



HINOWA TTC MACHINE SOFTWARE UPDATE PROCEDURE

The present procedure details how to update the machine main software on Hinowa TTC machines. In particular, each chapters describes how to carry out one step.

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- ii. **SOFTWARE TTC-DOWNLOADER INSTALLATION → (from page n.3)**
- iii. **MAIN SOFTWARE DOWNLOAD ON THE MASTER BOARD BY TTC-DOWNLOADER → (from page n.8)**
- iv. **MACHINE MAIN SOFTWARE INSTALLATION AND SETTING → (from page n.16)**
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MACHINE SOFTWARE DOWNLOADING REQUIRED KIT

- Peak cable and drivers (PART CODE: 26582800) →



- Peak cable additional termination (PART CODE: 07844200) →



- Ramhino cable tool (PART CODE: 17162500) →



To communicate with the Hinowa TTC machines and to download the software on their master board (ECM1), Ramhino needs to be updated at least to the software release 7.0.

In order to connect Ramhino 7.0 (or following) to the Hinowa TTC machines, the Peak cable needs to be updated with the additional termination.



Note: Additional termination does not give any problem with the other Hinowa machines, so that it can be left installed all the time.

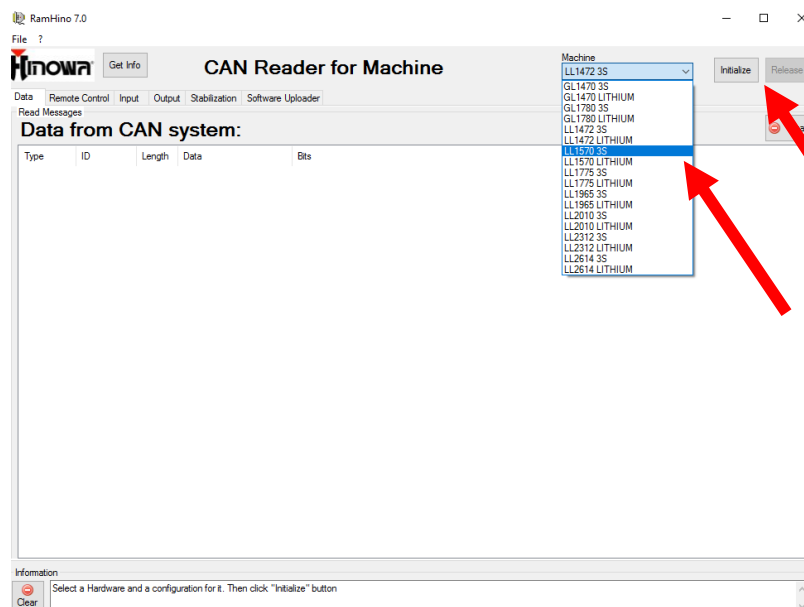
SOFTWARE TTC-DOWNLOADER INSTALLATION:

ATTENTION: Verify that the lead battery is fully charge, otherwise plug the machine to the electric network

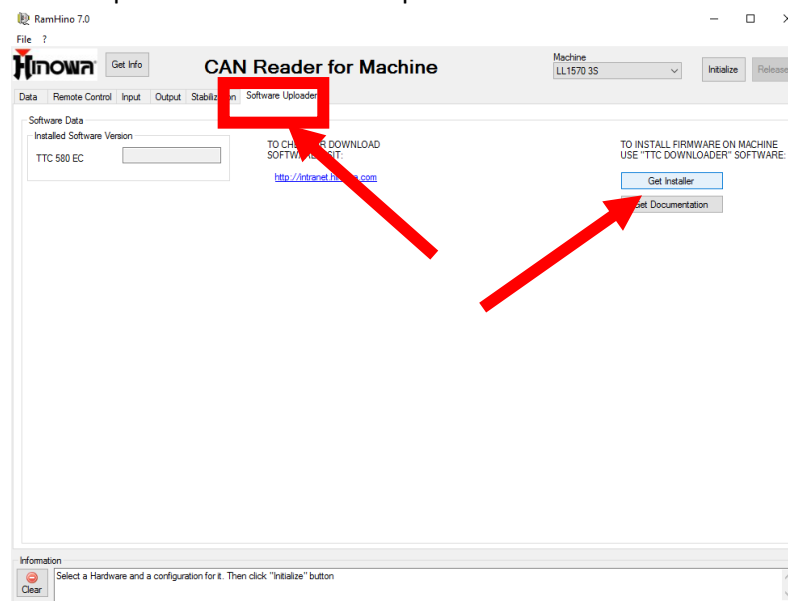
1. Open Ramhino 7.0 (or following) clicking on its icon.



