VF TUNER

Installation Guide

Version 1.6 +

Support: Support@ovtune.zendesk.com

Table of Contents

1.0. INTRODUCTION 5
1.1. Convention 5
1.2. Copyright and trademarks 5
2.0. GETTING STARTED 5
2.1. Operating Systems 5
3.0. INSTALLATION GUIDE 5
3.1. Installation from web 5
3.2. VF tuner Registration 11
4.0. MANUAL DRIVER INSTALLATION 13
5.0. Obtaining your Vehicles Stock Calibration Information - PREPARE ECU 18
5.0.1. Licensing the Vehicle using OBDII Port 19
5.1. Read Stock Calibration Data - READ ECU 22
5.1.1. How to interpret your ECU ID 22
5.2. Licensing the Vehicle VIN Remotely 23
6.0. TUNE PACKS 24
7.0. FLASHING YOUR ECM 25
8.0. LICENSING ECU FOR EDITING 29
8.1. Basic hot keys for editing 29
8.2. VF Tuner program menu 29
8.2.1. KEY MENU OPTIONS 29
8.3. Basic Functions 30
1. Opening your ECU file and licensing your ECU ID 30
2. Requesting for more Credits - PRO TUNER ONLY 35
3. Checking credit balance 38
4. Credit usage 39
5. Updating the software 39
6. Favorites option 40
7. User level control 41
9.0. EDITING – BASICS 42
9.1. Navigating the User Interface / EDITING FILES 42
9.2. Adjusting the Map Definition Window Size 42
9.3. Opening a Map/Table 44

9.4. Navigating the Map Window 45
9.4.1. Minimizing the Map Window 45
9.4.2. Restoring a Minimized Map Window 46
9.4.3. Maximizing the Map Window 47
9.4.4. Restoring a Maximized Map Window 48
9.4.5. Adjusting the Size of the Map Window 49
9.4.6. Moving the Map Window 50
9.4.7. Panning 3D Maps (not possible with 1D and 2D maps) 50
9.4.8. Opening Multiple Windows 51
9.4.9. Cascading Multiple Windows 52
9.4.10. Horizontal Tiling Multiple Windows 53
9.4.11. Vertical Tiling Multiple Windows 54
9.4.12. Closing the Map Window 55
9.5. Editing values on a map / table 55
9.5.1. 3D Map 56
9.5.2. 2D Map 57
9.5.3. 1D Map 58
9.6. Navigating the 2D and 3D Map Functions 59
9.7. Value Interpolation 62
9.8. Select All, Copy, Paste 63
9.8.1. Select All 63
9.8.2. Copy 64
9.8.3. Paste 64
9.9. Map Compare 65
9.10. Opening a CSV (Datalog) File 69
9.10.1. Configuring the Colors Datalog to Highlight Values 71
9.10.2. Cutting Part of the Datalog 74
9.11. Saving Your Work 76
9.12. Exporting a File 76
9.13. Editor - Favorites List and other useful features 78
9.14. Editor - User Level 79
10.0. LOGGING – BASICS 80

10.1. Logging - Favourites List 82
10.2. Logging - Selecting Protocol 84
11.0. TROUBLESHOOTING – ERRORS 86
11.1. Reporting an error 86
11.1.1. Errors on map bugs, maps not opening 86
11.1.2. Errors Relating to Registering 86
GLOSSARY 88

1.0. INTRODUCTION

1.1. Convention

VF tuner is a Toyota calibration tools developed by Ovtune. This is professional Calibration and Diagnostic tuning software that supports Toyota, Lexus, Mazda, Hyundai, Kia and more.

This manual covers the installation and configuration for VF Tune software. The information in this manual supersedes any software installation information in the previous releases.

1.2. Copyright and trademarks

This software is the property of OVTUNE LLC copyright 2019-2021

2.0. GETTING STARTED

2.1. Operating Systems

This software may be installed on Windows 7, Windows 8, Windows 10 systems. Any or all versions of the software may be installed on Windows 7, 8 or 10 systems including 32 bit and 64 bit Windows distributions.

3.0. INSTALLATION GUIDE

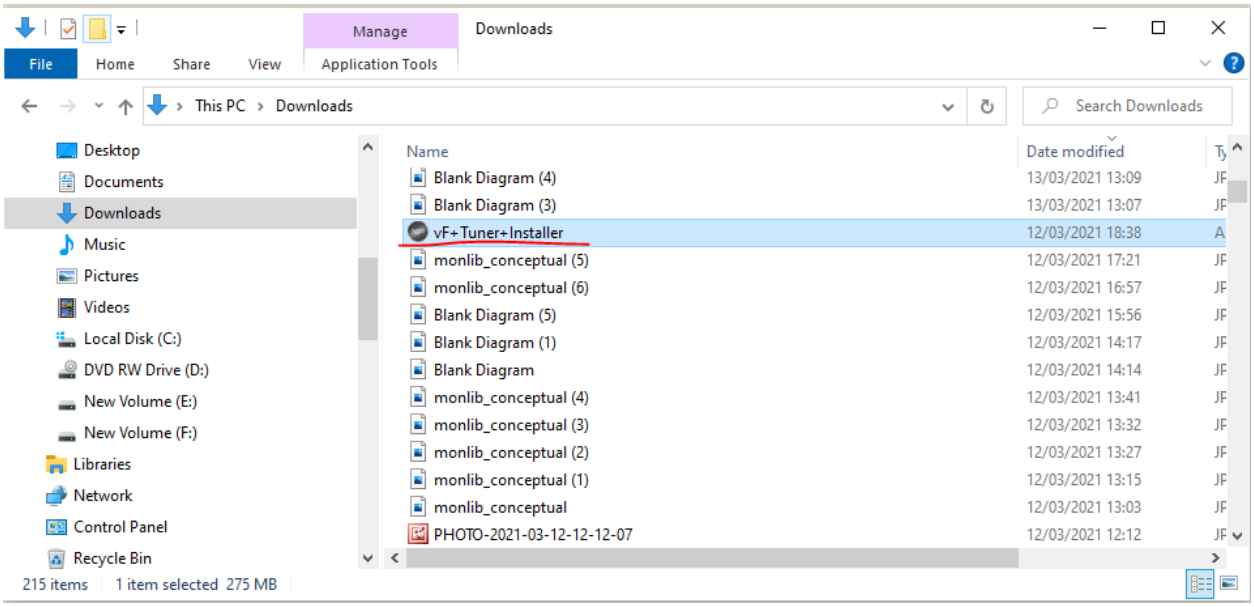
3.1. Installation from web

Click the **black VF Logo** to download the latest version

The software will be downloaded and saved into your computer download directory in .exe format.

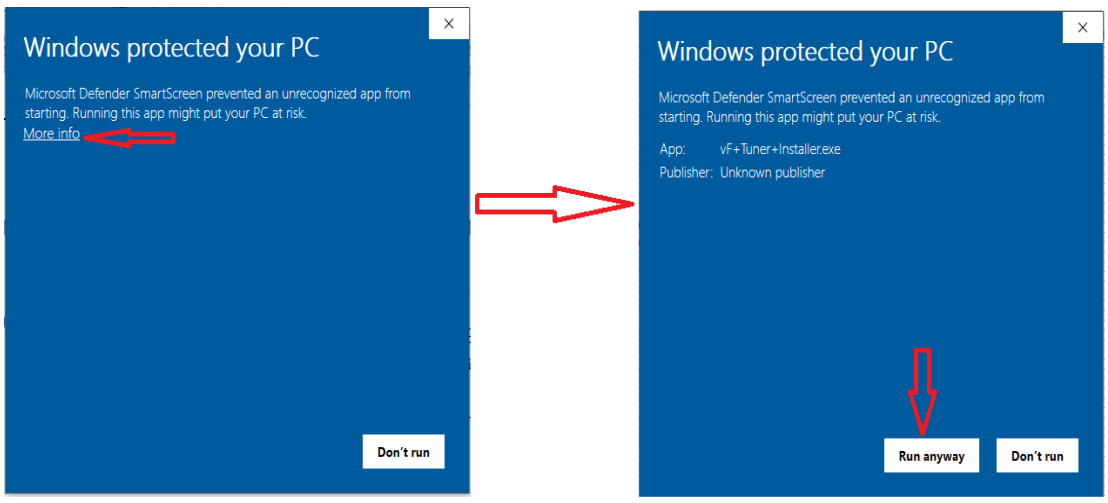
Pronounced dot e-x-e, this is the standard extension for installation files on Windows computers

1. After download in complete, navigate to the downloads directory
2. Locate the .exe file named “vF+Tuner+Installer”



3. Double click on the installer to being the installation process

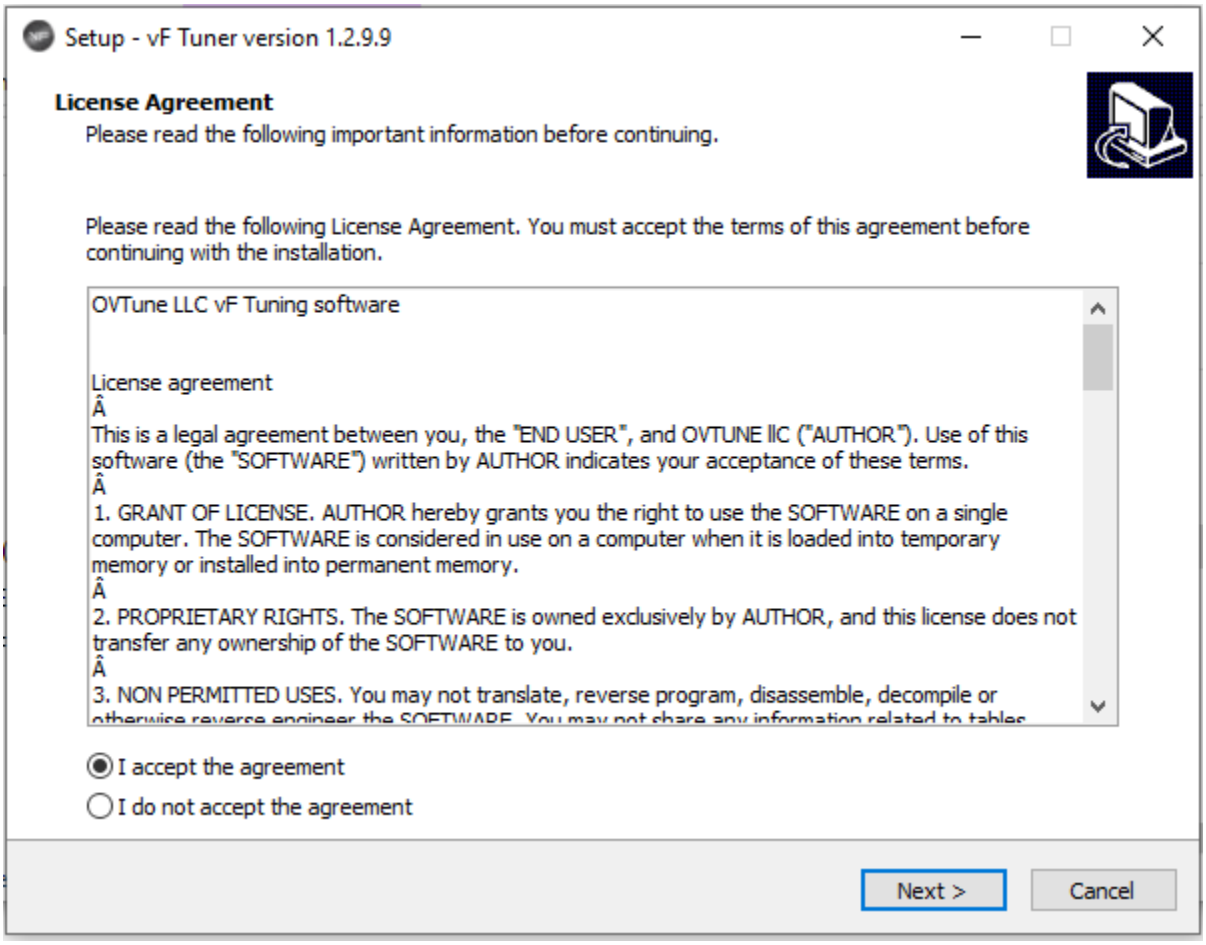
If you are running Windows 8 and above, Window Defender my try to block the installation process. On the popup that shows immediately after double clicking on the .exe, click on “More info” button and then “Run anyway”



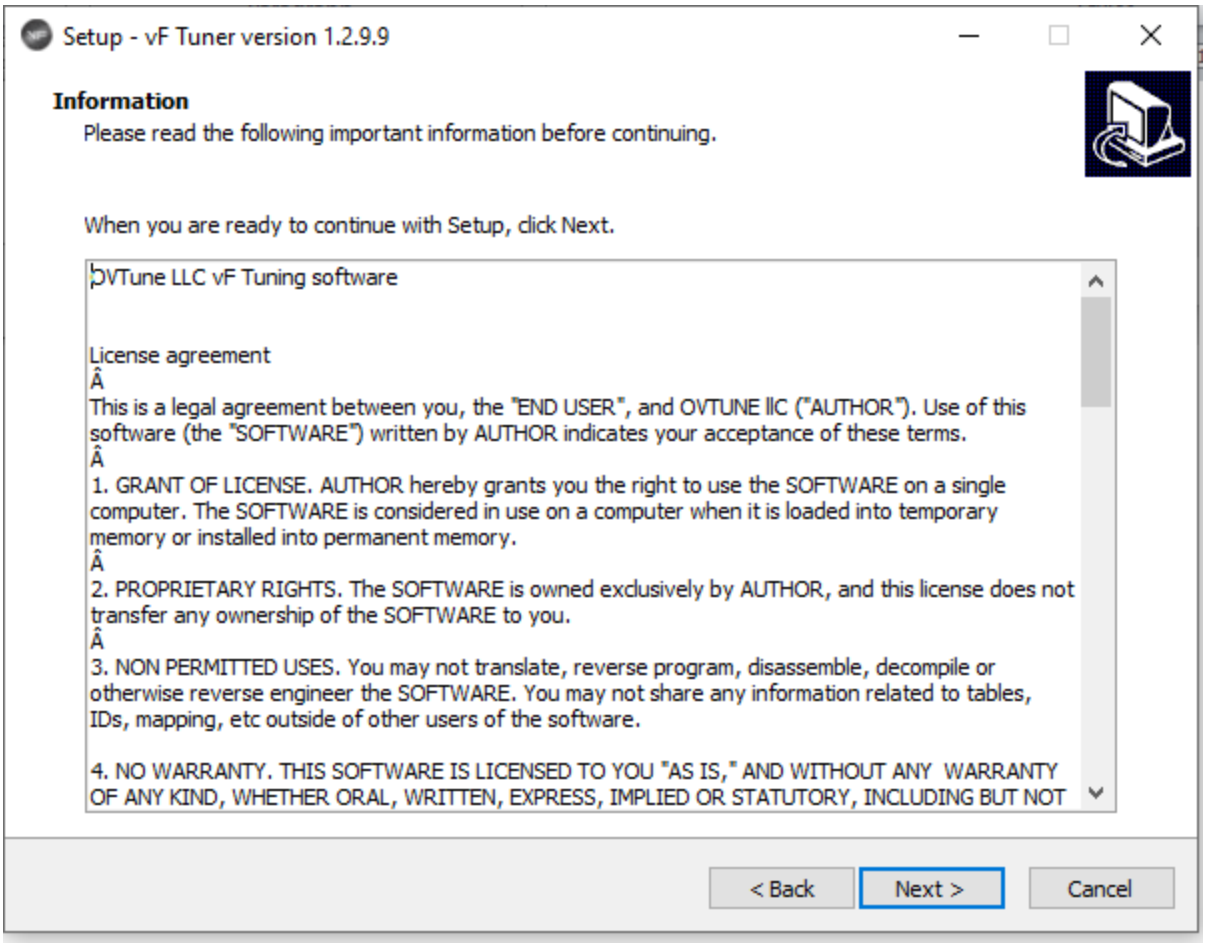
Back to the top

button. As shown bellow

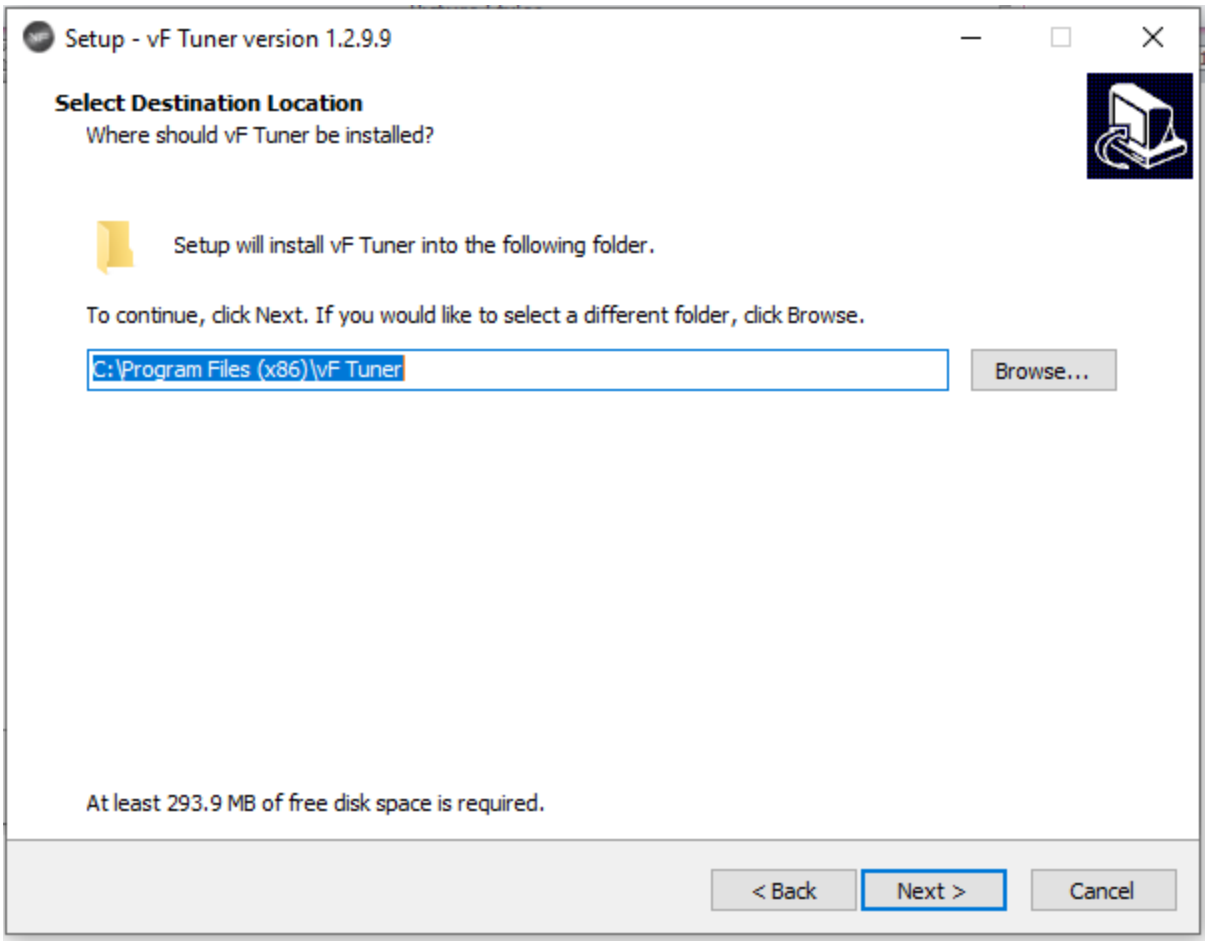
4. On the next popup window, click on the “I accept the agreement” and then the “Next” button.



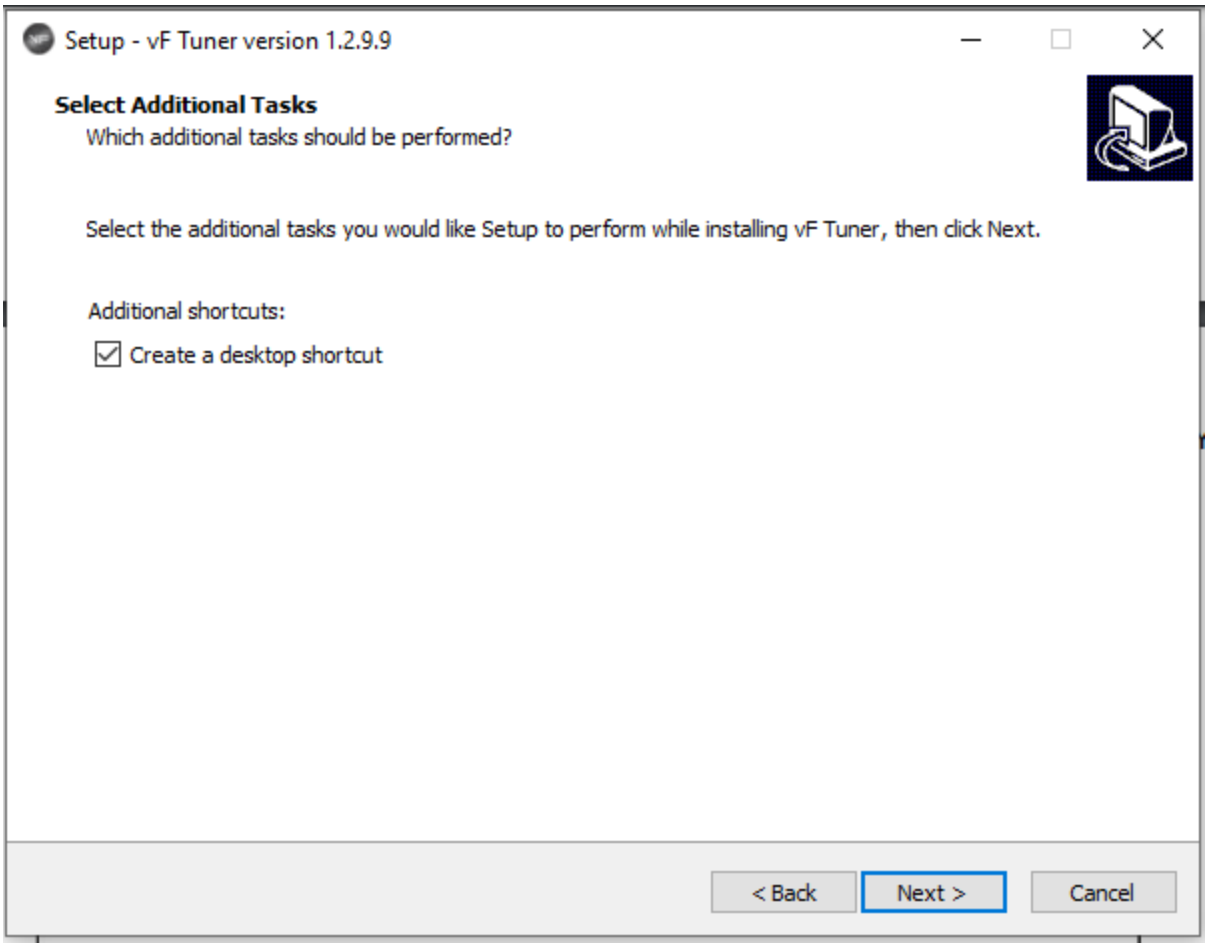
5. Read through the software license and then click “Next” button



6. On the next page, we recommend you to retain the current installation path (C:\Program Files (x86)\vF Tuner)



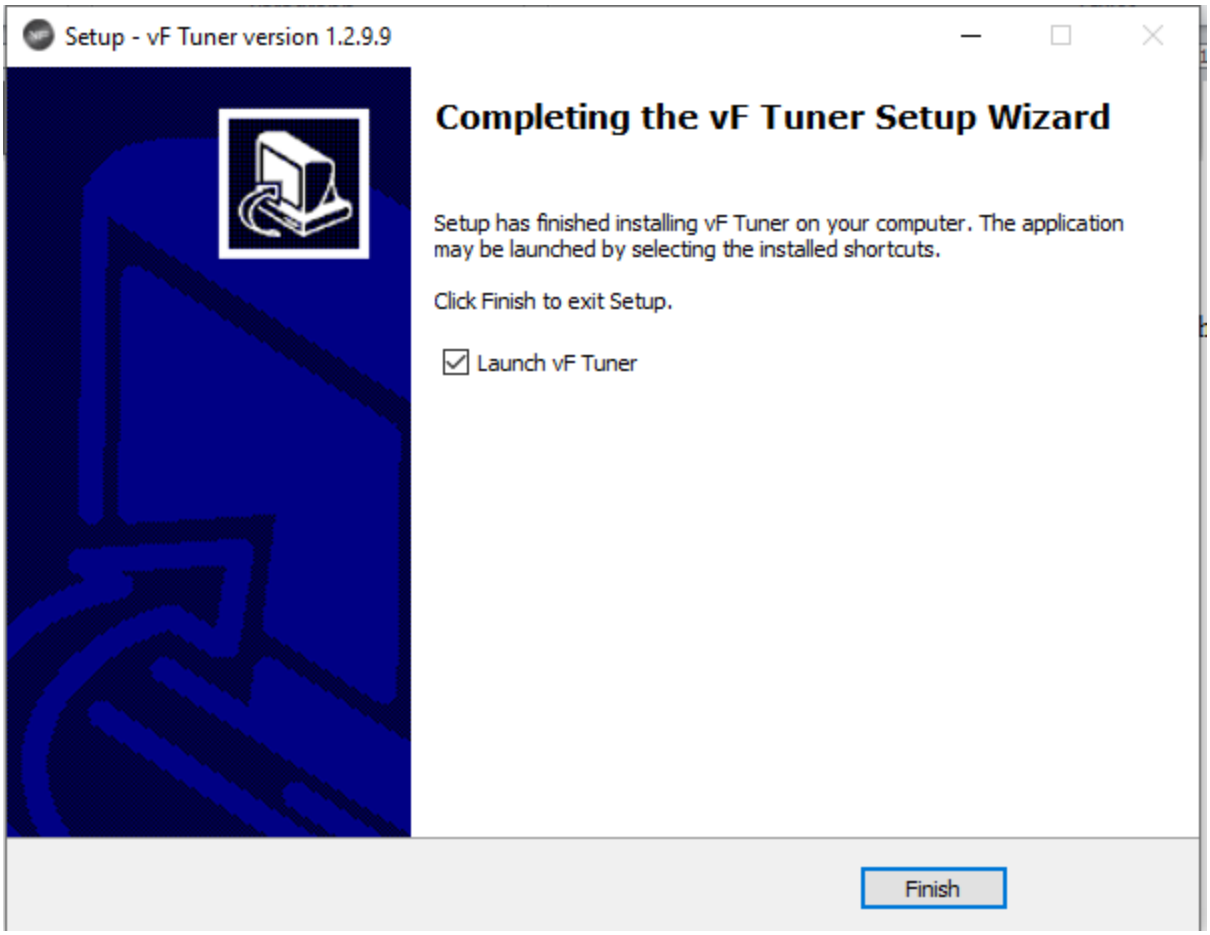
7. On the next page, select and check “Create a desktop shortcut” for quick access on your desktop. You can also leave the check box blank to skip creating a desktop shortcut



8. Click on “Install” button

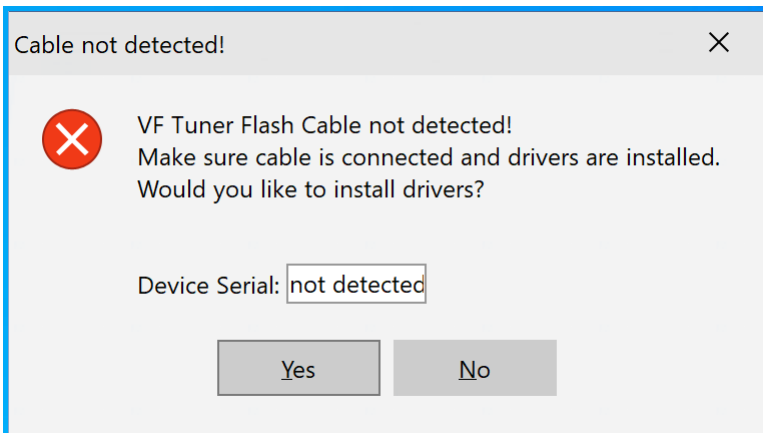
   Please wait for a few seconds as the software is installed on your computer

9. Finish the installation by clicking on “Finish” button. This will automatically launch the VF tuner program



3.2. VF tuner Registration

VF Tuners new registration method is simple and easy. Plug your VF Tuner cable into your PC (your OBDII Device) and run the software. If you get a LICENSE CHECK Error and it says "**CABLE NOT DETECTED**" you need to install the Drivers. Click "**YES**" To install the drivers and follow the driver installation prompt as shown below.



If your serial IS SHOWN, highlight the serial, and email this serial number to Support@ovtune.zendesk.com. Please be sure to include your NAME and ORDER NUMBER. Once received, we will register your device and you will be able to access the software.

NOTE:

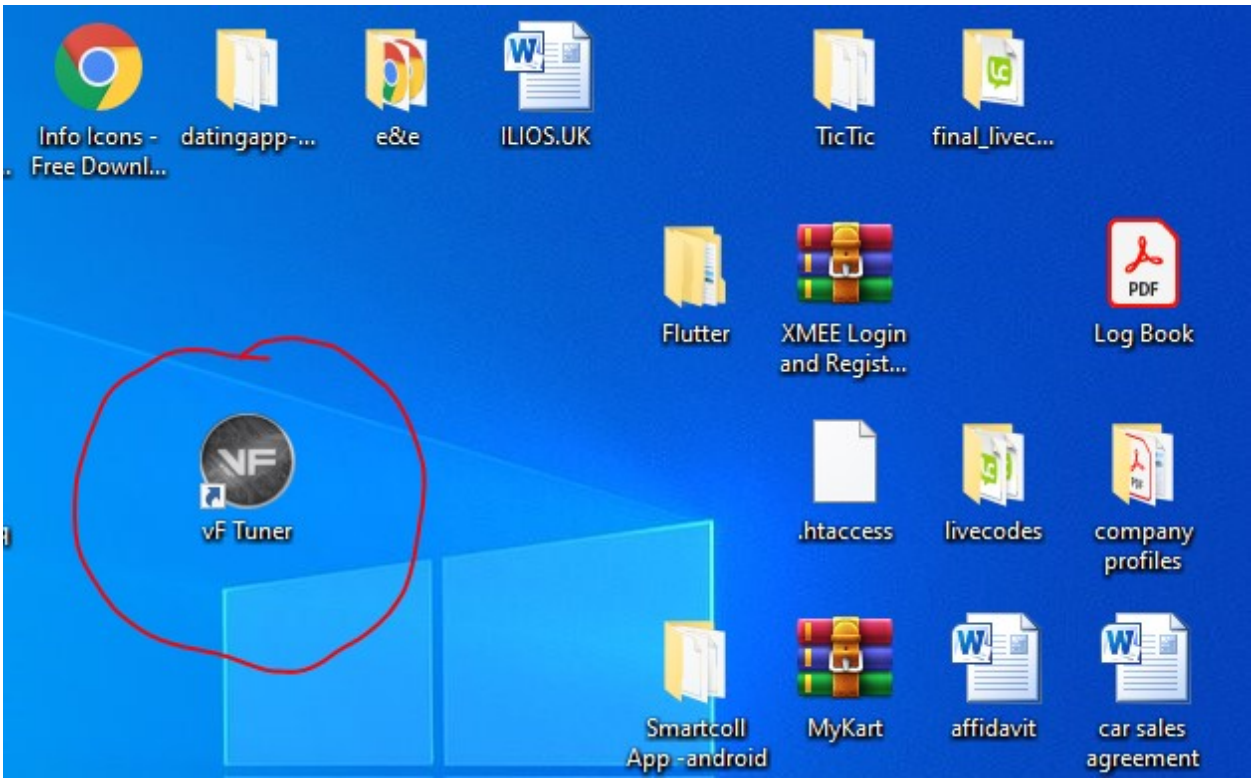
If it is your very first time installing VF tuner it will ask you if you want to install the DRIVERS. Select YES and install the drivers. (Follow 4.0. MANUAL DRIVER INSTALLATION below)

4.0. MANUAL DRIVER INSTALLATION

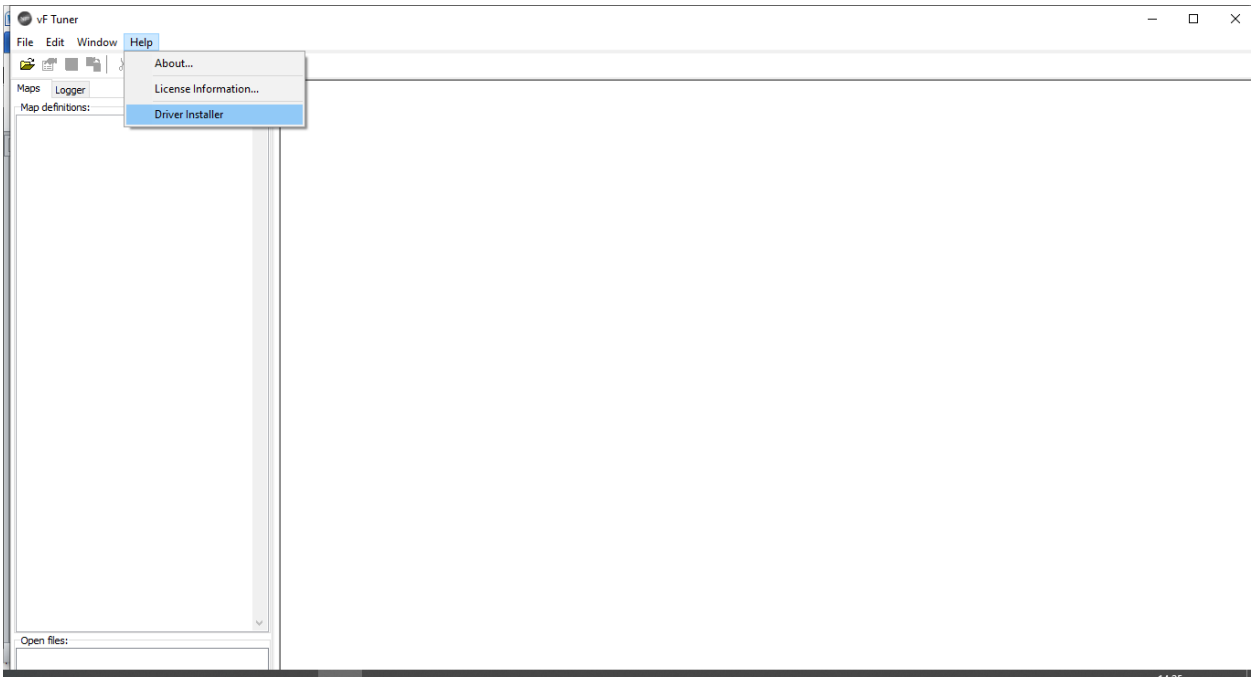
After installation, the next step is to install the program drivers. Make sure you have internet connection on your computer.

i	Drivers are software component that lets the operating system and a device communicate with each other.

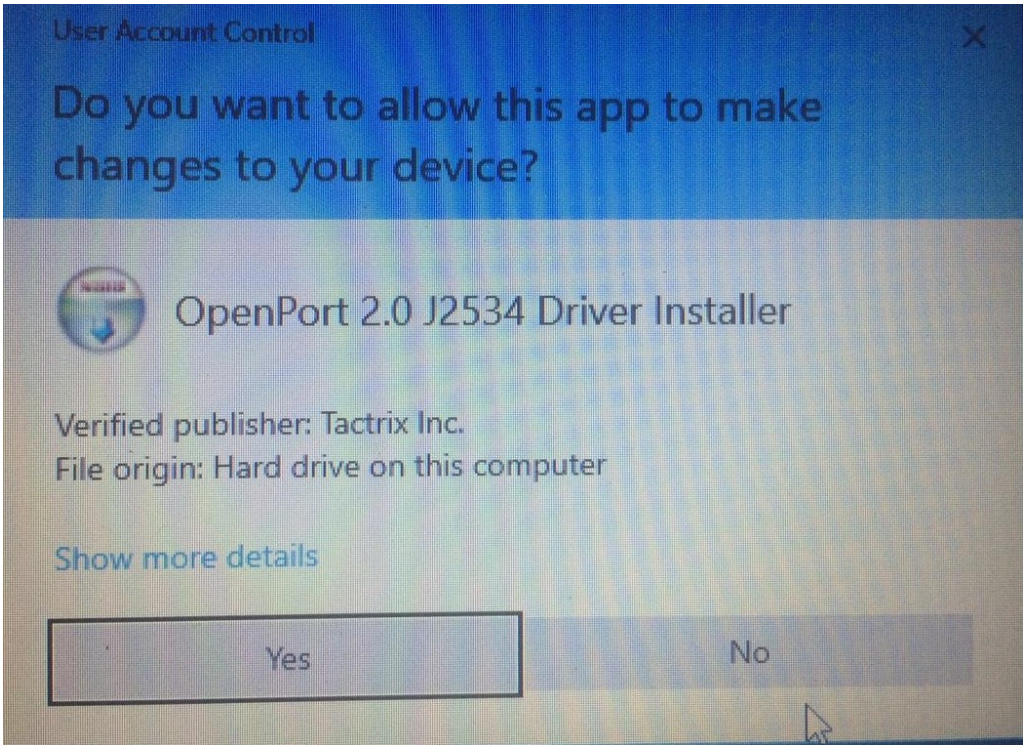
4.1. Open the software by double clicking on the software shortcut icon “vF Tuner” on your computer desktop.



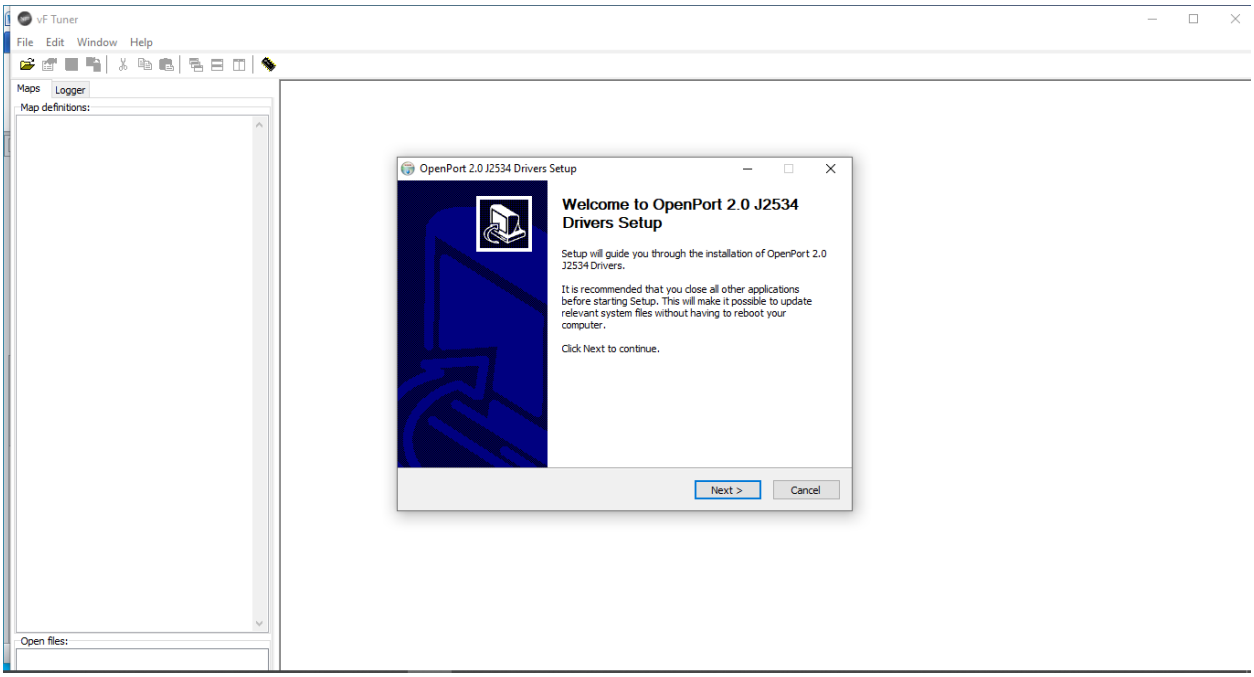
4.2. On the software menu, Click Help→Driver installer



When you press “Driver Installer” menu, a popup will show asking for permission to install the drivers. Press “Yes” to continue with the installation.

