



FEM/BDC

1. Copy key with key

2. Copy key without key

CG-DI

Open the car door, OBD connects the vehicle and equipment, the vehicle maintains voltage above 12v , do not turn off the computer screen during operation.

CGDI

Device activation time remaining 26 days



BMW OBD Key Match



CAS3 Key Match



BMW ISN



FEM/BDC Key Match



CAS4 Key Match



BMW Enable/Disable key



BMW F Series Program

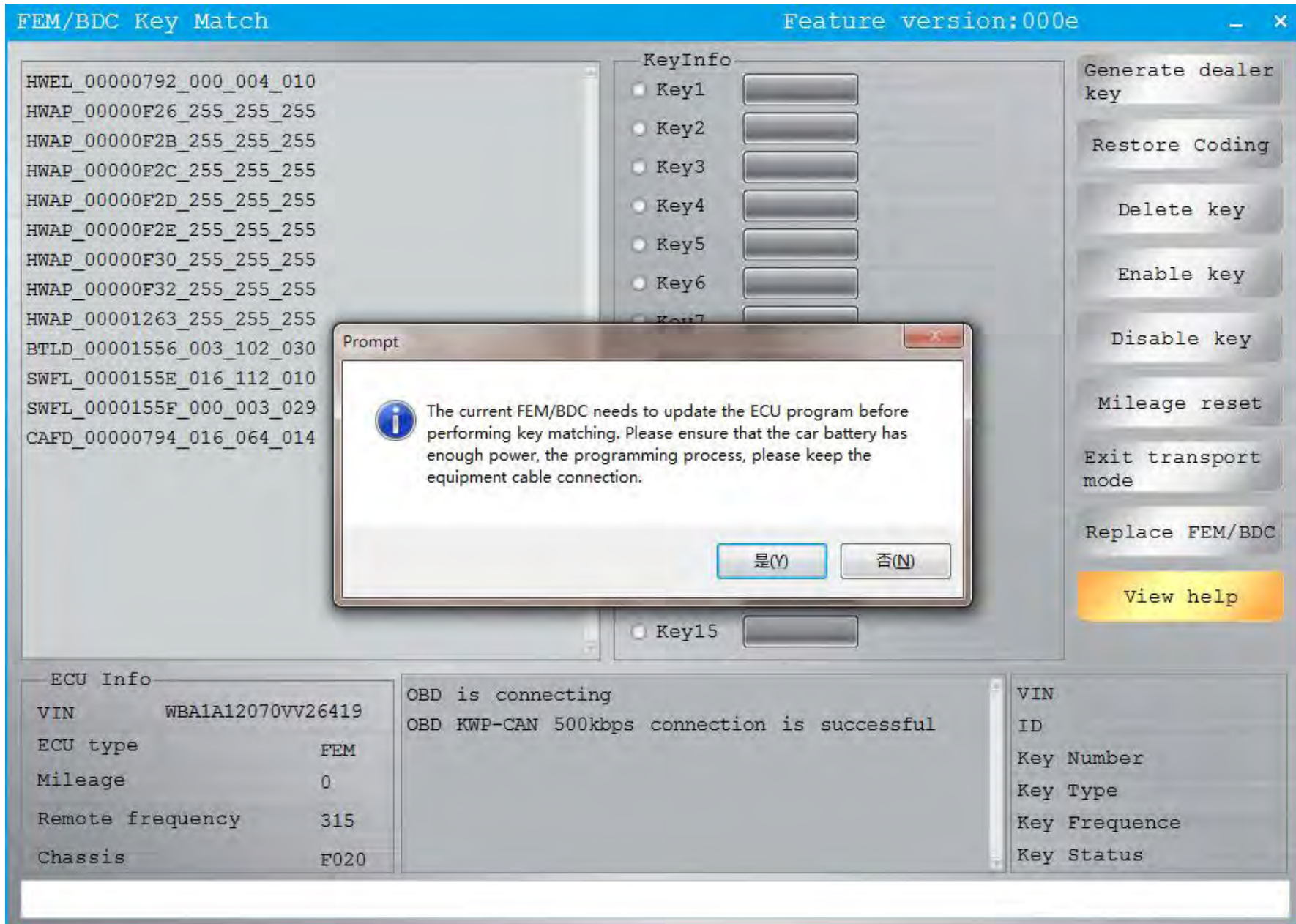


BMW F Series Coding

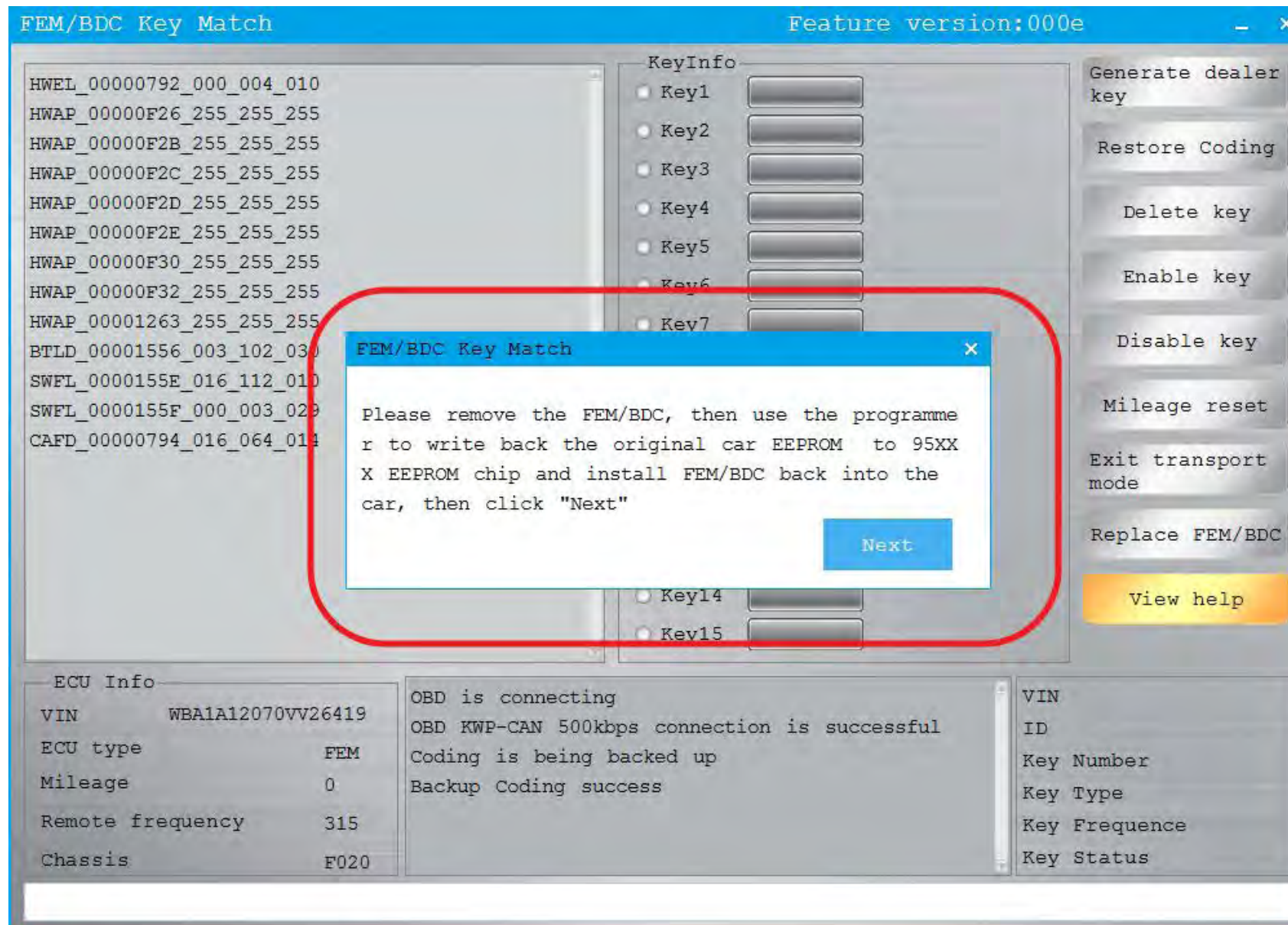


EGS ISN

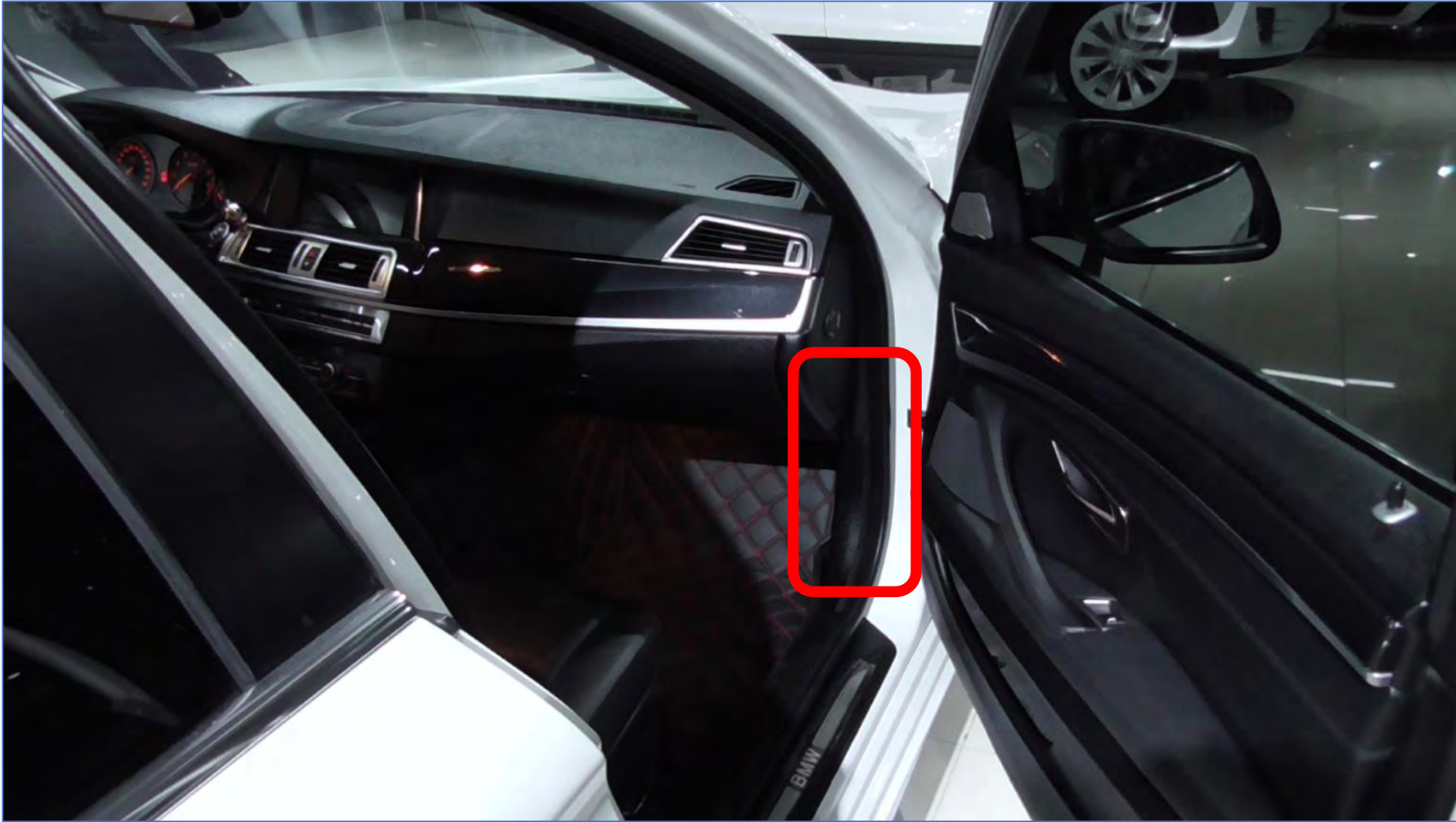
Select "FEM/BDC key match" and click enter



Connect successfully, maintain enough voltage, click "yes"

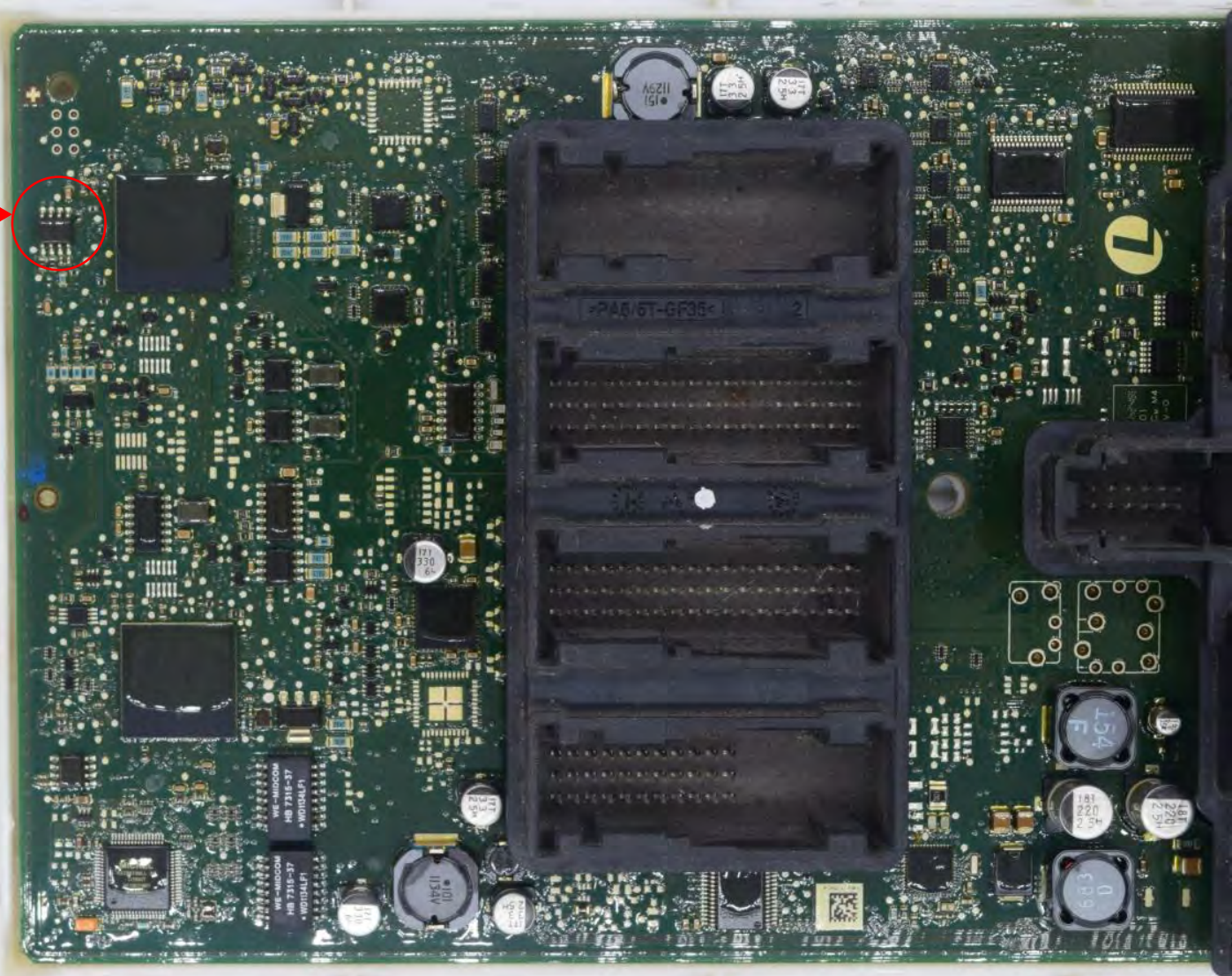
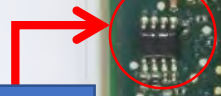


Need to disassemble the module, read EEPROM data, FEM is 95128



FEM module installation location

95128 IC
position



**Use CG-100 to read
out 95128 IC data and
save the data**



Remove the 95128 chip, wash it, and clip it to the ATMEGA adapter

Open Save Read Write Pin Diagram EEPROM Return

```
00000000 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000010 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000020 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000030 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000040 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000050 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000060 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000070 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000080 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000090 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000000A0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000000B0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000000C0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000000D0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000000E0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000000F0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000100 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000110 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000120 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000130 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000140 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000150 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000160 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000170 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000180 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000190 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000001A0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000001B0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000001C0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000001D0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000001E0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
000001F0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000200 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000210 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000220 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000230 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000240 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000250 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000260 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
00000270 FF FF FF FF FF FF FF FF FF FF FF FF FF FF
```

Device connecting

Reading data, please wait

Firmware:180317
Start with the target board
Detecting chip information
Reading chip program memory
Read chip program mem
Start check data
Data validation success
Is off the power supply
Power off is completed, t

