Getting Started: FDL Coding

You will need the following items to begin your coding adventure.
(Please note: I am providing a general guide to coding within this document. You are assuming all risk by following this guide, and I will not be held accountable should you cause damage to your vehicle)

1. BMW Ethernet to OBD-II Cable (BMW ENET Cable): If you do not have one, you can purchase one here at: http://www.bmwenet.com for $19.99 shipped in the USA

2. ESYS Software: You can find the latest ESYS software available here: http://www.bmwenet.com/esys (Please note: I do not host these files, I have provided as a link to where someone else has posted these)

3. PSdZDATA Files for ESYS: You can find the latest PSDZData (Lite) files here: http://www.bmwenet.com/psdzdata (Please note: I do not host these files, I have provided as a link to where someone else has posted these) **(Please note: it has been proven that the Google Chrome Browser works best for downloading from Mega)**

   PLEASE NOTE: FULL PSdZDATA Files are only needed for Flashing ECUs & not needed for VO or FDL Coding: PSDZDATA Full: http://www.bmwenet.com/psdzdata/full/

4. EST Token Solution for ESYS: You DO NOT need to purchase a token any longer. TokenMaster has released a new tool called ESYS Launcher PREMIUM, which generates a personal token injects the missing descriptive text in CAFD & FAFP files needed for FDL Coding & enhances the security of ESYS. Please visit here to obtain a copy: http://www.bmwenet.com/token

   ESYS Launcher Premium is the "free" version of Launcher offered by "Token Master". It is intended for personal use on 1 chassis. There are limitations in the software that limit you from how frequently you can change the chassis for coding. If you want a fully functional version without any limitations, you can contact "Token Master" via e-mail at: fxxtokenmaster@gmail.com for more details. This version is called ESYS Launcher PRO.

5. Windows XP, Vista, 7, 8 or 10 (Native or Virtual Machine) computer with an Ethernet (RJ-45) Connection

6. Model-Specific Cheat Sheets: http://www.bmwenet.com/guides

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REMOTE CODING:

Are you looking for an all-inclusive coding service? We offer remote coding for a flat-rate of $100.00 USD. If you opt for remote coding, we will connect to your computer via free remote control software (teamviewer.com). We will install and configure the ESYS software on your PC for you with ESYS Launcher PRO.

After configuring your PC for coding, we will have you connect the computer to your car, and code an unlimited number of options during 1 session. In addition, if you have OEM navigation, we can generate an FSC code to update your navigation maps and destinations data to the latest version (2016-1). There is no additional cost for the map upgrade FSC Code during the remote coding session.

Everything listed above is included for the flat $100.00 USD rate. Remote coding requires the following:
- Laptop running Windows XP or higher (Mac OS X is capable, only if running a windows VM)
- 2GB RAM
- 3GB Free Hard Drive Space
- WiFi Connection at the location of the car to be coded
- Ethernet port (to connect the ENET Cable)

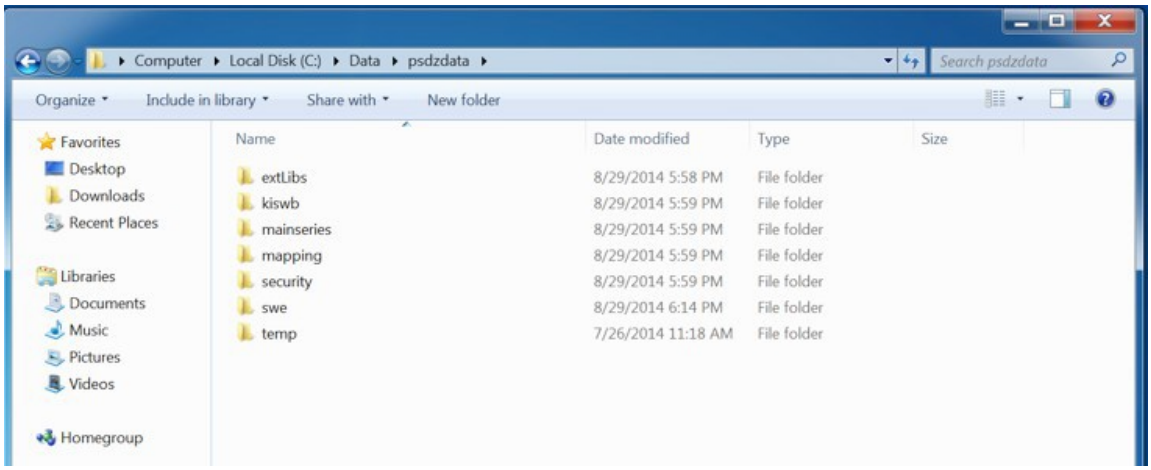
E-Mail us at: Antonio@compubuilder.net for remote coding services.

Software Installation / Preparation

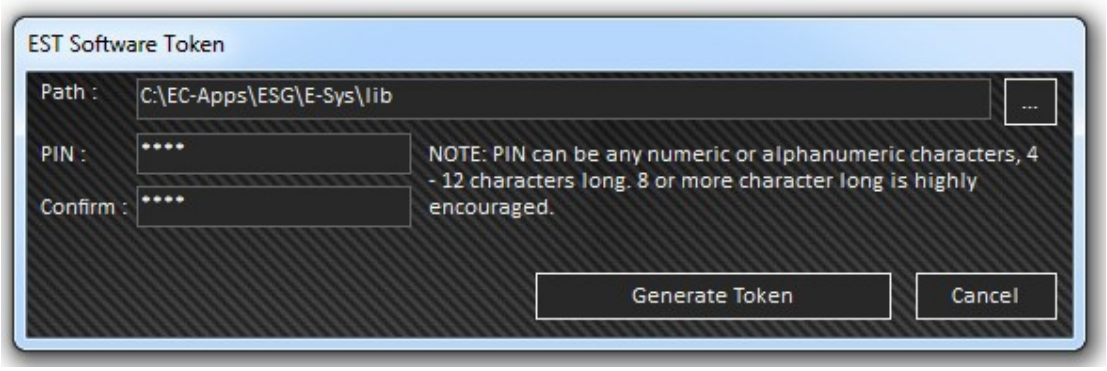
It is VERY important that you setup/install the software in the following order.

1. Extract the ESYS RAR file, and begin the ESYS Software Setup (click through, accept all agreements, use default locations for all software file locations when prompted during setup)
2. Use WinRAR to decompress PSDzDATA files to the location: **C:\data\psdzdata**

The sub-folders should be moved directly to C:\data\psdzdata\ as indicated in the picture below:

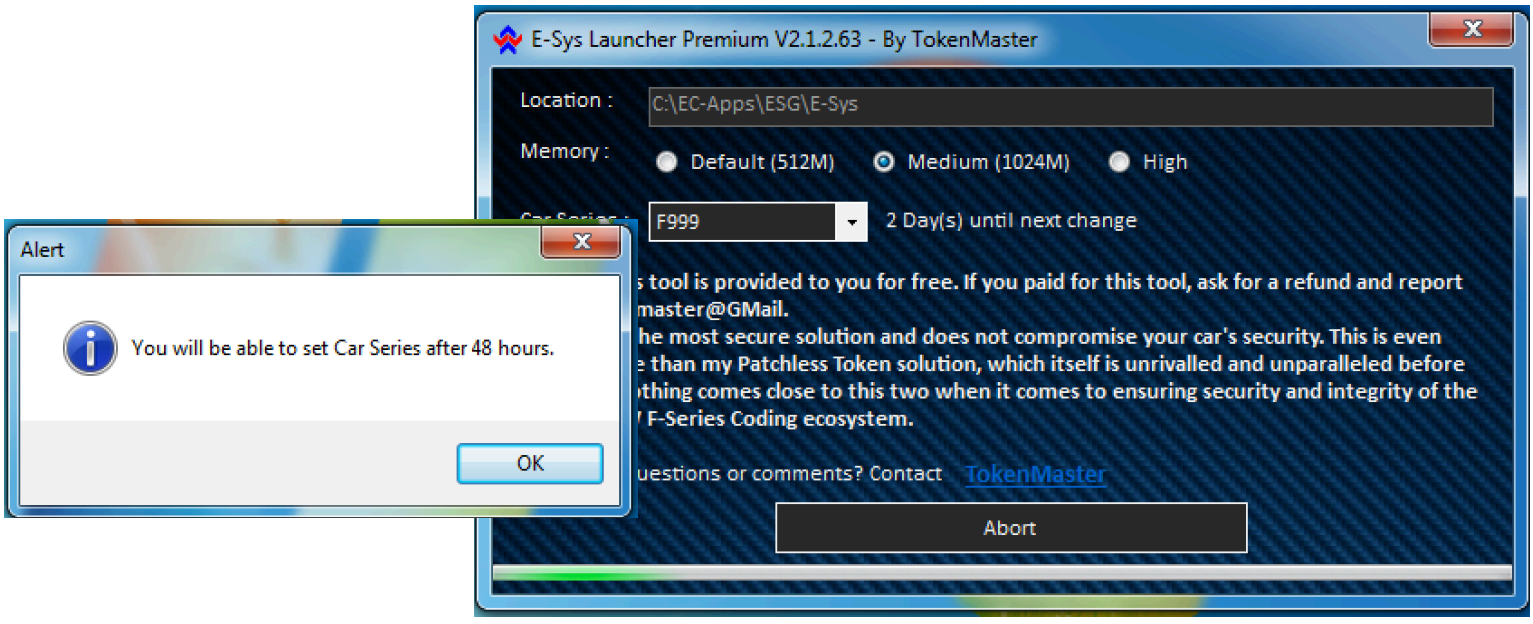


3. From the ESYS RAR file, run the ESYS Launcher Setup (Requires MS .NET Framework 4.0)
   a. This is the Token Generator, as well as the program you should use to run ESYS (do not use the icon that the ESYS installer provides to launch the program, instead use the icon that the launcher provides.
   b. After installation, the Token Generation process will occur. Please see below and pick the correct file location, and select your own personal 4-8 alphanumeric PIN code.

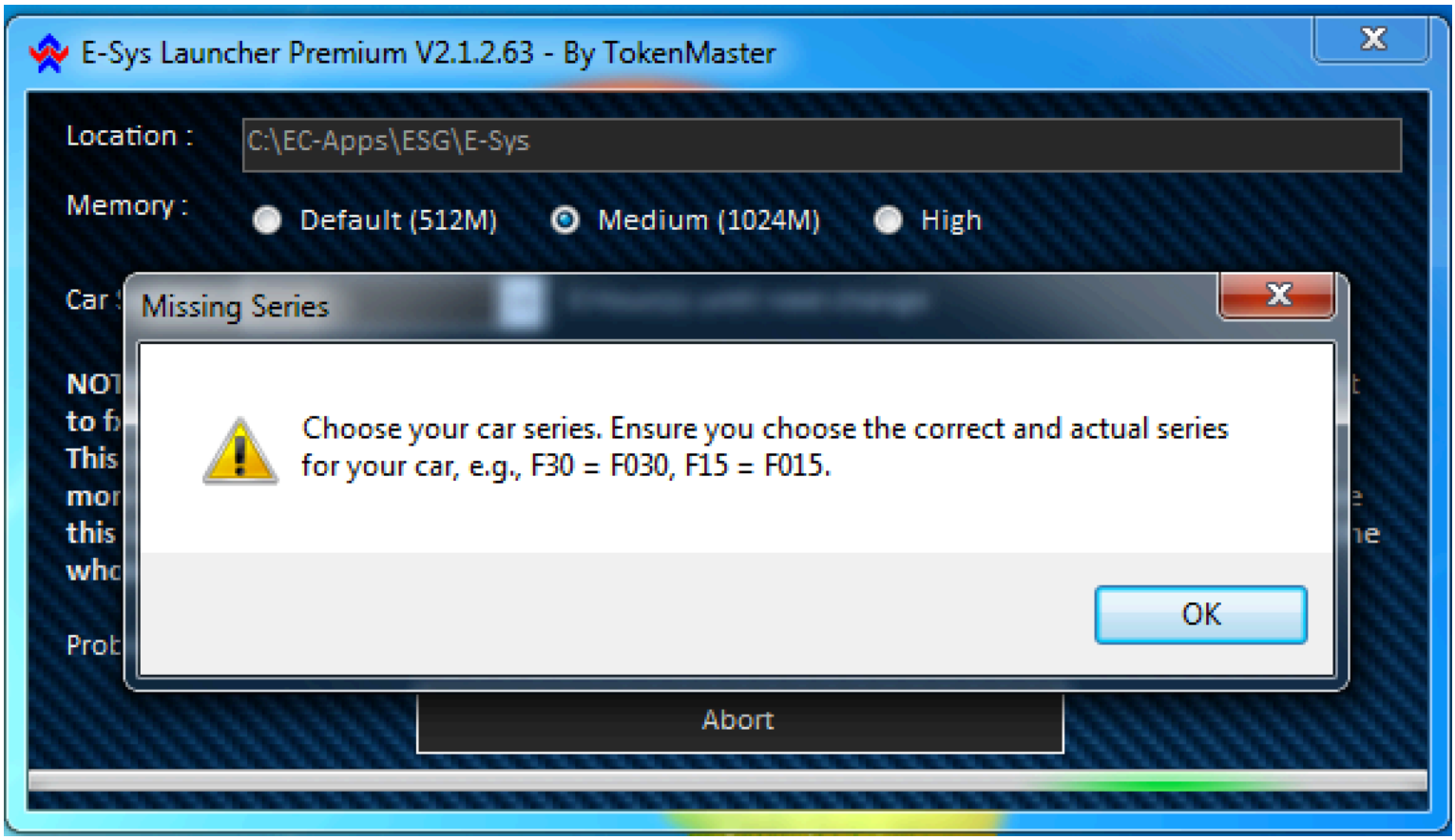


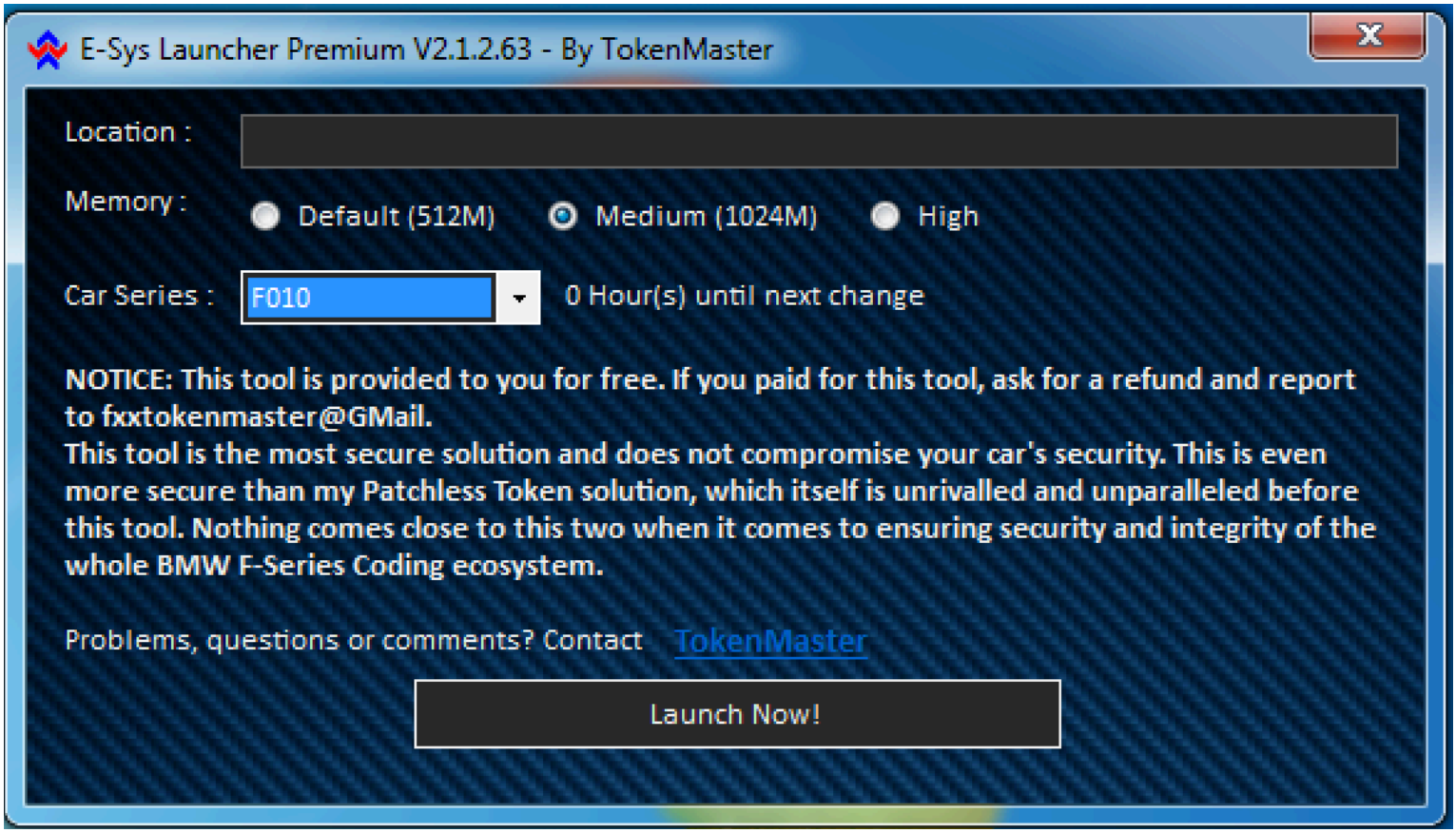
ESYS Launcher will set the default memory settings, activate the free token for use with ESYS, as well as validate that all CAFD files are signed by the developer to protect you from malicious CAFDs floating around the internet! The Launcher will also provide descriptive text injection "on-the-fly" to allow you to use the newest PSDzDATA with ESYS for FDL coding!

   d. Since people have tried to exploit the generous free tool created by Token Master, he has implemented a 48 hour delay before the software can be used. It also will only function for 1 specific model, chosen by
c. chassis code, so be sure to set it correctly. Please see screenshots below:



AFTER 48 hours after install, when you open the launcher, you will see this message:



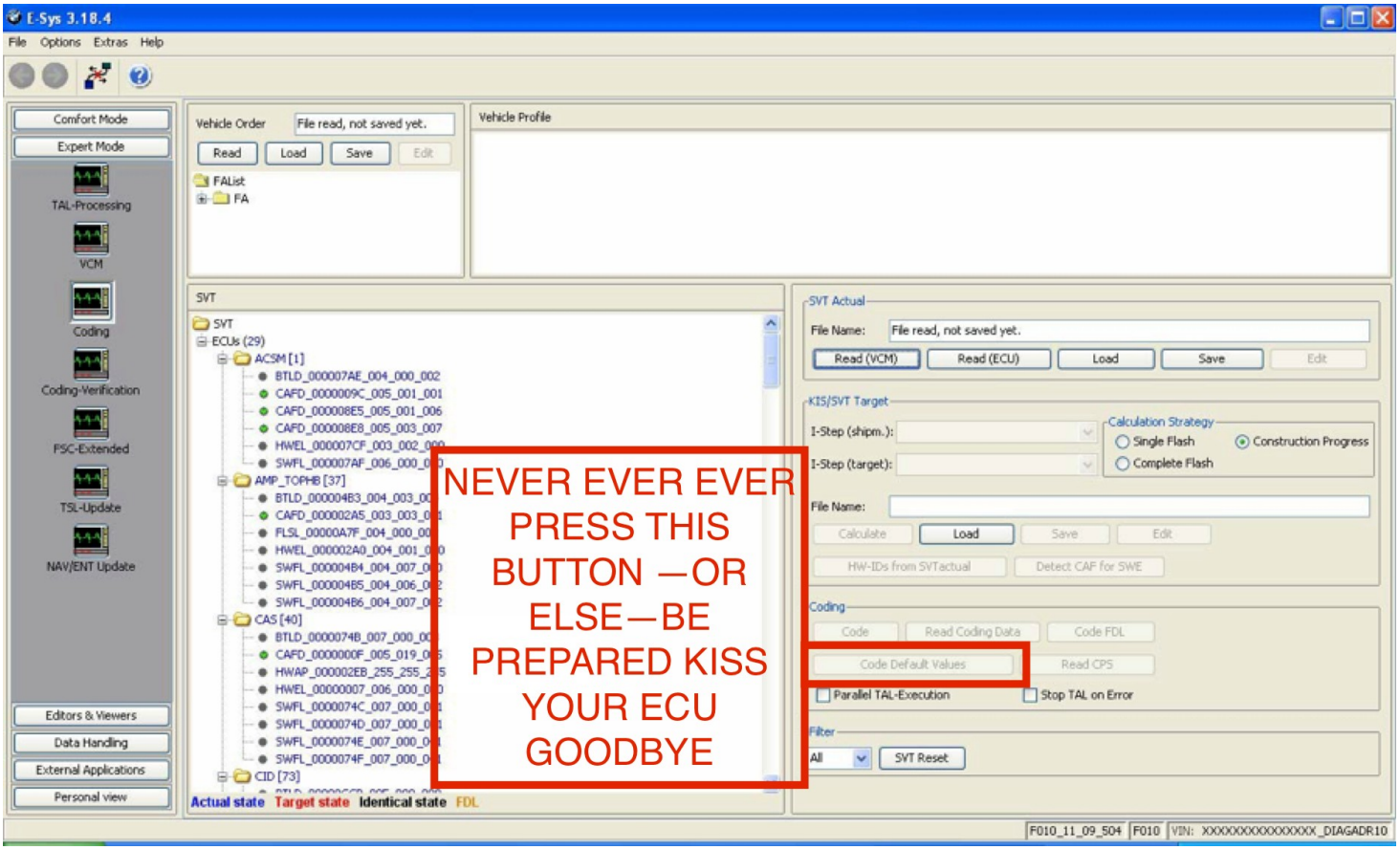


BE SURE TO RUN ESYS from the ESYS LAUNCHER SHORTCUT … DO NOT USE THE SHORTCUT THAT WAS CREATED BY THE ESYS INSTALLER!!!

