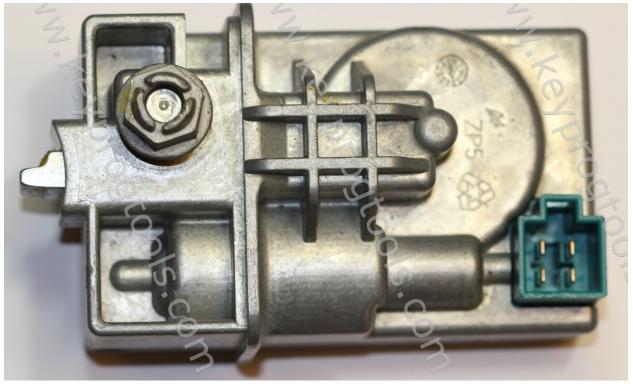
### SIMON TOLICH

### How to renew (Enable) MB ESL/ELV



#### ESL Voltage must be 12V Minimum 8A

• Plug the MB NEC Steering device by K-Line, open the ALL IN ONE MB Software, and select ESL.



• Select K-line, connect then click on read.

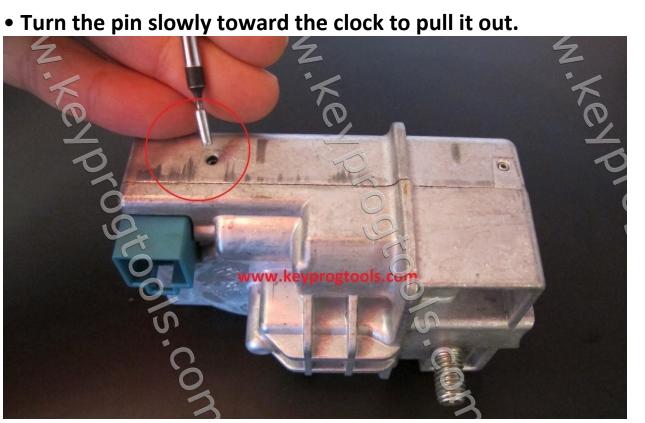
ESL Tool by Simon Touch	www.keyprogtools.com		
	*	Read W204   EEPROM	Initialized by Factory
		Viri las 14 digits Change	Transport Protection
		Pa 3 nber Date Release	Personalized ESL
		Virgin Initialize Write	Activated ESL
		Enable Blocked ESL	Disabled ESL
	-	KMs Unique SSID of ESL	SW Version
Motorola ESL	Read EEPROM Write EEPRO	M Erase EEPROM DTC	Clear
Custom Command	nand to send Length S	Response bytes received	Save
Special Functions           K-line         Connect           PCB         hange ESL Odometer	2		FF7F4F78A49 Renew
Sead ESL Password ( AP	IY Version, ANY ESL ) Te	est Calculated ESL Password	ile Source <b>v</b> SSC

• Device will read the SSID/Hashes ESL Status, Motor position and show you (ESL is not repairable! Enable NEC MCU)

