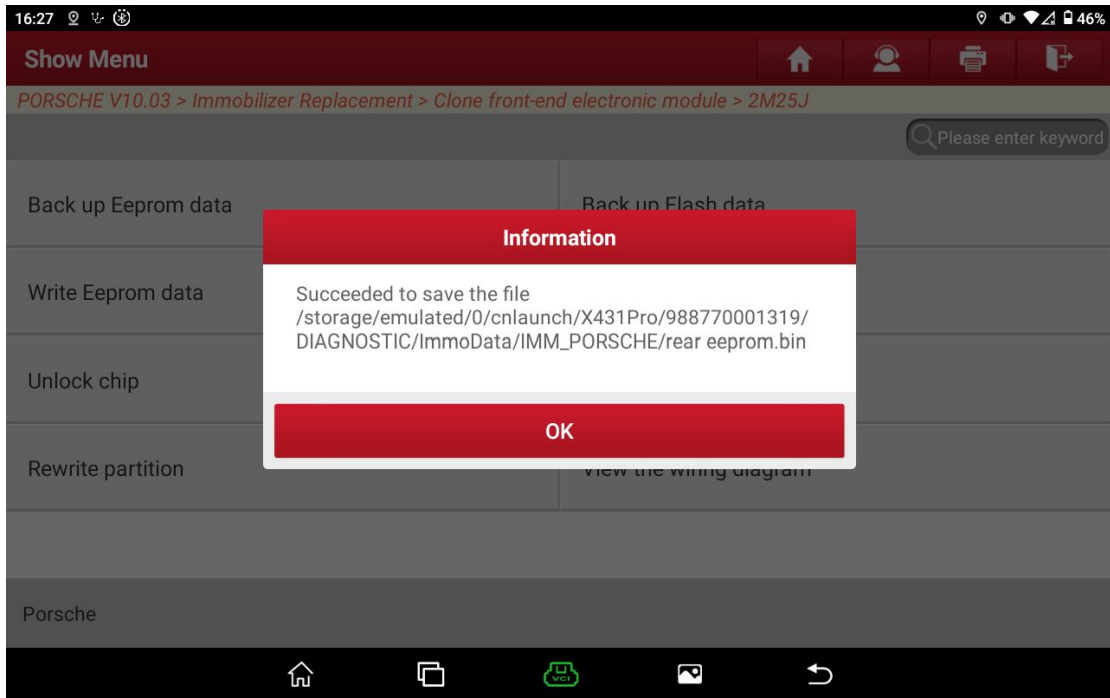


Figure 5

6. Choose [Back up Flash data], as shown in Figure 6.

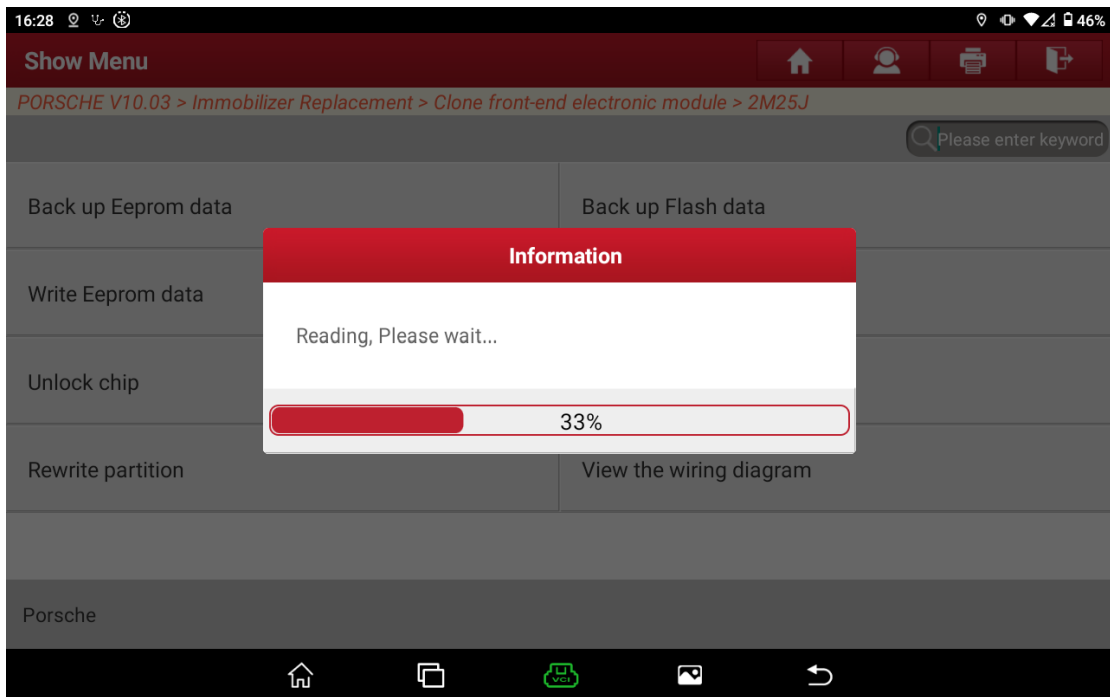


Figure 6



- 7. The FLASH data is large. After about 3 minutes, the FLASH data backup is successful. Input the file name and save the FLASH data file, as shown in Figure 7 and Figure 8.

