



Maya Software Help Guide

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Installation

Maya is available for Microsoft Windows©. Official compatible versions are:

Windows© XP (Service Pack 2, Service Pack 3)

Windows© Vista (32 - 64 bit ,Service Pack 1, Service Pack 2)

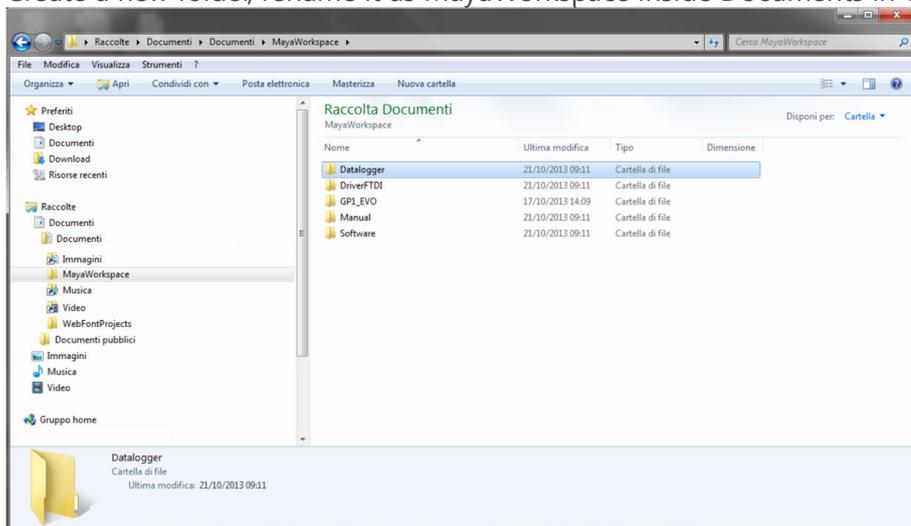
Windows© 7 (32 - 64 bit)

Maya is distributed as a *.exe self installing:

Maya_Install_<Version number >.exe

To install Maya you need to follow screen instructions:

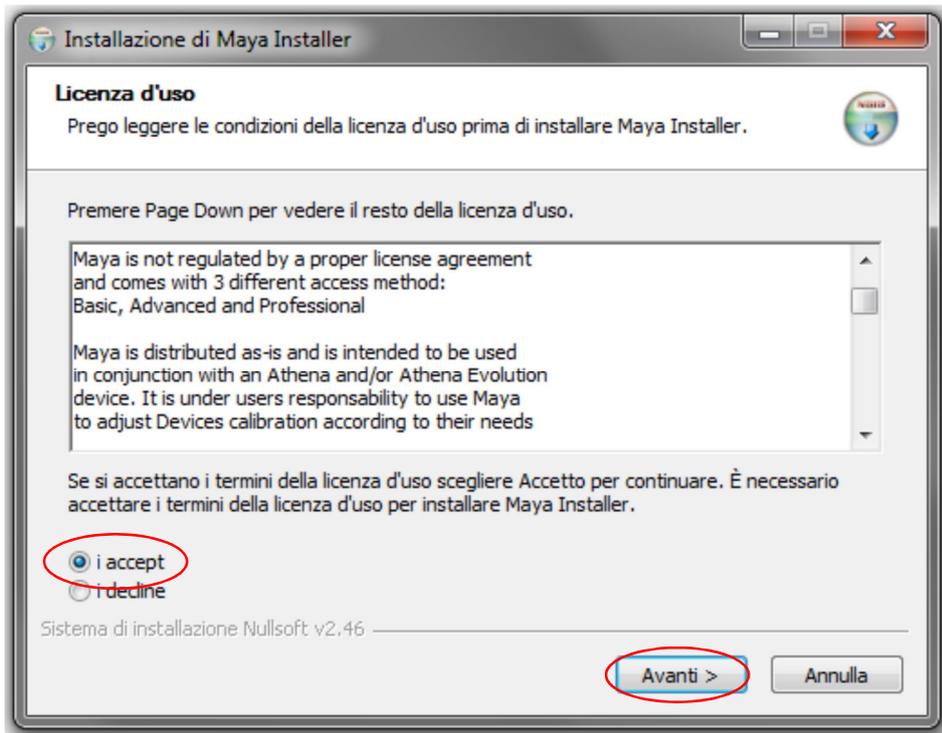
- Create a new folder, rename it as MayaWorkspace inside Documents in Windows©



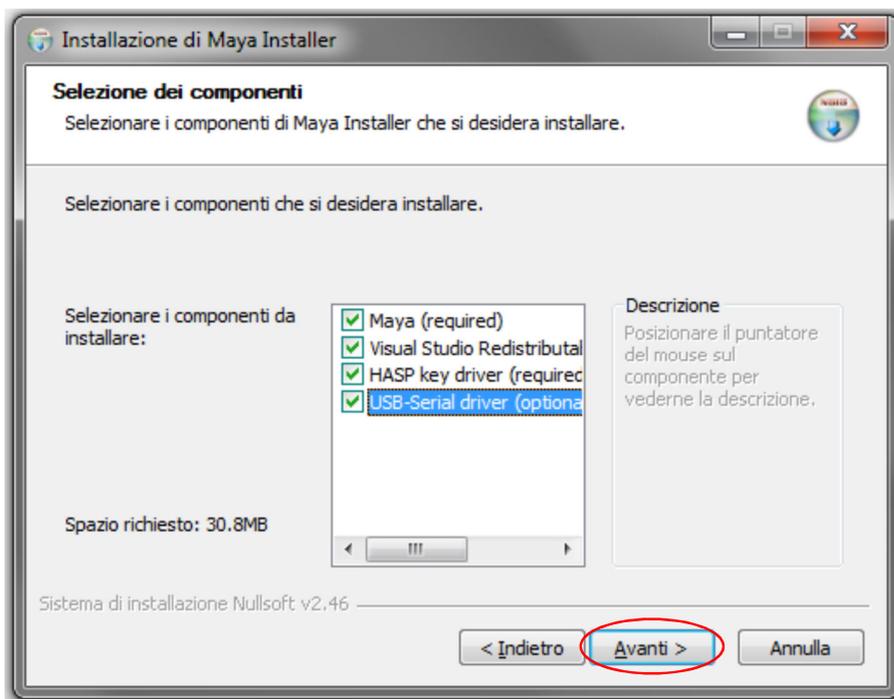
- Run Maya_Install_<Version number>.exe (double click) contained in Software in MayaWorkspace folder.
- NOTE: Windows© Vista and/or 7 could show some other permission requests. To continue, chose Agree.
- Accept the user licence to proceed:



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- Select software components to install (see figure below).

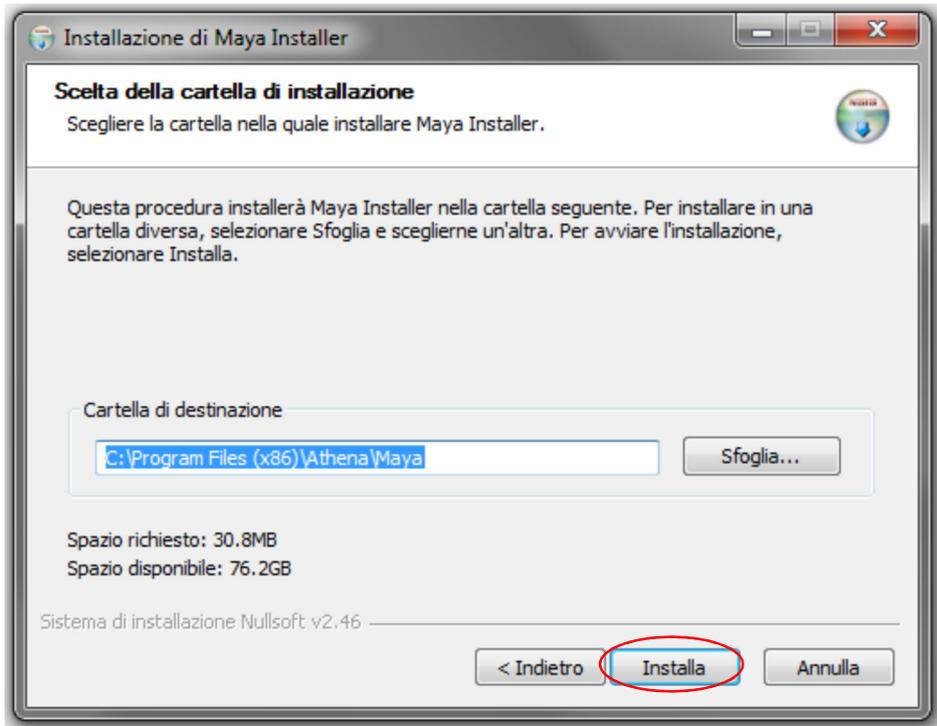


NOTE: if you are running the installation for the first time it is necessary to select all components. If you are running an update it is possible to install only Maya



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- Chose installation path (or accept the default one – strongly suggested) and click Install to start the installation process. During this process you could create a link to Desktop.





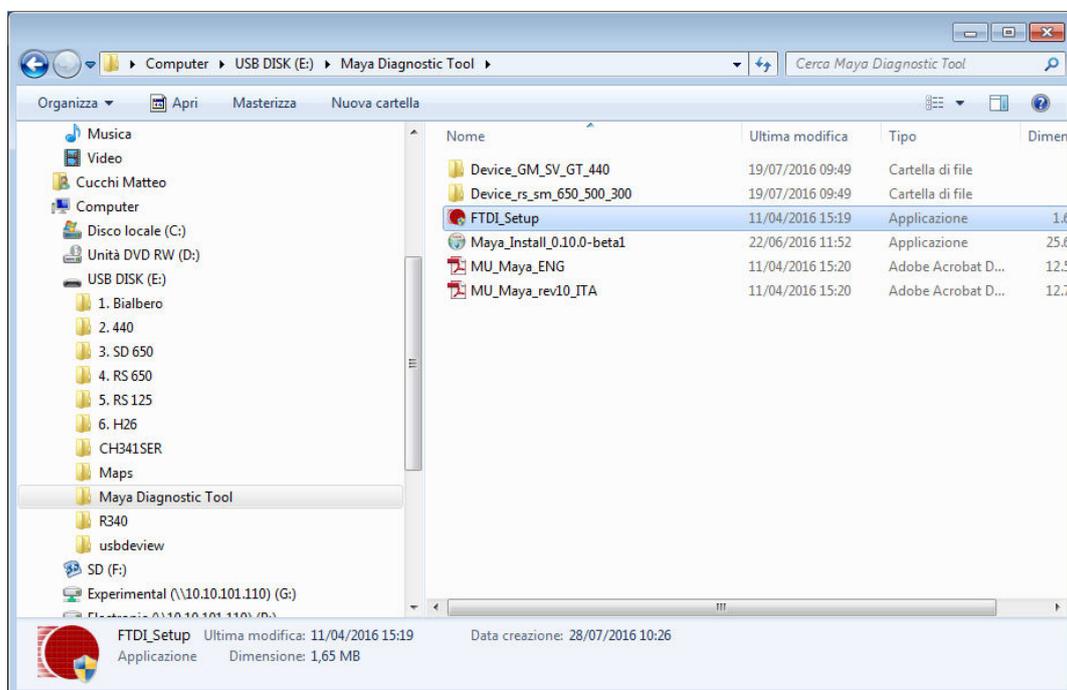
Programming Cable Driver Installation

The following steps describe how to correctly configure the programming cable:

- Connect the programming cable to your USB port as in the picture



- Open the “Maya Diagnostic Tool” folder and click on “FTDI_setup”



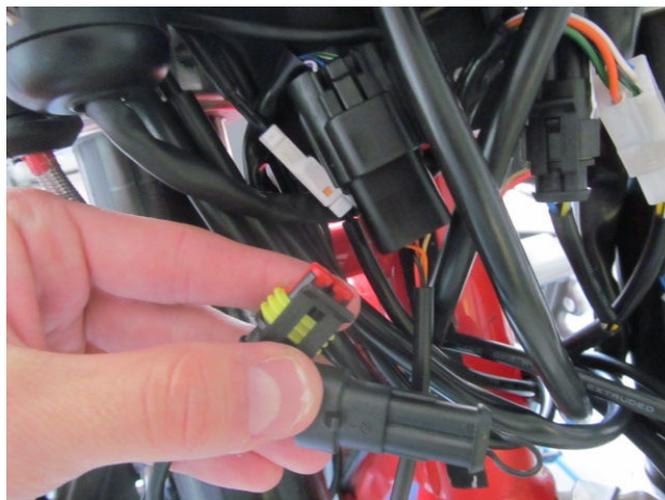


Communication with the ECU

- Connect the programming cable to the diagnostic interface connector (behind the front fairing in the RS/SM models or under the left side cover in the Silver Vase, Gran Milano and Gran Turismo)



