VVDI – MB TOOL User Manual

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1.Document Declaration

Please view the following declaration carefully:

- VVDI MB TOOL User Manual can help you maintenance vehicles with VVDI MB TOOL device. Please DON'T used for illegal purpose, Please follow the national law
- VVDI MB TOOL User Manual is written by VVDI-MB, please DON'T used for commercial purposes without authorize
- VVDI MB TOOL User Manual can help you how to use VVDI MB TOOL software, please view carefully
- Any illegal use VVDI MB TOOL User Manual, illegal use VVDI MB TOOL device, The user should take all risks, the company does not assume any responsibility

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2. Overview

2.1. Noun explanation

- Mercedes Benz: A car brand come from German, we simply use MB, BENZ instead
- **EIS**: Sometimes we call it EZS. The immobilizer system for MB cars
- ESL: Sometimes we call it ELV
- Chassis: Mainly use to distinguish car platform, the same platform will have same EIS type, example: W204, W216 etc

2016-05-29 Ver: 1.5

2.2. VVDI – MB TOOL Hardware



- 1. VVDI-MB TOOL device
- 2. IR adaptor
- 3. USB cable
- 4. NEC adaptor 1
- 5. NEC adaptor 2
- 6. NEC adaptor base PCB
- 7. K Line in OBD line
- 8. OBD line
- 9. VVDI-MB NEC Key Adaptor (not standard component, need buy extra)

10. Connector for W164, W209, W211 without gateway (not standard component, need buy extra)

11. VVDI-MB W204 ELV adaptor (not standard component, need buy extra)



2.3. Mainly function

Read Write Key

- 1. Read key basic information
- 2. Key with BE version, we can read password from key via IR directly. Of course, renew key, write new key file via IR is also supported
- 3. Support IR repair key, repair key not work via IR
- 4. NEC adaptor can read key password from NEC v51, v57 version
- Support write and renew (NEC adaptor) NEC key versions following: v51, v57

v28, v35, v40

- v03, v06, v08 (Keyless Go)
- v05, v07, v09 (Keyless Go)
- v59, v61 (Keyless Go)

EIS Tools

- 1. Support read EIS data via OBD and IR adaptor
- 2. Under OBD mode, we provide auto detect EIS type for CAN protocol
- 3. Support read W164, W209, W211 EIS via OBD without gateway support
- 4. Support read old Motorola EIS (HC05, HC08, K-Line) password via IR directly
- 5. Support renew EIS, make 2nd hand EIS to new one (online)
- 6. Support replace EIS, you can write original EIS data to new EIS via IR
- 7. Support write new VIN
- 8. Support clear TP
- 9. Support disable key position
- 10. Support personalize W204 ESL
- 11. Support test EIS, ELV, working key status
- 12. Support type:

W164 W164 2009-W166, 197, 212, 218, 246 W169, 209, 211 W172, 204, 207, 212(old, with ELV) W203, 463, 639 (K) W202, 208, 210 (K) W215, 220 (K) W230 (K) W216 W221 W639 2009-



- Password Calculation: support working key and lost all key
 - 1. Password calculation can get the key password from working key and EIS(online)
 - 2. CAN protocol EIS all support password calculation (support BGA keys and other NEC keys)
 - **3.** We also support calculate password for NEC v51, v57 keys. No soldering.
 - **4.** Data acquisition time depends on the key version. It needs about 3.5 minutes -13 minutes, BGA version need about 5 minutes
 - 5. Calculate time in server: 30 seconds 1 minute
 - 6. Now VVDI-MB TOOL is the fastest tool for password calculation
 - 7. Lost all key password calculation: Now we support calculate password for W166, W212, W246, W212(old, with ELV) while lost all key
 - 8. Support type (have working key):

W164 W164 2009-W166, 197, 212, 218, 246 W169, 209, 211 W172, 204, 207, 212(old, with ELV) W216 W221 W639 2009-

• Prepare Key File

- 1. Prepare key file means prepare the key file which you will write to new key(online)
- 2. Prepare key file need about 20 seconds
- 3. Support VVDI-MB type EIS data and old Motorola EEPROM dump

♦ ESL Tools

- 1. Support read ESL data via OBD (K-Line)
- 2. Support renew ESL, make 2nd hand ESL to new one (online)
- 3. Support replace ESL, you can write original ESL or EIS data to new ESL
- 4. Support write new VIN
- 5. Support clear TP
- 6. Support auto personalized ESL, no need renew EIS
- 7. Support check ESL damage status
- 8. Support repair W204 ESL NEC chip(fatal error: 0xAA) and Motorola ESL chip
- 9. Support renew VVDI-MB W204 emulator

Renew ECU/Gearbox

1. This function support renew, write VIN, personalization operation for module ECU, Gearbox, ISM etc



Special Instructions (2016.05.29)

- 1. The newest cars after 2015 with FBS4 EIS don't support read data and password, we are researching it
- 2. Renew EIS and renew ESL require erase password. Now search erase password have 85% success rate. We are building a new server for erase password. It will support all erase password after new server finished
- 3. Auto personalized ESL: Now only support auto personalized ESL with key password all 00, we will support all the passwords in future (You can use "Personalize W204 ESL" instead before we publish new version). In ESL window, you can input crypto password for auto personalize (no need renew EIS). Crypto password need calculate with other tools



3.Options

3.1. Language

Please manual set user language after first run program Support following languages:

- Chinese (Simplified)
- English

3.2. User Manual

Open user manual folder

3.3. Open Log

Open log folder

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4. Read Write Key

Read Write Key support read key basic information, write key file, renew/write NEC key (Support Keyless Go). BE keys can read password directly via IR, renew BE key, write new key file to BE key

NEC adaptor support v51, v57 key password

4.1. IR mode

Identification key: Support read key basic information: SSID, counter, remain times, use times, key number, status, version, mark values etc

BE key: Key version is BE, support read password and key eeprom stored in BE key, write new key file to make a working key, **renew used BE key to new one** etc

If working key is BE version, you can read password from key directly, no need read password from EIS

NEC&BGA Keys: Write key file to new original keys or erased keys via IR

Write mark values: Only BE key support, you can write information for yourself

Copy key password: You can copy the password to clipboard after success read key password

Repair key via IR: When identification key, you can only get SSID, Status, Version, then you can repair this key via IR

🜌 VVDI – IB TOOL V	72.0.5 Remain	ning Synchronization Time: 28 days					
Options Special Function Process Wizard Update Online							
	-Key Information -	Function					
2	SSID	0AE1B74E Mode OIR ONEC Adaptor					
Read Write Key	Counter	2F1F77 Type BE key					
	Remain times	196599					
	Use times	8 Identification key Diagram					
EIS Tools	Key number	3					
1200	Status	14EC Used Read BE key password					
Password Calculation	Version	BE					
	Mark values	FFFFFFF730C Write Save Key file					
	Key Password	AF5ECCFC6EE4635B Copy Load Key file					
Prepare Key File	Key EEPROM						
a - 12	0C 72 20 EB 2 FB BF CC 3D (FC 6E E4 63 5B 0A E1 B7 4E E6 86 99 27 DF DF 98 72 8D 34 9C 5D BD B0 E0 C4 74 90 B5 7B F0 02 67 4F 41 B0 43					
ESL Tools		92 2E 44 F5 02 0E 12 7B 45 34 75 2F					
		C0 84 A1 87 CA C3 FC 73 AE 74 FE FC Renew OF 6C 39 75 80 CF 77 13 AA BF 4F 1D					
		3F 5C 8F 2F 65 33 FA 77 13 73 00 02					
Renew ECU/Gearbox		FF FF FF FF 73 0C FF FF FF FF 14 EC					
		100%					
Reading data success.							