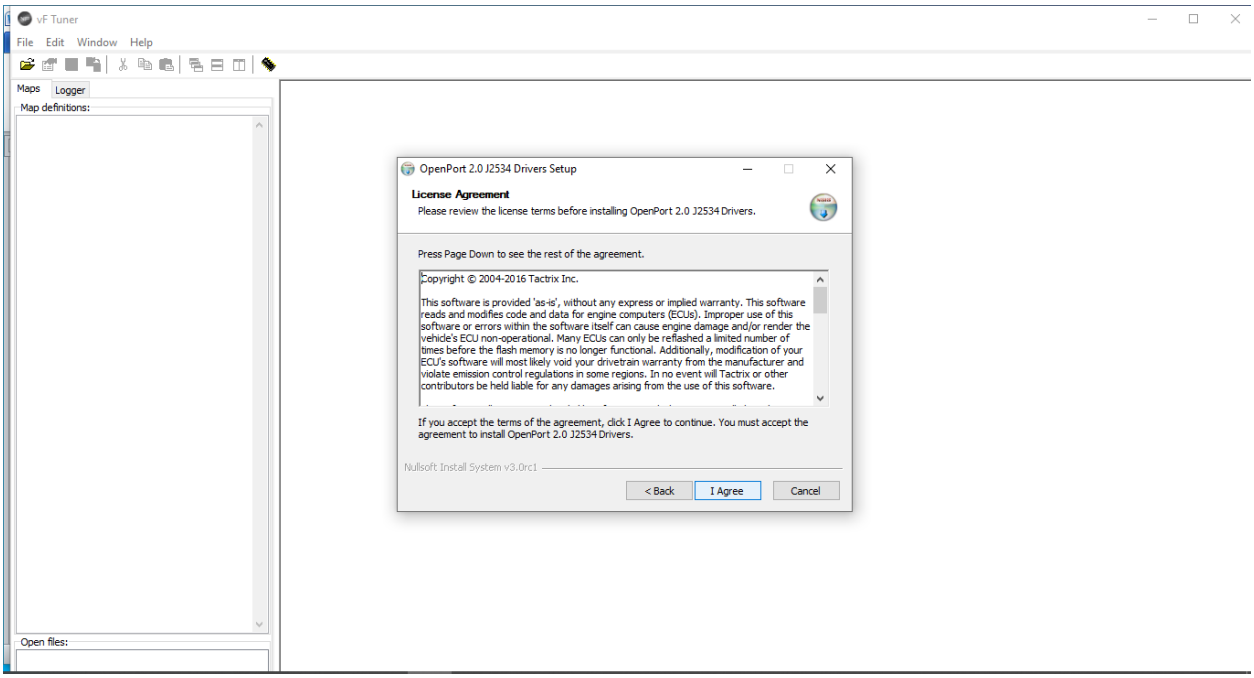


4.3. After 1 second, a software installation wizard pops up. The wizard will guide you through the installation of OpenPort 2.0 J2534 Drivers.

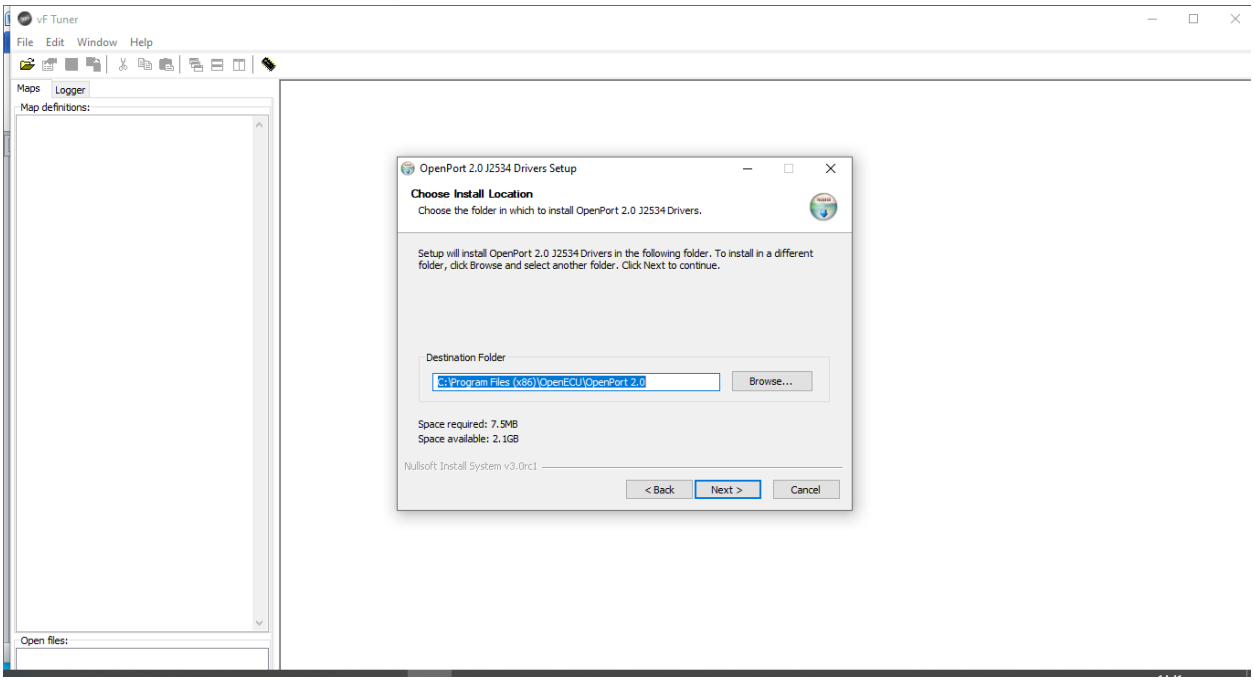


4.4. Click “Next” button

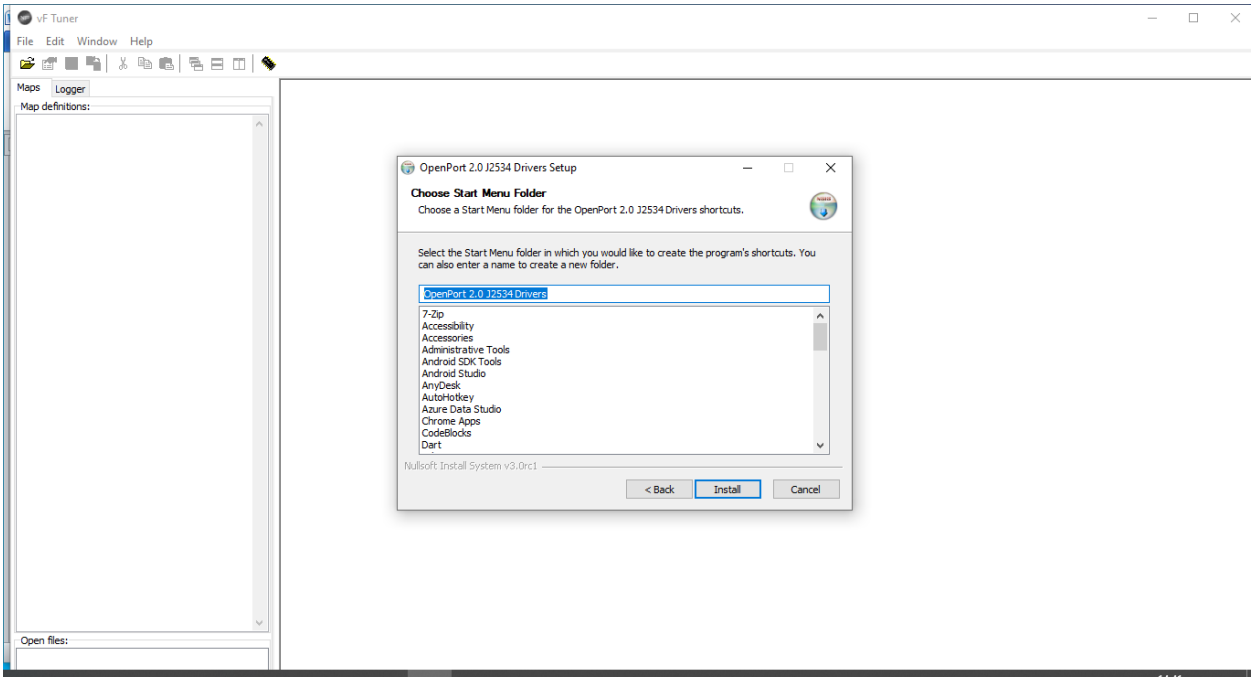
4.5. Go through the driver’s license agreement and then Click on “I Agree” to continue



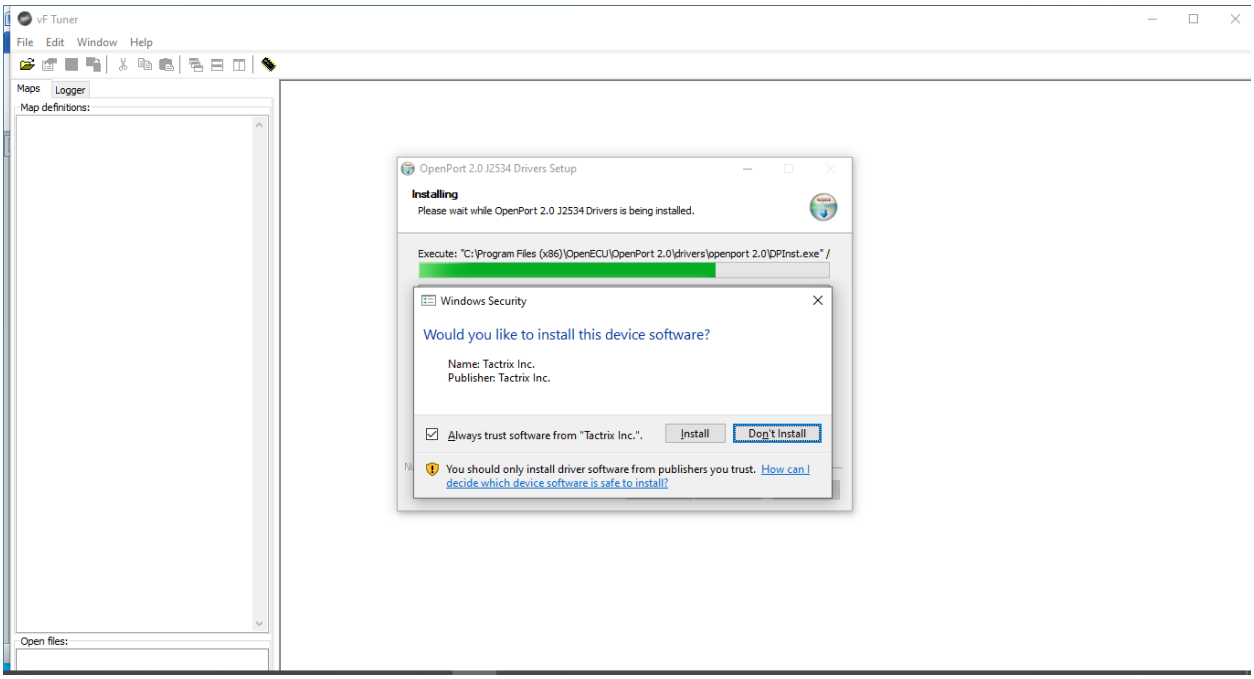
4.6. The next screen prompts you to choose the driver’s installation directory. PLEASE leave the installation path as is. i.e. C:\Program Files (x86)\OpenECU\OpenPort 2.0



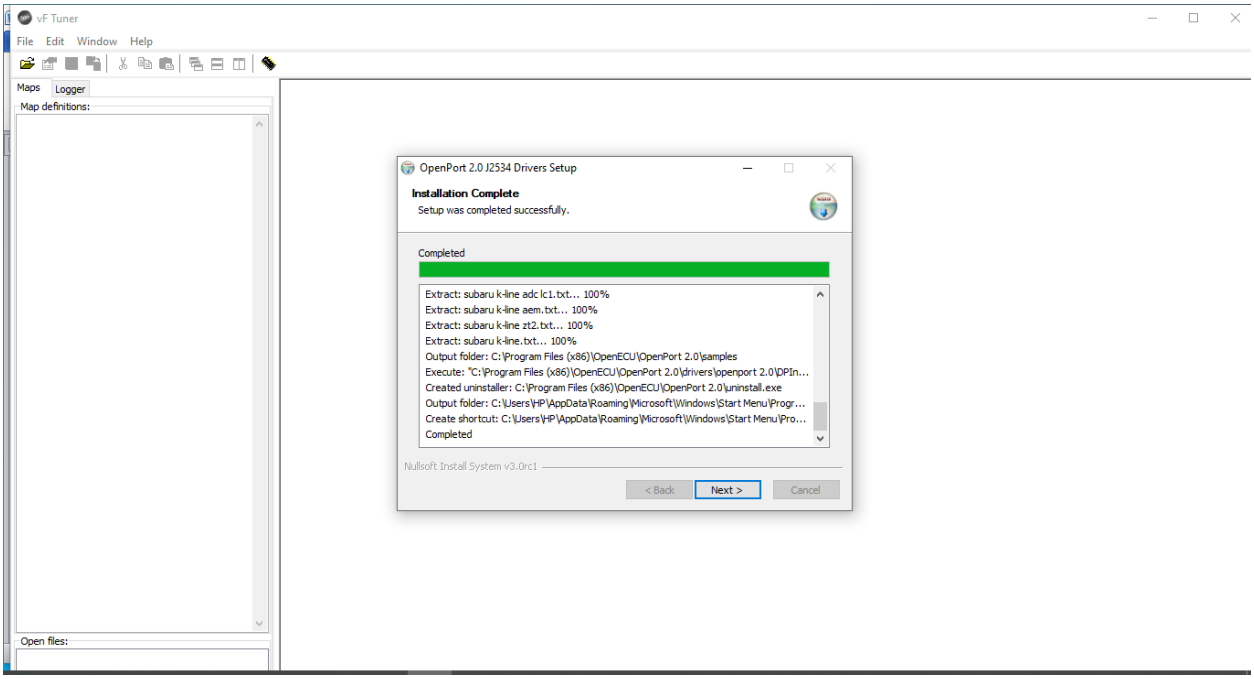
4.7. On the next screen, Click on the “Install” button to initiate drivers installation process



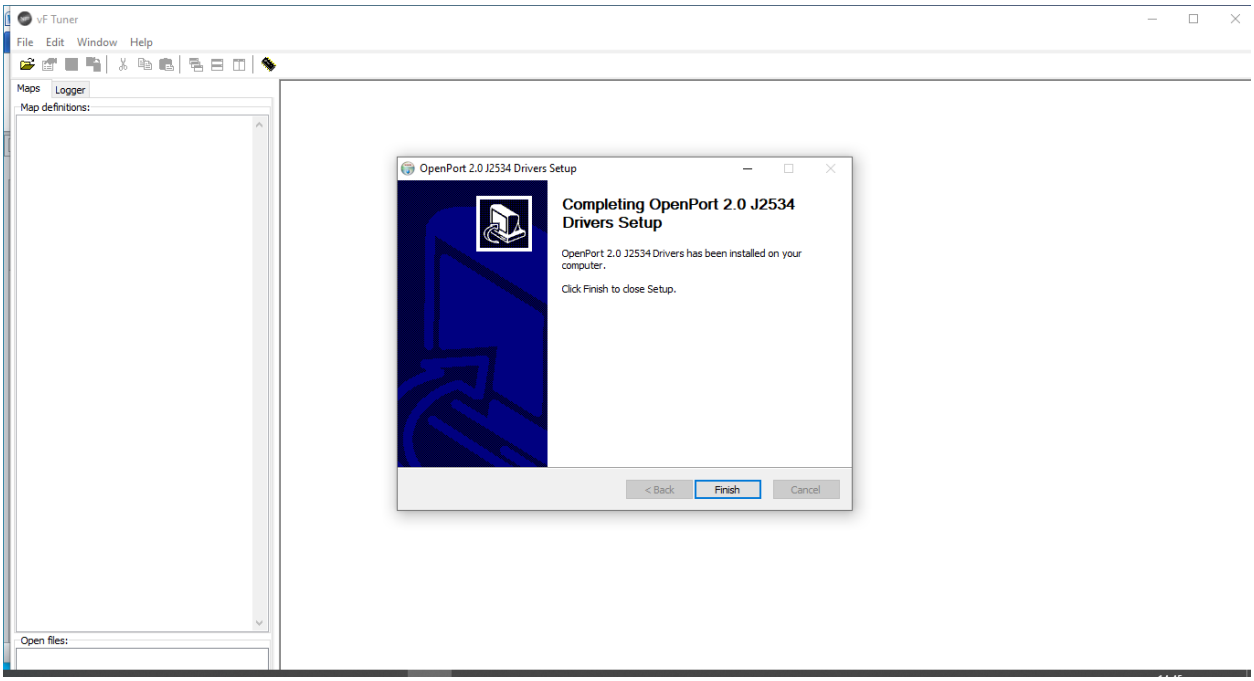
4.8. After a few seconds, you will be promoted with a message “Would you like to install this device software?” Please select Install



4.9. After a short while, the installation is complete. Click “Next” button



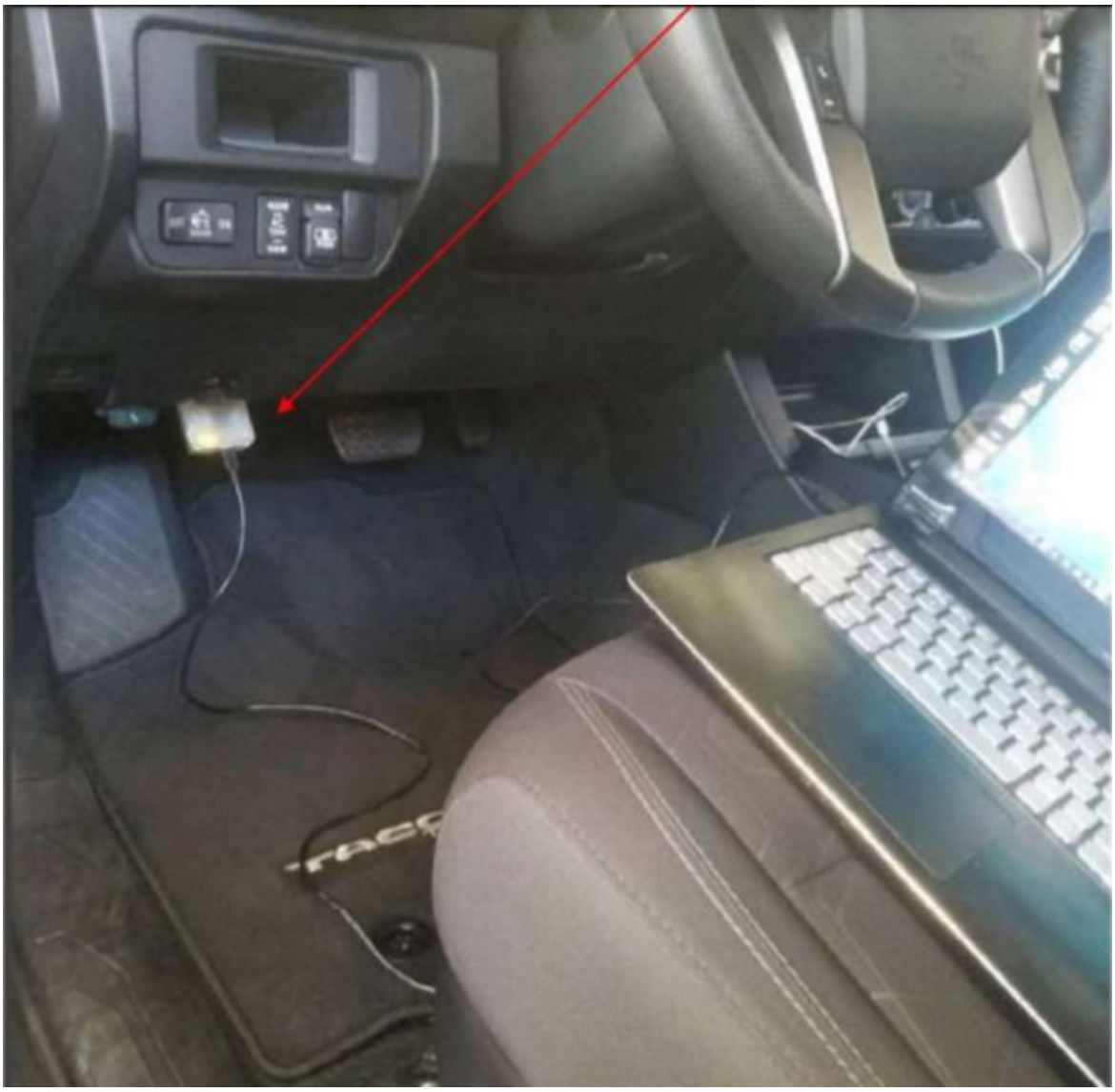
4.10. Finish the installation by pressing “Finish” button



Now you are ready to connect to your vehicle.

5.0. Obtaining your Vehicles Stock Calibration Information - PREPARE ECU

The following steps require you to connect your vehicle to the laptop through the OBDII Port using a serial cable. You **MUST** also have internet connection on your laptop.



5.0.1. Licensing the Vehicle using OBDII Port

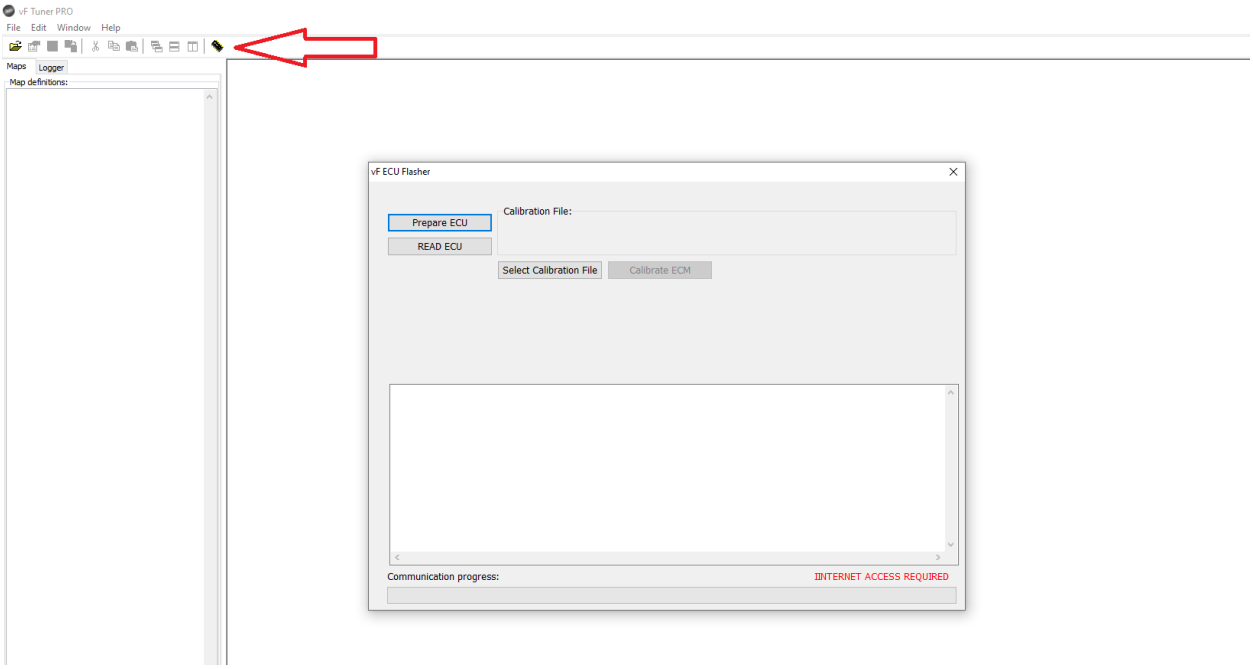
CAUTION!

- ✓ Make sure your laptop has internet connection
- ✓ Make sure you are connected to the vehicle through the OBDII Port as shown above.

5.0.1.1. Turn on the vehicle **BUT** do not start the engine

5.0.1.2. Open the VF tuner software

5.0.1.3. Click on the “Flash ECU” icon as shown bellow



5.0.1.4.On the popup, press "PREPARE ECU" button

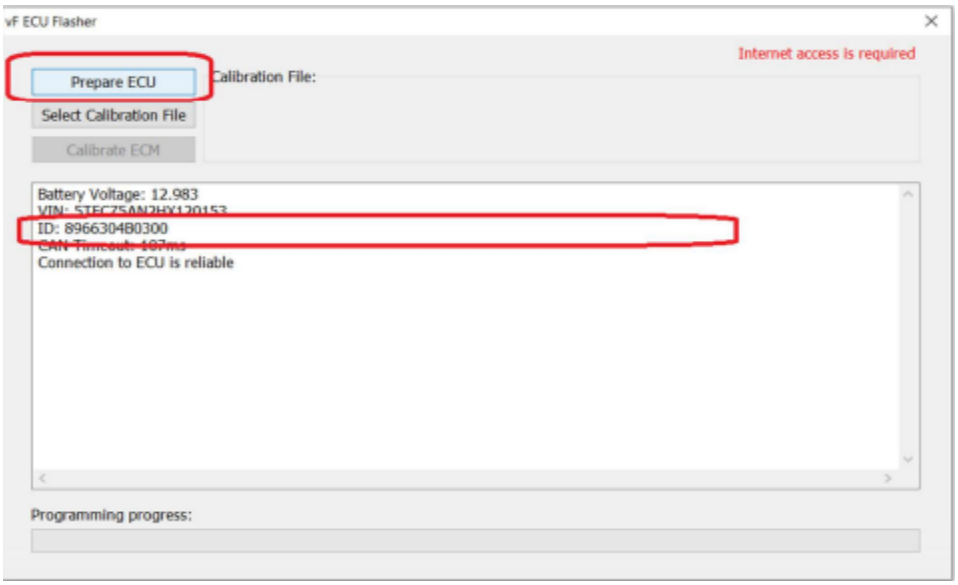
This will gather the basic information about your vehicle as shown below.

	The “ID” is your CALIBRATION or ECU ID

The software will then ask you if you would like to license the vehicle (4 credits are required)

CAUTION:

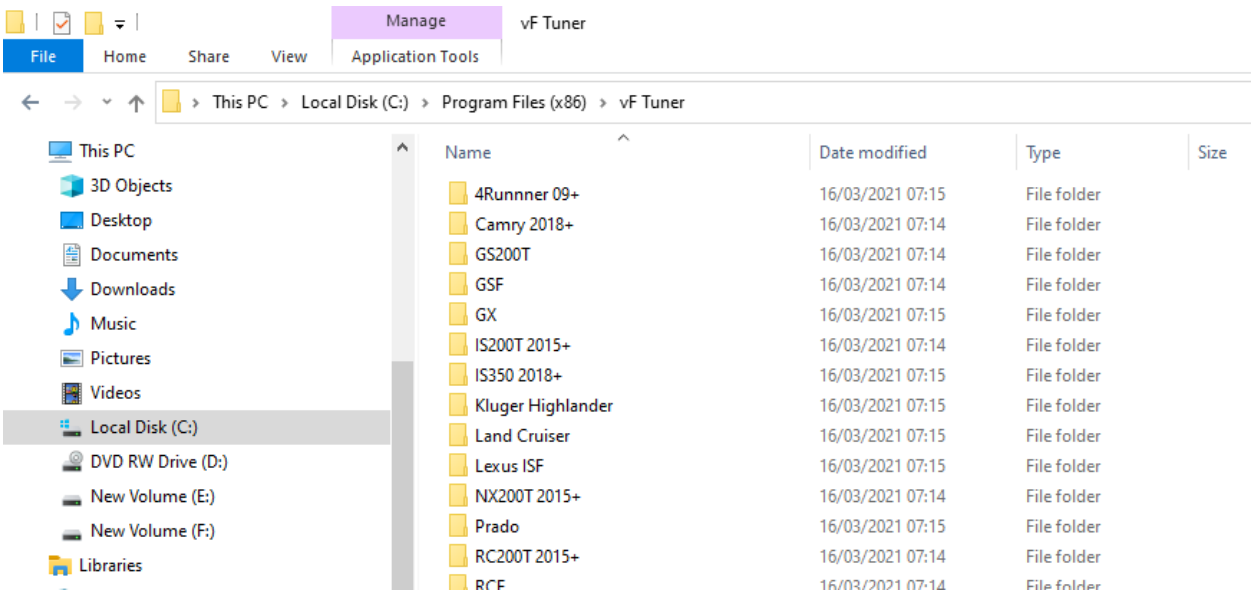
PLEASE VERIFY THAT YOUR ECU ID IS SUPPORTED BEFORE ACCEPTING TO LICENSE THE VEHICLE.
IF YOU LICENSE THE VEHICLE IT WILL COST 4 CREDITS. SO PLEASE ENSURE THAT YOUR VEHICLES ID IS SUPPORTED



NOTE - The files located in the installation folder are STOCK CALIBRATION FILES. THESE FILES ARE THE OEM CONFIGURATION OF THE VEHICLE AND ARE NOT TUNES. YOU DO NOT HAVE TO FLASH THESE AND SHOULD NOT UNLESS YOU ARE REVERTING BACK TO STOCK. THESE FILES ARE USED TO CREATE A TUNE.

Stock data for all vehicles is included in the vF Tuner installation Folder

C:\Program Files (x86)\vF Tuner



Back to the top

5.1. Read Stock Calibration Data - READ ECU

To read your ECU, you need to connect the cable to the vehicle and the computer. Run the software and open the flash window.

If your vehicle is a **P5 ECU** (**Tacoma, Highlander, IS200T**, etc.) click **Read P5 ECM**. This can take up to 30 minutes. Once done, save the file. This is the STOCK TUNE FILE.

If the ECU is not supported please EMAIL US YOUR TUNE FILE along with information from "prepare ECU" including VIN, ECU ID, etc.

If the vehicle cannot be read over the OBD (which is the case for some vehicles), please first, verify if your ECU stock file is already in the install folder, if not then please send us the information to support@ovtune.zendesk.com so that we can check for support.

NOTICE:

SOME ECUS CAN BE READ THROUGH THE OBDII PORT. SOME CANNOT. IF THE SOFTWARE TELLS YOU THAT YOUR ECU CANNOT BE READ THROUGH THE OBDII PORT THAT DOES NOT NECESSARILY MEAN IT IS NOT SUPPORTED.

PLEASE CHECK THE INSTALLATION FOLDER C/PROGRAM FILES X86 / VF TUNER / (CAR FOLDER) TO SEE IF YOUR CALIBRATION IS PROVIDED

5.1.1. How to interpret your ECU ID

On most vehicles the ECU ID from the vehicle will have the following format:

32177000

304B3000

304A6100

To find your MATCHING file, simply look at the numbers **AFTER** the first digit "**3**" and ignore the last 2 00 / 01. For example:

21770

04B30

04A61

In the calibration files folder (the folders inside the installation location with MANY vehicles) there will be files with the following format:

89663-21770

89663-04B30

89663-04A61

You would select the one that matches your **89663-XXXXX** (matches YOUR VEHICLES ID).

5.2. Licensing the Vehicle VIN Remotely

CAUTION!

ONLY USE THIS METHOD IF YOU CANNOT CONNECT TO YOUR CAR!

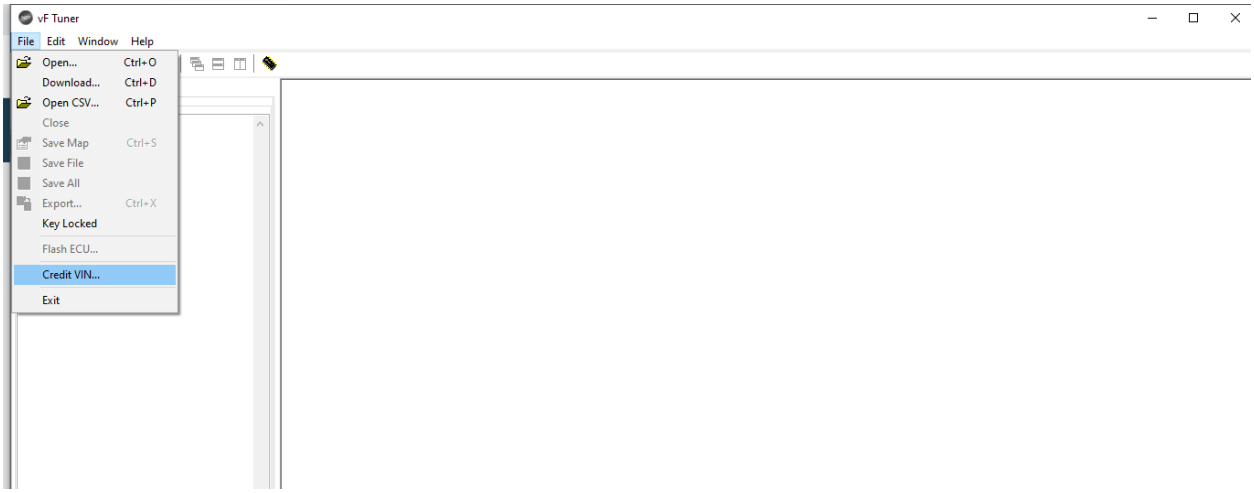
THIS FEATURE IS ONLY AVAILABLE TO PRO TUNERS!

This option is available if you're not near your vehicle. You **MUST**

- ✓ Have your vehicle VIN with you. **YOU MUST MAKE SURE TO ENTER YOUR VIN CORRECTLY! NO TYPOS** ,
- ✓ Have internet connection

5.2.1.1.Open VF Tuner program

5.2.1.2.On the menu, click "File" →"Credit Vin.."



5.2.1.3. A popup will show asking you to enter the vehicle VIN. **YOU MUST MAKE SURE TO ENTER YOUR VIN CORRECTLY! NO TYPOS. DOUBLE CHECK, IF THERE ARE TYPOS YOU WILL USE YOUR CREDITS AND WILL NOT BE ABLE TO FLASH**.

Input the VIN in CAPS and press "OK" button (**NOTE: Internet connection is require**)

6.0. TUNE PACKS

Tune packs are a package (zip / rar / compressed folder) that includes multiple Tune options for an individual vehicle. The package contains multiple files that a user

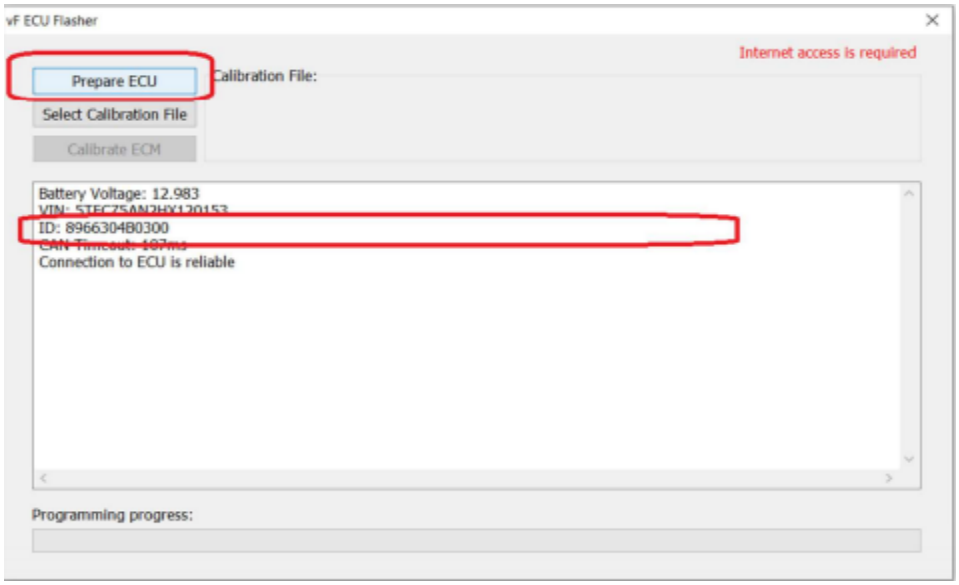
- ✓ Can select from to start as a base calibration to edit further,
- ✓ Can use the calibration as-is.

If you purchased a Tune pack from our store, (https://vftuner.com/collections/tune-packs) you will need to email us your vehicles information to request your tune pack.

6.1. Make sure your vehicle is connected to your computer as show in Step 5.0. above

6.2. Open VF Tuner program

6.3. Press "Prepare ECU"



6.4. Copy the information (calibration ID, VIN, etc.) and email that information with your order number to Support@ovtune.zendesk.com . We will email you a link to your tune package as soon as possible once receiving your information. This may take 1-3 days depending upon how busy our support email is.

7.0. FLASHING YOUR ECM

After passing steps 1-6 without any error it time to flash your ECM.

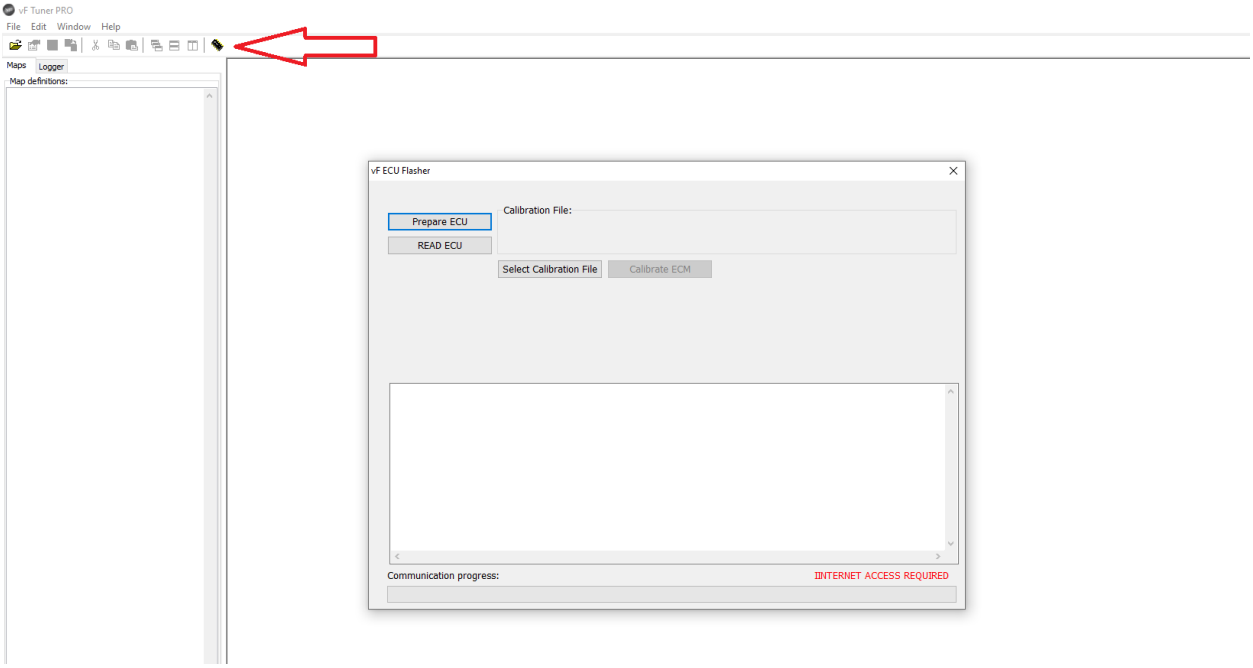
NOTE: Some files in the VF Tuner installation folder may be VFT format. If this is the case (that is if you do not see the file) simply select VFT format from the file type drown down menu.