- DO NOT connect the jumper wire

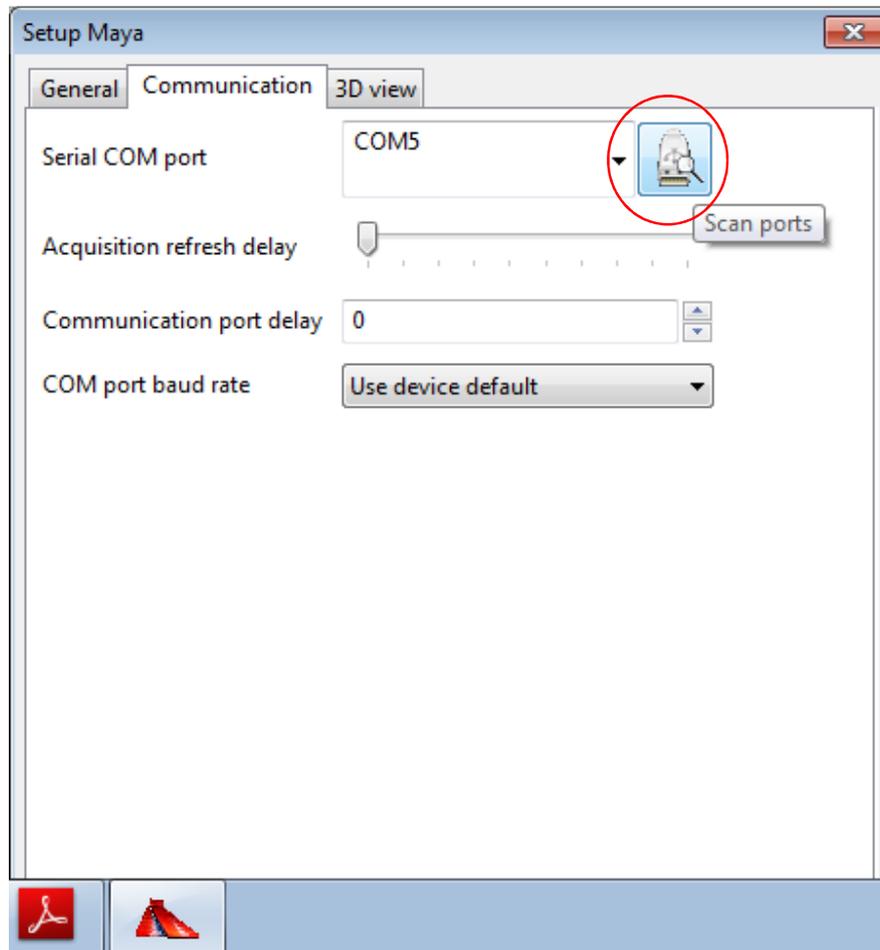


- Turn the key in the "on" position (and lift up the side stand in the Silver Vase, Gran Milano and Gran Turismo) -> you should hear the fuel pump turning

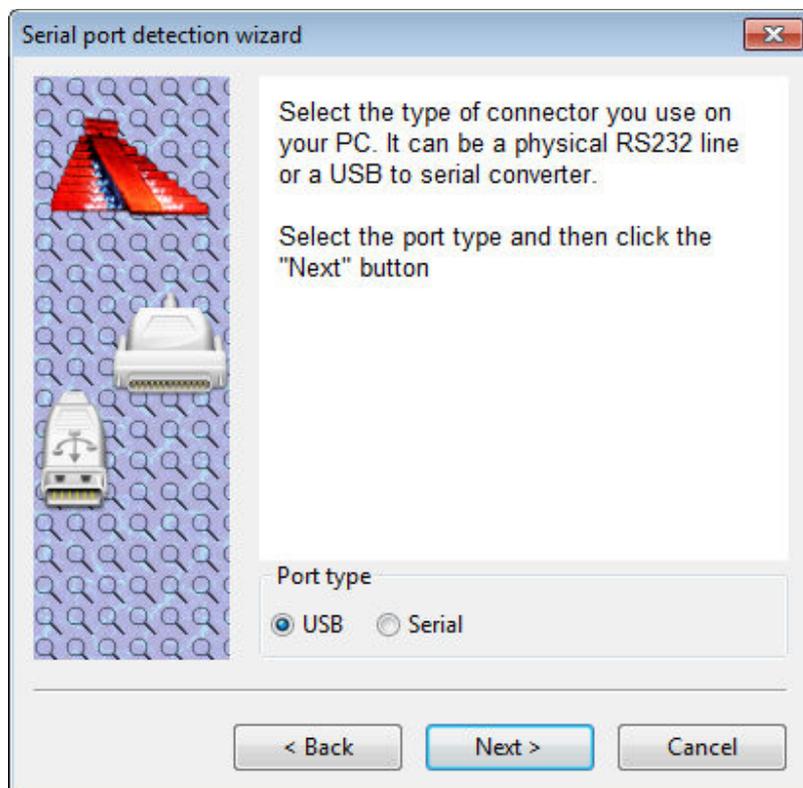
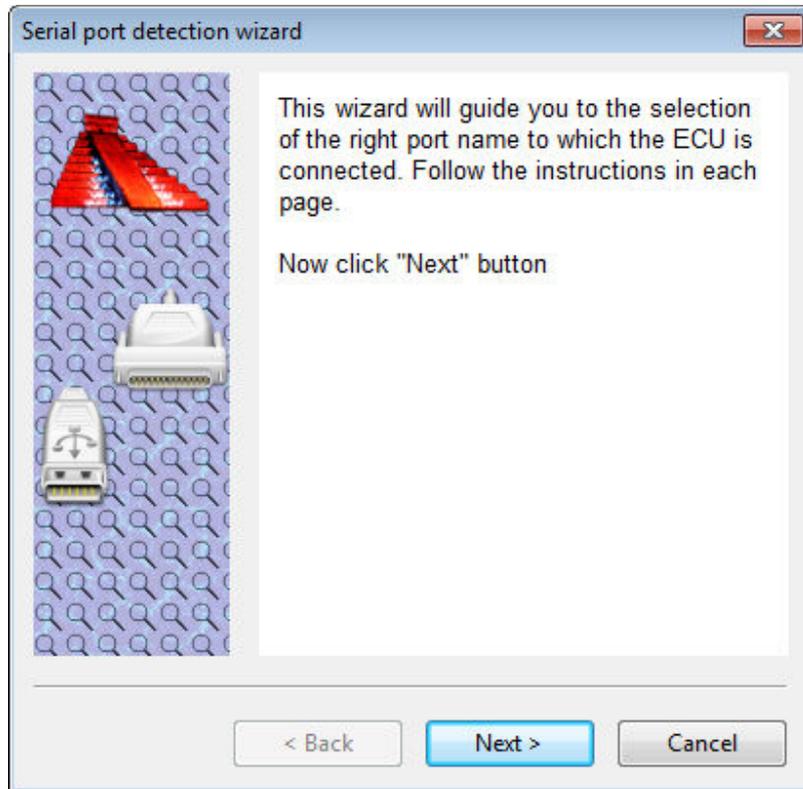


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- Click on File -> Preferences -> Communication and then click on the "Scan ports" icon