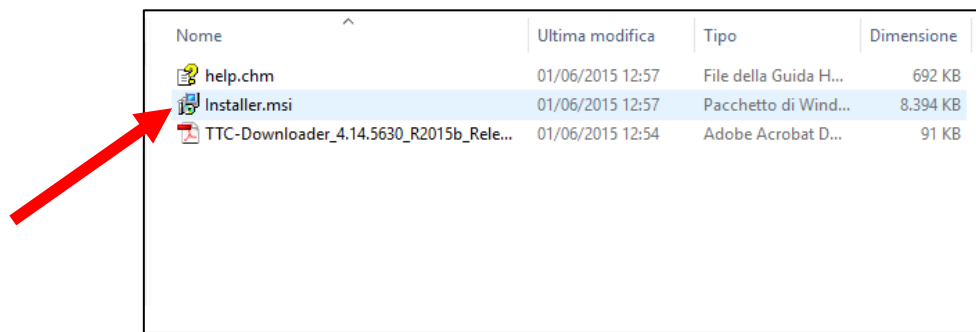
2. Select the Hinowa TTC machine model from the drop-down menu and then press the button "Initialize". If no machine is connected, and no action occurs, proceed to the next step.



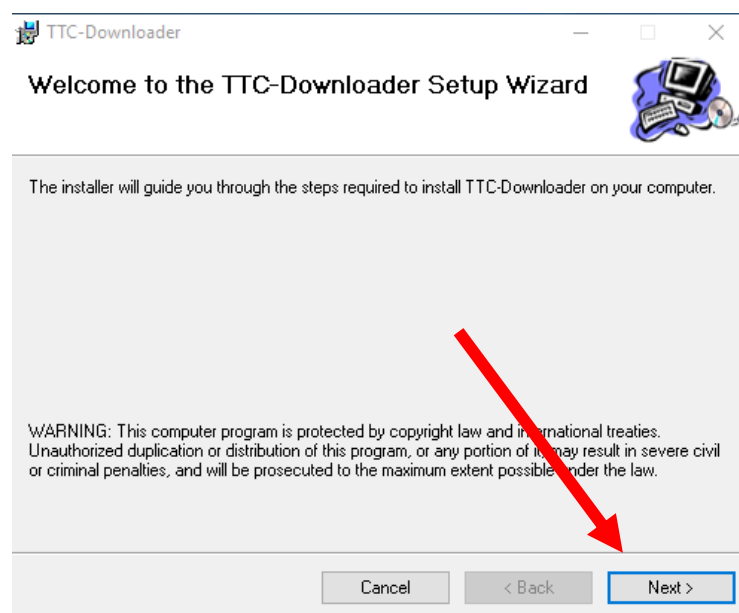
3. Click on the "Software Uploader" label and then press the "Get Installer" button.