CAUTION:

YOU SHOULD NOT BE FLASHING A FILE FROM THE INSTALLATION FOLDER UNLESS YOU ARE TRYING TO FLASH YOUR VEHICLE BACK TO STOCK!! THESE FILES ARE NOT TUNES.

7.1. Open VF Tuner program

7.2. Click on the “Flash ECU” icon as shown below

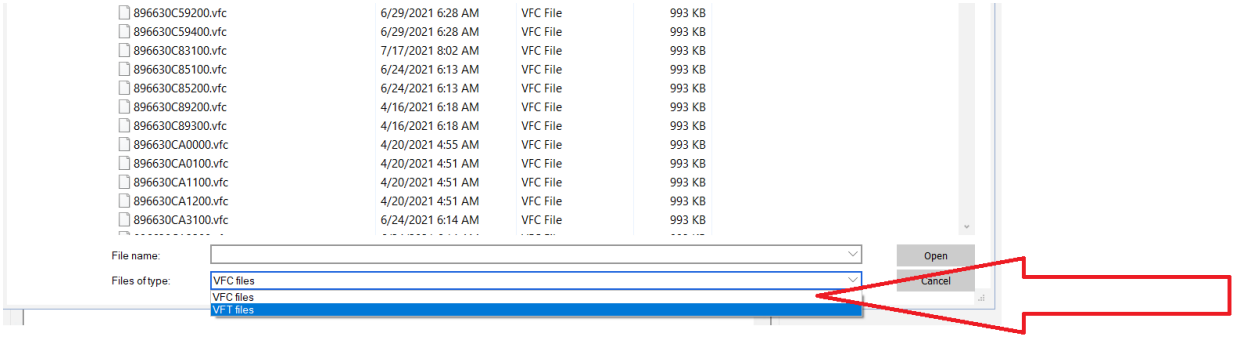


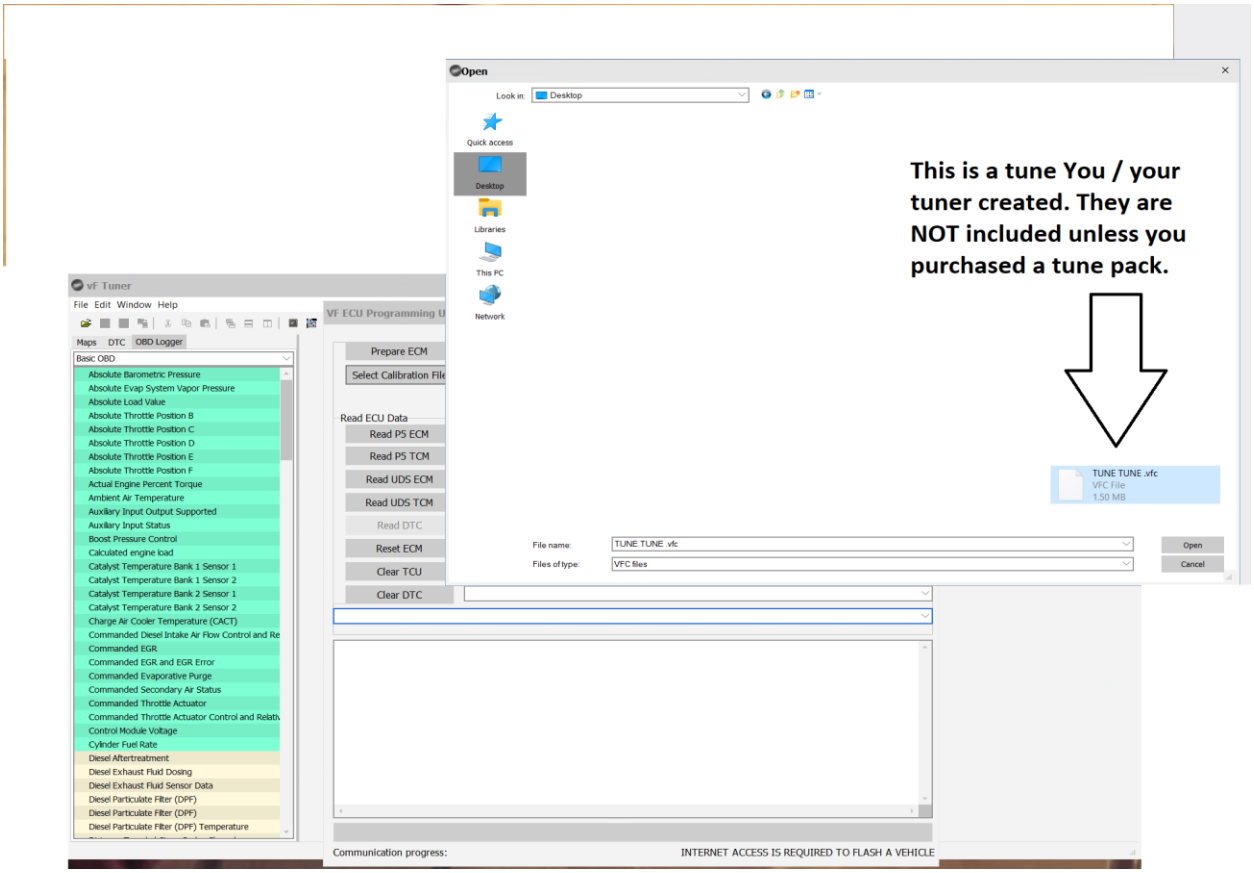
7.3. Press “Select Calibration File” button

7.4. Select the location of the (tune file) (.vft, .vfc file) as show below depending on your vehicle model

CAUTION:

YOU SHOULD NOT BE FLASHING A FILE FROM THE INSTALLATION FOLDER UNLESS YOU ARE TRYING TO FLASH YOUR VEHICLE BACK TO STOCK!! THESE FILES ARE NOT TUNES.





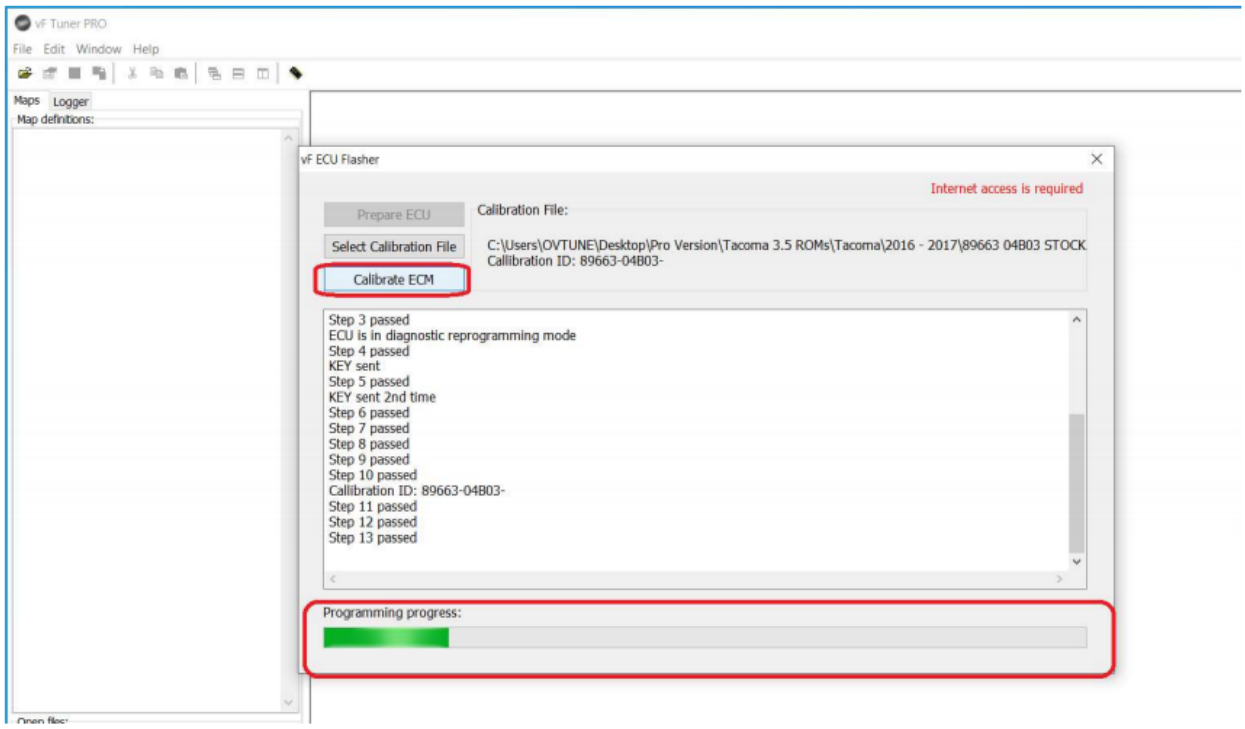
7.5. Once you are ready to flash, and have selected the file. Press “calibrate ECM” button.

NOTE: THIS PROCESS CANNOT BE INTERRUPTED.

If you get any ERRORS, please provide the ERROR CODE, Vehicle information (Make, Model, Year, Engine) to Support@ovtune.zendesk.com. Please include the Error ER code (Example ER3233)

CAUTION!

- ✓ FLASHING ECM process cannot be interrupted.
- ✓ Ensure you have adequate battery voltage before trying to flash.
- ✓ Do not attempt to flash your ECU if your battery voltage is under 12.0 volts!
- ✓ Ensure you have a stable connection.
- ✓ Errors, interruptions, low battery voltage disconnects, etc. can brick your ECM!
- ✓ In some cases, you may have to send us the ECM for repair.



7.6. Once the process is complete, the VF Tuner program will prompt you “Flashing Complete”

7.7. Turn the vehicle OFF, and then ON and start it to confirm flashing is done successfully.

NOTE: Some Toyotas will start, and immediately die after the first start up after a flash. This is completely NORMAL. Simply start it again.

7.8. Recovering your ECU in the case of a Flash Error.

- Your vehicle may be unable to be started in the case of a flash error
- Depending on the severity of the Fault, your ECU may need to be removed (rare)
- Our software has multiple strategies for trying to recover.

7.9. Automated Flash Recovery

Note, if you get a flash error, the software should prompt you with a message that an error occurred and will ask you to RETRY flashing.

PLEASE carefully follow the prompts and instructions when to shut your car off (OR NOT SHUT IT OFF!) so that the ECU can be recovered.

In most cases the fault is from low battery voltage or an unstable connection / battery draws like head lights.

7.9.1. Force Flash - ECU recovery

In some cases the ECU will not be able to be recovered automatically. This is very rare. In that event, you should try force flash recovery (this does not work on Gen1 ECUs without additional work and removing the ECU so please contact us for assistance at Support@ovtune.zendesk.com).

To force flash the ECU you will need to do this in the following order

1. Turn the vehicle fully on and **DO NOT** try to start it
2. Select the STOCK calibration file from the VF Tuner installation folder
3. **DO NOT, UNDER ANY CIRCUMSTANCES, PRESS PREPARE ECU**.
4. Press Gen 1 Force Flash ******* If your ECU is a gen 1 (file size of the calibration file 1mb or less)
5. Press Gen 2 Force flash ******* if your ECU is a gen 2 (file size of the calibration file is 1.25mb 1.5mb or 2.0mb)

(the software should prompt you if the ECU is gen 1 or gen 2 when you select the file).

Allow the software to flash and recover the ECU and then follow the steps as prompted.

8.0. LICENSING ECU FOR EDITING

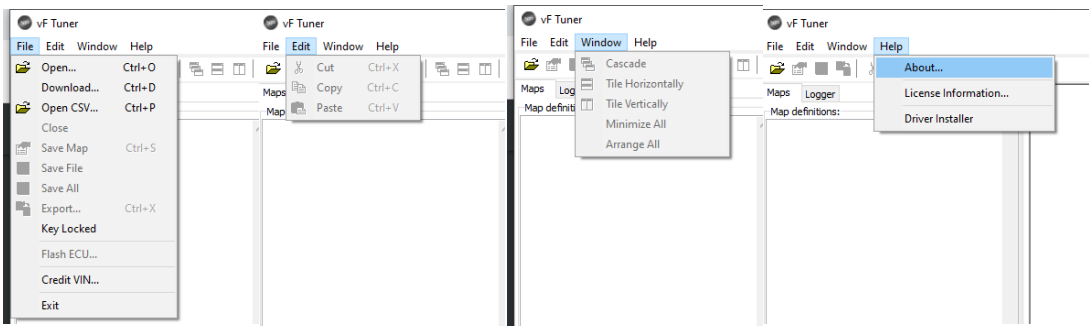
8.1. Basic hot keys for editing

- CRTL + F = Editing a value
- CRTL + I = Interpolation of a selected area
- CRTL +C = Copy
- CRTL + P = Paste
- " *" (star) button on numpad = Multiply value by percent

NOTES:

- ✓ When multiplying a value, 100% = 1.0 multiplier (no change)
- ✓ 80 % = Value x 0.8
- ✓ 180 = Value x 1.8

8.2. VF Tuner program menu



8.2.1. KEY MENU OPTIONS

i. Key Locked Menu

When this menu is selected as shown in fig 8.2.1 b, then you SAVE a file or EXPORT a file, that file is locked to your key, and nobody else can access it with VF Tuner program.

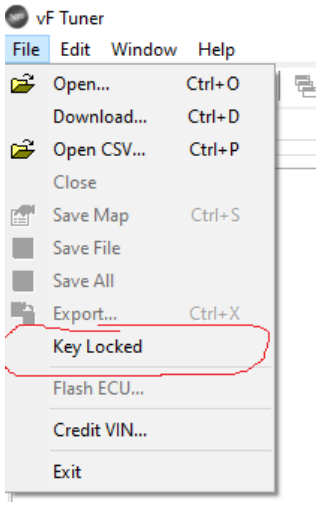


Fig 8.2.1 (a) showing Key Locked menu

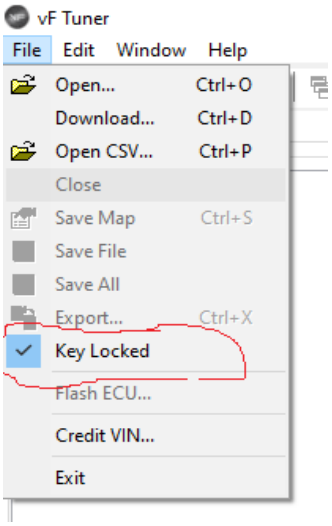


Fig 8.2.1 (b) showing Key Locked menu activated

ii. Credit VIN – License a VIN for flashing

8.3. Basic Functions

1. Opening your ECU file and licensing your ECU ID

NOTES:

- When opening your ECU for the first time you will need to license access to the file. This will cost 4 credits.
- Please be sure you are licensing the file that MATCHES your ECU ID. If you license the wrong file, additional credits will not be provided to you.
- If you do not know your CALIBRATION ID, Click "prepare ECU" the "ID" has your calibration ID. Example 0304b0400 = 89663-**04B04** The last 5 digits matching
- The software will prompt you that you must use credits to license the file. This process only needs to be done one time, and you will have permanent access to that ECU version. You do not have to license additional files of the same ECU version.

Licensing an Upgrade or Modified ECM File

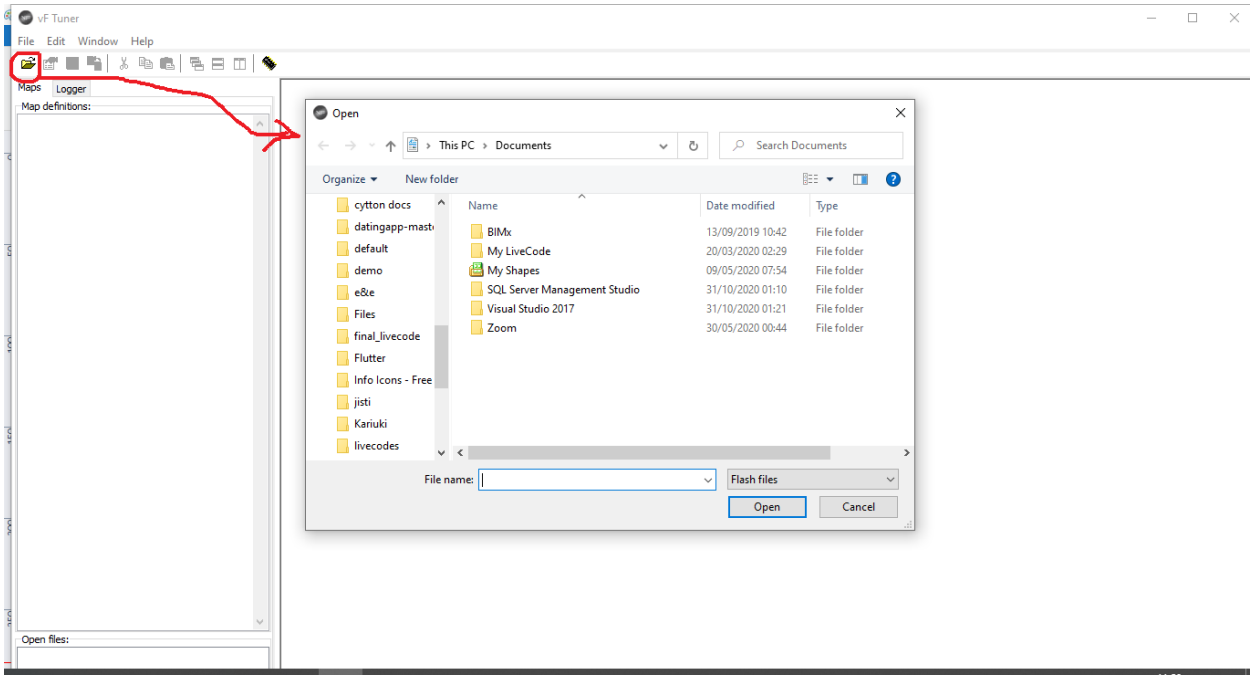
- Some files provided by VF Tuner are modified files for specific vehicle model years. These files are modified in order to work with your vehicle. Sometimes ECU unlocks are required, and other times ECU services may be required (sending your ECM to us).

- Certain models and ECUs have files modified from original code in order to work with your application.

i. Open VF Tuner program

ii. Click “File” then “Open” or press CRTL + O on the keyboard, or press the folder icon on the upper left corner of the program

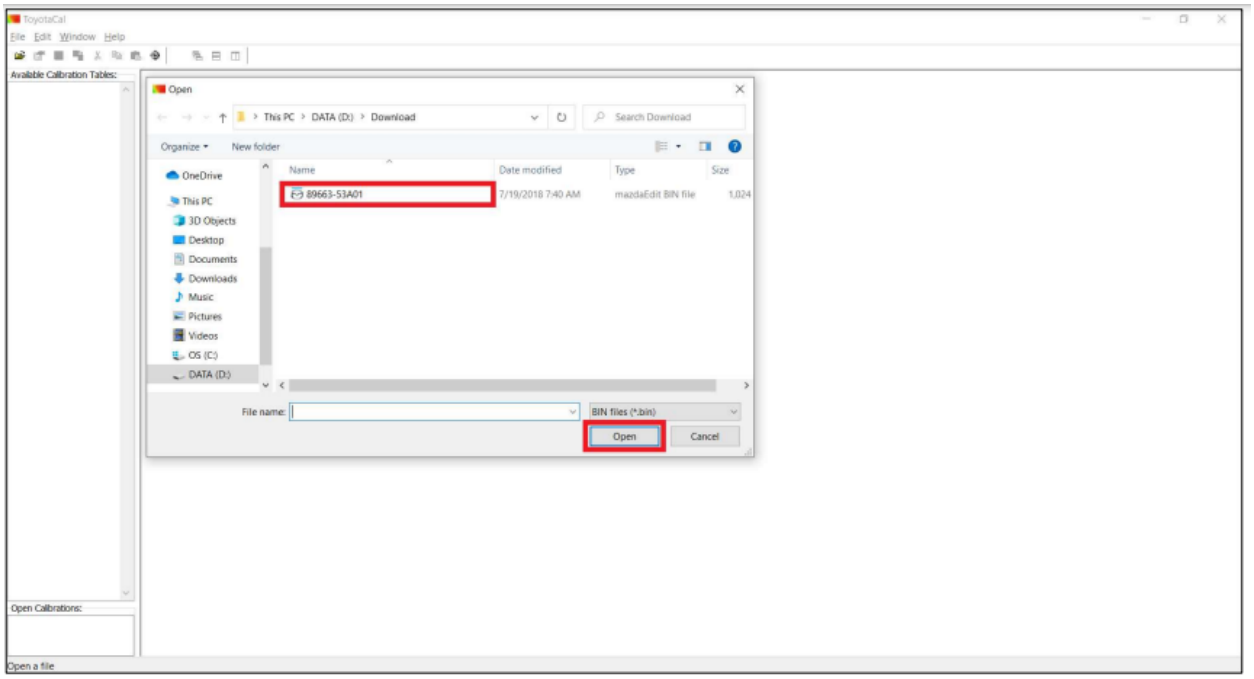
iii. Browse the location of the file as shown below



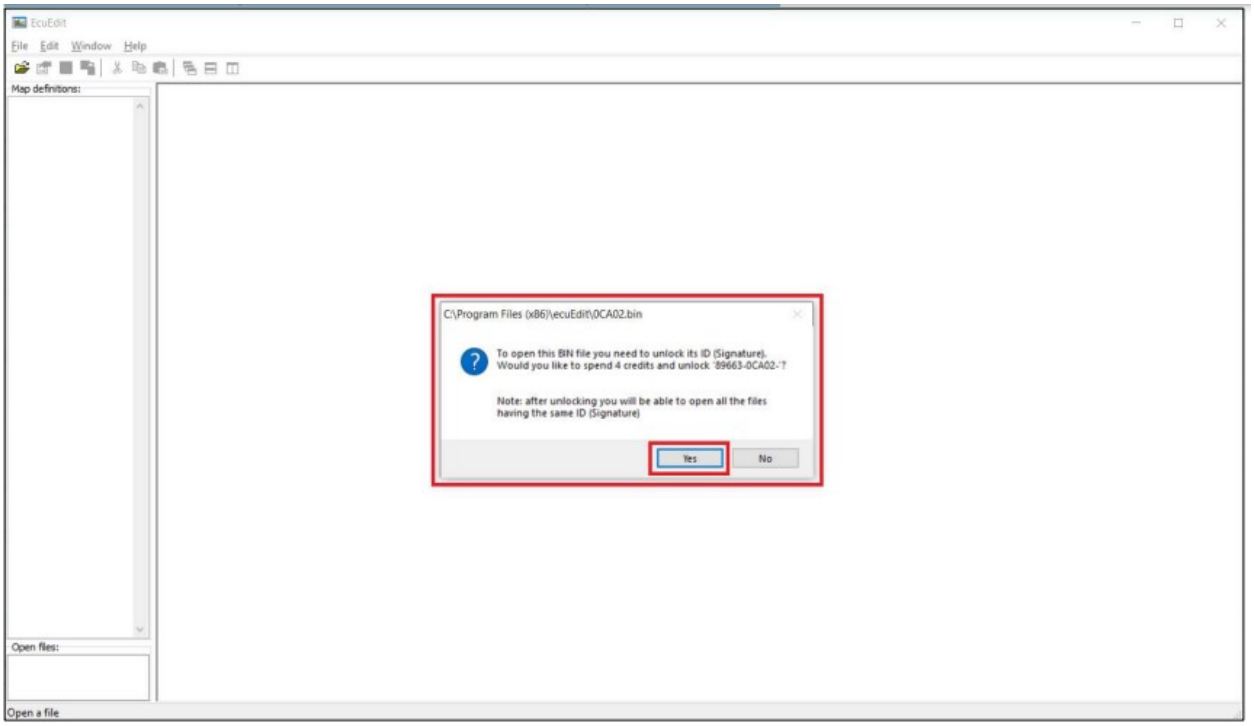
iii. Select the file you wish to edit and click on the “Open” button located on the lower right side of the “Open” window above.

CAUTION!

MAKE SURE THAT THE FILE MATCHES YOUR VEHICLES CALIBRATION ID IF YOU INTEND TO LICENSE YOUR VEHICLES CALIBRATION!



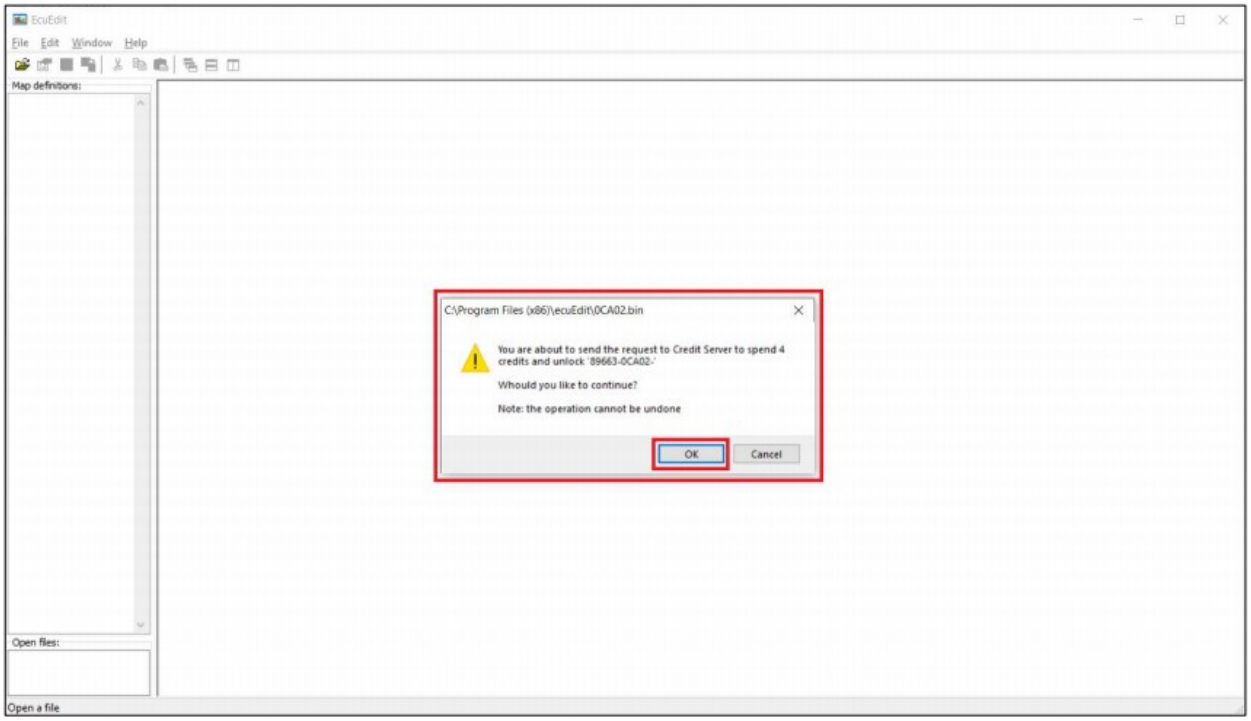
iv. When you have selected and opened your file, you will be notified that doing so will consume some of your credits. Click on the “Yes” button to proceed on to opening that file and deduct the credits from your account.



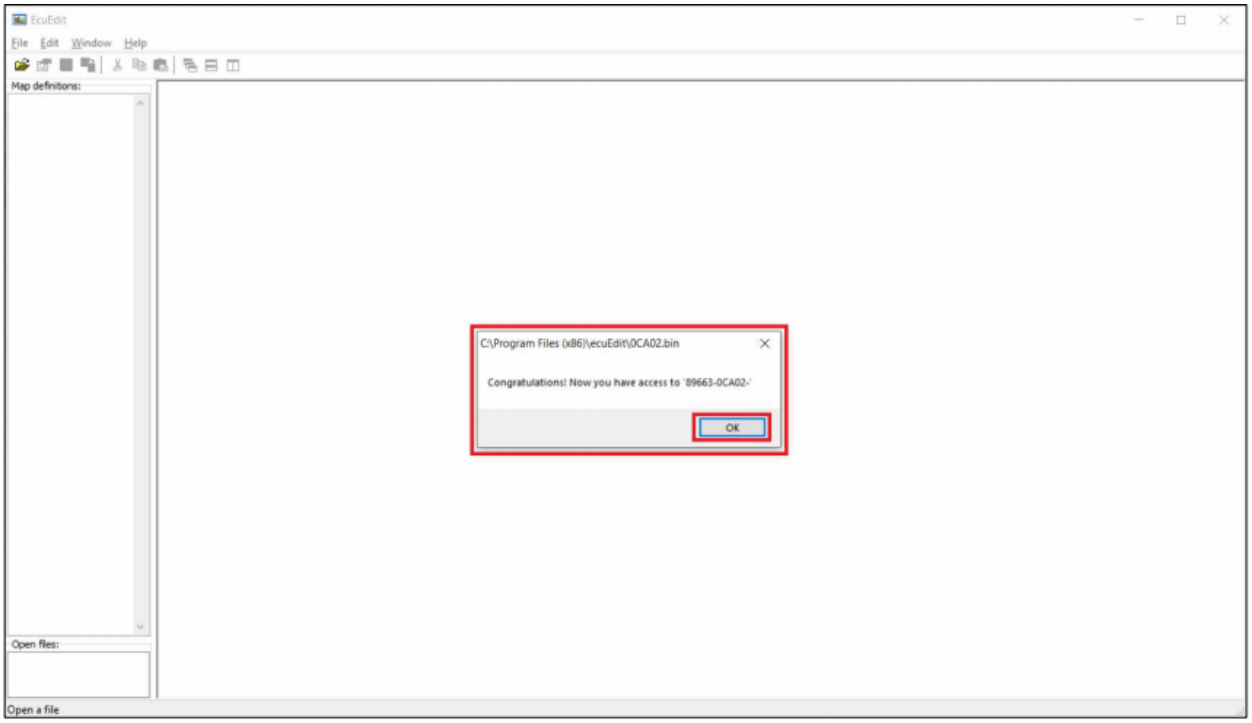
v. A confirmation of your request will be show on the next dialog. Click the “Ok” button to proceed.

CAUTION!

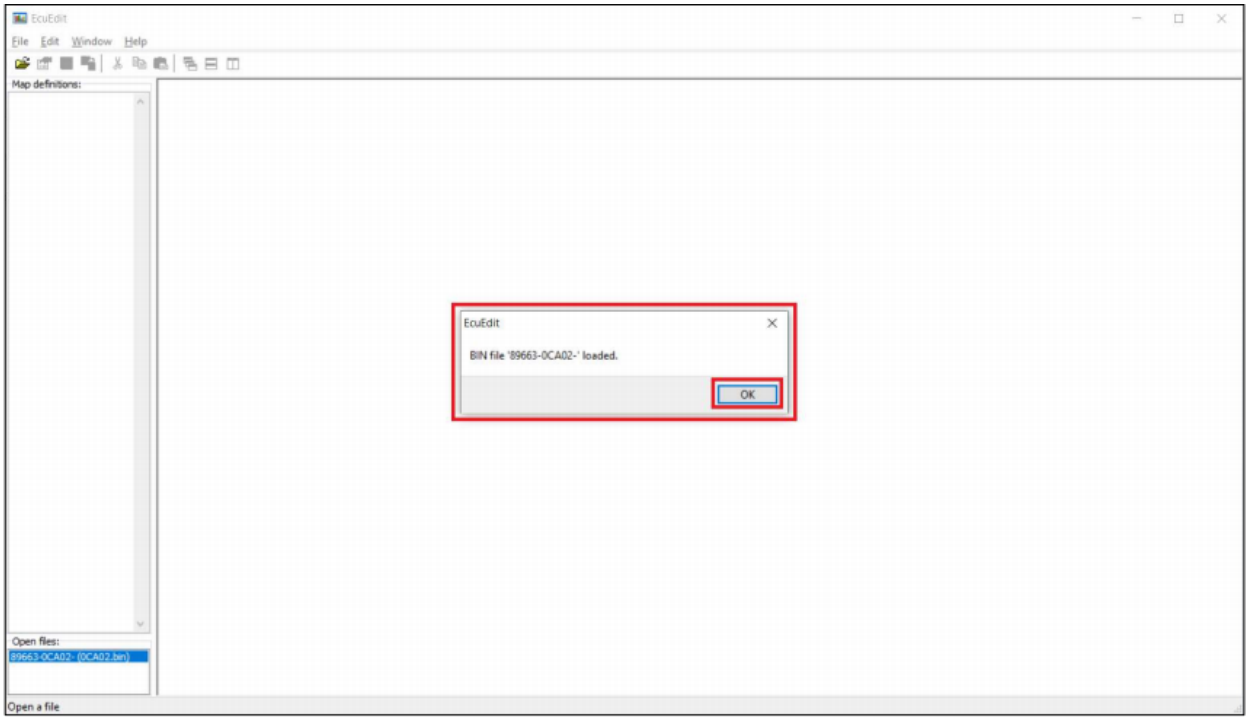
VERIFY THAT THE CALIBRATION YOU ARE OPENING MATCHES YOUR VEHICLE! THIS PROCESS CANNOT BE UNDONE



vi. There will be another confirmation that you now have access to that file. Click the “Ok” button to proceed



vii. Your file will be loaded and another confirmation dialog will appear. Click the "Ok" button to finish loading the BIN file.



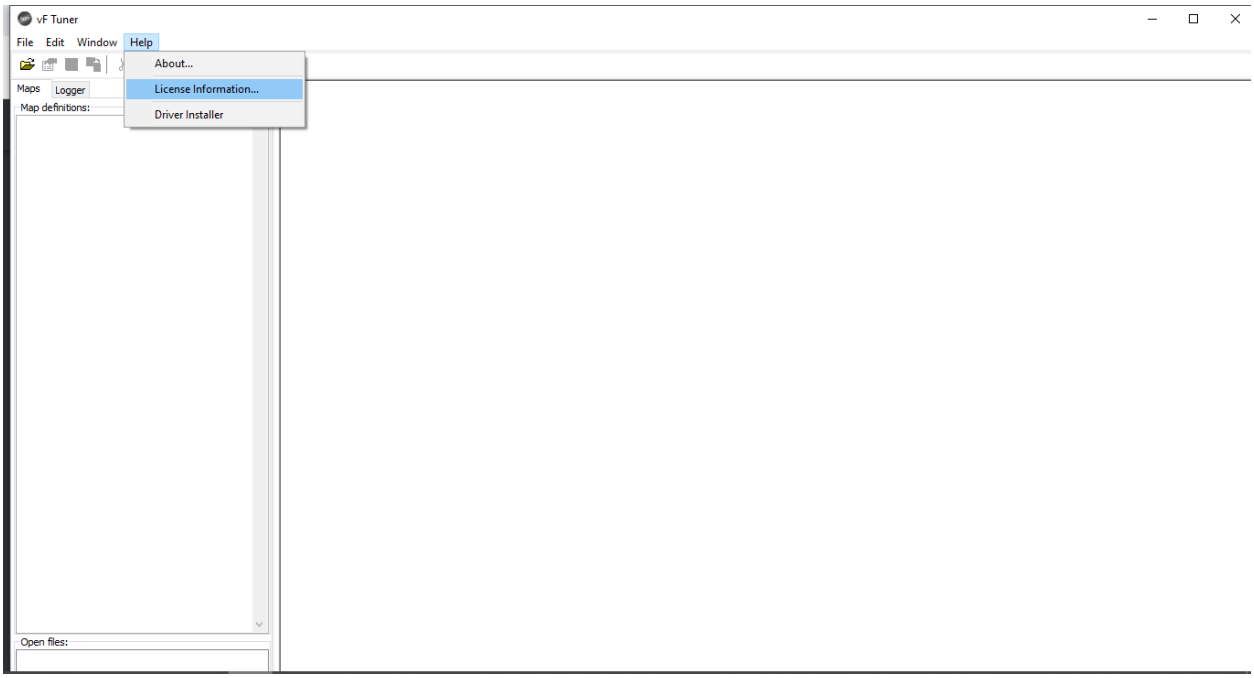
2. Requesting for more Credits - PRO TUNER ONLY

2.1. Go to https://vftuner.com/collections/creditds and PURCHASE the credits you want

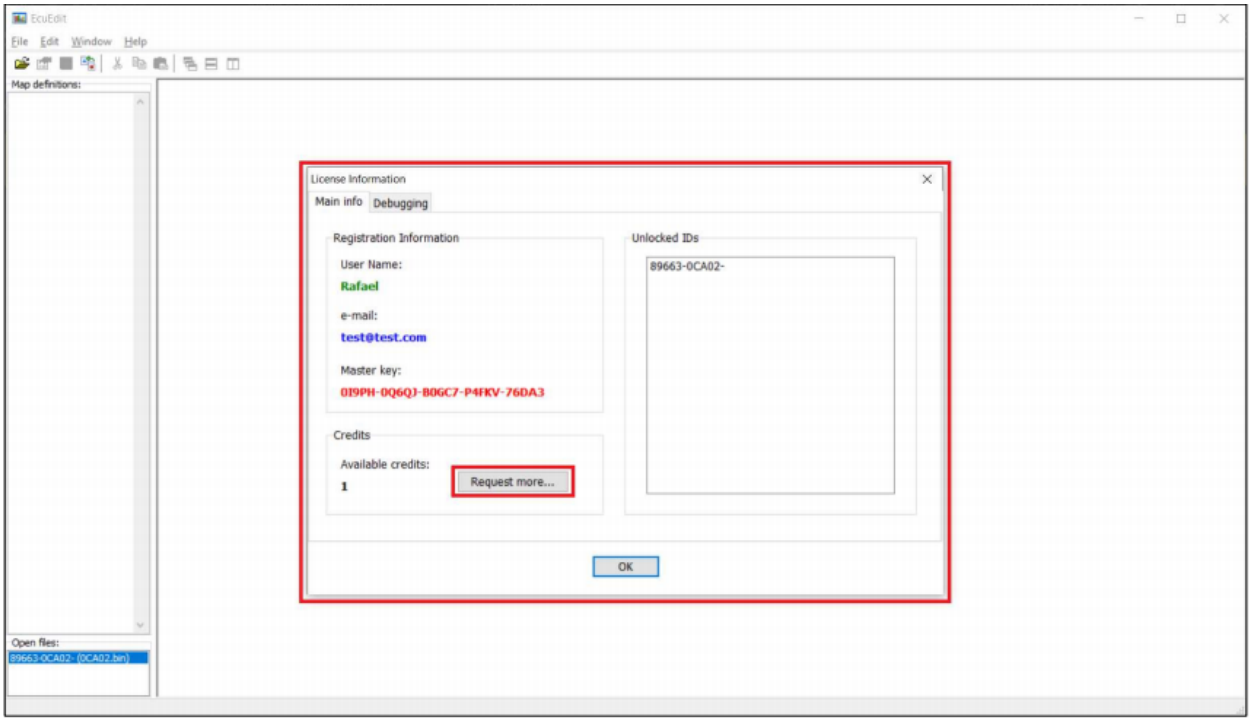
NOTE: You must go to https://vftuner.com/collections/creditds before requesting the credits using the VF Tune programs

2.2. Open VF Tune program

2.3. Click on "Help" menu and then click on "License Information…" sub menu

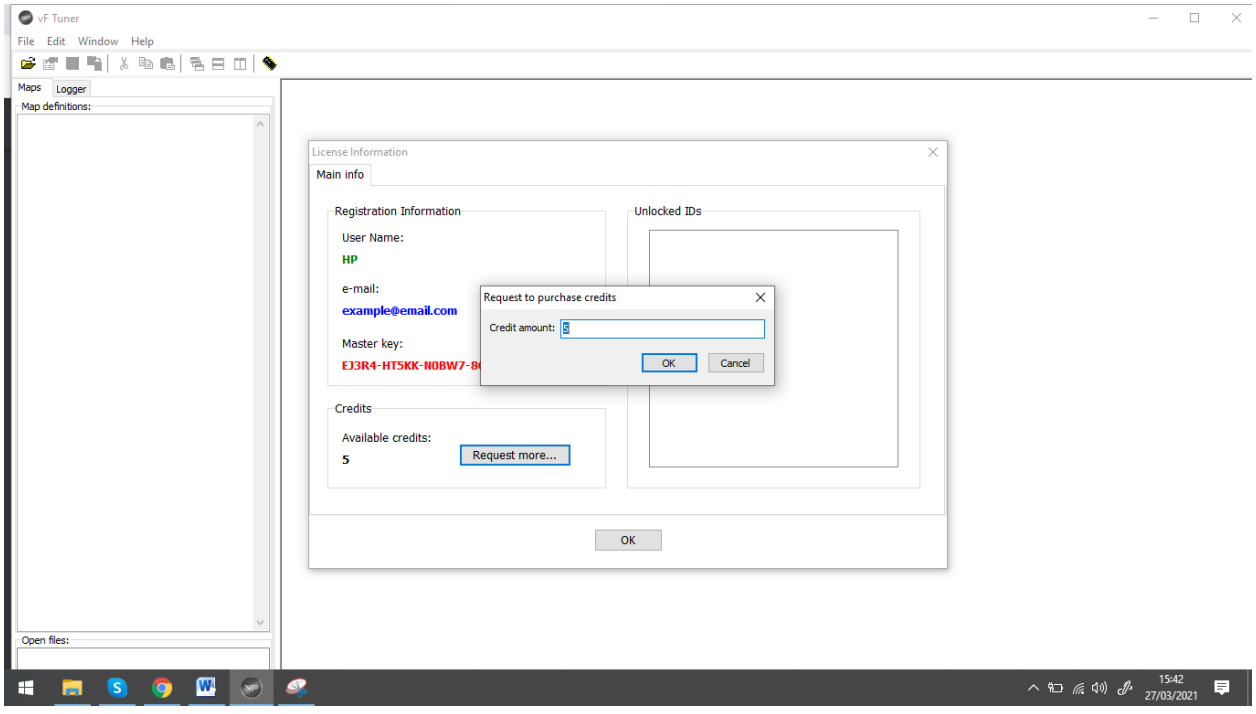


2.4. Click on "Request more" button



On this window, you can also view the unlocked IDs for your account, and how many credits you have.