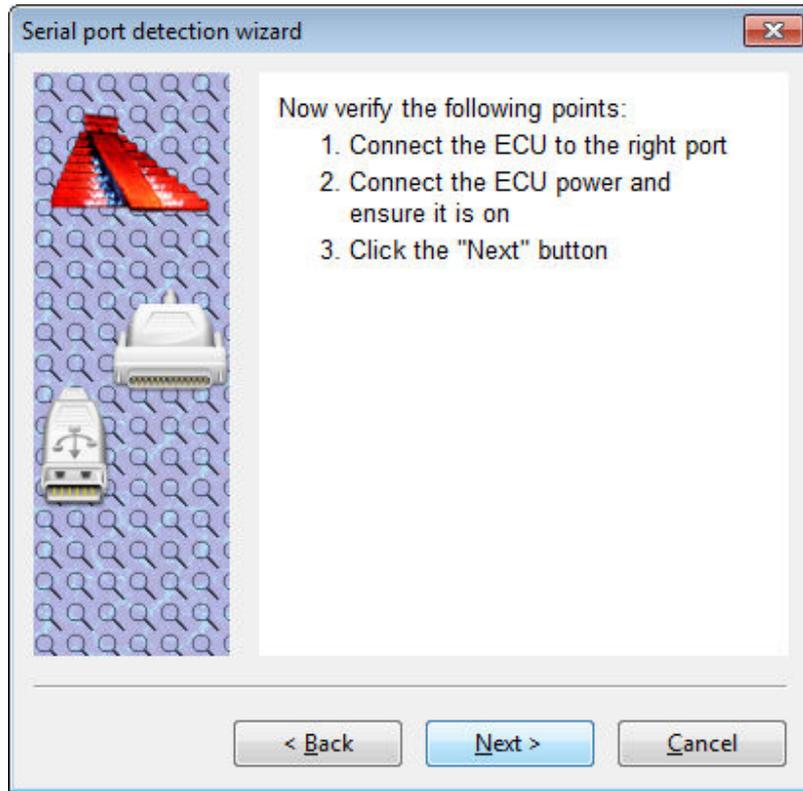


- Click on the Next button in the following windows

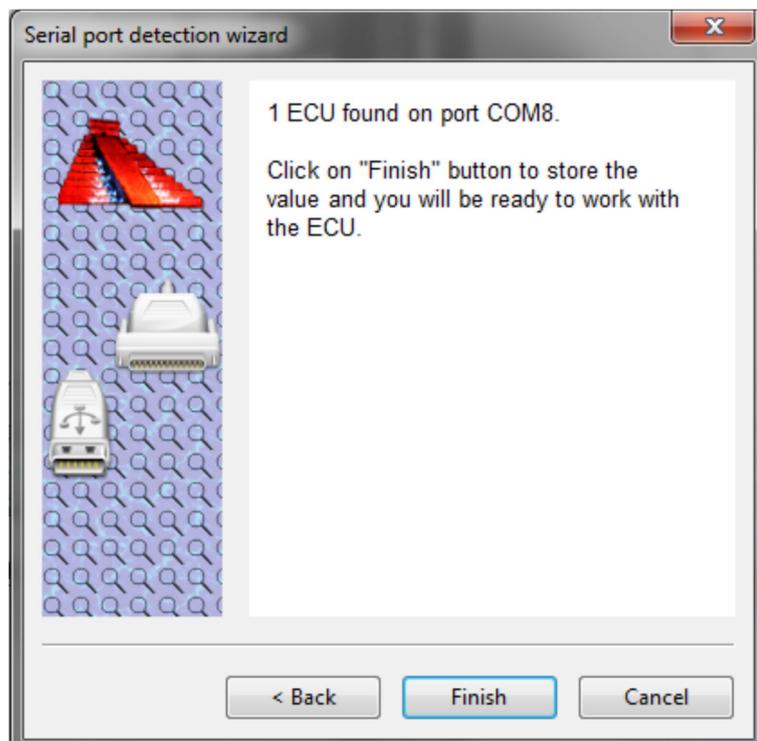




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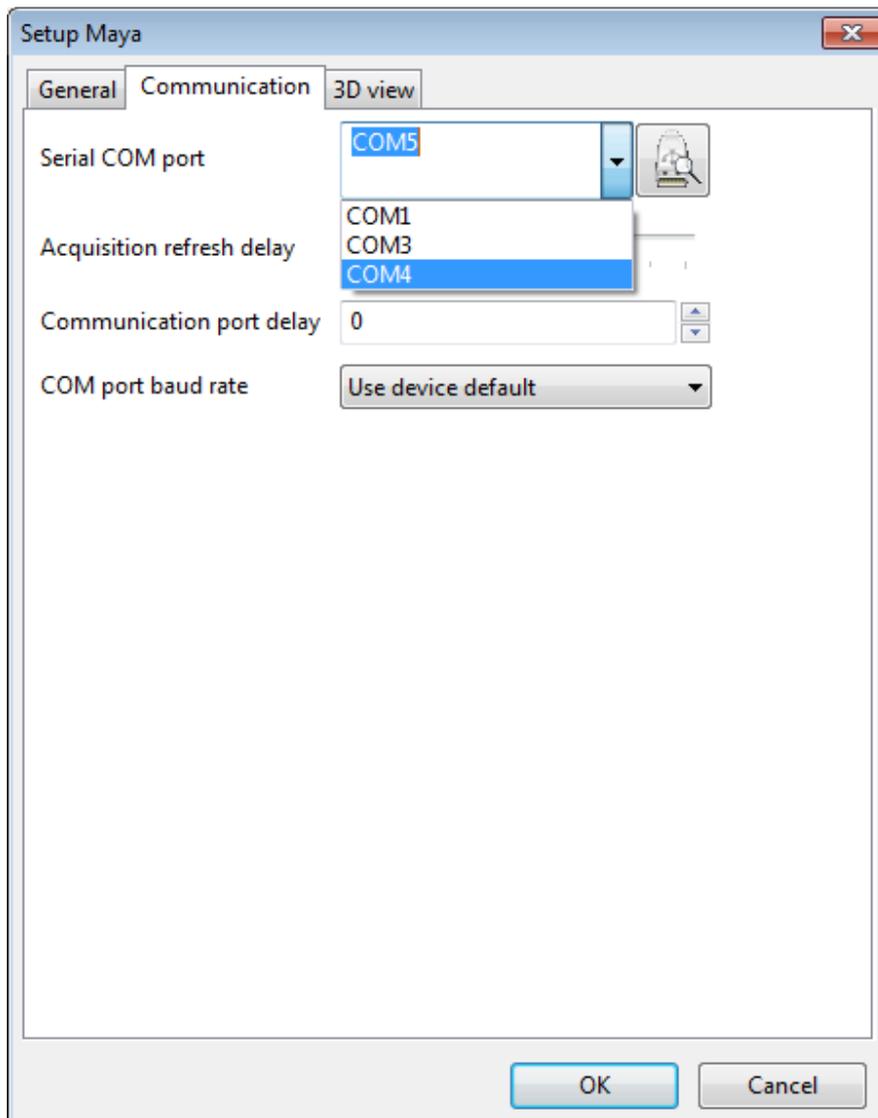
•Click on the Finish button. If the connection is ok, you'll receive a message telling you the COM port on which the ECU was found:



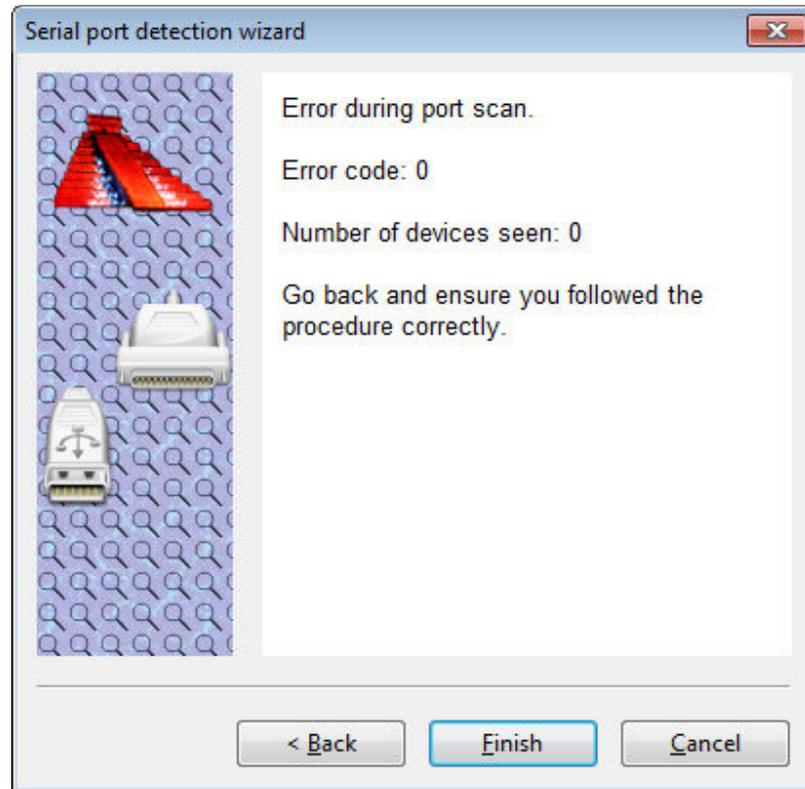


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In the Silver Vase, Gran Milano and Gran Turismo you will receive the message “No ECU found” and you have to select the last COM port available in the drop down list in the Communication settings (see the picture below):



- If there is a connection problem you'll receive an error like the one in the following picture:



In this case you need to check the procedure (installation of the programming cable's driver, key on, presence of power, kill switch in open position, ecc...)

Downloading Map to ECU

To download a map to the ECU the Maya software and the programming cable have to be correctly installed and configured.

First open Maya software then choose the corresponding device of the bike you need to map:

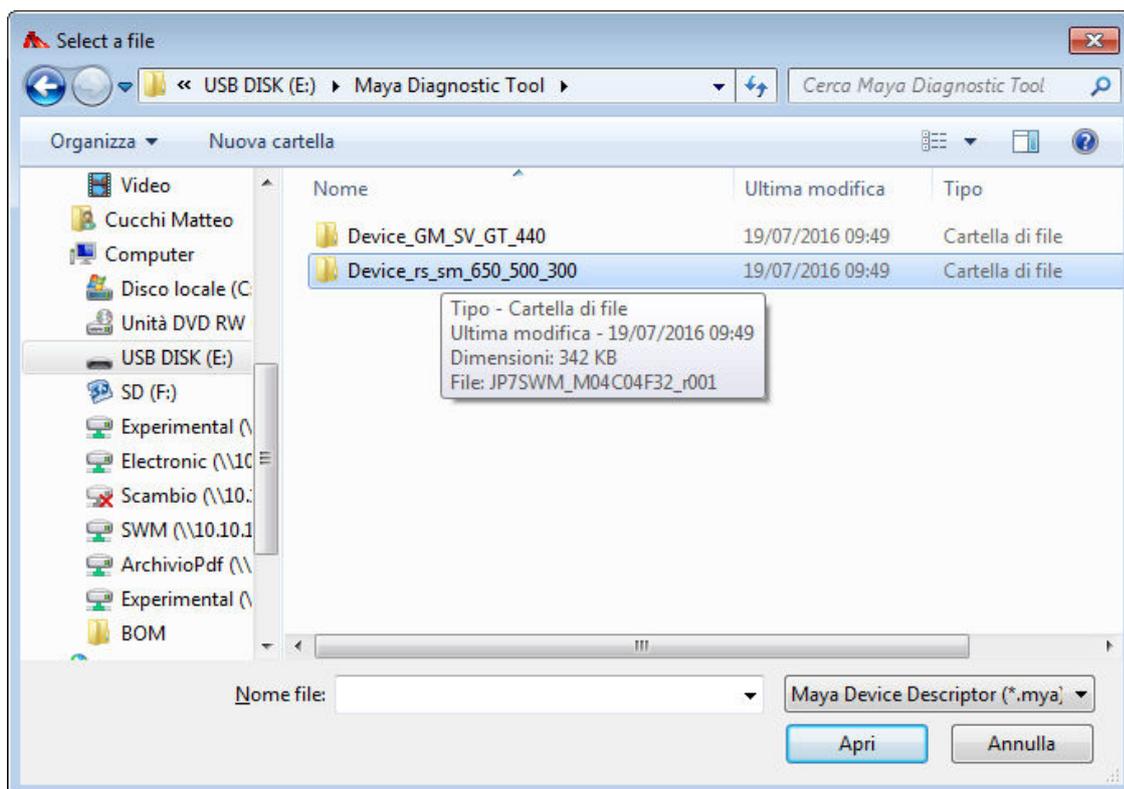
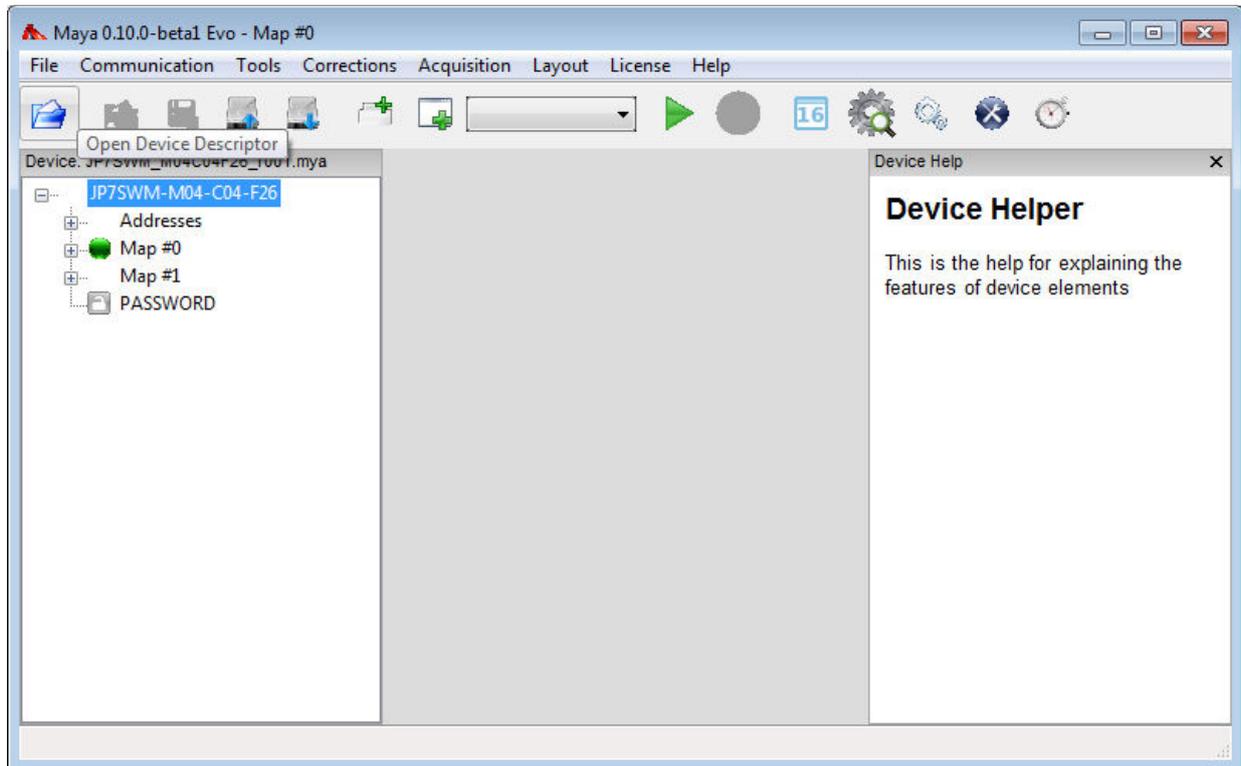
- If you are mapping a RS/SM 650 – RS/SM 500 – RS300 you need to load the device in the "Device_rs_sm_650_500_300" folder (inside the "Maya Diagnostc Tool" folder)
- If you are mapping a Silver Vase 440 – Gran Milano 440 – Gran Turismo 440 you need to load the device in the "Device_GM_SV_GT_440" folder (inside the "Maya Diagnostc Tool" folder)