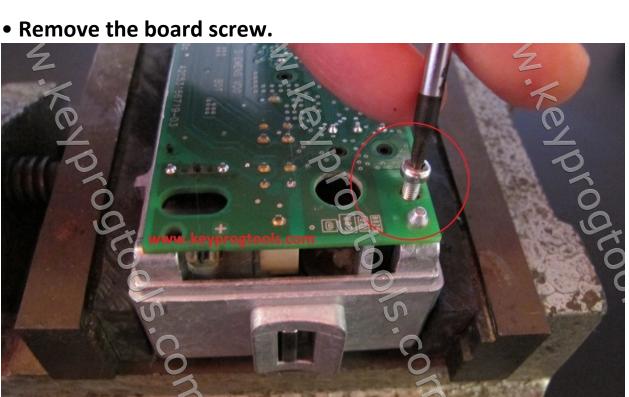
Reading       Read       W204       EEPROM       Initialized by Factory         Version ROM: E03006       MOTOR POSITION       Change       Transport Protection         Service Hash       2D96ABAB31CF4864       WDB204000000       Change       Personalized ESL         Service Hash       2D96ABAB31CF4864       Write       Activated ESL         Key #1 Hash       DBA2518062B23D54       disabled       Virgin       Initialize         Key #2 Hash       DBA2518062B23D54       disabled       Enable Blocked ESL       Disabled ESL         Key #3 Hash       DBA2518062B23D54       disabled       Write       Enable Blocked ESL       Disabled ESL         Key #4 Hash       DBA2518062B23D54       disabled       Write EEPROM       DTC       Cl         Key #5 Hash       DBA2518062B23D54       disabled       Write EEPROM       DTC       Cl         Key #6 Hash       DBA2518062B23D54       disabled       Write EEPROM       DTC       Cl         Key #8 Hash       DBA2518062B23D54       disabled       Write EEPROM       DTC       Cl         Key #8 Hash       DBA2518062B23D54       disabled       Write EEPROM       DTC       Cl         Key #8 Hash       DBA2518062B23D54       disabled       Save       S
Version ROM: E03006       MOTOR POSITION         ESL State: Moving       MOTOR POSITION         Service Hash 2D96ABAB31CF4864       Virgin         Key #1 Hash DBA2518062B23D54 disabled       Virgin         Key #2 Hash DBA2518062B23D54 disabled       Virgin         Key #3 Hash DBA2518062B23D54 disabled       Enable Blocked ESL         Key #4 Hash DBA2518062B23D54 disabled       Motor Blocked ESL         Key #5 Hash DBA2518062B2D2DB disabled       KMs         Key #6 Hash DBA2518062B23D54 disabled       Write EEPROM         Key #8 Hash DBA2518062B23D54 disabled       Write EEPROM         Key #7 Hash DC1399ACB00B72DB disabled       Write EEPROM         Key #8 Hash DBA2518062B23D54 disabled       Save
Service Hash 2D96ABAB31CF4864 Key #1 Hash DBA2518062B23D54 disabled Key #2 Hash DBA2518062B23D54 disabled Key #3 Hash DBA2518062B23D54 disabled Key #4 Hash DBA2518062B23D54 disabled Key #6 Hash DBA2518062B23D54 disabled Key #7 Hash DC1399ACB00B72DB disabled Key #8 Hash DBA2518062B23D54 disabled Key #8 Hash DBA2518062B23D
Key #1 Hash       DBA2518062B23D54       disabled         Key #2 Hash       DBA357AB21B23D54       disabled         Key #3 Hash       DBA2518062B23D54       disabled         Key #4 Hash       DBA2518062B23D54       disabled         Key #4 Hash       DBA2518062B23D54       disabled         Key #5 Hash       DBA2518062B23D54       disabled         Key #6 Hash       DBA2518062B23D54       disabled         Key #7 Hash       DC1399ACB00B72DB       disabled         Key #8 Hash       DBA2518062B23D54       disabled         Write EEPROM       Erase EEPROM       DTC         Cli       Disabled       Write EEPROM         Key #8 Hash       DBA2518062B23D54       disabled
Key #3 Hash       DBA2518062B23D54       disabled         Key #4 Hash       DBA2518062B23D54       disabled         Key #5 Hash       DBA2518062B202DB       disabled         Key #6 Hash       DBA43426753BD432       disabled         Key #7 Hash       DC1399ACB00B72DB       disabled         Key #8 Hash       DBA2518062B23D54       disabled         Key #8 Hash       DBA2518062B23D54       disabled         Transport TP       C2E901F0EDBA7C5C       OK         ESL Is not repairable!       Enable       NEC
Key #5 Hash DBA2518062B2D2DB disabled         Key #6 Hash DBA43426753BD432 disabled         Key #6 Hash DBA43426753BD432 disabled         Key #7 Hash DC1399ACB00B72DB disabled         Key #8 Hash DBA2518062B23D54 disabled         Transport TP C2E901F0EDBA7C5C OK         ESL Is not repairable! Enable NEC MCU         ESL Is not repairable! Enable NEC MCU
Key #6 hash DDA43426/33B0432 disabled         Key #7 Hash DC1399ACB00B72DB disabled         Key #8 Hash DBA2518062B23D54 disabled         Transport TP C2E901F0EDBA7C5C OK         ESL Is not repairable! Enable NEC MCU         ESL Is not repairable! Enable NEC MCU
Key #8 Hash DBA2518062B23D54 disabled       Transport TP C2E901F0EDBA7C5C OK       ESL Is not repairable! Enable NEC MCU       ESL Is not repairable! Enable NEC MCU         Save
K-line     Stop     Hash 1     Disable     Lock     5D65416170B8B4CF     Unlock     5B8F0FF7F4F78A49     Renew
Change ESL Odometer (incrementing only) User Data Write Calibration Write Test Count Write
Server Functions
Read ESL Password ( ANY Version, ANY ESL )     Test Calculated ESL Password     SSC File Source     SSC