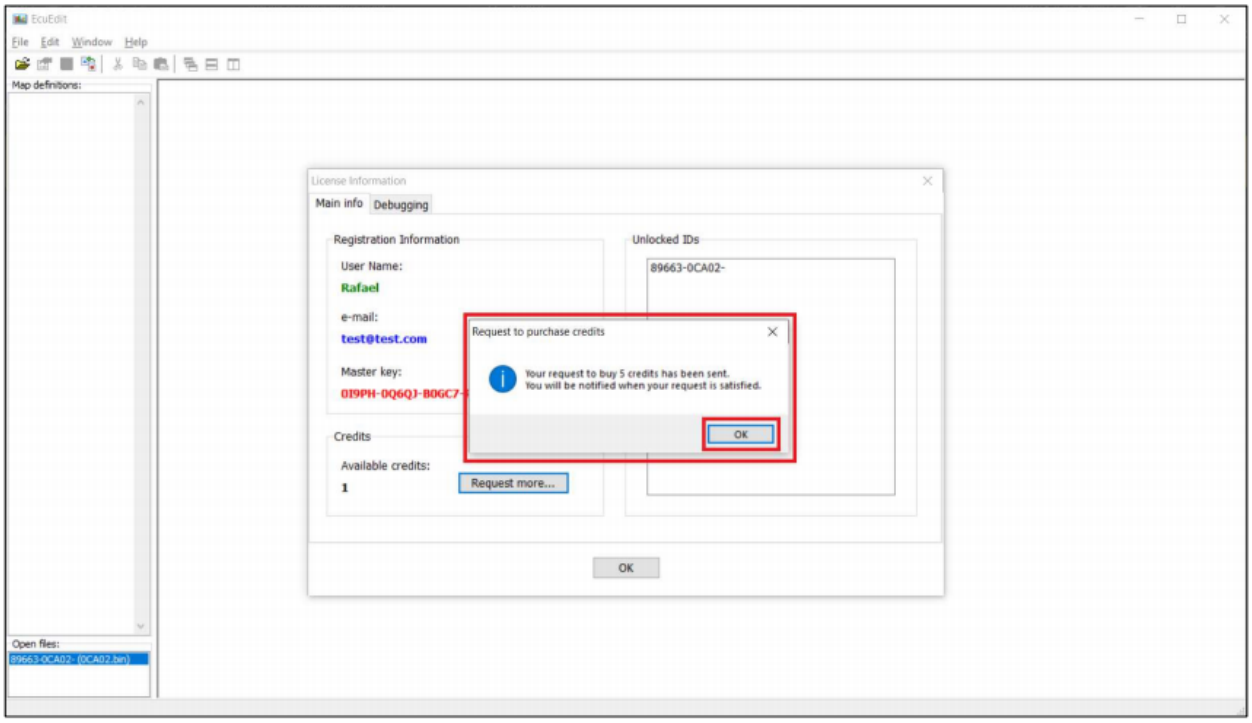
2.5. On the next popup dialog, enter the credit amount you wish to spend. NOTE, this process is not “instant” in all cases so **do not send multiple requests**



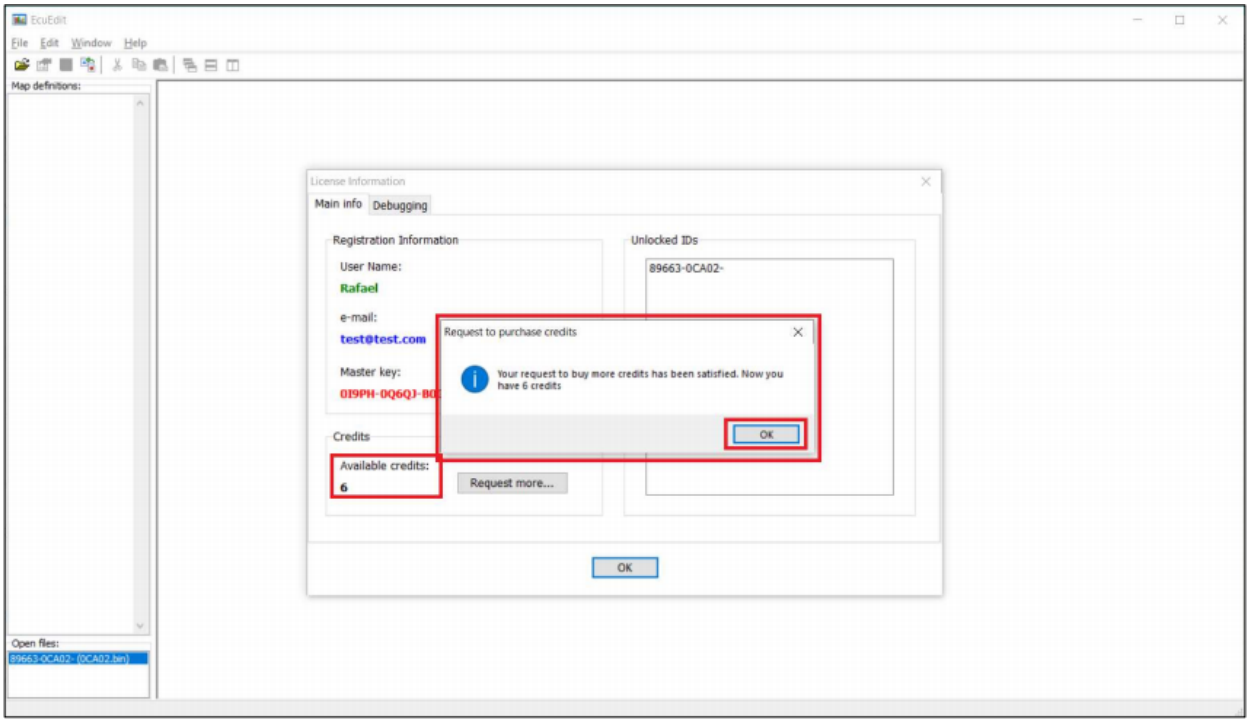
CAUTION!

- Please be sure to request the same amount you purchased in order to expedite your credit purchase
- Please do not request the same credits multiple times
- Please do not request credits if you have not made any purchases

2.6. Once your purchase and request for more credits is sent, you'll get a confirmation as pictured below. Click the "Ok" button to proceed.



2.7. Once we have added more credits to your account, you will get a notification like the one pictured below. You will also notice your available credits increase. Click the "Ok" button to proceed.

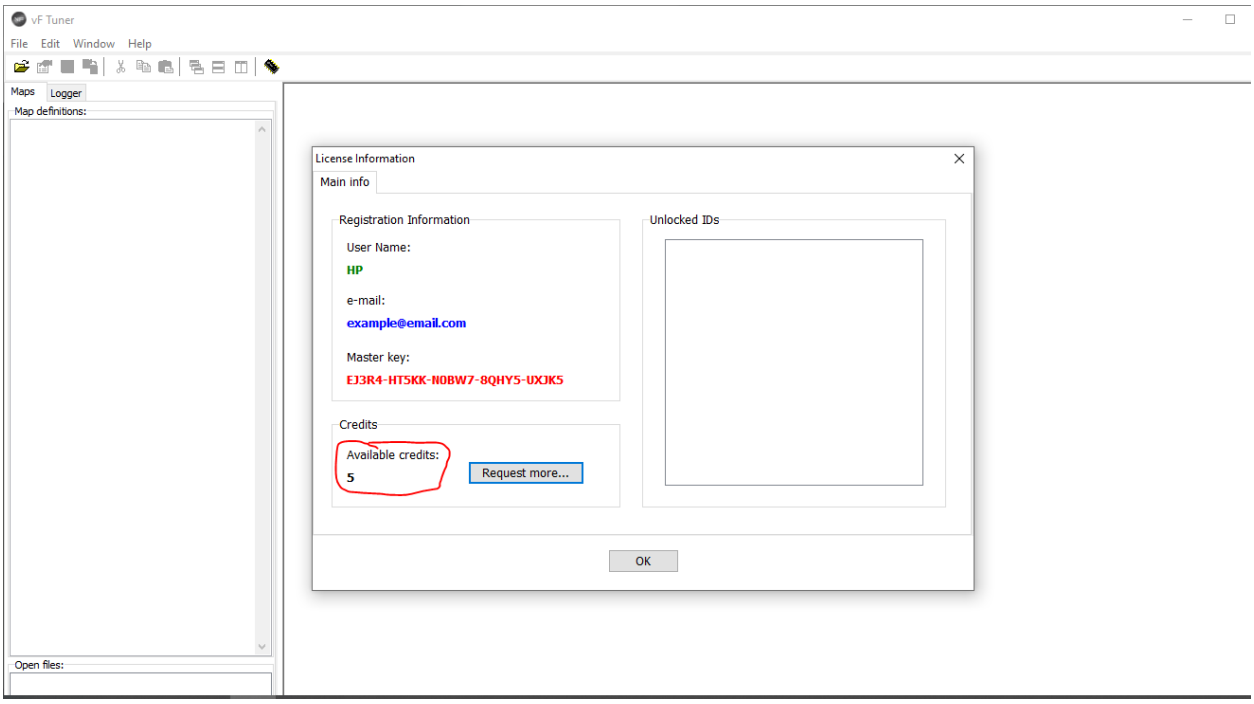


2.8. You can now open a new ECU ID again (check the above instructions on opening an ECU)

3. Checking credit balance

3.1. Open VF Tuner program

3.2. Click on “Help” menu and then “License Information…”



4. Credit usage

- ✓ Credits are used to unlock access the ECM/TCU Files (permanent access once licensed
- ✓ Credits are used / required to license a vehicles ECM for flashing

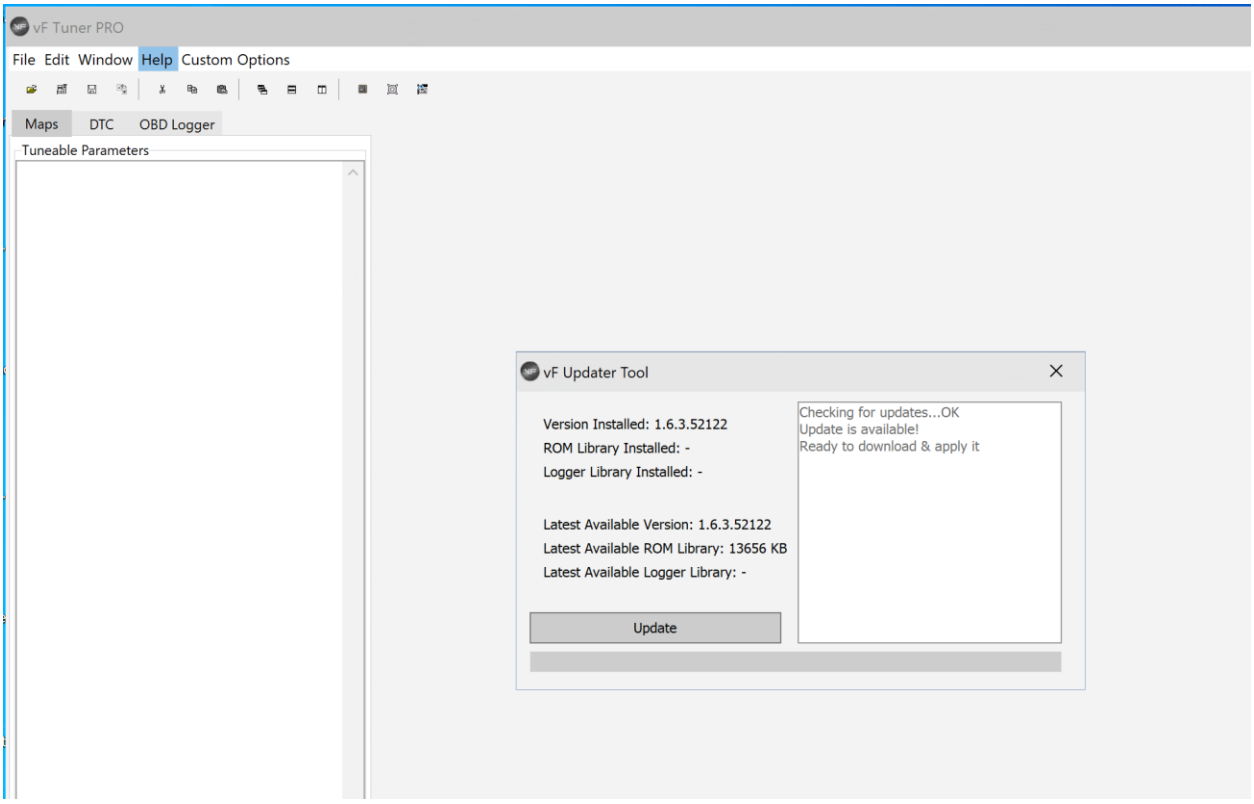
5. Updating the software

Method 1 - In App Updater

To easily update your software, go to VF Tuner Menu→ HELP→CHECK FOR UPDATES. This will automatically check for newer versions of the Software and calibration definitions.

NOTE:

This **WILL NOT** download new ECU files. So if you are waiting on support for a new ECU file you will need to download the FULL software from the website as outlined above and re-install the latest version.

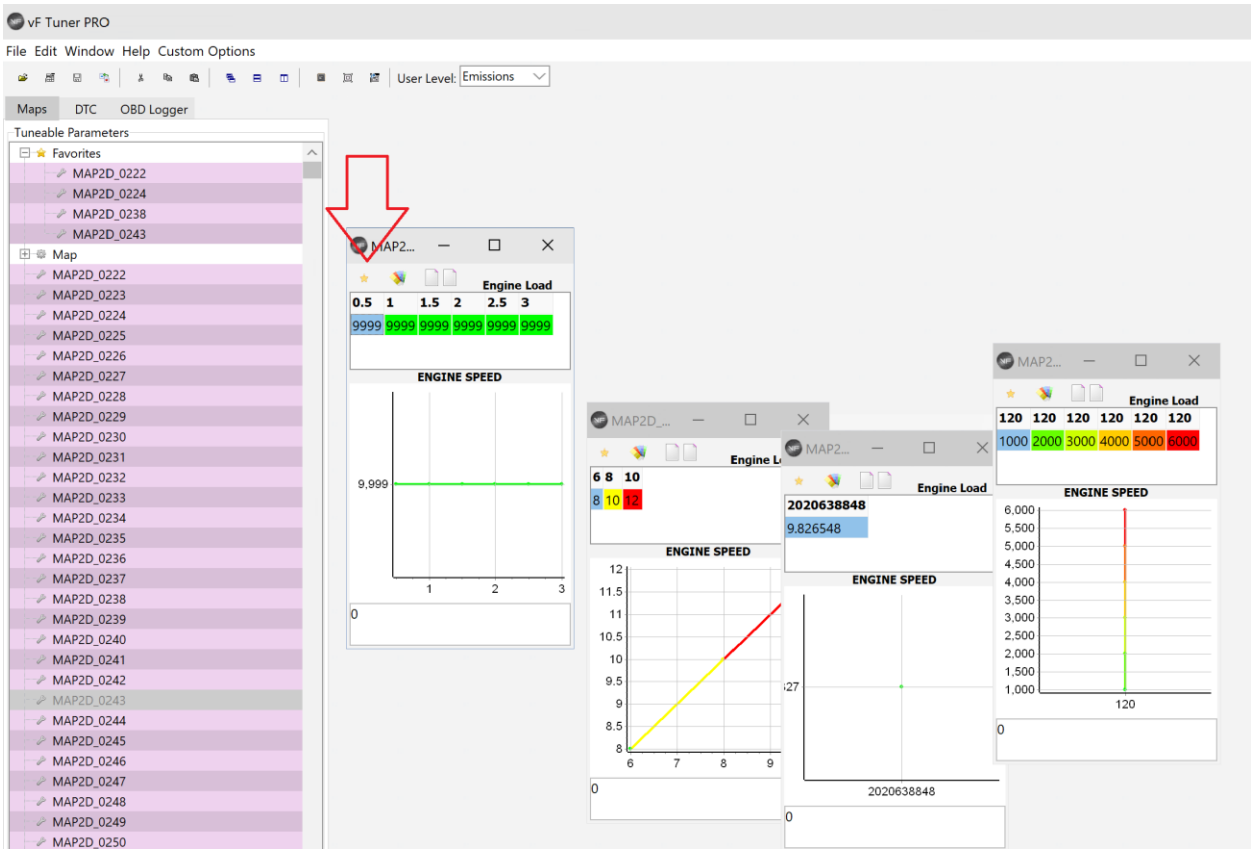


6. Favorites option

VF Tuner now has an option to add favorites to your map list. Allowing you to quickly find the maps you need to tune. Setting up a favorites list is easy.

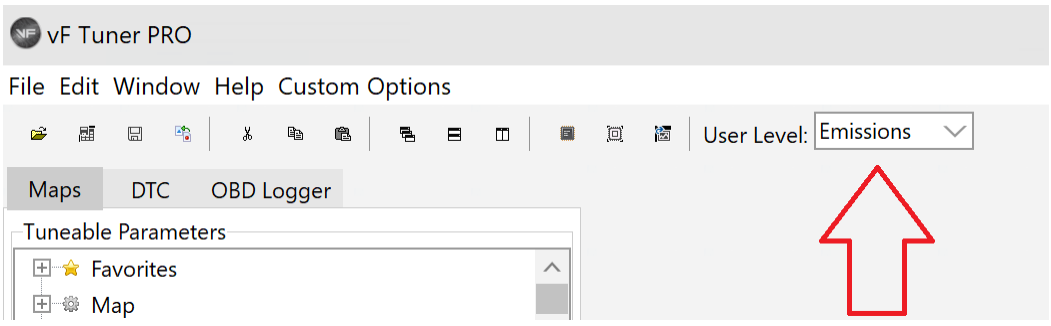
- Open the map you want to add, and press the STAR ICON. If the star is not grey, it is added to your favorites.

ALL ECUS with these maps will show in your favorites list. Favorites options is not file specific.



7. User level control

VF Tuner has added an option to allow users to tailor their experience and the amount of tables they would like to access. Default is Emissions (all tables). Depending on which user level you select, some tables will be available and some will not. This can help inexperienced EFI calibrators find only what they are looking for without diving into hard development level maps.



9.0. EDITING – BASICS

9.1. Navigating the User Interface / EDITING FILES

There are four (4) basic areas that are mainly referred while editing

- The Editing window
- The Map Definition window
- The Menu items
- The Shortcut items
- The Open File window

9.2. Adjusting the Map Definition Window Size

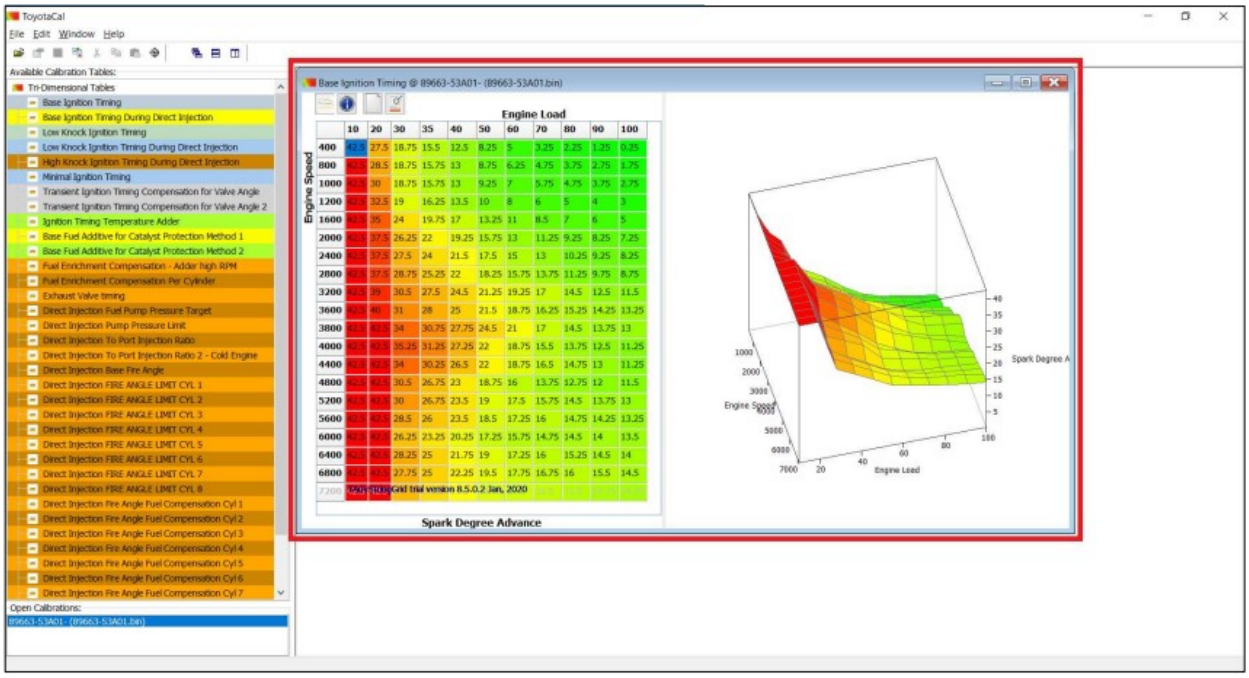
Hover your cursor in between the “Map Definition” window and the “Editing” windows until your cursor changes appearance. You can then click and drag your mouse to change the “Map Definition” window to your desired size.

Changed window size:

9.3. Opening a Map/Table

Select on a map/table you want to edit

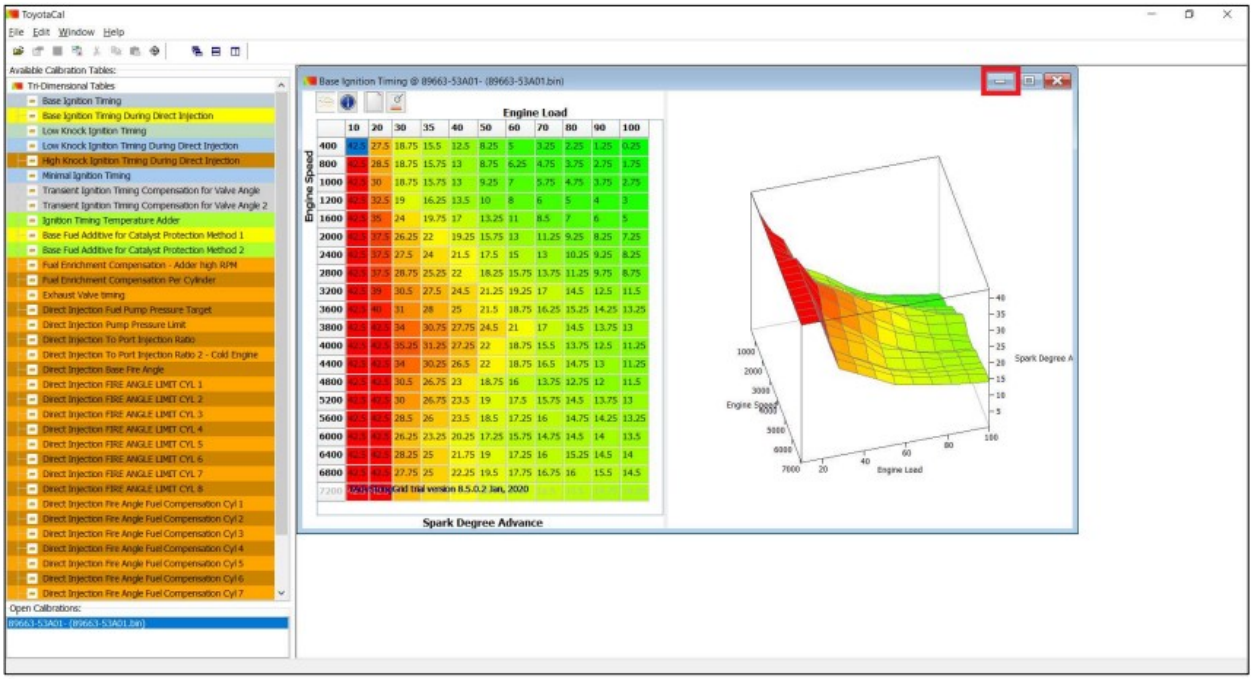
Double click that map and it will open the map/table in the “Editing” window



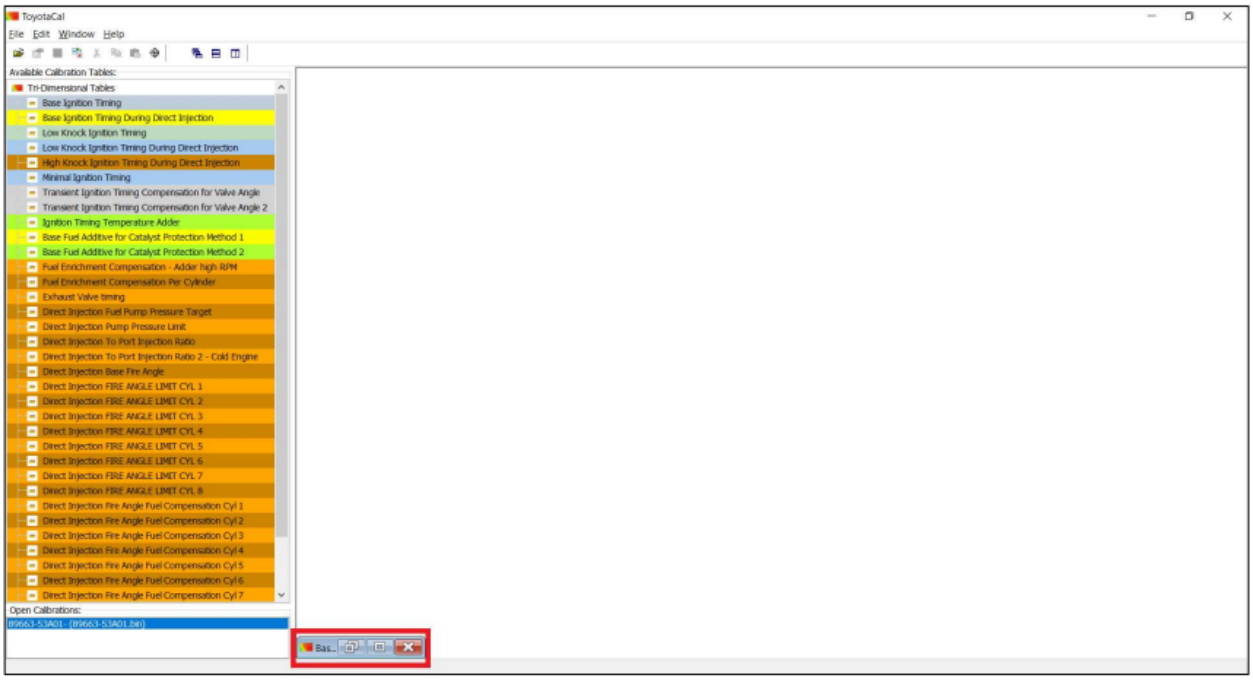
9.4. Navigating the Map Window

9.4.1. Minimizing the Map Window

Click on the minimize button

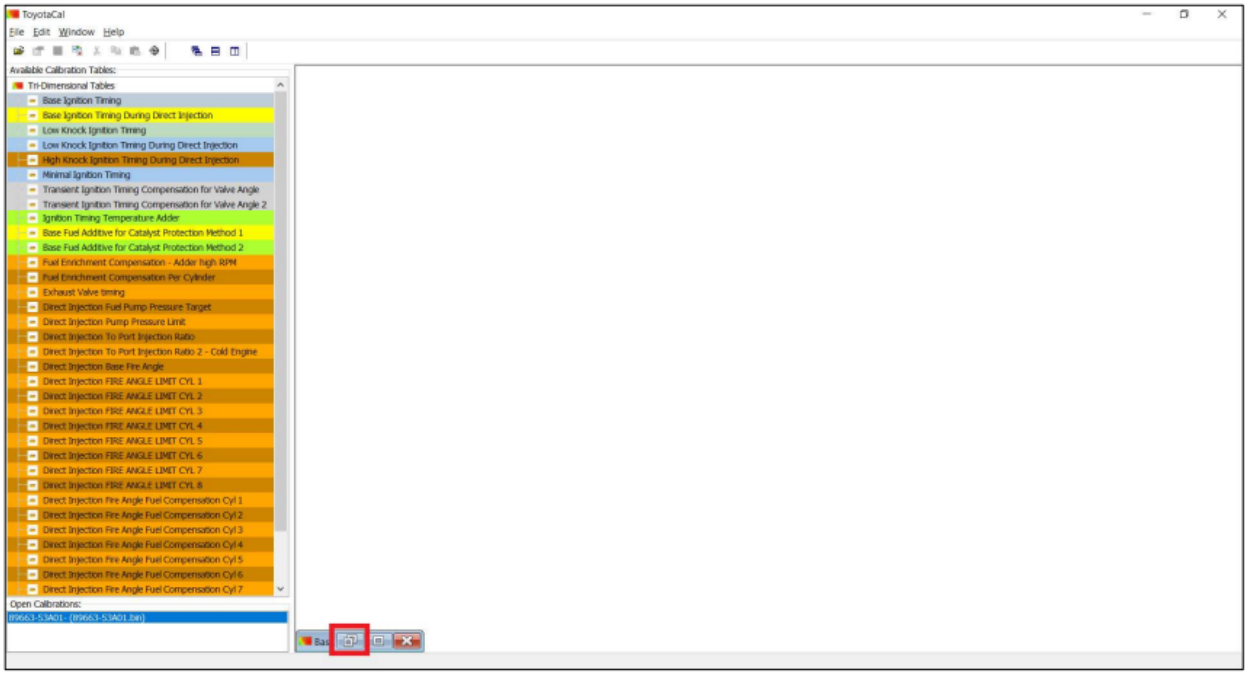


Results

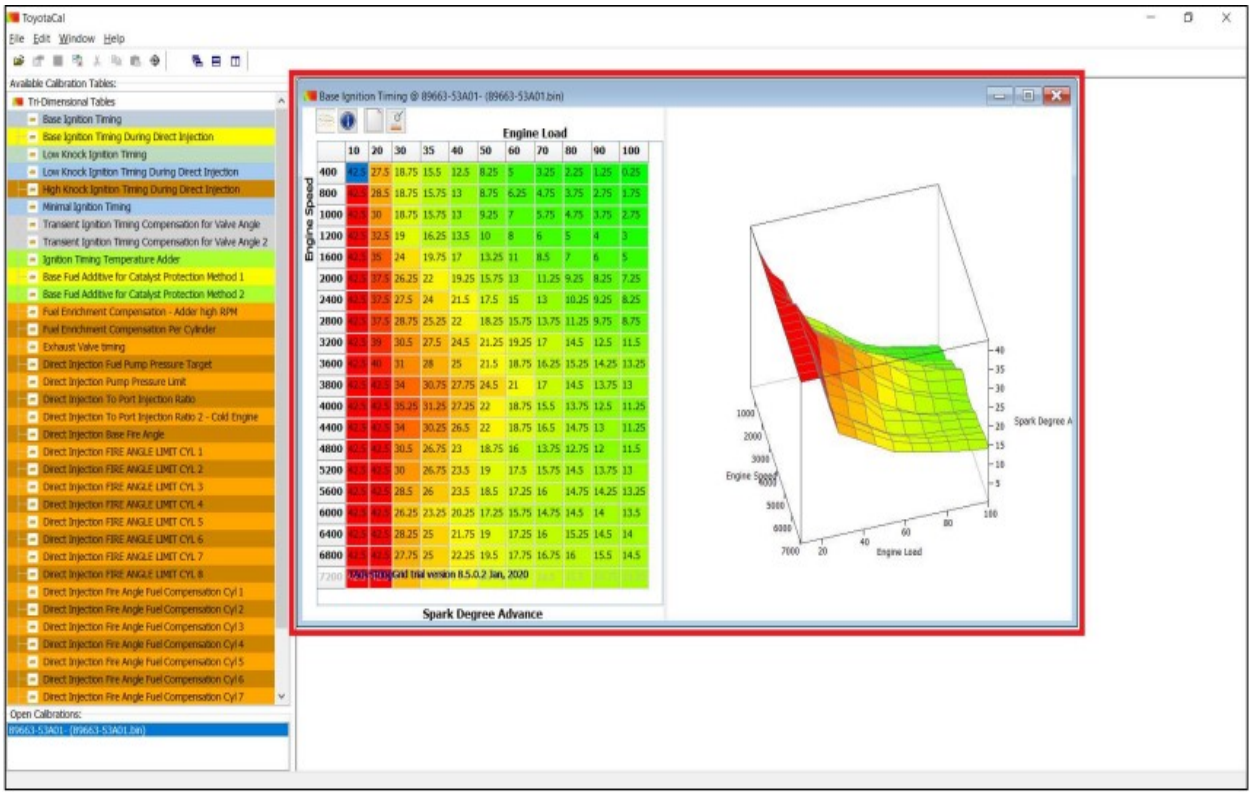


9.4.2. Restoring a Minimized Map Window

Click on the maximize button on the now minimized screen

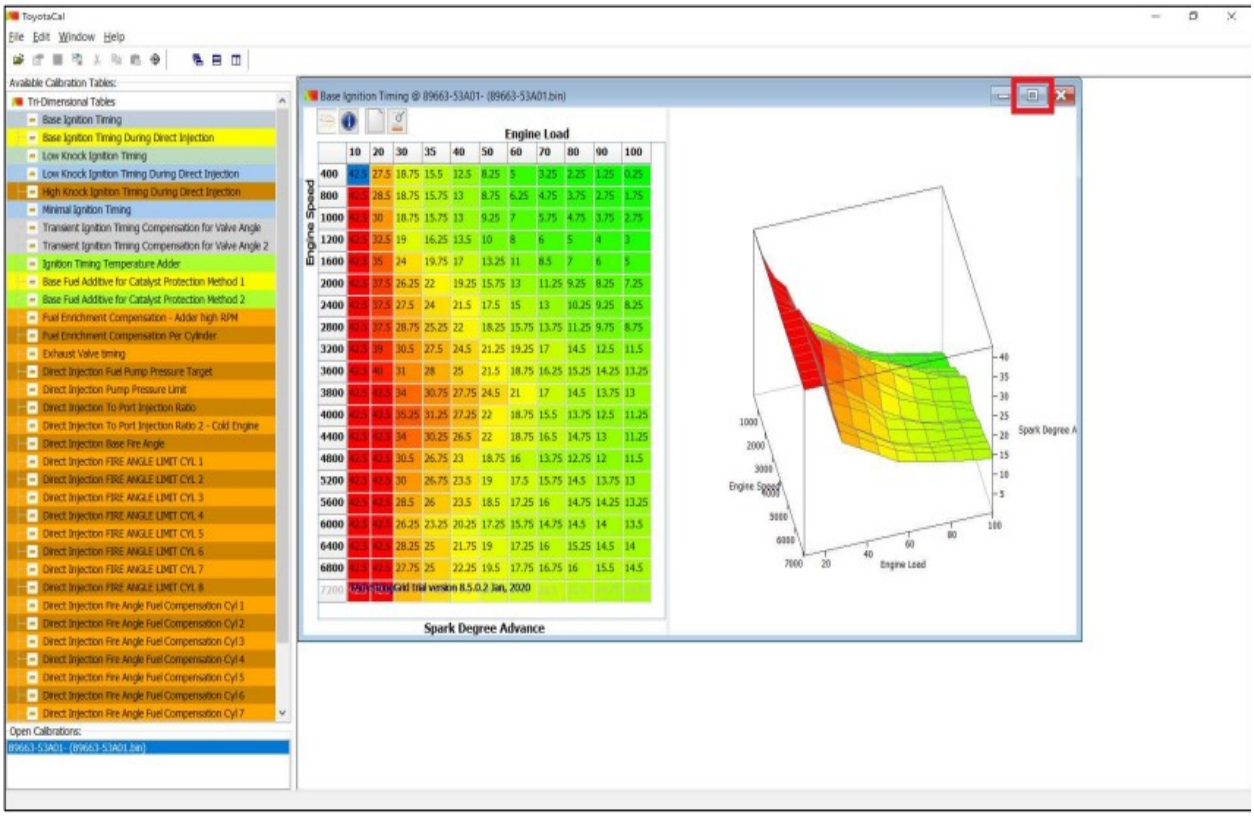


Results: The window is maximized to its original size

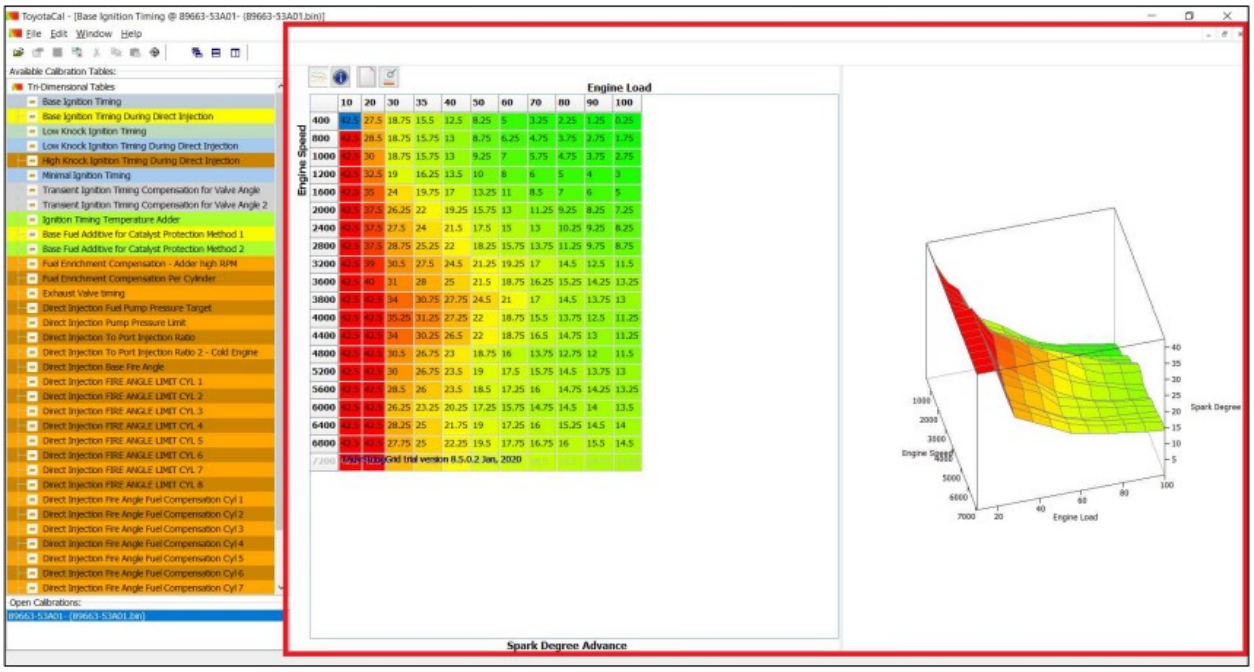


9.4.3. Maximizing the Map Window

Click on the maximize button



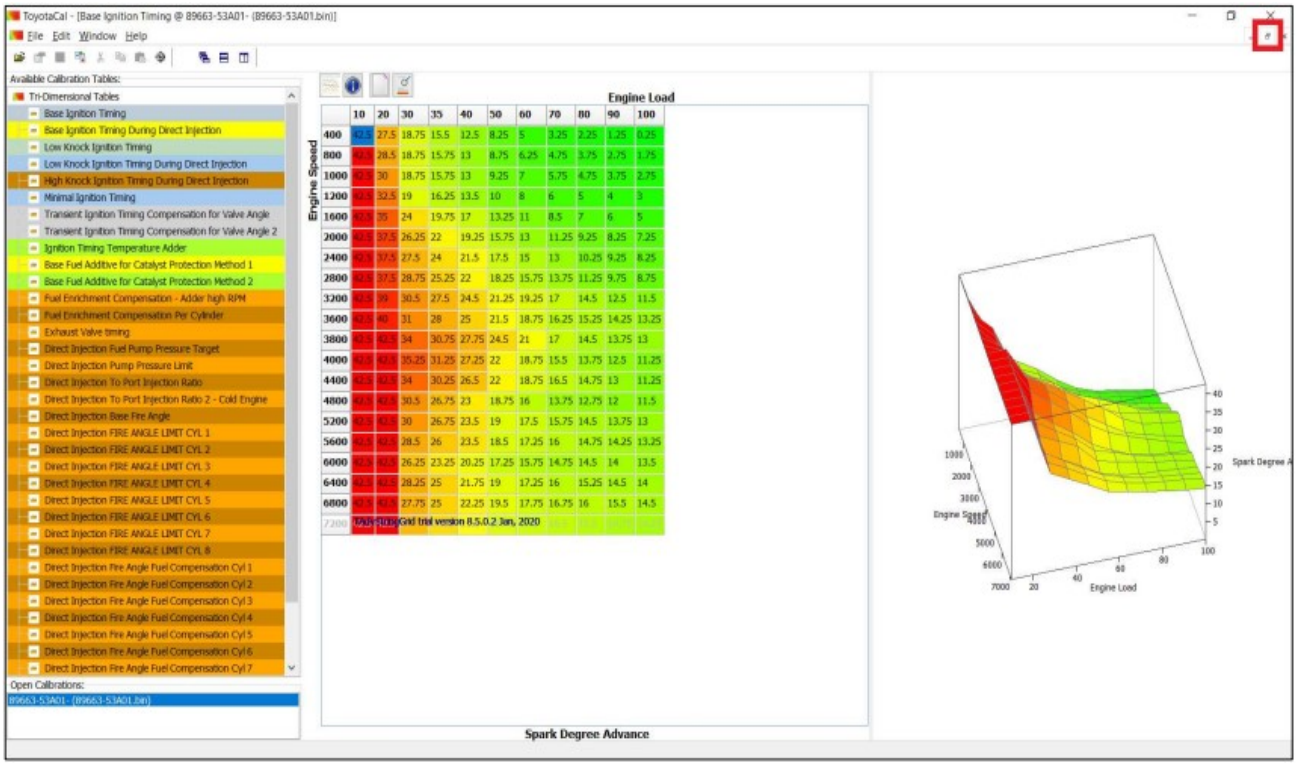
Results: The screen stretches and fills in the editing window