CG100III

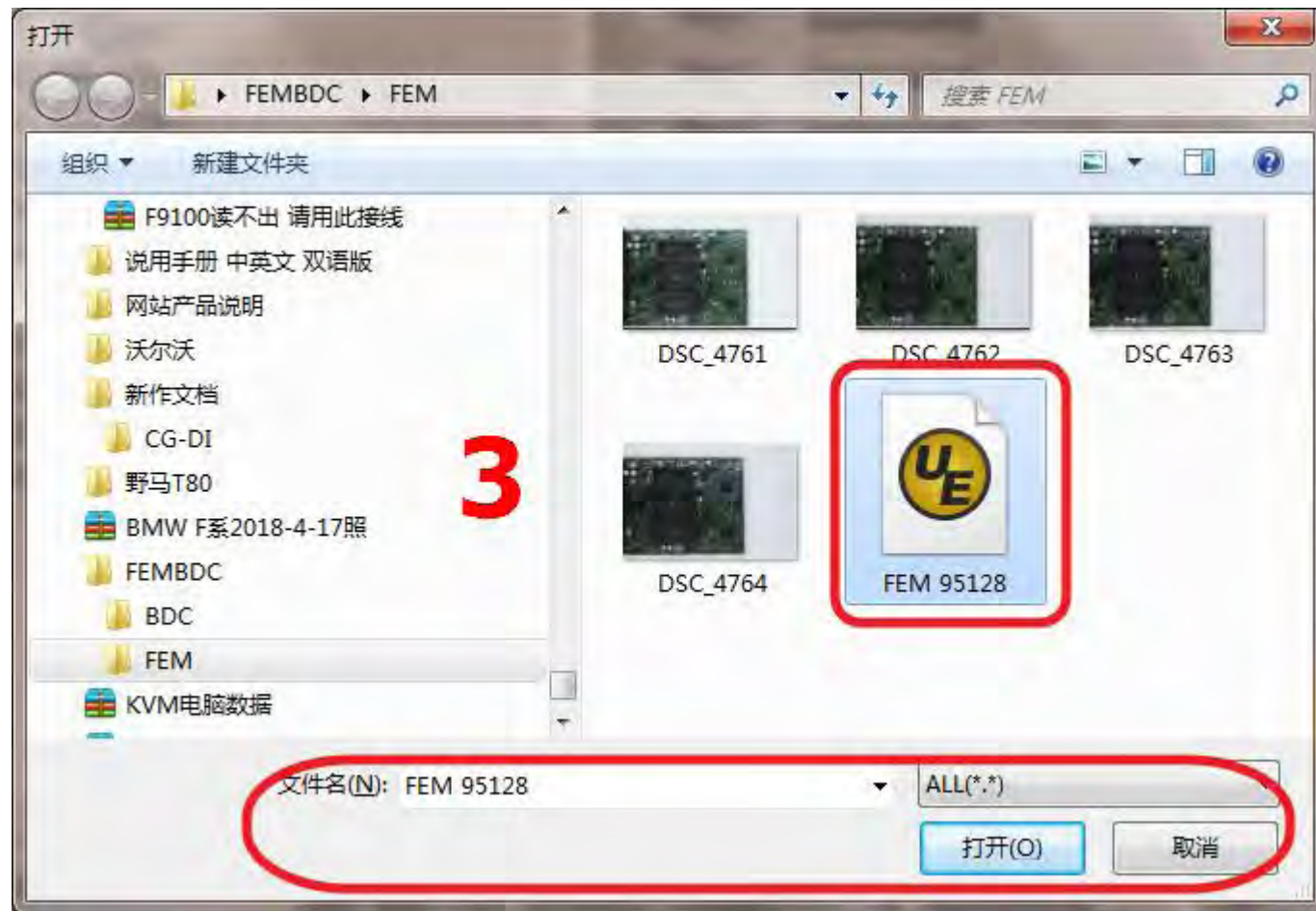
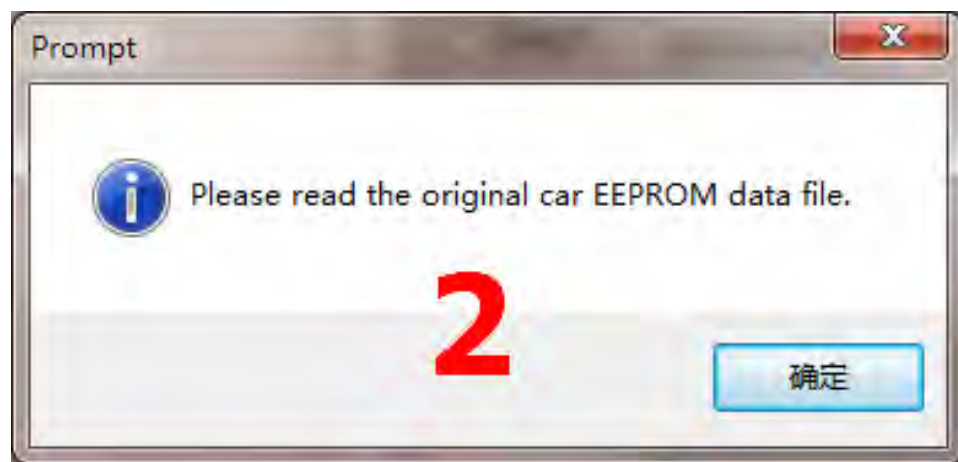
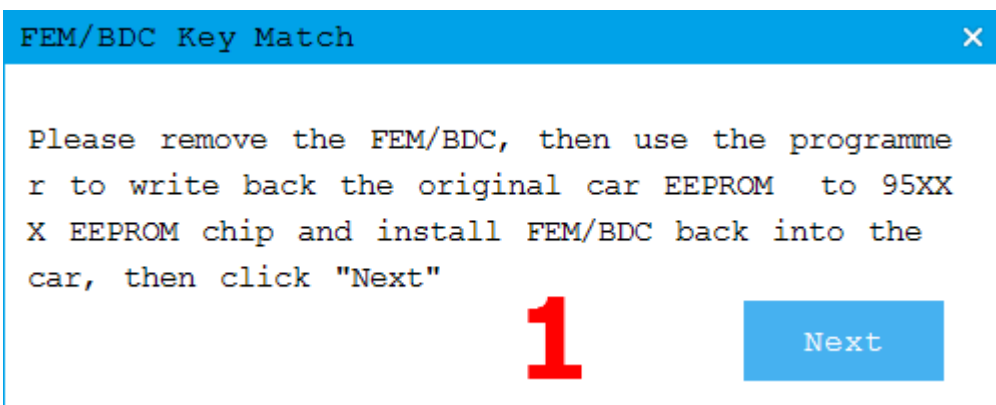
Reading succeeded

确定

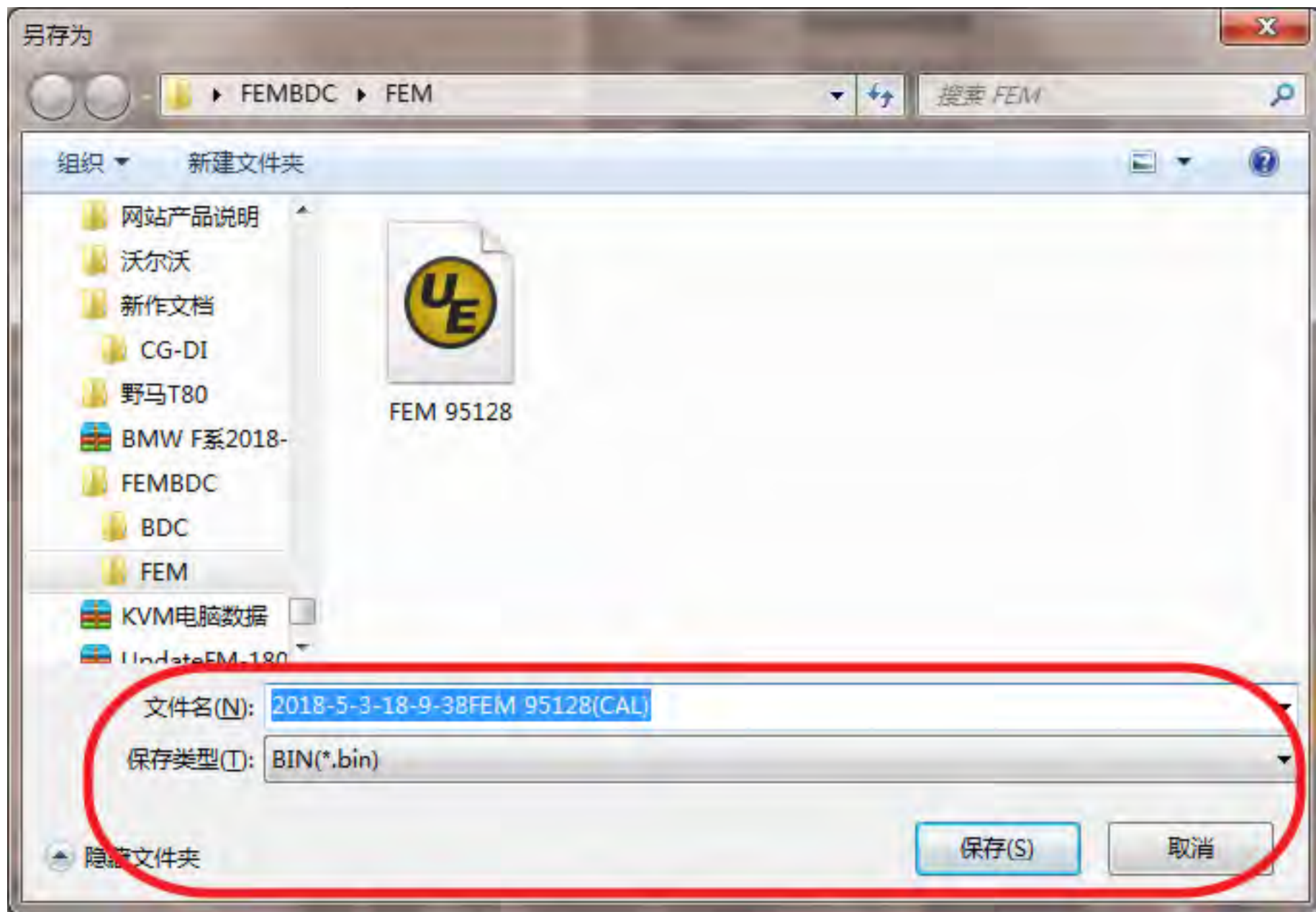
Chip name: 95128
Device ID: 95128
Capacity: Eeprom:16384 Bytes

