

# ME 9.7 Virginize 2019 Update - No Soldering

There is a lot of good information out but nothing very detailed and nowhere stating that you do not have to remove the 95080 chip from the ECU. Well I successfully completed many flashes and tests without removing the chip and wanted to give some extra details what exactly needs done to get the new computer replaced.

Unfortunately I was unable to find anyplace in Vediamo that could remove personalization and activation. If just those 2 parameters can be removed and set to NO, then you would not have to access the M95080 chip to reflash.

You do not need Vediamo or any other program to complete these steps but it is beneficial. Listed below is how to do with and without. There are also several ways to accomplish everything and I am documenting what I found the easiest.

mhhauto.com Webmaster has a zero file to reflash if you cannot read your original ECU.

<https://mhhauto.com/Thread-M-E-9-7-virgin-dump-help?pid=376131#pid376131>

Shout out to @mikepl as well for his thread.

<https://mhhauto.com/Thread-Virginize-ME9-7-quick-guide>

I used an **In Circuit Serial Programmer (ICSP) SPI driver adapter and original XGecu TL866II Plus**

*10/28/2019 Purchased direct from XGecu store –*

<https://xgecu.aliexpress.com/store/4805043>

As of 11/2019 the latest ME9.7 M272 part # is A2721535191 (verify yourself via EPC)

I sourced a used one from a nation wide junkyard directory <http://car-part.com/>

Connect a battery charger (some programming can be done before killing your battery but this procedure will take some time)

Engine should be cold as some learning processes will require it

Before removing replacement ME cover, I recommend using Vediamo to write the VIN into the new ECU and clear/read faults. (fan should run full speed until faults cleared after writing vin) You should have 0 faults or the replacement ECU is faulty also. (this is if you have no other issues of course)

While in Vediamo clear shadow memory. (so you dont have any logs from replacement vehicle)

I replaced my ECU due to these faults that is known to occur due to the heat of the engine damaging the ground circuit from what I understand --

Code Text Status

- 0218 M16/6 (Throttle valve actuator) : The throttle valve is jamming or is stiff. (P2176)
- 1337 Alternator serial interface Current and stored
- 0443 Heating of component G3/4 (Right O2 sensor, before TWC [KAT]) : Open circuit (P0030)
- 0447 Heating of component G3/3 (Left O2 sensor, before TWC [KAT]) : Open circuit (P0050)

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<https://cartechnology.co.uk/showthread.php?tid=59301>

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- 0228 M16/6 (Throttle valve actuator) : Throttle valve jamming (iced up) (P0638)

## Vediamo steps --

unlock ECU (Functions -> DJ\_Zugriffsberechtigung)

write vin (Generic -> DL\_FIN\_Schreiben)

clear shadow memory (Functions -> FN\_VRV\_Schattenspeicher\_Loeschen)

Turn off key 10 sec to reboot ECU if you are going to do any other programming (there is no function in Vediamo for ME97) You can add SCN and change variant coding at this time if you choose to.

If you do not have Vediamo or other means, you cannot read the new ECU until it is virginized/zero'd. You can write VIN and SCN as noted below in Dev Mode after reading coding/transfer to new unit. I did not try using Dev Mode to transfer coding (steps below) with a locked ECU from a donor to see if it could be read that way and vin rewritten.

## Remove ECU cover.

Be careful not to reach too far in past the raised lip or your ECU will not be of any use if you damage the circuit boards.

The cover is extremely difficult to get off the adhesive bead. Recommend using a heat gone to get it VERY hot and work your way around the cover. Once you get one side up with a couple of screwdrivers it should be easier to pry open. I ended up bending the cover where the ledge sits trying to pry it open. When I was done I used some pliers to pry the cover back the best I could.

## Virginizing ME9.7

Using original XGecu TL866II Plus and ICSP SPI driver adapter with SOP8 test clip and ICSP cable. (you are saving \$2k from getting a new ECU so just buy the original and not a clone)

Connect test clip to ICSP adapter as follows

ICSP to Test Clip (as orientated on M95080 chip)

1 -> 6 clock

2 -> 2 out

3 -> 5 in

4 -> 4 grd

5 -> 8 volt

6 -> 1 chip select

Test clip 3 and 7 are not connected (write protect and hold)

## In Xgpro software

- Select IC --> ST M95080 @TSOP8
- disable ICSP\_VCC Enable (this is just to ensure nothing is shorted out while you are moving the adapter around)
- connect test clip to 95080 -- Pin 1 is away from main harness on the left (soldering station magnifying glass is helpful)

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- enable ICSP\_VCC Enable
- clear all buffer
- read (if it reads all 00 or FF then turn off vcc and readjust clip then turn on vcc)

--note -- OverCurrent error is common; read or program a 2nd time should be successful if it is connected properly.