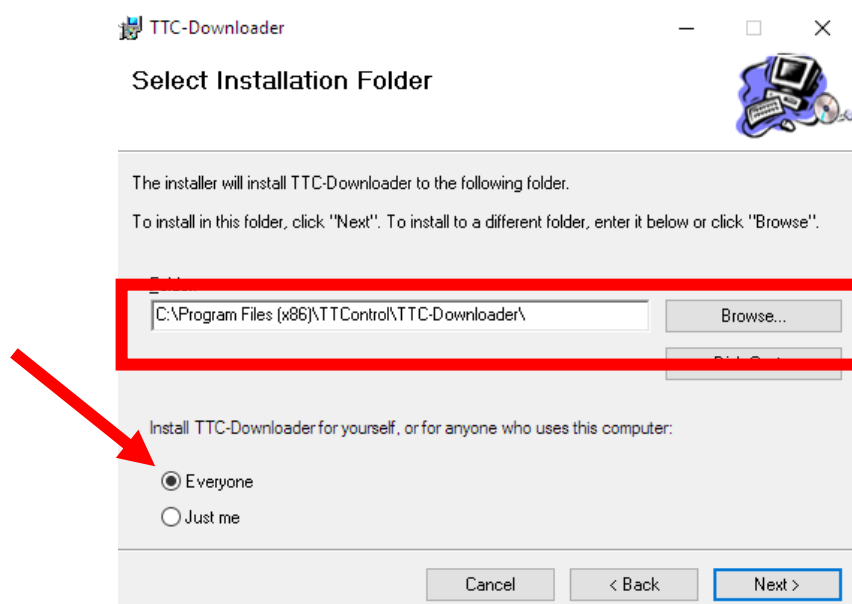
4. From the folder that has been opened, click on the “Installer.msi” icon to start the program installation.



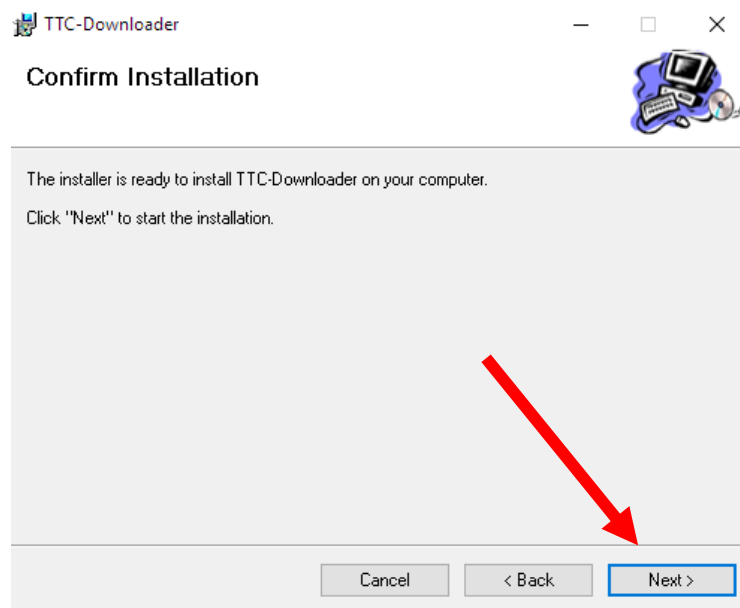
5. At the first window, press “next”.



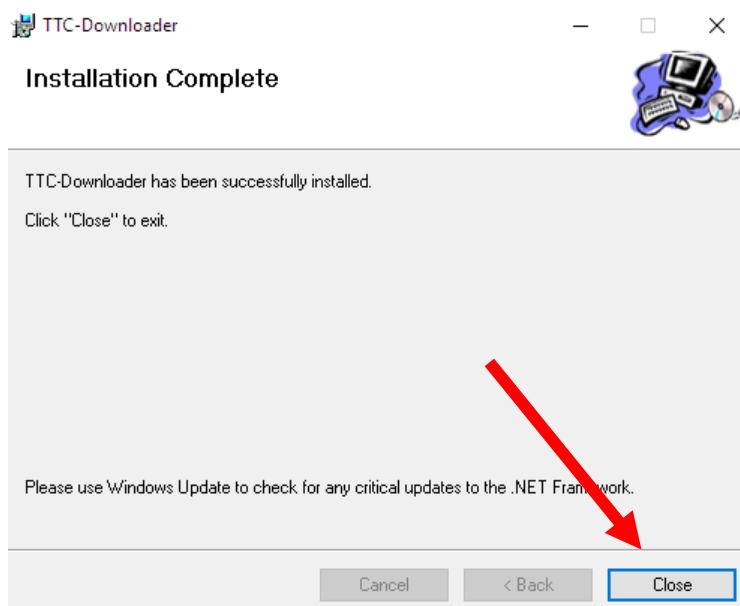
6. Chose the installation folder location, as default the program is installed into the folder “Program File” of Windows®. Select the option “Everyone”, then press “Next”.