Turn On 12V Turn off 12V

Open the CG-100 to read the data and save it



Go back to cg-di and load the data



Load successfully, save the new data generated by the system

FEM/BDC Key Match

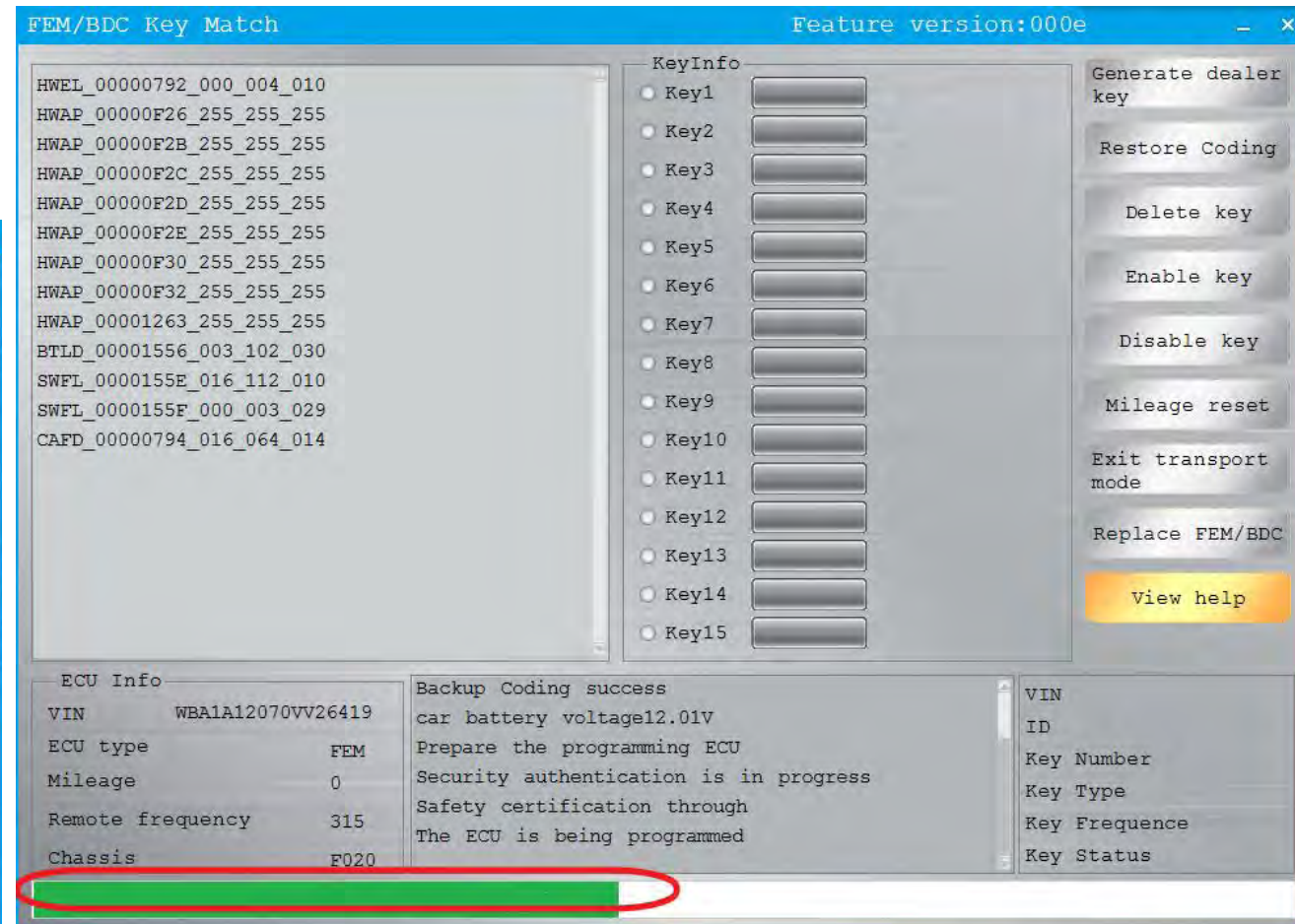
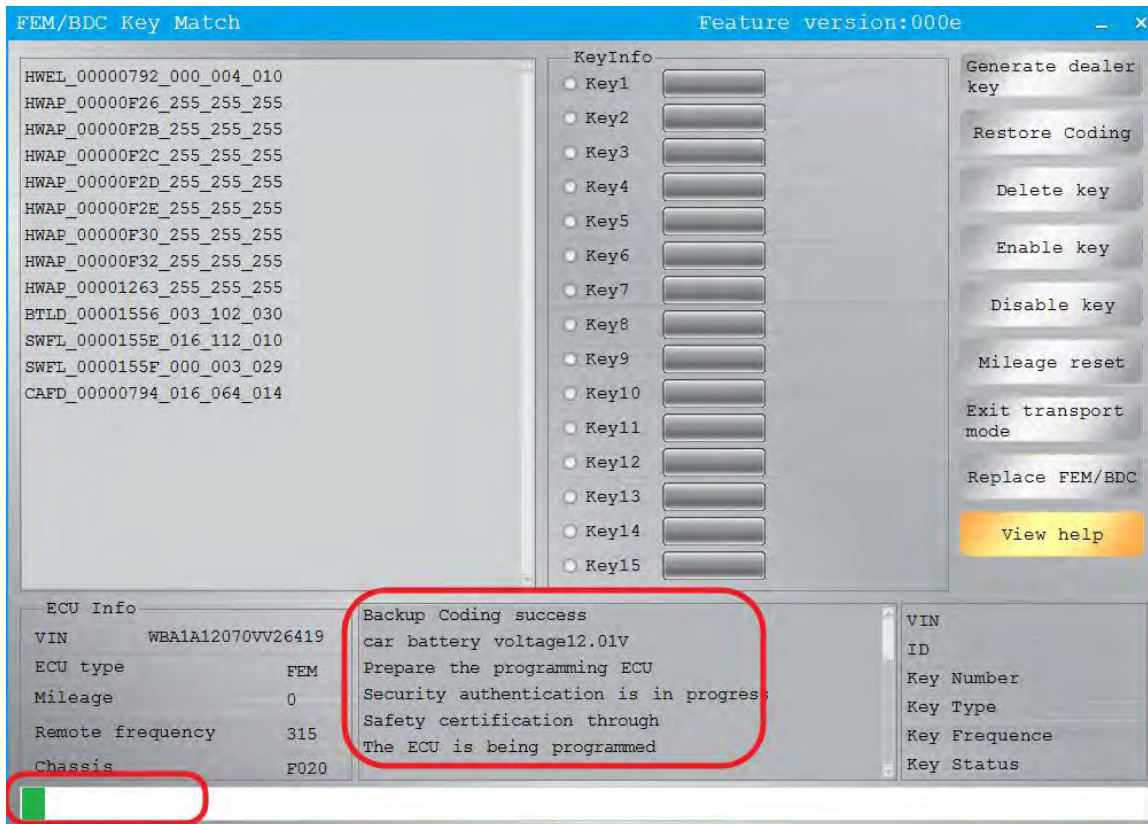
Use the programmer to write the calculated new data to the 95XXX EEPROM chip, then put the FEM/BD C back into the car, then click "Next"

Next

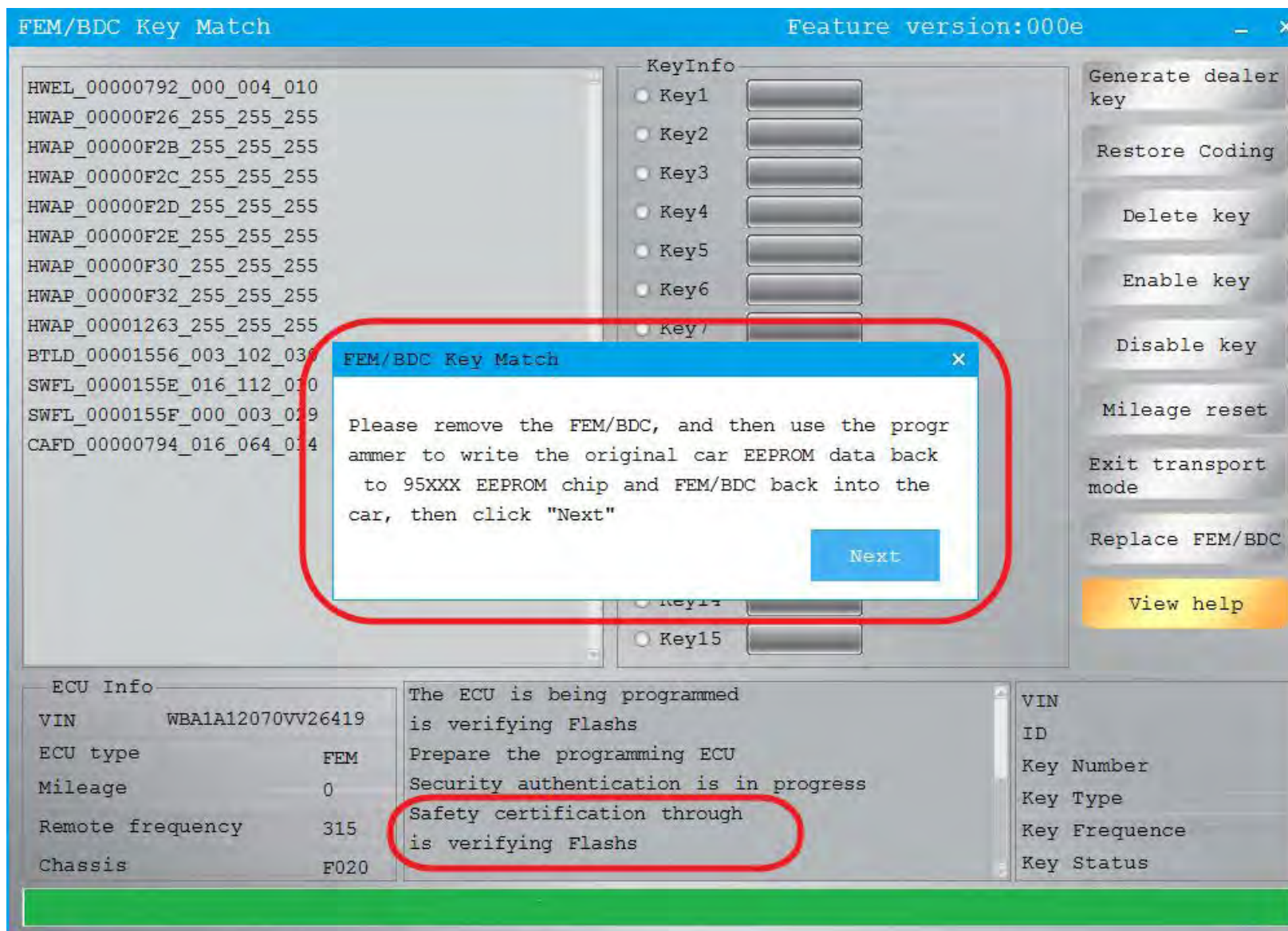
The screenshot shows a programmer interface with a data table and several dialog boxes. The data table lists addresses from 00000000 to 00000260 with corresponding hex values. A red box highlights the 'Device connecting' dialog box, which contains the following text: 'The data is being downloaded, please wait', 'Firmware:180317', 'Start with the target board', 'Detecting chip information', 'Writing chip program memory', 'Write chip program memory', 'Start check data', 'Data validation success', 'Is off the power supply', and 'Power off is completed, the'. Overlaid on this is a smaller dialog box titled 'CG100III' with a warning icon and the text 'Writing succeeded', with a '确定' (OK) button. At the bottom of the interface, the chip name is '95128', device ID is '95128', and capacity is 'Eeprom:16384 Bytes'. There are also 'Turn On 12V' and 'Turn off 12V' buttons.