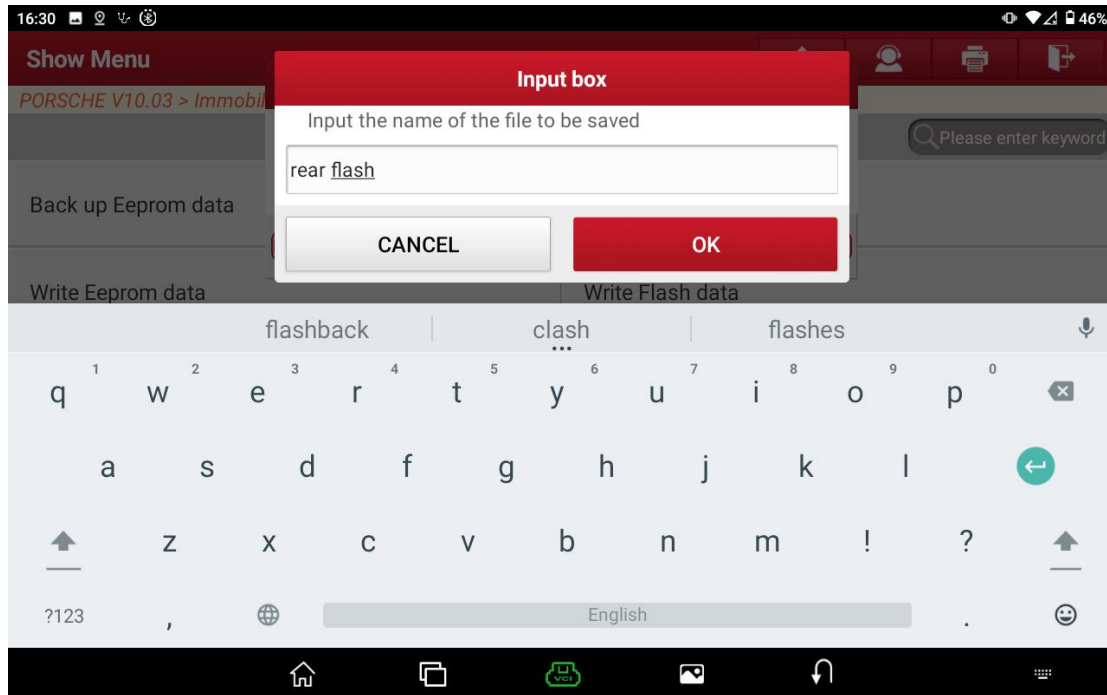


Figure 7

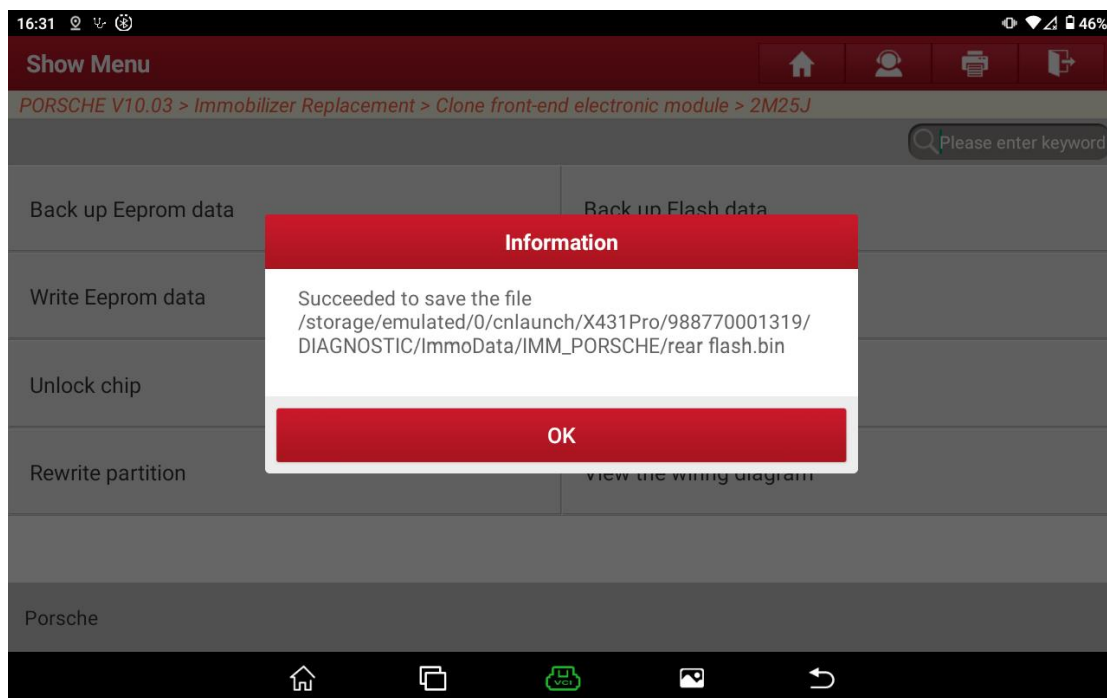


Figure 8

8. Follow the above steps to connect the new front-end electronic module and back up the EEPROM and FLASH data.
9. Choose [Unlock chip], as shown in Figure 9.