# • Remove the ESL from the car, use star screw driver number





• Remove the board screw.



• Use a screw driver to pull the ESL board from the Motor side



• Clean the NEC with solvent (read note 2) and DESOLDER the NEC with hot air.



### • Put the NEC in the ESL Socket in the right position.



# • Open the ESL Software, select PCB, Connect and click on read, software will show you ESL is not reparable (Disabled)

Reading	▲ Read W204 ▼ EEPROM V Initialized by Factory
Version ROM: E03006	WDB204000000 Change IV Transport Protection
ESL State: Moving MOTOR POSITI	CON 2045455372 14/09 07.07.07 V Personalized ESL
Service Hash 2D96ABAB31CF4864 Xey #1 Hash DBA2518062B23D54 disabled	Virgin Initialize Write Activated ESL
Key #2 Hash DBA357AB21B23D54 disabled Key #3 Hash DBA2518062B23D54 disabled	Enable Blocked ESL Disabled ESL
Key #4 Hash DBA2518062B23D54 disabled Key #5 Hash DBA2518062B2D2DB disabled	KMs Unique SSID of ESL  Disabled  Version
Key #6 Hash DBA43426753BD432 disabled Key #7 Hash DC1399ACB00B72DB disabled Key #8 Hash DBA2518062B23D54 disabled Transport TP C2E901F0EDBA7C5C OK	Write EEPROM DTC CI
ESL Is not repairable! Enable NEC MCU	ESL NOT REPAIRABLE Save
Special Functions	
K-line V Stop Hash 1 V Disable Lock	5D65416170B8B4CF Unlock 5B8F0FF7F4F78A49 Renew
Change ESL Odometer ( incrementing only )	User Data Write Calibration Write Test Count Write
Server Functions	

### • Click on initialize, WAIT few seconds till it is done then click on (Enable blocked ESL) and wait till it is done (read note 3)

ESL Tool by Simon Touch www.keypro	tools.com
Click on initialize, WAIT few seco till it is done then click on (Enable blocked ESL) and wait till it is Dor	Virgin Initialize Activated ESL
Motorola ESL	Write EEPROM DTC Clear

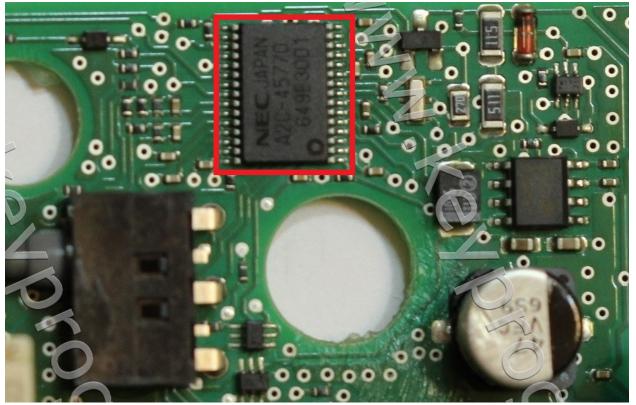
# • When it's done click on read you will see the key hashes becomes the same and the ESL is enabled.