00000000	01 01 FF 00 FF 05 07 05 00 05 FF FF 17 07 04 8F	.....
00000010	04 D2 01 00 00 10 00 00 00 01 01 00 04 13 07 29	.....
00000020	8B 00 09 00 00 70 80 80 80 80 81 80 80 87 22 80	.....
00000030	04 0A 06 00 00 15 56 03 65 0A 08 00 00 15 5E 07	.....V.e.....^
00000040	66 0A 08 00 00 15 5F 00 03 1D FF FF FF FF FF FF	.....
00000050	FF FF FF FF FF FF FF FF	.....
00000060	FF FF FF FF FF FF FF FF	.....
00000070	FF FF FF FF FF FF FF FF	.....
00000080	FF FF FF FF FF FF FF FF	.....
00000090	5F 00 03 1D FF FF FF FF	.....
000000A0	FF FF FF FF FF FF FF FF	.....
000000B0	FF FF FF FF FF FF FF FF	.....
000000C0	FF FF FF FF FF FF FF FF	.....
000000D0	FF FF FF FF FF FF FF FF	.....
000000E0	FF FF FF FF FF FF FF FF	.....
000000F0	FF FF FF FF FF FF FF FF	.....
00000100	FF FF FF FF FF FF FF FF	.....
00000110	FF FF FF FF FF FF FF FF	.....
00000120	FF FF FF FF FF FF FF FF	.....
00000130	FF FF FF FF FF FF FF FF	.....
00000140	FF FF FF FF FF FF FF FF	.....
00000150	FF FF FF FF FF FF FF FF	.....
00000160	FF FF FF FF FF FF FF FF	.....
00000170	0A 00 00 01 01 01 04	.....
00000180	C4 0D FF FF FF FF FF C4	.....
00000190	FF FF C4 0D 56 13 19	.....
000001A0	FF FF FF FF C4 0D FF	.....
000001B0	FF FF FF FF 30 37 01 30	.....
000001C0	FF FF FF FF FF C5 41	.....
000001D0	42 00 00 00 08 0B E1	.....
000001E0	8E D8 7B 56 C4 0B FF	.....
000001F0	1D 68 16 8A 4D 1D 91	.....
00000200	A8 C3 50 C3 50 11 A8	.....
00000210	A8 61 A8 61 A8 FF FF	.....
00000220	FF C3 50 C3 50 FF FF	.....
00000230	50 C3 50 FF FF FF FF 95 4E 00 11 00 01 84 A4 79	.....P.P.....N.....y
00000240	A7 F6 01 EC 5C AC AC E4 FF FF FF FF C4 0D FF FF\N.....
00000250	FF FF C4 0D FF FF FF FF C4 0D FF FF FF C4 0D	.....
00000260	FF FF FF FF C4 0D FF FF FF FF C4 0D FF FF FF	.....

Write back new data with cg-100, weld back to module, and click next



Waiting for programming



After programming, write back 95128 original data, put FEM into the car again, and click next

Open Save Read Write Pin Diagram EEPROM Return

```
00000000 01 01 FF 00 FF 05 07 05 00 05 FF FF 17 07 04 8F .....
00000010 04 D2 01 00 00 10 00 00 00 01 01 00 04 13 07 29 .....
00000020 8B 00 09 00 00 00 00 00 00 01 00 00 04 13 07 29 .....
00000030 04 0A 06 00 00 05 56 03 65 0A 08 00 00 15 5E 07 .....
00000040 66 0A 08 00 00 05 5E 00 03 1D FF FF FF FF FF FF f.....
00000050 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000060 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000070 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000080 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000090 5F 00 03 1D FF FF FF FF FF FF FF FF FF FF FF FF f.....
000000A0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
000000B0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
000000C0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
000000D0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
000000E0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
000000F0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000100 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000110 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000120 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000130 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000140 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000150 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000160 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000170 0A 00 00 01 01 01 00 00 00 00 00 00 00 00 00 00 .....
00000180 C4 0D FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
00000190 FF FF C4 0D 56 03 19 00 00 00 00 00 00 00 00 00 .....
000001A0 FF FF FF FF C4 0D FF FF FF FF FF FF FF FF FF FF f.....
000001B0 FF FF FF 30 37 31 30 00 00 00 00 00 00 00 00 00 .....
000001C0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF f.....
000001D0 42 00 00 00 08 0B E7 00 00 00 00 00 00 00 00 .....
000001E0 8E D8 7B 56 C4 0B FF FF FF FF FF FF FF FF FF FF f.....
000001F0 1D 68 16 8A 4D CD 91 00 00 00 00 00 00 00 00 .....
00000200 A8 C3 50 C3 50 61 A8 00 00 00 00 00 00 00 00 .....
00000210 A8 61 A8 61 A8 FF FF FF FF FF FF FF FF FF FF f.....
00000220 FF C3 50 C3 50 FF FF FF FF FF FF FF FF FF FF f.....
00000230 50 C3 50 FF FF FF FF FF 95 4E 00 11 00 01 84 A4 79 P.P.....N.....y
00000240 A7 F6 01 EC 5C 1C AC F4 FF FF FF FF FF C4 0D FF FF \.....
00000250 FF FF C4 0D FF FF FF FF C4 0D FF FF FF FF C4 0D .....
00000260 FF FF FF FF C4 0D FF FF FF FF C4 0D FF FF FF FF .....
00000270 C4 0D FF FF FF FF C4 0D FF FF FF C4 0D FF FF FF .....
```

Device connecting

The data is being downloaded, please wait

Firmware:180317
Start with the target board
Detecting chip information
Writing chip program memory
Write chip program memory
Start check data
Data validation success
Power off the power supply
Power off is completed, tip

CG100III

Writing succeeded

确定

Chip name: 95128
Device ID: 95128
Capacity: Eeprom:16384 Bytes

Turn On 12V Turn off 12V

Use CG-100 to write back 95128 original data

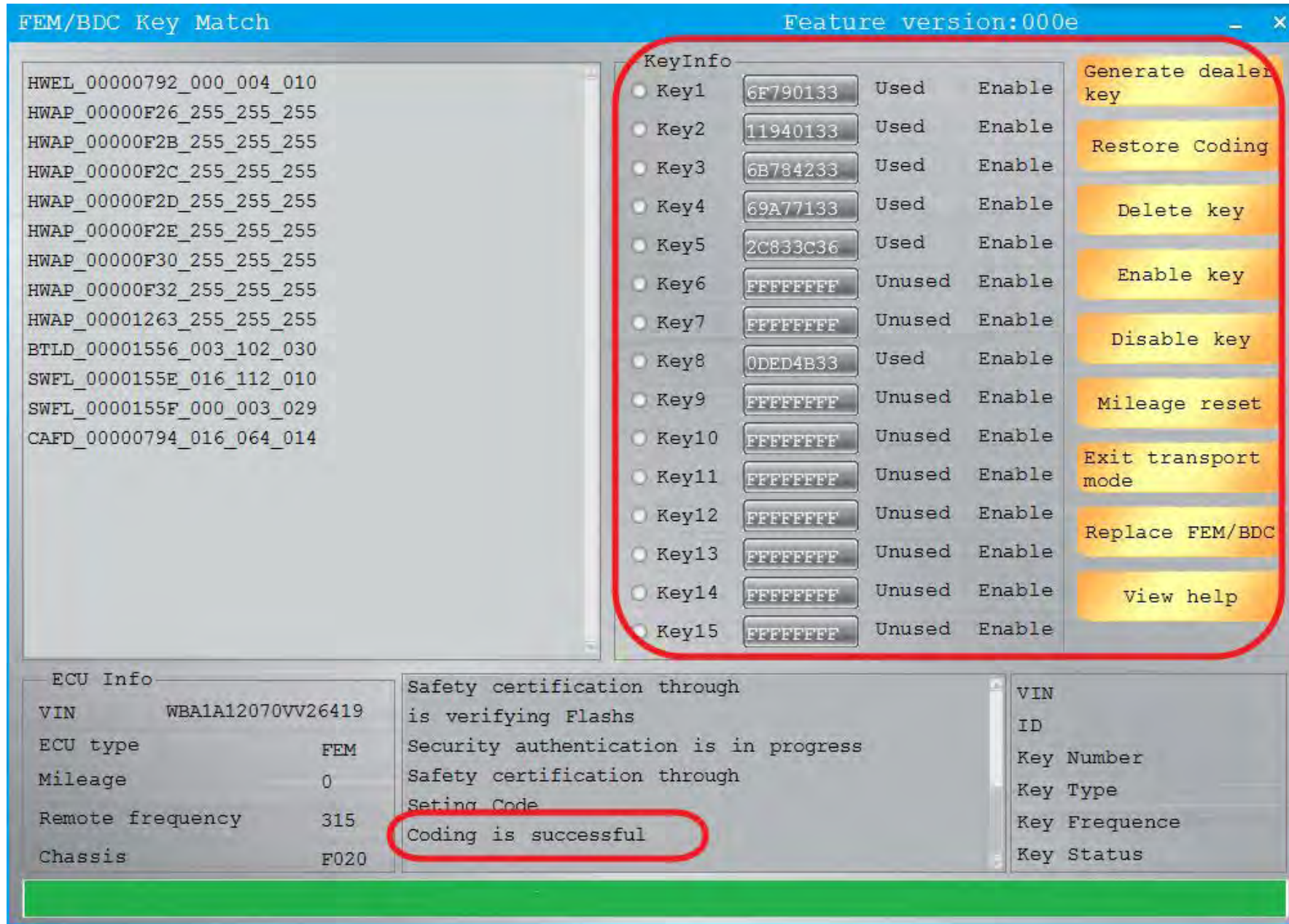
FEM/BDC Key Match



Please remove the FEM/BDC, and then use the programmer to write the original car EEPROM data back to 95XXX EEPROM chip and FEM/BDC back into the car, then click "Next"