4.2. NEC Adaptor mode

Renew/Write new key file via NEC adaptor

Support versions:

v51, v57

v28, v35, v40

v03, v06, v08 (Keyless Go)

v05, v07, v09 (Keyless Go)

v59, v61 (Keyless Go)

The above keys all with NEC chip (not BGA type). You need solder the NEC chip from key and place it to NEC adaptor

For NEC v51, v57 version, support read password from working key directly, no need read password from EIS

For all NEC types, you must use "Identification key" to read one time before renew/write key

🜌 VVDI – IB TOOL V	2.0.5 Remain	ing Synchronization Tim	ie: 28 days			
Options Special Function	n Process Wizard	Vpdate Online				
	Key Information -			Function		
0	SSID	98DB7DB8		Mode OIR ONEC Adaptor		
Read Write Key	Counter			Type v51, v57		
	Remain times					
	Use times			Identification key Diagram		
EIS Tools	Key number					
1.03	Status	14EC Used		Read v51,v57 key password		
Password Calculation	Version	57				
	Mark values			Save Key file		
	Key Password	5C4DAECBFB71B006 C	Гору			
Prepare Key File	Key EEPROM			Load Key file		
	E6 E0 F1 20 1 B1 1E 69 19 8	E FB 71 B0 06 98 DB 7D B8 1 41 B9 DA 55 03 E2 20 3F E B3 89 34 54 94 4A 51 9B	7 69 55 0A 3 D9 ED 10	Write		
ESL Tools		2 2E D2 94 6C 74 8A 45 4C A 6E B0 8A 27 1E 20 33 95				
	89 C8 54 1F 3 CD 7F E9 D7 7	4 EC B9 19 D8 OC 05 C9 7B 5 8F F3 78 EE 7F FF FF FF	3 7C 53 13 7 FF FF FF	Renew		
Renew ECU/Gearbox	FF FF FF FF F	7 AC CC DD AE A2 7C 7F FF F FF FF FF B0 50 97 93 98 F FF FF FF 73 0C FF FF FF	3 DB 7D B8	Repair key via IR		
Reading data success.				100 %		



How to place key NEC chip to adaptor via read/write/renew key via NEC adaptor:







5.EIS Tools

EIS data can prepare key file

VVDI MB TOOL support 2 mode to read EIS data: OBD and IR adaptor

This picture is read from W246 EIS

🜌 VVDI – IB TOOL V	72.0.6 R	emaining Synchroniza	ntion	Time: 28 days				
Options Special Function Process Wizard Update Online								
	- EIS Basic In	formation	_		EIS Function			
2	SSID	08BB90B3		🗹 Initialized	Mode 💿 OE	ID 🔘 IR		
Read Write Key	EIS P/N	246 905 99 00]	TP Cleared	Chassis	Allow user		
<u> </u>	КМ	12800]	Personalized	W166, 197, 212	, 218, 246 🛛 👻		
and the second s	VIN		Write	Activated	Read	EIS data		
EIS Tools	EIS Key Inf	ormation		1				
er.	Key Pass.	000000000000000000000000000000000000000	Paste	Previous used key Key 4	E ave	EIS data		
13 F	Erase Pass.	00000000000000000	Get	Last used key	Save			
Password Calculation	Special key	413492478C280525]	Key 1	Load	-IS data		
			Used -	Disabled				
	Key 1	B1CBE8C1179F6893			Write	EIS data		
Prepare Key File	Key 2	556A97B69480572D			vvnice	ET2 (1919		
100	Key 3	61B570A285381EF6			Pop	NUT ETC		
	Key 4	BA28464336927165			Renew EIS			
ESL Tools	Key 5	D108719486687467			Clear TP	Disable Key		
	Key 6	FB48A71F765C03F8				Disable Key		
	Key 7	AFA76BD53342DA8E			Personalize W204	Test EIS status /		
Renew ECU/Gearbox	Key 8	7BEFC8C44BD8DEEE			ESL	Working key		
100%								
Reading data success.						13070		

5.1. EIS type

Support types:

W164 W164 2009-W166, 197, 212, 218, 246 W169, 209, 211 W172, 204, 207, 212(old, with ELV) W203, 463, 639 (K) W202, 208, 210 (K) W215, 220 (K) W230 (K) W216 W221 W639 2009-

5.2. Functions

- 1. **Mode**: Support OBD and IR adaptor read EIS. You need connect OBD line to car in OBD mode, IR mode only need IR adaptor
- 2. Chassis: EIS type, support auto detect CAN protocol EIS under OBD mode
- 3. Allow user: When you select this option, allow input key information, password, VIN manually
- 4. Read EIS data: Read basic information and key information from EIS. Attention: You can read password via IR directly, select IR mode, EIS is old Motorola type HC05, HC08 (K-Line), support add key or lost all key
- 5. **Save EIS data**: Save the read EIS data. Support save 2 types: VVDI-MB type and HC05 type
- 6. Load EIS data: Load VVDI-MB type EIS data
- 7. Write EIS data: First you should read EIS or load EIS data, second write EIS data to new EIS. This function can use to replace EIS. Attention: Only support under IR mode, but you must connect OBD line to car
- 8. **Renew EIS**: Input correct key password and erase password, renew 2nd hand EIS to a new one. Attention: Only support under IR mode
- 9. Clear TP: This function only use to close transport protection. Once the EIS activated, this option will be always selected even renew EIS. The EIS without transport protection closed doesn't support write data
- 10. **Disable Key**: This function can disable key position
- 11. Personalize W204 ESL: This function can synchronize key information from EIS to W204 ESL, use for change W204 ESL. Before run this function, make sure "EIS status: Personalized selected, Activated not selected", "ESL status: Activated not selected". After success, ESL will have personalized selected. Open ignition with working key will activate ESL automatically. Attention: Only support under OBD mode, and chassis number select W172, 204, 207
- 12. Test EIS status/Working key: This function can test EIS, ELV and working key status