- Click on write factory.
- Software will write
- Removing TP...
- TP removed.
- Personalizing...

#### • Done.

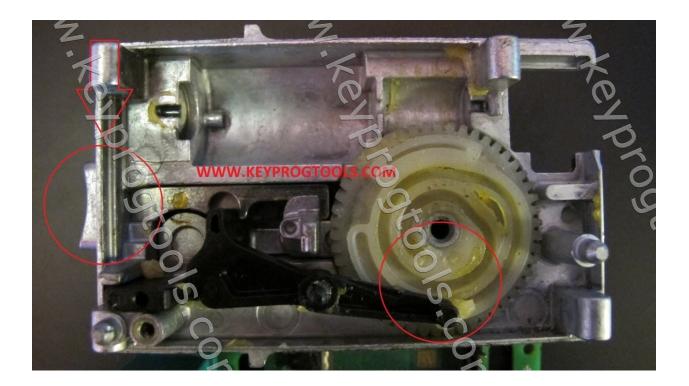
Key #8 Hash E9C64E70CA30C717 enabled Transport TP C2E901F0EDBA7C5C OK	▲ Read VV204 ▼ EEPR	Initialized by Factory
Server timeouted	WDB20412345678 Char	nge 🗹 Transport Protection
Server not accessible! SSID: 00000000	64FD455732 14/06 02.06.0	08 Versonalized ESL
Removing TP	Virgin Initialize Wr	ite Activated ESL
Done.	Enable Blocked ESL	Disabled ESL
	▼ KMs Unique SSID of ESL	SW Version
Motorola ESL Load EIS Dump Read EEPROM	Write EEPROM Erase EEPROM DTC	Clear

• Solder the NEC back to the PCB.

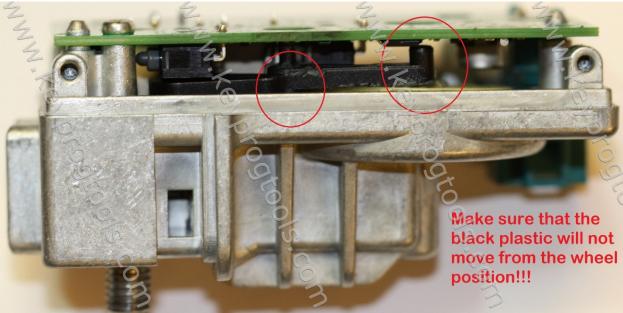


• Change the ESL Motor with new one and assemble the ESL on unlock position, it is recommend to put some grease under the ESL wheel.

• Assembles the ESL on UNLOCKED position.



• Make sure that the black plastic wheel will not mover from the wheel position.



• If you disconnect the power and the ESL is in Moving position, this will kill the ESL NEC after the assembling.

• If you choose the Locked switch position and you assemble the ESL on Unlocked position, this will kill the ESL NEC.

• Plug the power/K-Line socket.



• Open the ESL software, select K-Line, connect, read, click on Write factory, the ESL will automatically go to lock position, Read, click on unlock then click on Read then click on renew, you will see a message Renewing done...