4. Before we begin, here's the MOST IMPORTANT PIECE OF INFORMATION THAT YOU NEED WHEN CODING

Under NO CIRCUMSTANCES SHOULD YOU EVER PRESS THE BUTTON "Code Default Values"

See BELOW for the location of that button in the Expert Mode; Coding Screen in ESYS



CODING TUTORIAL NOW BEGINS

Step 1: Connect cable to computer then to car (Ensure that your car's engine is running during coding)

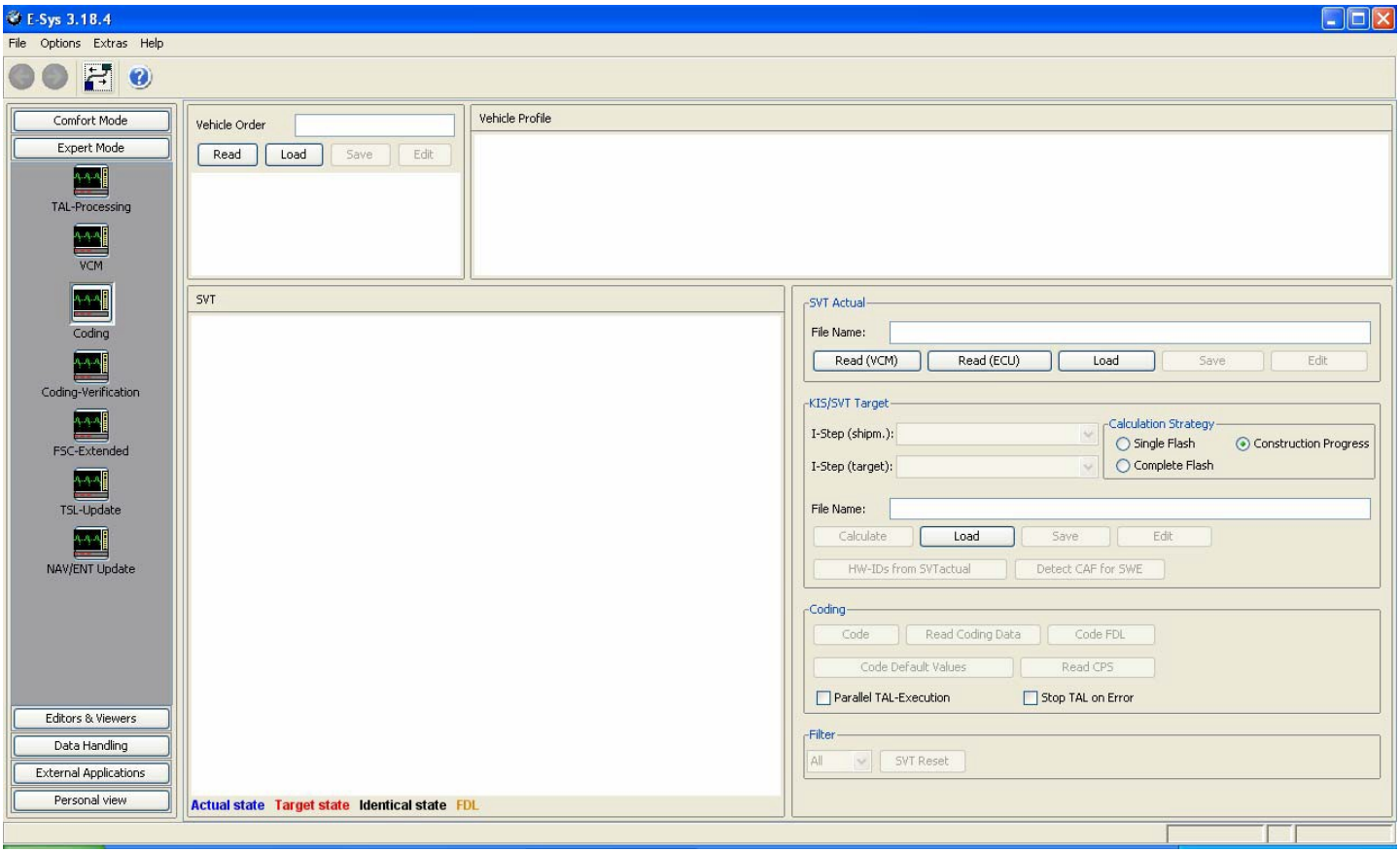
Step 2: Wait until LAN network adapter in task bar has established limited network capability (no screenshot)

To validate that the cable has a proper connection to the car, open up the LAN properties in Windows. The adapter should be set to obtain IP Address via DHCP (You can NOT set a STATIC IP Address for LAN Adapter)

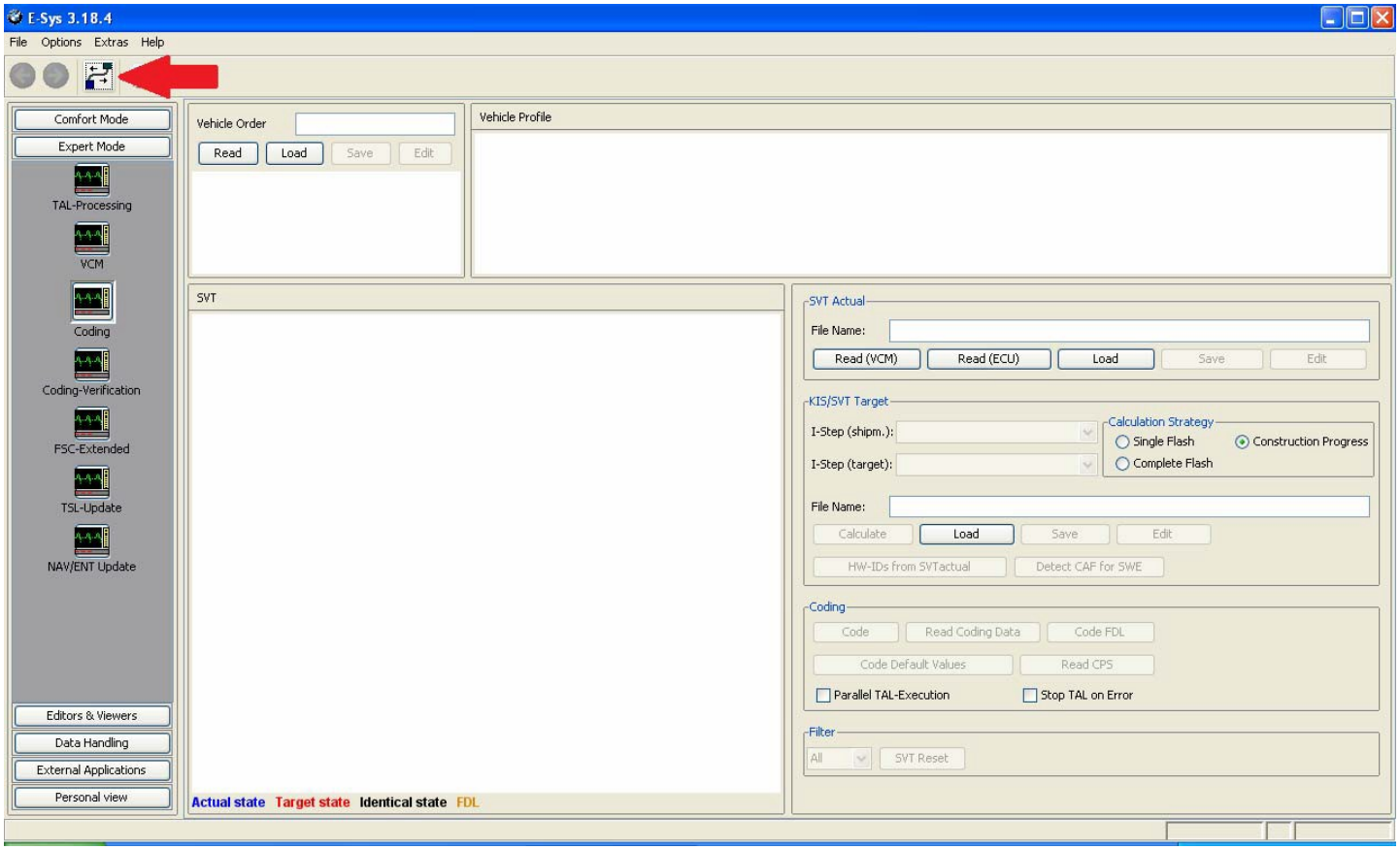
If you have a proper connection, your IP Address should be: 169.xxx.xxx.xxx

Remember to DISABLE Anti-Virus and Firewall Programs, which are KNOWN to interfere with ESYS communication via Ethernet / LAN connection.

Step 3: Open E-Sys



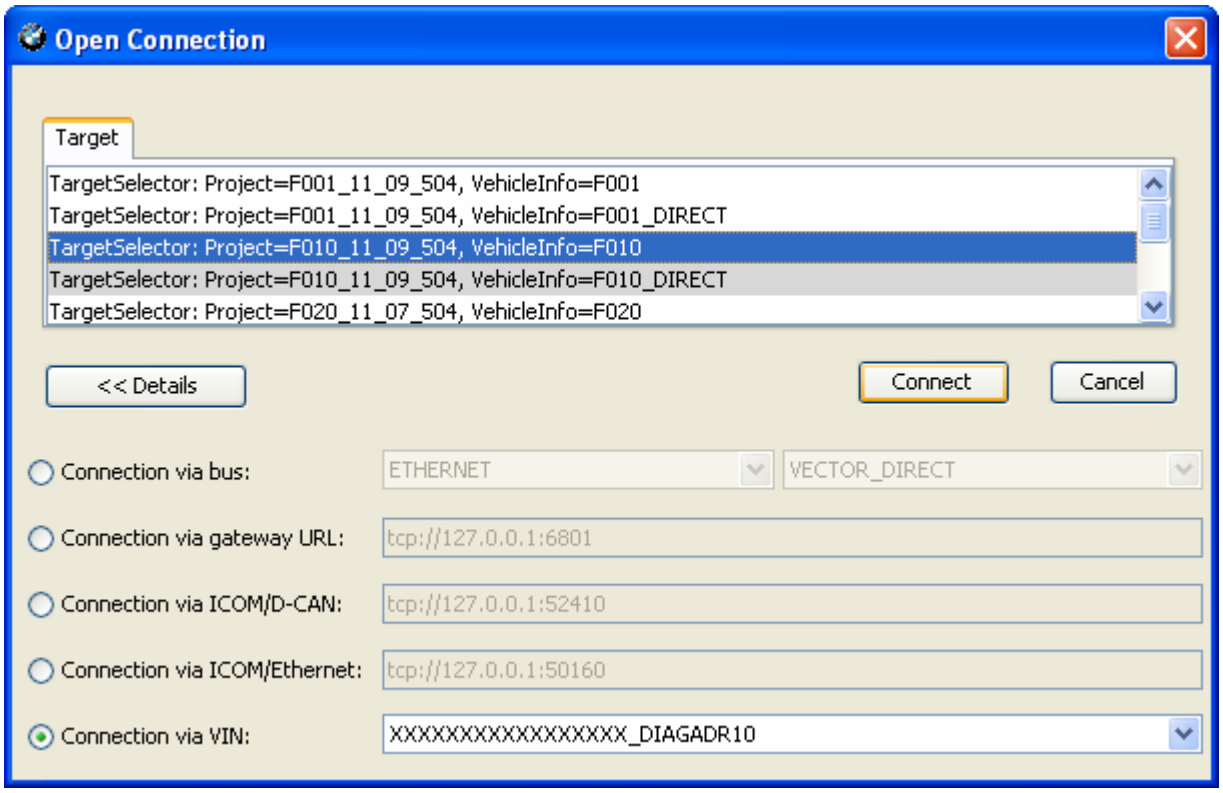
Step 4: Click the Connect button



Step 5: Select F series you are working on, my case F10=F010 Project … then select:
Connection via VIN and click “Connect”

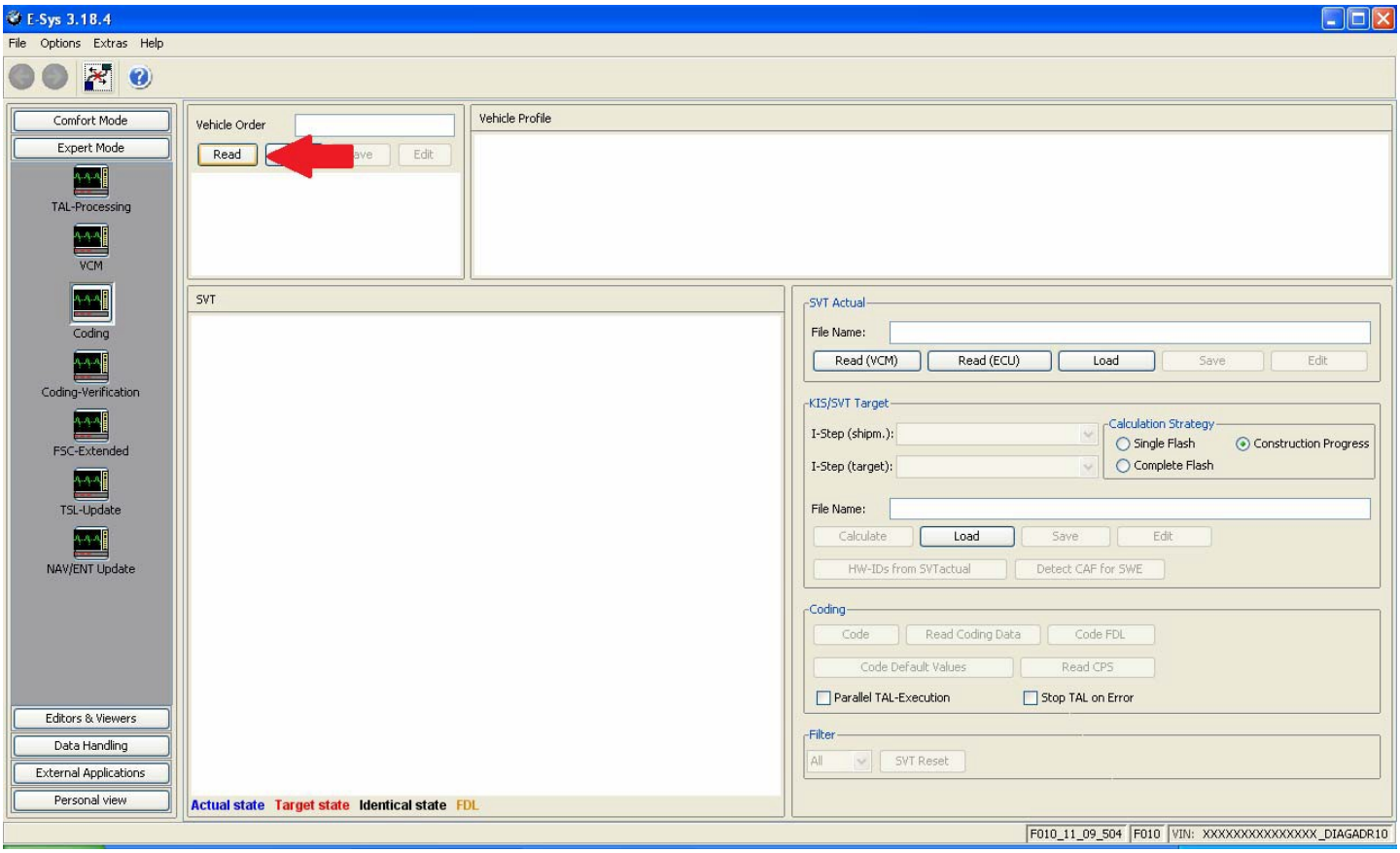
DO NOT USE ANY CONNECTION THAT SAYS “_DIRECT” at the end of the description

F001 – 7-Series (all, including Alpina variants) & 5-Series GT Models Only
F010 – 5-Series; 6-Series (including ///M variants and Alpina vairants)
F020 – 2, 3, 4 Series (all) (including ///M variants and Alpina variants)
F025 – X3, X4, X5, X6 (all) (including ///M variants)
F056 – 2014+ Mini Cooper (all variants with iDrive controller)
I001 – i3, i8 (all variants)