Test EIS s	tatus	:/ •	orkir	ng ke	y				\mathbf{X}
EIS Status									
Test EIS and ELV working or not with working key support ON: key inserted; 15R: ACC, 15: ignition ON; 50: engine									
	ON	HO	15R	15	50				_
Meh. status	✓							Stop	
Can status	✓								
Test working key 1. Test working key status 2. Require connect OBD line to car before test									
Testing EIS									

5.3. EIS Basic Information

SSID:	The identification ID in EIS, use to recognize key, something like key ID				
EIS P/N:	EIS part number, the front 3 characters is the main type, example: W164,				
	W166, W246 etc				
KM:	KM stored in EIS				
VIN:	VIN stored in EIS				
Write VIN:	Under OBD mode, we support write VIN to ESI without activated status				
Initialized: Selected means EIS was already initialized. All EIS include new one					
	selected status				
TP Cleared:	Selected means transport protection was closed. You can't write data to EIS				
	without transport protection closed				
Personalize	d: Selected means already written car information, insert working key will				
	activate EIS automatically				
Activated:	Selected means this EIS already have working key. You can't write data				
	to EIS with activated status				

5.4. EIS Key Information

Key Password: Key password use for EIS to recognize working key. It is also t									
password when prepare key file (IMPORTANT)									
Paste key passw	Paste key password: You can paste your password here directly								
Erase Password	Renew activated EIS to un-activated status, make EIS allow write new								
	data. Attention: Renew EIS not only need erase password but also key								
	password								
Get erase passw	ord: First read EIS, then press button "Get", get erase password online								
Special Key:	A special key stored in EIS								
Previous used k	ey: The previous used key in EIS, it is always different from last key								
Last used key:	The last used key in EIS. Example: insert working key with 3, 3, 1,								
	1: the lasted used key is 1, the previous used key is 3								
Key 1 – Key 8 :	Key track (hash) for every key. Attention: key track is not a fixed value.								
	When you insert a working key to EIS, it's key track will changed. You								
	can verify working key status though this method								
Key used:	Selected means this position have a working key								
Key Disabled:	Selected means this position was disabled, not accept any key. Now we								
	don't support enable key								

6. Password Calculation

6.1. Overview

Password calculation support working key mode and lost all key mode. <u>WORKING</u> <u>KEY MODE NEED PAY 1 TIME FOR SUCCESS CALCULATION. LOST ALL KEY NEED PAY 2 TIMES</u> <u>FOR SUCCESS CALCULATION</u>

Password calculation – working key: can get key password through EIS and working key (online)

CAN protocol EIS all support password calculation

Support BGA keys and other NEC keys

Support calculate password for NEC v51, v57 keys. No soldering, safe method. Data acquisition time depends on the key version. It needs about 3.5 - 13 minutes BGA version need about 5 minutes, some versions only need 3.5 minutes Calculate time in server: 30 seconds – 1 minute

Password calculation – lost all key: support W166, W212, W246, W212(old with ELV) EIS for password calculation while lost all working key

Lost all key data acquisition time depends on EIS type, It needs about 3.5-8 minutes Lost all key calculate time in server: 30 seconds – 1 minute

😿 VVDI – 💵 TOOL V2	.0.5 Remaining Synchronization Time: 28 days				
Options Special Function	Process Wizard Update Online				
	Password Calculation				
	Step 1: Select working key, communicate mode and chassis	Select this if lost all working key			
Read Write Key	Attention: Connect device OBD line to car	Mode OBD OIR			
	Step 2: Press "Data Acquisition" to start with following steps	Chassis			
	 1. Insert working key to ignition, waiting 5 seconds 	W164 🗸			
EIS Tools	 2. Take out working key, insert again, last insert to IR reader, v 3. Data acquisition 				
Sol .	4. Insert working key to ignition, waiting 30 seconds				
A BE	 5. Insert working key to device IR reader, wait end 6. Save acquisition data 	Data Acquisition			
Password Calculation					
	Step 3: Press "Upload Data" to send acquistion data	Upload Data			
Prepare Key File	Step 4: Press "Query result" to get result Auto reflash	Query result			
united 19.	Key Password 8016380 CD08E1D75 Copy Stop acquisite after success	Query result			
D - HE		Filename			
ESL Tools		- VM_OBD_08BB90B3_1.dat			
Renew ECU/Gearbox					
		<u> </u>			
L		0%			

6.2. Support type

- Add key support type
 W164
 W164 2009 W166, 197, 212, 218, 246
 W169, 209, 211
 W172, 204, 207, 212(old with ELV)
 W216
 W221
 W639 2009-
- Lost all key support type
 W166, 197, 212, 218, 246
 W212 (old with ELV)

6.3. Functions

Mode: OBD and IR adaptor, mode use for communicate with EIS

Chassis: Select chassis number, you can detect it with auto detect in EIS Tools **Data Acquisition**:

Press "Data Acquisition", it will continue with following steps automatically

- 1. Insert working key to ignition, waiting 15 seconds
- 2. Insert working key to device IR reader, verify key and car
- 3. Data acquisition
- 4. Insert working key to ignition, waiting 30 seconds
- 5. Insert working key to device IR reader, wait end...
- 6. Save acquisition data

Upload Data: Upload saved acquisition data to server for calculate password. Attention: Once success calculate password for one SSID, the server will not accept calculate the acquisition data with same SSID in 2 hours. **After 2 hours, acquisition data with same SSID upload to server will start with a new task**

Query result: Query server calculation result. The password will fill in key password area automatically after success calculation. Use "Copy" copy password to clipboard

Auto reflash: Program will auto re-flash server result until there's no task for this device. You can start data acquisition once more while auto reflash starting

Stop acquisite after success: If you are run data acquisition while auto reflash running, program will stop the acquisition progress when find correct password

6.4. About query result status

Query result support query calculation result in 24 hours, others don't support Query result will display Time, SSID, Status, Filename (name when upload to server) Status has the following types:

- 1. Queuing: number x, require about y minutes, means your task need y minutes
- 2. Processing: requires 1 minutes, means your task need 1 minute to finish
- 3. Password: xxxxxxxxxxx (Free), means success find password, "Free" show this task is calculated for free or this task already success calculated before
- 4. Discard: Once you success calculate the password, in 2 hours, the upload acquisition data with same SSID will discard
- 5. Already upload: means the server already have this file in queuing
- 6. Pay for password calculation before upload: means your device doesn't have authorize for calculation. Contact your dealer and pay for password calculation
- 7. Failed: means this task failed to get password, you can run data acquisition again. Failed task is always free