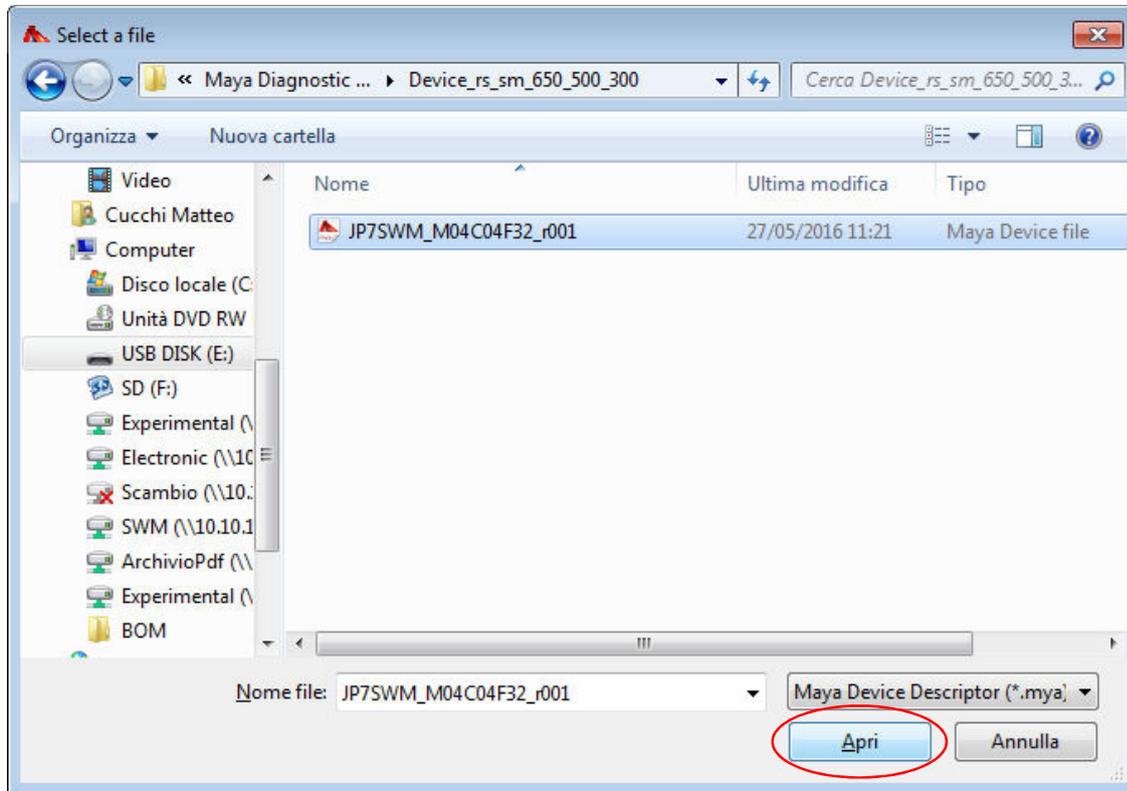
To load the device:

- Click on "File" -> "Open Device" -> then open the device folder and choose the file



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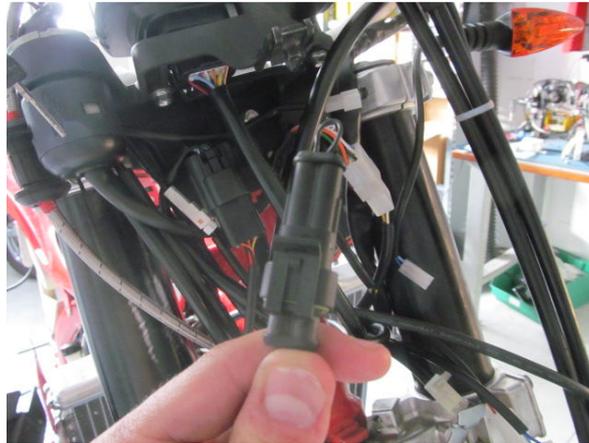
To download the map to the ECU there are two different procedures in case the bike you are mapping is a RS/SM 650 – RS/SM 500 – RS300 or a Silver Vase 440 – Gran Milano 440 – Gran Turismo 440:

RS/SM 650 – RS/SM 500 – RS300 procedure:

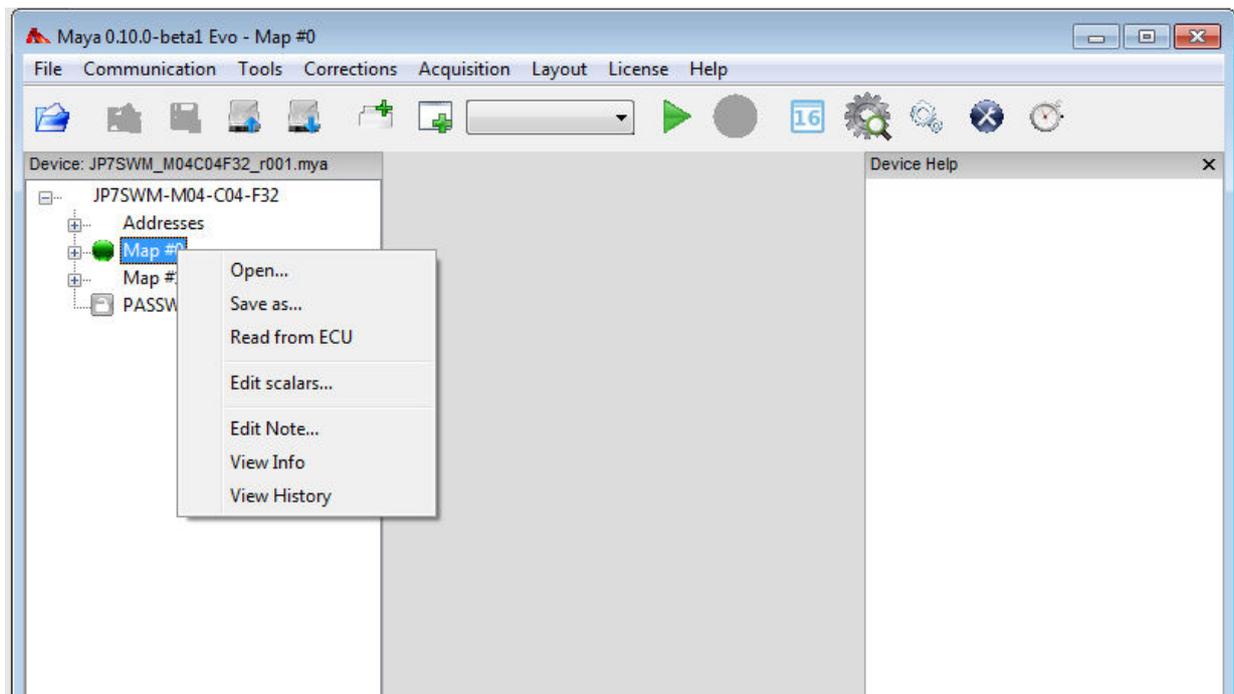
- Connect the programming cable in the interface connector and follow the “Communication with ECU” procedure
- When Maya find the ECU’s COM port, turn the key in the off position
- Connect the jumper wire:



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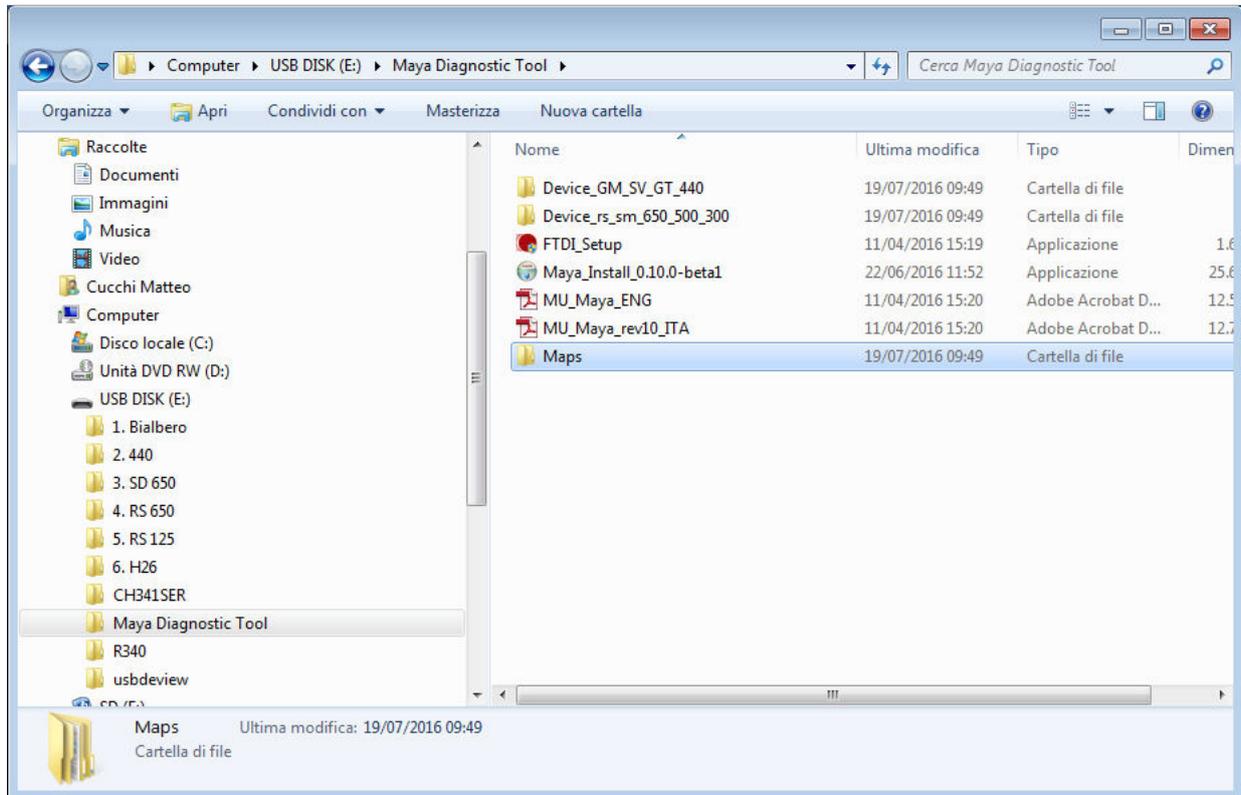
- Right click on "Map0" in Maya -> Open



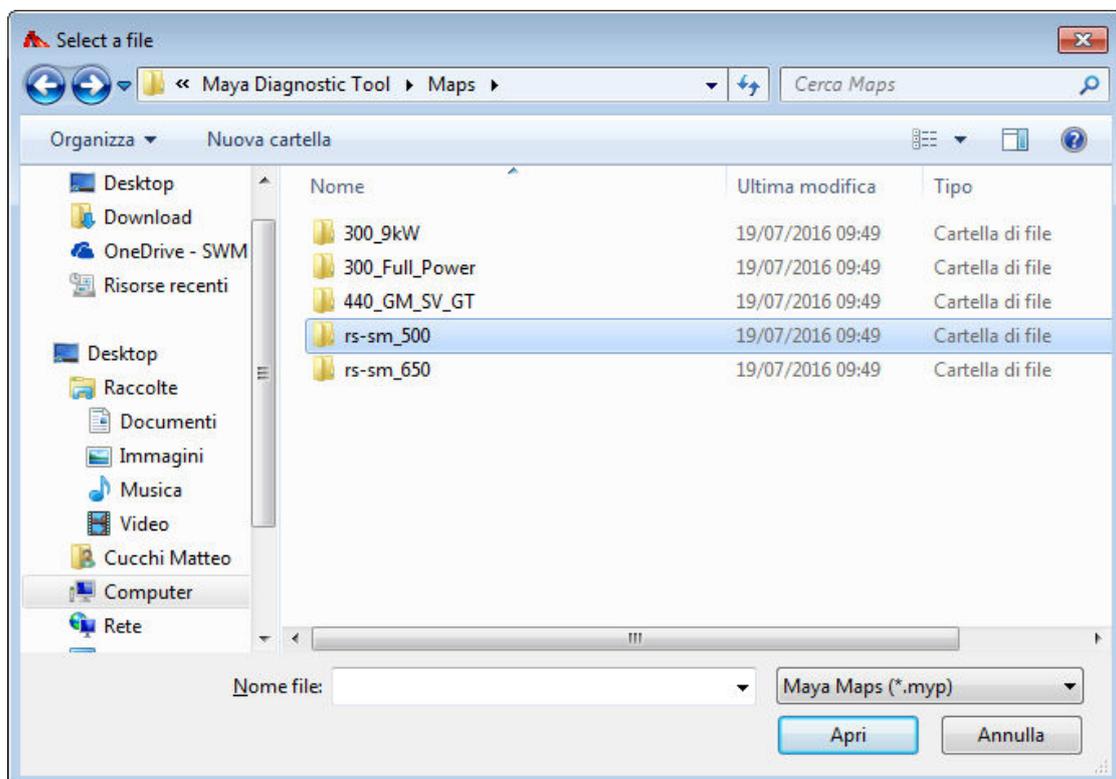
- Search the "Maps" folder under the "Maya Diagnostic Tool" folder