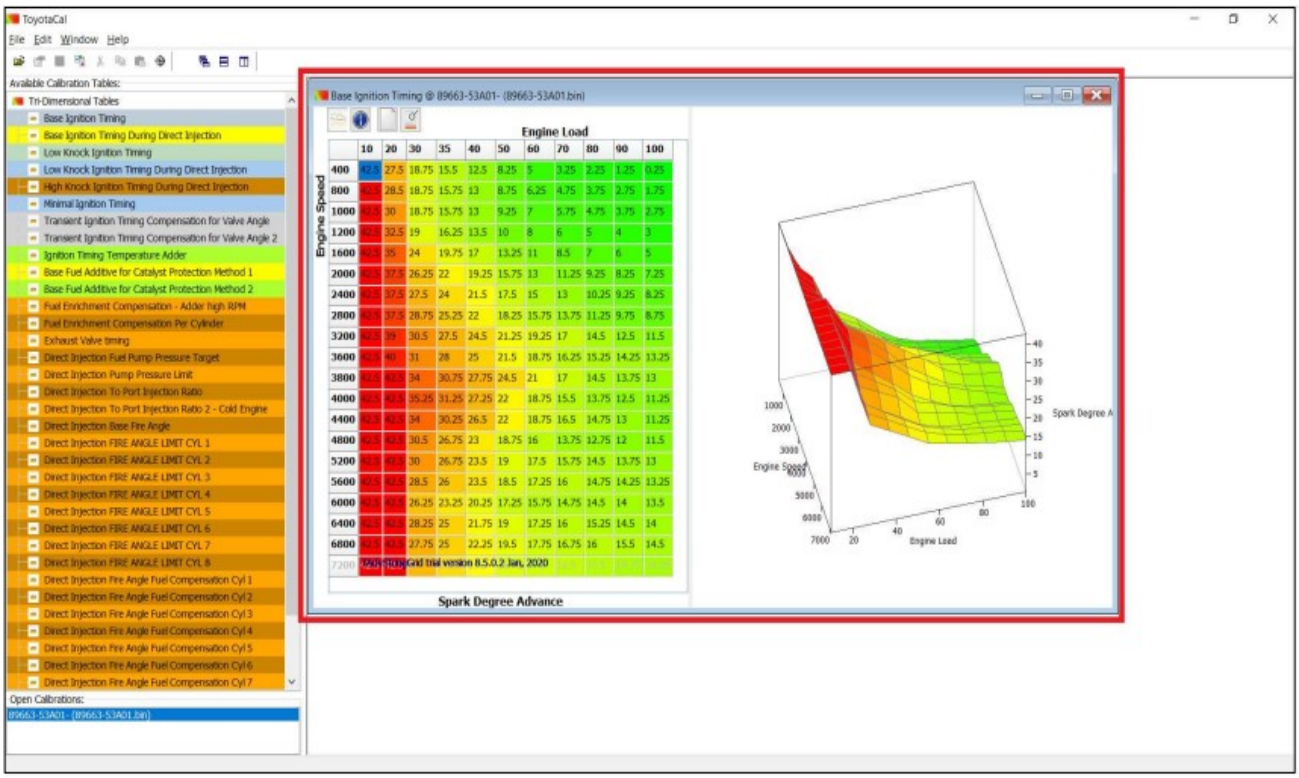
Back to the top

9.4.4. Restoring a Maximized Map Window

Click on the minimize button

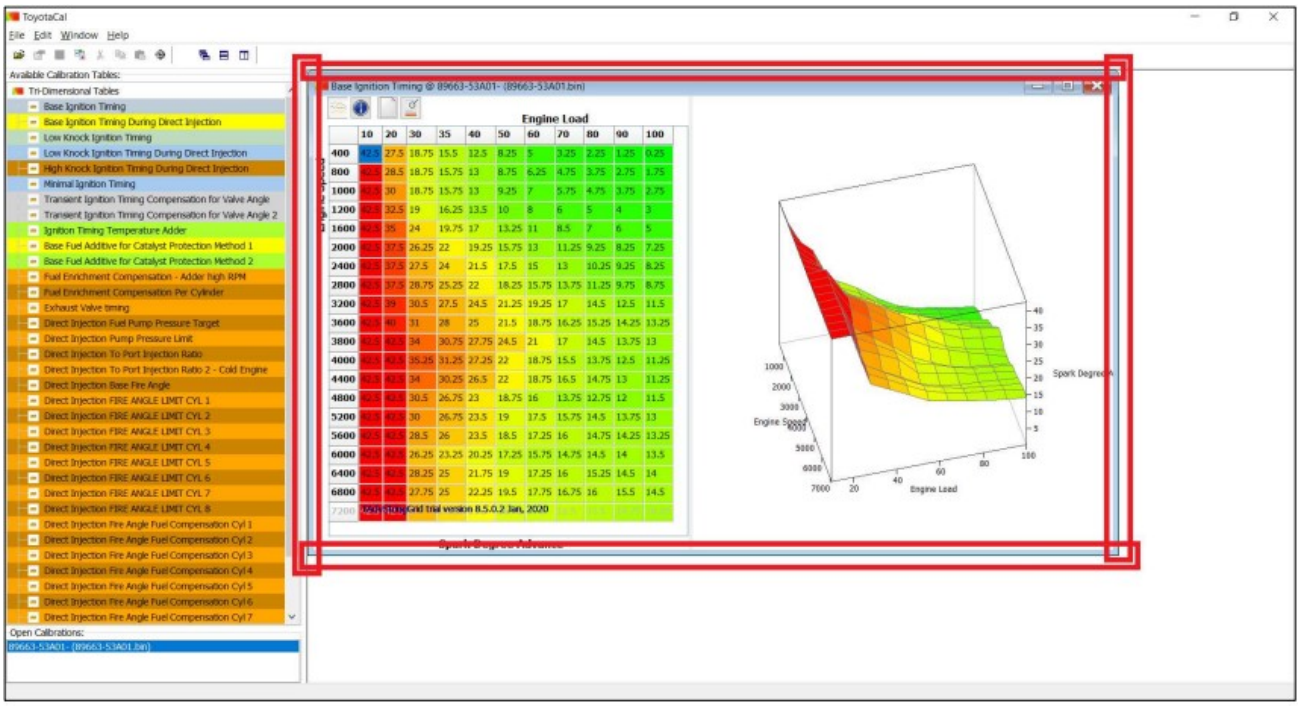


Results:



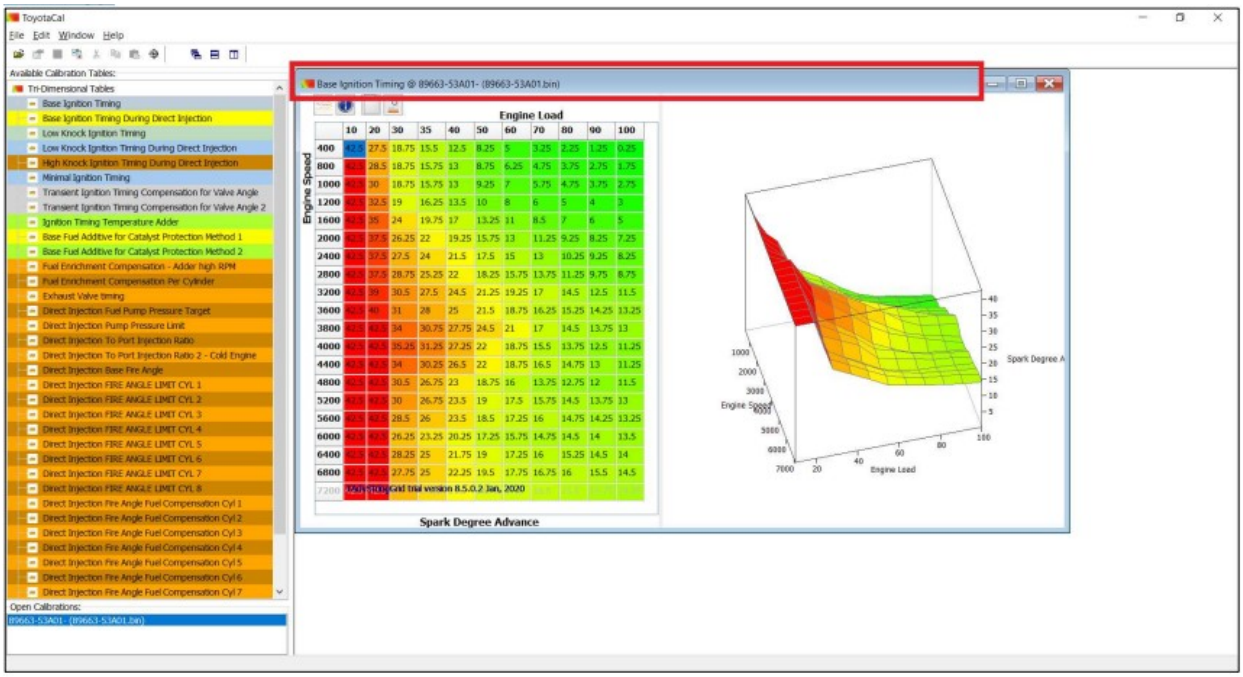
9.4.5. Adjusting the Size of the Map Window

When you hover your cursor along an edge or corner of the map window, the cursor icon will change, and you click and drag your mouse to adjust the size accordingly.



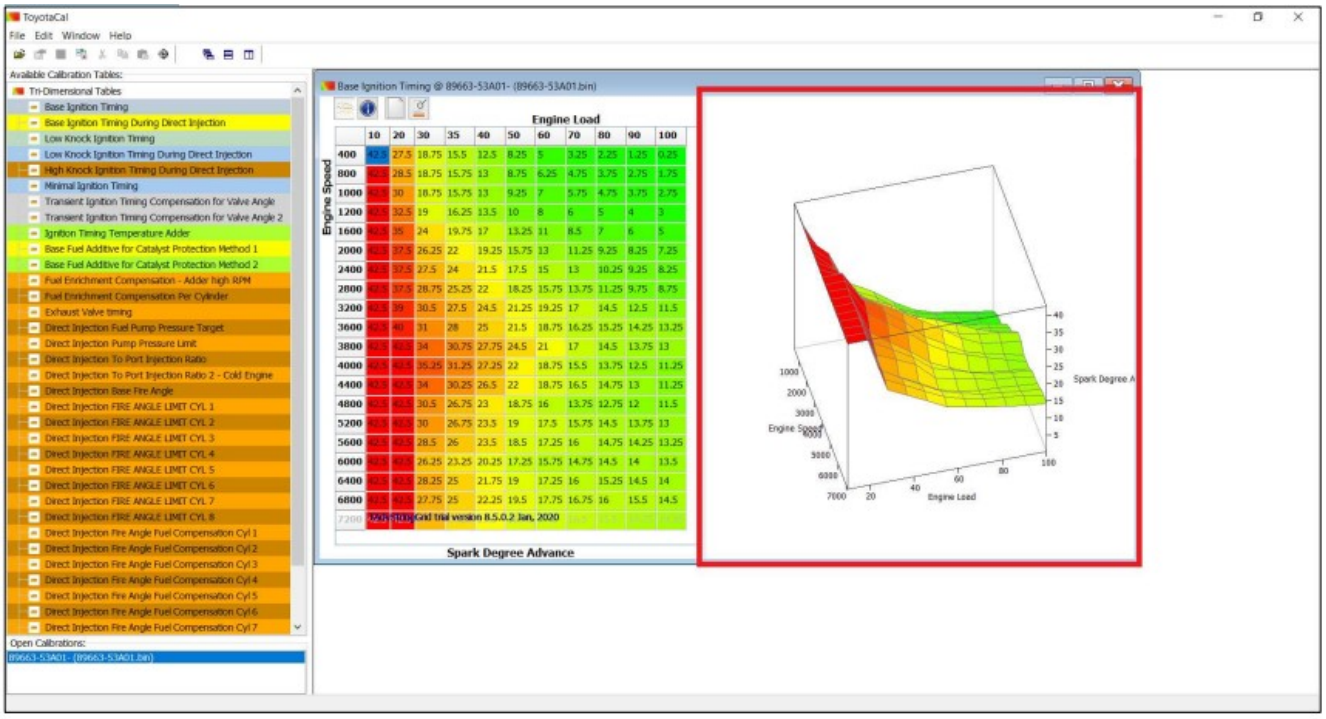
9.4.6. Moving the Map Window

When you hover your cursor along the Title/Name of the map window, you can click and drag your mouse to move the window accordingly.



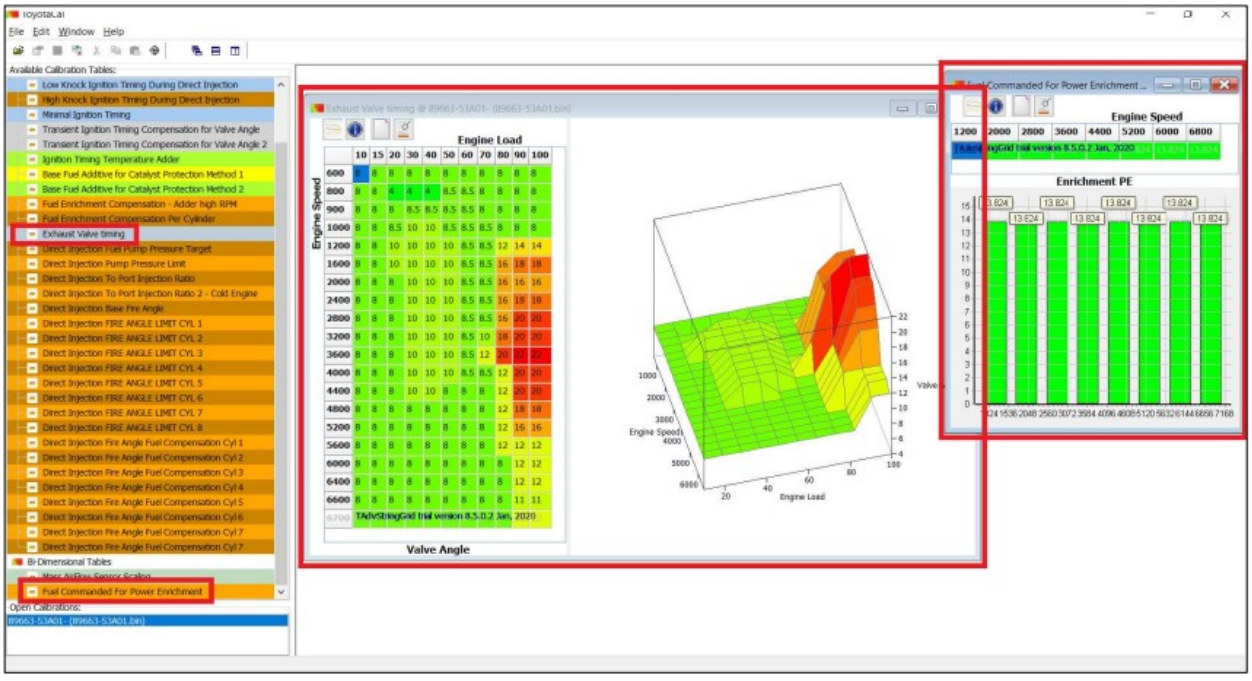
9.4.7. Panning 3D Maps (not possible with 1D and 2D maps)

When you hover your cursor over the 3D Map, your cursor will change its icon; you can then click and drag your mouse to pan the map accordingly



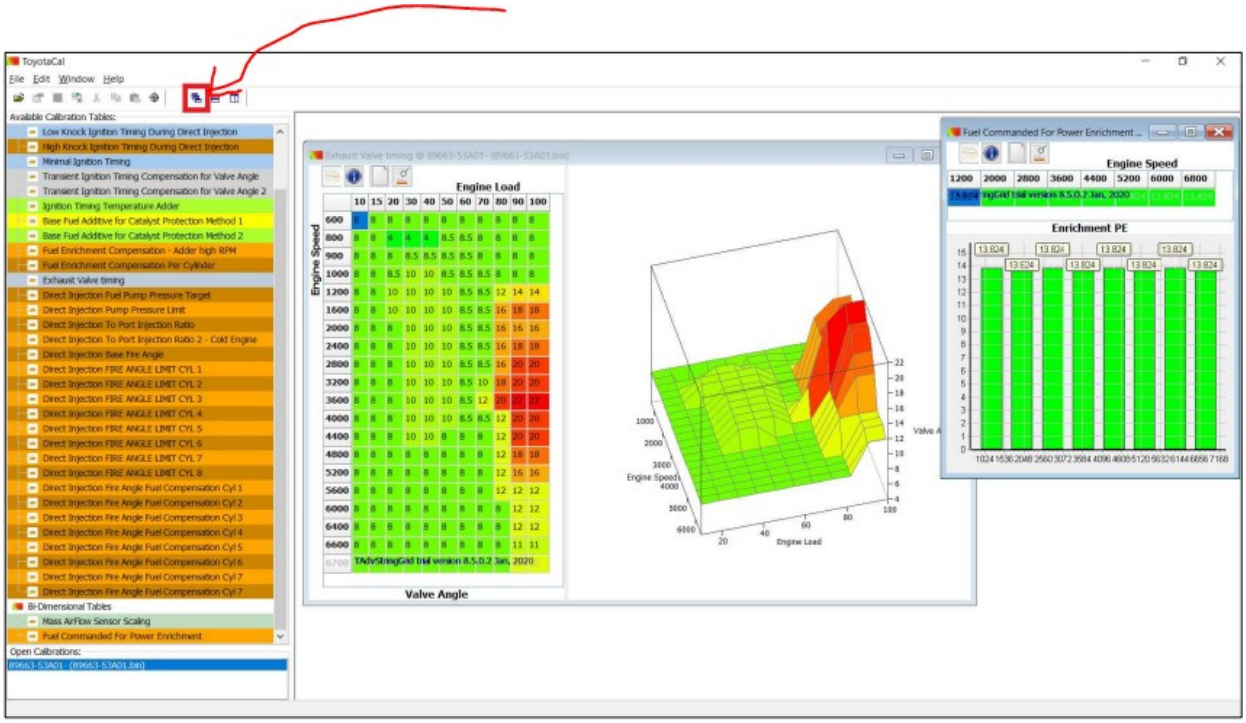
9.4.8. Opening Multiple Windows

You can open multiple windows by selecting other maps that are not yet open and follow the instructions on how to open a map above.

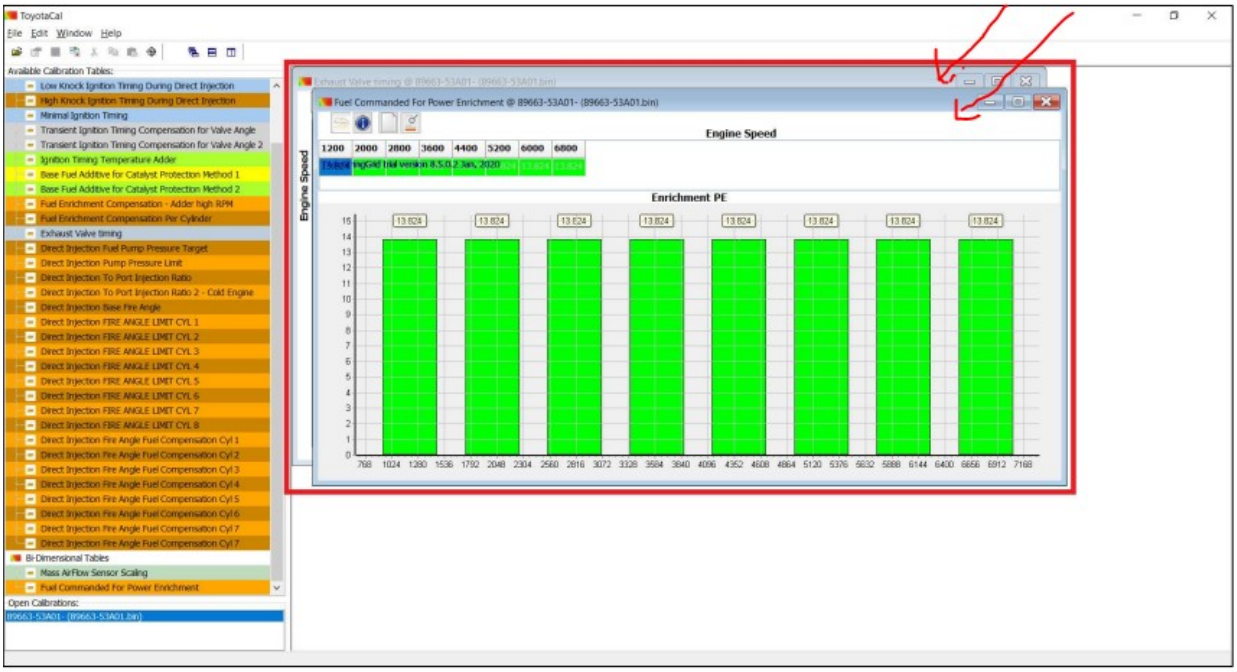


9.4.9. Cascading Multiple Windows

Click on the “Cascade” icon on the menu shortcut items

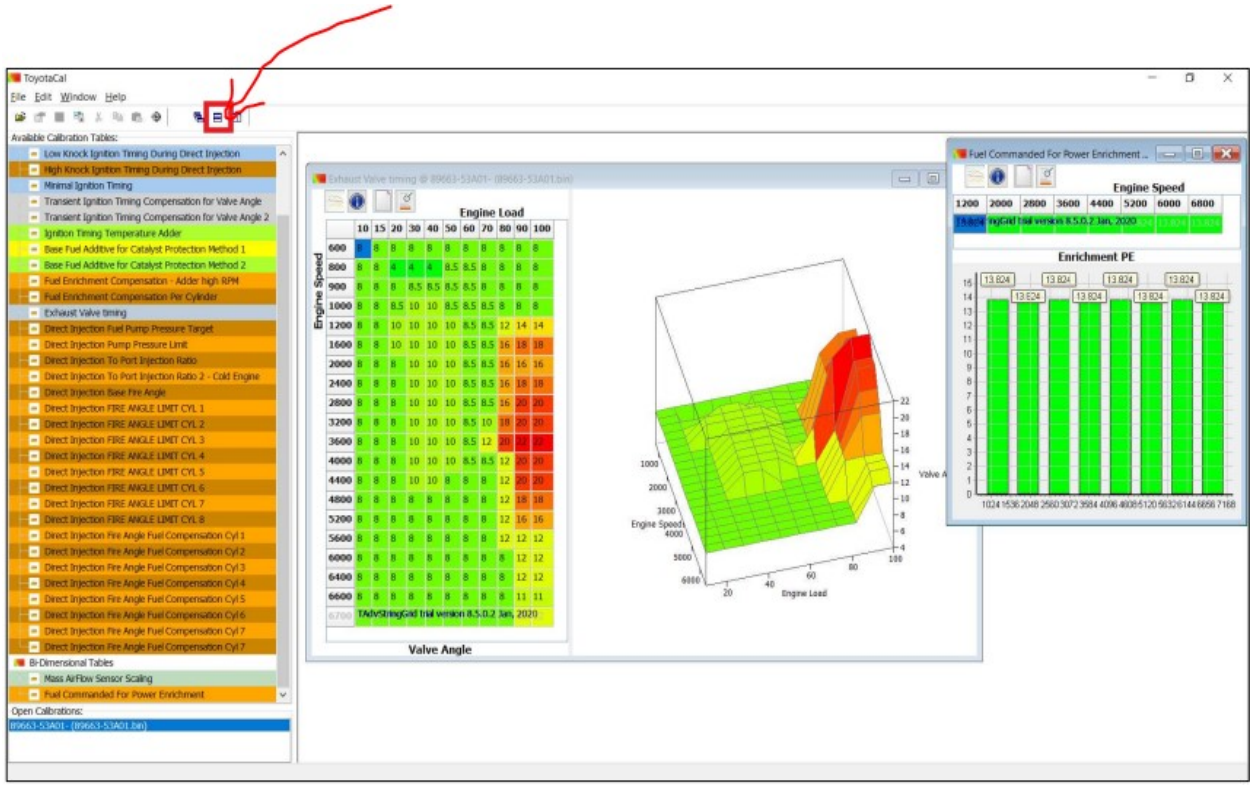


Results: Multiple open windows are placed on top of each other

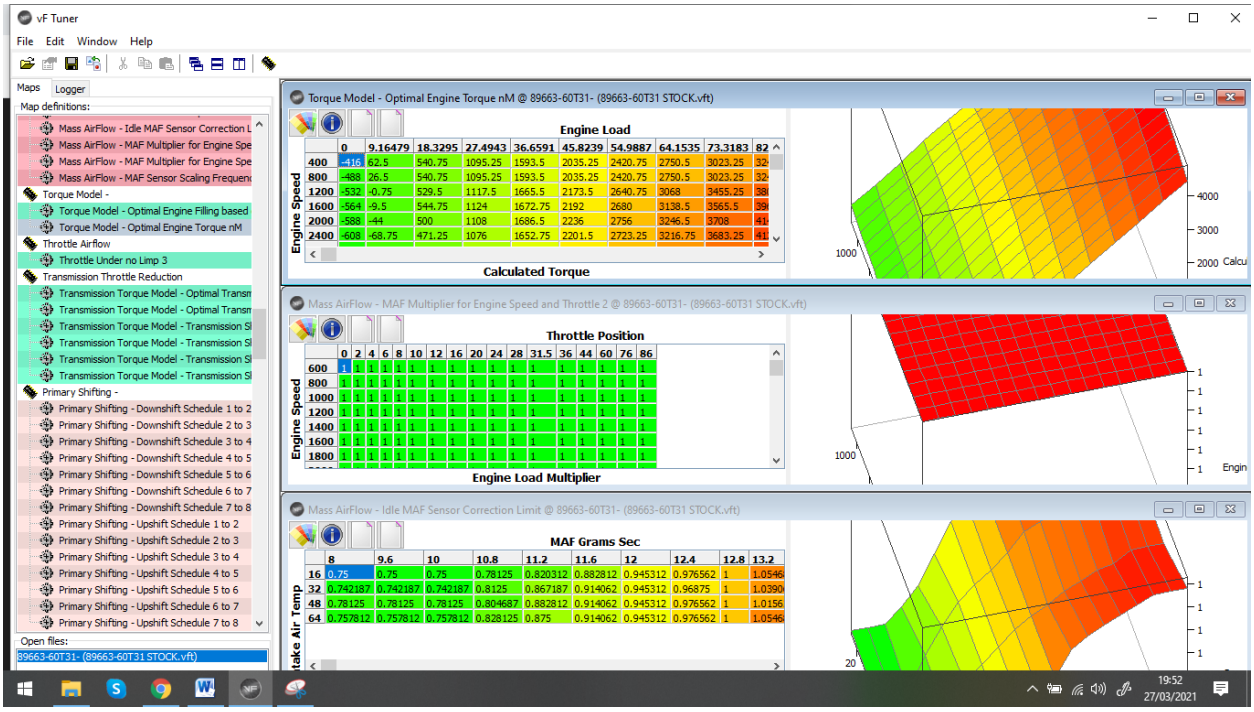


9.4.10. Horizontal Tiling Multiple Windows

Click on the “Tile Horizontally” icon on the menu shortcuts

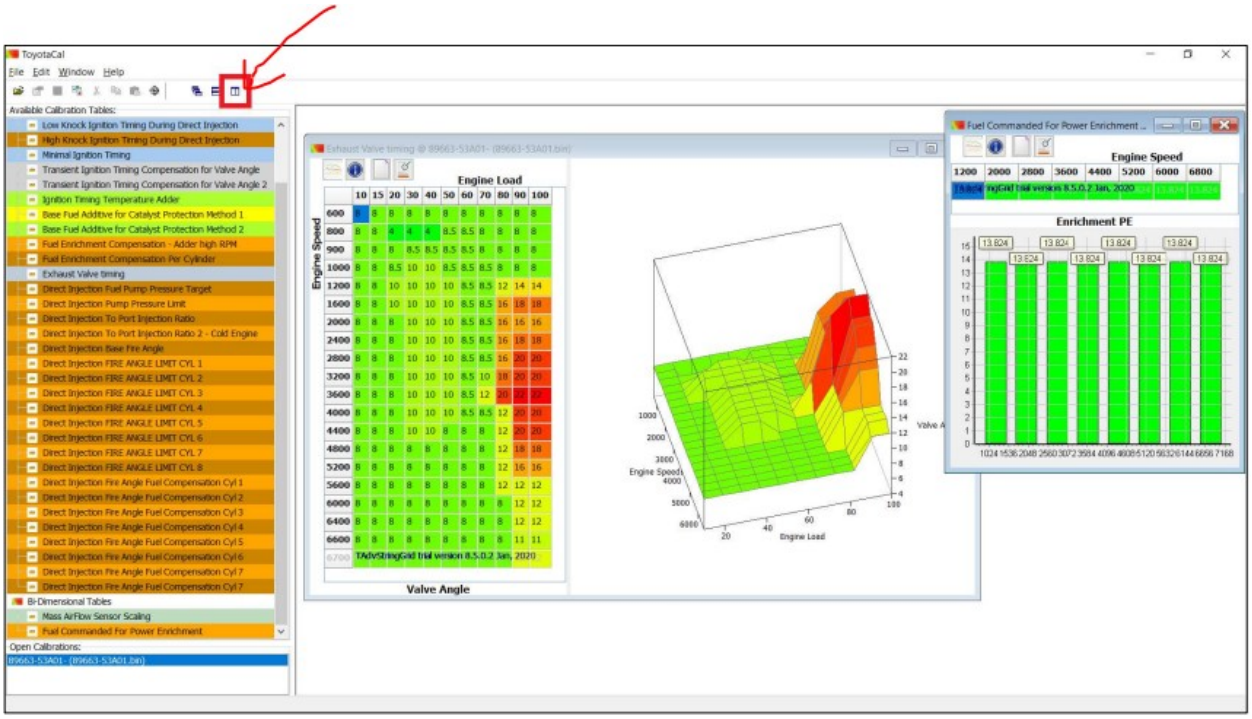


Results: Open windows are placed horizontally in the Edit Window

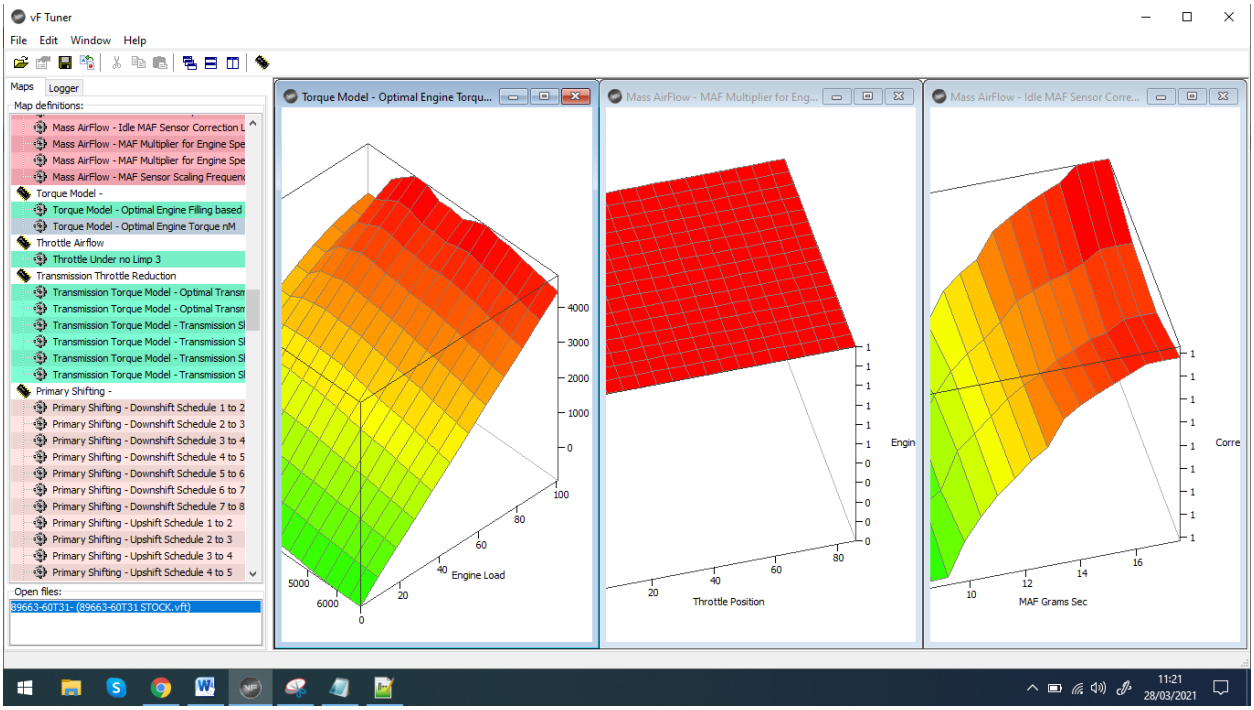


9.4.11. Vertical Tiling Multiple Windows

Click on “Tile Vertically” icon on the menu shortcut

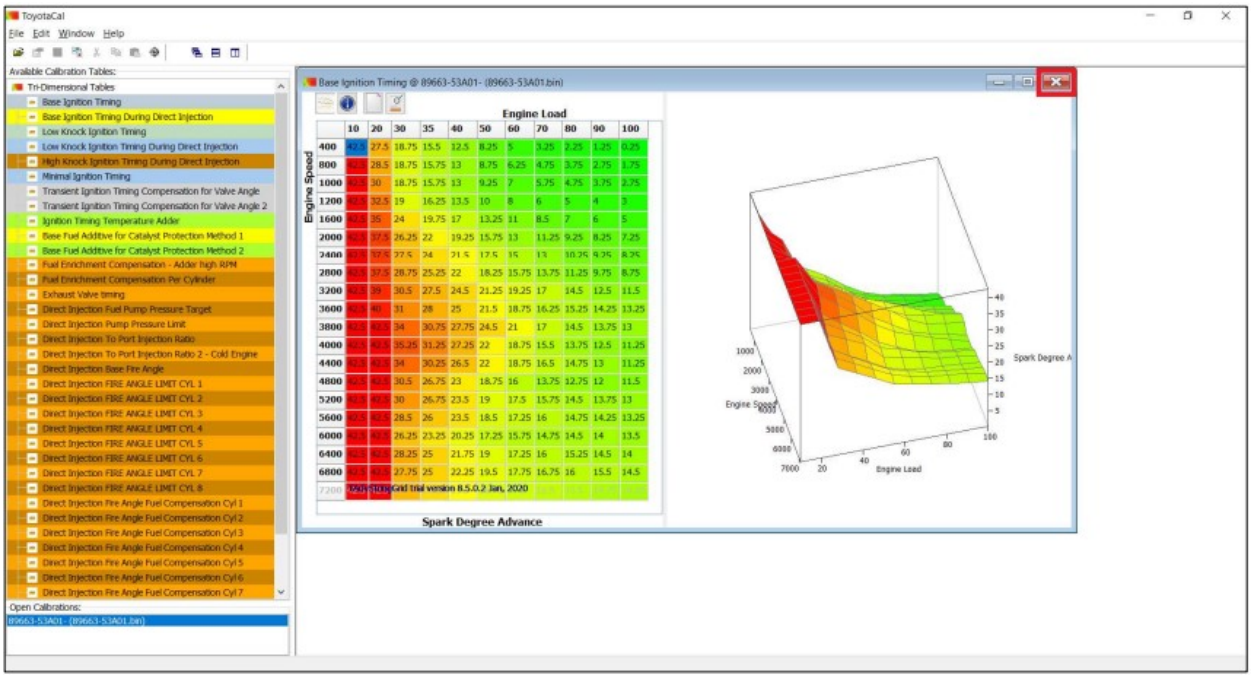


Results: Open windows are placed vertically in the edit window

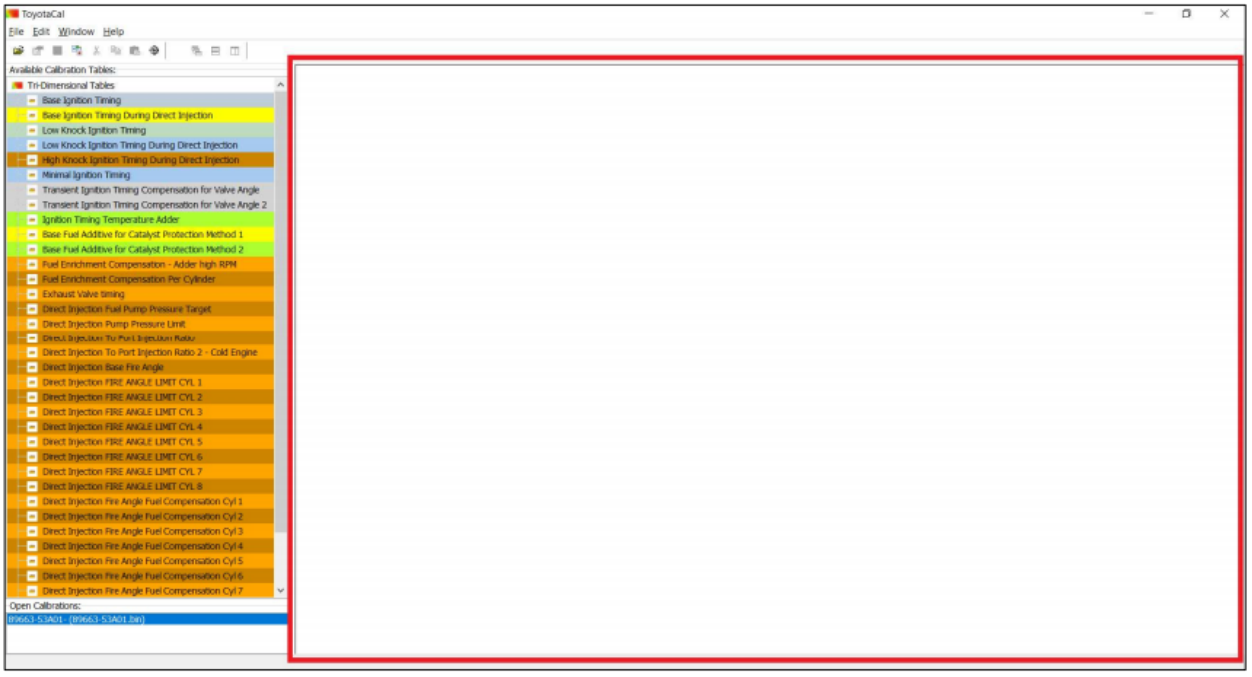


9.4.12. Closing the Map Window

Click on the “Close” button



Results: The edit window is left blank



9.5. Editing values on a map / table

VF Tuner software can edit the values and the axis data of available tables and controls