- save
- change address 144-146 Xor with 48 (this makes Drive Authorization Personalized, Activated and Start Enable to NO) --> If you change 143 that block will not get reprogrammed unless you use the zero file.
- for 15E 15F Xor with 48 (or load zero file) this is the checksum
- program
- verify
- disable ICSP\_VCC Enable
- remove adapter

## **Program in Car With XENTRY/DAS** Original ECU

- Recommend updating the software then saving the variant coding. This will ensure the formats are the same between the old and new ECU. --> Control Unit Adaptations -> Control Module Programming -> Offline Coding (when it goes to SCN coding just abort)
- At minimum save the current variant coding so you can compare configs. --> Control Unit Adaptations -> Variant Coding -> Display of Coding Data -> Coding
- Get the current SCN coding (not required to make it work but is best to match the original rather than what is in the replacement or if you are using the Zero file) --> Control Unit Adaptations -> Variant Coding -> Display of Coding Data -> SCN

## Transfer to the new ECU

- Initial Startup -> Initial Startup with Automatic Takeover -> Offline

Once it gets to SCN coding I documented the new SCN code and programmed that into the ECU (different part no has different SCN)

Initial startup will fail because SCN coding wasn't completed.

- Verify Variant Coding to the original-- if it is wrong fastest way to correct this is reinstall the original, go to Development Data --> Control Unit Adaptations, Read Coding and/or Transfer to new unit (you can also use saved coding from Vediamo)

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When the popup asks the following downloads must be performed manually, if you click yes you can write the VIN and SCN.

- Once Variet coding is correct go to --> Control Unit Adaptations -> Learning Processes -> (If you used ZERO file, you must activate fuel pump first or car wont start)

Teach in Of Drive Authorization (NOTE - When Personalization says to sart the car for 10s, once it is completed turn the car off for 10sec to reboot the ECU prior to activating -- if not you will get an personalization not complete error but it seems to complete)

Complete all the rest of the Learning Processes.

--- I prefer this way to ensure all adaptations are reset at the very last.

All done.

Things I tried that do not work.

Offline SCN Programming --- I converted Vediamo coding string to HEX in an attempt to write SCN Manually but the first digits were too large.

The offline calculator from some years back floating around will not work.

Attached some reference pics as well --- I didn't see any around.