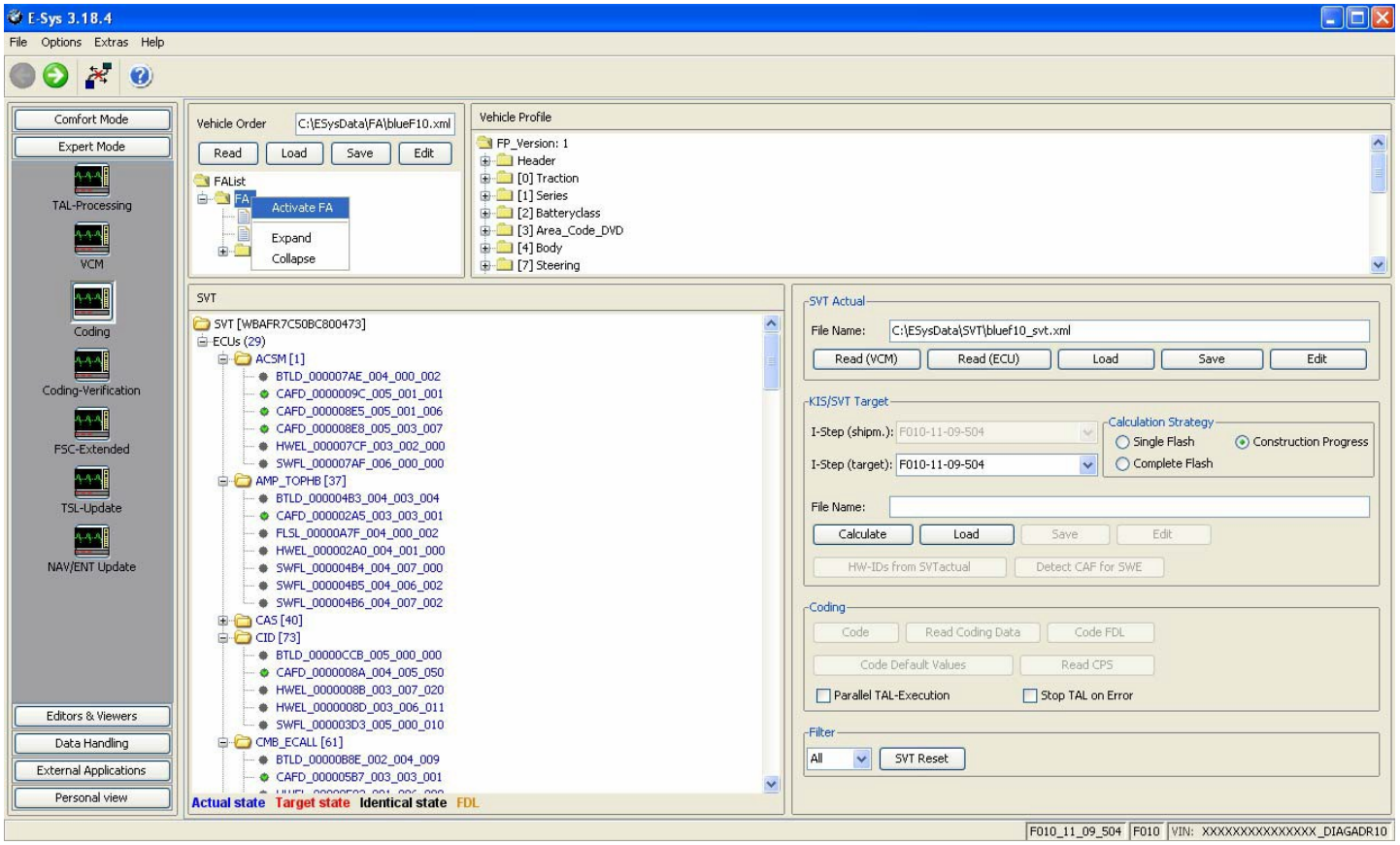
Step 6: Click “OK”

Step 7: Click “Read”

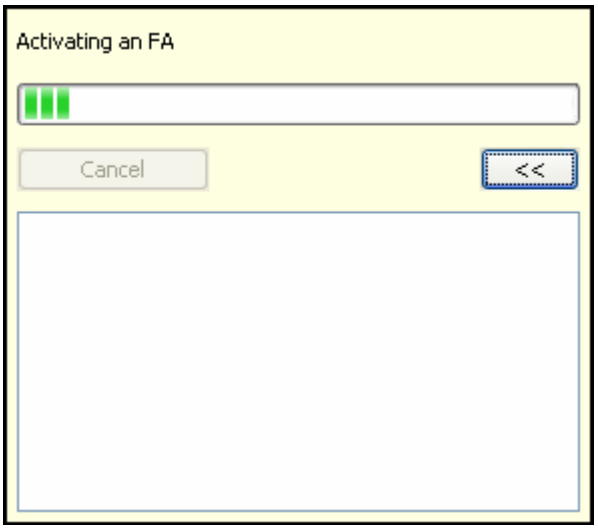


Note: Option to save or not to save

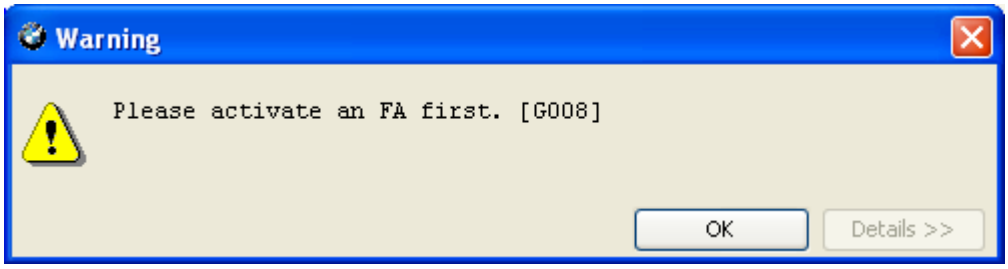
Step 8: Right click FA, select “Activate FA”



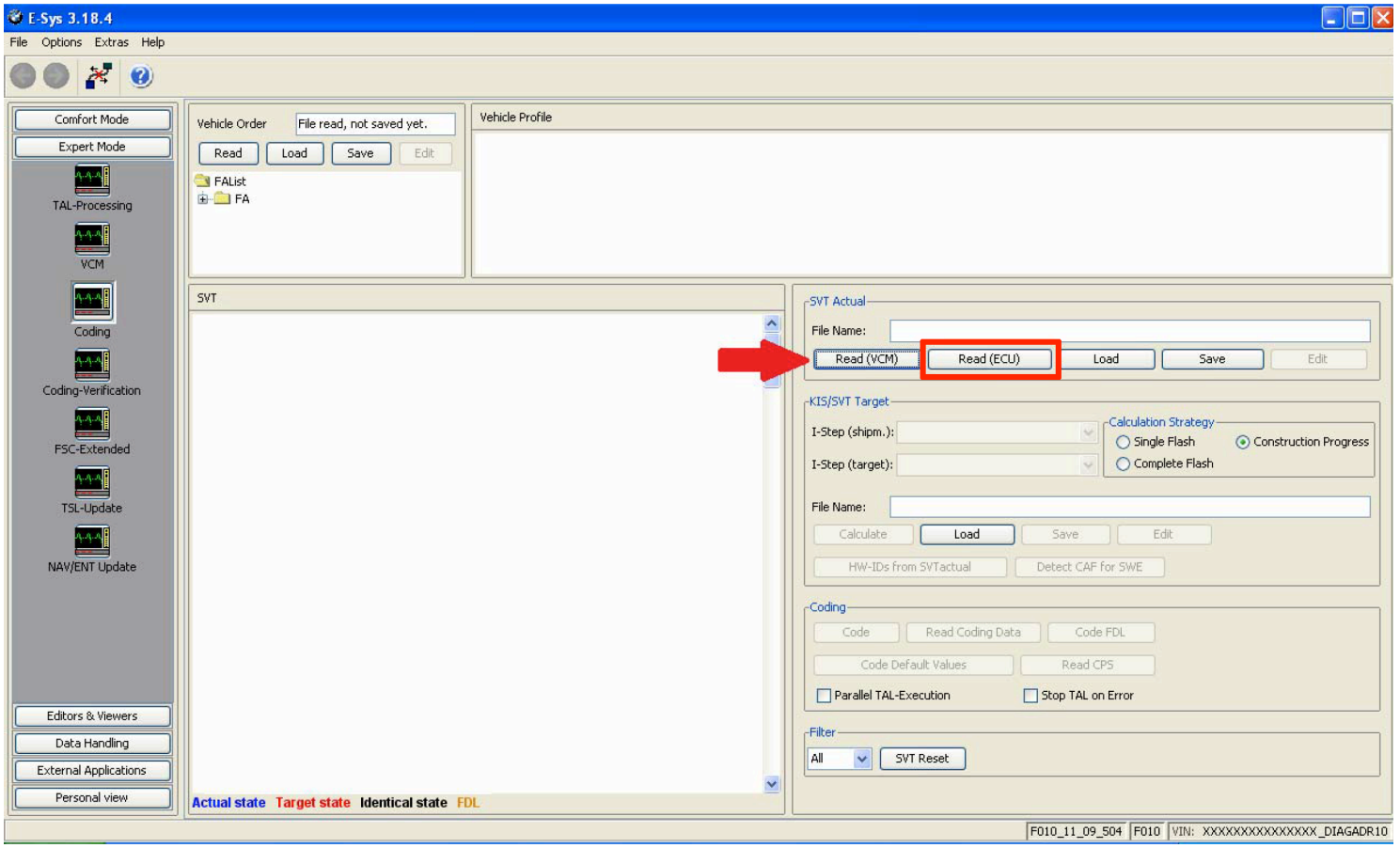
Activating FA, just wait till it finishes. Once finished, FA should show (active) in green. If not, try again.



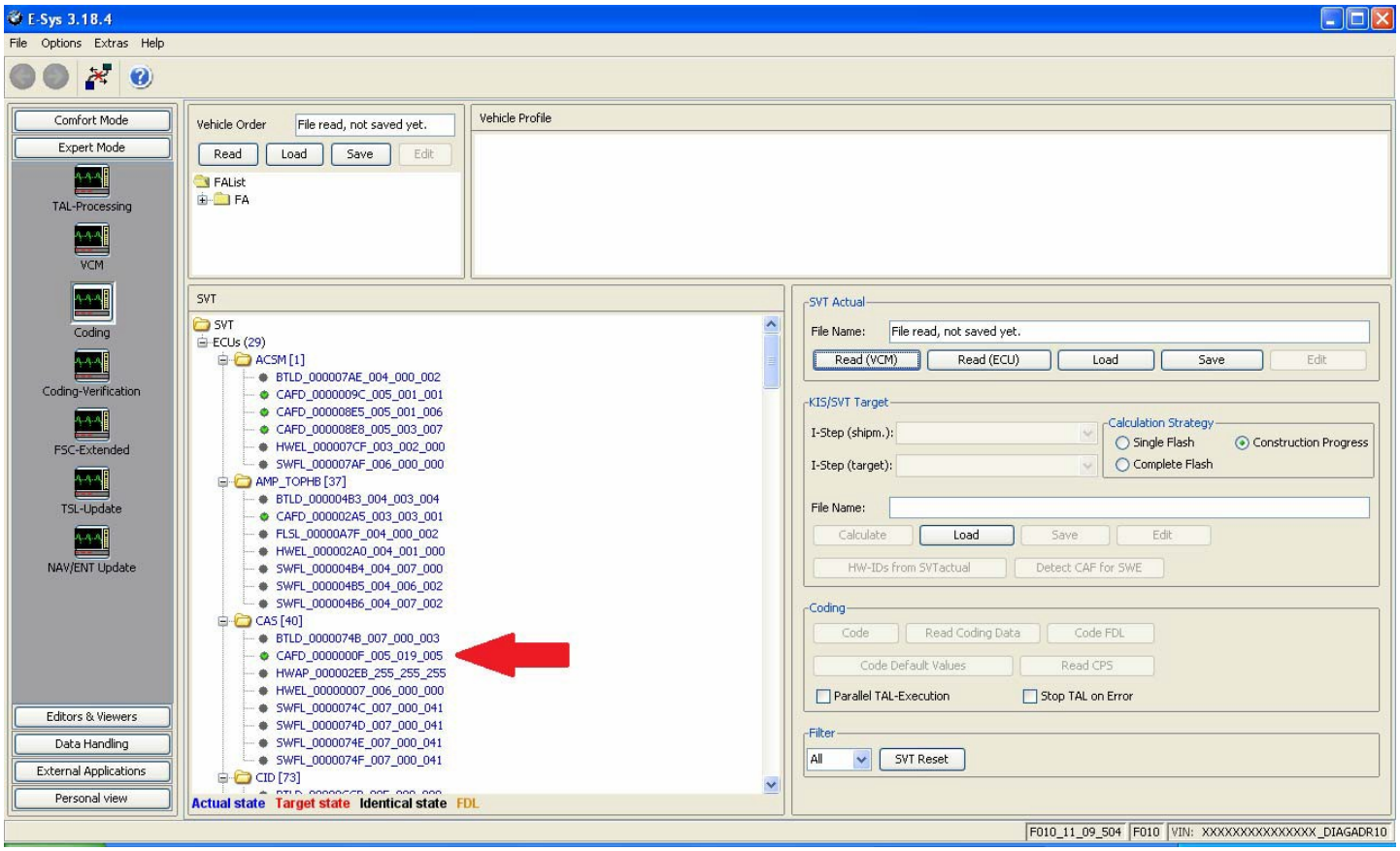
Note: If you do not activate FA as described in Step 8, you will receive this message

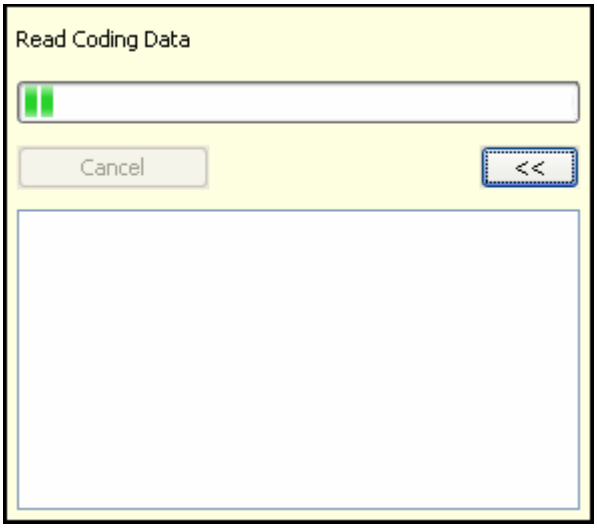


Step 9: Click "Read (ECU)"



Step 10: Select CAFD (only one with a green Check mark) file under the module you want to read and select “Read Coding Data” …. (Note: the ACSM ECU has 3 with green check marks … pick first one)

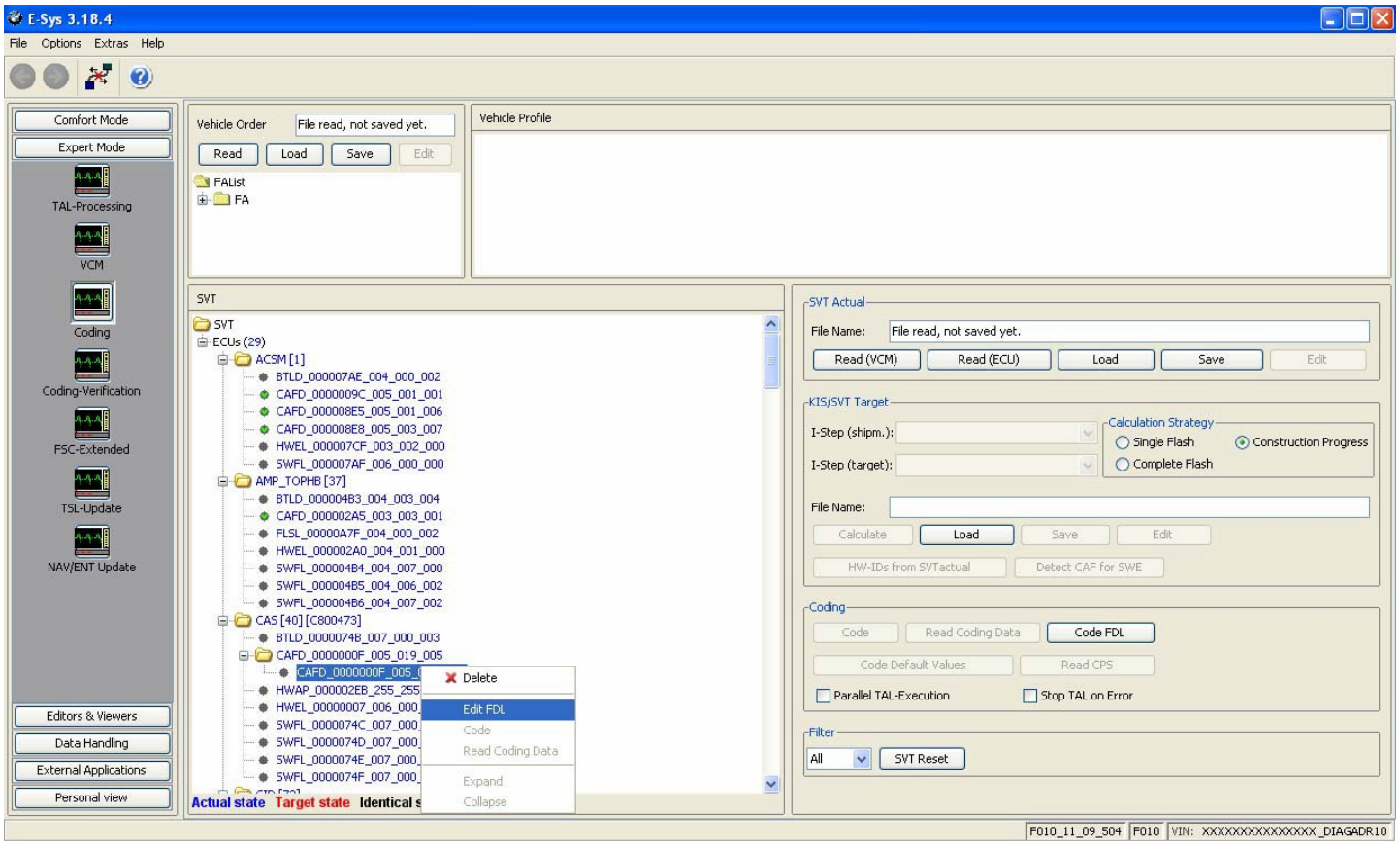




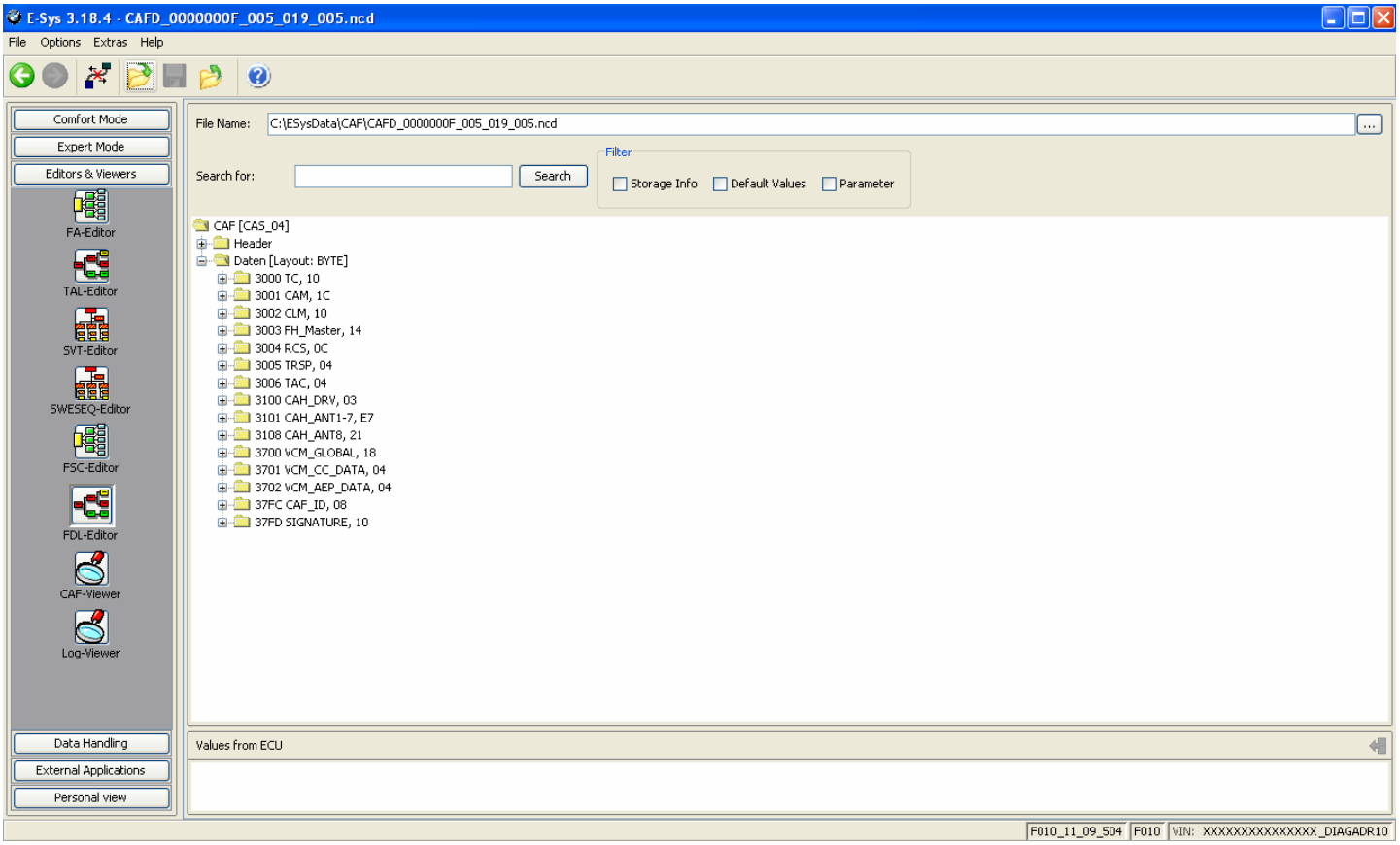
Step 11: Error Report, Click “Close”