9.5.1. 3D Map

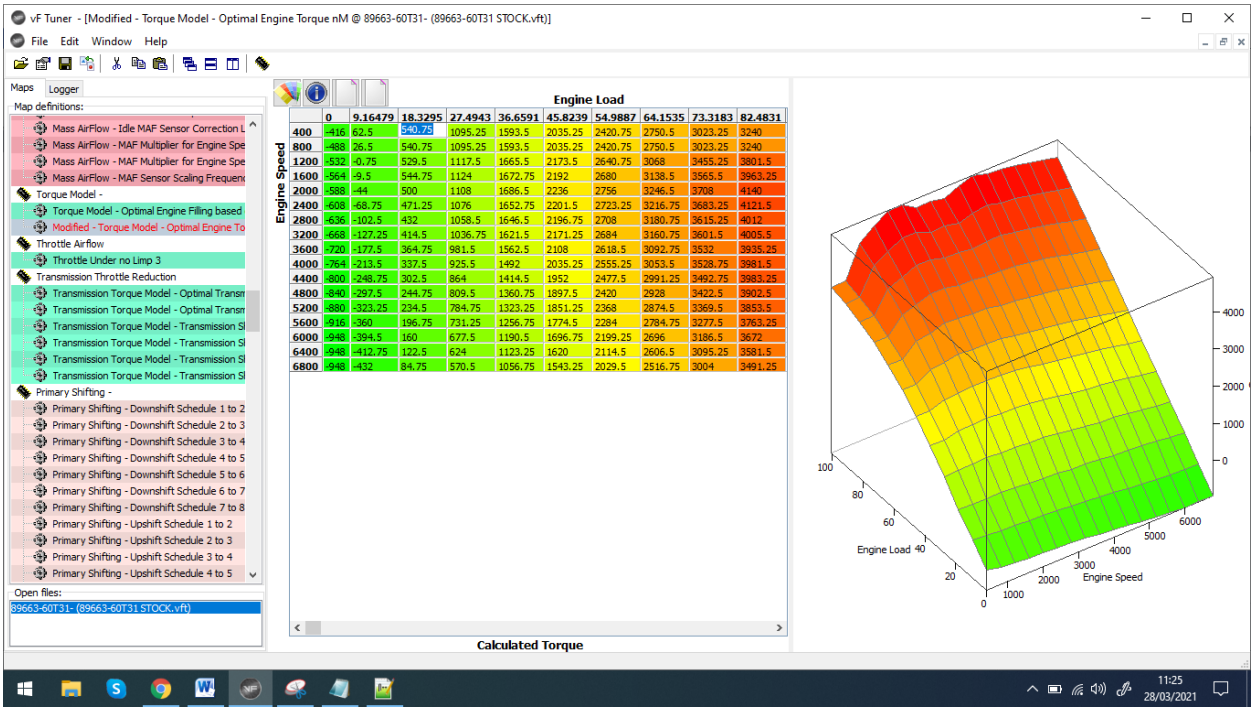
9.5.1.1. OPTION 1: Editing one cell at a time

i. Select and double-click on a value/cell in the map you want to edit,

ii. Type in your desired value.

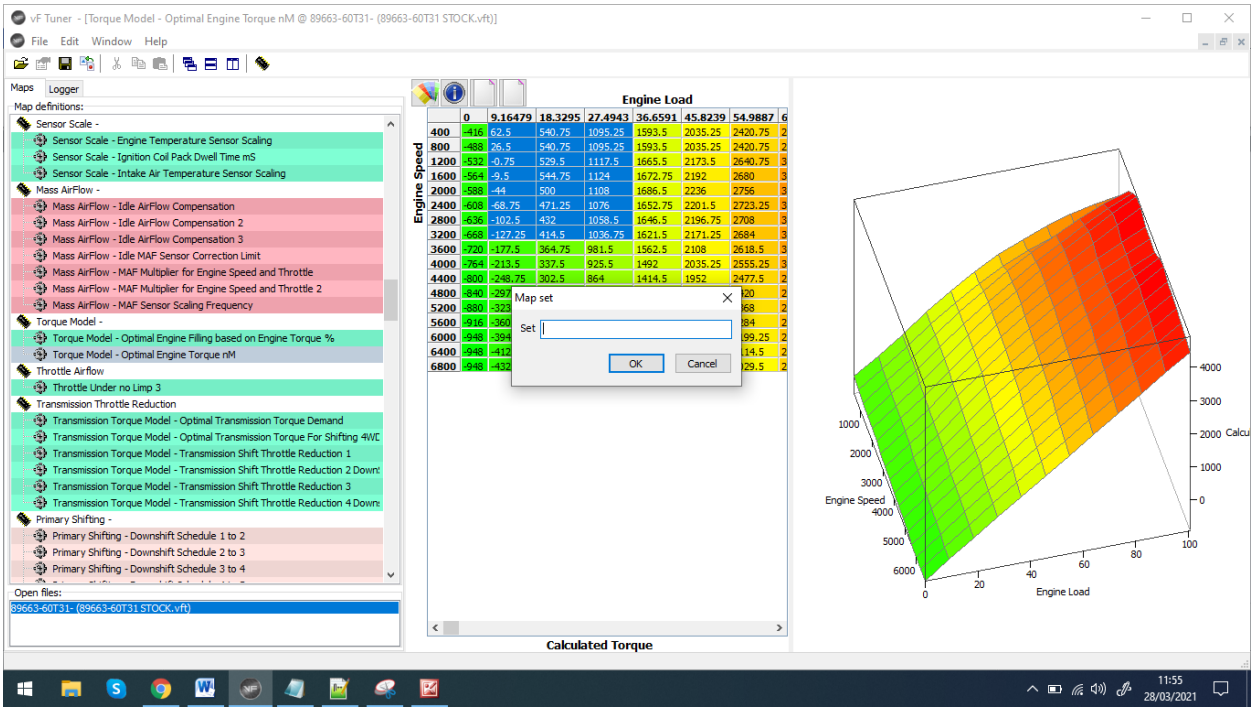
iii. Click the “Enter” key on your keyboard to finish editing

iv. The value changes to the value you typed



9.5.1.2. OPTION 2: Editing multiple cells at once

You can select a cell, or highlight an area of cells, and press CTRL+F to edit the value:



9.5.2. 2D Map

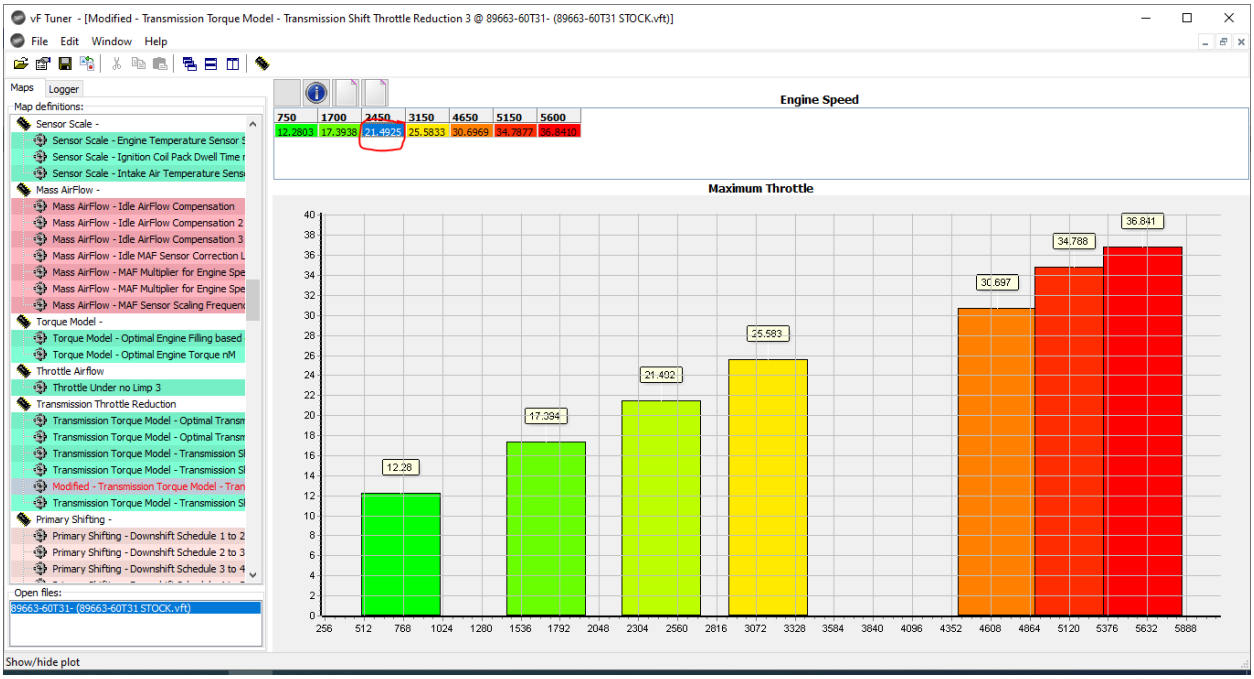
9.5.2.1. OPTION 1: Editing one cell at a time

i. Select and double-click on a value/cell in the map you want to edit,

ii. Type in your desired value.

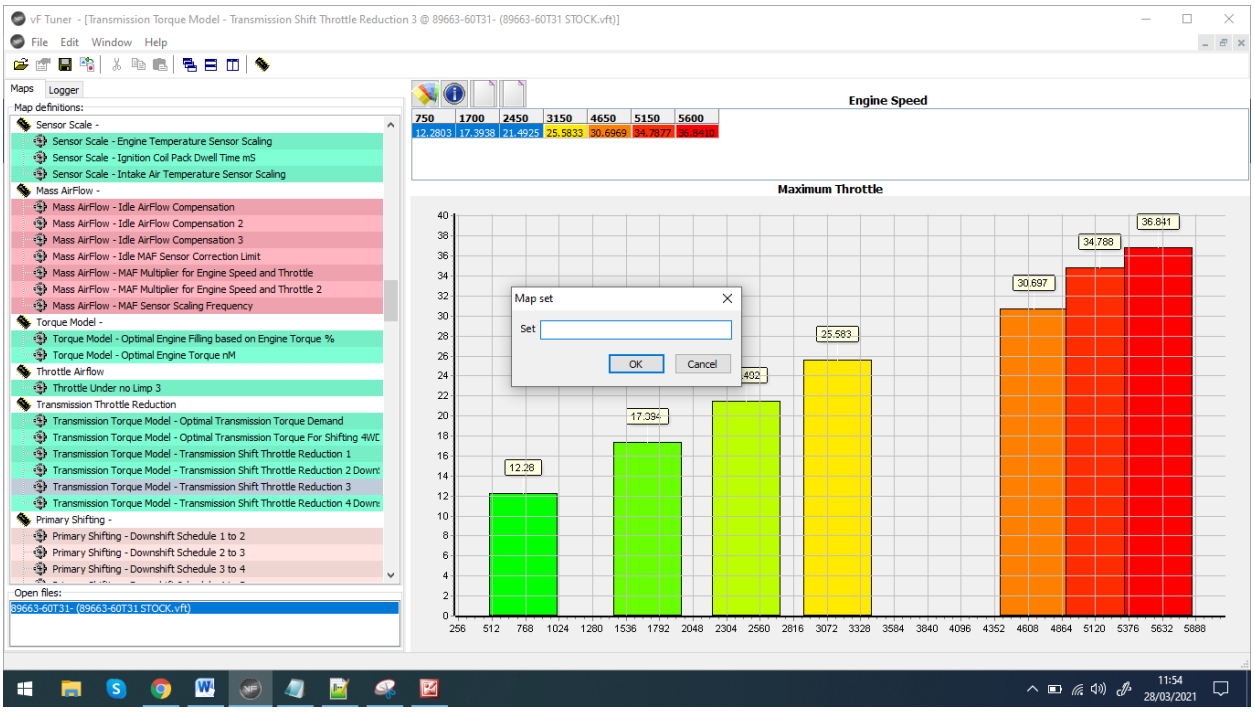
iii. Click the “Enter” key on your keyboard to finish editing.

iv. The value changes to the value you typed



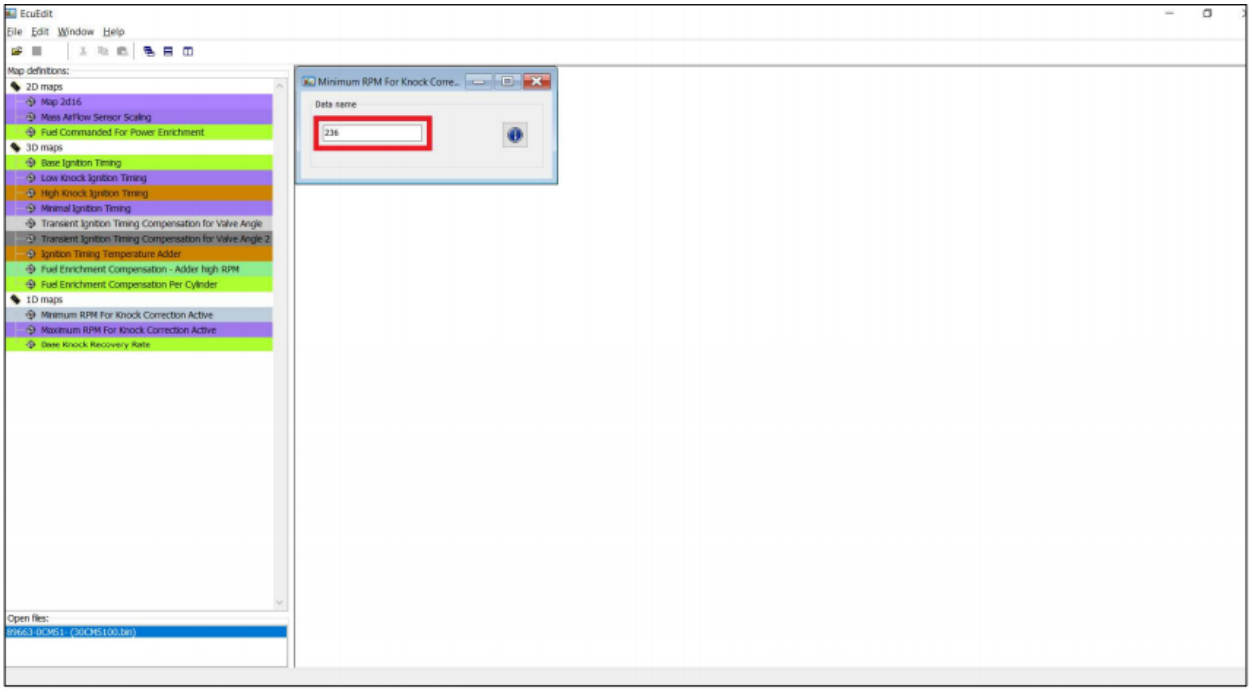
9.5.2.2. *OPTION 2: Editing multiple cells at once*

You can select a cell, or highlight an area of cells, and press CTRL+F to edit the value:



9.5.3. 1D Map

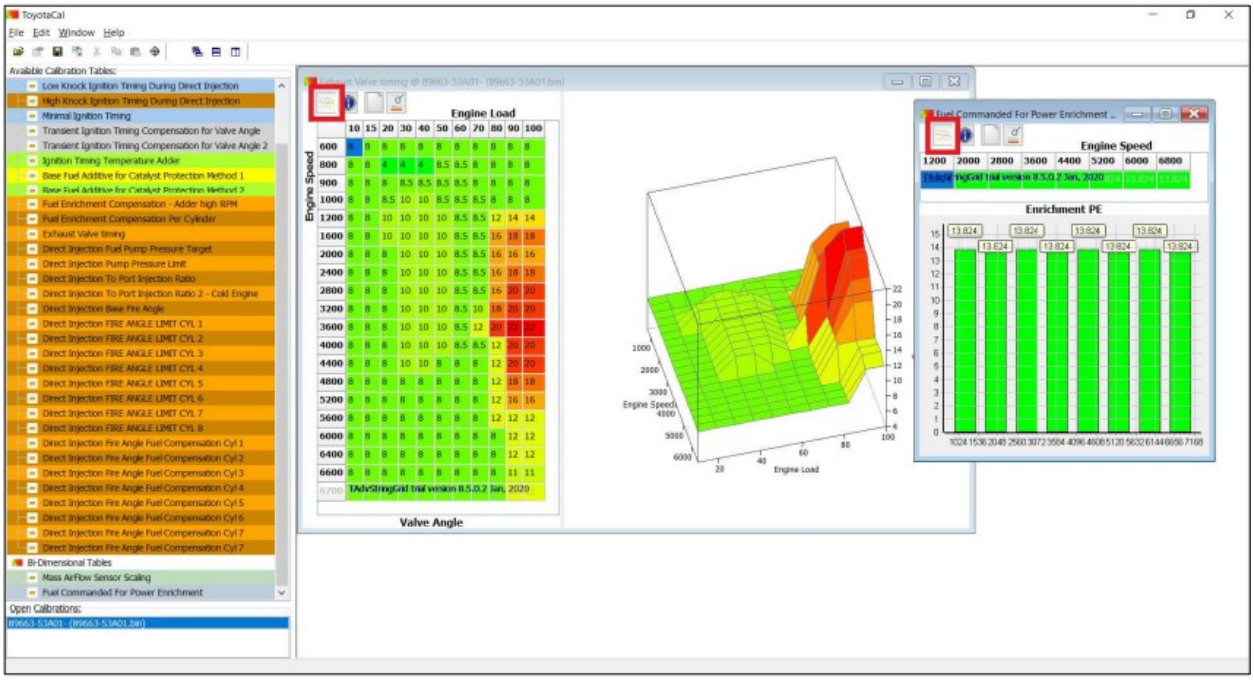
i. Click on the Text Box and type in your desired value.



9.6. Navigating the 2D and 3D Map Functions

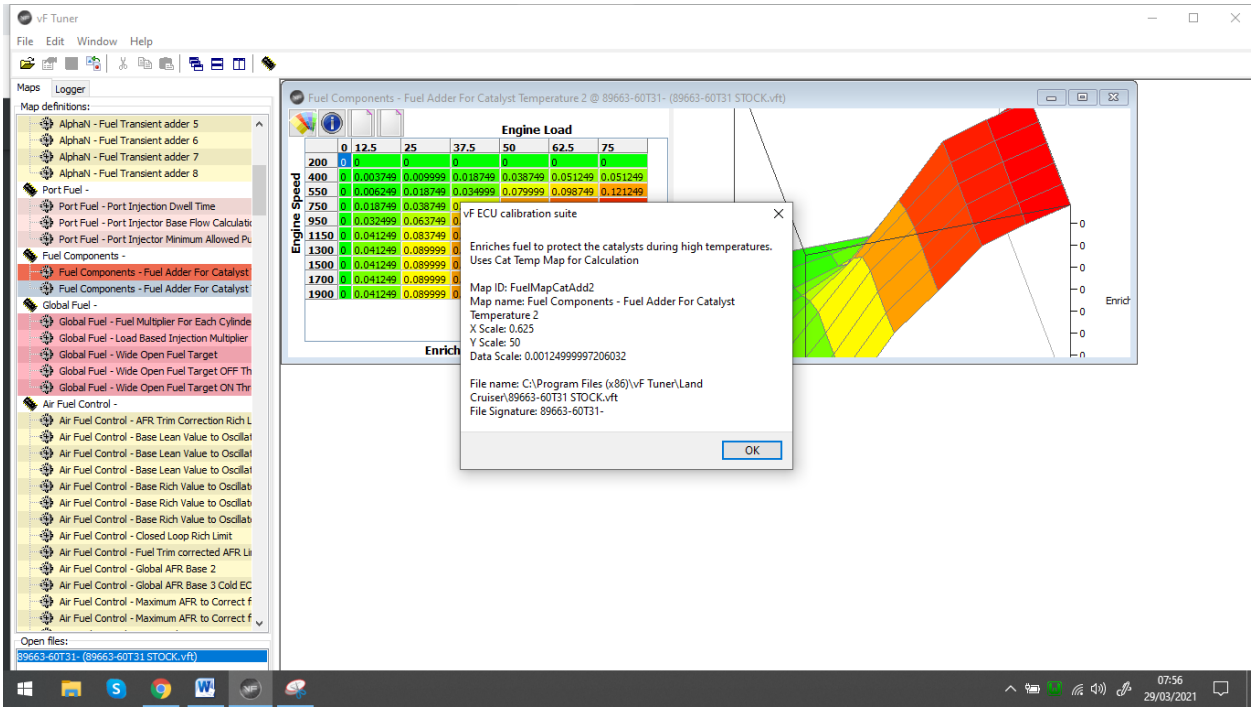
i. Show/Hide Plot

Click on “Show/Hide Plot” icon on the map windows. This hides the 3D or 2D graph and only displays the data and not the graphs



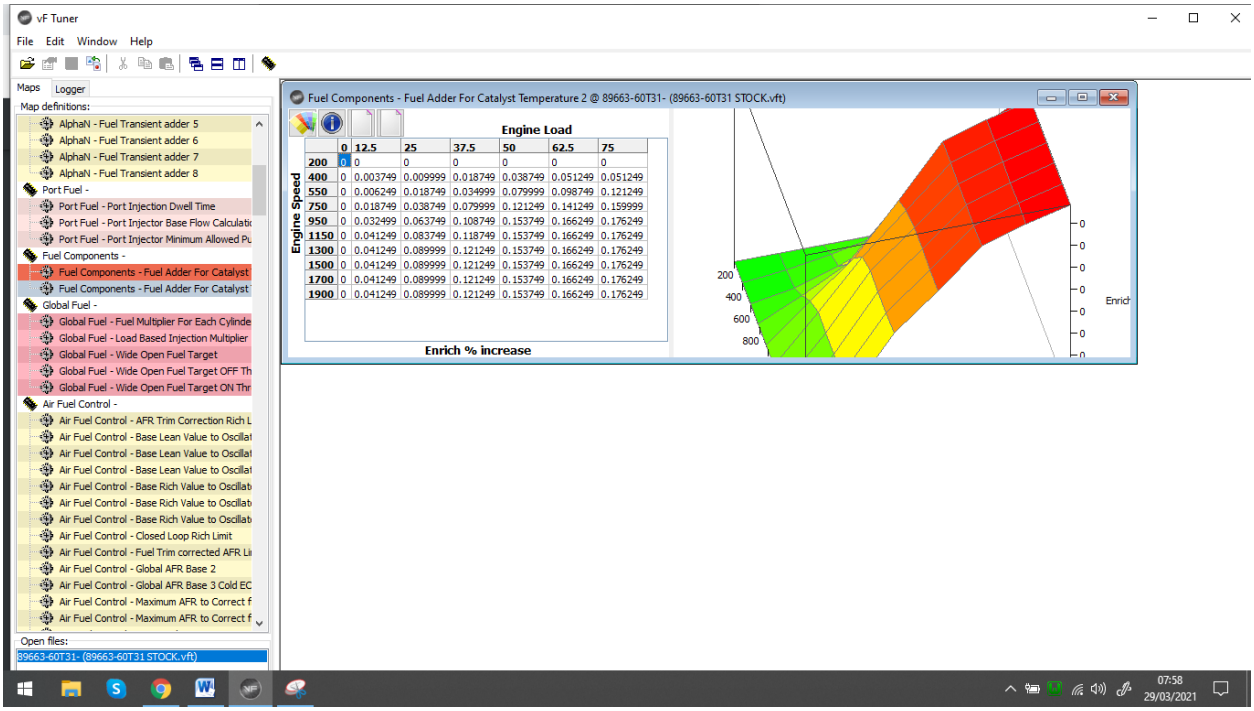
ii. Show Map Information

Click on the “Show Map Information” icon . This shows a detailed explanation of the open map



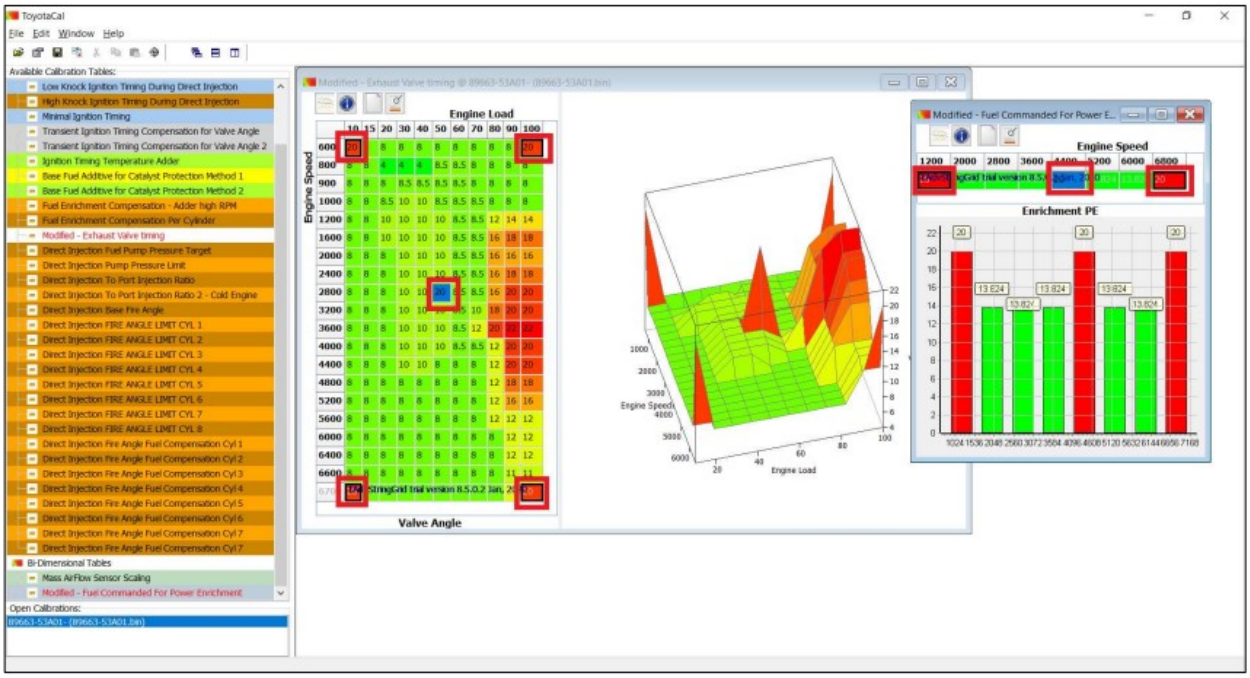
iii. Change Table Color Mode

Click on the “Change Table Color Mode” icon . The table color changes from coloured to just white and black



iv. Highlight Changed Values

Click on the “Highlight Changed Values” icon . This highlights all edited values in the map table.

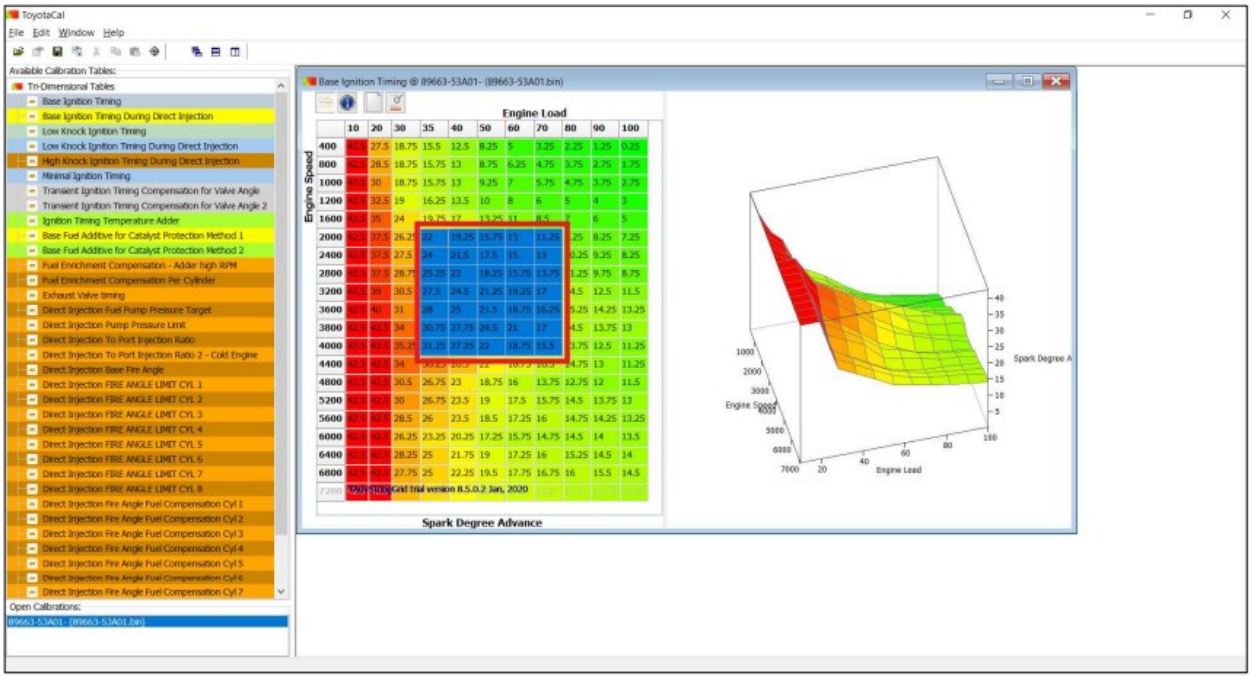


9.7. Value Interpolation

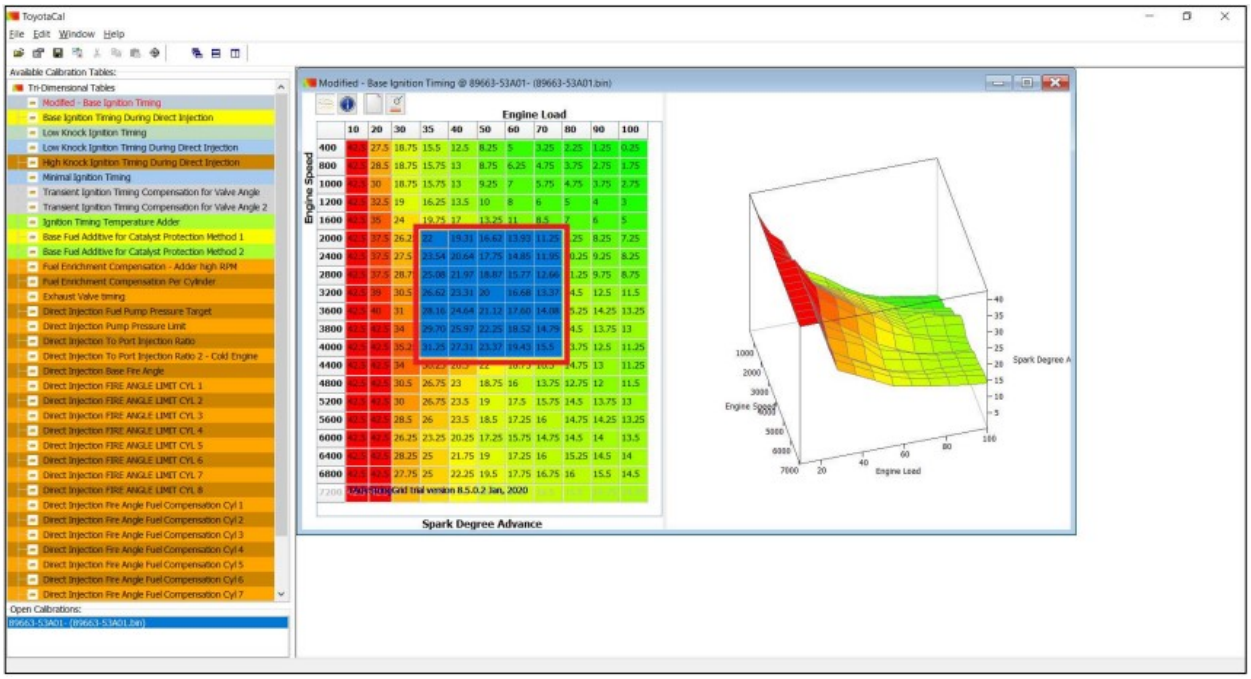
Interpolation means to alter the values by inserting new values for example from another table/source.

i. 2D Map and 3D Map

a. Select the values you want to interpolate



b. Press CTRL + I on your keyboard to interpolate

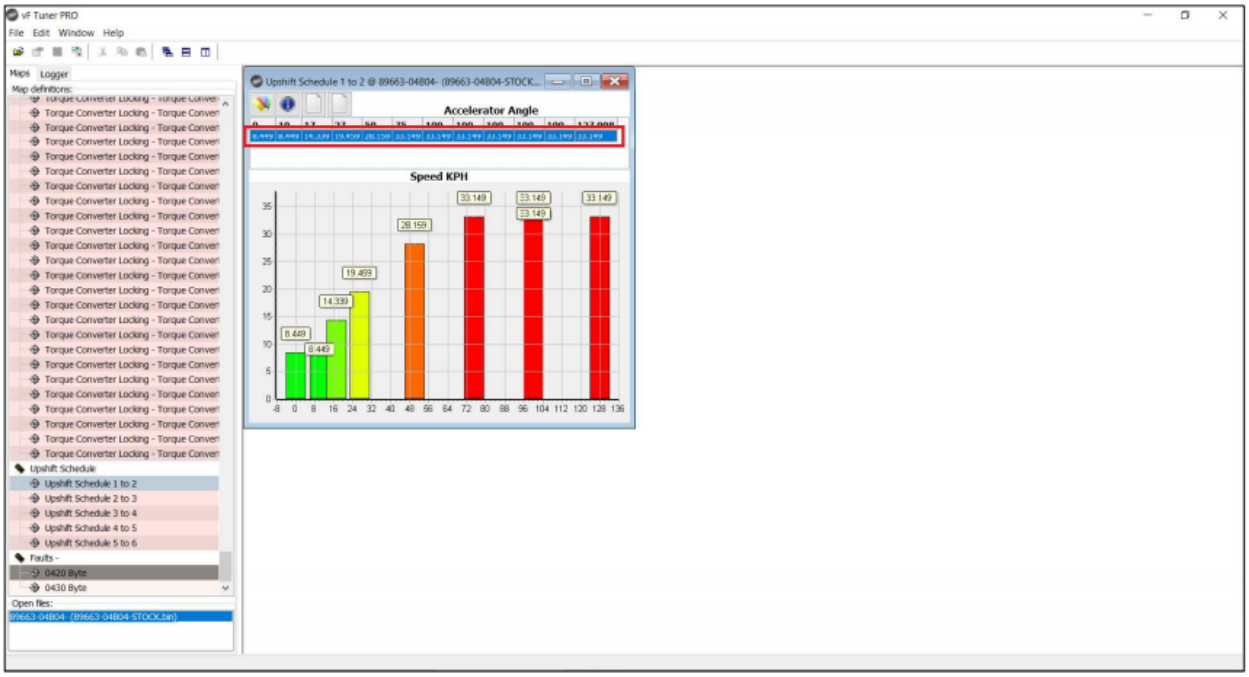


9.8. Select All, Copy, Paste

9.8.1. Select All

To select all the values in the active map, simultaneously

i. Press the “Ctrl” button and the “A” button on your keyboard. All the values in the active map should be highlighted like this example:



9.8.2. Copy

To copy selected values from the active map, simultaneously

i. Press the “Ctrl” button and the “C” button on your keyboard.

Note: There is no visual confirmation for this action, but you should be able to verify that you were able to copy the values once you “Paste” the values over to another map.

9.8.3. Paste

The last “copied” values are pasted on to the selected active map. To do this, simultaneously

i. Press the “Ctrl” button and the “V” button on your keyboard. The values you copied should be applied to the selected active map. A sample will look like the example below.

