# BMW Continental Electronic MSV90 Engine ECU Replacement/Cloning

Features： This function is required when you need to replace the Continental Electronic Engine ECU. Supported BMW Continental Electronic Engine ECU models: MSD80, MSD81, MSD85, MSD87 and MSV90;

Support products： Launch X431PADIII, PADV, PROV5 and other diagnostic devices, BMW latest software;

Tested models： BMW 5 Series 530i 2012

Physical wiring diagram:
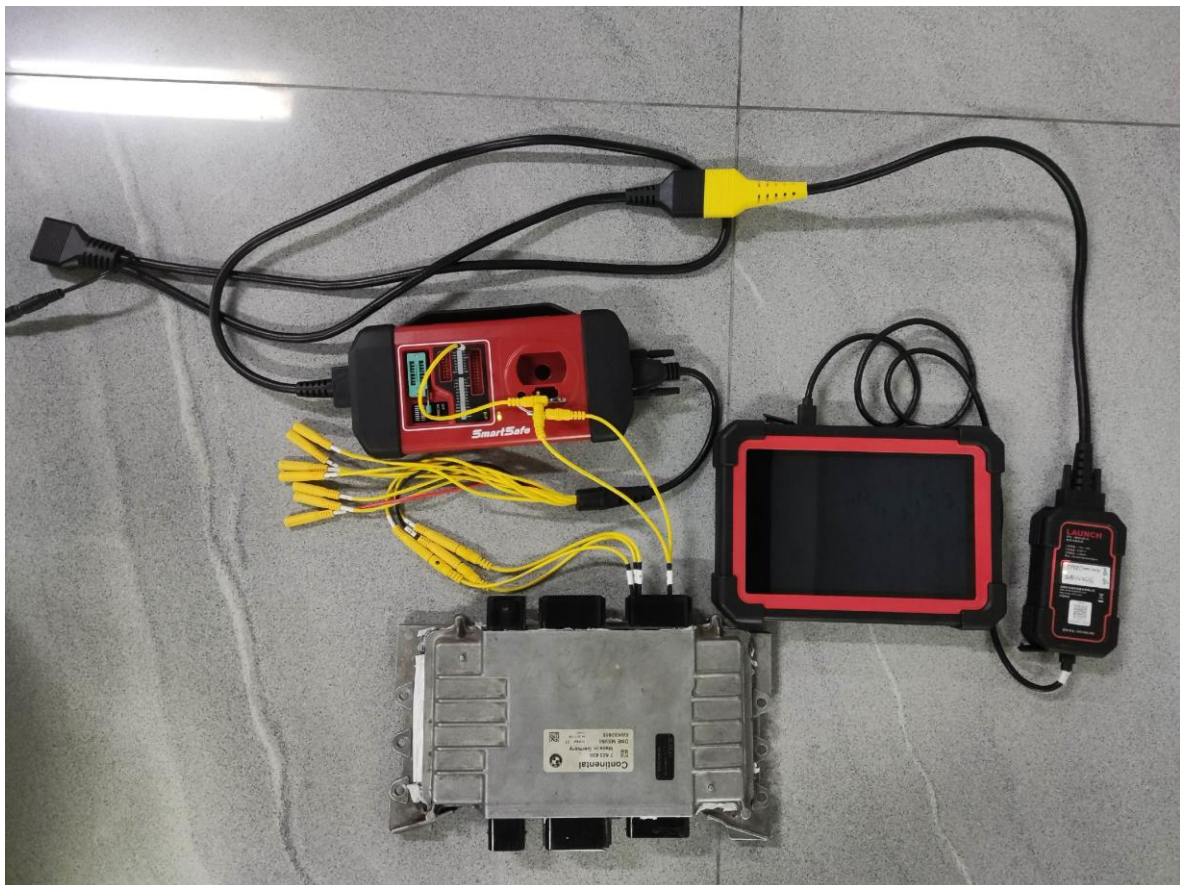
Steps：

Replacement:

1. Perform the backup function, read EEPROM and FLASH files from original engine ECU. 2. Perform the FLASH data decryption function,

load the original FLASH file to parse the ISN and record it (if the original engine ECU has been completely damaged, the ISN can be read from the Immobilizer module and the key).

3. Perform the backup function, read EEPROM and FLASH files from external engine ECU. 4. Perform the function of Change ISN, load the FLASH file of external engine ECU, and enter the ISN in the original vehicle (obtained in step 2), and save the changed FLASH file.

5. Perform the function of Restore FLASH, and write the FLASH file with ISN changed to the external engine ECU.

6. Perform programing and coding for Engine ECU after installed on the vehicle.

Cloning:

1. Perform the Backup function, read EEPROM and FLASH files from original engine ECU.

2. Perform the Backup function, read EEPROM and FLASH files from external Engine ECU (this step is to back up the original data of external engine).
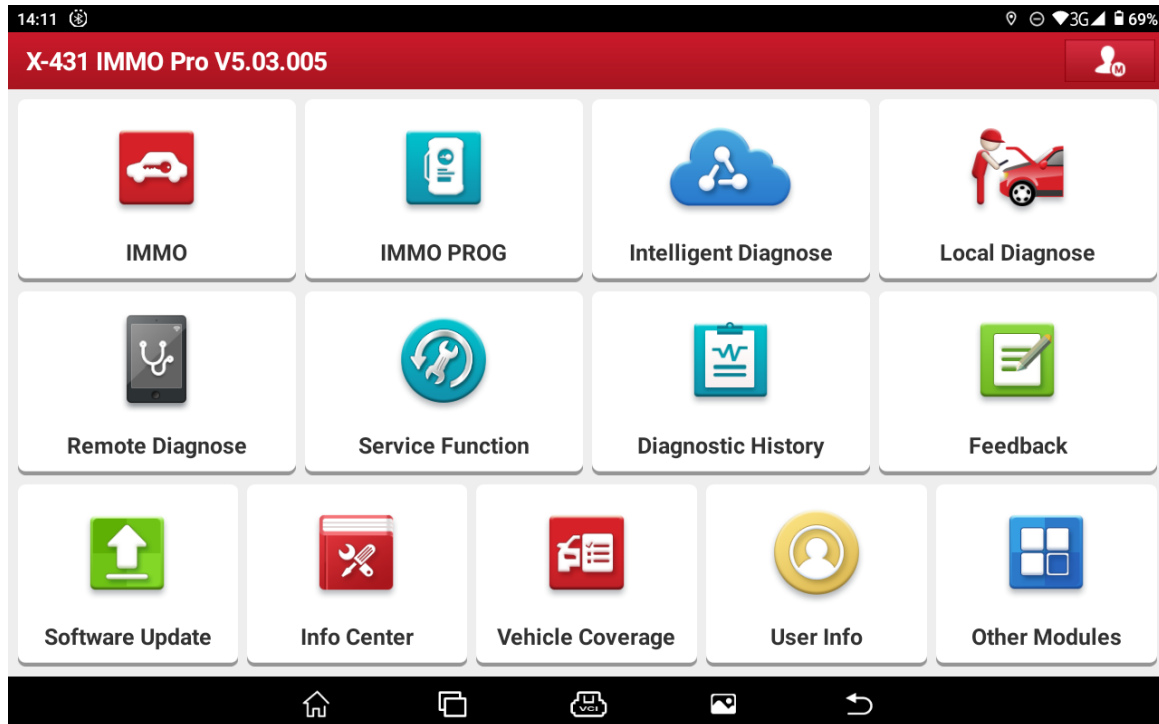
3. Perform the Restore function, and write the EEPROM and FLASH files of original Engine ECU into the external engine ECU respectively.
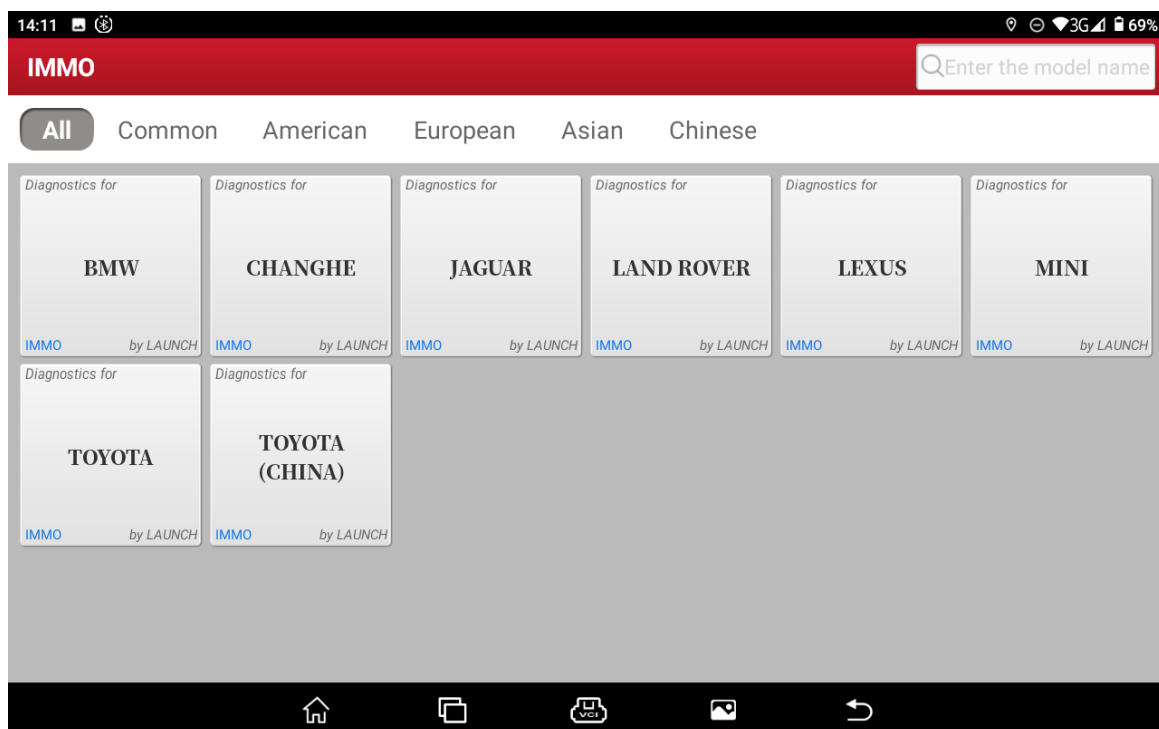
4. Install it on the vehicle and clear DTCs.