You want to see that CAFD_xxxxxxxx_xxx_xxx_xxx.ncd was generated as shown below:

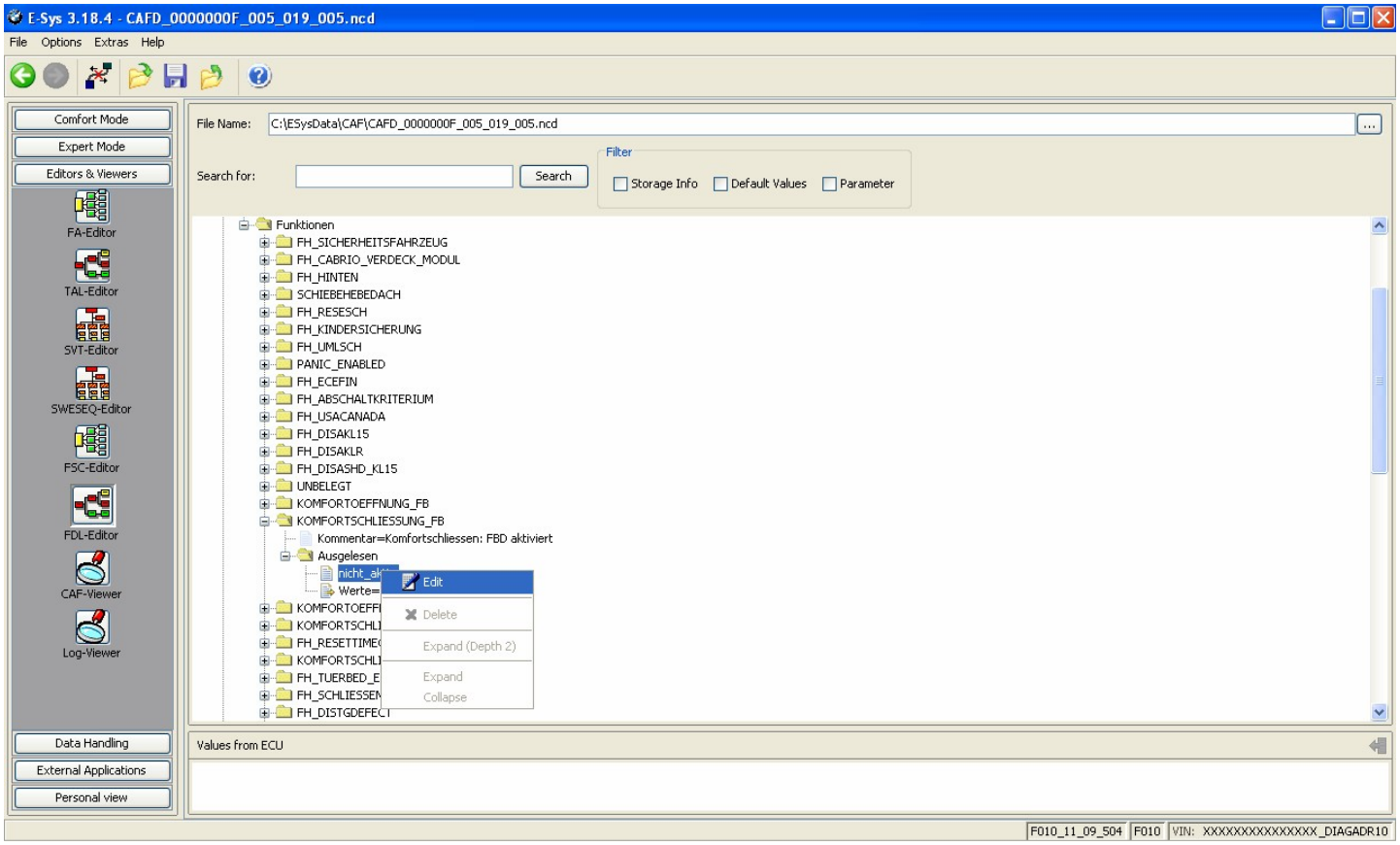
Step 12: New option under CADF, a folder. Expand the folder by clicking + and right click that file, Select “EDIT FDL”



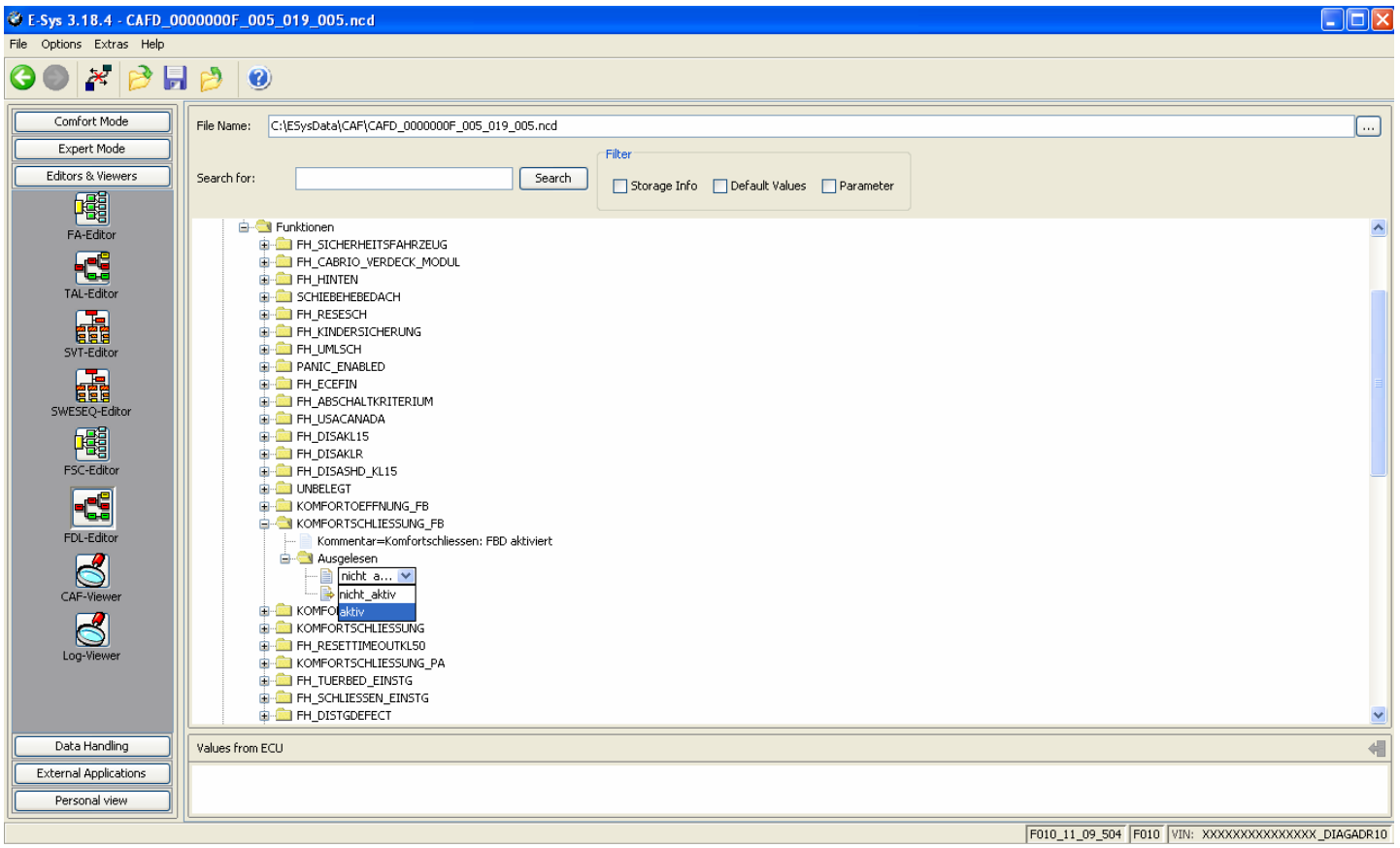
Step 13: Browse the folders till you find your option, I want option KOMFORTSCHLIESSUNG_FB



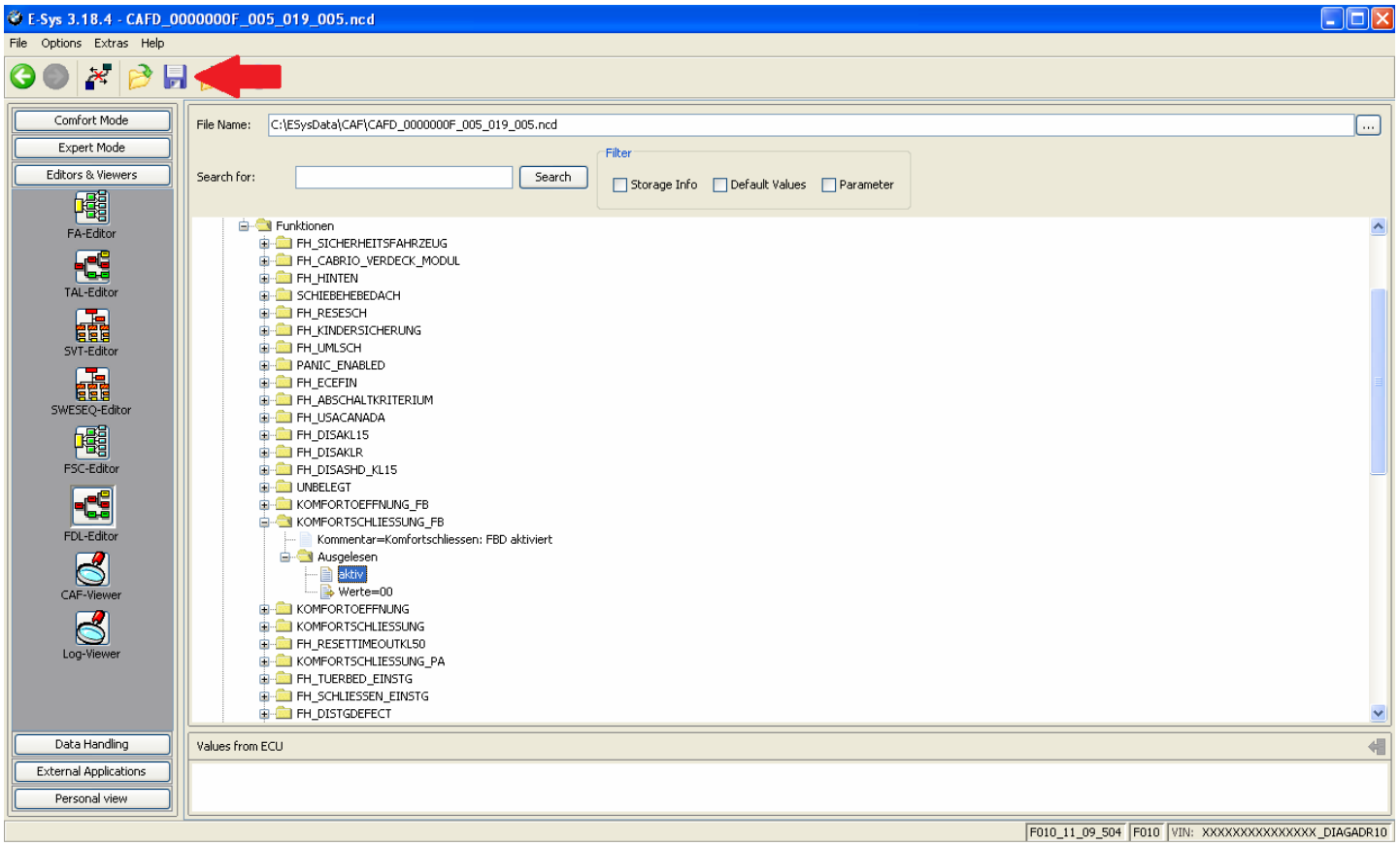
Step 14: Factory option set to nicht_active. Right click, select “Edit”



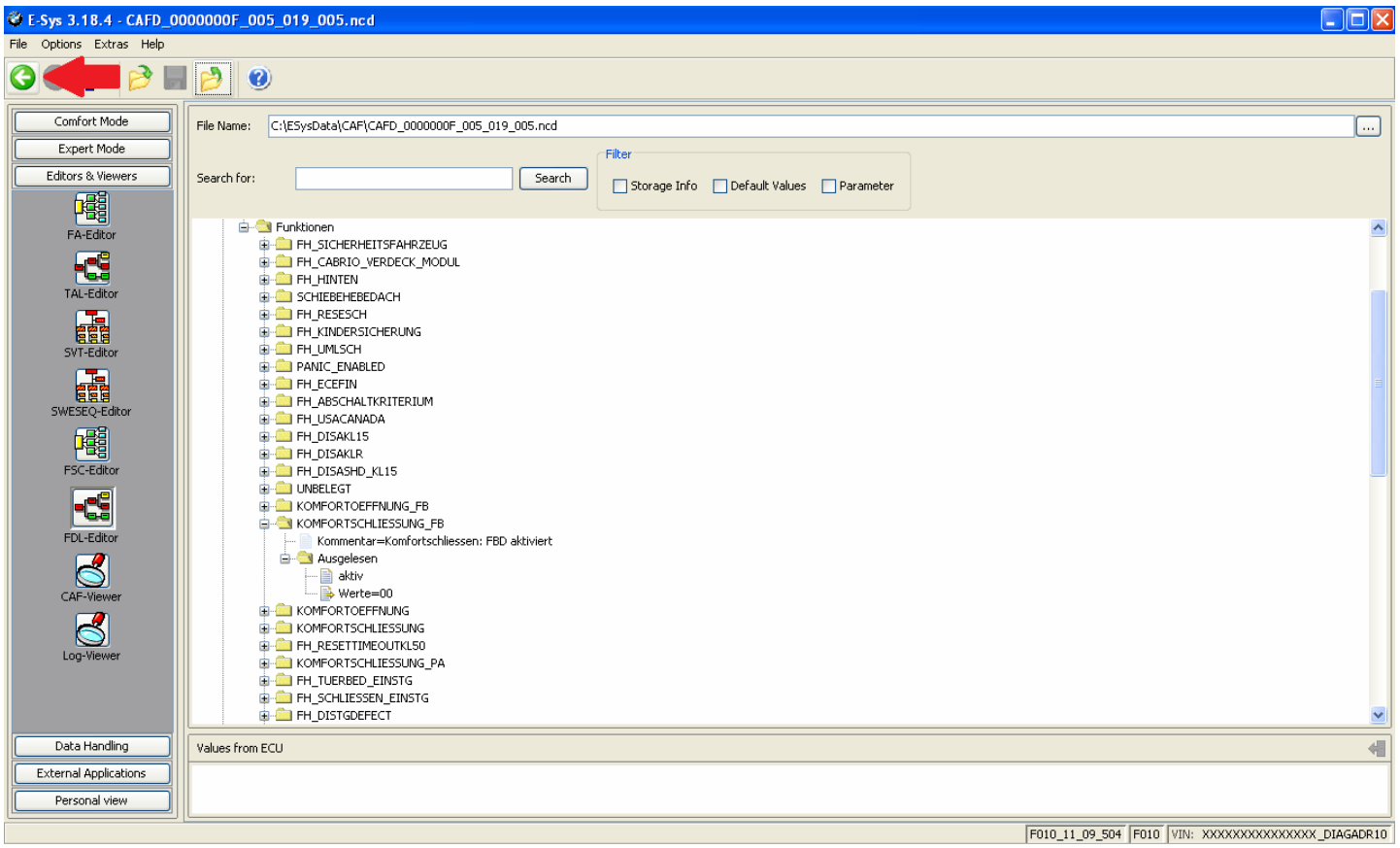
Step 15: Select option desired, in this case, select “aktiv”