7. Prepare Key File

Prepare key file means prepare the key file which you will write to new key (online)

- Step 1: Load EIS file with password. The file can auto detected by VVDI-MB TOOL Support VVDI-MB type and old Motorola EEPROM dump file If the loaded EIS don't contain key password, paste your password with "Paste" After load file key position show blue means it is used After load file key position show green means it is unused After load file key position show gray means it is disabled
- Step 2: Press "Prepare Key File". This function need online, about 20 seconds It will prepare the key file after success find in server After prepare key file, key position show green means success After prepare key file, key position show red means failed

🜌 VVDI – IB TOOL V	2.0.0 Remaining Sync	chronizatio	on Time:	28 day	s	🛛		
Options Special Function Process Wizard Update Online								
(a)	Step 1	File type	VVDI	MB type	e			
Read Write Key	Load EIS file with	SSID	08B	B90B3				
	password	Password	8016380	CD08E1	D75 Paste			
EIS Tools	Support motorola EEPROM dump	Key number	Key	1	~			
100		Key hash	F304BB4	F2DEF6	5E1	Load EIS file		
Password Calculation								
Prepare Key File	Step 2 Select key position for key file	✓ Select all	 ✓ Key 1 ✓ Key 2 ✓ Key 3 	•	✓ v051 ✓ v041			
a	Select key file format		Key 3	•	₩v011			
ESL Tools	Press button "Prepare		Key 5	٠				
a total a	Key File"		Key 6	•				
			Key 7	•		Prepare Key File		
Renew ECU/Gearbox			Key 8	•		. repare noy i no		
	L					100%		
C:\W246\VVDIMB_EIS_OB	ID_08BB90B3_pass.bin							



8. ESL Tools

ESL Tools ca	n read/write/renew	ESL via	OBD(K-Line).	Adaptor also support

	V2.0.9 Remaining Synchronization	Time: 21 days		
Options Special Functi	on Process Wizard Update Online			
	ESL Basic Information		ESL Function	
	ESL P/N	🔲 Initialized	Mode 💿 OBD	Adaptor
Read Write Key	ESL S/N	TP Cleared	Chassis	Allow user 🗌
	HW SW	Personalized	W204, W207, W2	212 💌
	VIN	Activated	Read ES	L data
EIS Tools	ESL Key Information			
100	Key Pass. Paste	SSID	Save ES	L data
	Erase Pass Get			
Password Calculation	Special key		Load ES	L data
	Key 1		Load VVDI-M	IB EIS data
Prepare Key File	Key 2			
	Кеу З		Writ	te
	Key 4		Auto clear TP and	personalized
ESL Tools	Кеу 5			·
	Кеу б		Renew ESL	Clear TP
	Key 7			W204 ESL
Renew ECU/Gearbox	Key 8		Check ESL damage	Emulator
			·	100%

8.1. Functions

- 1. **Mode**: Now only support OBD (K-Line). If ESL was on car, you need connect the K-Line(find from device OBD head) to ESL separately
- 2. Chassis: ESL type
- 3. Allow user: If select this option, allow input key track, password, VIN manually
- 4. Read ESL data: Read basic information and key information from ESL
- 5. Save ESL data: Save the read ESL data
- 6. Load ESL data: Load ESL data read by VVDI-MB TOOL
- 7. Load VVDI-MB EIS data: Load VVDI-MB type EIS data
- 8. Write: Write the key information (shown in window) to ESL
- 9. Auto clear TP and personalized:

If you select this option, it will close transport protection and personalized ESL automatically while write data. Attention: Correct key password and EIS SSID should placed with this option

- 10. **Renew ESL**: Input correct erase password, renew 2nd hand ESL to a new one
- 11. Check ESL damage: Most W204 ESL will damage with lock status. You can test it
- 12. Clear TP: Close transport protection in new ESL. The ESL without transport protection closed doesn't support write data

- Unlock W204 ESL: Fix the locked ESL to normal one (NEC chip fatal error: 0xAA). This function need buy an extra NEC ELV adaptor, support W204 ESL and old Motorola ESL. You need select Adaptor option in ESL window
- **14. W204 ESL Emulator**: Support renew VVDI-MB ESL emulator, the emulator will finish all the W204 ESL function. Before you use emulator, please renew it first, then you can do personalize. Connection is same with original W204 ESL

204 ESL Emulator	
Press Renew make the emulator to new one	Renew
Read crypto password stored in W204 ESL emulator Warning: This password is cyrpto data, it is not the key passowrd	Read crypto password

8.2. ESL Basic Information

ESL P/N:	ESL part number, the front 3 characters is the main type, example: W204
ESL S/N:	ESL serial number
HW:	ESL hardware version
SW:	ESL software version
VIN:	VIN stored in ESL. Attention: only last 14 characters
Write VIN:	Support write VIN to ESL without activated status
Initialized:	Selected means ESL was already initialized
TP Cleared:	Selected means TP was cleared. You can't write data to ESL without TP
	cleared
Personalize	d: Selected means already written car information, insert working key will activate ESL automatically
Activated:	Selected means this ESL already have working key. You can't write data to EIS with activated status

8.3. ESL Key Information

Key Password: Key password use for EIS to recognize working key. It is also stored in ESL

Paste key password: You can paste your password here directly

Erase Password: Renew activated ESL to new one

Get erase password: First read ESL, then press button "Get", get erase password onlineSpecial Key:A special key stored in ESL. Normally it is same with EIS special keySSID:You can't read this from ESL. When you write ESL, it need this valueKey 1 – Key 8:Key track (hash) for every key. Normally it is same with EIS key track

9. Renew ECU/Gearbox

This function support renew, write VIN, personalization operation for module ECU, Gearbox, ISM etc

🜌 VVDI – IB TOOL V	2.0.7 Remaining Synchronization Time: 30 days	
Options Special Functio	n Process Wizard Update Online	
Read Write Key EIS Tools EIS Tools Password Calculation Prepare Key File ESL Tools ESL Tools Renew ECU/Gearbox	Module Information Function VIN: WDB2110542A900220 Module Gearbox P/N: 033 545 73 32 Module Gearbox S/N: 0084485510 Read Initialized: Yes Save File Personalized: Yes Load File Key 1 : F4B5ED2AAE21A3BF Key 2 : E0144C48307A897C Key 3 : 91E73FD4BD9CDDC6 Key 4 : 27A9A30254171CBE Key 5 : 6170FA8EC80891F3	rite
		100%
Reading data success.		