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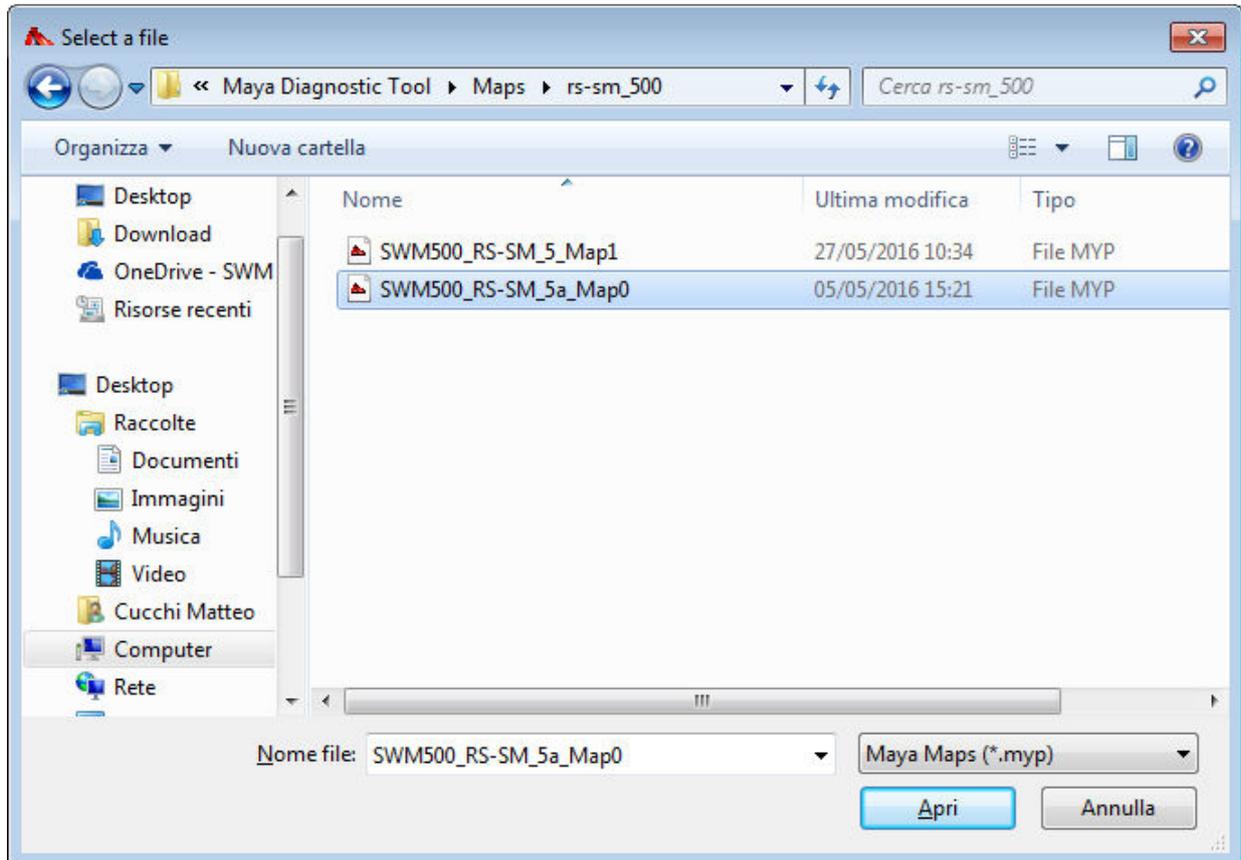


- Open the bike model's folder you need (e.g. RS-SM 500)

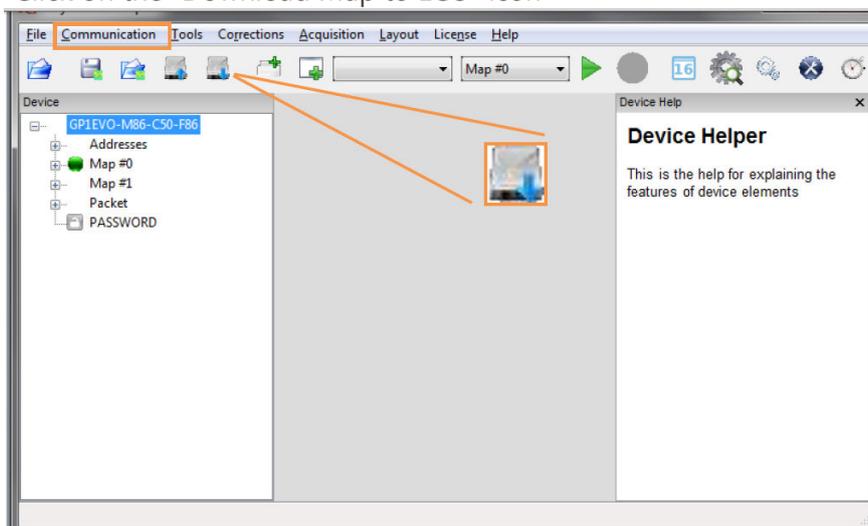




- Load the “_Map0” file



- Follow the same procedure to load the “_Map1” file in Maya
- Click on the “Download Map to ECU” icon

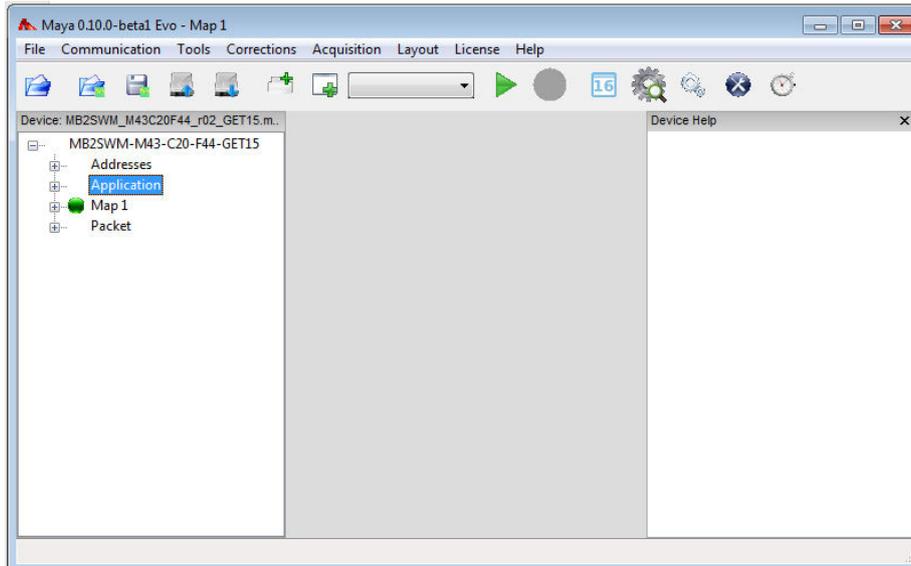




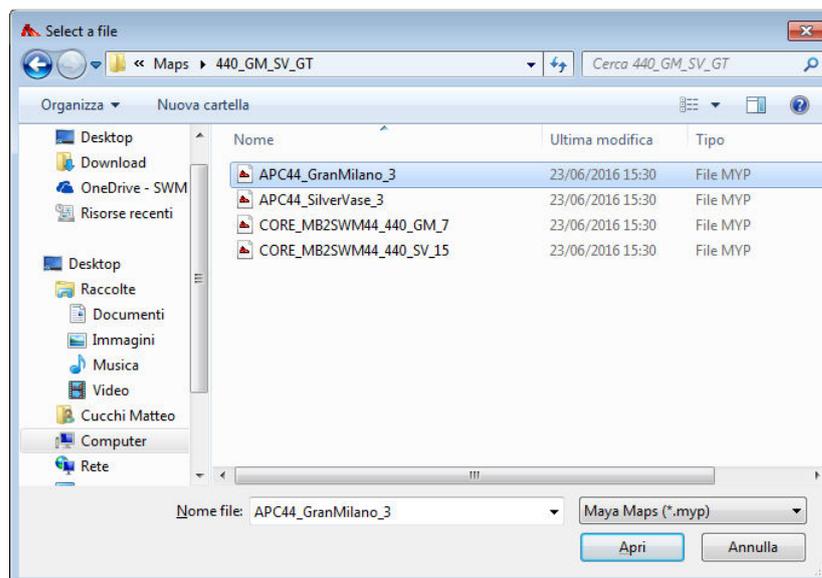
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Silver Vase 440 – Gran Milano 440 – Gran Turismo 440:

- Connect the programming cable in the interface connector and follow the “Communication with ECU” procedure
- When Maya find the ECU’s COM port, turn the key in the off position
- DO NOT Connect the jumper wire
- Right click on “Application”



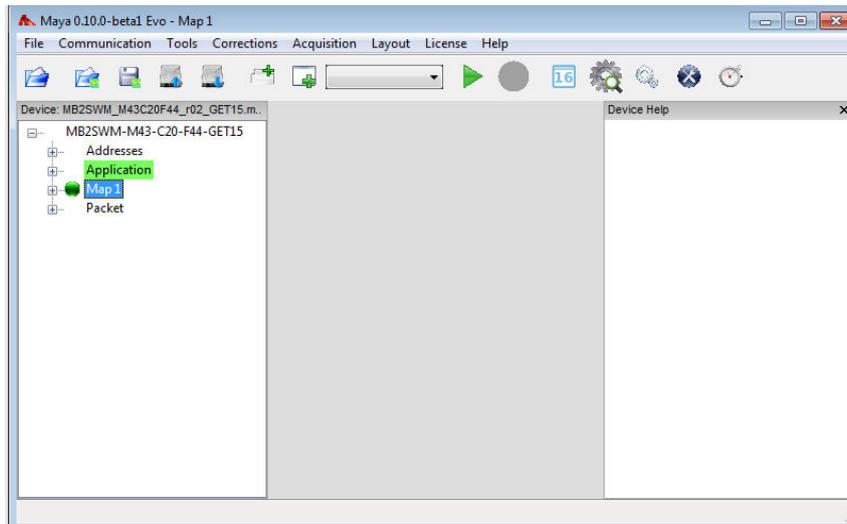
- Open -> Select the “APC” file in the bike model’s folder (under the “Maps” folder in the “Maya Diagnostic Tool”, e.g. Gran Milano as in the picture below)



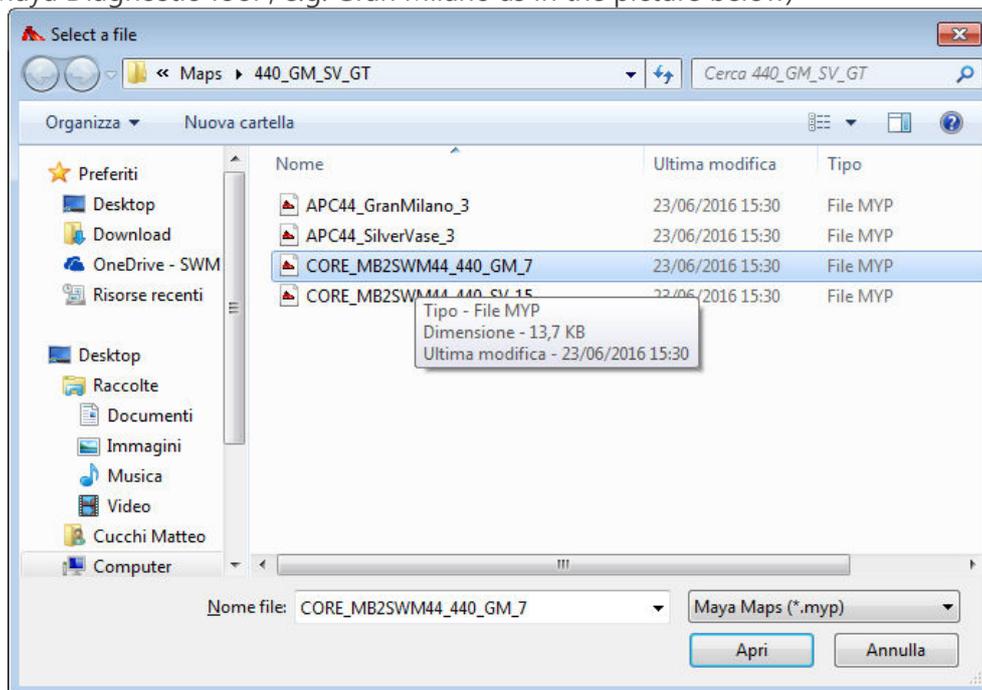
- Right click on “Map1”