7. Press "Next" to start the installation.

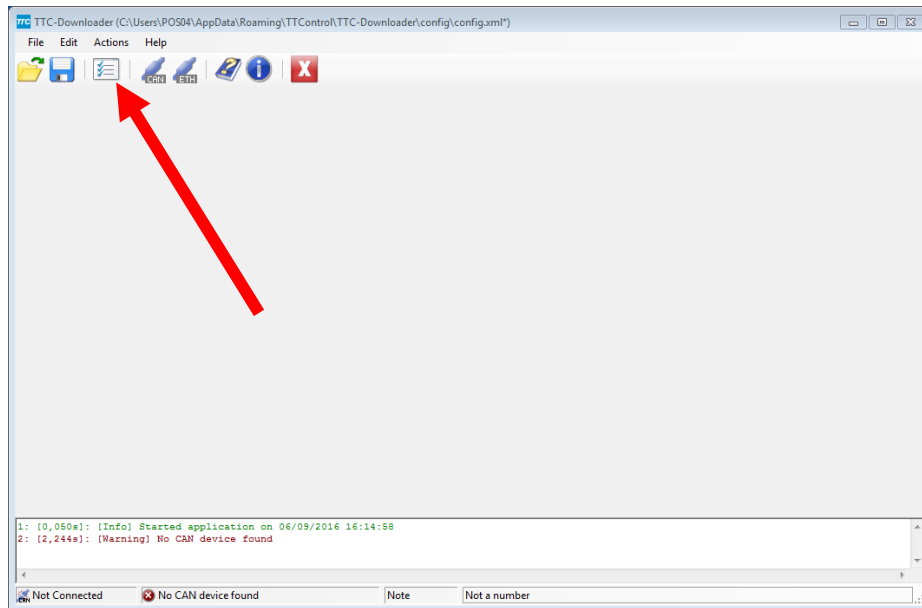


8. At the end of the installation press "Close".

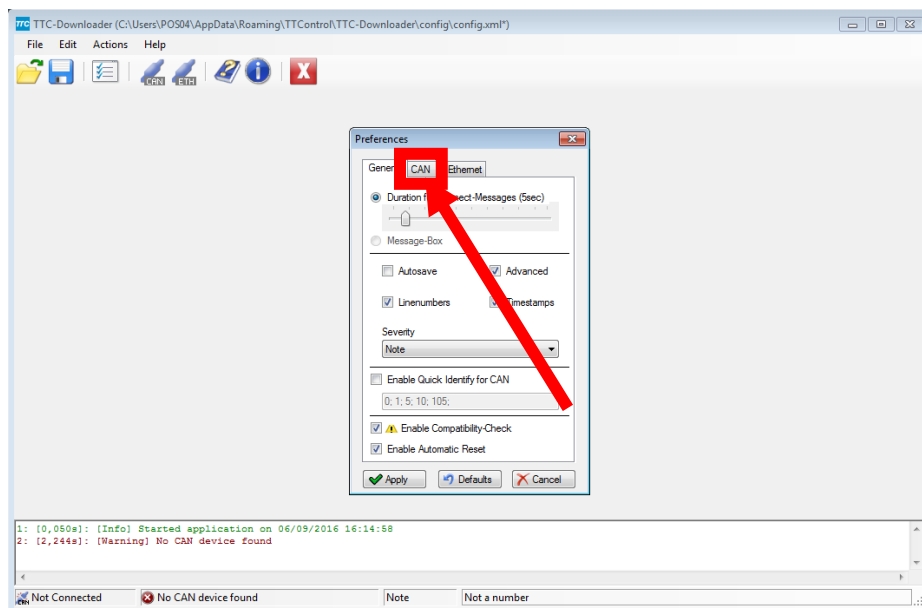


9. Open the program “TTC-Downloader” just installed. You can find it on