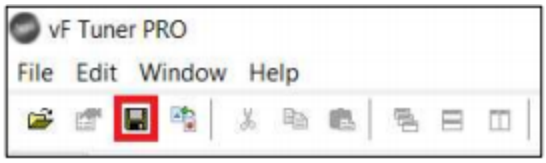
Before:

After:

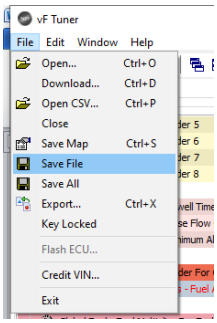
9.9. Map Compare

You can compare two (2) tune files at a time. If you have three (3) tune files open, you must close one of the three to activate the Map Compare function. You cannot compare unsaved tunes. If you see the “Save” button is colored before Map Comparing, you’ll get an error. Save your work first before comparing tunes.

Click on the save Icon on the menu shortcut or press “File” then “Save File” menu



OR

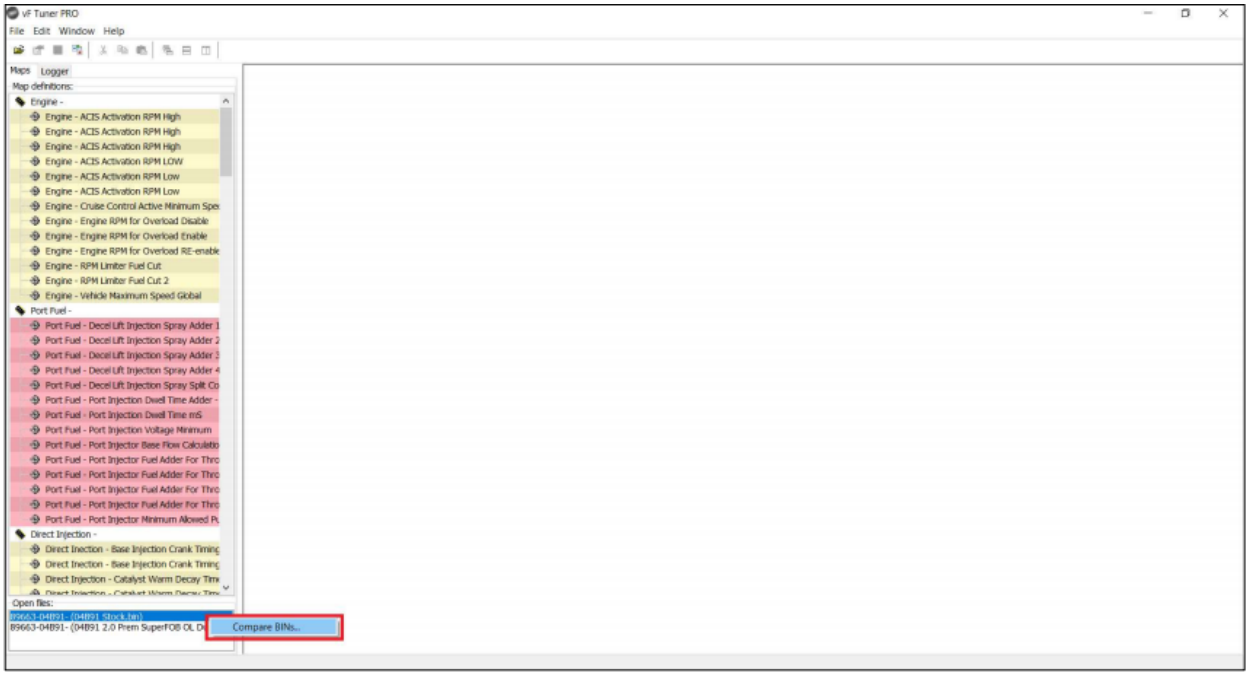


To use the Map Compare function,

i. Open two (2) tune files.

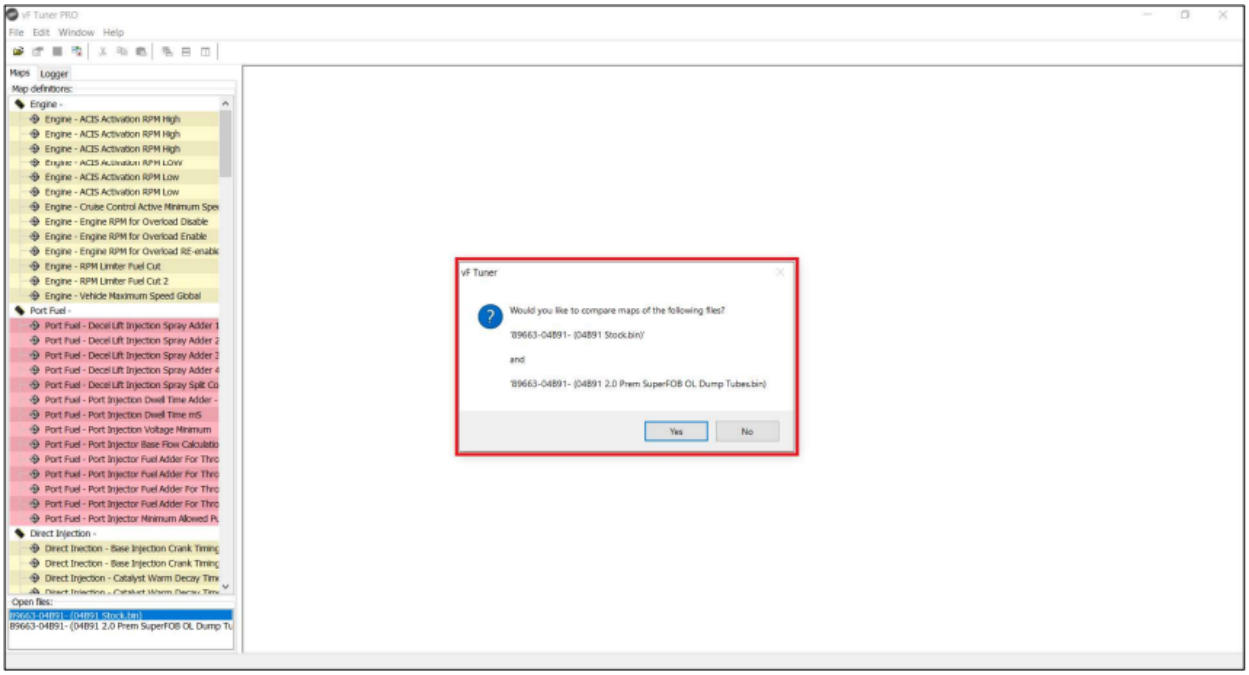
- ❖ We recommend that you only compare tunes that have the same ECU ID (e.g. 04B04 vs 04B04, 04B80 vs 04B80, etc.)

ii. Next, hover your mouse over to one of the two maps and press on the “Right Click” button of your mouse. A pop-up window will open



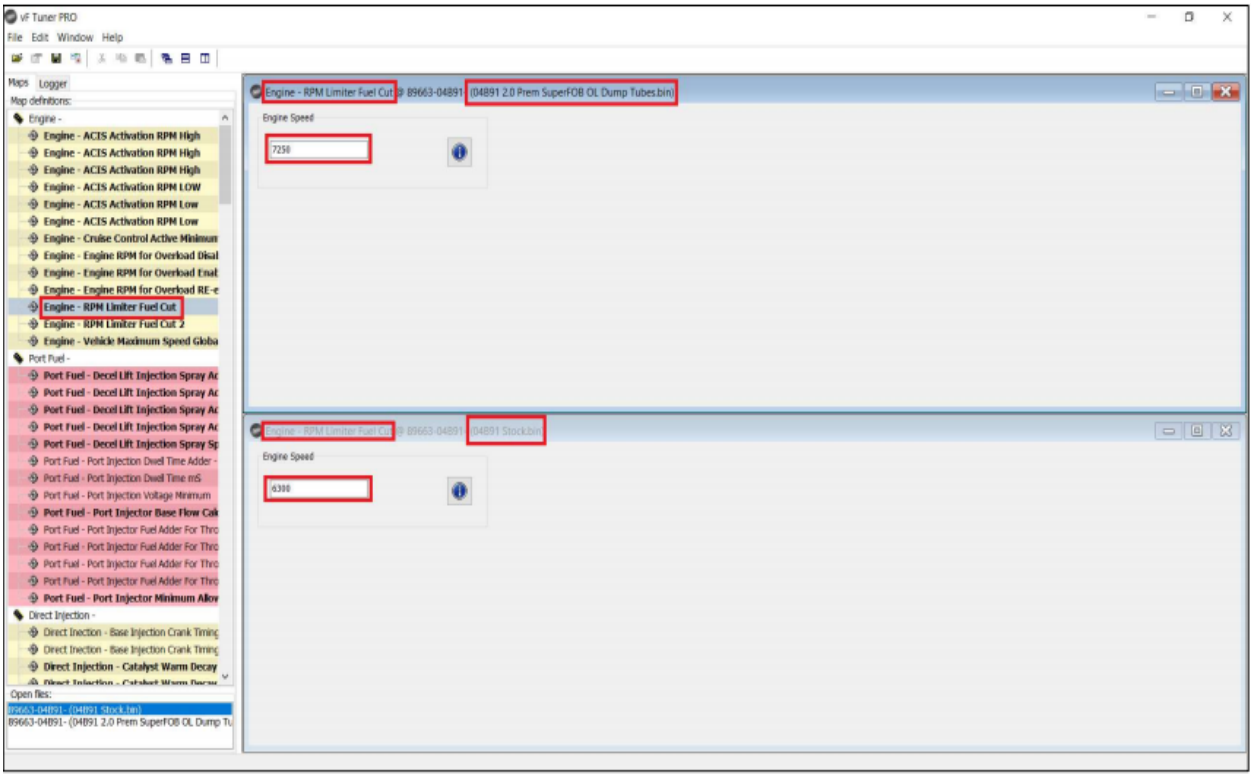
iii. Click “Compare Files”

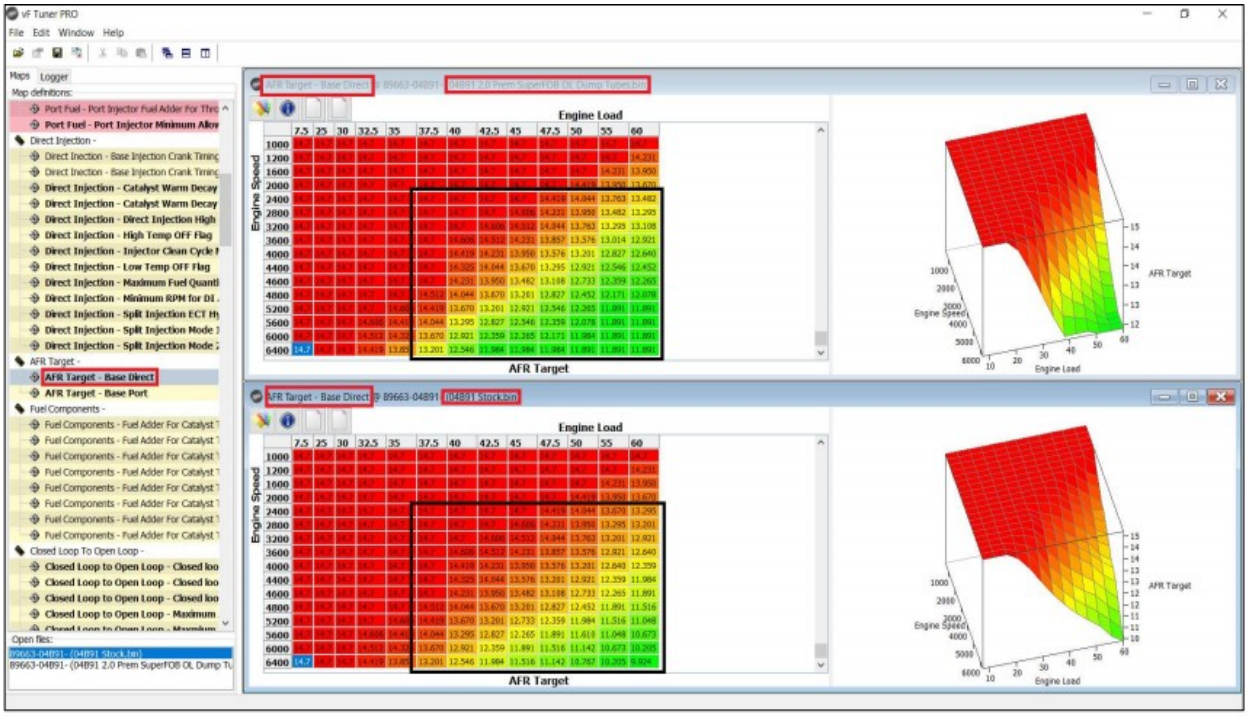
iv. A confirmatory window will open asking if you want to proceed with comparing the two (2) tune files opened. Click on the “Yes” button if you want to proceed with the Map Compare. Click on the “No” button if you do not want to proceed with the Map Compare.



v. If the program detects a difference in the maps, the title of the maps that are different from each other will be highlighted. If the program does not detect a difference in the maps, the title of the maps that are similar will not be highlighted.

vi. Double clicking on one of the different maps will open the same map for both tune files and showing the differences between the two

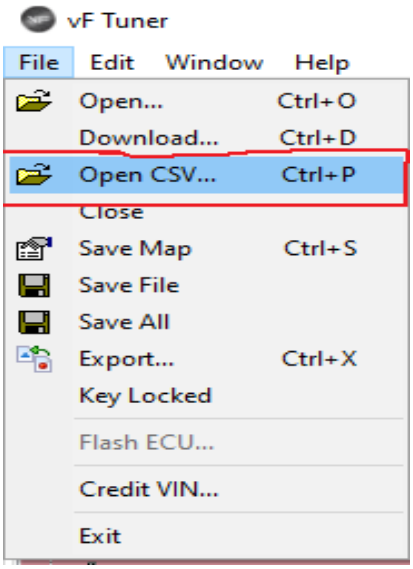




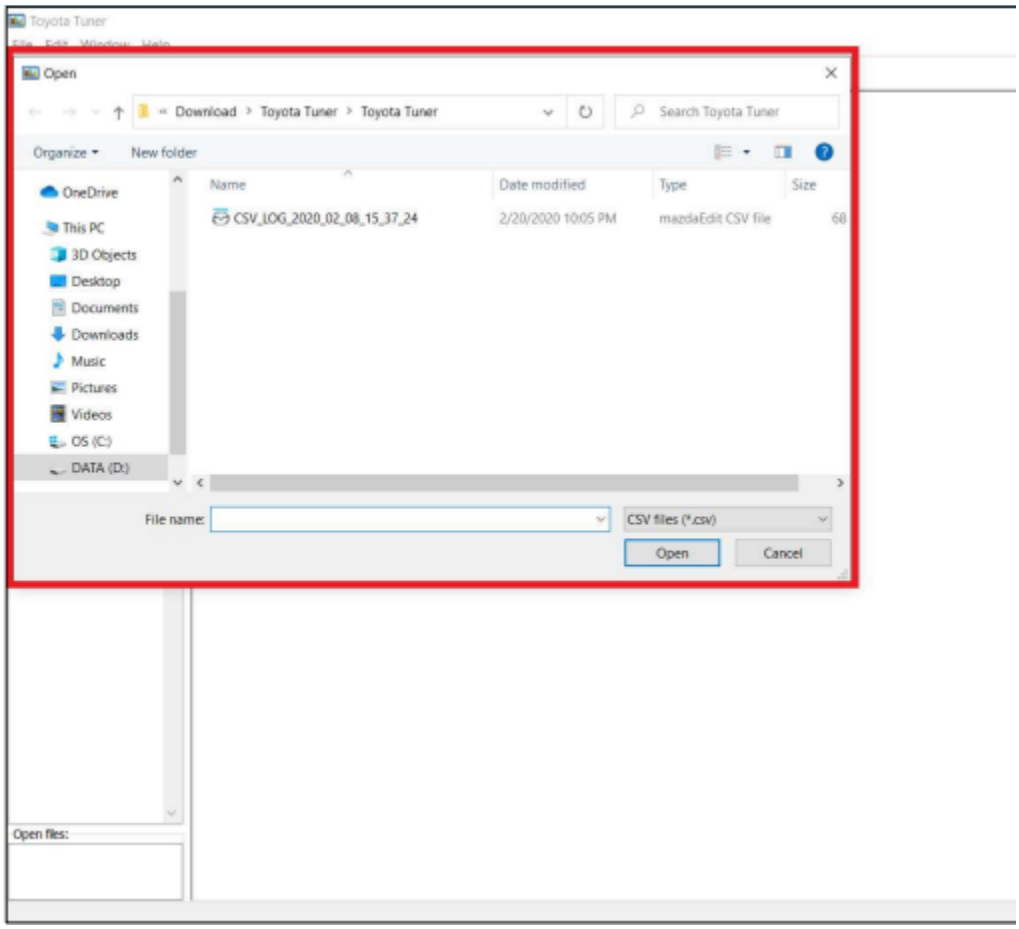
9.10. Opening a CSV (Datalog) File

i. Open VF Tuner

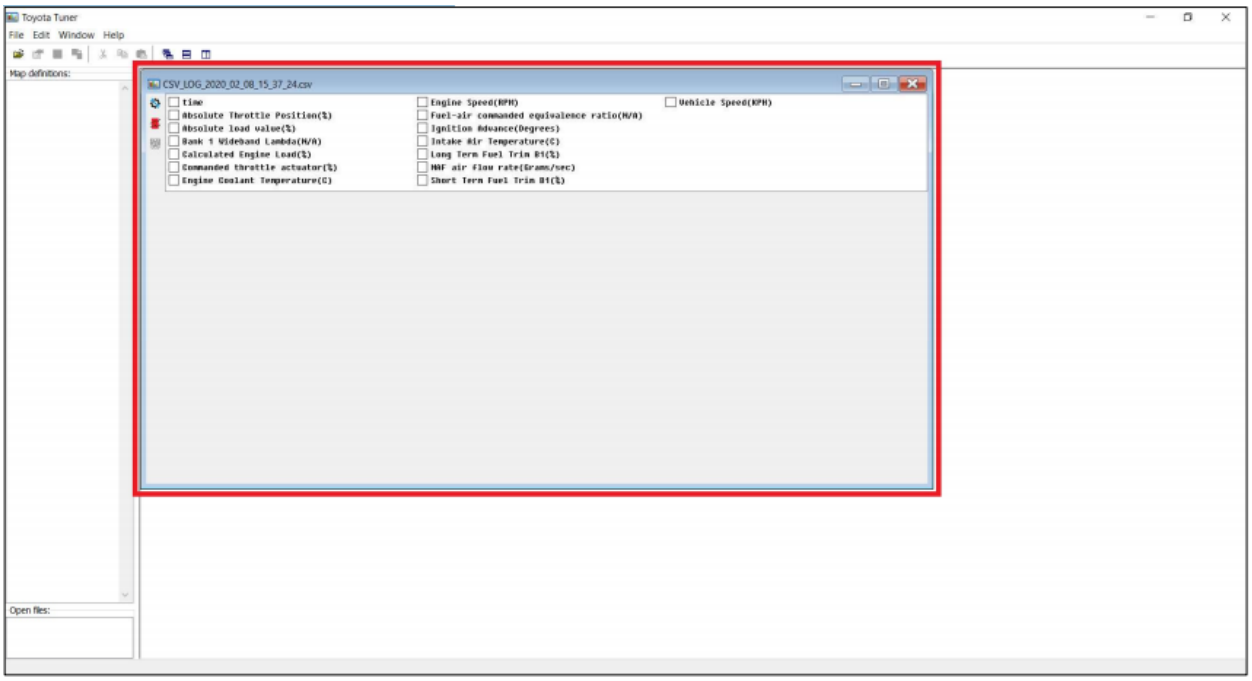
ii. Click on “File” menu, and select “Open CSV…” sub menu



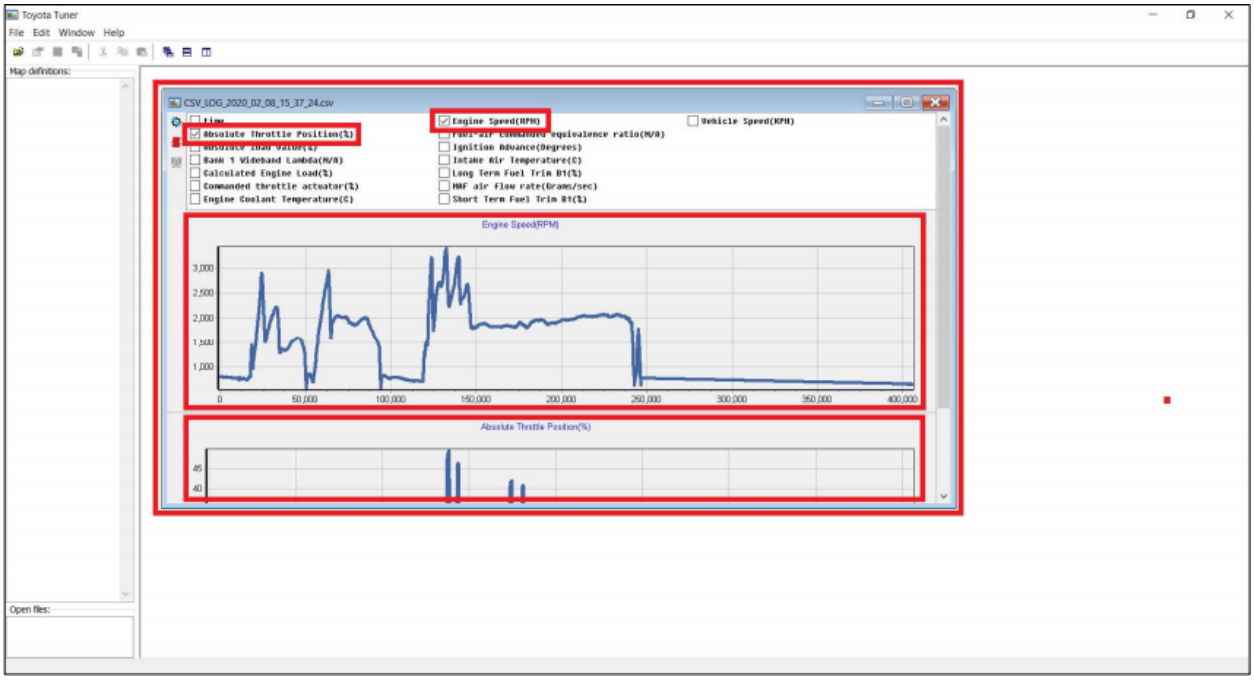
iii. A window will open that will let you find the CSV file (datalog) from the folder where it's saved



iv. Select the CSV file (datalog) and click on "Open"



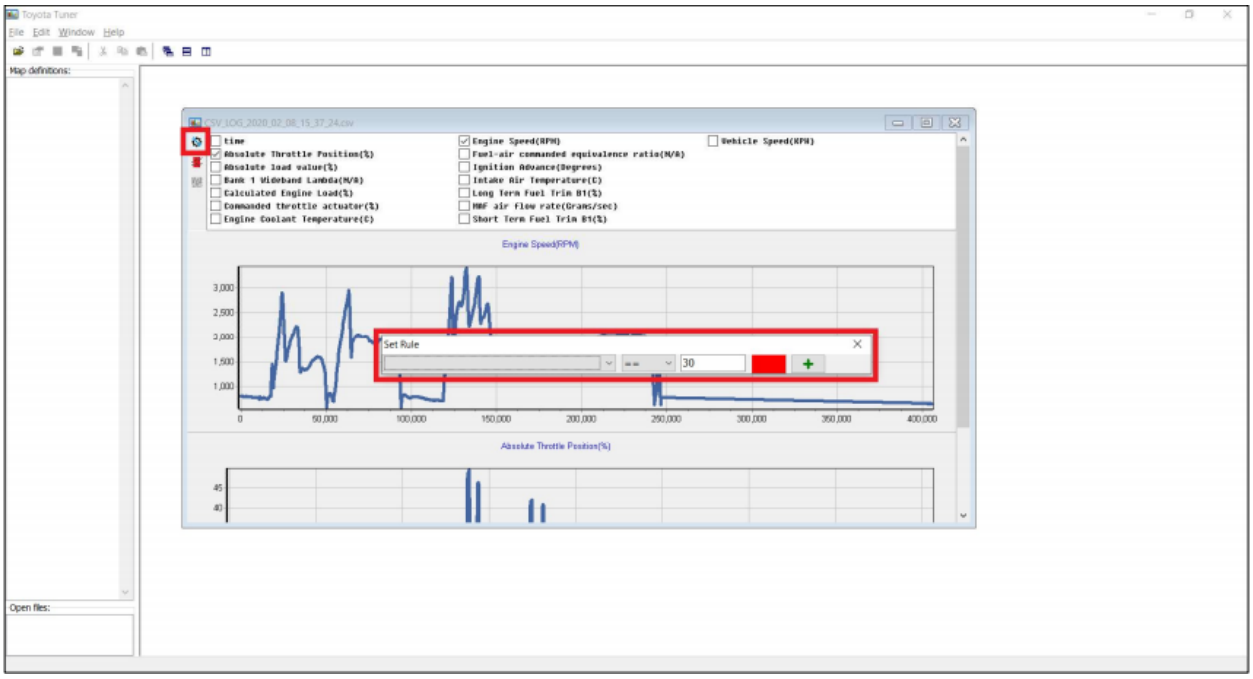
v. You can select the “parameters” by clicking on the small box in front of the parameters you want to view



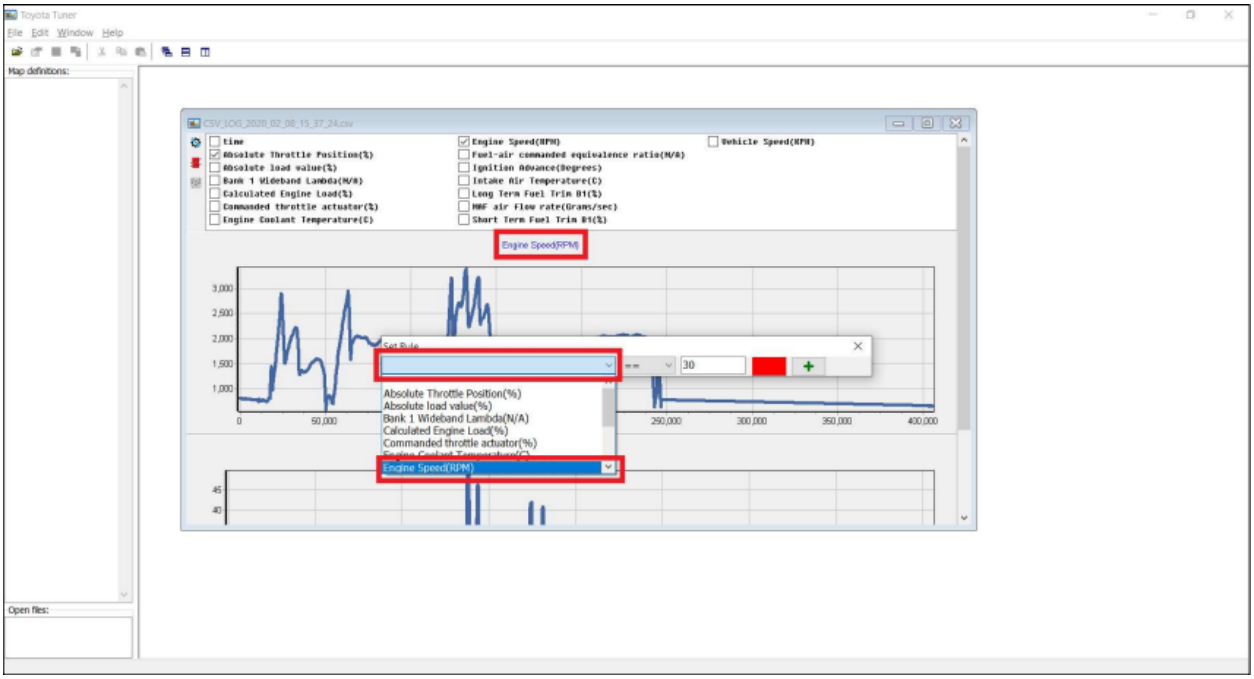
9.10.1. Configuring the Colors Datalog to Highlight Values

After opening the CSV file

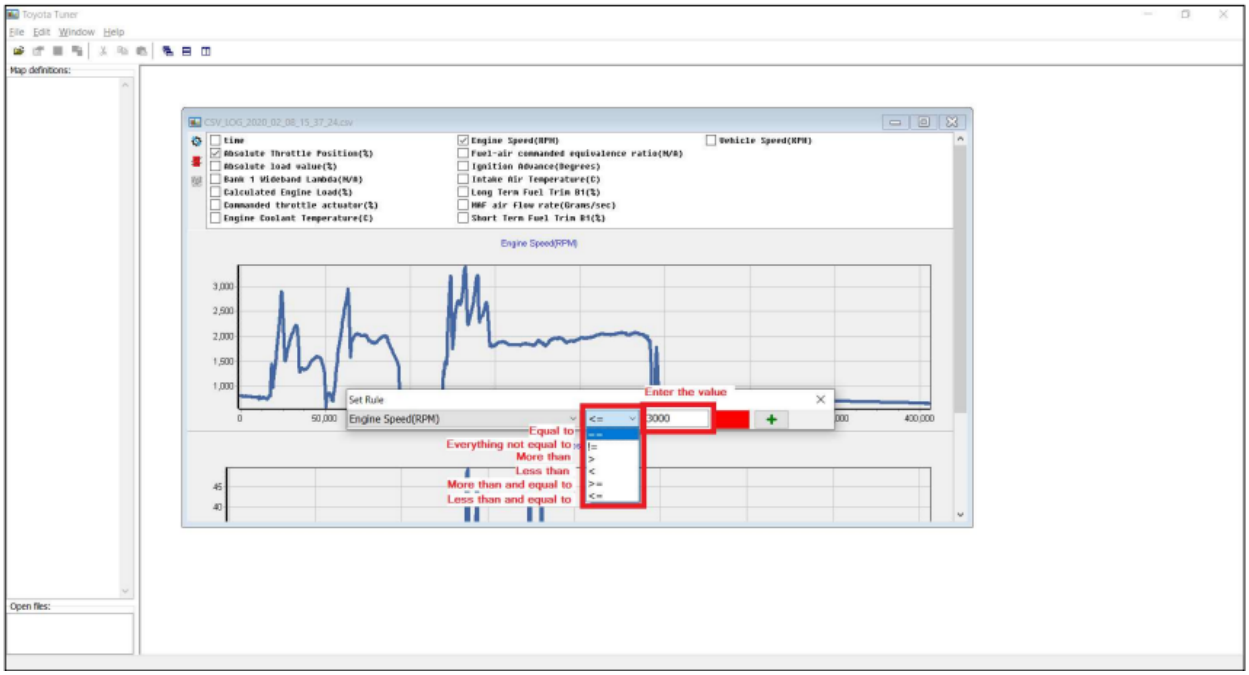
i. Click on the “Configure Chart” icon (1)



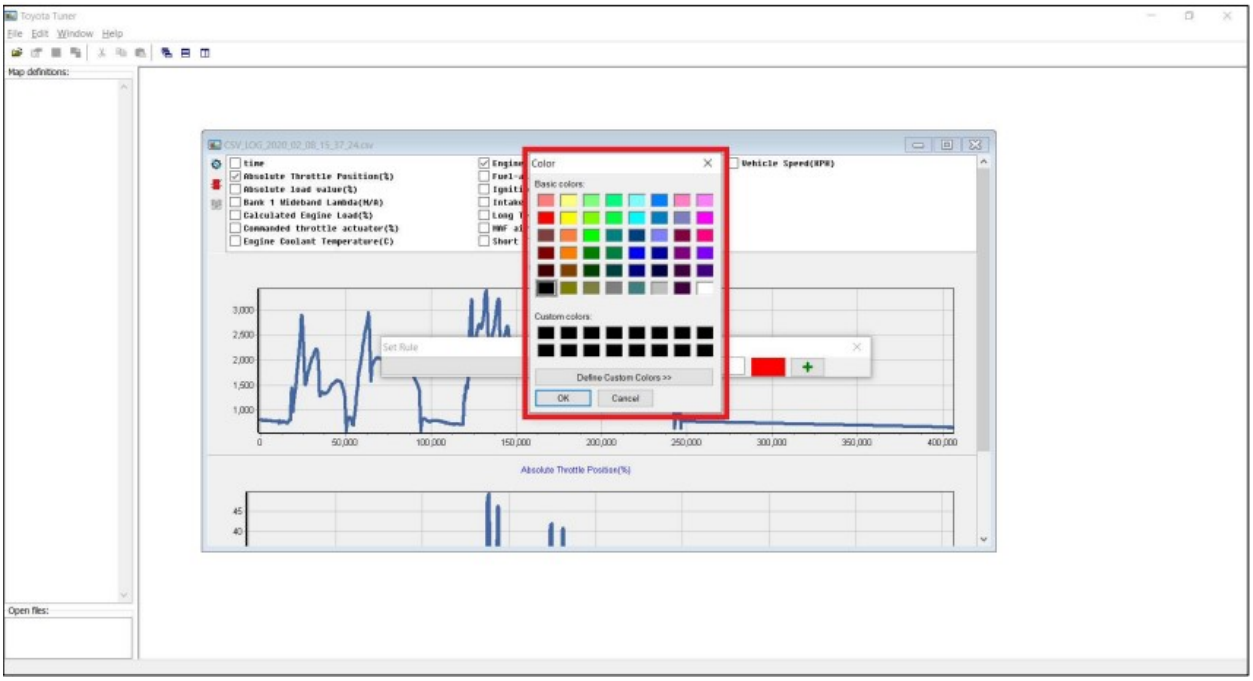
ii. Select which parameters you want to change the color



iii. Set the conditions of the color

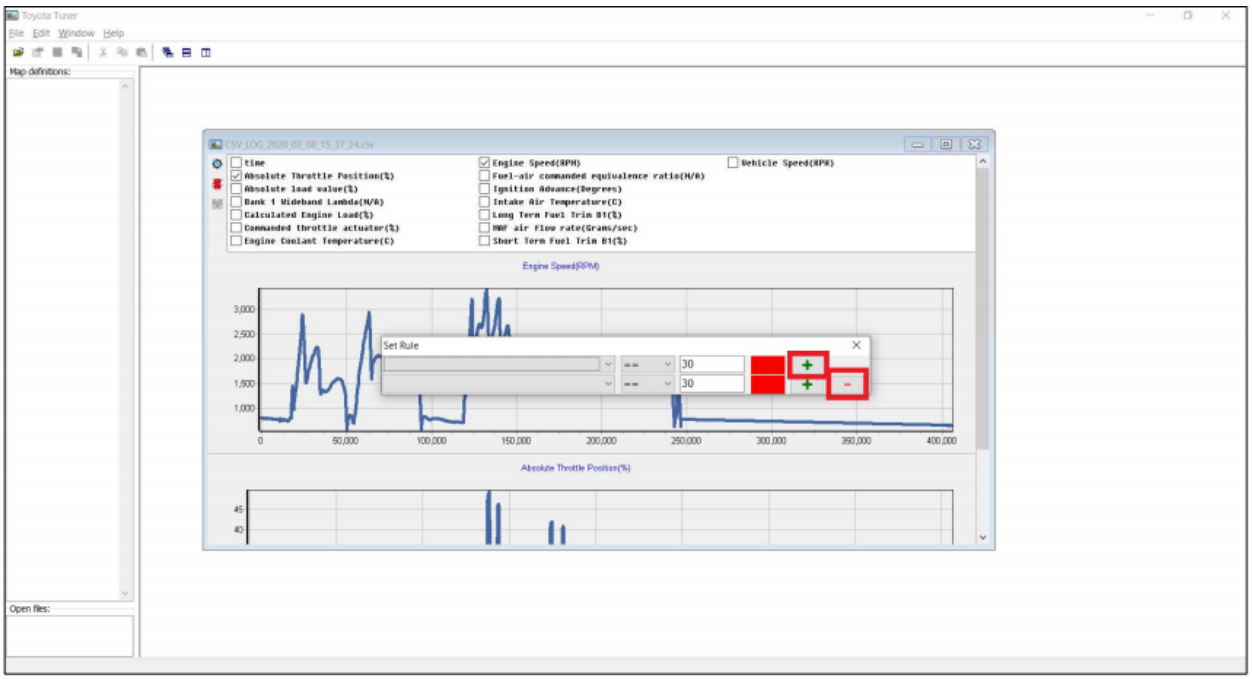


iv. Set the color



NOTES:

- ✓ You can click the "+" (plus) button to add more highlighting of values. Click on the "-" (minus) sign to remove a condition.



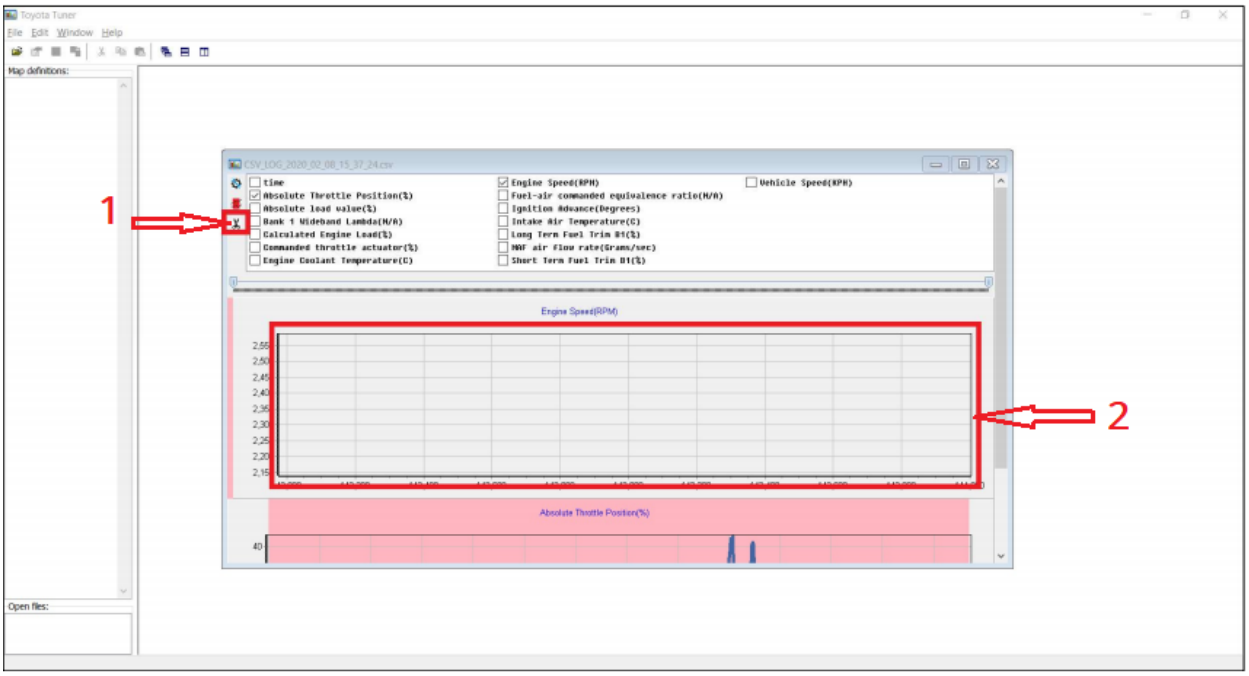
9.10.2. Cutting Part of the Datalog

After Opening the CSV file

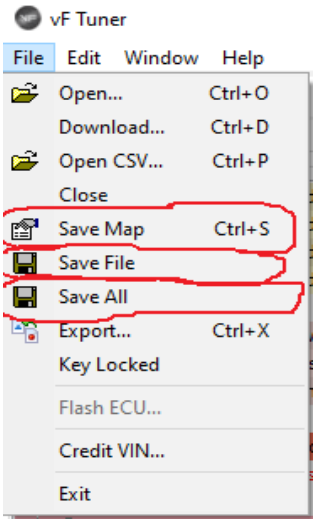
i. Click on the “Select range to cut” icon (1). The highlighted (in pink) (2) are the data that can be cut.

ii. You can use your mouse to select (click and drag from left to right) a specific area you want to cut (it will zoom in on that area).

iii. Click on the “Cut selection” to cut the selected range.