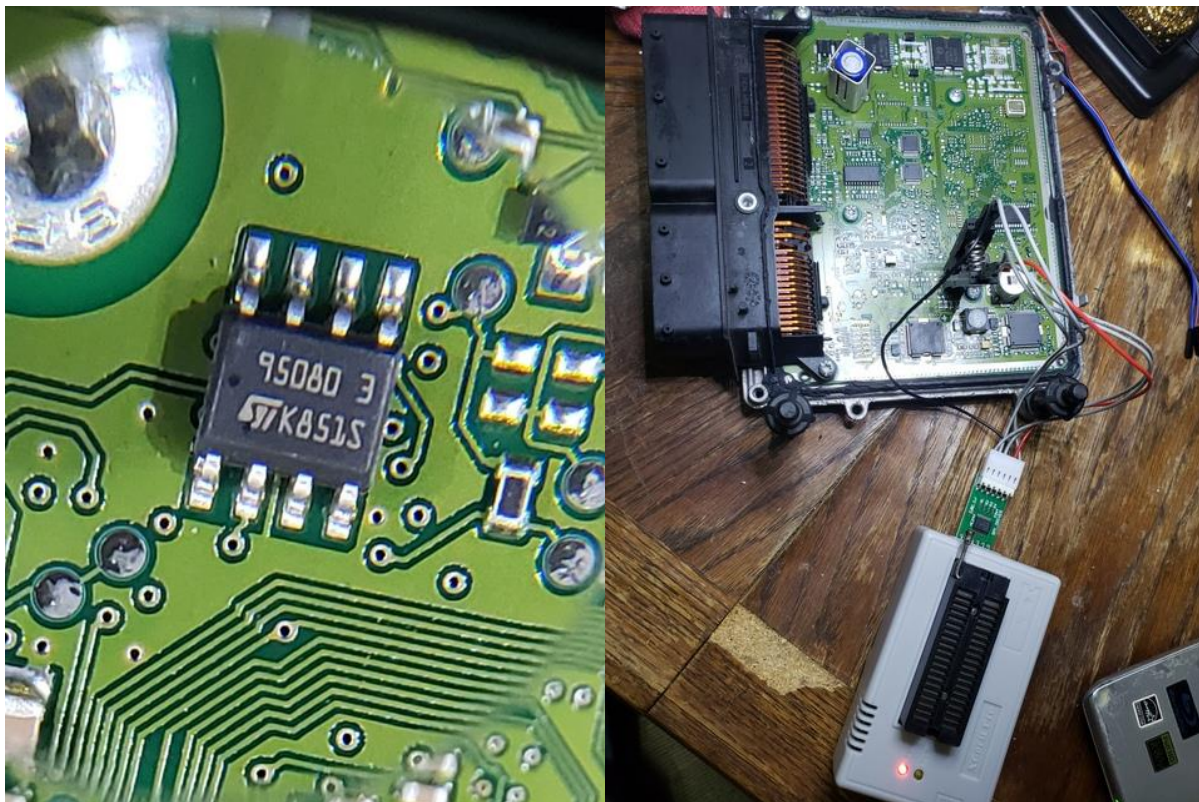
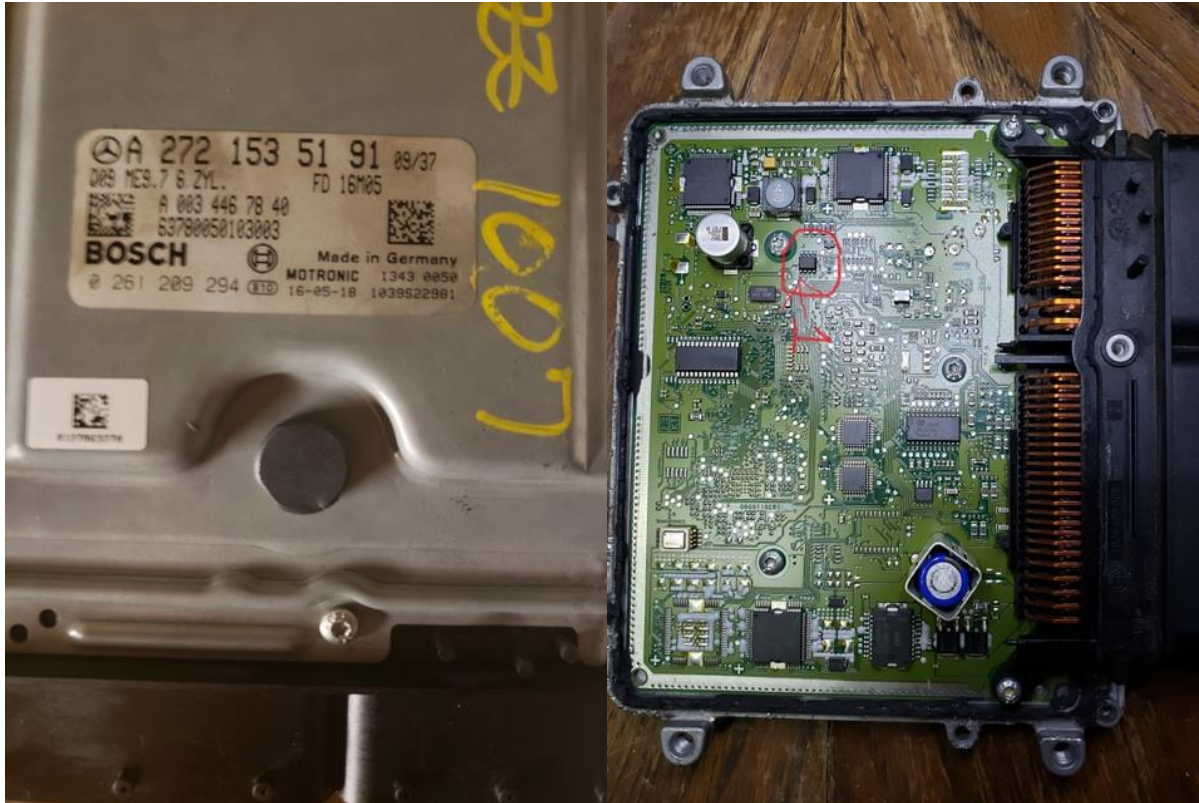
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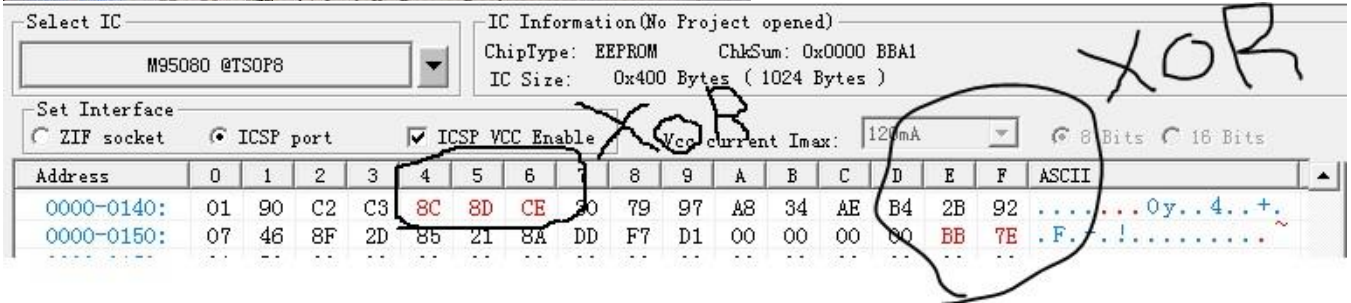