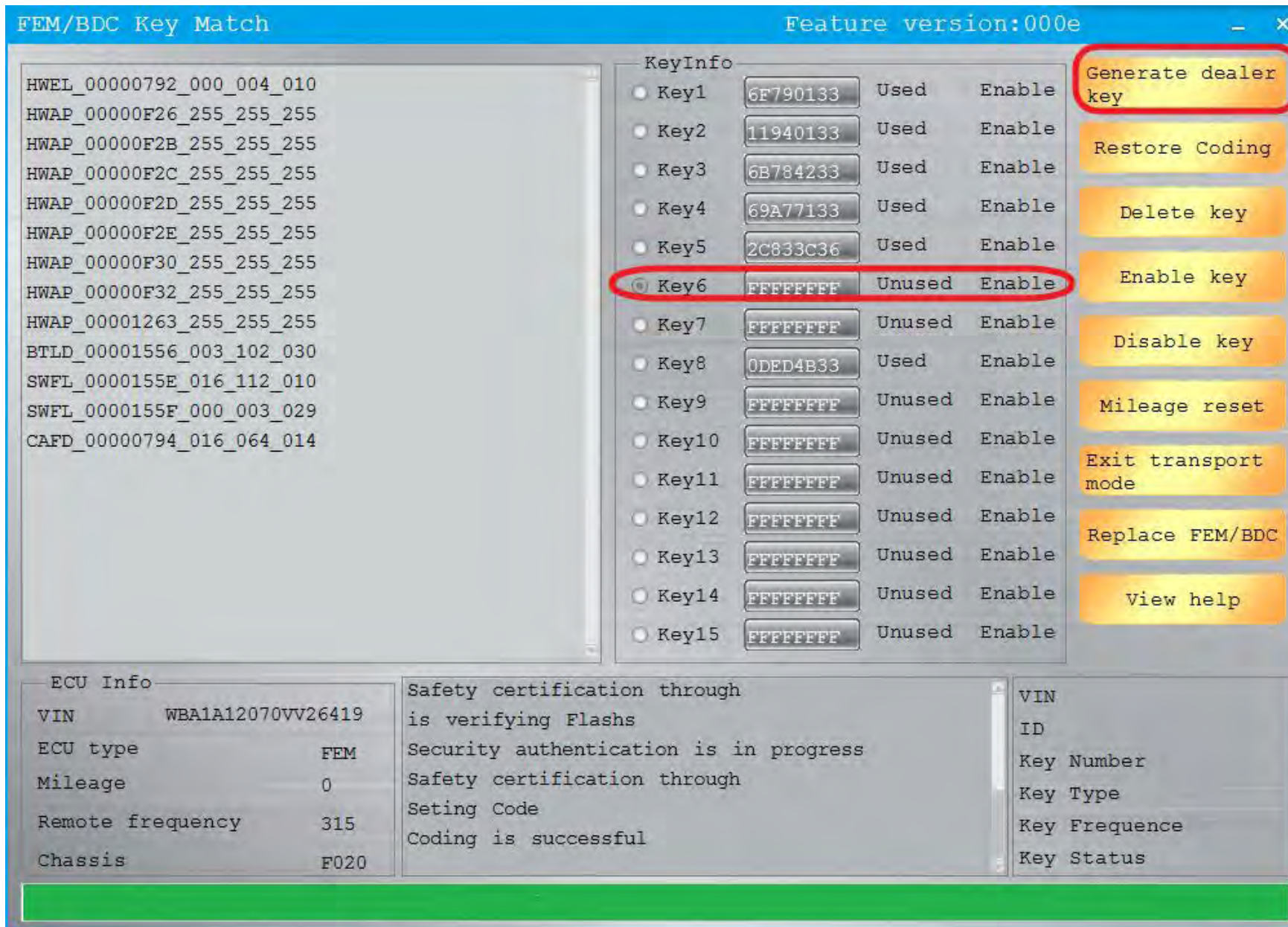
Next

When finished, click "next"



Set code successfully, customers can do any operation

Copy key with key



choose the unused key, and click "generate the dealer key"

FEM/BDC Key Match



FEM/BDC key matching need to enter engine ISN,
please select the way of input ISN code

Read Working Key

With the engine data, the next step is to load the engine data

Manually input known ISN

Next


Read working key,click Next

FEM/BDC Key Match

Keep the original car key near the key sensor area below the steering wheel



Prompt

 password:81E627FE72056F4990CAC4E8977A3450
ISN:92118CBB8309E7A22AA2280D832125AF
Key Sync Code:3D5A8A0419D4BFCB
DME ISN:AF4B06BF9ADD586917F8A2099AF59A64

确定

Read successfully and display information

FEM/BDC Key Match



Keep the new key near the key sensor area below
the steering wheel

Next



Match the new key

FEM/BDC Key Match Feature version:000e

HWEL_00000792_000_004_010
HWAP_00000F26_255_255_255
HWAP_00000F2B_255_255_255
HWAP_00000F2C_255_255_255
HWAP_00000F2D_255_255_255
HWAP_00000F2E_255_255_255
HWAP_00000F30_255_255_255
HWAP_00000F32_255_255_255
HWAP_00001263_255_255_255
BTLD_00001556_003_102_030
SWFL_0000155E_016_112_010
SWFL_0000155F_000_003_029
CAFD_00000794_016_064_014

KeyInfo

<input type="radio"/> Key1	6F790133	Used	Enable
<input type="radio"/> Key2	11940133	Used	Enable
<input type="radio"/> Key3	6B784233	Used	Enable
<input type="radio"/> Key4	69A77133	Used	Enable
<input type="radio"/> Key5	2C833C36	Used	Enable
<input checked="" type="radio"/> Key6	969A7133	Used	Enable
<input type="radio"/> Key7	FFFFFFFF	Unused	Enable
<input type="radio"/> Key8	0DED4B33	Used	Enable
<input type="radio"/> Key9	FFFFFFFF	Unused	Enable
<input type="radio"/> Key10	FFFFFFFF	Unused	Enable
<input type="radio"/> Key11	FFFFFFFF	Unused	Enable
<input type="radio"/> Key12	FFFFFFFF	Unused	Enable
<input type="radio"/> Key13	FFFFFFFF	Unused	Enable
<input type="radio"/> Key14	FFFFFFFF	Unused	Enable
<input type="radio"/> Key15	FFFFFFFF	Unused	Enable

Generate dealer key

Restore Coding

Delete key

Enable key

Disable key

Mileage reset

Exit transport mode

Replace FEM/BDC

View help

ECU Info

VIN	WBA1A12070VV26419
ECU type	FEM
Mileage	0
Remote frequency	315
Chassis	F020

The key is being program
program key successful

The key is being program
program key successful

The key is being program
program key successful

VIN WBA1A12070VV26419

ID 969A7133

Key Number 05

Key Type 5

Key Frequency 315

Key Status blank

The new key matched successfully

Copy key without key

Using CG – 100

Read the engine data



9S12Das



AtmelDas



AirBag



ECU



BCM



UniProg



AMP

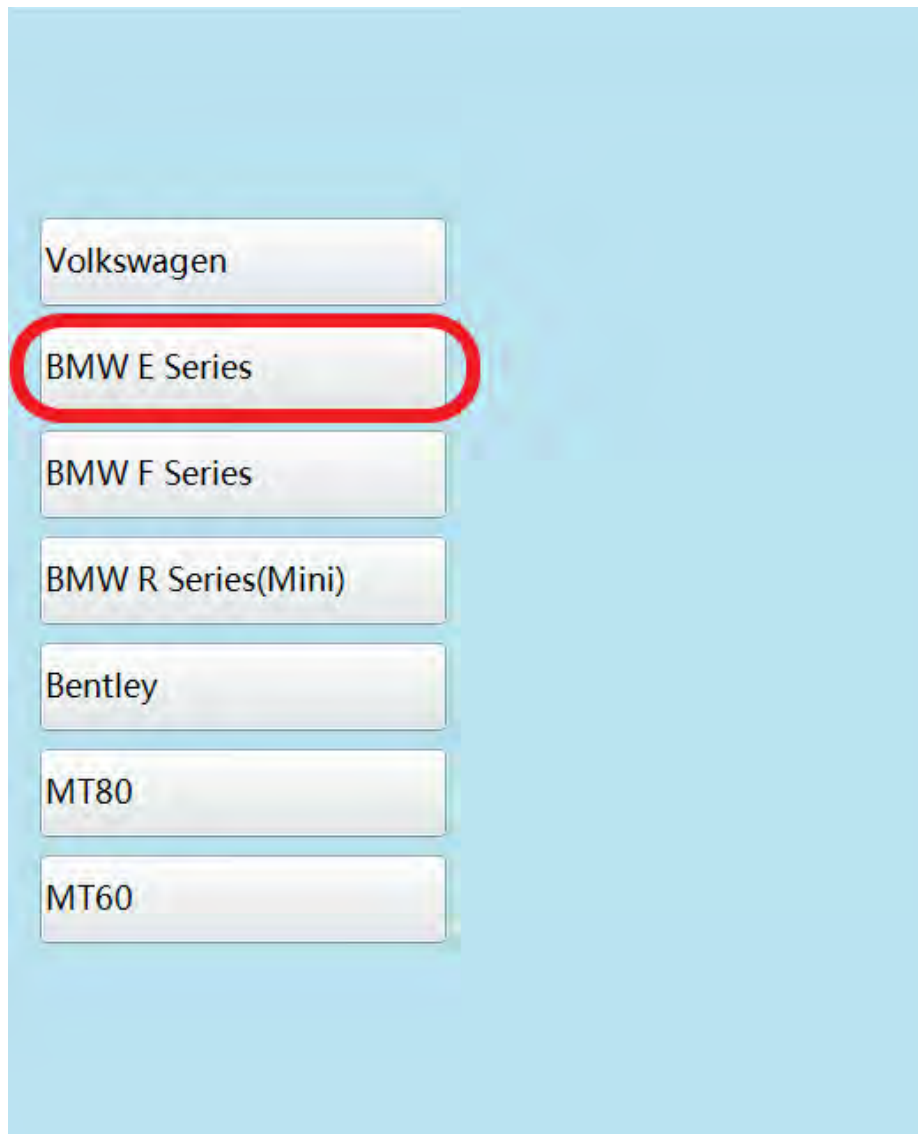


Setting



Other functions

Click to enter "ECU"



Click on the engine model option to enter the current vehicle

ISN:

VIN:

Please use the new adapter

Fullscreen

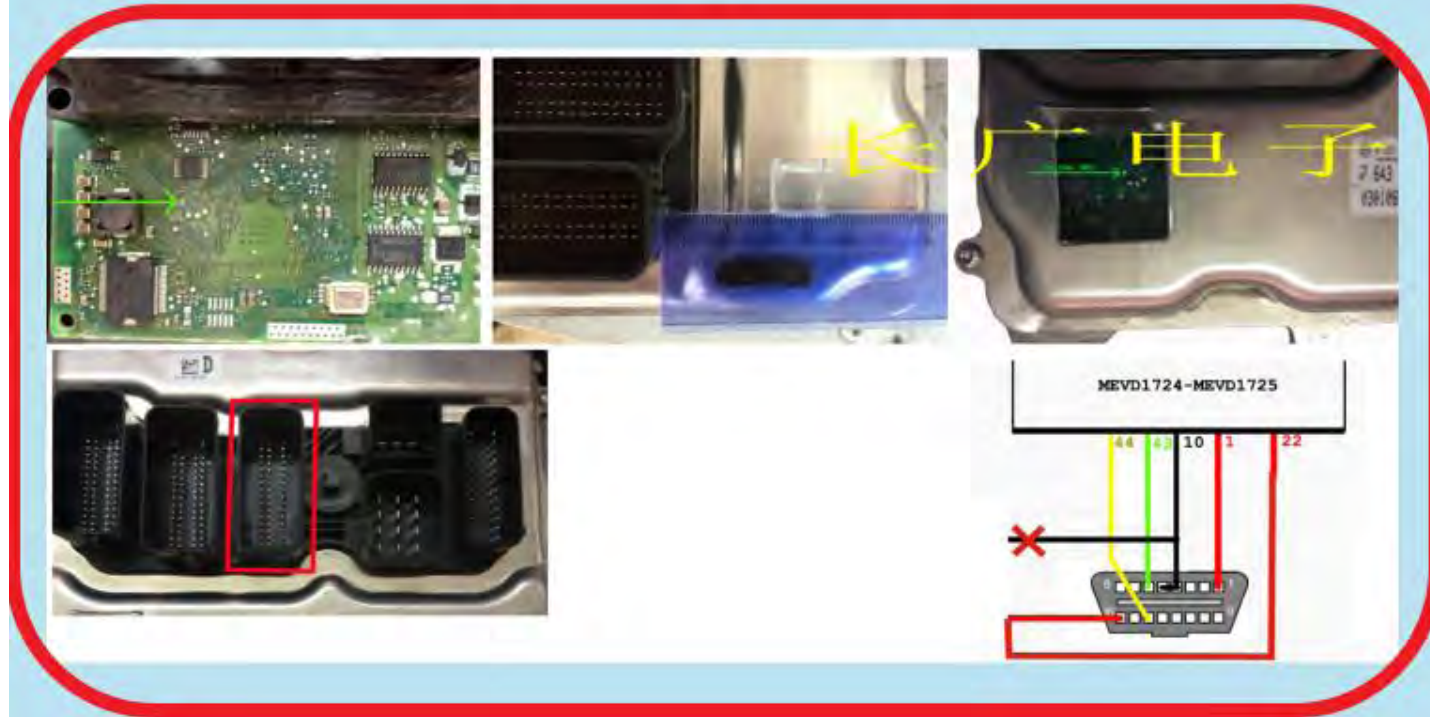
Return

Read EEPROM

Write EEPROM

Read FLASH

Write FLASH

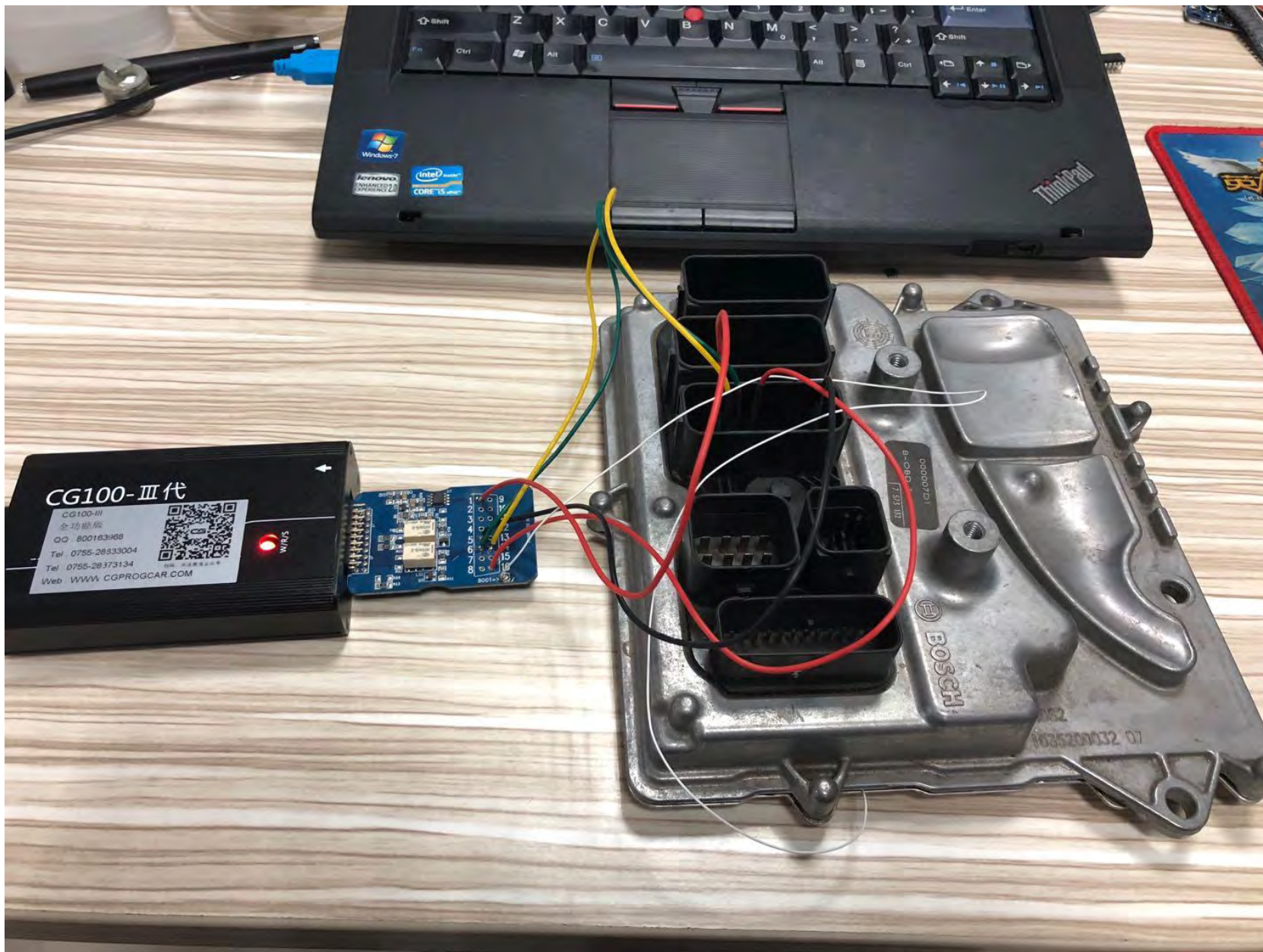


Picture:

CAN Diagram

Wiring Diagram 1

According to the software physical wiring diagram wiring



Physical connection

ISN:

VIN:

Please use the new adapter

Fullscreen

Return

Read EEPROM

Write EEPROM

Read FLASH

Write FLASH



Picture:

CAN Diagram

Wiring Diagram 1

Click read EEPROM

ISN:

VIN:

Please use the new adapter

Fullscreen Return

Read EEPROM

Write EEPROM

Read FLASH

Write FLASH

Picture:

CAN Diagram

Wiring Diagram 1

Device connecting

Reading data, please wait

Start initialize access data memory
Checking the status of the Flash
Reading chip data memory
Reading chip program memory
Is off the power supply
Power off is completed, t

CG100III

Reading succeeded

确定

Read successfully and save the data

ISN: AF4B06BF9ADD586917F8A2099AF59A64
VIN: SCBFN63W1EC094039

Please use the new adapter

Fullscreen

Return

Read EEPROM

Write EEPROM

Read FLASH

Write FLASH



Picture:

CAN Diagram

Wiring Diagram 1

Show ISN and VIN

FEM/BDC Key Match Feature version:000e

HWEL_00000792_000_004_010	<input type="radio"/> Key1	6F790133	Used	Enable
HWAP_00000F26_255_255_255	<input type="radio"/> Key2	11940133	Used	Enable
HWAP_00000F2B_255_255_255	<input type="radio"/> Key3	6B784233	Used	Enable
HWAP_00000F2C_255_255_255	<input type="radio"/> Key4	69A77133	Used	Enable
HWAP_00000F2D_255_255_255	<input type="radio"/> Key5	2C833C36	Used	Enable
HWAP_00000F2E_255_255_255	<input type="radio"/> Key6	969A7133	Used	Enable
HWAP_00000F30_255_255_255	<input checked="" type="radio"/> Key7	FFFFFFFF	Unused	Enable
HWAP_00000F32_255_255_255	<input type="radio"/> Key8	0DED4B33	Used	Enable
BTLD_00001556_003_102_030	<input type="radio"/> Key9	FFFFFFFF	Unused	Enable
SWFL_0000155E_016_112_010	<input type="radio"/> Key10	FFFFFFFF	Unused	Enable
SWFL_0000155F_000_003_029	<input type="radio"/> Key11	FFFFFFFF	Unused	Enable
CAFD_00000794_016_064_014	<input type="radio"/> Key12	FFFFFFFF	Unused	Enable
	<input type="radio"/> Key13	FFFFFFFF	Unused	Enable
	<input type="radio"/> Key14	FFFFFFFF	Unused	Enable
	<input type="radio"/> Key15	FFFFFFFF	Unused	Enable