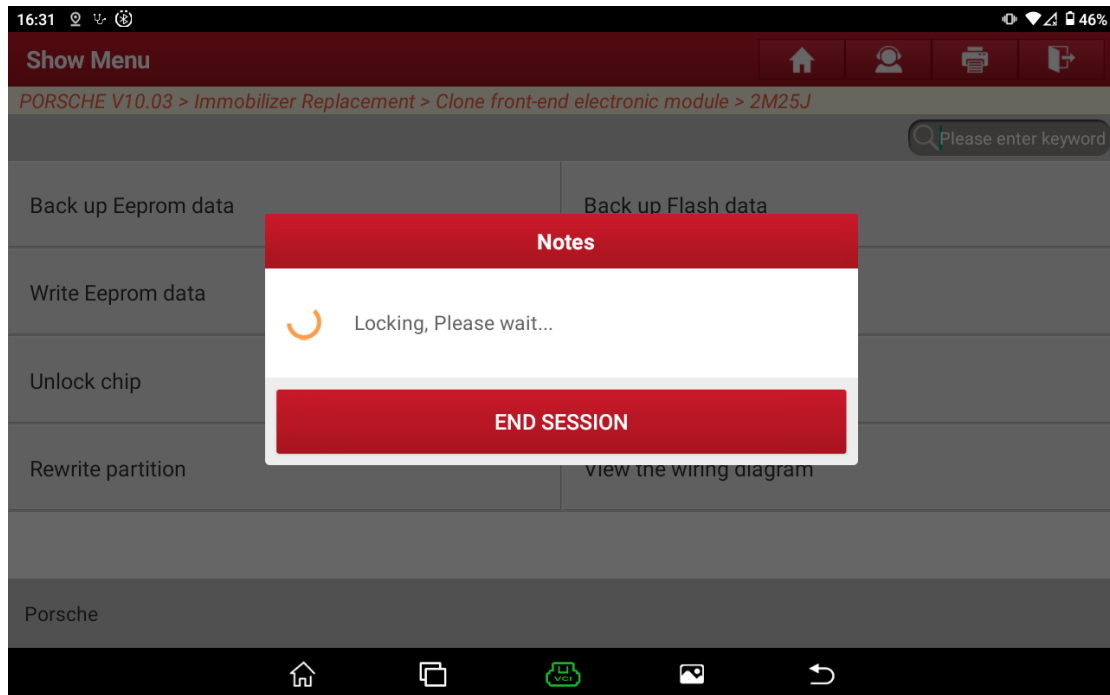


Figure 9

10. Unlocking is successful, as shown in Figure 10.

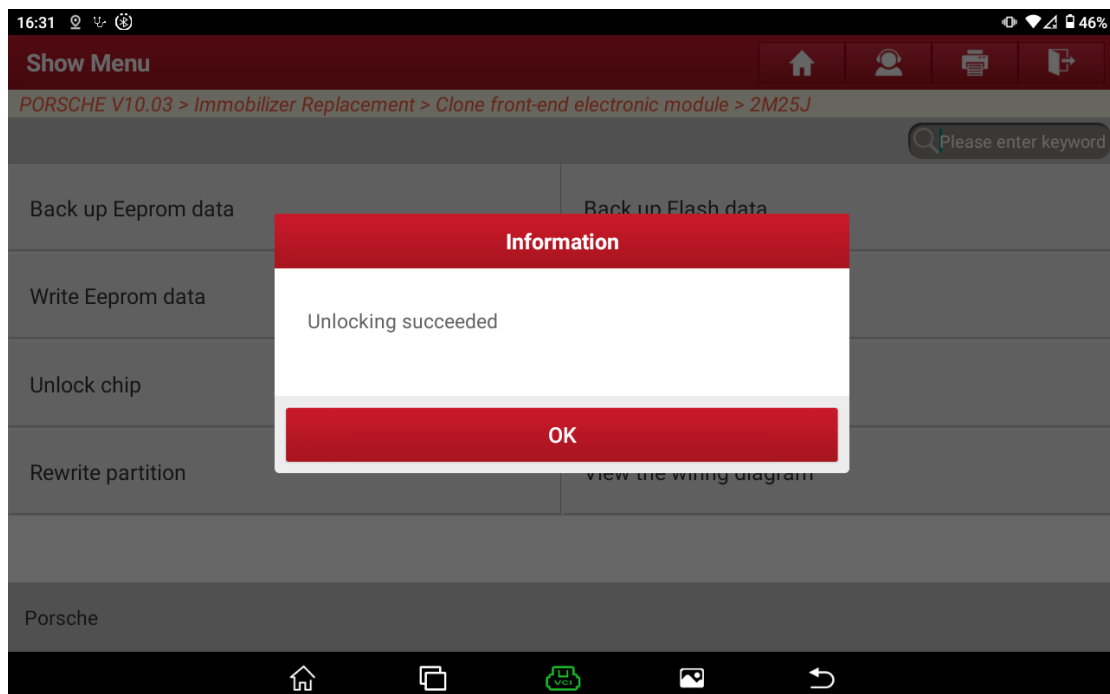


Figure 10

- 11. Choose [Write EEPROM data], and choose the EEPROM data file of the original car module, as shown in Figure 11. Start writing, as shown in Figure 12.