9.1. Functions

- 1. Module: Support ECU, Gearbox, ISM etc
- 2. **Read**: Read key information, unit status and other diagnostic information. Require connect unit with CAN separately
- 3. Save File ...: Save the read data to file
- 4. Load File ...: Load the saved file
- 5. Write VIN: Write VIN to unit
- 6. Get Erase Password: Get erase password online after success read module information
- 7. **Renew**: Input correct erase password, renew 2nd hand unit to a new one. Require connect unit with CAN separately
- 8. Personalization: Personalize unit to new car. Requires module placed on car
- 9. Advanced function: Only gearbox has this function. Support renew gearbox without erase password, see chapter 9.2



9.2. Advanced Functions

Support Read/Write gearbox special EEPROM. Support set unit status while write data. That means you can renew gearbox without erase password

Advanced function	
EPROM	
47 45 41 52 42 4F 58 45 45 50 00 00 00 00 00 00	Read
00 00 03 00 04 02 00 00 00 00 00 00 00 00 00 00 00 00	
30 7A 89 7C 91 E7 3F D4 BD 9C DD C6 27 A9 A3 02	Save File
54 17 1C BE 61 70 FA 8E C8 08 91 F3 93 BD 7B 22	
12 47 DA 77 3B 68 6A 41 17 B6 4E 73 A8 A1 14 EC	
55 41 54 E8 8A C9 1D 59 51 CD FC 3F 00 00 00 00 00 00 00 00 00 00 00 00 00	Load File
Set unit status	Write
✓ Initialized ✓ TP Cleared	
Personalized Activated	Exit

- 1. Read: Read module special EEPROM
- 2. Save File...: Save the read EEPROM file
- 3. Load File ...: Load the saved EEPROM file
- 4. Write: Write EEPROM to unit, it will set the selected status to module
- Set unit status: Set unit status, you can set status to unit by write once Set Activated: Will set Initialized, TP Cleared, Personalized, Activated status Set Personalized: Will set Initialized, TP Cleared, Personalized status; not set

Activated status

Set TP Cleared: Will set Initialized, TP Cleared status; not set Personalized, Activated status

Set Initialized: Will set Initialized status; not set Cleared, Personalized, Activated status



10. Process Wizard

Here will provide whole progress for some special function. Example replace EIS and replace ESL etc (Under developing, it will be released soon!)

2016-05-29 Ver: 1.5

11. Update Online

11.1. Update Firmware

- The program will read the newest software version from server automatically
- Update firmware steps:
 - 1) Connect VVDI MB TOOL to PC with USB cable
 - 2) Choose VVDI MB TOOL firmware version from Firmware List
 - 3) Press button Update Online, wait the progress end
 - 4) If failed to get firmware list or get something like "communicate with server error!" while update your device, close antivirus and firewall programs, try again. Change your internet provider once failed again
 - 5) DON'T shutdown your PC or disconnect USB cable while update device

😿 VVDI - IB TOOL V2.0.0 Remaining Synchronization	Time: 27 days
Options Special Function Process Wizard Update Online	
	Update Steps 1. Connect VVDI-MB TOOL to PC with USB cable 2. Choose firmware version 3. Press button "Update Online" to start
Firmware List	Device Information
2.0.0 MB1 Beta v2.0.1 (2015-11-17) * UI modify v2.0.0 (2015-11-16) * MB1 V2.0.0	Image: Device Information
Completed.	0%

• Reflash Firmware List

Update Online Tool will connect to server automatically and download the newest firmware information. You can press reflash picture button if there's no display. After you get information success, will display current support firmware list, the software support by specify firmware and the mainly include update information

• Device Information

After connect VVDI-MB TOOL to PC and install USB drivers, Press button Device Information, will show you VVDI-MB TOOL Serial Number, current firmware version and hardware version etc

• Update Online

After connect VVDI-MB TOOL to PC and install USB drivers, choose you expect firmware version from firmware list, Press button Update Online, wait progress finish (about 3 minutes) (Require internet)

11.2. Update software

- This function require internet support
- Use "Menu ->Update Online->Software Update" to obtain VVDI-MB TOOL latest software version, the software version require firmware version etc. Press Download Link will download the latest software
- If there's no display for software version, shutdown your firewall and antivirus programs, try again

Software Update		×
Khorse	Latest software version	
	Soft version : V2.0.0 Require firmware : V2.0.0	
Automatic Key Cutting Machine 了解更多	Download Link 1	
Completed.		

11.3. Latest Update Information

- This function require internet support
- Use "Menu->Update Online->Latest Update Information" to obtain VVDI-MB TOOL latest update information

11.4. History Update Information

Use "Menu->Update Online->History Update Information" to obtain VVDI-MB TOOL history update information



12. Case Description

12.1. W246 EIS with BGA (79) keys, add new key via OBD

- 1. Insert working key to device IR reader, Press "Identification key", check working key version
 - If key with BE version, you can read password via IR
 - If key with v51, v57 version, you can read password via NEC adaptor, or you can use password calculation
 - Here key version is 79, belong to BGA key. We use password calculation for key password

😿 VVDI – IB TOOL V	72.0.0 Rem	aining Synchronization Tim	e: 28 day	75	
Options Special Function	on Process Wizard	Vpdate Online			
	- Key Information -			- Function	
	SSID	08BB90B3		Mode 💿 IR	O NEC Adaptor
Read Write Key	Counter	240E36		Type Identification	key 💙
	Remain times	149302			
and the second s	Use times	47305		Identificatio	n key
EIS Tools	Key number	1			
1203	Status	14EC Used		Read BE key p	assword
Password Calculation	Version	79			
	Mark values	830A240101FF		Save Key	file
	Key Password	Сору			
Prepare Key File	Key EEPROM			Load Key	file
Cathe R)0 00 00 00 00 00 00 00 00 00 00)0 00 00 00 00 00 00 00 00 00 00			
		0 00 00 00 00 00 00 00 00 00 00		Write	
ESL Tools)0 00 00 00 00 00 00 00 00 00 00)0 00 00 00 00 00 00 00 00 00 00			
(The second seco	00 00 00 00 00	00 00 00 00 00 00 00 00 00 00	00 00		
200)0 00 00 00 00 00 00 00 00 00 00)0 00 00 00 00 00 00 00 00 00 00			
				Renew	
Renew ECU/Gearbox	00 00 00 00 0	0 00 00 00 00 00 00 00 00 00 00	00 00		
					100%
Reading data success.					100%
Reading data success.					