Operation guidelines：
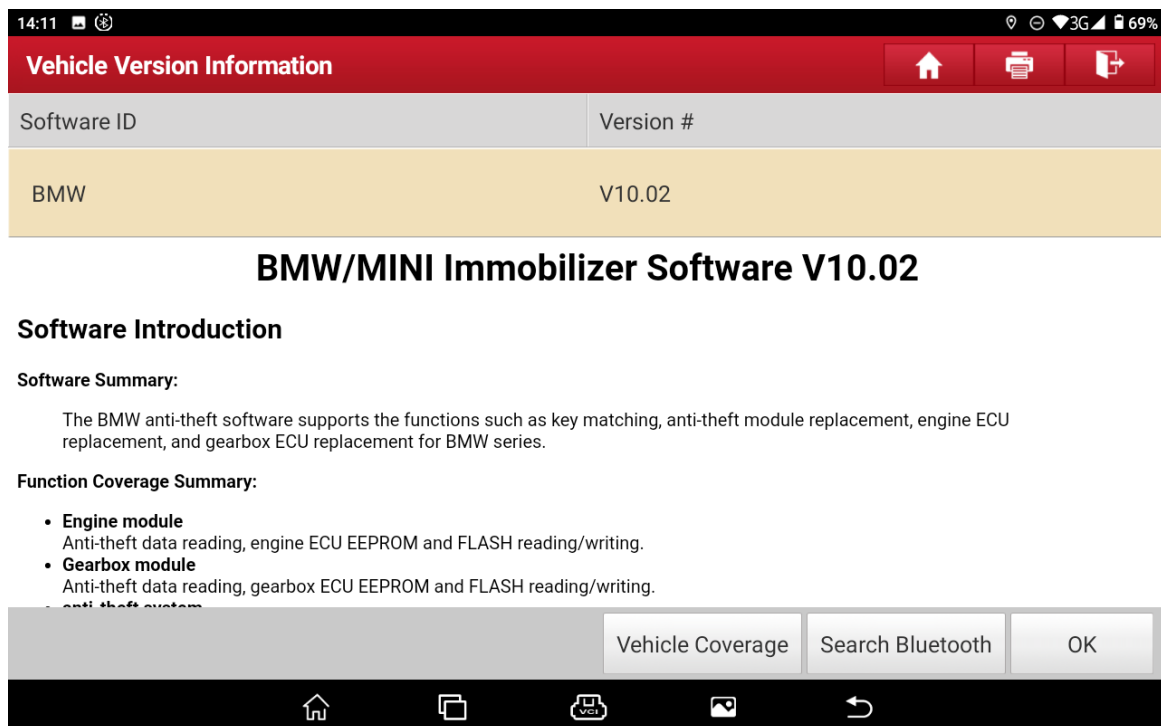
Take PRO V5 MSV90 Engine ECU replacement as an example

1. Click the【 IMMO 】menu to enter the Immobilizer independent software, as shown in the figure below:
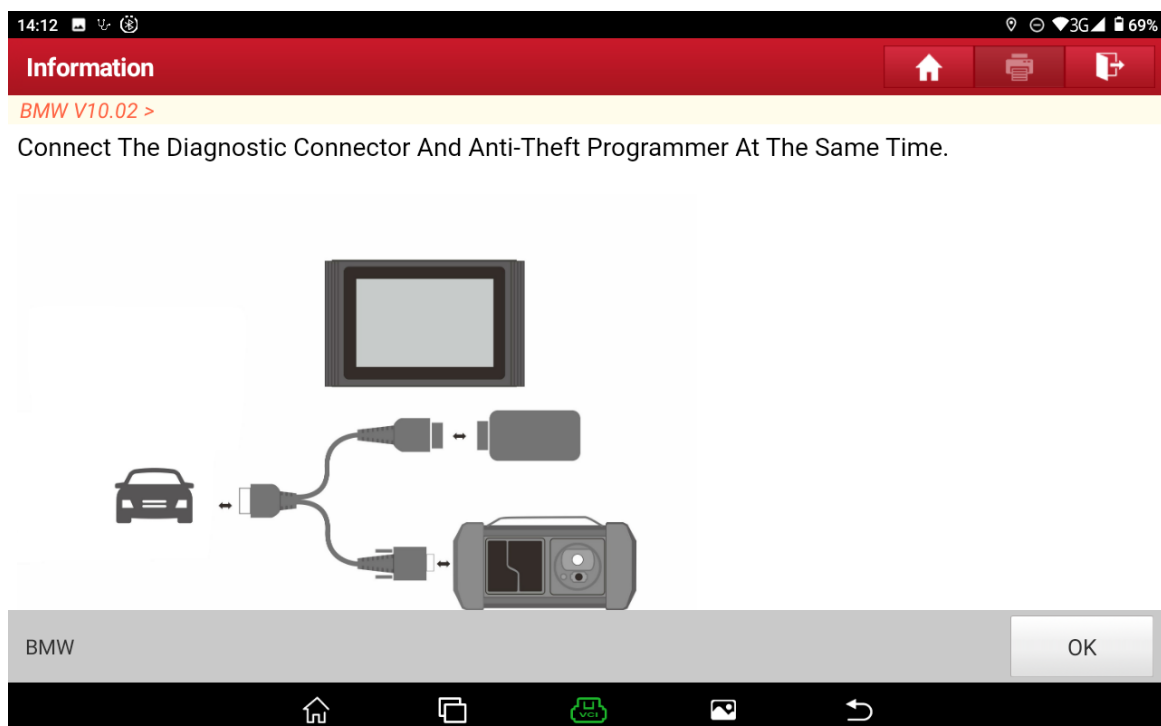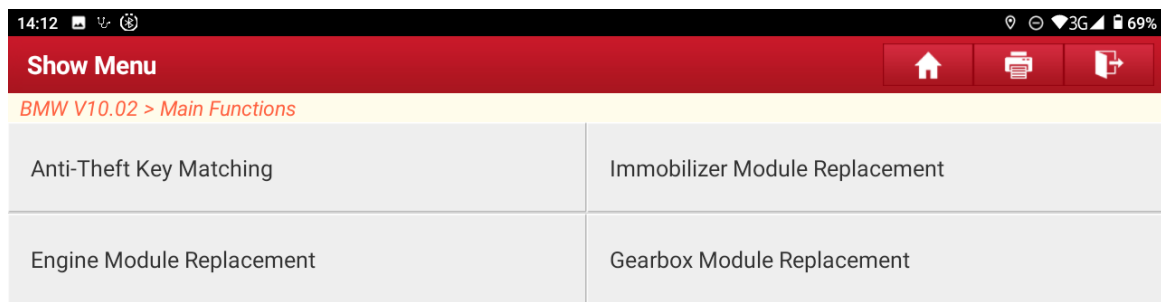

2. Select 【 BMW】 software, as shown in the figure below:

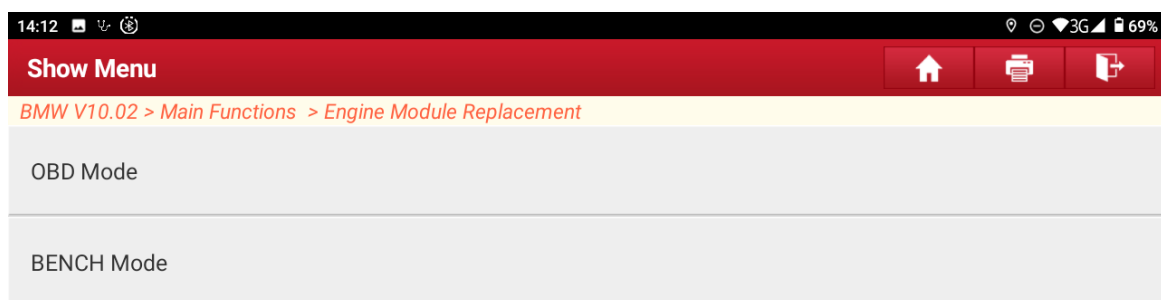3. Click "OK" button to enter the software, as shown in the figure below:

4. This function requires to remove the Engine ECU and to operate on the platform without connecting with vehicle OBD connector. Click OK after programmer connected, as shown in below:
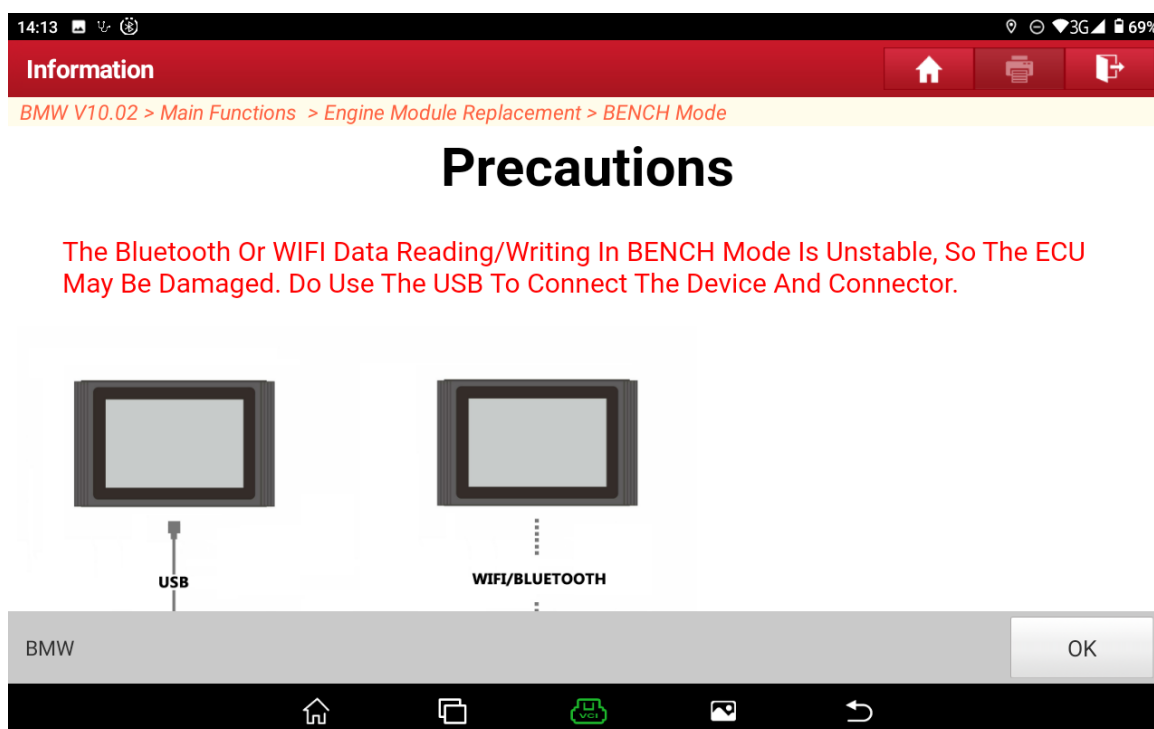
5. Click【 Engine Module Replacement】, as shown in the figure below:

6. Click the【 BENCH Mode】, as shown below:

7.   Due to the large amount of reading and writing data in the BENCH mode, Bluetooth and WIFI are erratic, which may cause damage to the ECU. Please be sure to use USB to connect the device and connector. Click "OK" after connected, as shown in the figure below:
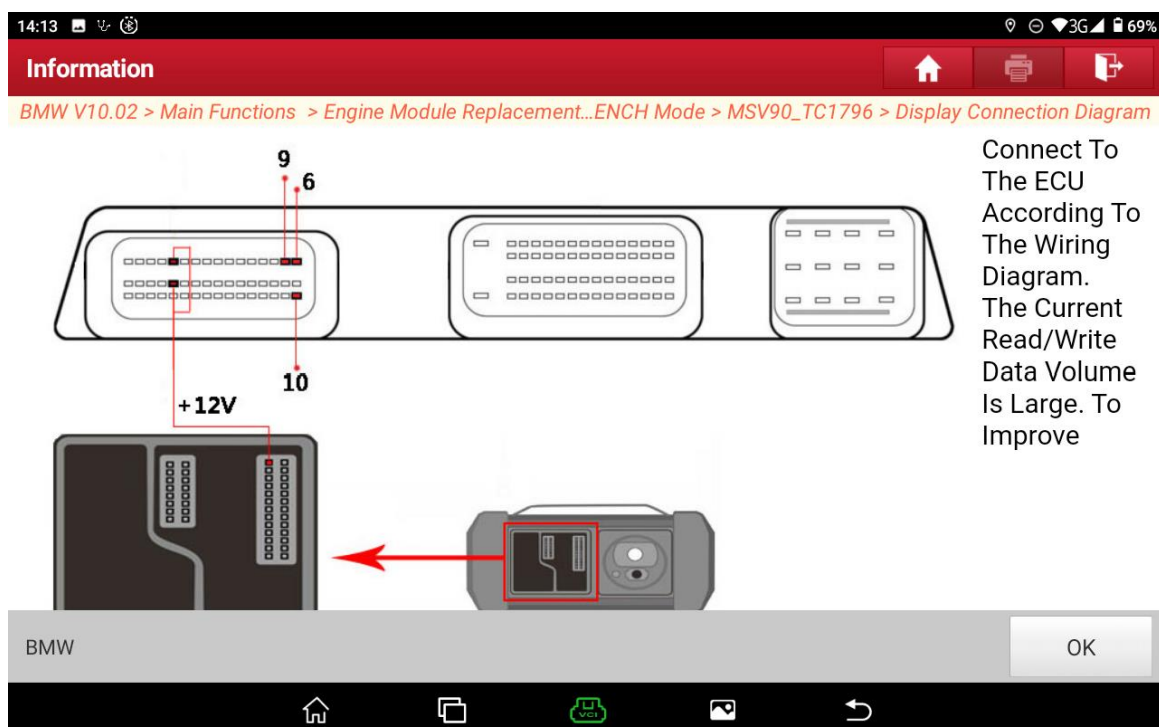

8. Select the corresponding Engine ECU model, select 【MSV90_ TC1796】 for this case using MSV90, as shown in the figure below:
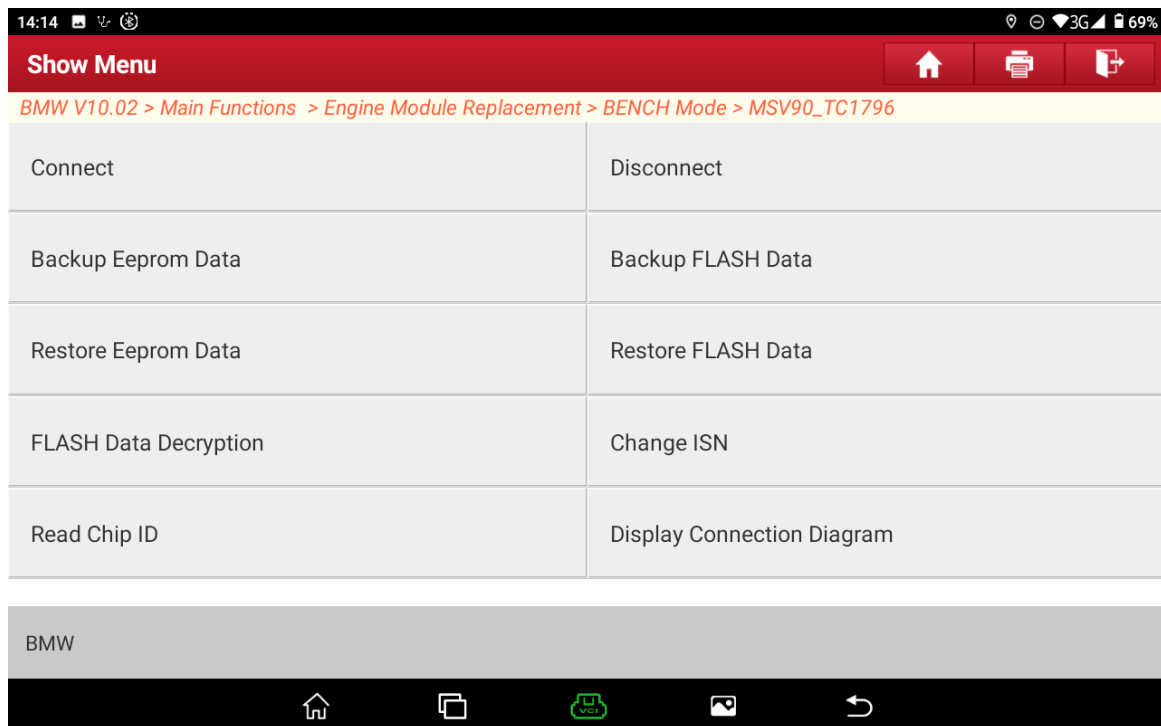
9. Click 【Display Connection Diagram】, as shown below:
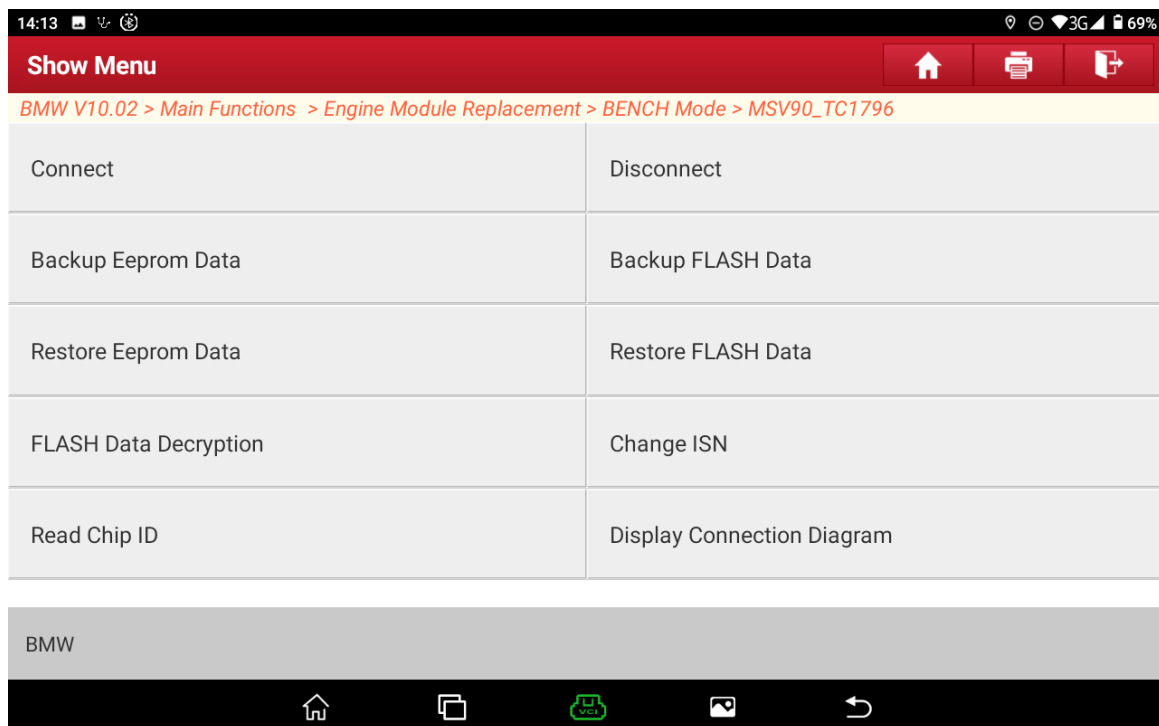
10. Connect Engine ECU and the programmer according to the wiring diagram. Click "OK" after connected, as shown below:
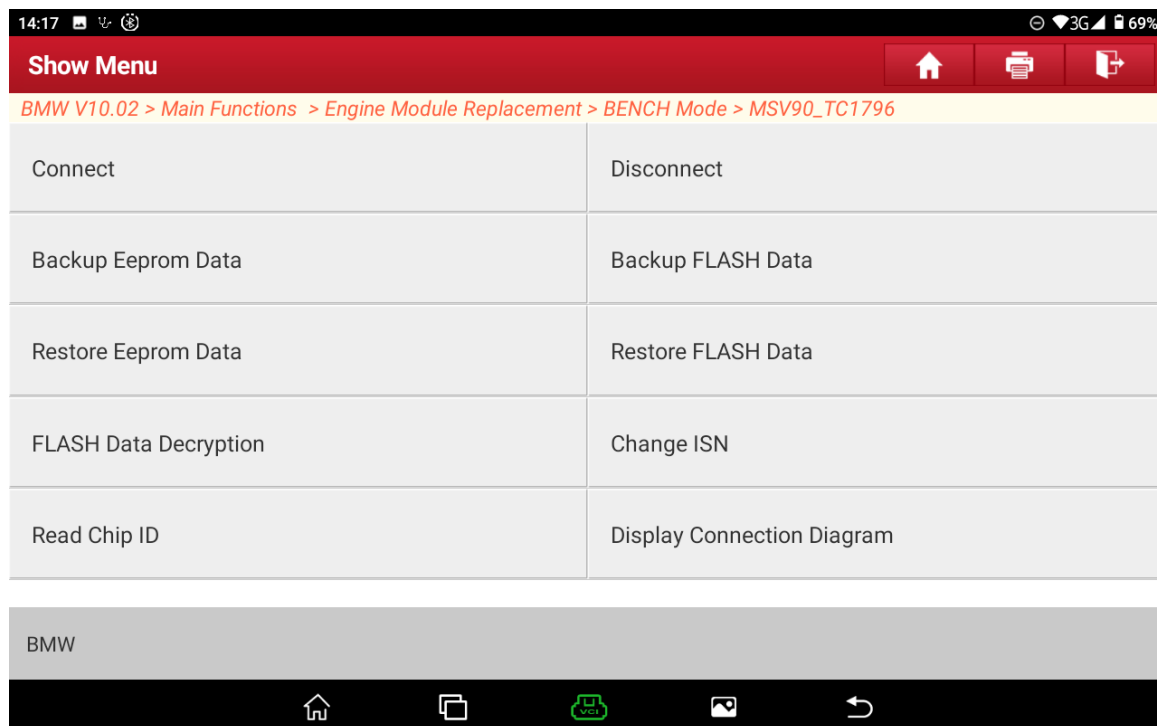
11．Click the【 Connect】 function, the Backup and Restore functions can be executed after the connection is successful, as shown below:
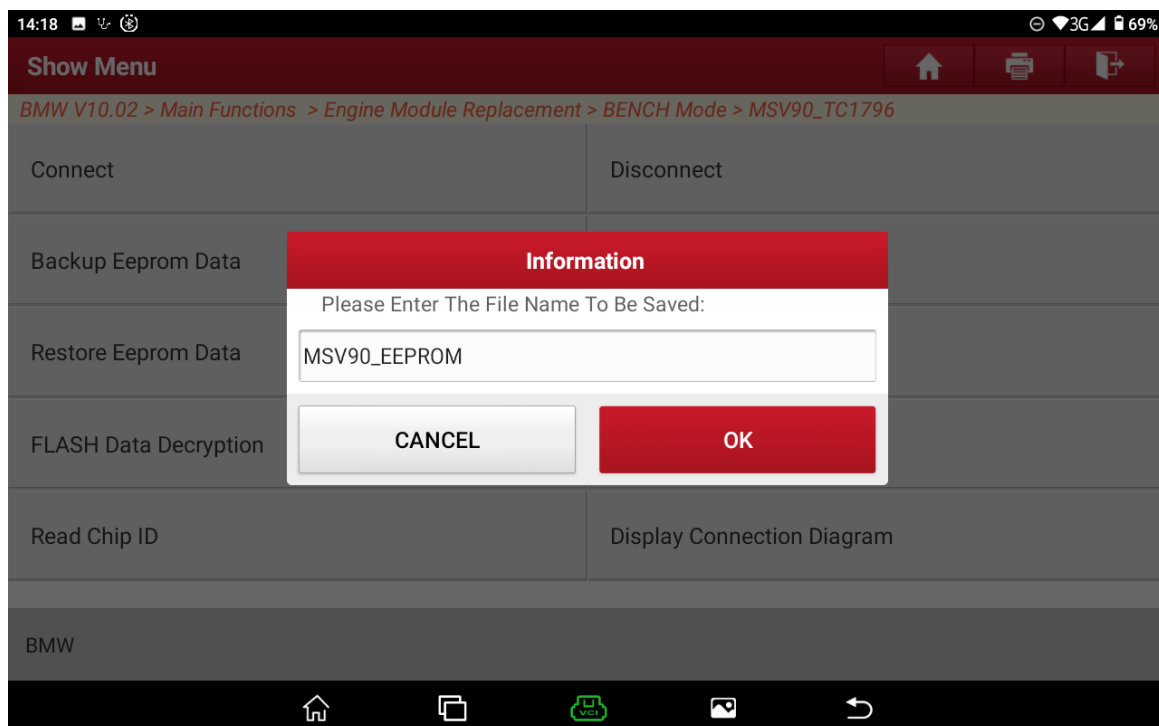