the path previously chosen at point number 6.

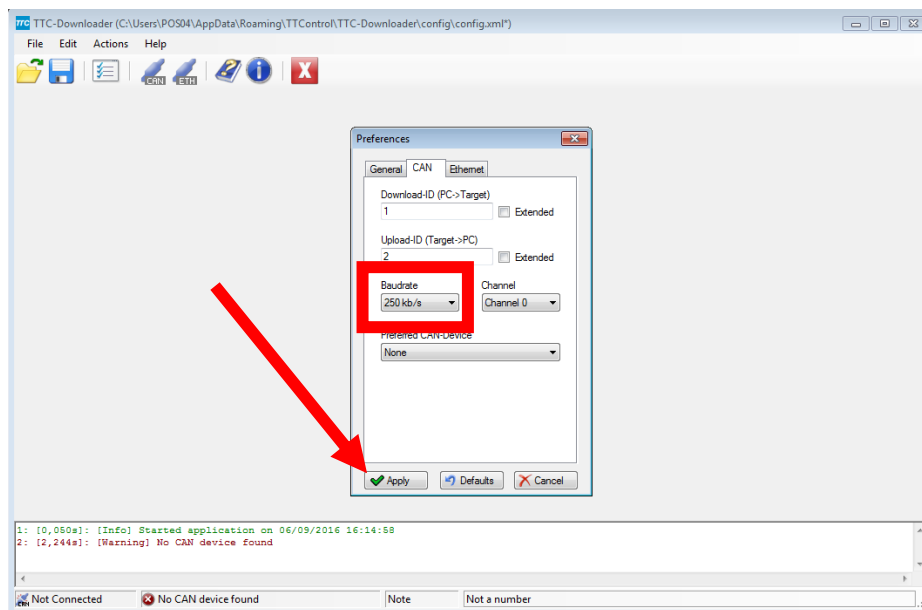
Press the button  “Edit Application Preferences” on the top-left corner.



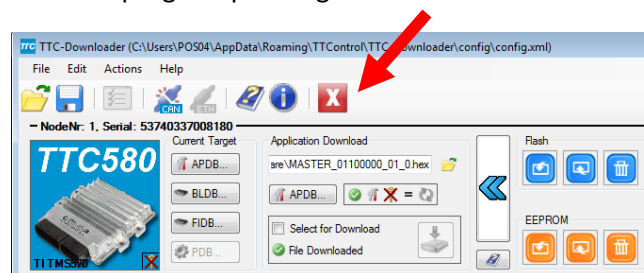
10. Press the label “CAN” as indicated below.