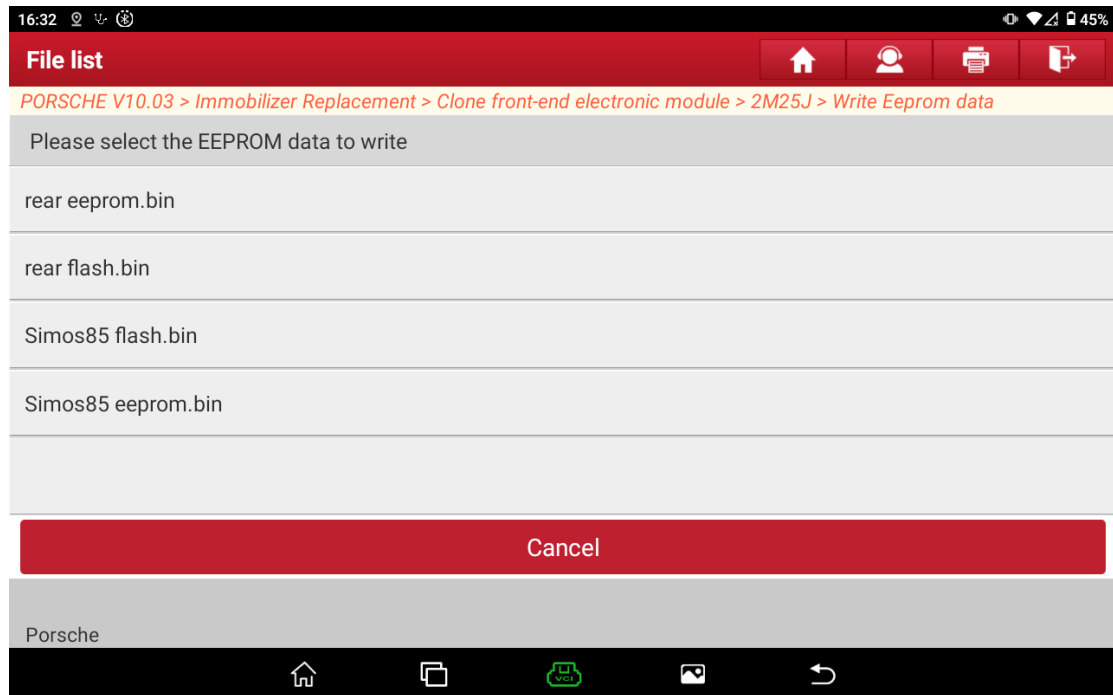


Figure 11

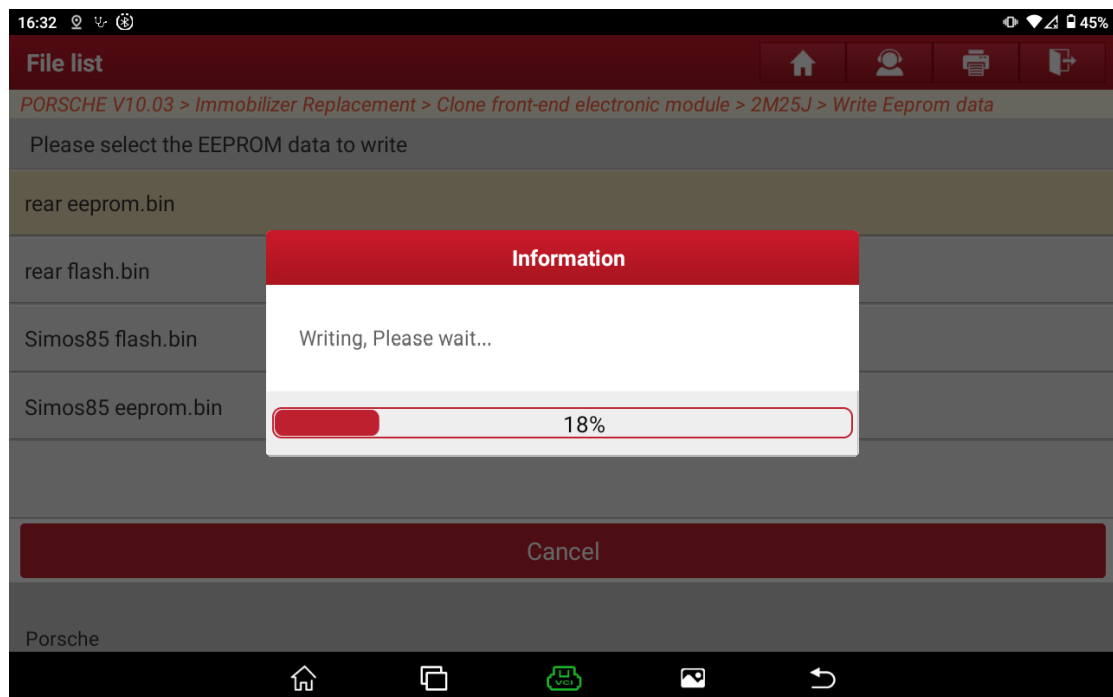


Figure 12

12. After about 30 seconds, the writing is successful, as shown in Figure 13.