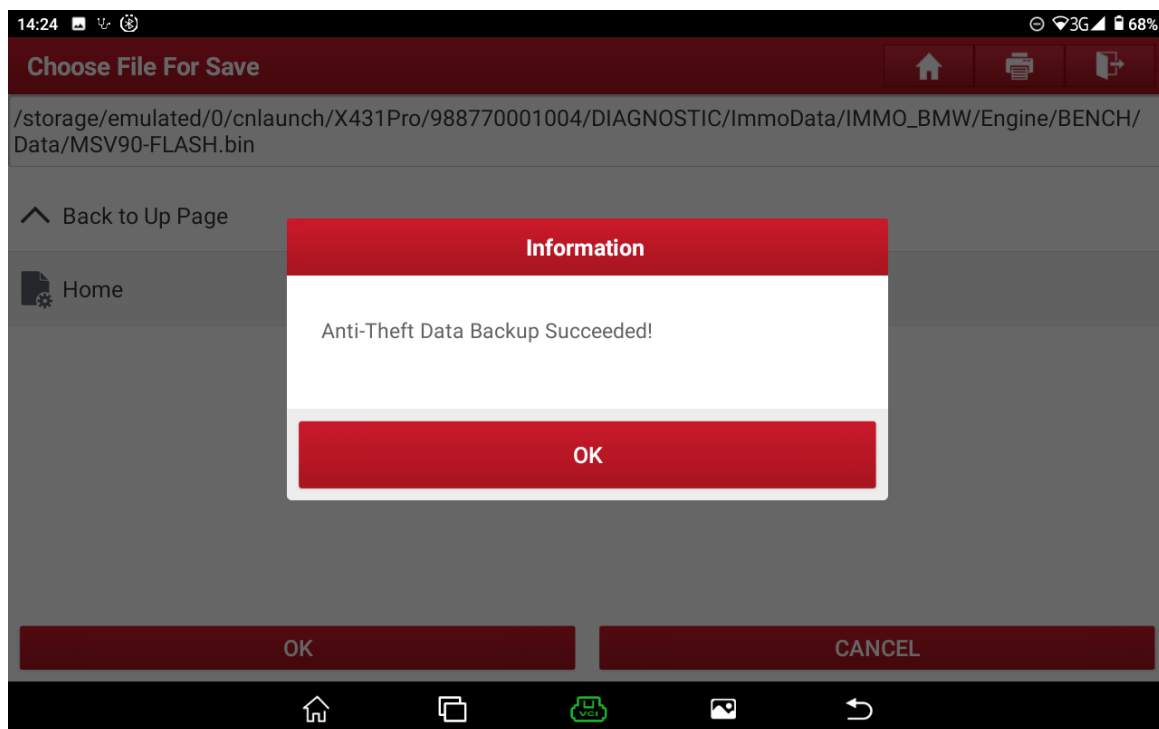12．Click "OK" after the connection is successful, as shown in the figure below:
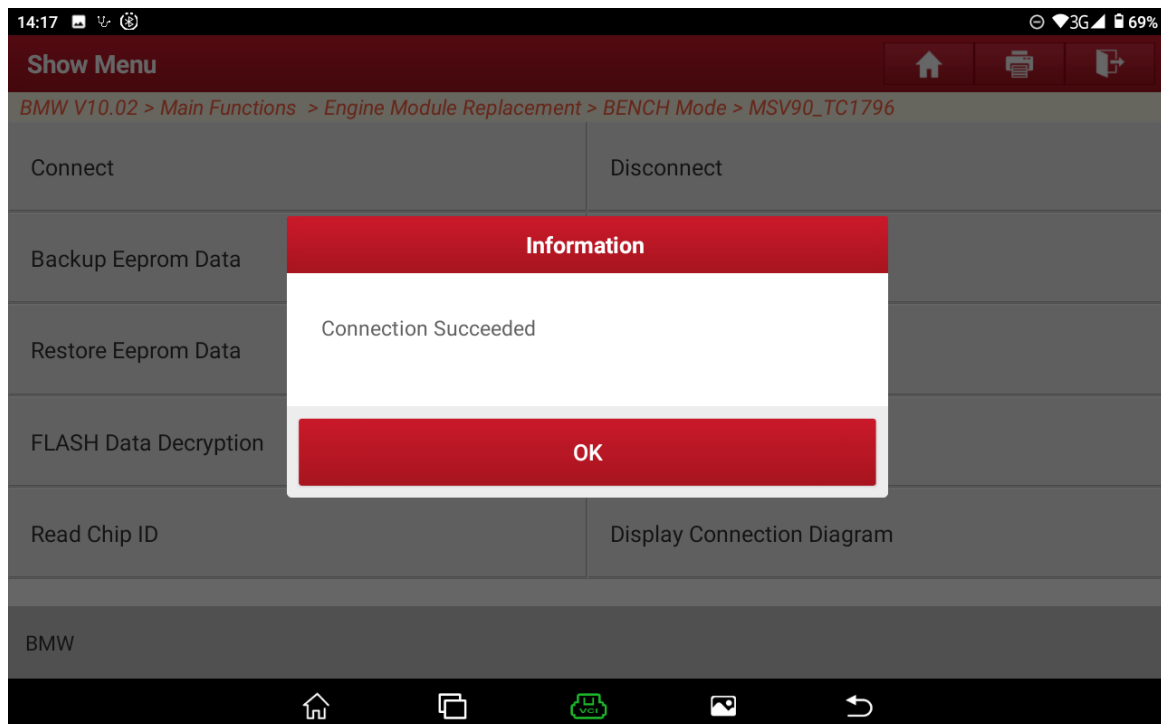
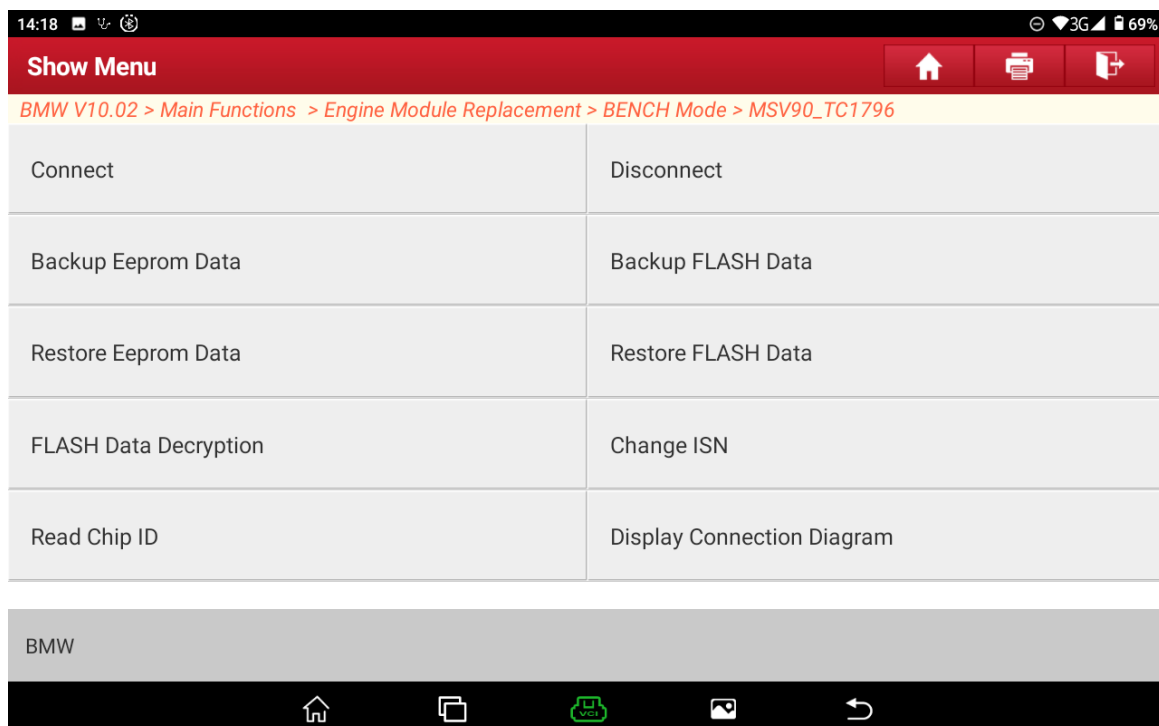13．Click the function of【 Backup Eeprom Data】, as shown in the figure below:

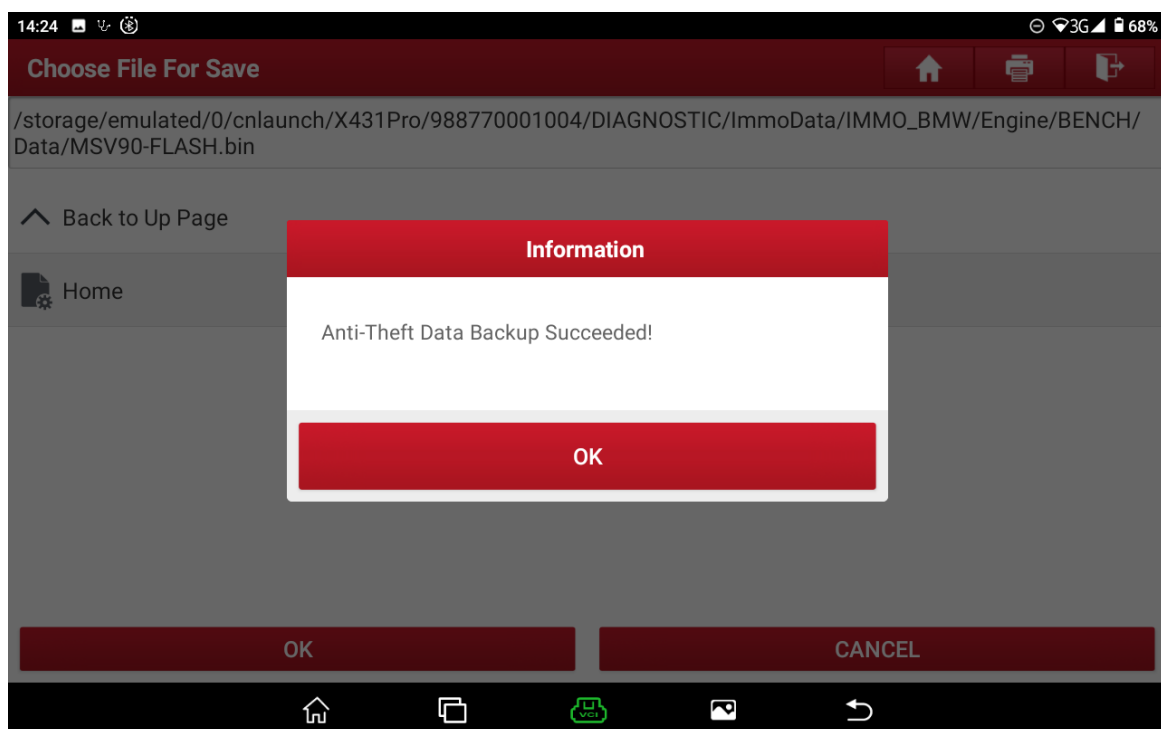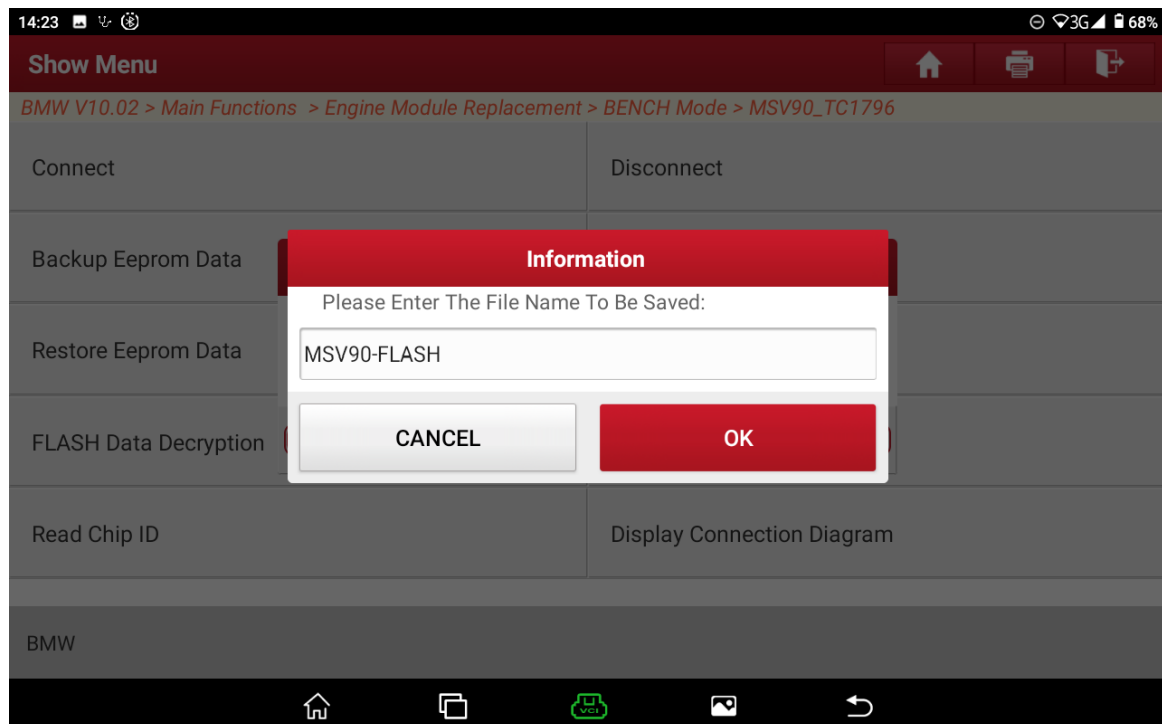14．Enter the backup file name, click "OK", the backup is successful, and then click "OK", as shown below:

14:24   ⊖ ▼3G◢ 🔋68%

Choose File For Save   🏠   🖨   🡒

/storage/emulated/0/cnlaunch/X431Pro/988770001004/DIAGNOSTIC/ImmoData/IMMO_BMW/Engine/BENCH/
Data/MSV90-FLASH.bin

⌃ Back to Up Page

📄 Home

Information

Anti-Theft Data Backup Succeeded!

OK

OK   CANCEL

🏠   🗗   🔌   🖼   ↩

15．Click the function of 【Backup FLASH Data】, as shown in the figure below:

14:18   ⊖ ▼3G◢ 🔋69%

Show Menu   🏠   🖨   🡒

BMW V10.02 > Main Functions > Engine Module Replacement > BENCH Mode > MSV90_TC1796

Connect	Disconnect
Backup Eeprom Data	Backup FLASH Data
Restore Eeprom Data	Restore FLASH Data
FLASH Data Decryption	Change ISN
Read Chip ID	Display Connection Diagram

BMW

🏠   🗗   🔌   🖼   ↩

16. Enter the name of the file to be saved and click "OK", the save is successful, and then click OK, as shown in the figure below:
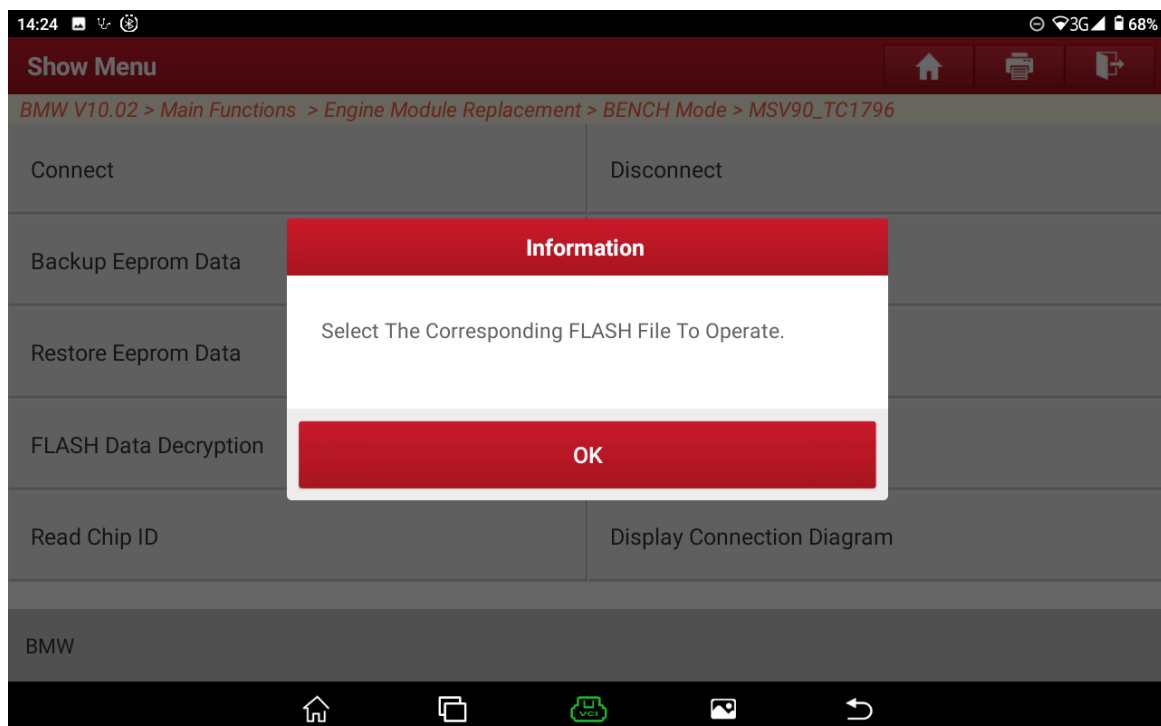
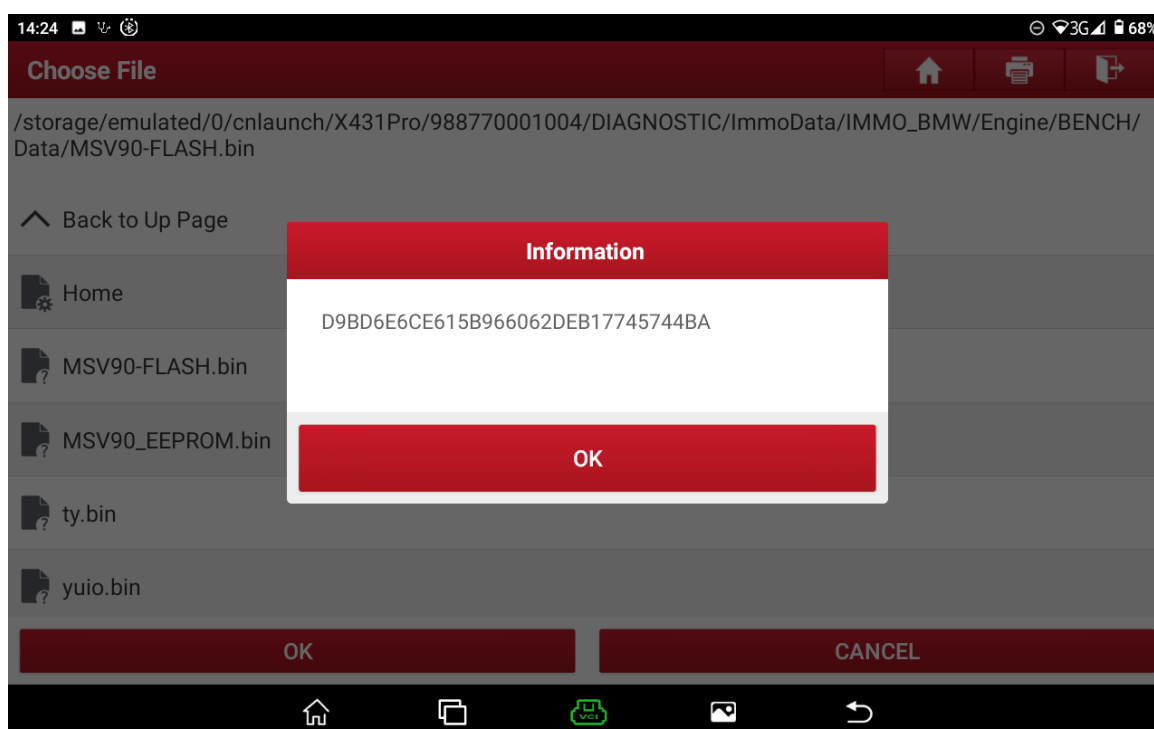17. Click the function of 【FLASH Data Decryption】, as shown in the figure below:

14:24 ◻ ⋃ ⊛   ⊖ 🛜3G◢ 🔋68%

Show Menu   🏠   🖨   ⇥

BMW V10.02 > Main Functions > Engine Module Replacement > BENCH Mode > MSV90_TC1796

Connect	Disconnect
Backup Eeprom Data	Backup FLASH Data
Restore Eeprom Data	Restore FLASH Data
FLASH Data Decryption	Change ISN
Read Chip ID	Display Connection Diagram

BMW

⌂   ⧉   🔌   🖼   ↩
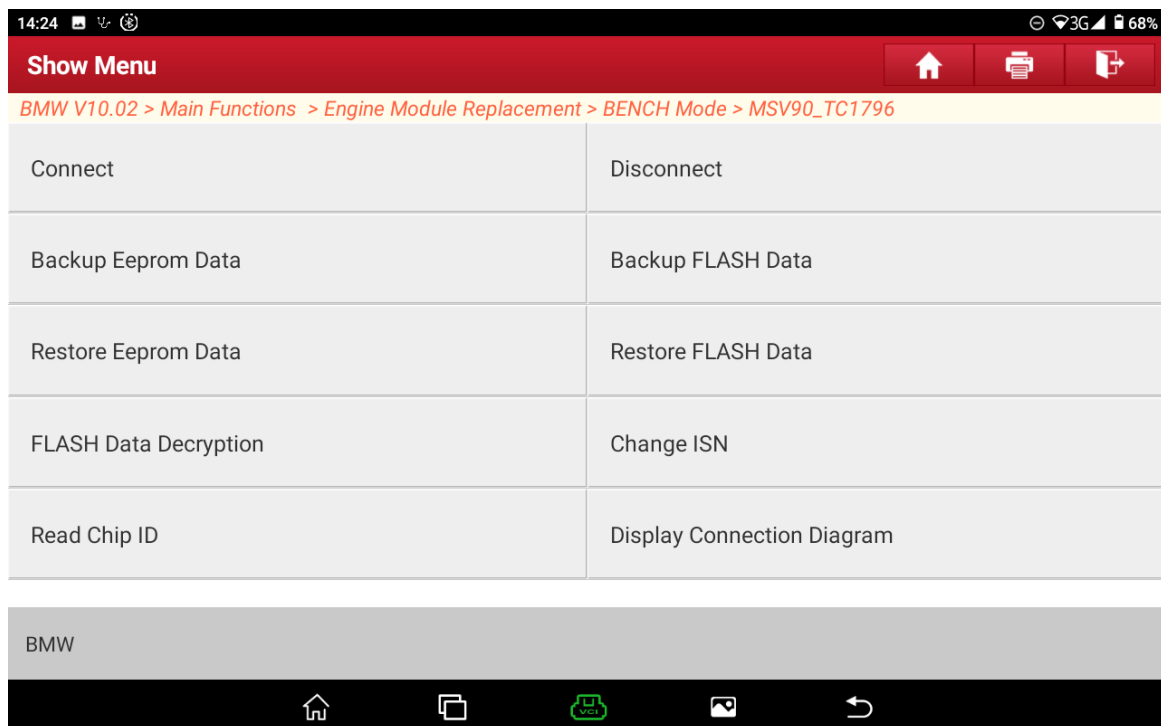
18. Select the original FLASH file data and click "OK", as shown below:

14:24 ◻ ⋃ ⊛   ⊖ 🛜3G◢ 🔋68%

Show Menu   🏠   🖨   ⇥

BMW V10.02 > Main Functions > Engine Module Replacement > BENCH Mode > MSV90_TC1796

Connect	Disconnect
Backup Eeprom Data	
Restore Eeprom Data	
FLASH Data Decryption	
Read Chip ID	Display Connection Diagram

Information

Select The Corresponding FLASH File To Operate.
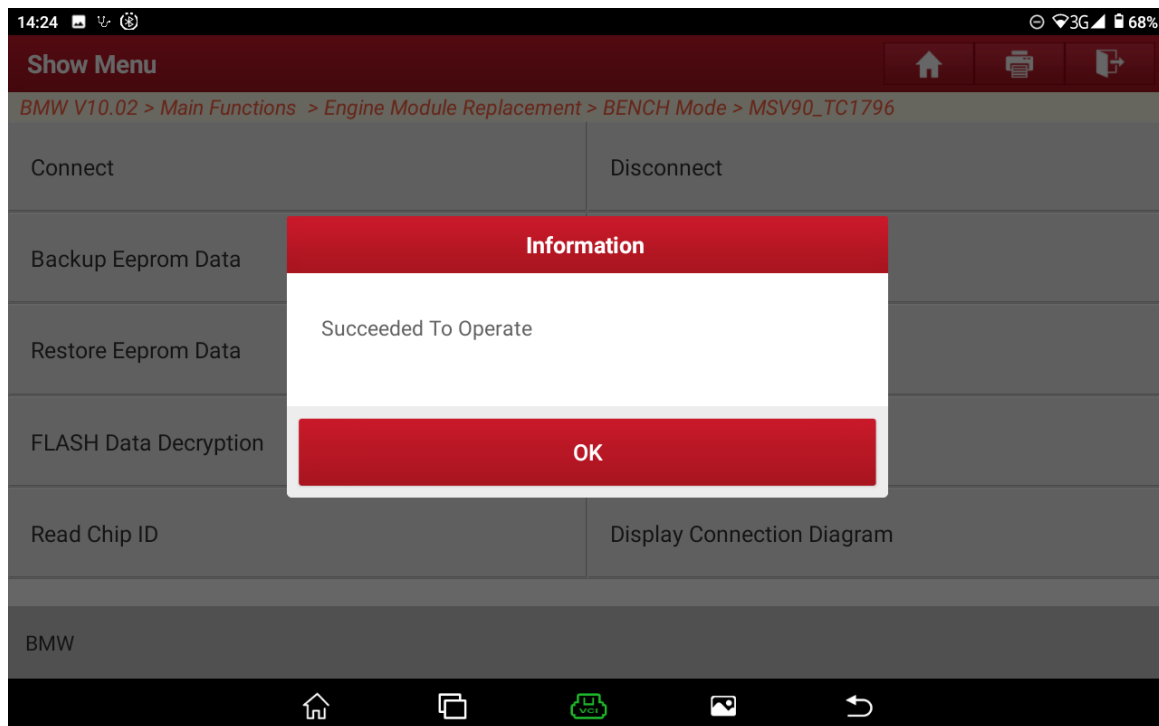
OK

BMW

⌂   ⧉   🔌   🖼   ↩

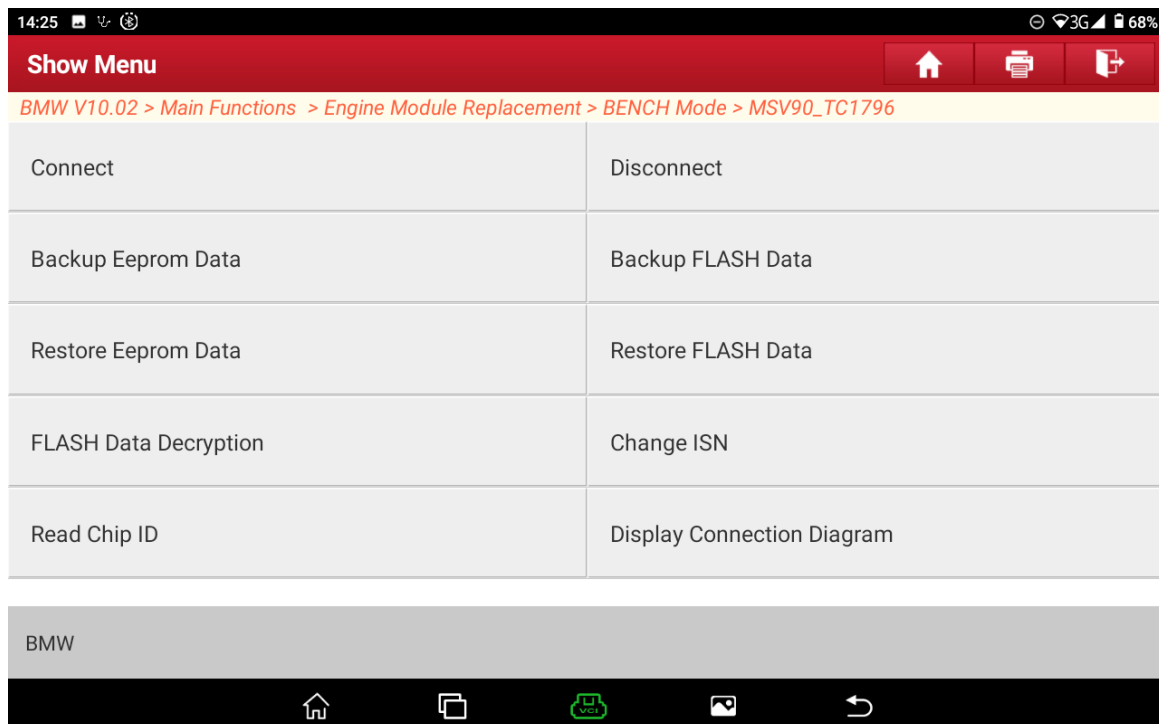19．Take a photo to record the 32-bit ISN, and click "OK", as shown below:

20．Please make sure to click the function of Disconnect to power off the ECU after the operation completed, as shown in the figure below:
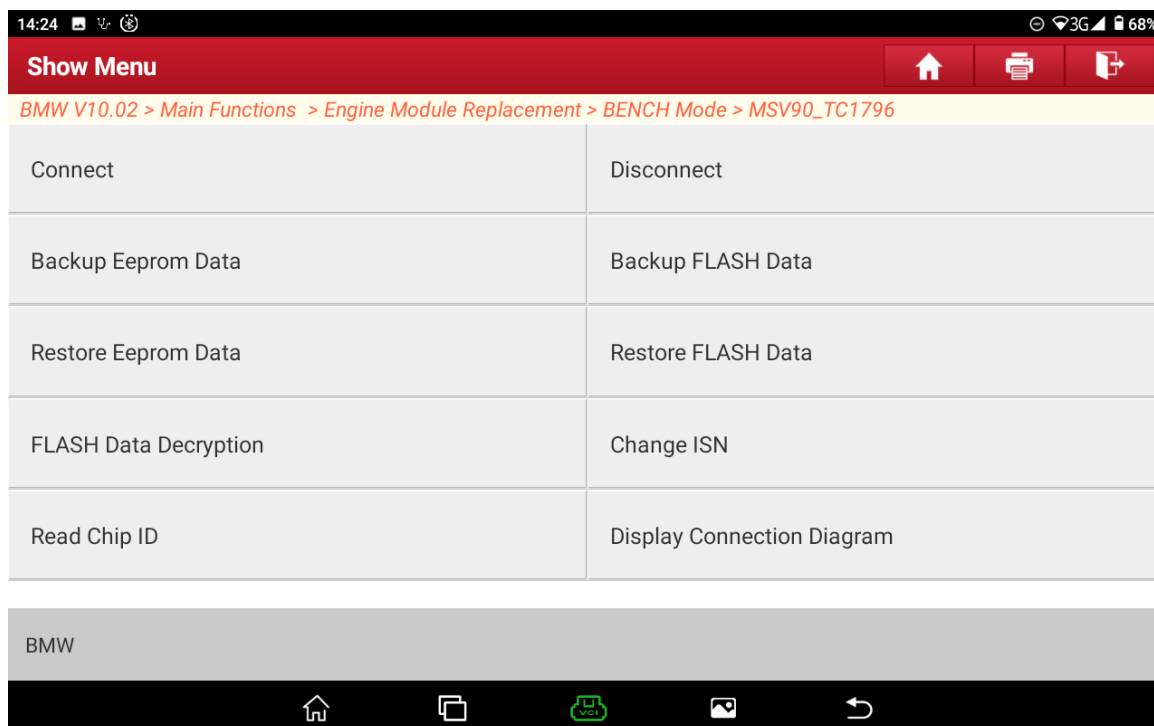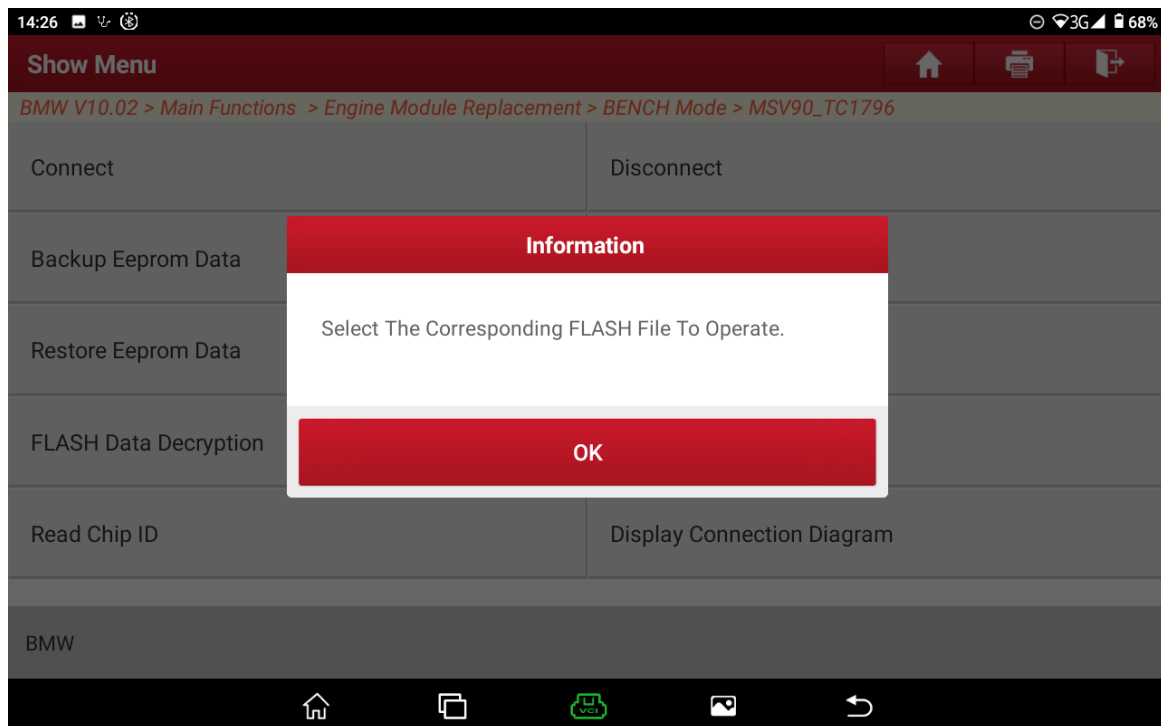
21．Click"OK" after the disconnection completed, and then remove the original engine ECU, as shown in the figure below:


22．Perform Backup EEPROM and FLASH files and save them in the same way as above steps after the external Engine ECU connected, and then perform the function of Change ISN, click Change ISN, as shown in the figure below:
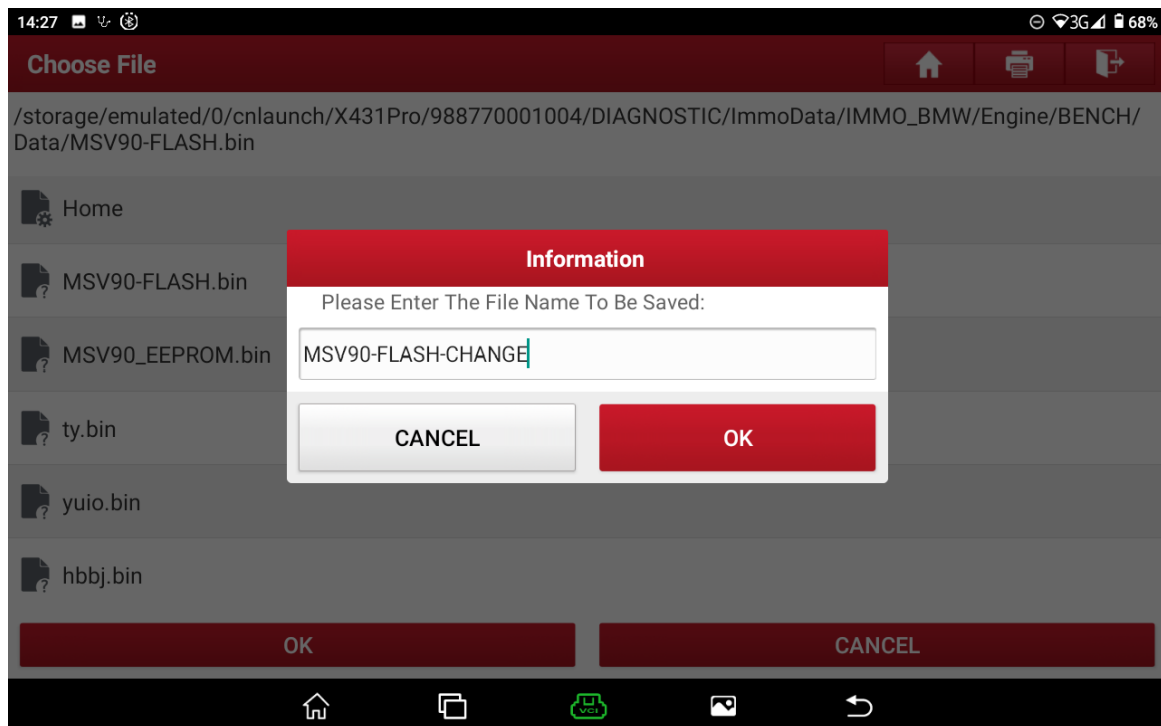
23．Select the FLASH file of external engine ECU and click "OK", as shown in the figure below:

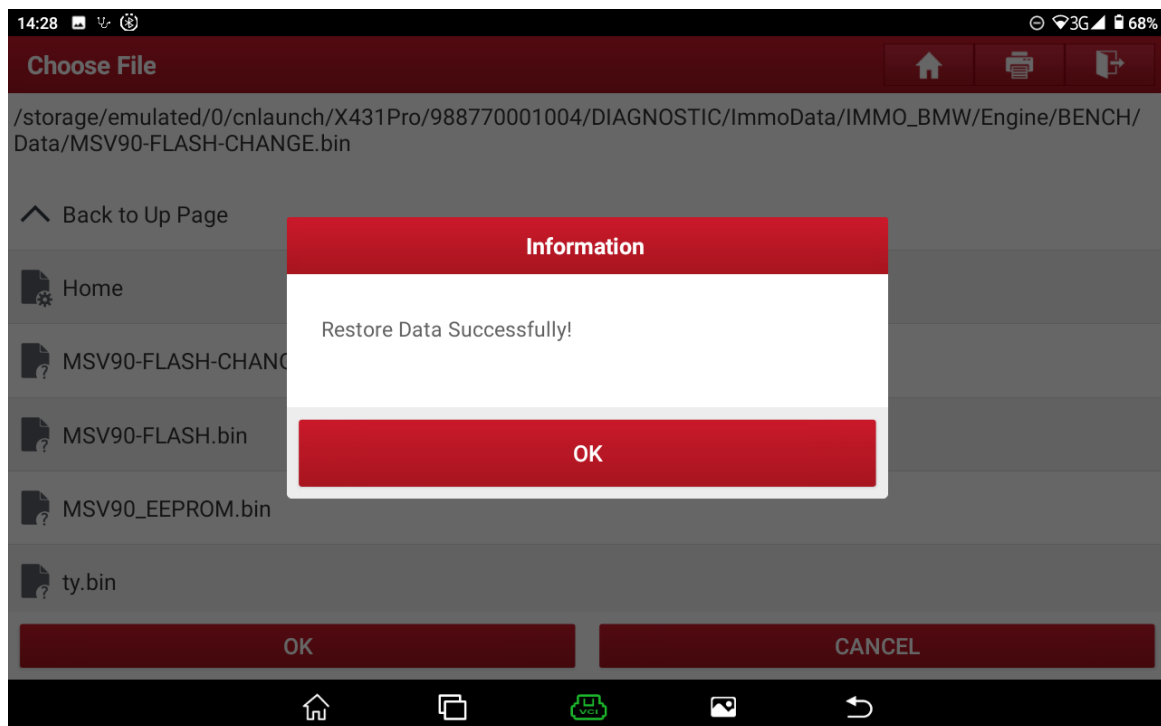24．Enter the ISN decrypted from the original ECU, and click "OK", as shown in the figure below:
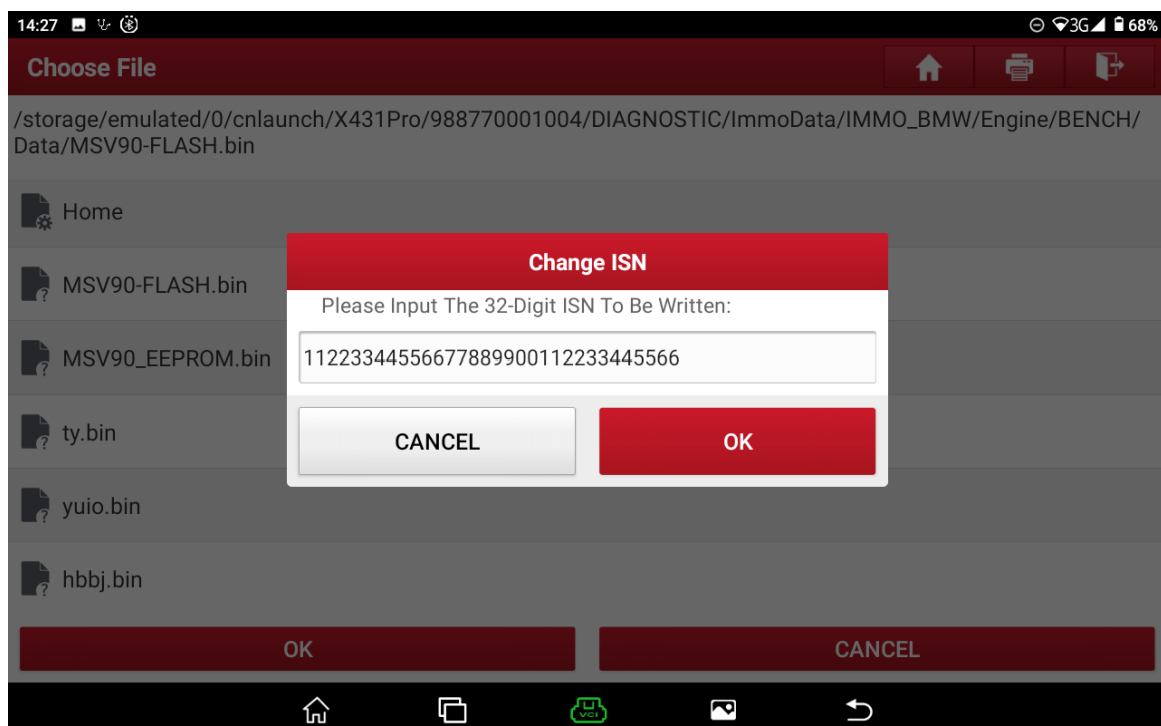
25． Enter the file name, save the FLASH file with ISN changed, and click "OK", as shown in the figure below:
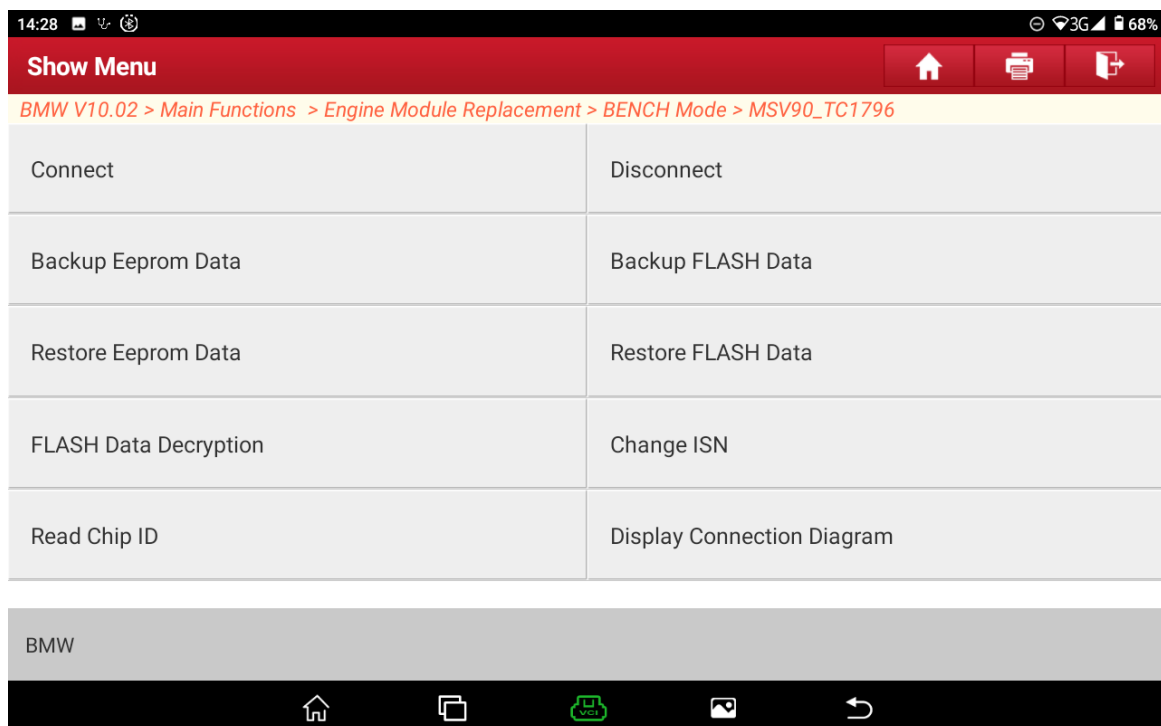

26． Click the function of【 Restore FLASH Data】, and load the FLASH file with ISN changed, as shown below:
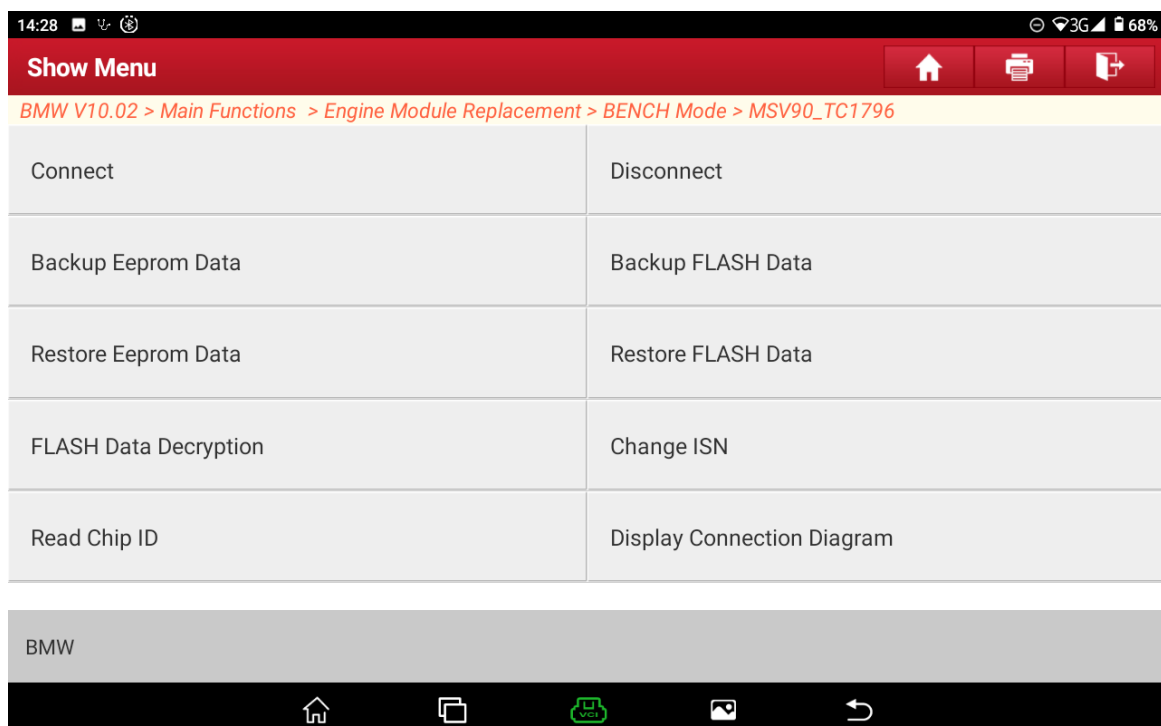
27.　Restore FLASH successfully, and then click "OK", as shown below:

28. Please make sure to click the function of Disconnect to power off the ECU after the operation completed, as shown in the figure below:

29．Click "OK" after the disconnection completed, and then remove the external engine ECU, as shown in the figure below:
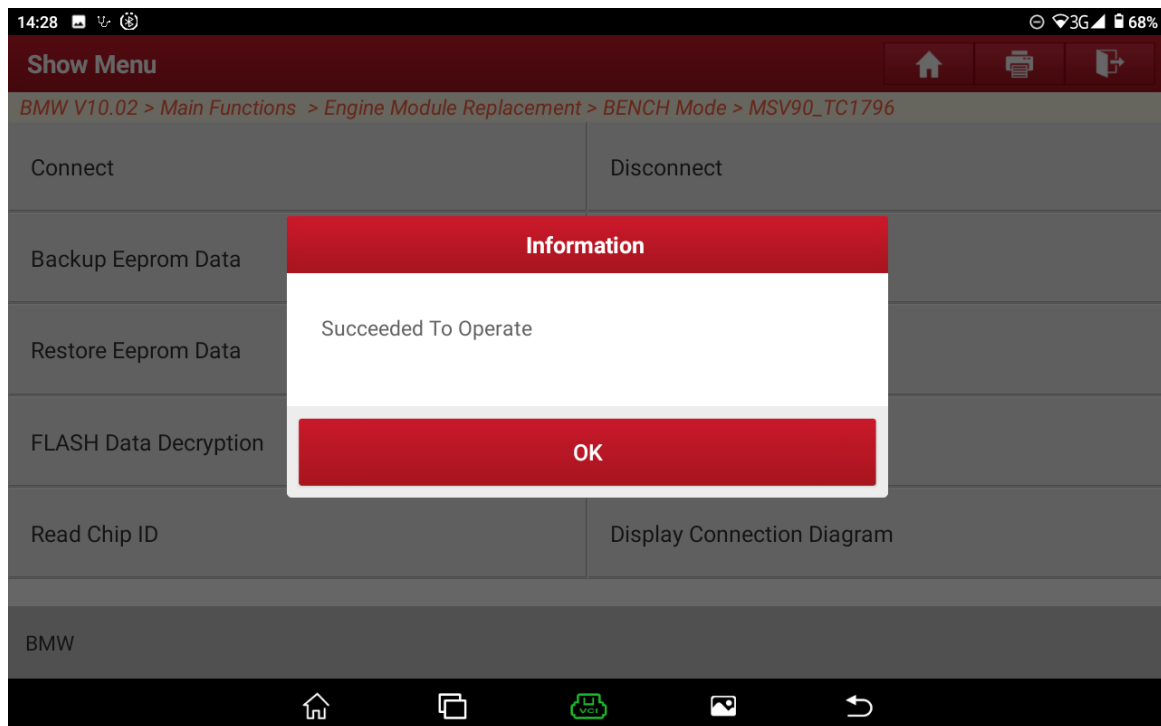
30．Perform programming and coding after the external engine ECU installed on the vehicle.

Statement:

The content of this document belongs to Shenzhen Launch Tech Co., Ltd. All rights reserved. Any individual or unit shall not quote or reprint without consent.