2016-05-29 Ver: 1.5

- 2. Connect device OBD line to car. Select OBD mode, chassis select AutoDetect (CAN)
 - Press Read EIS data. Chassis will turn to specify item after success read
 - ♦ Follow steps 1->2->3->4 in picture and save EIS data
 - ♦ It will save 2 files, VVDI-MB type and HC05 type
 - ◆ There's default file name when save EIS data. You'd better keep it

🜌 VVDI - IB TOOL V	2.0.0	Remaining Synchron	nizati	on Time: 28 day	7S	
Options Special Functio	on Process W	izard Update Online				
	- EIS Basic In	formation			EIS Function	
2	SSID	08BB90B3]	🗹 Initialized 🖊 🔶	Mode OBD	IR
Read Write Key	EIS P/N	246 905 99 00]	TP Cleared	Chassis Allo	ow user 🗌
	КМ	12800]	Persona Ded	W166, 197, 212, 218, 246	· 🖌
	VIN		Write	Activated	Read EIS data	
EIS Tools	EIS Key Inf	ormation				
io at	Key Pass.	000000000000000000000000000000000000000	Paste	Previous used key Key 3	Save EIS data	
A de	Erase Pass.	00000000000000000	Get	Last used key	Save EIS data	
Password Calculation	Special key	413492478C280525]	Key 1	Load EIS data	
			- Used -	Disabled		
	Key 1	F304BB4F2DEF65E1]
Prepare Key File	Key 2	556A97B69480572D			Write EIS data	
1.1	Key 3	61B570A285381EF6			Renew EIS	
	Key 4	30E3243E4DF17B58			Kellew Eta	
ESL Tools	Key 5	D108719486687467			Clear TP	
	Key 6	FB48A71F765C03F8				
	Key 7	AFA76BD53342DA8E			Personalize W204 ESI	
Renew ECU/Gearbox	Key 8	7BEFC8C44BD8DEEE				
l						100%
Reading data success.						100%
Reducing data success.						

Save As					? 🛛
Savejn:	🚞 W246		G	🦻 📂 🛄-	
My Recent Documents					
Desktop					
My Documents					
I y Computer					
ing comparer	File <u>n</u> ame:	VVDIMB_EIS_OBD_08B	B90B3	*	<u>S</u> ave
	Save as <u>t</u> ype:	EEPROM (*.bin)		~	Cancel
My Network					

Save As							? 🔀
Save in:	🚞 W246		~	G 🖻	1 🖻	•	
My Recent Documents	T VVDIMB_EIS_O	3D_088B90B3					
Desktop							
My Documents							
I y Computer		[1	
~	File name:	EIS_OBD_08BB90B3			*]	Save
	Save as type:	EEPROM (*.bin)			*		Cancel
My Network							

- 3. Enter Password Calculation, calculate key password
 - ◆ Select OBD mode, chassis select W166, 197, 212, 218, 246
 - ◆ Press "Data Acquisition", progress with following steps
 - Insert "working key" to "EIS" before press OK; only insert working key to EIS, don't switch ignition ON

2 VVDI - MB TOOL V2.0.	0 Remaining Synchronization Time: 28 days	×
Options Special Function Pro	ocess Wizard Update Online	
	Password Calculation Password Calculation Step 1: Select communicate mode and chassis Mode OIR Chassis	-
Read Write Key	Attention: Connect device OBD line to car W166, 197, 212, 218, 246	
EIS Tools	Step 2: Press "Data Acquisition" to start with following steps Issert working key to ignition, waiting 15 seconds Issert working key to device IR reader, verify key and car Issert working key to ignition, waiting 30 seconds	7
Password Calculation	5. Insert working key to device IR reader, wait end 6. Save acquisition data Attention	
	Step 3: Press "Upload Data Upload Data Upload Data	
Prepare Key File	Step 4: Press "Query OK Query result Key Password OK OU OK OU OK OU OU <td></td>	
ESL Tools		
Renew ECU/Gearbox		
Keriew Ecoydearbox		
L	ס	%

- ♦ Waiting 15 seconds
- Insert "working key" to "Device IR Reader" before press OK; take off working key from EIS and insert to device IR Reader, then press OK

WDI - MB TOOL V2.0.	0 Remaining Synchronization Time: 28 days	
Options Special Function Pro	ocess Wizard Update Online	
	Password Calculation Step 1: Select communicate mode and chassis	Mode OBD OIR Chassis
Read Write Key	Attention: Connect device OBD line to car	W166, 197, 212, 218, 246 🗸
EIS Tools	Step 2: Press "Data Acquisition" to start with following steps I. Insert working key to ignition, waiting 15 seconds J. Insert working key to device IR reader, verify key and car J. Data acquisition Insert working key to ignition, waiting 30 seconds Insert working key to device IR reader, wait end Solution Solution <td>Data Acquisition</td>	Data Acquisition
Password Calculation	Step 3: Press "Upl Attention Step 4: Press "Que Insert "working key" to "Device IR Reader" Key Pacsword OK	Defore press OK
a	Key Password OK	
ESL Tools		
Renew ECU/Gearbox		
Prepare to verify EIS and wo	orking key	0%

🜌 VVDI - MB TOOL V2.0.	.0 Remaining Synchronization Time: 28 days	
Options Special Function Pro	rocess Wizard Update Online	
	Password Calculation Mode OBD OI	
	Step 1: Select communicate mode and chassis Chassis	<u> </u>
Read Write Key	Attention: Connect device OBD line to car W166, 197, 212, 218, 246	~
	Step 2: Press "Data Acquisition" to start with following steps	
EIS Tools	 1. Insert working key to ignition, waiting 15 seconds 2. Insert working key to device IR reader, verify key and car 3. Data acquisition 	
100	 4. Insert working key to ignition, waiting 30 seconds 5. Insert working key to device IR reader, wait end 6. Save acquisition data 	
Password Calculation		
	Step 3: Press "Upload Data" to send acquistion data Upload Data	
Prepare Key File	Step 4: Press "Query result" to get result Auto reflash Key Password Guery result	
	Key Password Copy Stop acquiste after success	
ESL Tools		<u> </u>
Renew ECU/Gearbox		~
		71%
Processing data acquistion	used time: 02 min 30 sec, left time: 01 min 09 sec	

◆ Data acquisition progress, just wait it finish. The left time will show on the bottom

 After 100%, Insert "working key" to "EIS" before press OK; only insert working key to EIS, don't switch ignition ON

VVDI - MB TOOL V2.0	.0 Remaining Synchronization Time: 28 days
Options Special Function Pr	rocess Wizard Update Online
0	Password Calculation Step 1: Select communicate mode and chassis
Read Write Key	Attention: Connect device OBD line to car W166, 197, 212, 218, 246
	Step 2: Press "Data Acquisition" to start with following steps 1. Insert working key to ignition, waiting 15 seconds
EIS Tools	 2. Insert working key to device IR reader, verify key and car 3. Data acquisition
1.0	 4. Insert working key to ignition, waiting 30 seconds 5. Insert working key to device IR reader, wait end 6. Save acquisition data
Password Calculation	Attention Vpload Data
Prepare Key File	Step 4: Press "Qu OK Ouery result
	Key Password
ESL Tools	
Renew ECU/Gearbox	
	100%
Processing data acquistion	used time: 03 min 36 sec, left time: 00 min 00 sec