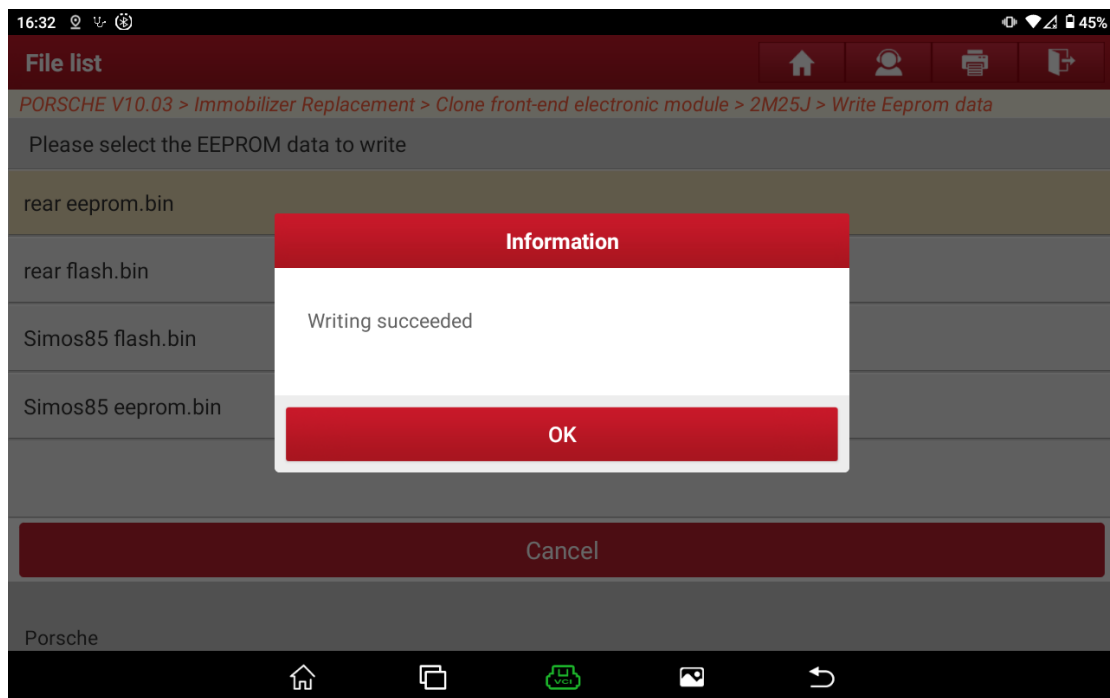


Figure 13

13. Choose [Write Flash data], and choose the FLASH data file of the original car module, as shown in Figure 14. Start writing, as shown in Figure 15.