Generate dealer key

Restore Coding

Delete key

Enable key

Disable key

Mileage reset

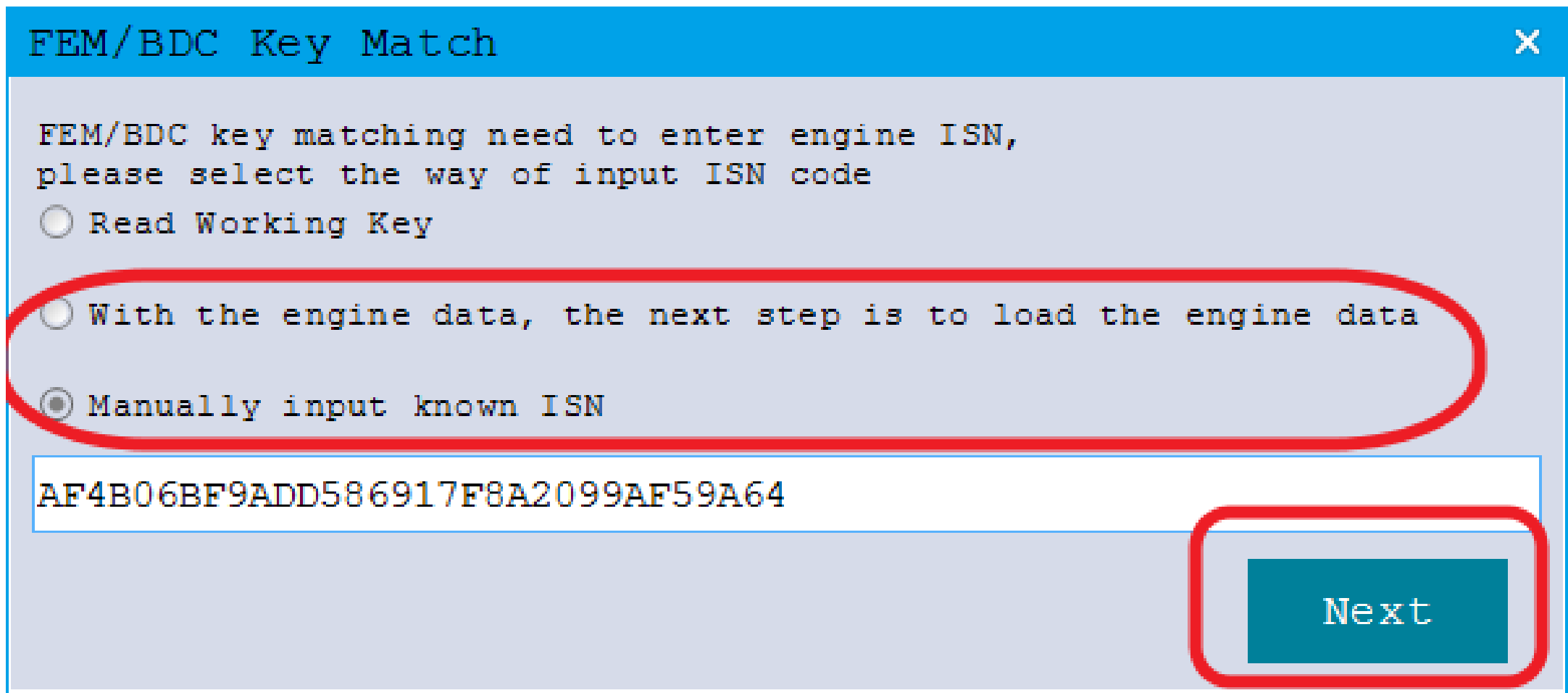
Exit transport mode

Replace FEM/BDC

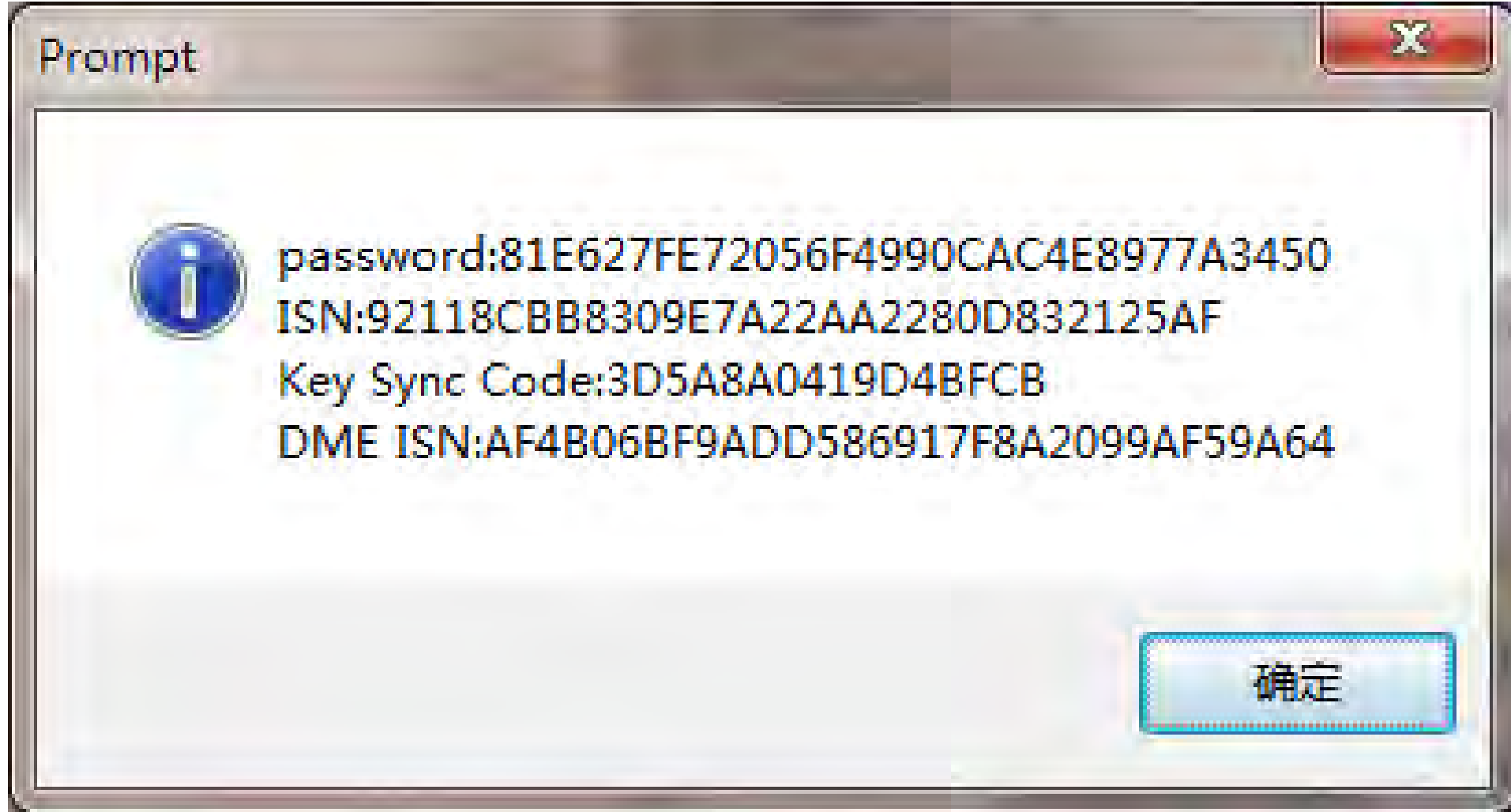
View help

ECU Info		The key is being program program key successful The key is being program program key successful The key is being program program key successful	VIN	WBA1A12070VV26419
ECU type	FEM		ID	969A7133
Mileage	0		Key Number	05
Remote frequency	315		Key Type	5
Chassis	F020		Key Frequency	315
			Key Status	blank

Return to cg-di, select unused key bits, and click "generate dealer keys"



**Click on the next item that you select and click next
(Manually input known ISN)**



Check the information and click ok

FEM/BDC Key Match Feature version:000e

KeyInfo	Key	Used	Enable
<input type="radio"/> Key1	6F790133	Used	Enable
<input type="radio"/> Key2	11940133	Used	Enable
<input type="radio"/> Key3	6B784233	Used	Enable
<input type="radio"/> Key4	69A77133	Used	Enable
<input type="radio"/> Key5	2C833C36	Used	Enable
<input type="radio"/> Key6	969A7133	Used	Enable
<input checked="" type="radio"/> Key7	FFFFFFF	Unused	Enable
<input type="radio"/> Key15	FFFFFFF	Unused	Enable

Generate dealer key
Restore Coding
Delete key
Enable key
Disable key
Mileage reset
Exit transport mode
Replace FEM/BDC
View help

ECU Info

VIN	WBA1A12070VV26419	program key successful	VIN	
ECU type	FEM	The key is being program	ID	00000000
Mileage	0	program key successful	Key Number	03
Remote frequency	315	The key is being program	Key Type	0
Chassis	F020	program key successful	Key Frequency	0
		The key is being program	Key Status	blank

Keep the new key near the key sensor area below the steering wheel



Place new key

FEM/BDC Key Match Feature version:000e

```

HWEL_00000792_000_004_010
HWAP_00000F26_255_255_255
HWAP_00000F2B_255_255_255
HWAP_00000F2C_255_255_255
HWAP_00000F2D_255_255_255
HWAP_00000F2E_255_255_255
HWAP_00000F30_255_255_255
HWAP_00000F32_255_255_255
HWAP_00001263_255_255_255
BTLD_00001556_003_102_030
SWFL_0000155E_016_112_010
SWFL_0000155F_000_003_029
CAFD_00000794_016_064_014

```

KeyInfo			
<input type="radio"/> Key1	6F790133	Used	Enable
<input type="radio"/> Key2	11940133	Used	Enable
<input type="radio"/> Key3	6B784233	Used	Enable
<input type="radio"/> Key4	69A77133	Used	Enable
<input type="radio"/> Key5	2C833C36	Used	Enable
<input type="radio"/> Key6	969A7133	Used	Enable
<input checked="" type="radio"/> Key7	D148EA35	Used	Enable
<input type="radio"/> Key8	0DED4B33	Used	Enable
<input type="radio"/> Key9	FFFFFFFF	Unused	Enable
<input type="radio"/> Key10	FFFFFFFF	Unused	Enable
<input type="radio"/> Key11	FFFFFFFF	Unused	Enable
<input type="radio"/> Key12	FFFFFFFF	Unused	Enable
<input type="radio"/> Key13	FFFFFFFF	Unused	Enable
<input type="radio"/> Key14	FFFFFFFF	Unused	Enable
<input type="radio"/> Key15	FFFFFFFF	Unused	Enable

Generate dealer key

Restore Coding

Delete key

Enable key

Disable key

Mileage reset

Exit transport mode

Replace FEM/BDC

View help

ECU Info		program key successful		VIN WBA1A12070VV26419	
VIN	WBA1A12070VV26419	The key is being program		ID	D148EA35
ECU type	FEM	program key successful		Key Number	06
Mileage	0	The key is being program		Key Type	5
Remote frequency	315	The key is being program		Key Frequency	315
Chassis	F020	program key successful		Key Status	blank

New key programming success