ESL Tool by Simon Touch www.keyprogtools.com		
Key #3 Hash DBA2518062B23D54 enabled Key #4 Hash DBA2518062B23D54 enabled	Read W204  EEPROM	☑ Initialized by Factory
Key #5 Hash DBA2518062B23D54 enabled Key #6 Hash DBA2518062B23D54 enabled	WDB20412345678 Change	Transport Protection
Key #7 Hash DBA2518062B23D54 enabled Key #8 Hash DBA2518062B23D54 enabled	64FD455732 14/06 02.06.08	Personalized ESL
Transport TP C2E901F0EDBA7C5C OK	Virgin Initialize Write	Activated ESL
Renewing Done.	Enable Blocked ESL	Disabled ESL
<b>— — .</b>	KMs Unique SSID of ESL	SW Version
Motorola ESL SKC  Load EIS Dump Read EEPROM Write EEPRO	M Erase EEPROM DTC	Clear
Custom Command		
0 Command to send Length S	end Response bytes received	Save 0
Special Functions		
K-line V Stop Hash 1 V Disable Lock 5065416	170B8B4CF Unlock 5B8F0	FF7F4F78A49 Renew

#### • Click on read you will see ESL become new as factory.

ESL Tool by Simon Touch	www.keyprogtools.com		
Service Hash 5B8F0FF7F4F78A49	<b>^</b>	Read W204  EEPROM	Initialized by Factory
Key #1 Hash 5D65416170B8B4CF disabled Key #2 Hash DBA2518062B23D54 disabled		WDB20412345678 Change	Transport Protection
Key #3 Hash DBA2518062B23D54 disabled Key #4 Hash DBA2518062B23D54 disabled		64FD455732 14/06 02.06.08	Personalized ESL
Key #5 Hash DBA2518062B23D54 disabled Key #6 Hash DBA2518062B23D54 disabled		Virgin Initialize Write	Activated ESL
Key #7 Hash DBA2518062B23D54 disabled Key #8 Hash DBA2518062B23D54 disabled Transport TP C2E901F0EDBA7C5C OK		Enable Blocked ESL	Disabled ESL
Transport TP CZE90 FOEDBA7C5C OK		KMs Unique SSID of ESL	SW Version
Motorola ESL SUC  V Load EIS Dump Read	EPROM Write EEPROM	Erase EEPROM DTC	Clear
Custom Command O Command to sen	Length Ser	nd Response bytes received	Save 0
Special Functions			
K-line V Stop Hash 1 V Di	sable Lock 5D654161	70B8B4CF Unlock 5B	8F0FF7F4F78A49 Renew
Change ESL Odometer ( incrementi	ng only ) User Data	Write Calibration	Vrite Test Count Write
Server Functions			
Read ESL Password ( ANY Version, #	NY ESL ) Tes	t Calculated ESL Password	SC File Source SSC

You can always change the ESL Vin/mileage/production date and part number by K-Line, lock or unlock the ESL, enable or disable keys from the ESL.

#### **⊡Enjoy** ☺

**NOTE 2 VERY IMPORTANT:** NEC pins must fit ZIF socket very well. Pins of NEC should be treated with soldering iron to remove all traces of residual dirt and the chip itself should be cleaned with solvent. Chip must look like new before putting it to ZIF socket. It is very important because the erasing process works with high frequency signals.

ESLD Software has a very easy way to check if the erasing is working properly - click "Read" button and look at the values of "Test Counts 1: " and "Test Counts 2:". The first counter should barely change while erasing, but the second counter will show major change.

#### NOTE BELOW FOR MODIFIED SOCKET ONLY:

To diagnose erasing process, read first chip, after click "Enable" button to erase, stop it after a minute and "Read" it again. Look the counters - if "Test Counts 2:" is not changing at all, it means there is some problem with capacitor 8.2pF or chip is not cleaned or is not properly installed to the ZIF socket or the power from the USB is not enough.

**NOTE 3** If "Test Counts 2:" is changing, then all is OK - just wait until the job is finished. With the new update, renew ESL will be faster but most importantly - it is safer, TP status will not become "incorrect", erasing will occur without any damages. How fast will it be? It depends on lots of factors: power of USB, temperature, etc... It depends also on NEC MCU internal state. Erasing time has no exact timing, for some NECs it might take less than 5 minutes and for others it might take 5 hours.

In all cases renew will succeed!

www.keyprogtools.com

info@keyprogtools.com