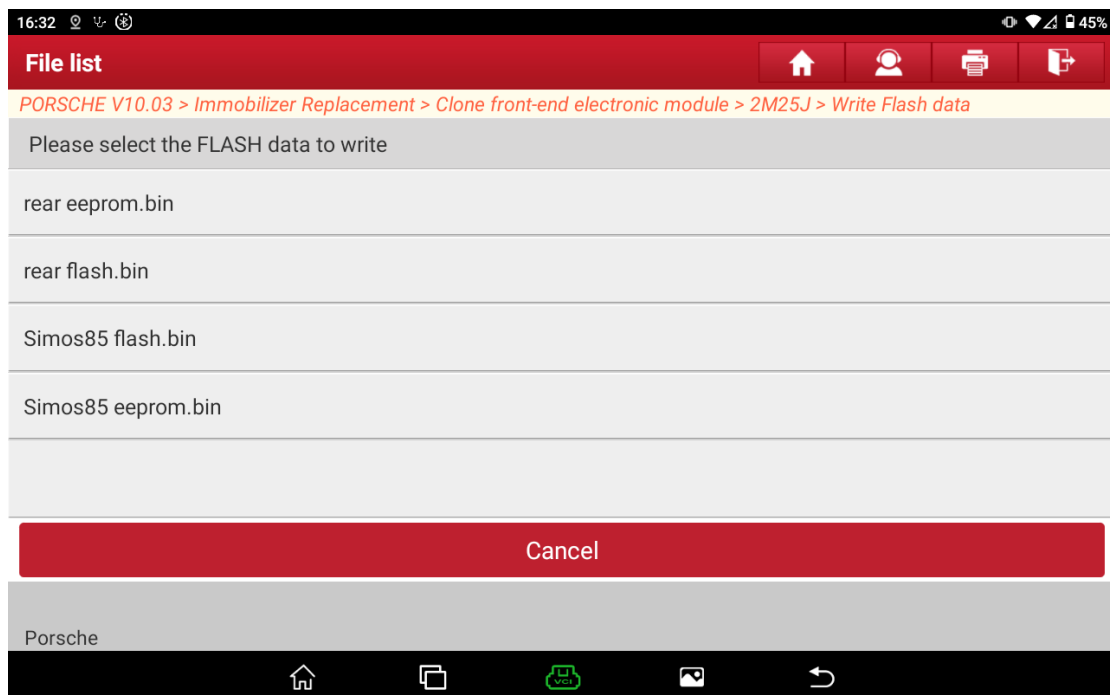


Figure 14

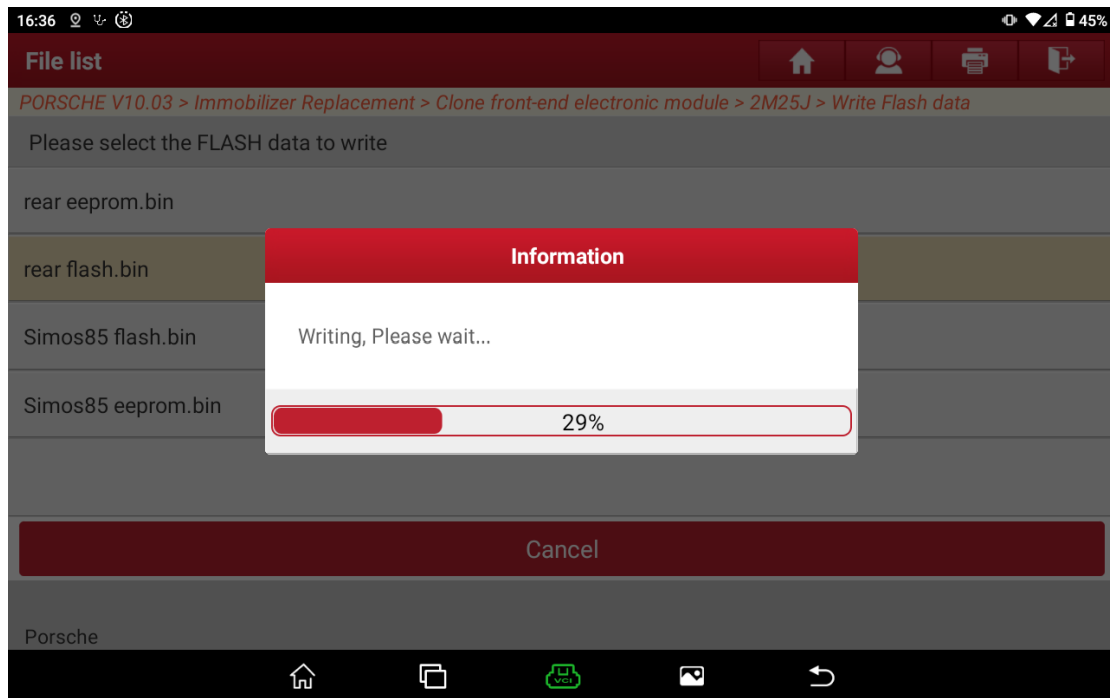


Figure 15

14. The FLASH data is large. After about 10 minutes, the writing is successful, as shown in Figure 16.