- ♦ Waiting 30 seconds
- Insert "working key" to "Device IR Reader" before press OK; take off working key from EIS and insert to device IR Reader, then press OK



 After save acquisition data you will get next window. Please keep the default file name when save acquisition data

VVDI - MB TOOL V2.0	.0 Remaining Synchronization Time: 28 days 📃 🔲 🔀
Options Special Function Pr	rocess Wizard Update Online
	Password Calculation Mode OBD IR Step 1: Select communicate mode and chassis Chassis Chassis
Read Write Key	Attention: Connect device OBD line to car W166, 197, 212, 218, 246 👻
EIS Tools	Step 2: Press "Data Acquisition" to start with following steps 1. Insert working key to ignition, waiting 15 seconds 2. Insert working key to device IR reader, verify key and car 3. Data acquisition 4. Insert working key to device IR reader, verify and car
Password Calculation	Attention Acquisition Acquisition Acquisition Acquisition OK
Prepare Key File	Step 4 Query result
0	Key Password Copy Stop acquisite after success
ESL Tools	
Renew ECU/Gearbox	~
Acquistion finished, upload	the saved data with "Upload Data" for password

Press Upload Data to upload saved acquisition data to server

😼 VVDI - MB TOOL	V2.0.0 Ren	naining Synchro	nization Time: 28 days					
Options Special Funct	ion Process Wizar	d Update Online						
	Passwor	d Calculation —			Mode		Oir	
	Open					? 🗙	U AIX	
Read Write Key	Look in:	🚞 W246		~	G 🤌 📂 🖽-		218, 246	~
	My Recent	INT_OBD_088B	90B3_1					
EIS Tools	Documents							
100	Desktop						isition	
Password Calculation								
Prepare Key File	My Documents						Data esult	
a 1	My Computer							
ESL Tools	ing compator	File name:	VM_*_08BB90B3_*.dat		*	Open		
	(1)	Files of type:	config (*.dat)		~	Cancel		
	My Network		Dpen as read-only					
Renew ECU/Gearbo	x							~
								100%
								100 /0

Press Query result to get result, you can select "Auto reflash", it will query server result automatically, it need about 1 minute

😿 VVDI – 💵 TOOL V2	2. 0. 0							
Options Special Function Process Wizard Update Online								
	Password Calculation	Mode OBD OIR						
2	Step 1: Select communicate mode and chassis	Chassis						
Read Write Key	Attention: Connect device OBD line to car	W166, 197, 212, 218, 246						
	Step 2: Press "Data Acquisition" to start with following steps							
EIS Tools	 1. Insert working key to ignition, waiting 15 seconds 2. Insert working key to device IR reader, verify key and car 3. Data acquisition 							
1302 1	 4. Insert working key to ignition, waiting 30 seconds 5. Insert working key to device IR reader, wait end 6. Save acquistion data 	Data Acquisition						
Password Calculation								
	Step 3: Press "Upload Data" to send acquistion data	Upload Data						
Prepare Key File	Step 4: Press "Query result" to get result Auto reflash Key Password Copy Stop acquisite	Query result						
a	after success							
ESL Tools	Time SSID Status 01:19:07 - 088B90B3 - Processing: require about 1 minutes	Filename All Strength						
Renew ECU/Gearbox								
L		0%						

♦ After calculate success, key password will display at key password area automatically, press "Copy" copy the password to clipboard

🜌 VVDI - MB TOOL V2.0	0.0 Remaining Synchronization Time: 28 days
Options Special Function F	Process Wizard Update Online
	Password Calculation Mode OBD IR Step 1: Select communicate mode and chassis Chassis
Read Write Key	Attention: Connect device OBD line to car W166, 197, 212, 218, 246 🗸
EIS Tools	Step 2: Press "Data Acquisition" to start with following steps 1. Insert working key to ignition, waiting 15 seconds 2. Insert working key to device IR reader, verify key and car 3. Data acquisition 3. Data acquisition
Password Calculation	 4. Insert working key to ignition, waiting 30 seconds 5. Insert working key to device IR reader, wait end 6. Save acquistion data
	Step 3: Press "Upload Data" to send acquistion data Upload Data
Prepare Key File	Step 4: Press "Query result" to get result Auto reflash Key Password 8016380 CD08E1D75 Copy Stop acquisite after success Auto reflash
ESL Tools	Time SSID Status Filename 01:19:07 - 08BB90B3 - Password:8016380CD08E1D75 (Free) - VM_OBD_08BB90B3_1.dat
Renew ECU/Gearbox	
	100%
Find correct password! Do	n't require data acquistion, use the password in key password area

- 4. Save EIS data with password
 - ♦ Enter **EIS Tools** again
 - Read EIS data
 - Use "**Paste**" paste the password to key password area
 - ♦ Then save EIS data again
 - ♦ Steps: 1->2->3

🜌 WVDI - IB TOOL V	72.0.0	Remaining Synchron	nizati	on Time: 28 day	ys			
Options Special Function Process Wizard Update Online								
	EIS Basic Ir	formation			EIS Functi	EIS Function		
0	SSID	08BB90B3		✓ Initialized	Mode	OBD	◯ IR	
Read Write Key	EIS P/N	246 905 99 00]	TP Cleared	Chassis		Allow us	er 🗌
	КМ	12800]	Personalized	W166, 1	97, 212, 218,	246	~
and the second	VIN		Write	Activated		Read EIS data	a	
EIS Tools	EIS Key Inf	ormation					-	
er.	Key Pass.	8016380CD08E1D75	Paste	Reviews sed key Key 3		Save EIS data		
13 F	Erase Pass.	000000000000000000000000000000000000000	Get	Last used key		2946 E12 090	d	
Password Calculation	Special key	413492478C280525]	Key 1		Load EIS data	a	
			Used	Disabled				
	Key 1	F304BB4F2DEF65E1				Write EIS dat	~	
Prepare Key File	Key 2	556A97B69480572D				AAUGE ETO OND	d	
100	Key 3	61B570A285381EF6				Renew EIS		
	Key 4	30E3243E4DF17B58				IXENEW ED		
ESL Tools	Key 5	D108719486687467				Clear TP		
	Key 6	FB48A71F765C03F8						
	Key 7	AFA76BD53342DA8E			P	ersonalize W204	ESL	
Renew ECU/Gearbox	Key 8	7BEFC8C44BD8DEEE						
100%								
Key password was paste s	accessfully.							