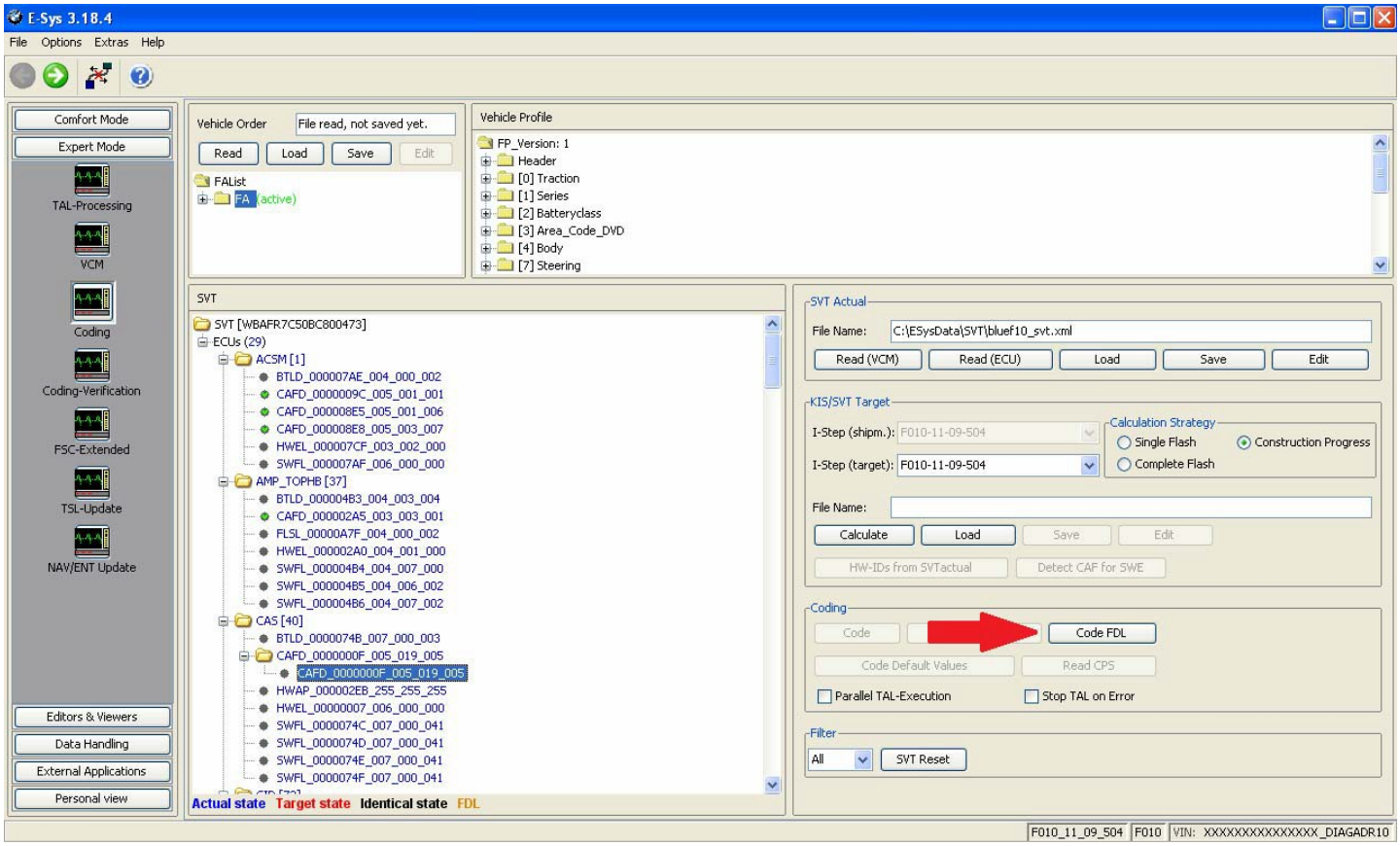
Step 16: Once all changes have been made, Click the “Save” icon



Step 17: Once saved, click the green back arrow

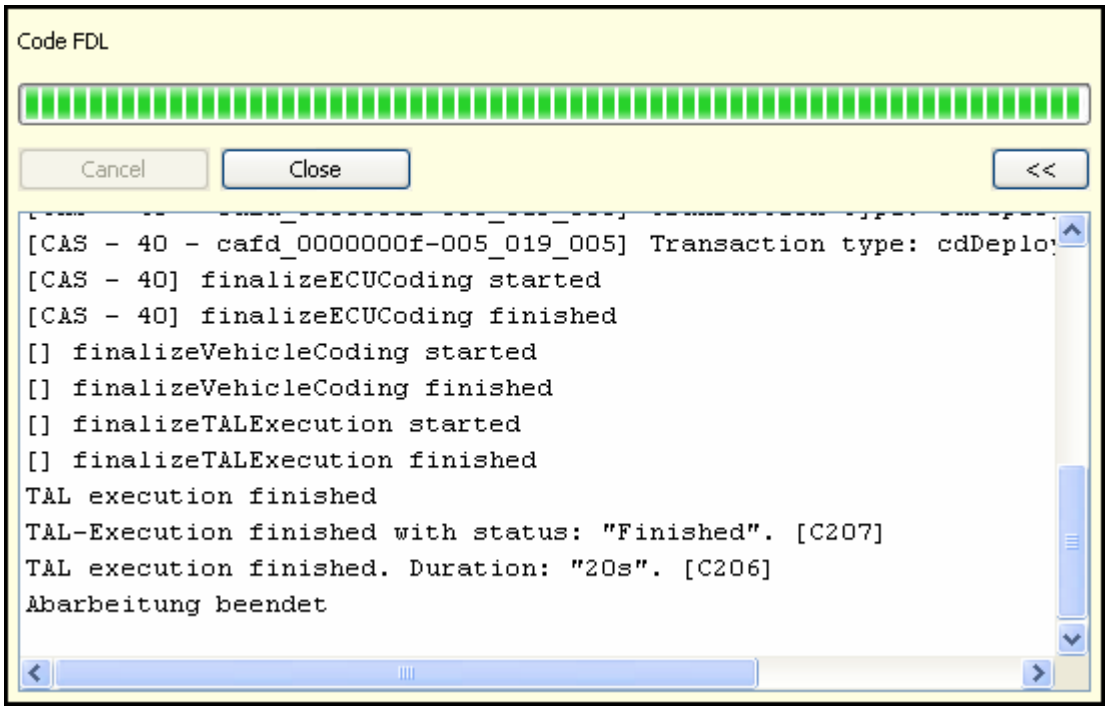


Step 18: Select the CAFD file that you just edited and then click “CODE FDL”

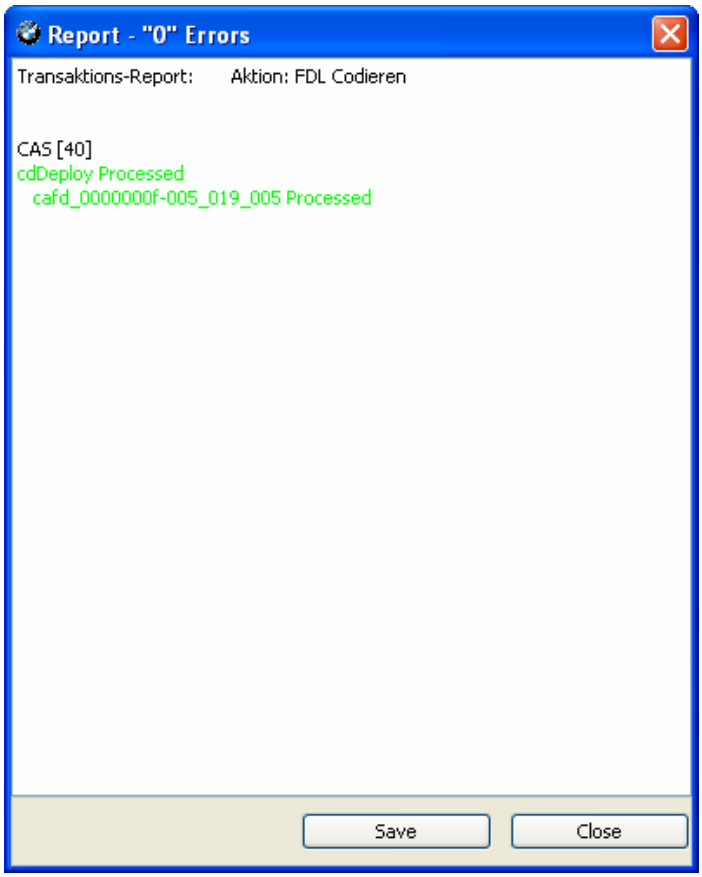


Step 19: Coding FDL (progress)

Step 20: After it completes, Click “Close”



Step 21: Error report will open, view and click “Close” (or save if necessary)

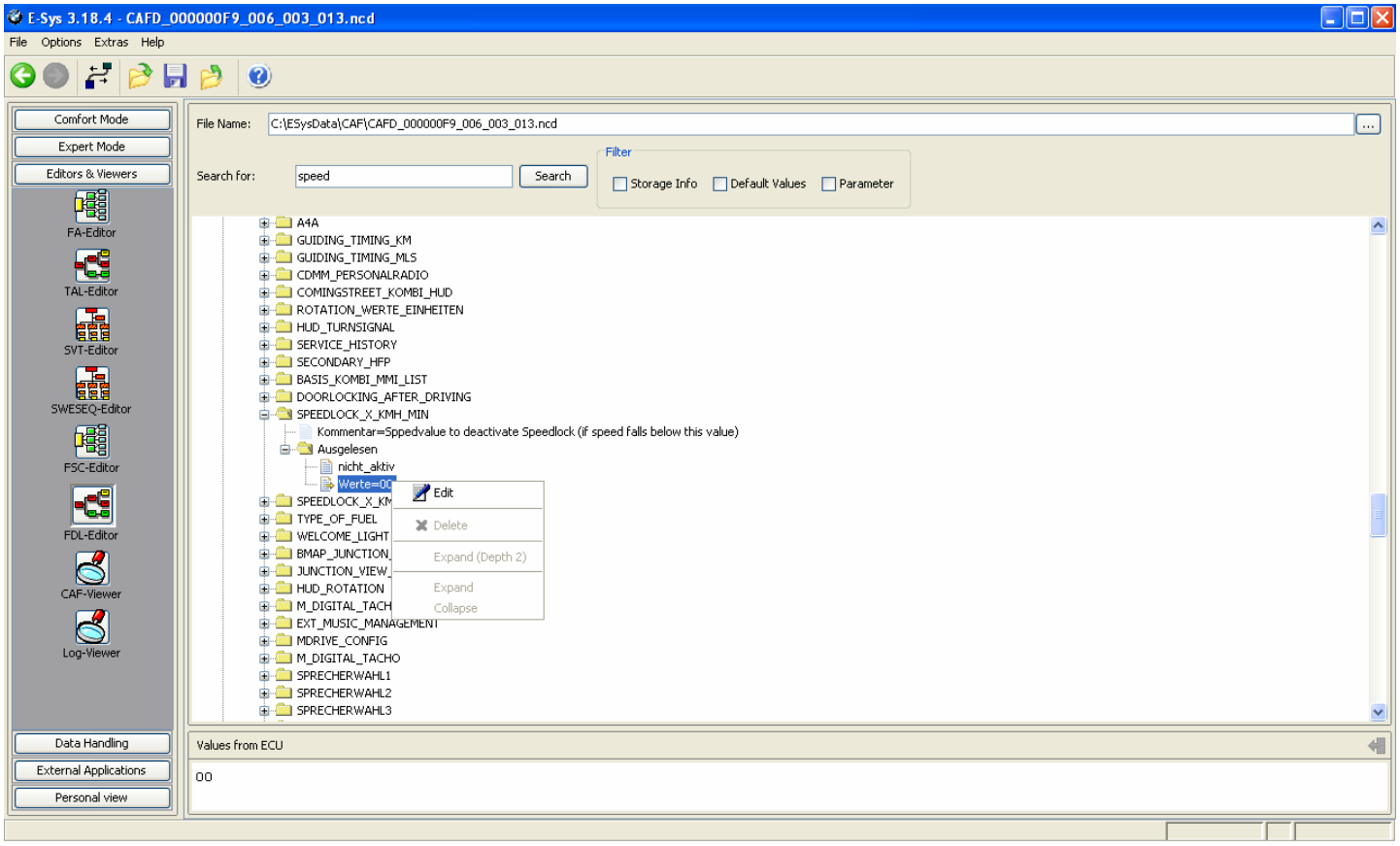


Cycle key and test for function. In my case, “0 errors” so it should work. I tested the new function and windows rolled up via remote by pressing and holding the lock button.

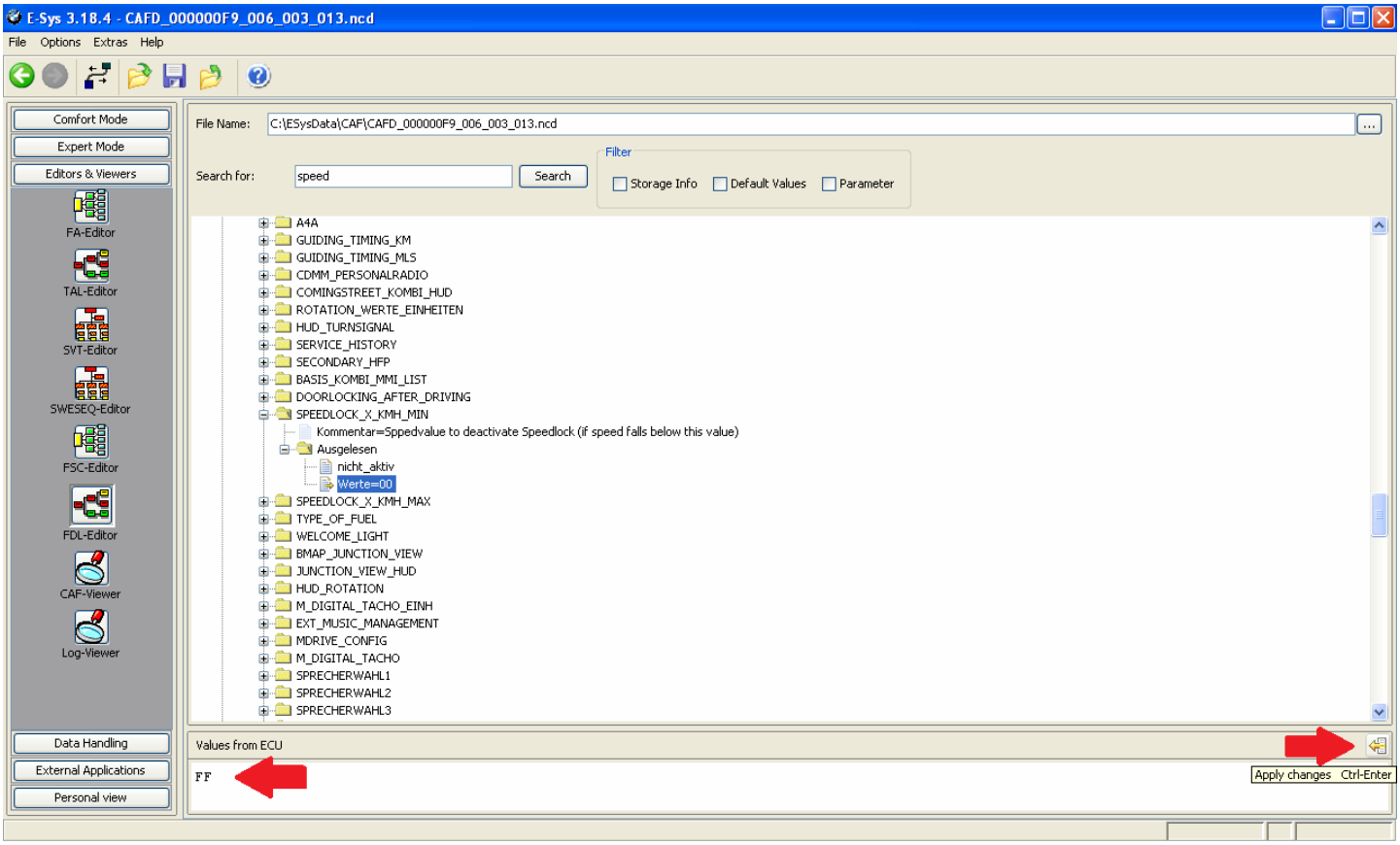
How to: Change Werte Values

Continuing from FDL CODING GUIDE above (after step 13)

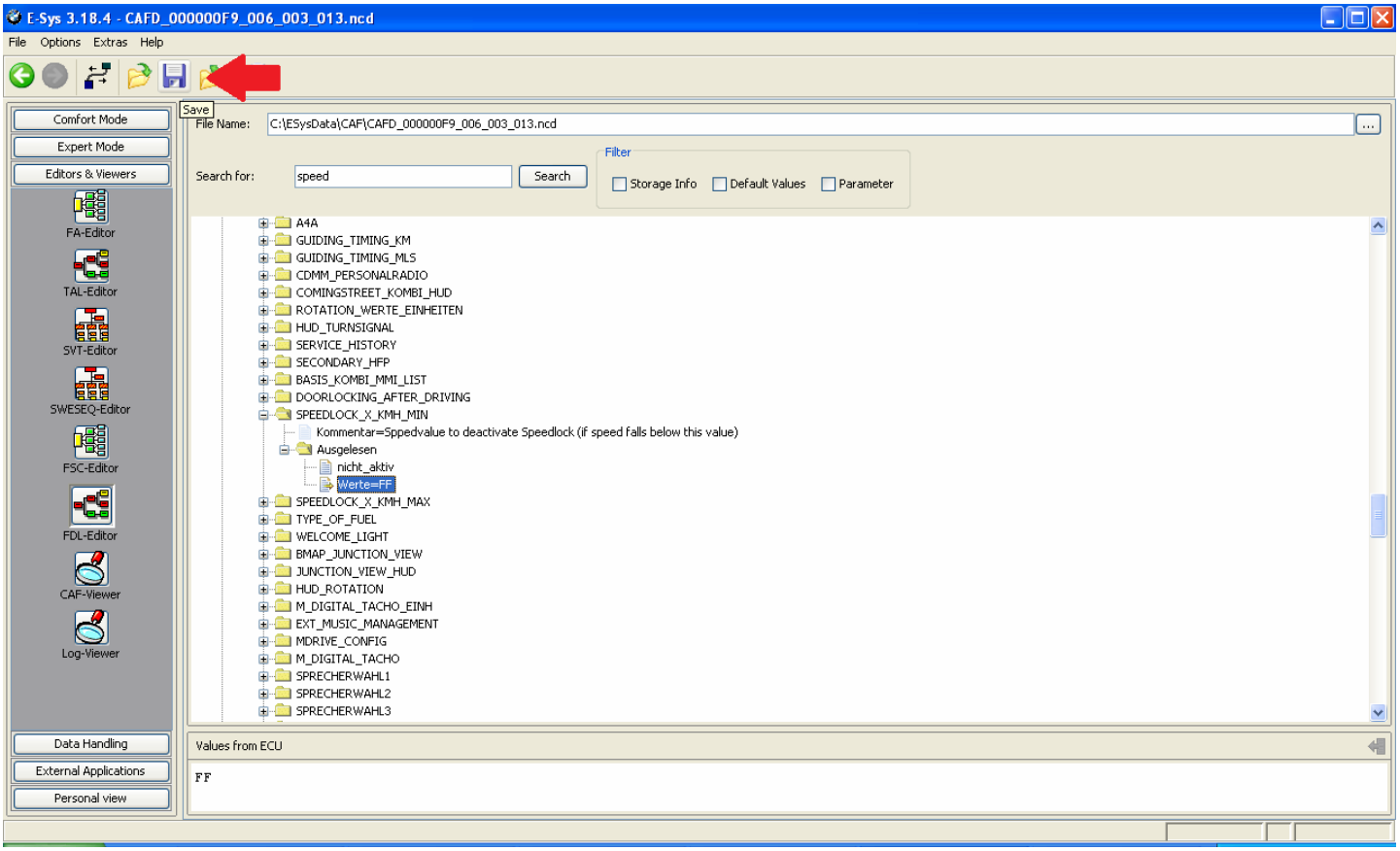
Step 14b: This time right click on the werte value, Click “Edit”



15b: The option to change the value is in the lower window. Replace current value with new, Click the button on the right.