11. In the field “Baudrate” select 250kb/s and then press “Apply” to validate it.



12. Close the TTC-Downloader program pressing the white X shown below.

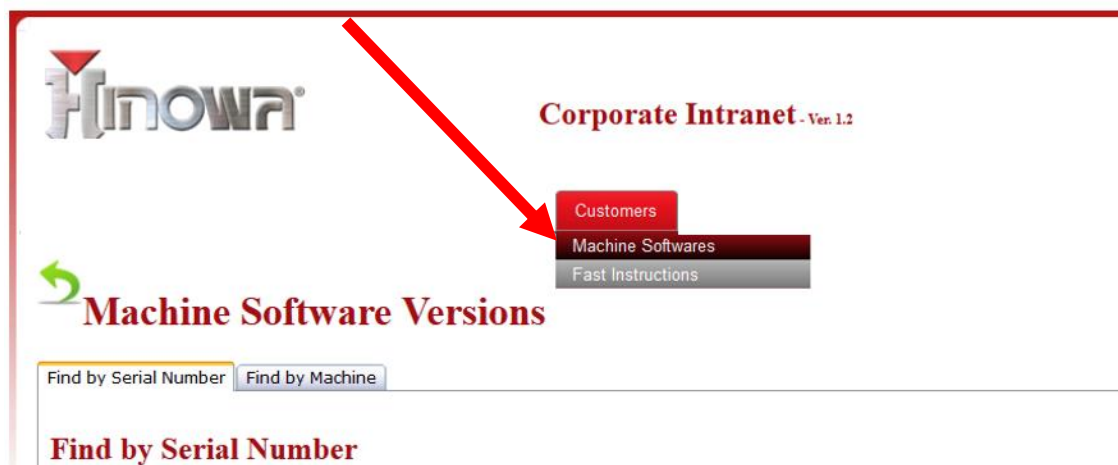



MAIN SOFTWARE DOWNLOAD ON THE MASTER BOARD BY TTC-DOWNLOADER:

13. Enter into your account on Hinowa Intranet by the link <http://intranet.hinowa.com>
The same link can be found at the Ramhino "Software Uploader" page.
To do that, it is necessary to LOG IN your own USER and PASSWORD.



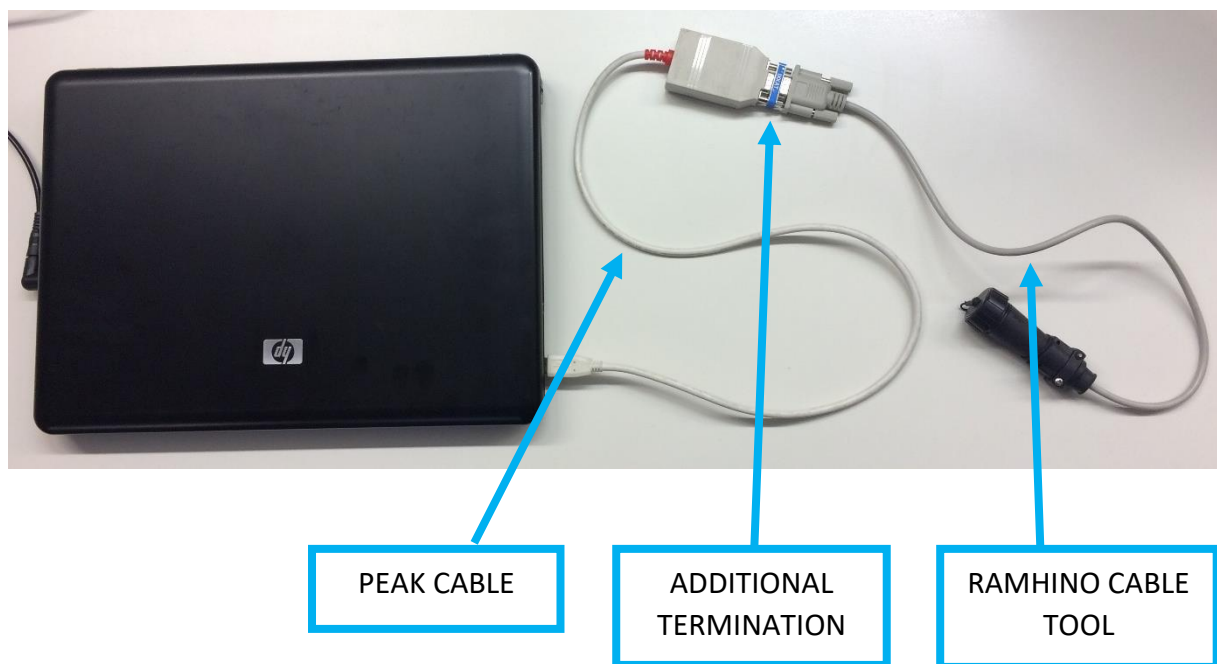
14. Chose the label "Customers" and then "Machine Softwares".