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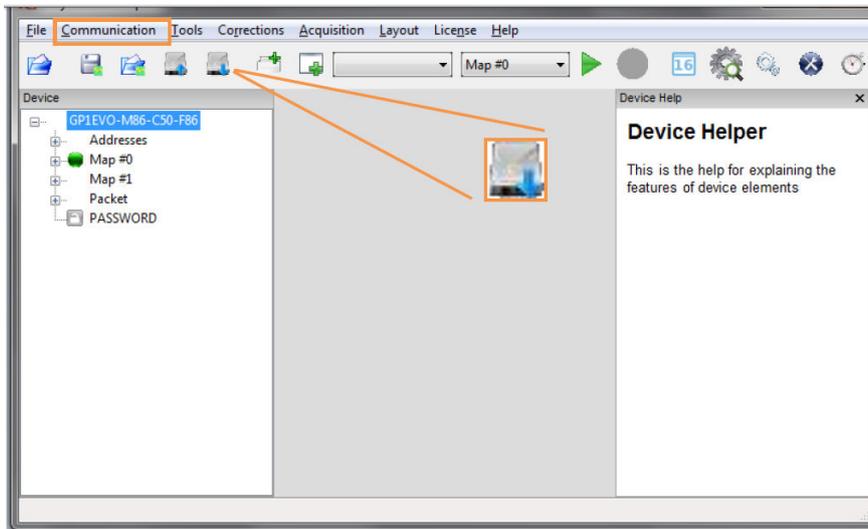
- Open -> Select the "CORE" file in the bike model's folder (under the "Maps" folder in the "Maya Diagnostic Tool", e.g. Gran Milano as in the picture below)





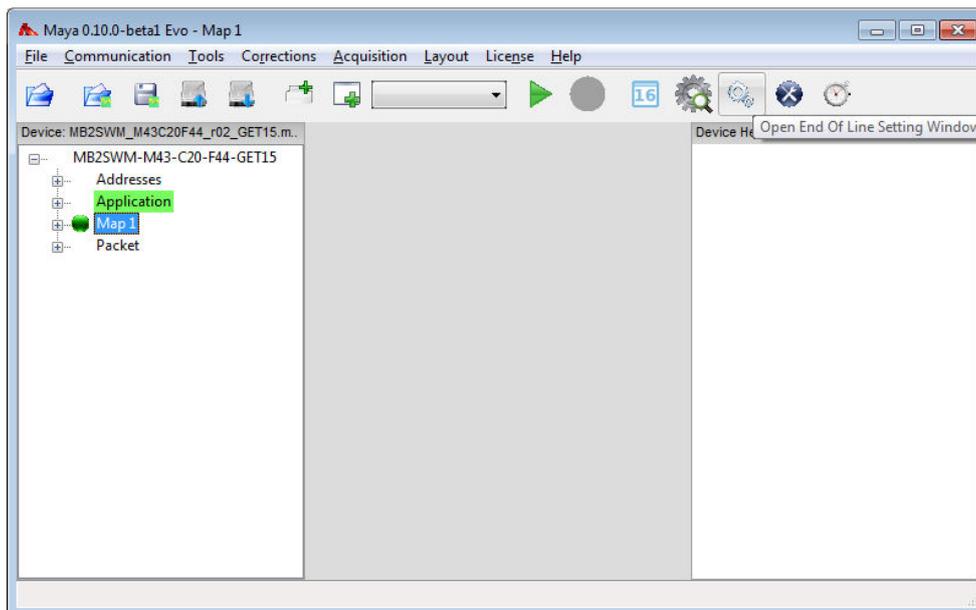
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- Click on the "Download Map to ECU" icon



TPS Calibration

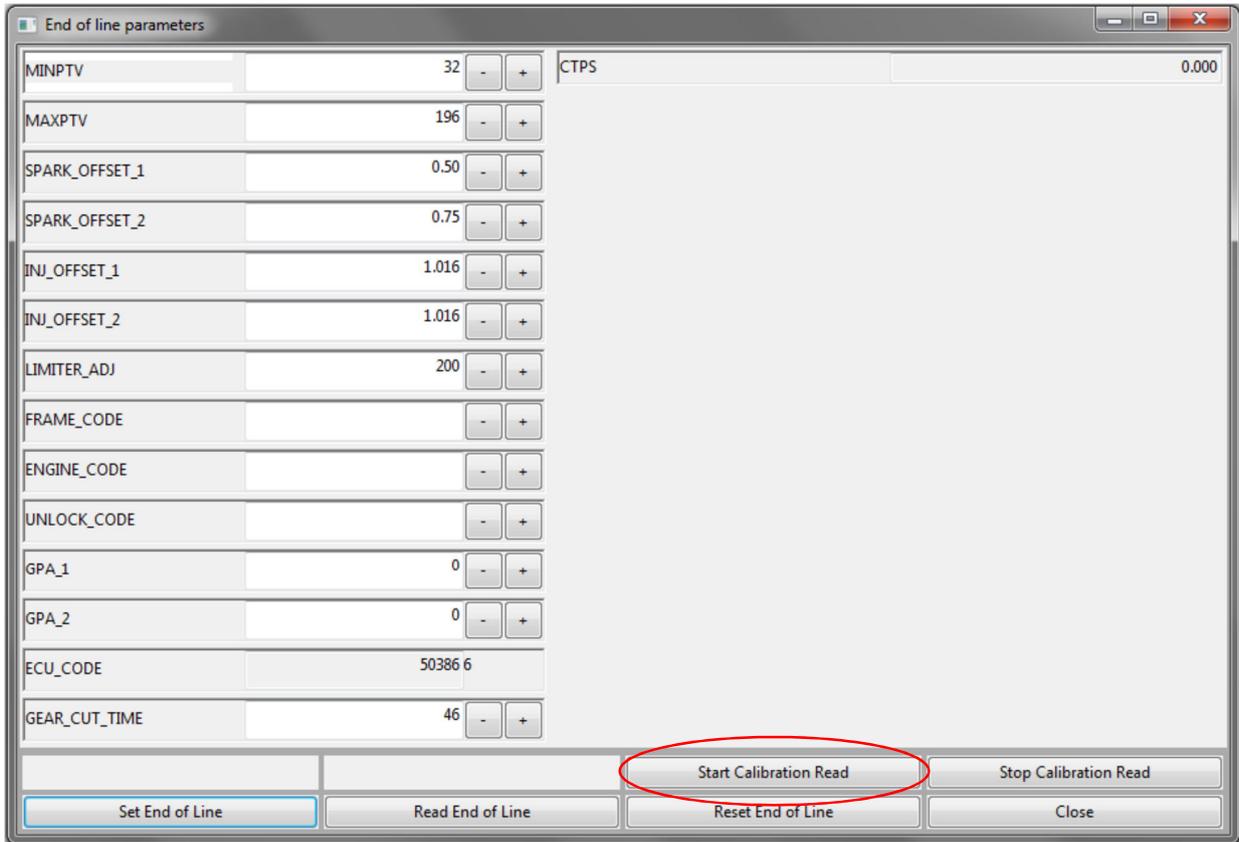
- Connect the programming cable to the interface connector and turn the key in the "on" position (lift up the side stand for 440 models)
- Open Maya, load the device file of the bike model you're checking and follow the "Communication with ECU" procedure
- Click on the "End of Line Settings" icon:



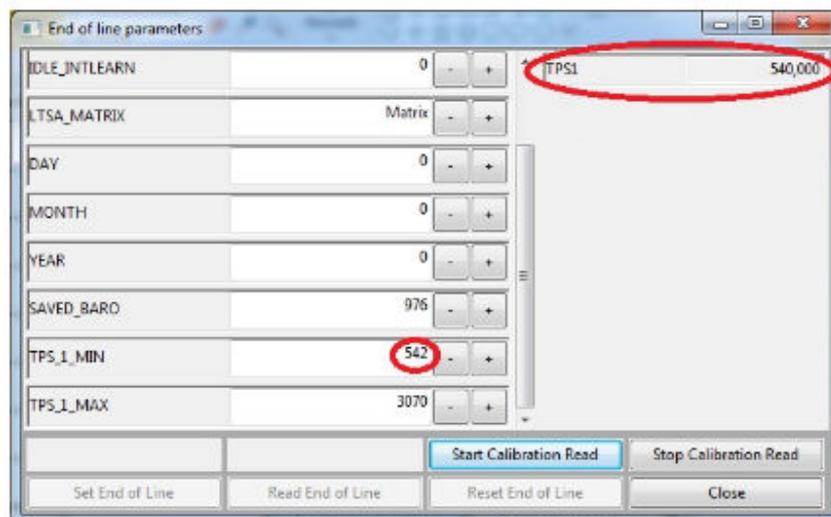


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- Click on the "Start Calibration Read" button with the throttle in full close position (zero TPS):



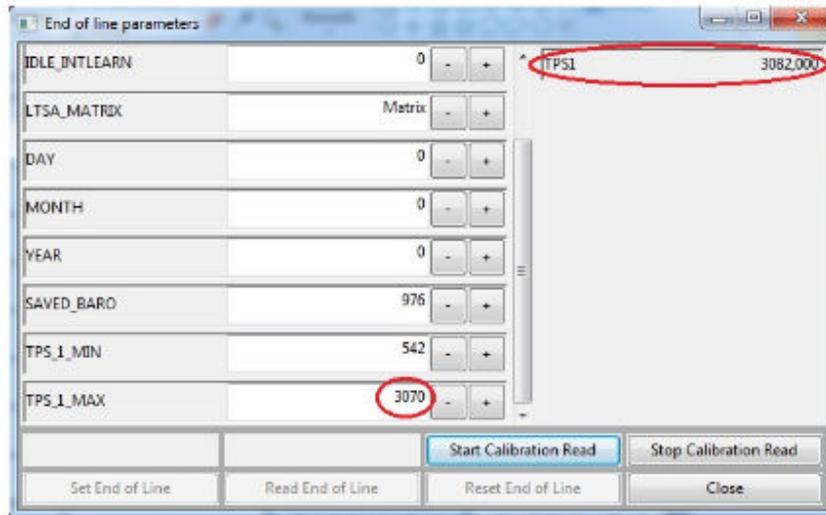
- You will see that the number in the TPS1 box (in the up-right corner of the window) starting to change. You have to put an average value of those you see, in the TPS_1_MIN box, like in the picture below:



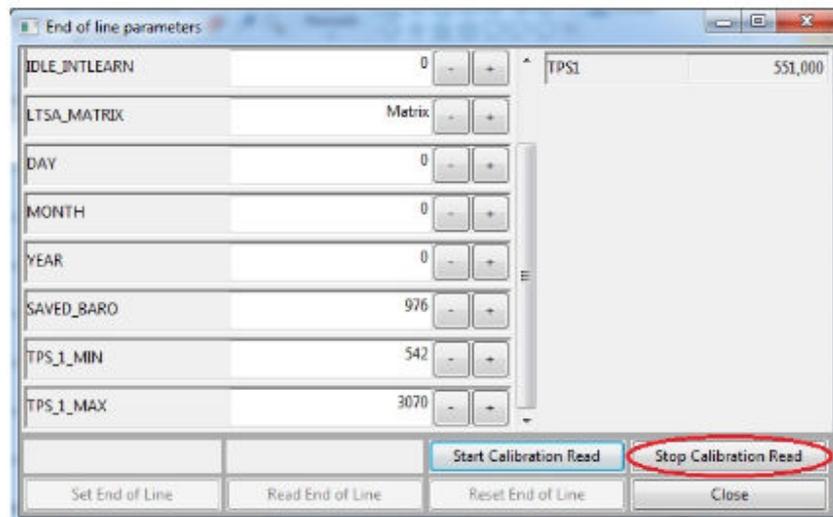


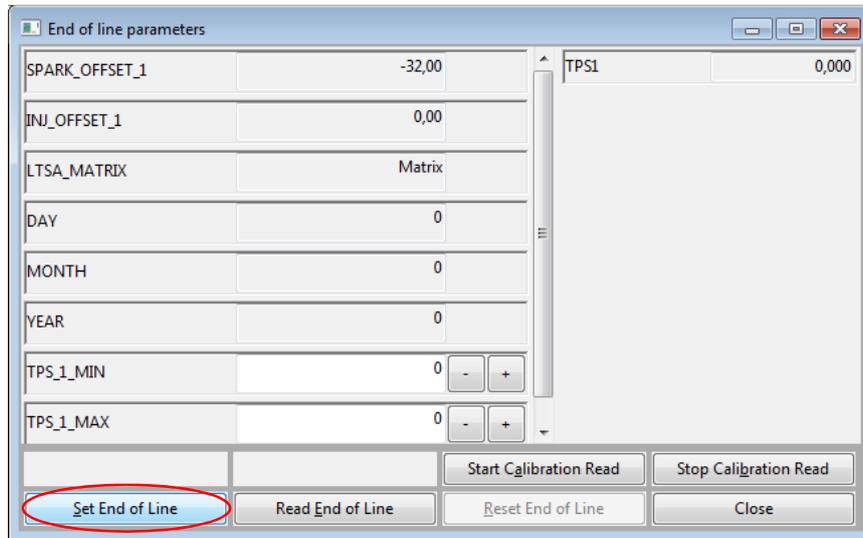
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- Fully open the throttle position and do the same procedure putting an average value of those you see in the TPS_1_MAX box, like in the picture below:



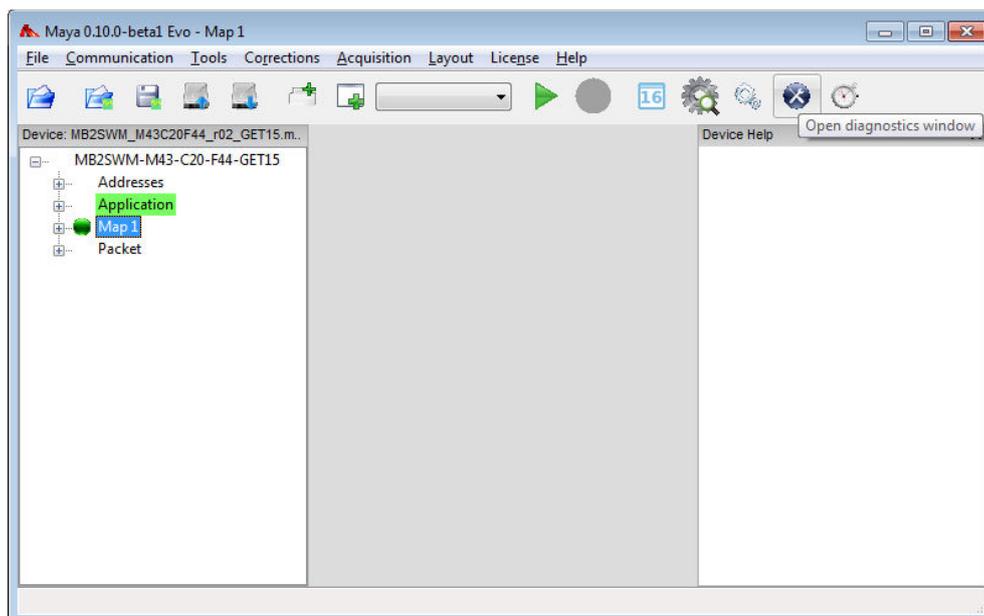
- Click on the "Stop Calibration Read" button and then to the "Set End of Line" button like in the two following pictures:





Checking Diagnostic

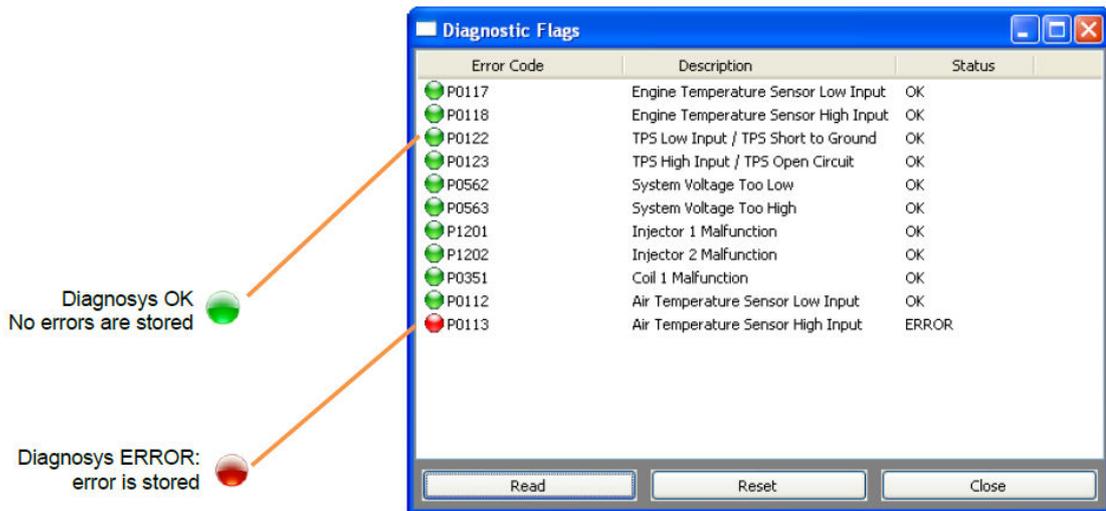
- Connect the programming cable to the interface connector and turn the key in the "on" position (lift up the side stand for 440 models)
- Open Maya, load the device file of the bike model you're checking and follow the "Communication with ECU" procedure
- Click on the "Open Diagnostic Window" icon:



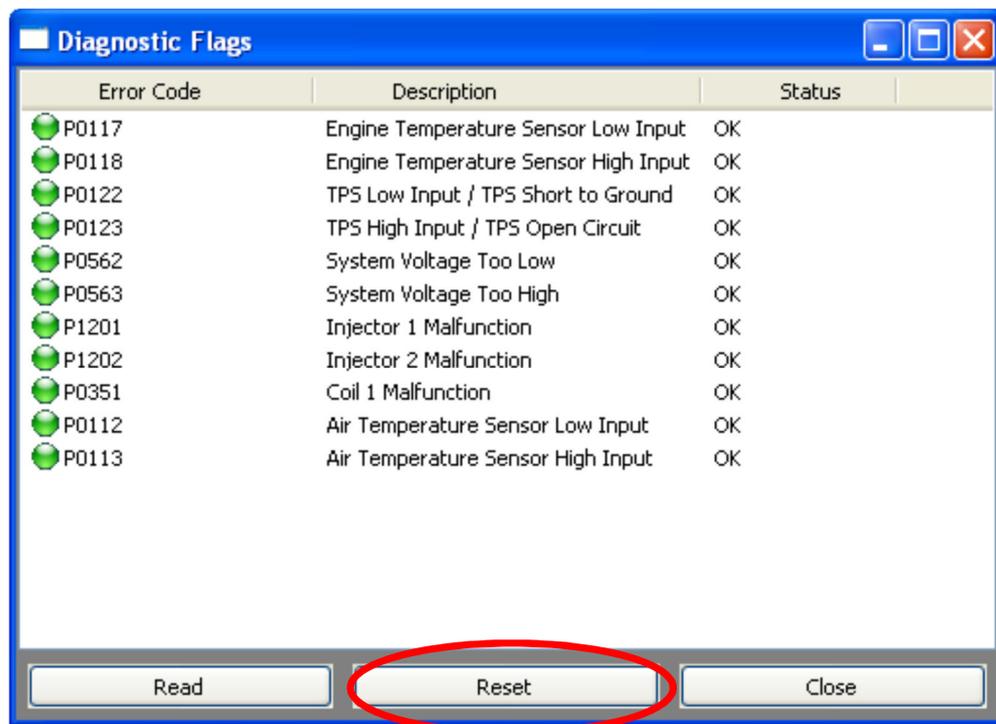


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- Turn the key in the “on” position and then click on the “Read” button



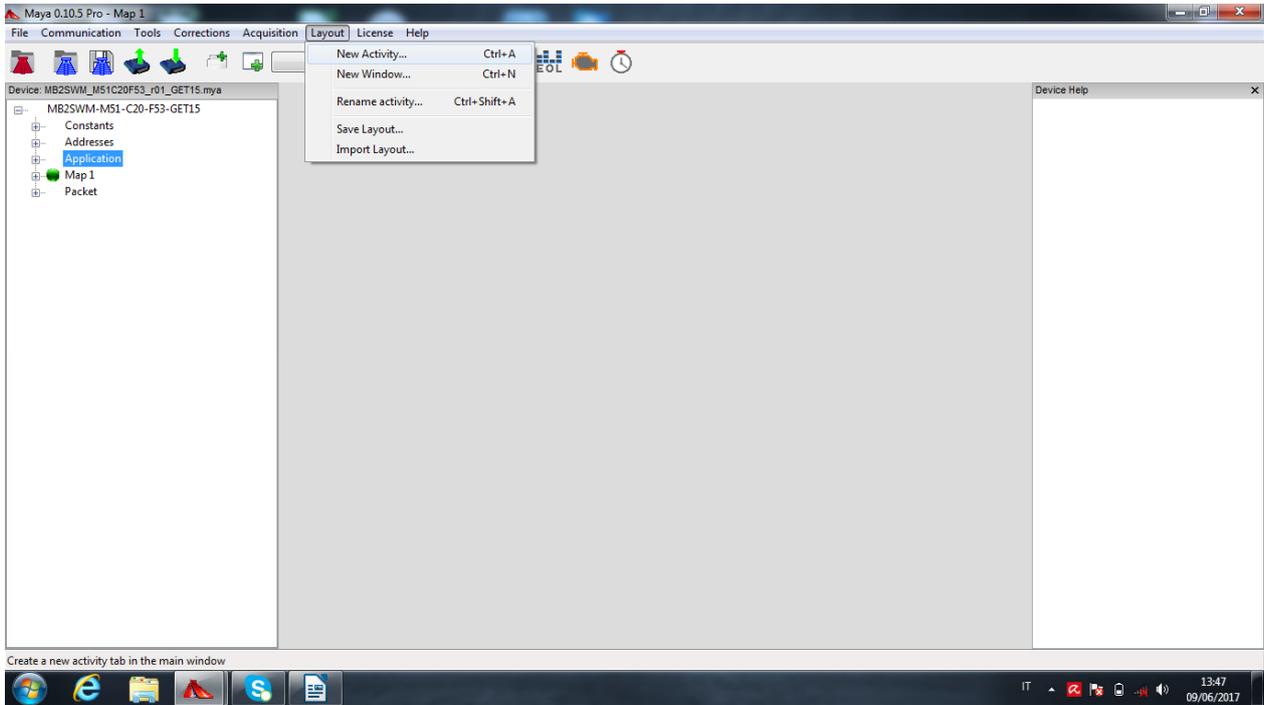
- If there are red lights press the “Reset” button and the “Read” again to check the actual status of the ECU. it is possible that an error that is visualized in the error window is not anymore seen by the ECU. The ECU in any case stores in its memory events occurred during functioning, therefore in the diagnosis window the error is stored (false error).