5. Enter Prepare Key File

- Press Load EIS file load EIS data with password
- The file path will be shown at bottom
- ◆ VVDI-MB TOOL will auto detect load file type, here is VVDI-MB type
- SSID and key password was shown

🌌 VVDI – 💵 TOOL V	2.0.0 Remaining Sync	chronizatio	on Time: 2	28 day	s			
Options Special Function Process Wizard Update Online								
(e)	Step 1	File type	VVDI-	MB type	e			
Read Write Key	Load EIS file with password	SSID		B90B3				
EIS Tools	Support motorola	Password Key number	80163800 Kev		D75 Paste			
	EEPROM dump	Key hash	F304BB4		55E1	Load EIS file		
Password Calculation								
	Step 2 Select key position for	✓ Select all	☑ Key 1 ☑ Key 2	•	✓ v051			
Prepare Key File	key file Select key file format		✔ Key 3 ✔ Key 4	•	▼v011			
ESL Tools	Press button "Prepare Key File"		Key 5	٠				
			✓ Key 6 ✓ Key 7	•		Dranara Kay Fila		
Renew ECU/Gearbox			Key 8	•		Prepare Key File		
100%								
C:\W246\VVDIMB_EIS_OB	C:\W246\VVDIMB_EIS_OBD_08BB90B3_pass.bin							

- Select key position and format for key file, Press Prepare Key File (online)
- After server find success, select where you want to save the key file, press save directly

Select posti	on to save key file		? 🛛
Save in: 🚞	W246	Solution	⊳ 🖽
	08BB90B3_pass		
File name:	Press Save directly	~	Save
Save as type:	Key File(*.*)	~	Cancel



- 6. Enter Read Write Key. If you want Keyless Go, please select NEC adaptor
 - We make a BE key.
 - ◆ Input BE key to device IR reader, select IR mode and BE key
 - Press Identification key
 - Load Key file, we load key 4
 - Press Write
 - ♦ Steps:1->2->3->4->5

🜌 VVDI – IB TOOL V	72. 0. 0 Rem	aining Synchronizati	on Time: 28 day	75 🔳 🗖 🔀
Options Special Function	on Process Wizard	Update Online		
	– Key Information – SSID		1 🔶	Function Hode IR ONEC Adaptor
Read Write Key	Counter		2 🔶	Type BE key
	Remain times		3-	Identification key
EIS Tools	Use times Key number		Ĩ	
1202	Status	21DF Unuse		Read BE key password
Password Calculation	Version	BE		Save Key file
	Mark values Key Password	FFFFFFF730C	Write Copy	
Prepare Key File	Key EEPROM	C D0 8E 1D 75 0B BB 90	D2 41 00 02	Load Key file
a	E6 86 CC 19 A F5 06 E7 81 A	IC DU 8E ID 75 0B BB 90 .7 32 35 4E 5B 7E 16 CD .9 D4 F9 02 16 54 8E EC .C 2E 80 CE 5A 3D 51 01	16 56 52 1F DF B3 <mark>-</mark> 87 FB	Write
ESL Tools	3F 8E E1 85 0	.C 2E 80 CE 5A 3D 51 01 16 DD AA 2E 72 1E D9 31 .A 65 71 92 36 43 46 28	8B 8B D0 F3	
	D2 90 0E 5C E FF FF FF 58 7	E 05 71 72 50 43 40 20 E 0D D6 78 02 7F FF FF E F1 4D 3E 24 E3 30 7F F FF FF FF F9 24 A8 B2	FF FF FF FF FF 00 00 02	Renew
Renew ECU/Gearbox		F FF FF FF 73 OC FF FF		
				100%
C:\W246\key4_0BBB90B3	_051.bin			

😿 VVDI – IB TOOL V		aining Synchronization Time: 2	8 days						
Options Special Functio	on Process Wizard	Update Online							
	- Key Information -	Function							
	SSID	0BBB90B3	Mode IR ONEC Adaptor						
Read Write Key	Counter	2F1F7C Type BE key							
_	Remain times	196604							
	Use times	3	Identification key						
EIS Tools	Key number	4							
100	Status	04FC Unuse	Read BE key password						
Password Calculation	Version	BE							
	Mark values	FFFFFFFF730C Write	Save Key file						
	Key Password	Сору							
Prepare Key File	Key EEPROM Load Key file								
		C DO 8E 1D 75 OB BB 90 B3 41 AO 8 A7 32 35 4E 5B 7E 16 CD 16 56 52 1	37						
0	F5 06 E7 81 A	A9 D4 F9 02 16 54 8E EC DF B3 87 F C 2E 80 CE 5A 3D 51 01 8C 73 16 2	B Write						
ESL Tools)6 DD AA 2E 72 1E D9 31 8B 8B D0 F	-						
		A 65 71 92 36 43 46 28 BA 7C 5B 5							
	FF FF FF 58 3	CB OD D6 78 02 7F FF FF FF FF FF F 'B F1 4D 3E 24 E3 30 7F FF 00 00 0	2 Renew						
Renew ECU/Gearbox		YF FF FF FF F9 24 A8 B2 0B BB 90 E YF FF FF FF 73 0C FF FF FF FF 04 F							
			100%						
Reading data success.									
Reducing data success.									

Press Identification key again after write key file. You can see key is prepared success

- 7. Insert new key to EIS, the EIS will learn the new key
 - ♦ First the red light will ON , then OFF, means key learn success
 - ◆ Read EIS data once more, you can find key 4 was selected

🜌 VVDI - IB TOOL V	72.0.0	Remaining Synchron	nizati	on Time: 28 day	ys						
Options Special Function Process Wizard Update Online											
	EIS Basic In	formation	EIS Function								
	SSID	08BB90B3		✓ Initialized	Mode	OBD	○ IR				
Read Write Key	EIS P/N	246 905 99 00]	TP Cleared	Chassis		Allow user				
	КМ	12800]	Personalized	W166, 19	7, 212, 218,	246 👻				
	VIN		Write	Activated	Read EIS data						
EIS Tools	EIS Key Inf	EIS Key Information									
	Key Pass.	000000000000000000000000000000000000000	Paste	Previous used key	Save EIS data						
	Erase Pass.	000000000000000000000000000000000000000	Get	Key 1 Last used key							
Password Calculation	Special key	413492478C280525]	Key 4		Load EIS dat	_				
			- Used -	Disabled							
	Key 1	F304BB4F2DEF65E1				Write EIS dat	_				
Prepare Key File	Key 2	556A97B69480572D			WILE ED GALA						
a 12	Key 3	61B570A285381EF6			Renew EIS						
	Key 4	BA28464336927165				Kellew LID					
ESL Tools	Key 5	D108719486687467			Clear TP						
	Key 6	FB48A71F765C03F8				Clear TP					
	Key 7	AFA76BD53342DA8E			Pe	rsonalize W204					
Renew ECU/Gearbox	Key 8	7BEFC8C44BD8DEEE									
100%											
Reading data success.											

8. Completed.