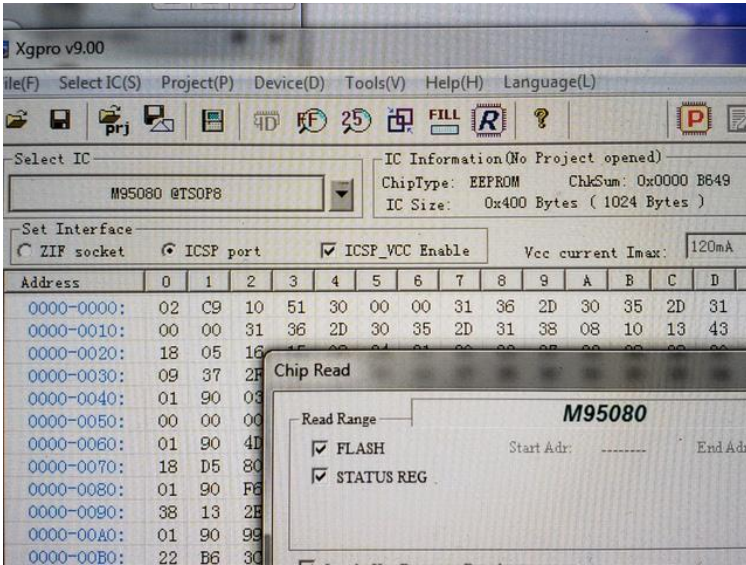
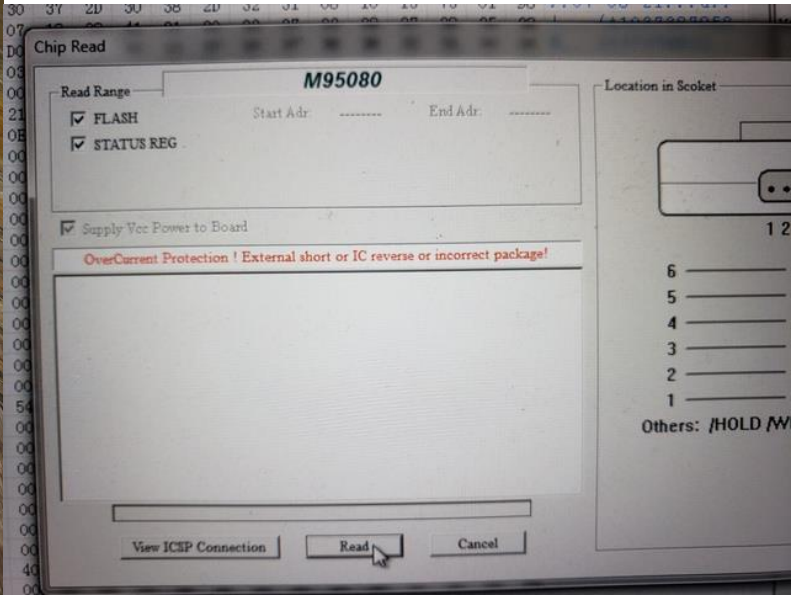
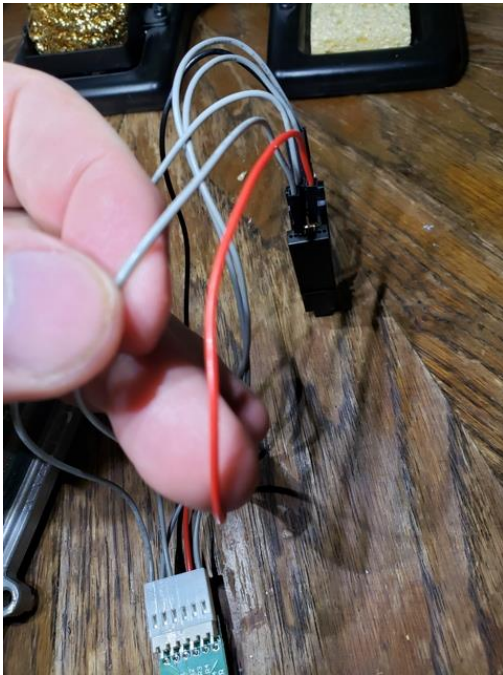
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