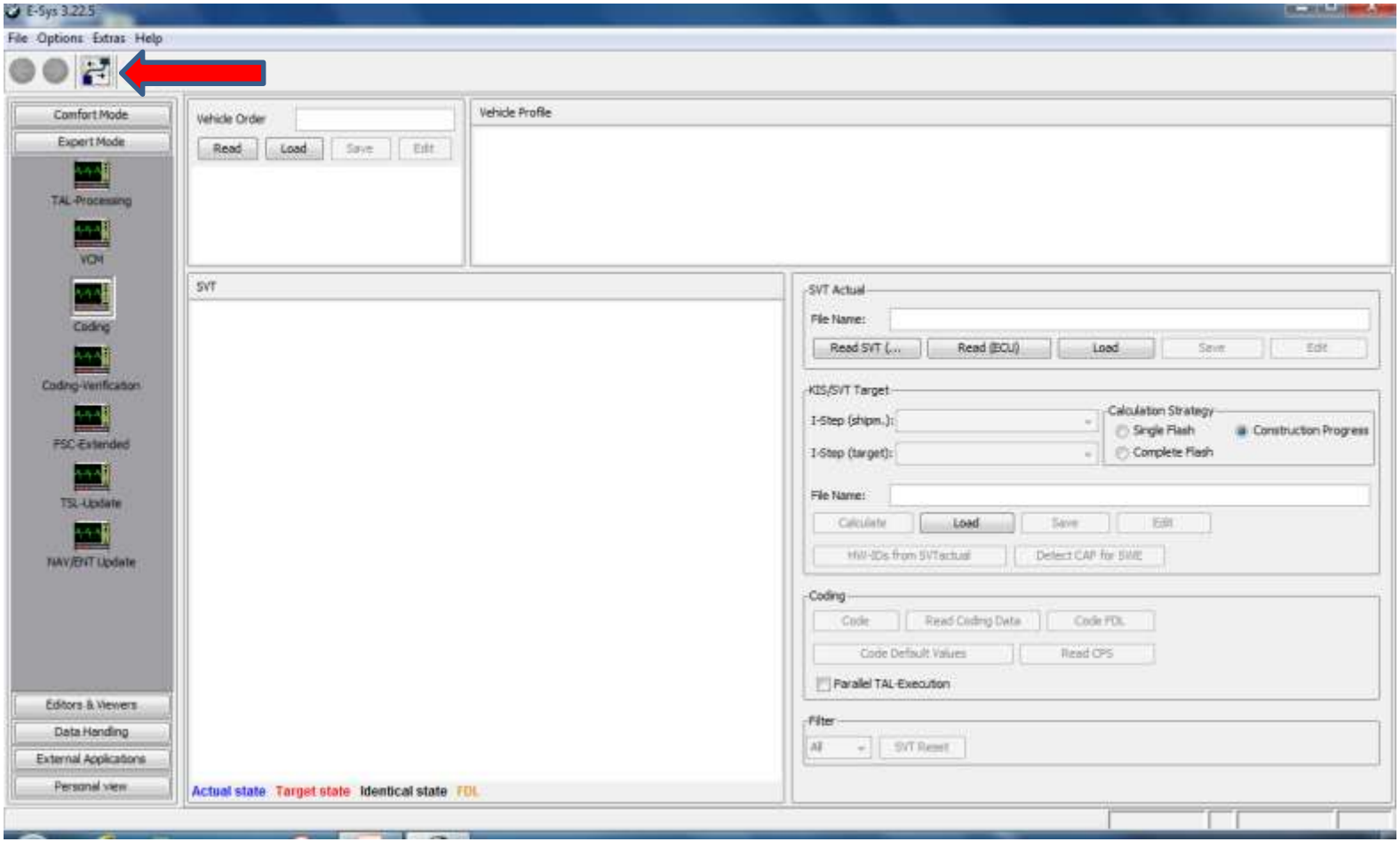
Step 16b: Save



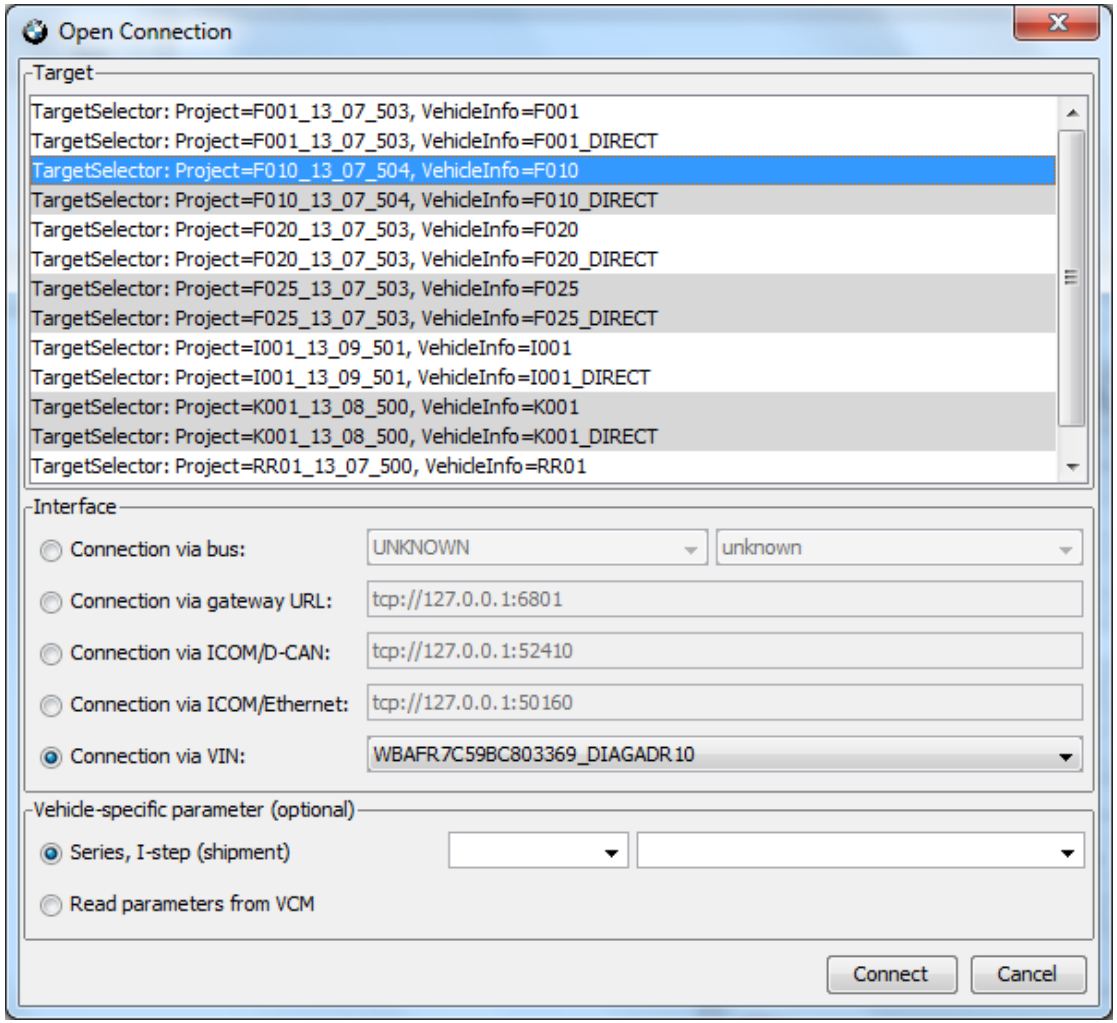
Step 17b: Proceed to Step 18 in the FDL Coding Guide above and follow to the end.

How to change FA (VO) in F-series car
Version 8-24-2013

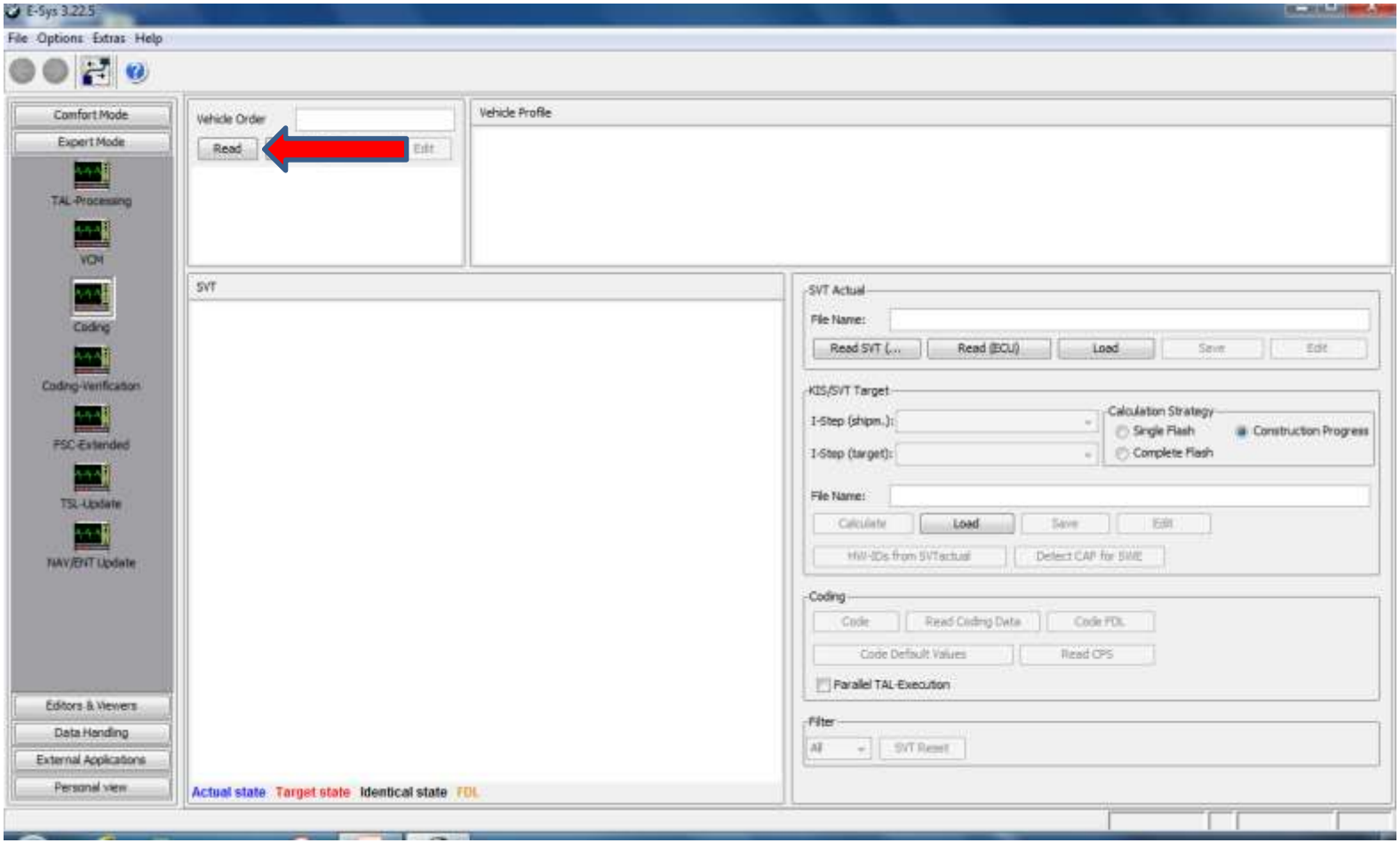
Connect to the car by clicking icon at the top.



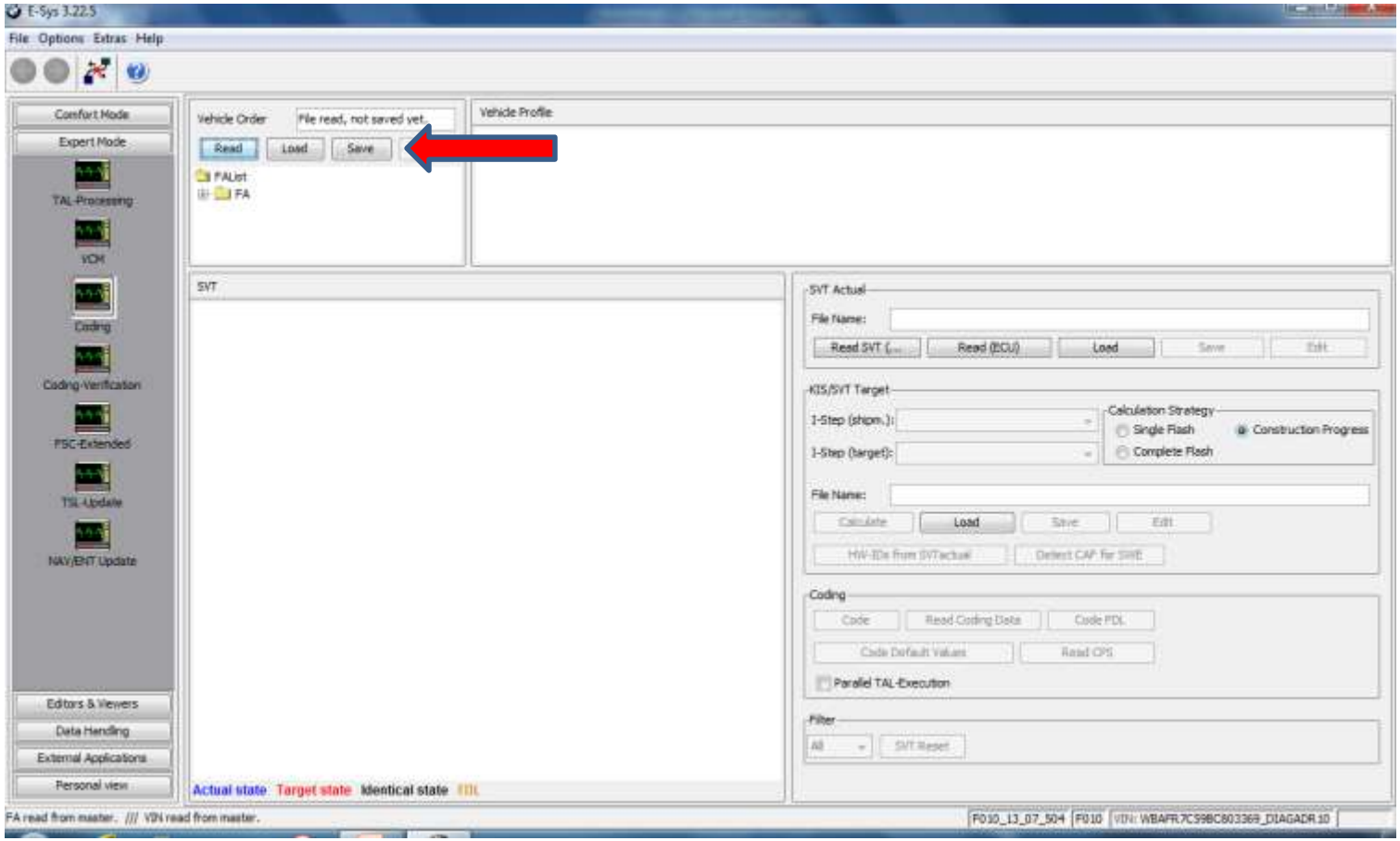
Select the correct TargetSelector, e.g. F010 (not F010_DIRECT) for an F10
Select “Connection via VIN" and press the “Connect” button.
(Ignore the Vehicle-Specific parameter options.)
Click OK in the popup box which appear when connection established.



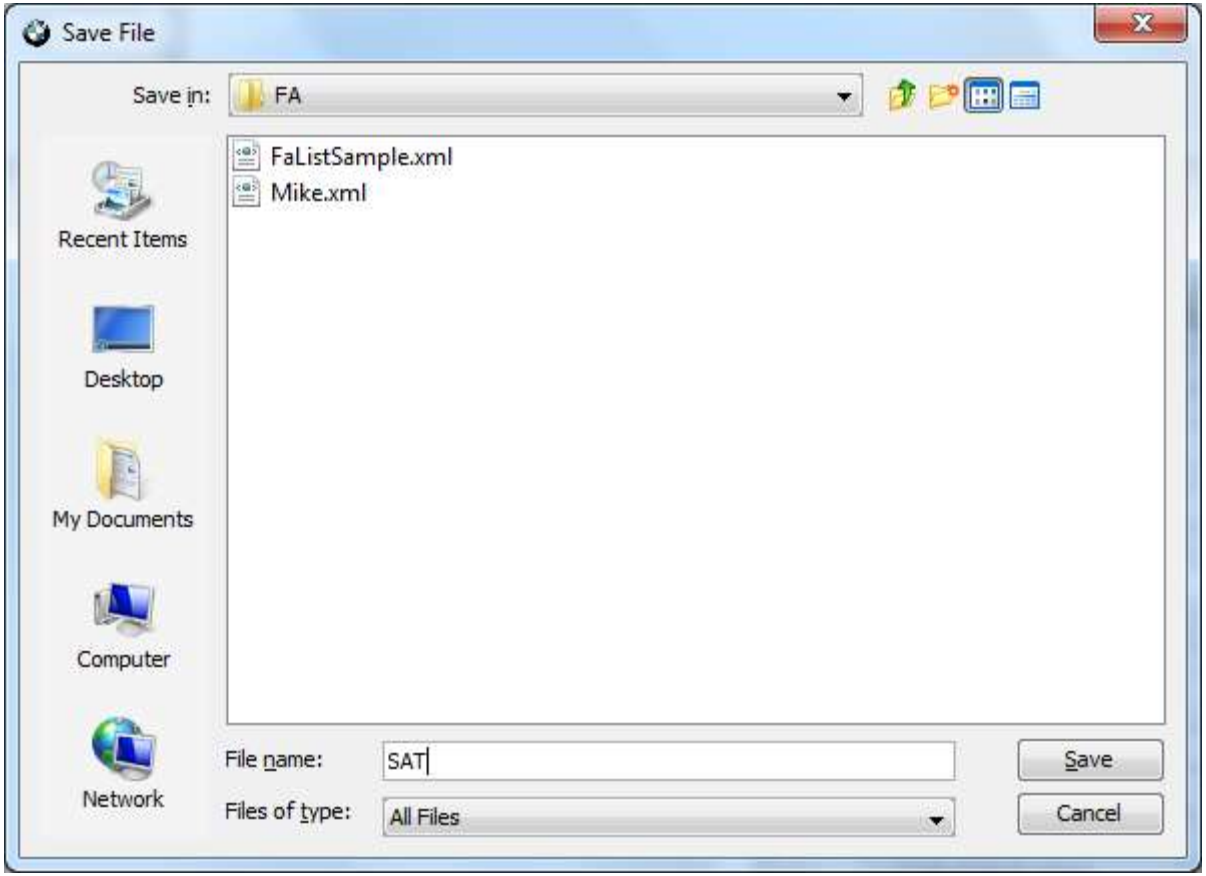
Select "Expert Mode“.
Click on the "Coding" tile.
In Vehicle Order Box, click on the "Read" button. This will display the car’s FA .