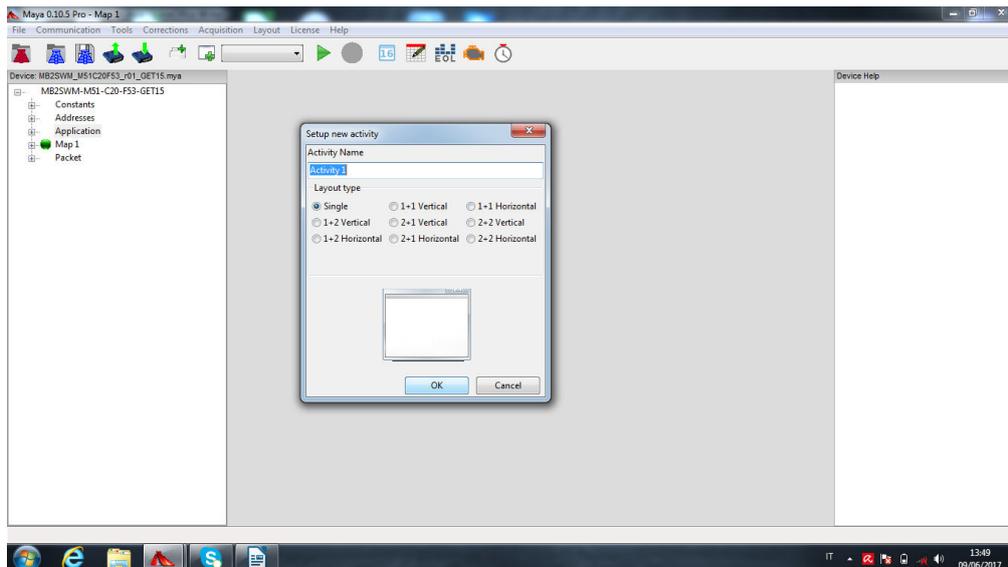


Checking Parameters

To open the engine functioning parameters' window, click on "Layout" → "New Activity":



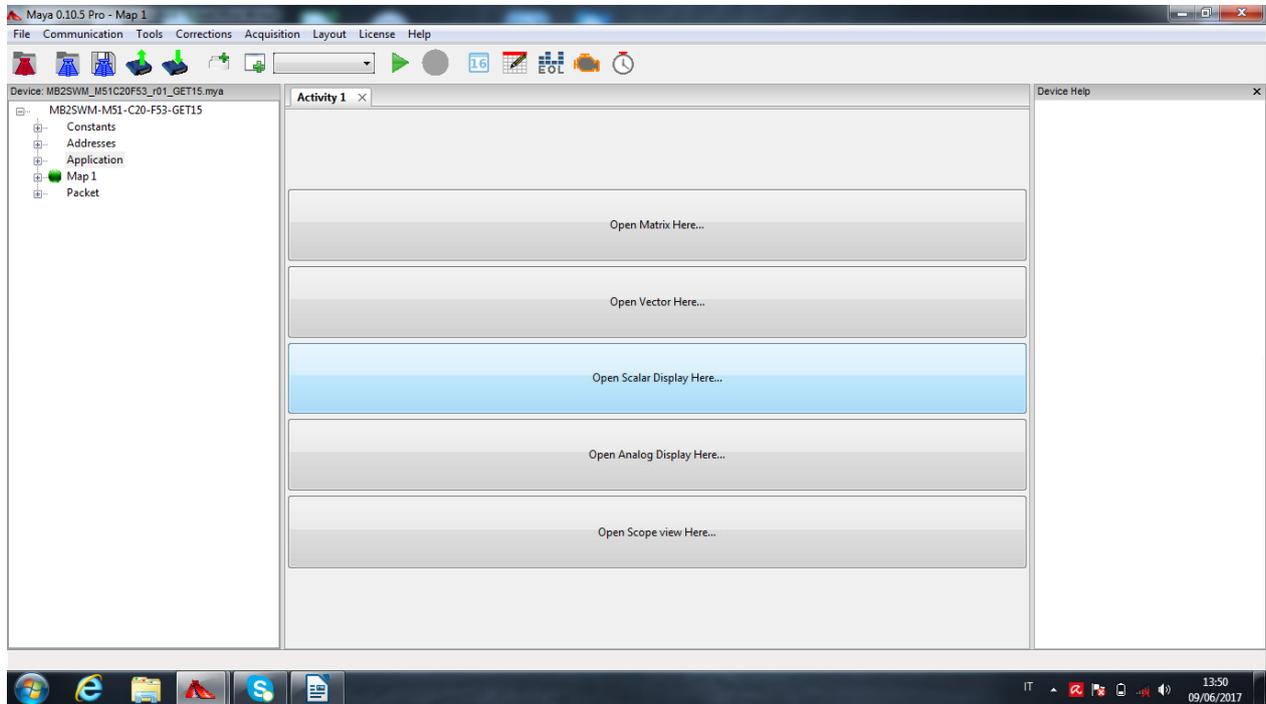
Then click on "OK" button when the following window appears:



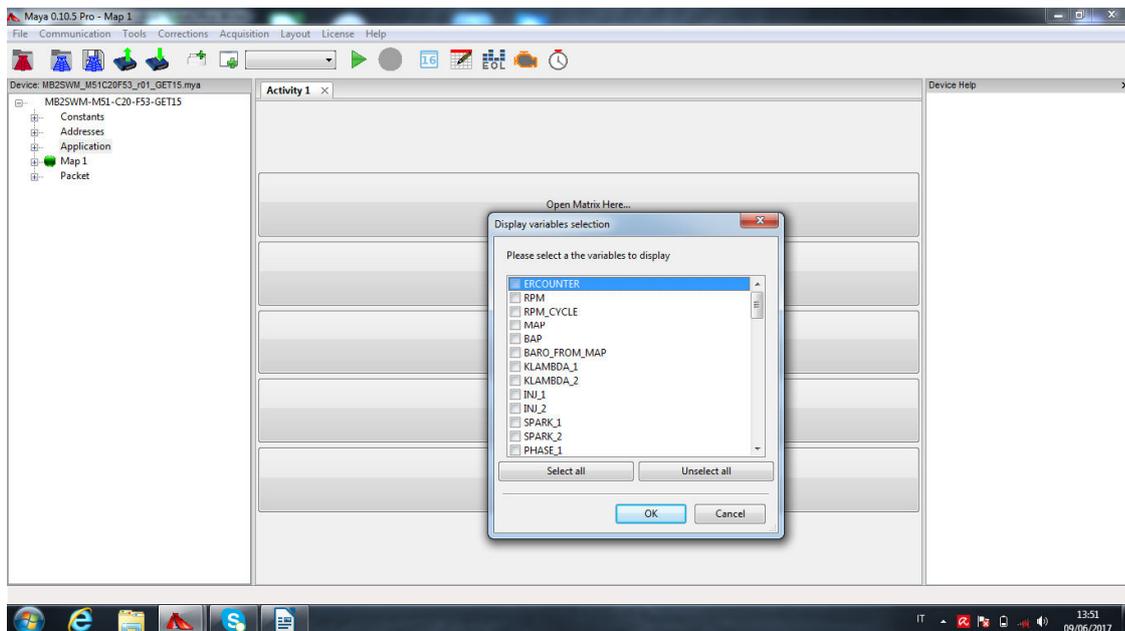


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Now click on "Open Scalar Display":



and then select the parameters in the scroll list:





Below you'll find the list of the most important parameters and for some of them, the normal values that they assumed during engine functioning:

- **RPM:** Engine speed
- **MAP:** Mainfold Air Pressure
- **BAP:** Barometric Air Pressure
- **BARO_FROM_MAP:** Barometric Air Pressure obtained from the input of the MAP sensor
- **K_LAMBDA1:** O2 sensor correction on injection time. Usually is a value close to **1** and may moves from **0,7** to **1,2**. If you see a constant value of **0,6** or **1,3** there may be a problem on the sensor or on the throttle body (see the description of the MAP_BAP_RATIO parameter)
- **INJ_1:** Actual injection time on cylinder 1
- **SPARK_1:** Actual spark advance on cylinder 1
- **PHASE_1:** Actual injection angle before TDC
- **LAMBDA_OFF_COUNT:** Time interval after which the O2 sensor starts to work
- **THROTTLE_16:** Actual position of the ThrottleValve in % (must vary from a minimum value of **0** to a maximum value of **100**)
- **AIR_T:** Actual intake air temperature in °C
- **ENGINE_T:** For water cooled engines is the actual water temperature in the engine cooling jacket. For air cooled engines is the actual cylinder head temperature
- **BATT_V1:** Actual battery voltage (it should be around **12.5 V** in key on and raise to **14 V** when the bike is running; on 440 classic models it should raise to **13.3 V** with engine running)
- **GEAR:** Actual gear used. When this value is **0** the Neutral indicator on the dashboard must be active. On models with a Gear Position Sensor (RS300, RS/SM500, RS650, SD650) it gives every gear number. On RS/SM125 and 440 classic models it's only a neutral indicator
- **STEPPER:** Actual position of the stepper motor or of the idle solenoid valve. This values should decrease when the engine starts to run from key on
- **MAP_BAP_RATIO:** It's the ratio of MAP and BAP values. It's calculated when the bike is kept in idle and gives an information about the air flow when the throttle valve is in close position. It's really important for the good working of the bike that it's value is close to the ones in following list for each model:

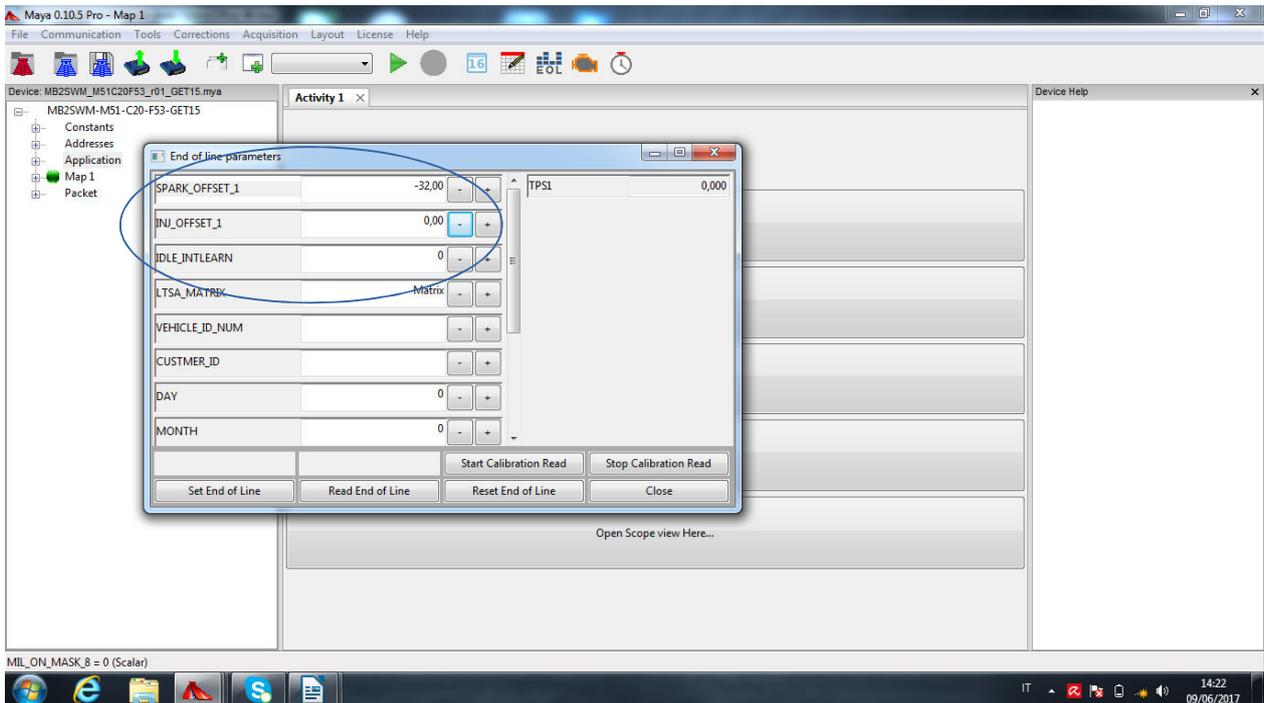
MODEL	MAP_BAP_RATIO
RS300	400
RS/SM 500	315
RS/SD 650	300
RS/SM 125	750



OFFSET CHECKING:

Another important check to do is the offset check.

To do it click on the EOL settings window (as in the TPS calibration procedure) and go in the upper side:



You'll find the 2 parameters SPARK_OFFSET_1, INJ_OFFSET_1

Their correct values should be respectively:

SPARK_OFFSET_1 = 0,00

INJ_OFFSET_1 = 0,00 (or eventually 1)

If you see a different value (like -32,00 in the image) you must change it to the correct one.



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If the software don't let you change the values please contact us.

This values are always checked by SWM during the EOL bike test, but in rare cases (especially on 440 Euro 3 classic models) they change when a voltage battery drop happens (full discharge of battery or fuse break).