9.11. Saving Your Work



a. Saving Map

This saves the changes in the current active map

1. Click File then “Save Map” menu

b. Save File

This saves the changes in the current active file

1. Click on “File” then “Save File” menu

c. Save All

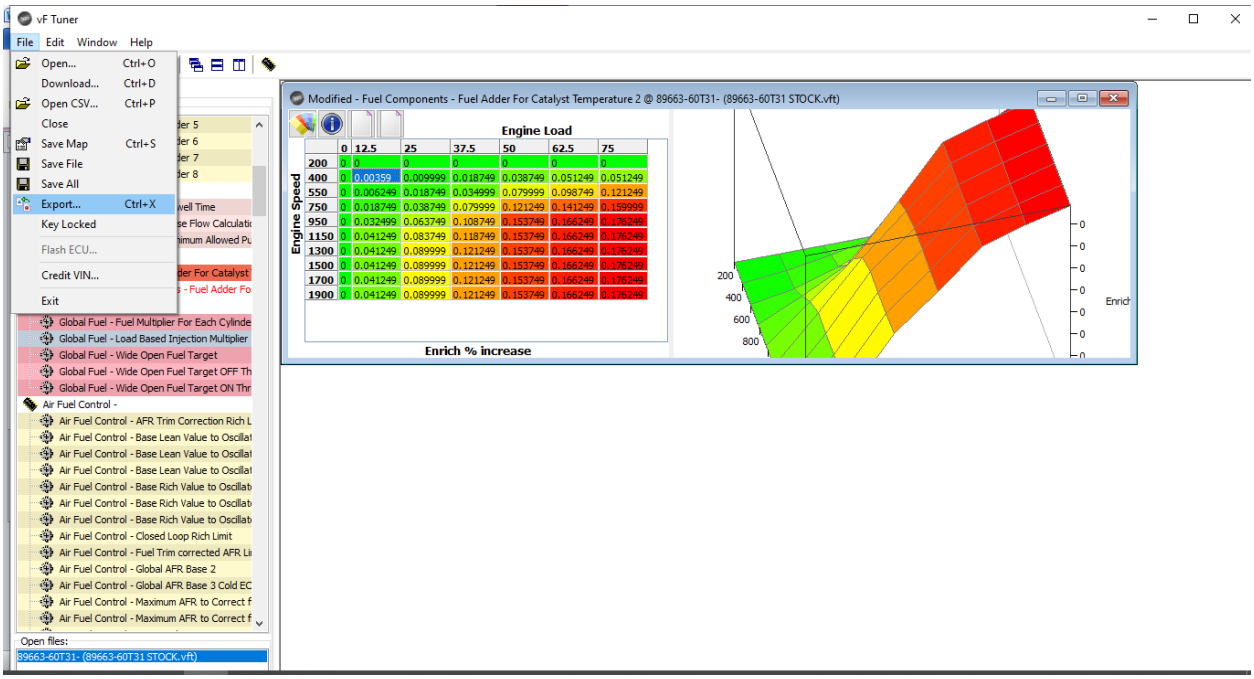
This saves the changes in all the opened files

1. Click “File” then “Save All” menu

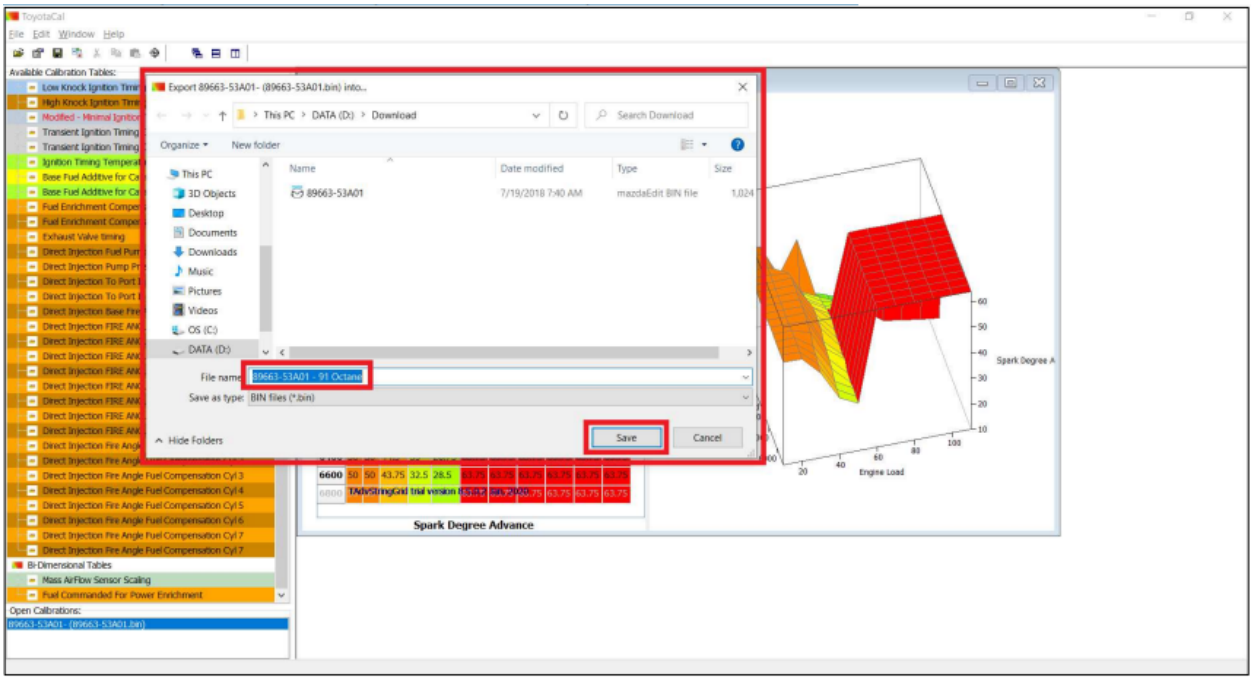
9.12. Exporting a File

i. Saves the file as your chosen file name using the guides above

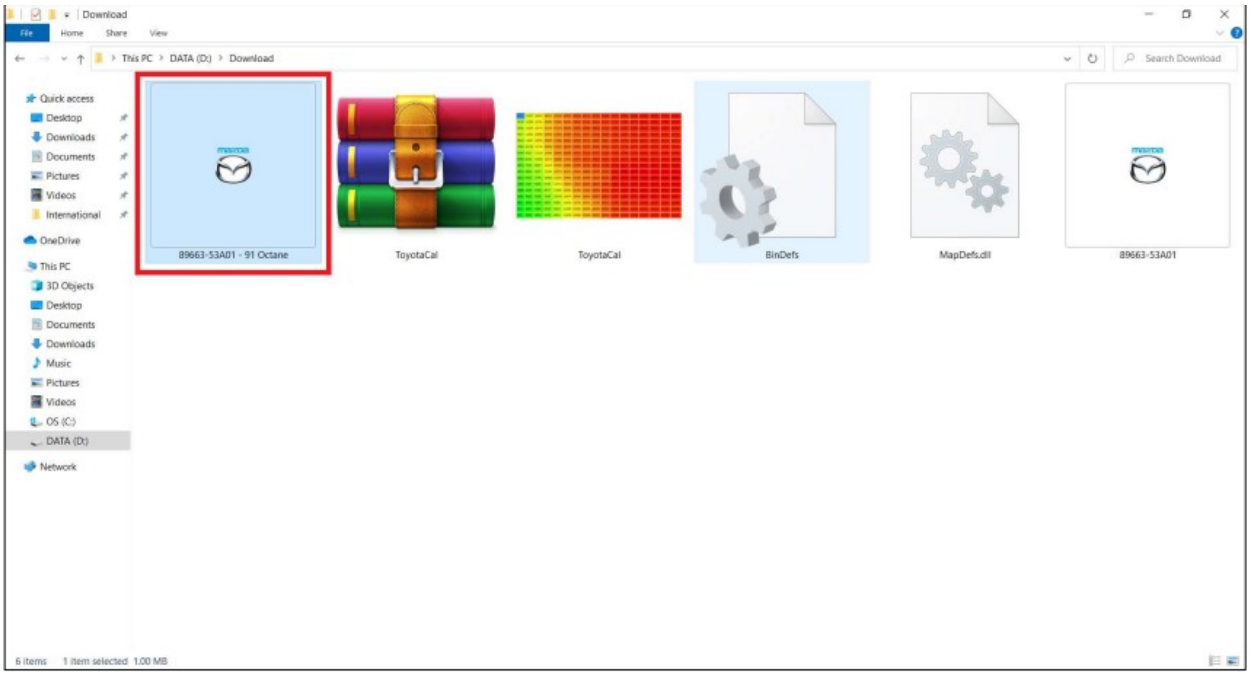
ii. Click on “File” menu and choose “Export” sub menu



iii. Select the folder you want to save it in, type in a file name that you like, and press on "Save"



iv. Your file will be saved on your chosen folder



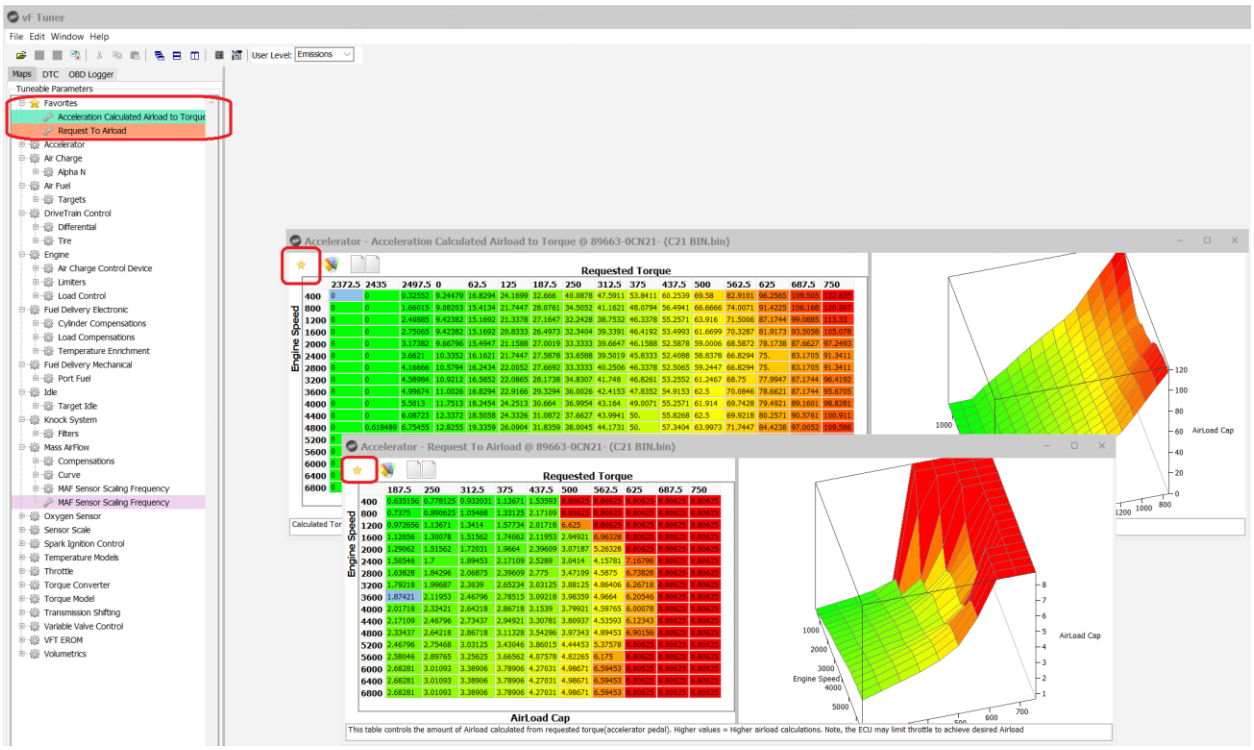
9.13. Editor - Favorites List and other useful features

VF Tuner has made it easy for users to find the maps they need quickly by implementing a **Favorites option**.

- Adding or removing a map from favorites is very simple. On each map at the top left corner is a greyed out STAR icon, simply press this ICON (so the star is illuminated yellow) and the map is added to your favorites list. This list will be saved even when you exit the software for easy and quick tuning the next time you load the software.

- To remove a map from your favorites list, simply open the map and click the star icon again, so that it is grey.

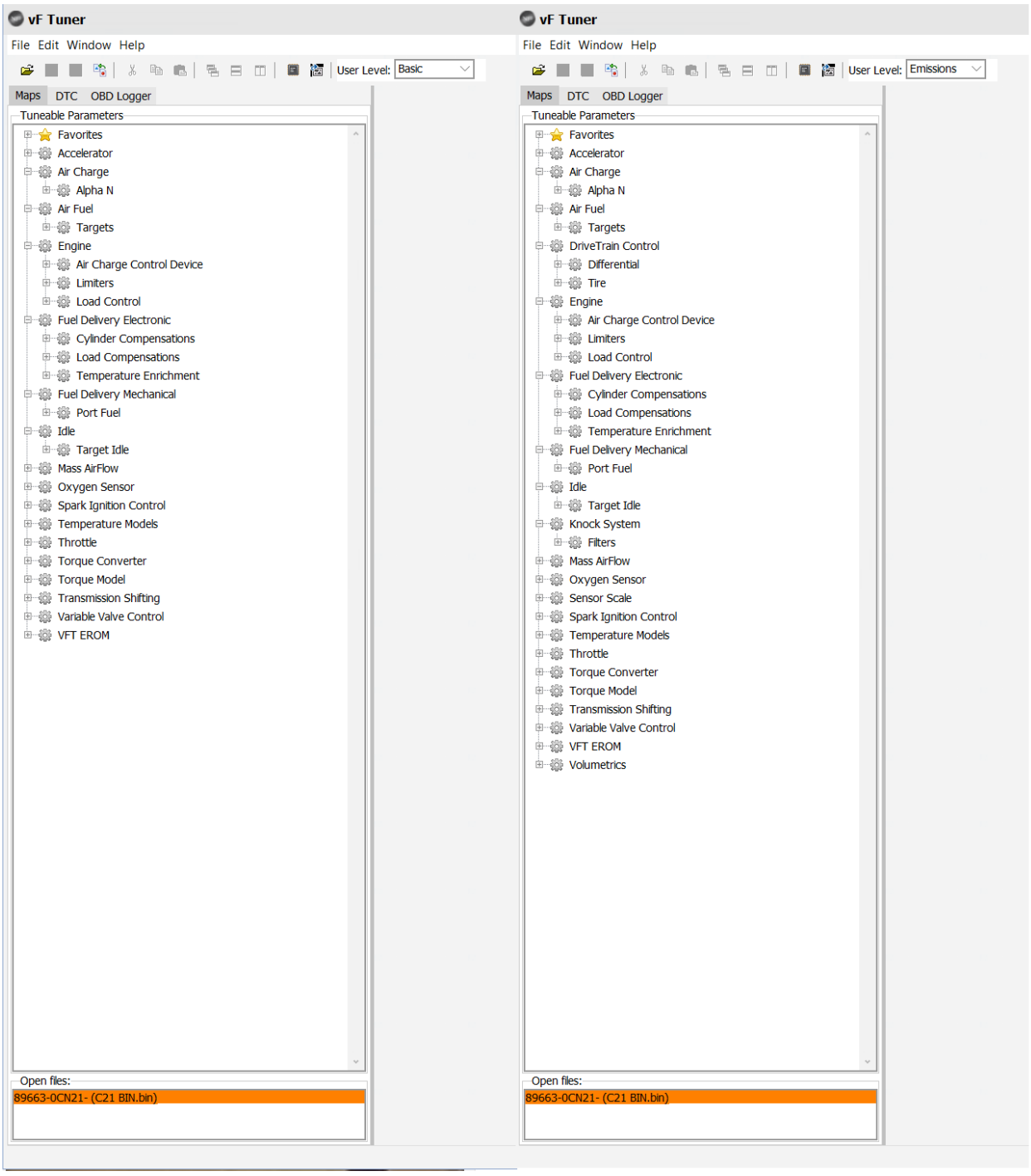
Your favorites will be at the top of the map list.



9.14. Editor - User Level

The user level option allows the user to tailor the amount of available tables they have access to depending on their EFI experience. When you change the user level the amount of available maps may change (less or more). This is to either hide or enable certain tables used for specific uses only. For example:

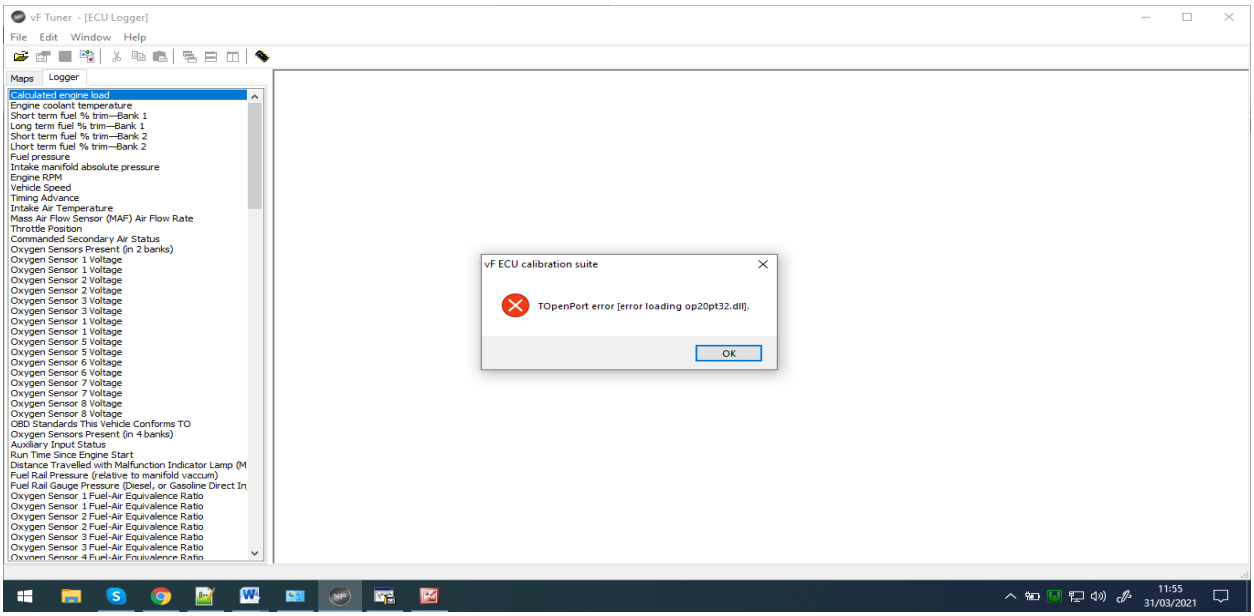
- When you select "basic" only the basic EFI tables and tunable parameters will be available.
- When you select "Emissions" All tables will be available



10.0. LOGGING – BASICS

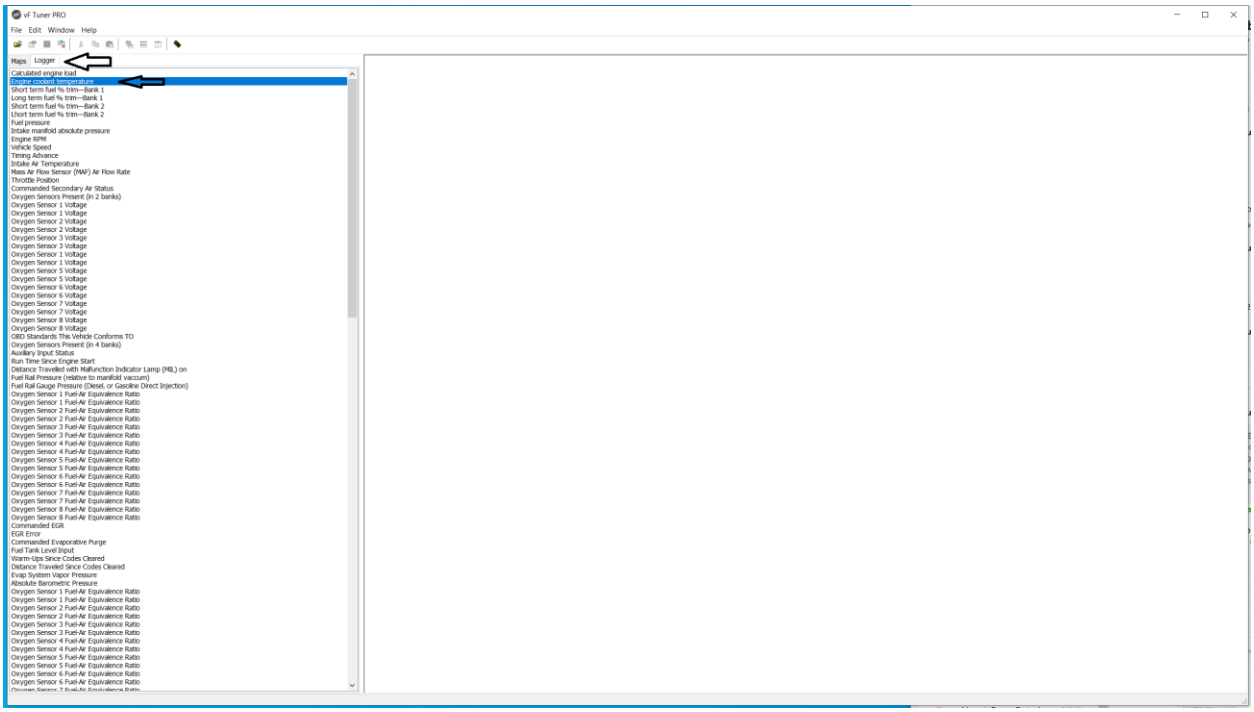
CAUTION!

You MUST be connected to your vehicle using the serial cable through the OBD-II port. Failure to do so you will get an Port connection error as shown below



i. Open VF Tuner program

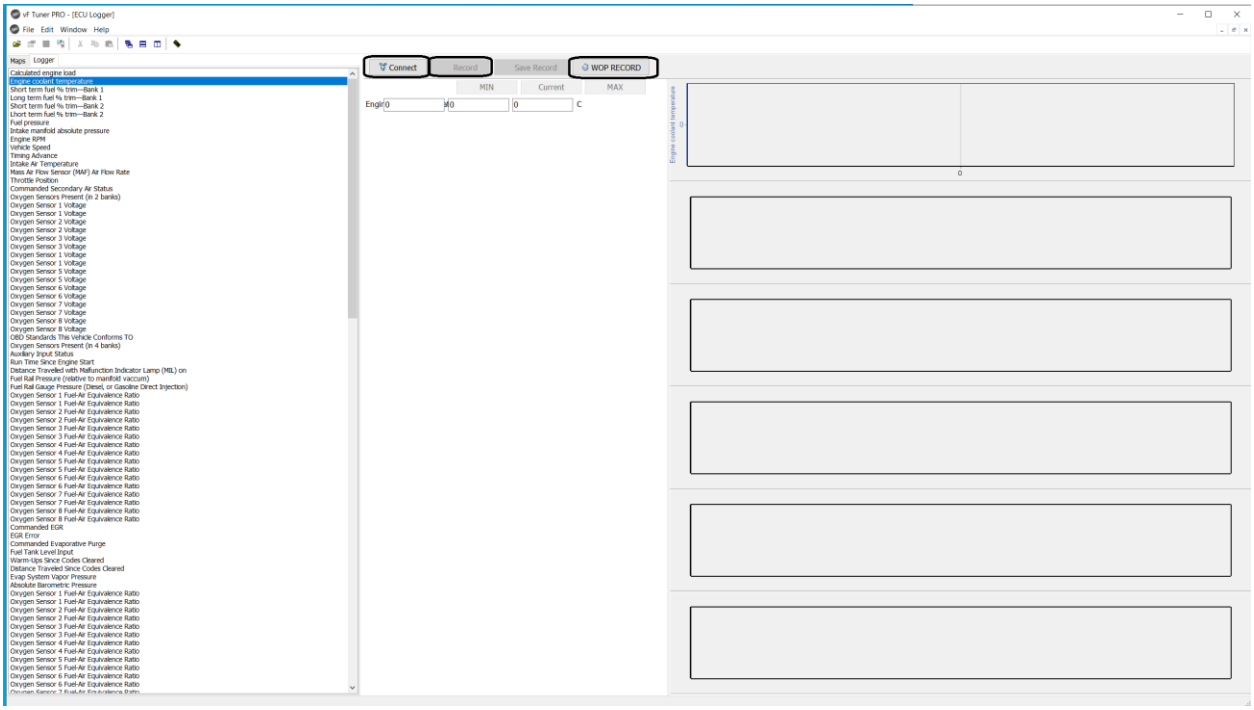
ii. Under menu shortcuts, Click on “Logger” tab



iii. Click any item on the list –these are PID (Proportional Integral Derivative)

iv. If no port error, A new window will open

v. Click “Connect” button



vi. You can then click record to record the log

vii. Click save record to save the recorded log

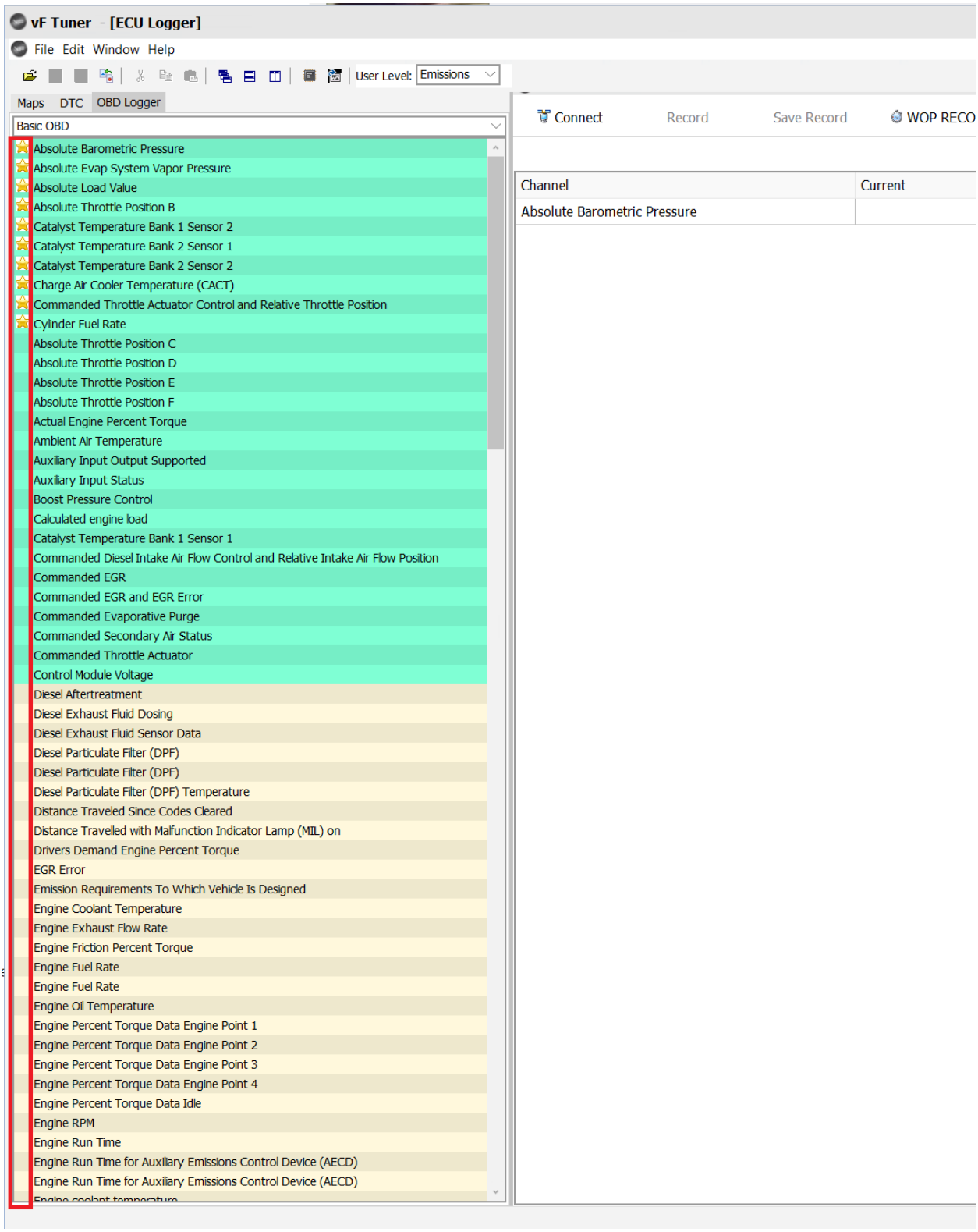
NOTES:

When you click on “WOP RECORD” button, the system will record and save a 20 second long log for you automatically

10.1. Logging - Favourites List

To create a favorites option for the logger, simply click the area on the LEFT of the name of the PID (see red box). This will illuminate a **STAR** and move this PID onto the top of the list. Now all of your favorites PIDs will come first.

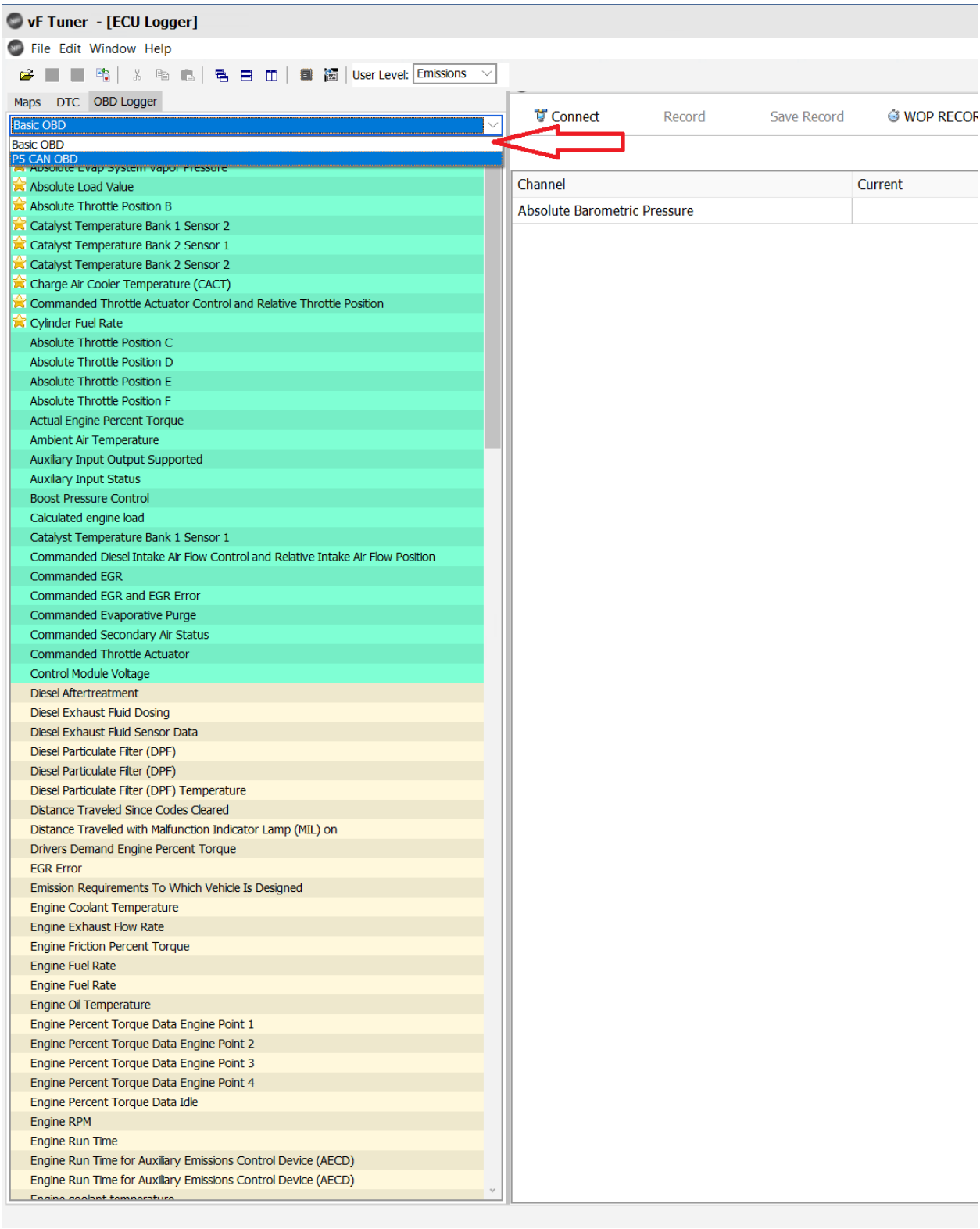
NOTE: The logger is in alphabetical order, but when you select a PID to be on the favorites it will move to the top of the list and ignore the alphabetical order this is for quicker access / PID selection.


vF Tuner - [ECU Logger]
File Edit Window Help
User Level: Emissions
Maps DTC OBD Logger
Basic OBD
Absolute Barometric Pressure
Absolute Evap System Vapor Pressure
Absolute Load Value
Absolute Throttle Position B
Catalyst Temperature Bank 1 Sensor 2
Catalyst Temperature Bank 2 Sensor 1
Catalyst Temperature Bank 2 Sensor 2
Charge Air Cooler Temperature (CACT)
Commanded Throttle Actuator Control and Relative Throttle Position
Cylinder Fuel Rate
Absolute Throttle Position C
Absolute Throttle Position D
Absolute Throttle Position E
Absolute Throttle Position F
Actual Engine Percent Torque
Ambient Air Temperature
Auxiliary Input Output Supported
Auxiliary Input Status
Boost Pressure Control
Calculated engine load
Catalyst Temperature Bank 1 Sensor 1
Commanded Diesel Intake Air Flow Control and Relative Intake Air Flow Position
Commanded EGR
Commanded EGR and EGR Error
Commanded Evaporative Purge
Commanded Secondary Air Status
Commanded Throttle Actuator
Control Module Voltage
Diesel Aftertreatment
Diesel Exhaust Fluid Dosing
Diesel Exhaust Fluid Sensor Data
Diesel Particulate Filter (DPF)
Diesel Particulate Filter (DPF)
Diesel Particulate Filter (DPF) Temperature
Distance Traveled Since Codes Cleared
Distance Travelled with Malfunction Indicator Lamp (MIL) on
Drivers Demand Engine Percent Torque
EGR Error
Emission Requirements To Which Vehicle Is Designed
Engine Coolant Temperature
Engine Exhaust Flow Rate
Engine Friction Percent Torque
Engine Fuel Rate
Engine Fuel Rate
Engine Oil Temperature
Engine Percent Torque Data Engine Point 1
Engine Percent Torque Data Engine Point 2
Engine Percent Torque Data Engine Point 3
Engine Percent Torque Data Engine Point 4
Engine Percent Torque Data Idle
Engine RPM
Engine Run Time
Engine Run Time for Auxiliary Emissions Control Device (AECD)
Engine Run Time for Auxiliary Emissions Control Device (AECD)
Connect
Record
Save Record
WOP RECO
Channel
Current
Absolute Barometric Pressure

10.2. Logging - Selecting Protocol

Protocol selection should be done depending on the ECU so that you can use enhanced and faster logging for the specific vehicle. This is not supported on all vehicles.

- Basic OBD - This should work on any CAN BUS based vehicle and provides various SAE PIDs for data logging.
- P5 CAN OBD - this protocol is enhanced for select Toyotas with Readable ECUs (Tacoma, highlander, IS200T, etc.) so that you may data log various additional Toyota-specific data
- EC614 CAN OBD - This protocol is enhanced for select older Toyotas without readable ECUs (almost all CAN Toyota ECU 05+) so that you may data log various additional Toyota - specific data


vF Tuner - [ECU Logger]
File Edit Window Help
User Level: Emissions
Maps DTC OBD Logger
Basic OBD
Basic OBD
P5 CAN OBD
Absolute Load Value
Absolute Throttle Position B
Catalyst Temperature Bank 1 Sensor 2
Catalyst Temperature Bank 2 Sensor 1
Catalyst Temperature Bank 2 Sensor 2
Charge Air Cooler Temperature (CACT)
Commanded Throttle Actuator Control and Relative Throttle Position
Cylinder Fuel Rate
Absolute Throttle Position C
Absolute Throttle Position D
Absolute Throttle Position E
Absolute Throttle Position F
Actual Engine Percent Torque
Ambient Air Temperature
Auxiliary Input Output Supported
Auxiliary Input Status
Boost Pressure Control
Calculated engine load
Catalyst Temperature Bank 1 Sensor 1
Commanded Diesel Intake Air Flow Control and Relative Intake Air Flow Position
Commanded EGR
Commanded EGR and EGR Error
Commanded Evaporative Purge
Commanded Secondary Air Status
Commanded Throttle Actuator
Control Module Voltage
Diesel Aftertreatment
Diesel Exhaust Fluid Dosing
Diesel Exhaust Fluid Sensor Data
Diesel Particulate Filter (DPF)
Diesel Particulate Filter (DPF)
Diesel Particulate Filter (DPF) Temperature
Distance Traveled Since Codes Cleared
Distance Travelled with Malfunction Indicator Lamp (MIL) on
Drivers Demand Engine Percent Torque
EGR Error
Emission Requirements To Which Vehicle Is Designed
Engine Coolant Temperature
Engine Exhaust Flow Rate
Engine Friction Percent Torque
Engine Fuel Rate
Engine Fuel Rate
Engine Oil Temperature
Engine Percent Torque Data Engine Point 1
Engine Percent Torque Data Engine Point 2
Engine Percent Torque Data Engine Point 3
Engine Percent Torque Data Engine Point 4
Engine Percent Torque Data Idle
Engine RPM
Engine Run Time
Engine Run Time for Auxiliary Emissions Control Device (AECD)
Engine Run Time for Auxiliary Emissions Control Device (AECD)
Connect
Record
Save Record
Channel
Current
Absolute Barometric Pressure

11.0. TROUBLESHOOTING – ERRORS

NOTES:

- ✓ All errors should be reported to Support@ovtune.zendesk.com

11.1. Reporting an error

i. Please be as specific as possible

ii. Include screenshots, or "ER" codes / ERROR codes

NOTES:

- ✓ If the error comes from the flasher include:
  - Your vehicles stock calibration ID (ECU ID)
  - ID of file you are trying to flash
  - Version of software you are using

11.1.1. Errors on map bugs, maps not opening

If you find any bugs (map bugs, maps not opening, etc) please also report these as an ERROR.

a. Include the ECU ID (your calibration 89663-xxxxx)

b. The name of the Map

c. The version of software you are using.

11.1.2. Errors Relating to Registering

i. Master key / email not recognized

Please ensure you are inputting the information correctly. **Do not type it**, just **COPY/ PASTE**

ii. Master key installation count exceeded

You are allowed to register VF Tuner software (3) times before your installation count has hit the maximum.

If you get this error but have not registered 3 times, this usually means you are trying to register with incorrect information. Usually the username or the password might be wrong.

The **FIRST** time you register, you set your username and password. That will be your username and password permanently. You must always use those same credentials in the future

GLOSSARY

BIN file → BIN files are the compressed binary files that are used for varied purposes by many computer applications.

Calibration → the process of configuring an instrument to provide a result for a sample within an acceptable range

ECU → Engine Control Unit

ECM →Engine Control Module

OBD-II port → is an on-board computer that monitors emissions, mileage, speed, and other data about your car. It's connected to the Check Engine light, which illuminates when the computer detects a problem. The OBD-II on-board computer features a 16-pin port located under the driver's side dash

PID → Proportional Integral Derivative

TCU → Transmission Control Unit

VIN → Vehicle Identification Number