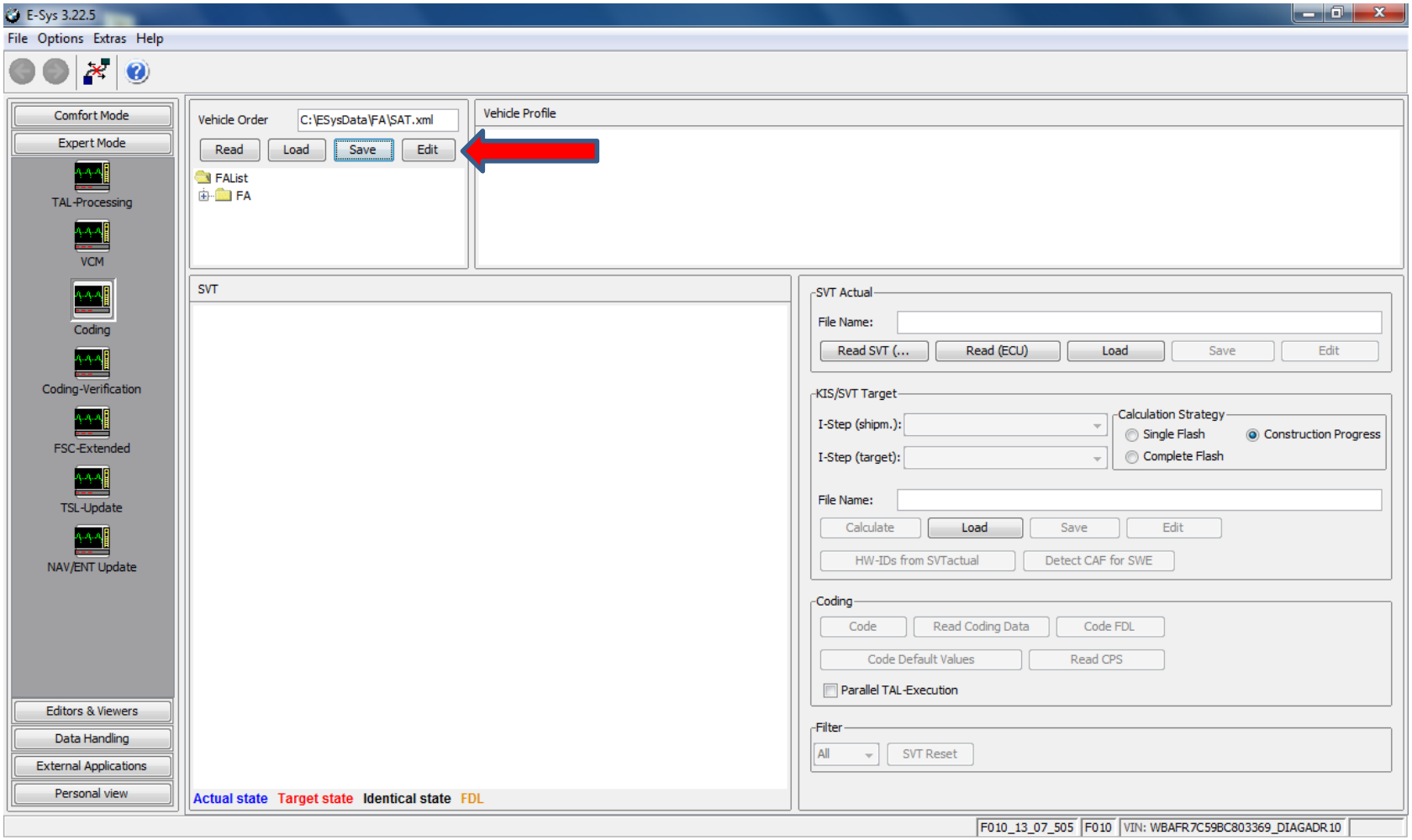
Click on the “Save” button.



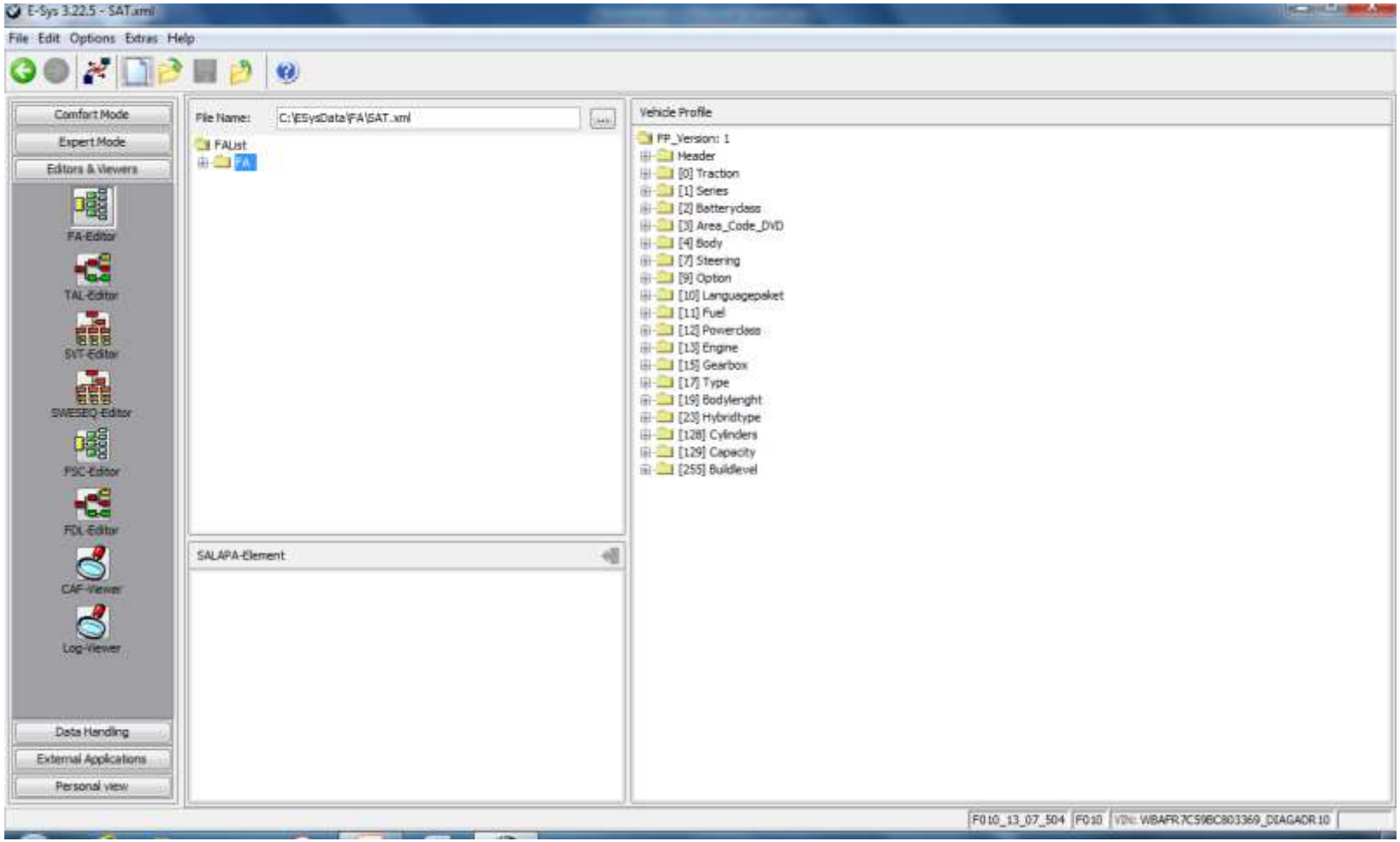
Create a file name and Save it.
(Note: In this example the file name is “SAT”)



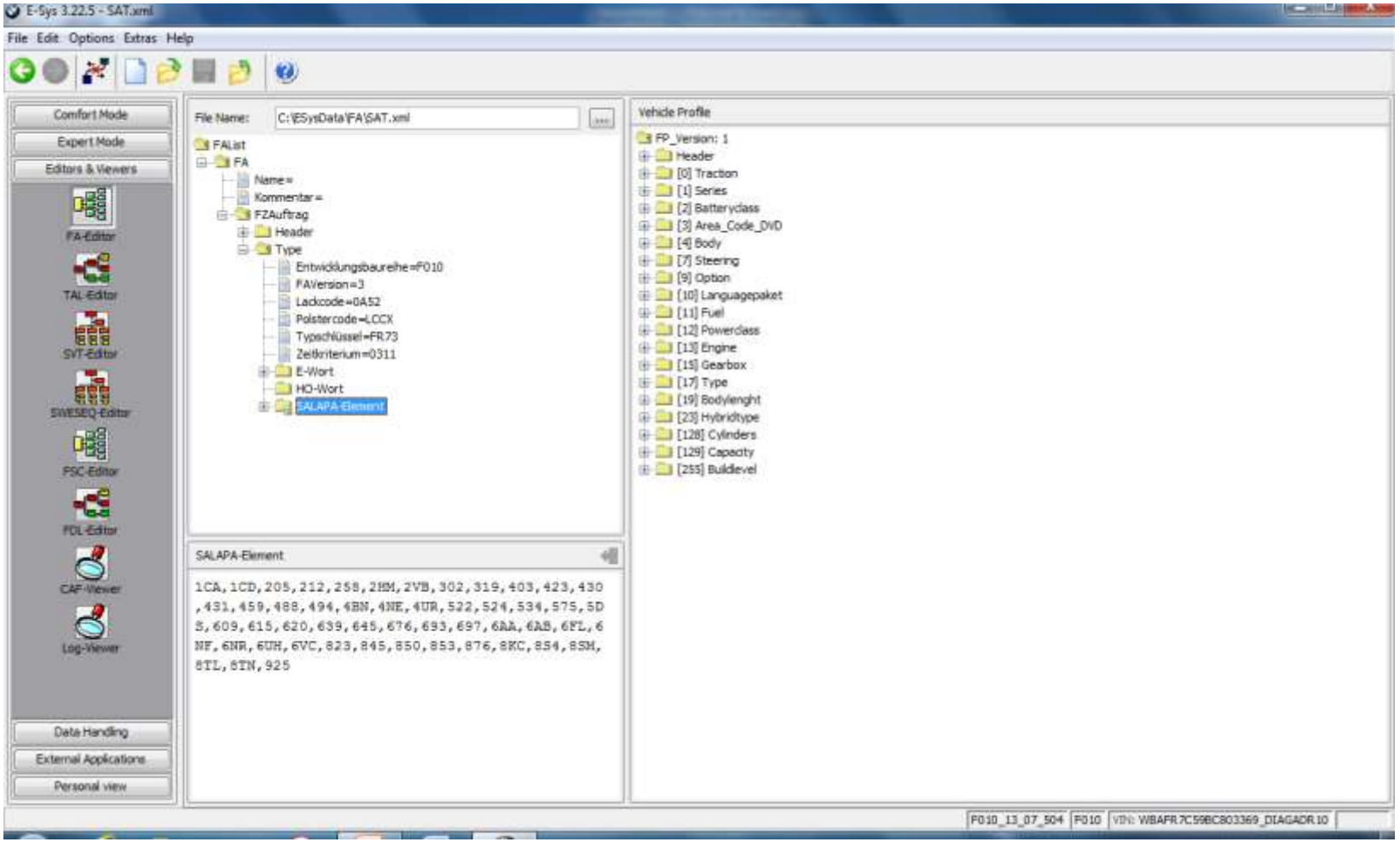
Click on the “Edit” button.



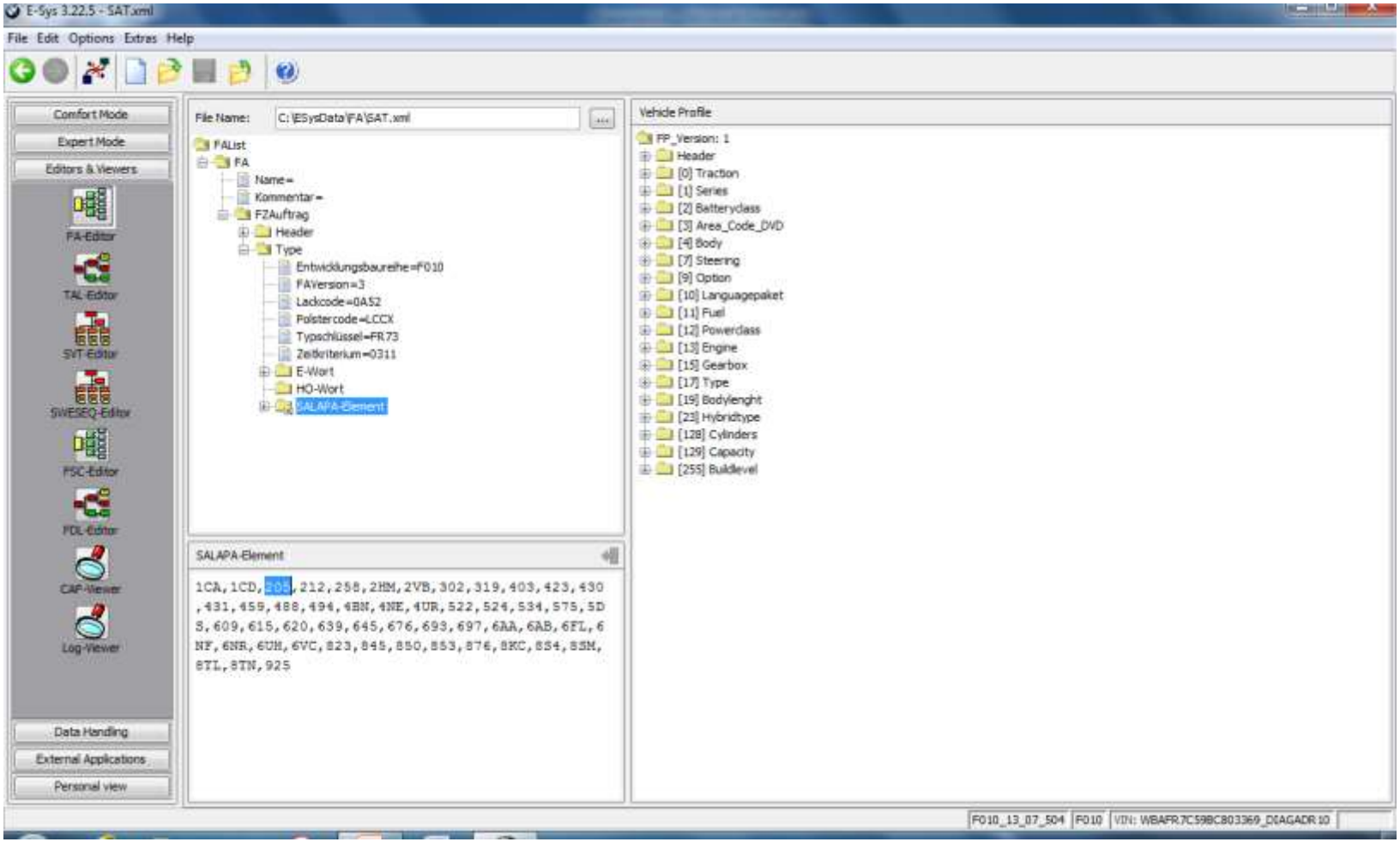
The view will automatically change to FA-editor.



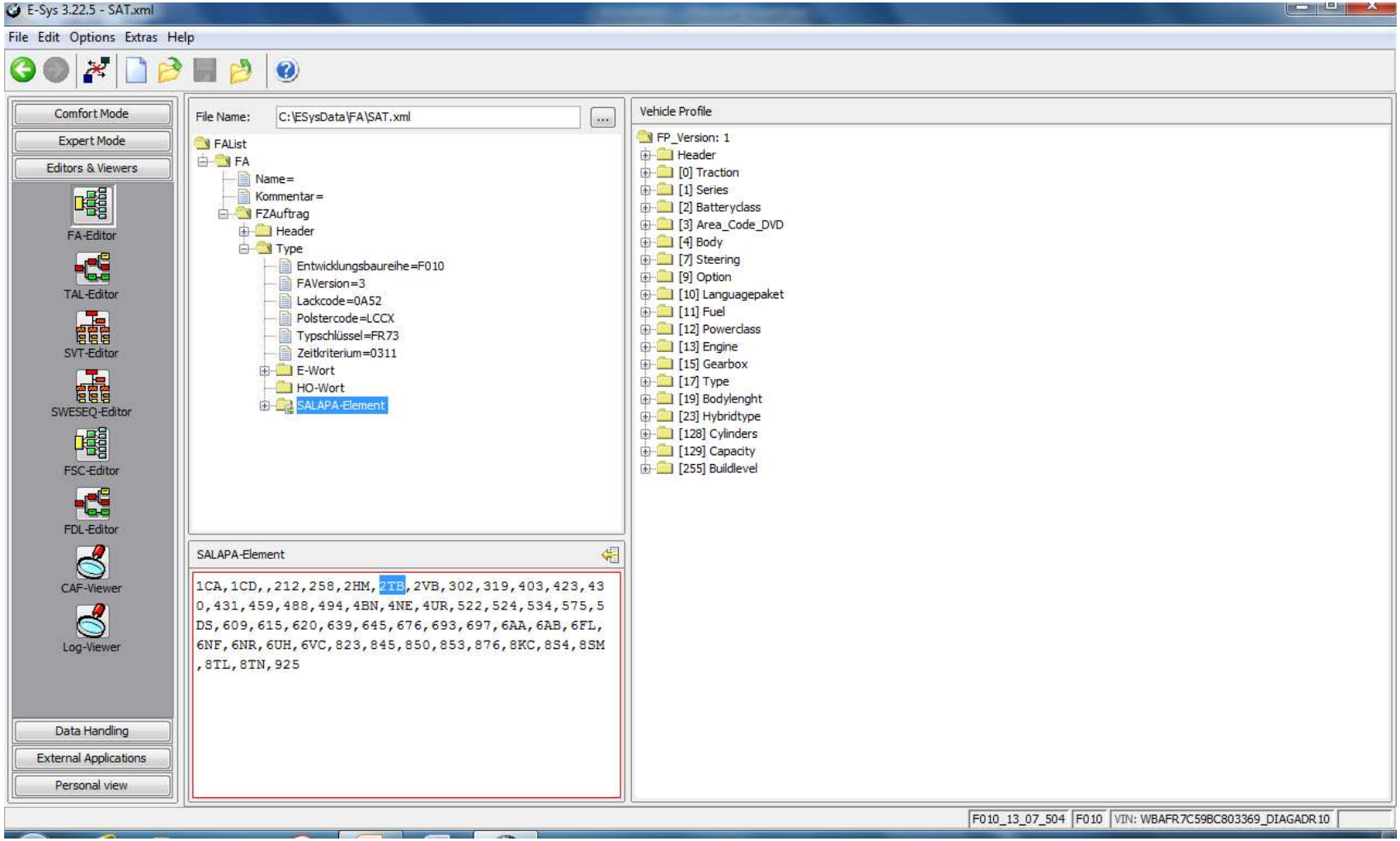
Expand the FAList folder system on left until SALAPA-Element is visible.
Click on SALAPA-Element to select it.
You will see the SALAPA-Elements in the window at the bottom