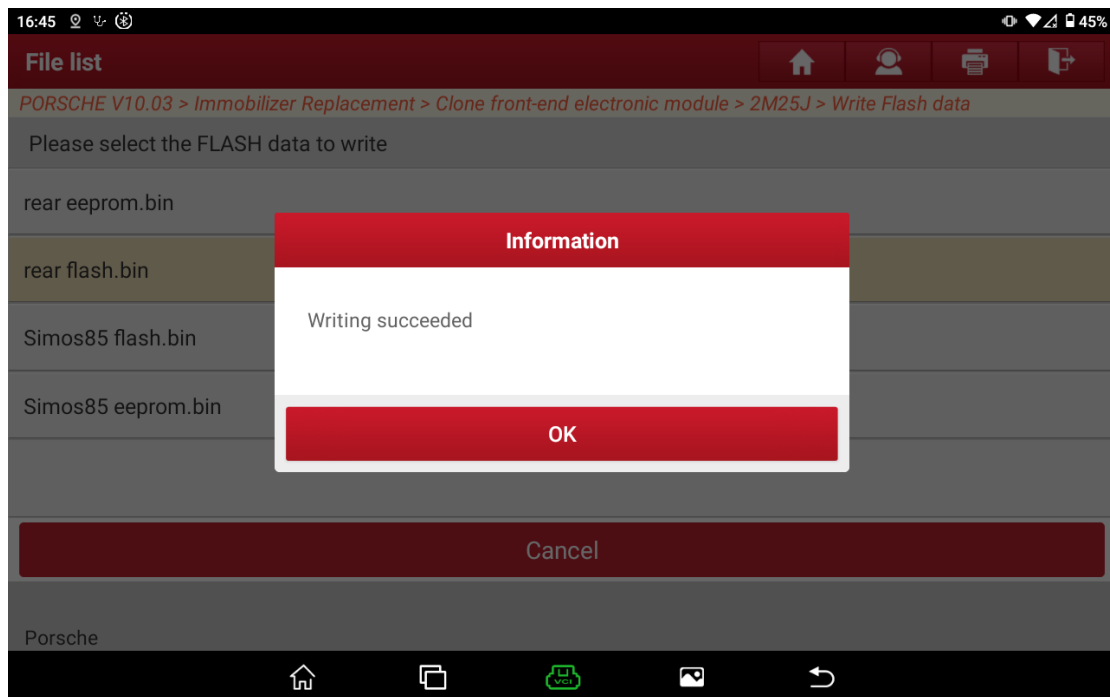


Figure 16

15. The data is cloned successfully. Load the new module onto the vehicle for testing.

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