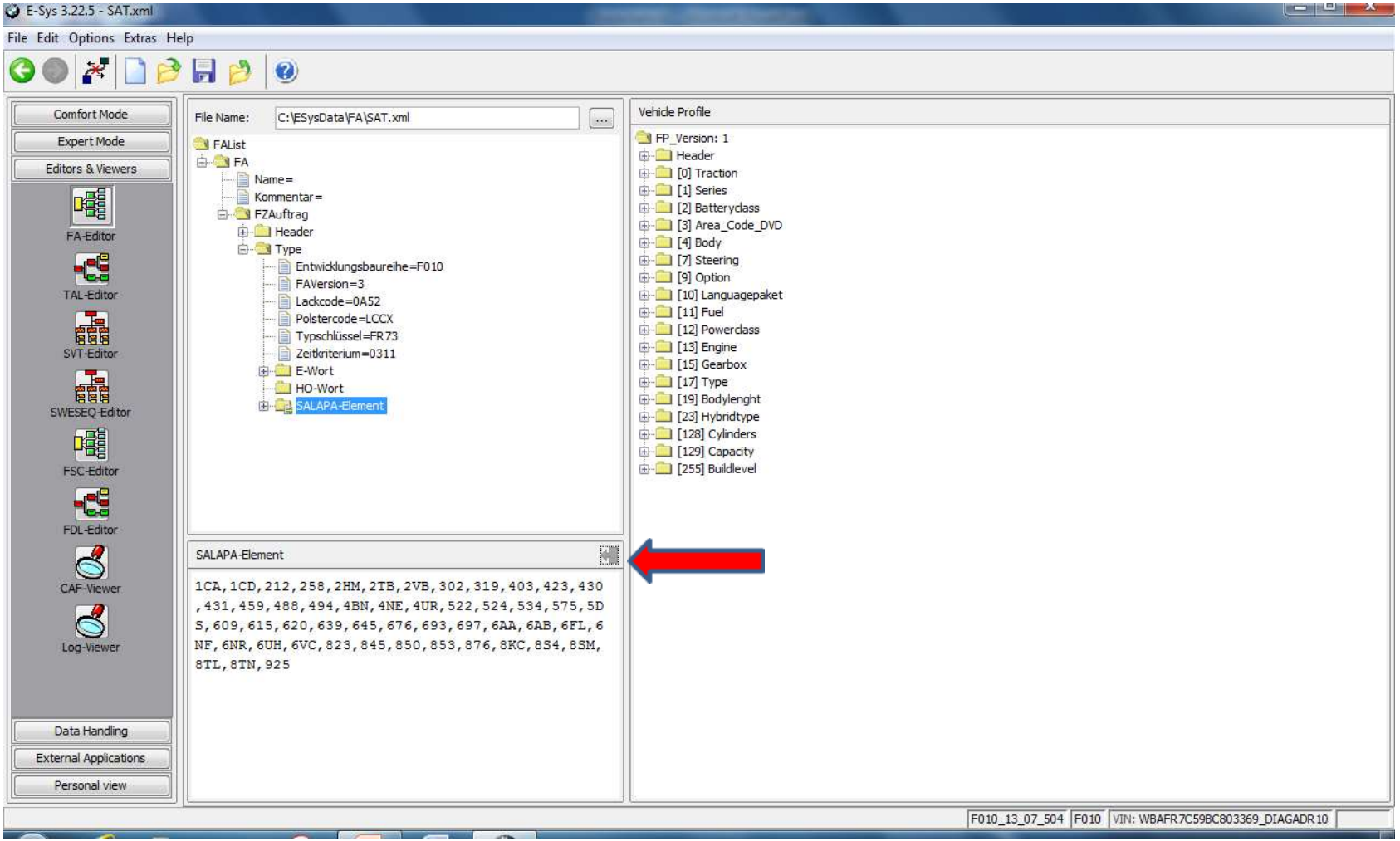
Delete or add Elements directly into the bottom window.
In this example 205 is highlighted and will be deleted.
The syntax is alpha-numeric and commas only, no spaces.



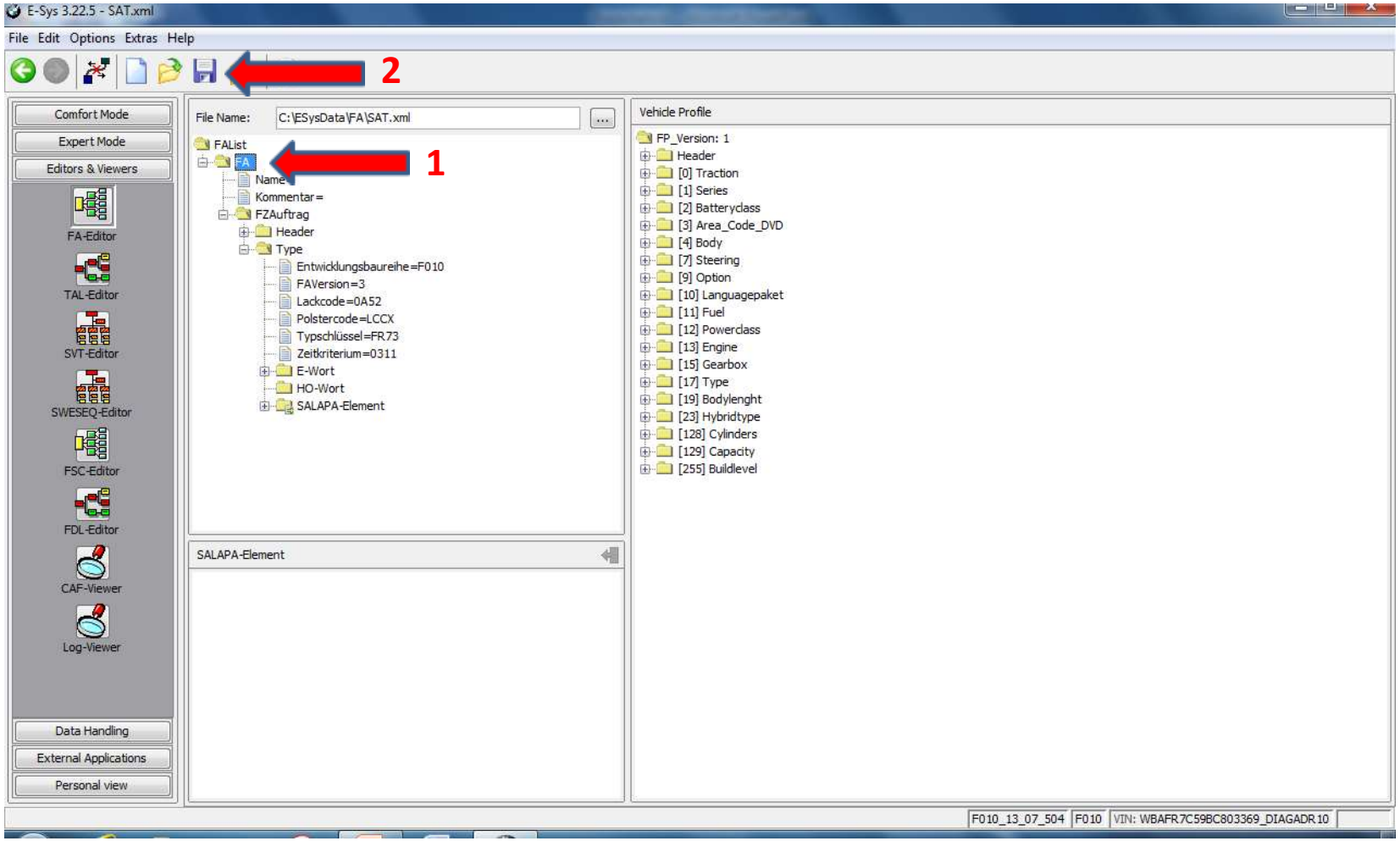
2TB has been added (and is highlighted for illustration purpose only.)
Note that 205 is gone.
The syntax is to add new elements in alphabetical order.



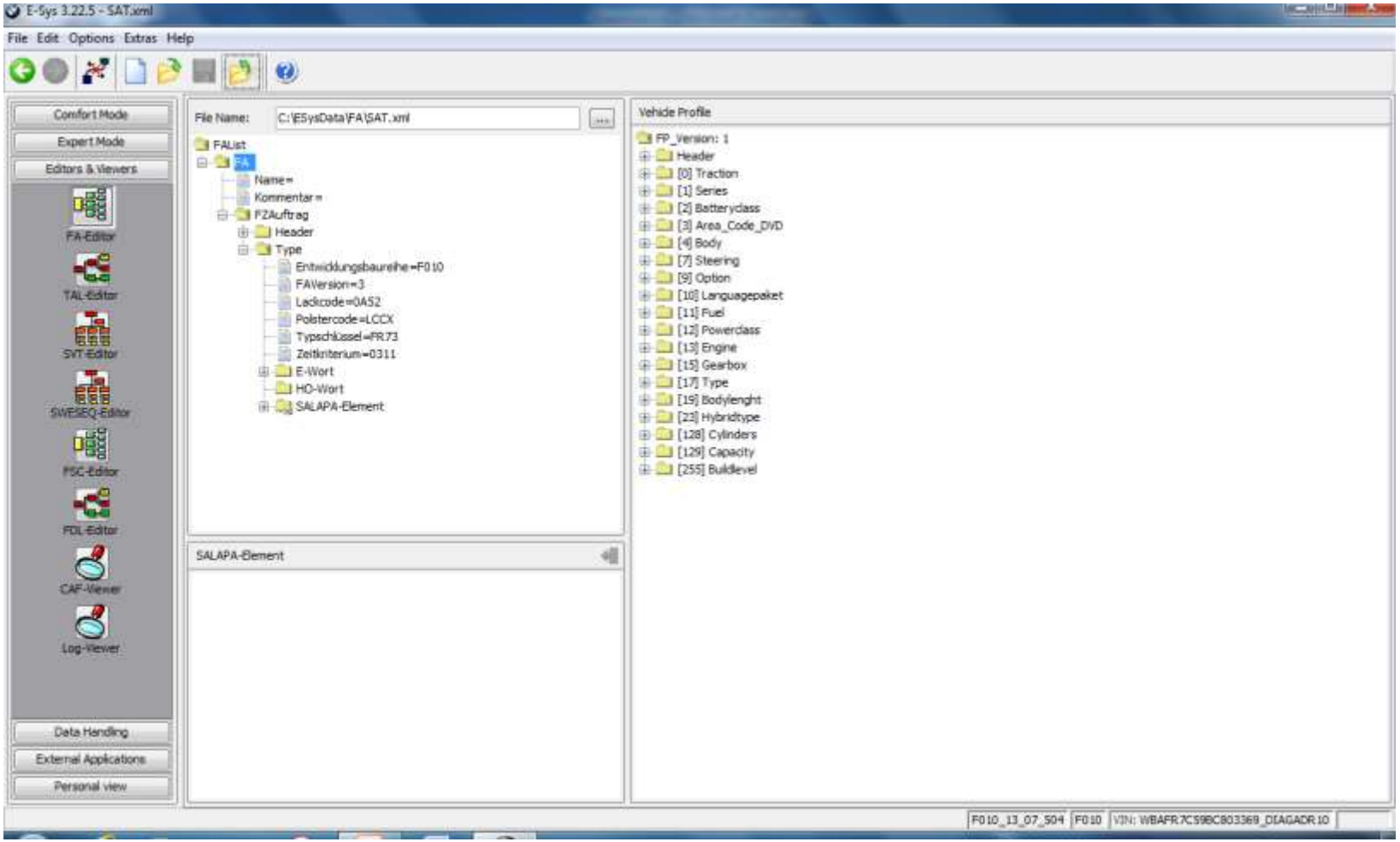
Click on the Save Changes Icon at the upper right corner of the lower window.



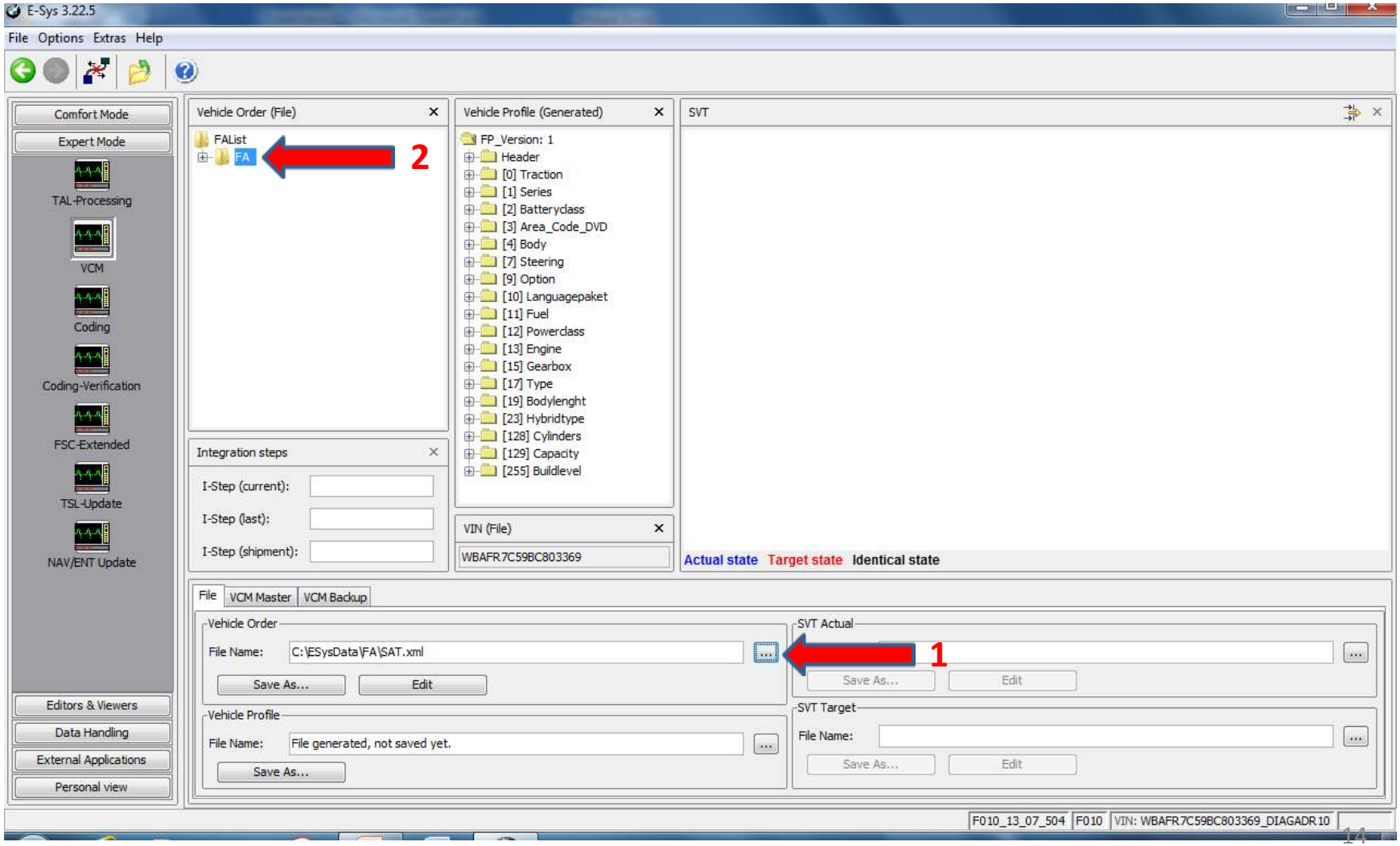
The edited FA must be verified before it can be written to car.
Right-click on FA and select Calculate FP.
If the FA has any errors, an error pop-up will be shown.
After FP is calculated, WITHOUT ERROR, save the new FA.



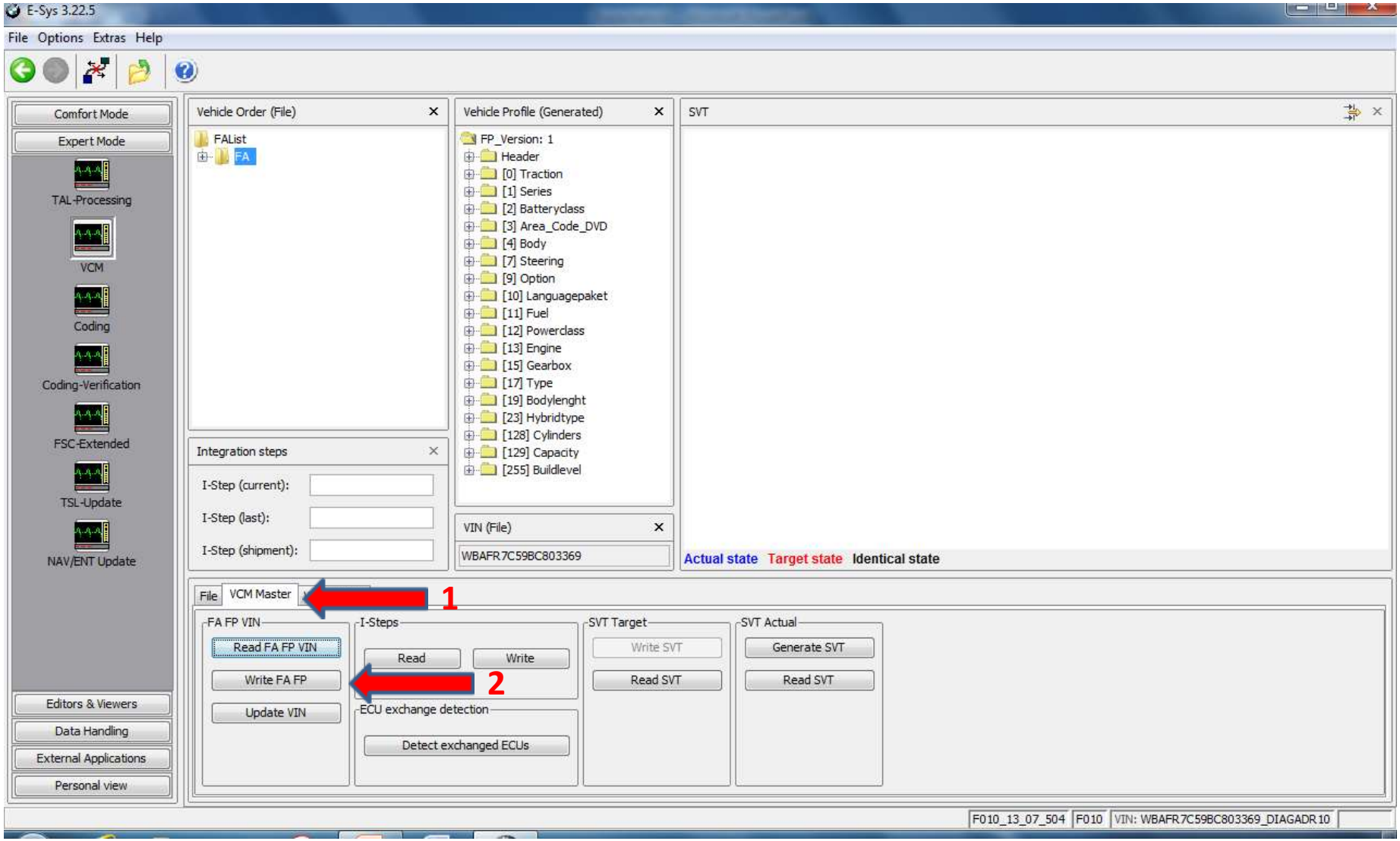
The new FA has been saved



Select “Expert Mode”
Click on the “VCM” tile.
Load your saved FA file
Right-click on FA and Calculate FP again.



Select the “VCM Master” tab
Click on the “Write FA FP” button.
New FA will be written to the car.



What Next?

For the new FA to be used for configuring ECUs, follow these steps:

(Skip this if you have just completed the previous page)

Connect => Select "Expert Mode“

(If you have just completed the previous step, or are continuing from the previous page, start here)

Click on "Coding" button.

Read FA (VO).

Activate FA (VO).

Read SVT (…

Right-Click on ECU (the ECU itself not the underlying CAFD).

Select CODE.

Repeat for all ECUs applicable to your project