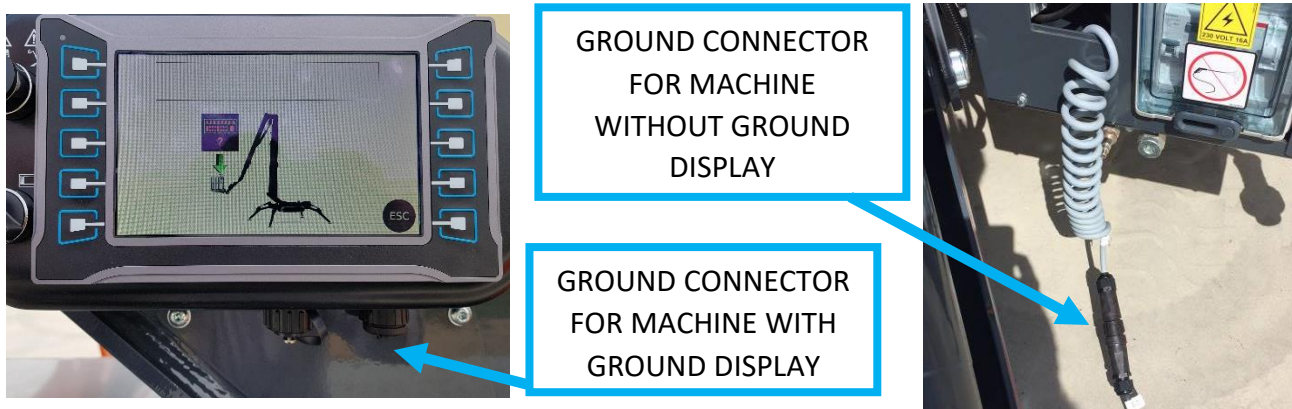
15. Insert your machine serial number and click “Search”, then select the machine main software and download it by clicking on  “Download Selected”.



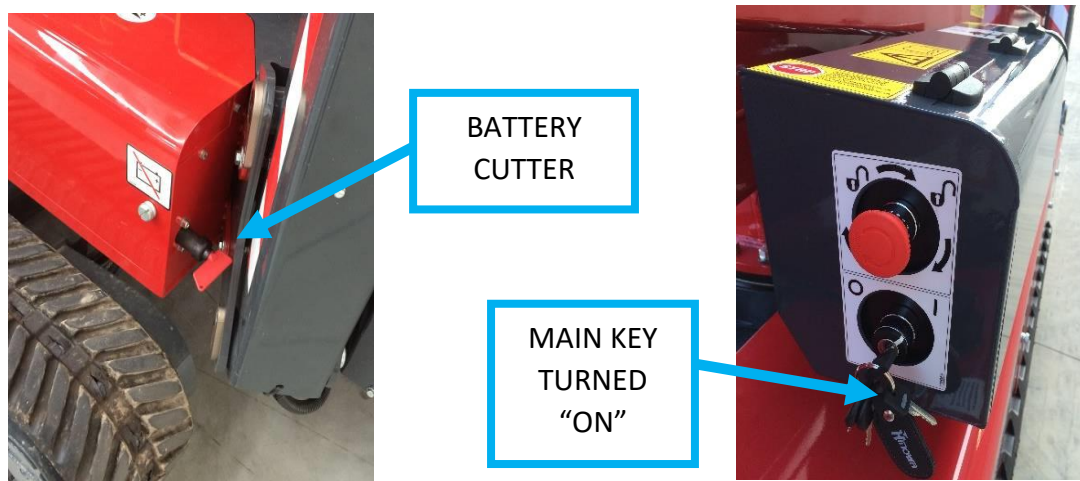
16. Connect Peak cable, through the additional termination, to the Ramhino cable tool.



17. Through those cables, connect the laptop, where the TTC-Downloader is installed, to the connector on the remote control ground cable.



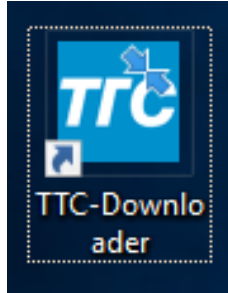
18. Switch battery cutter ON and turn ON the machine main key.



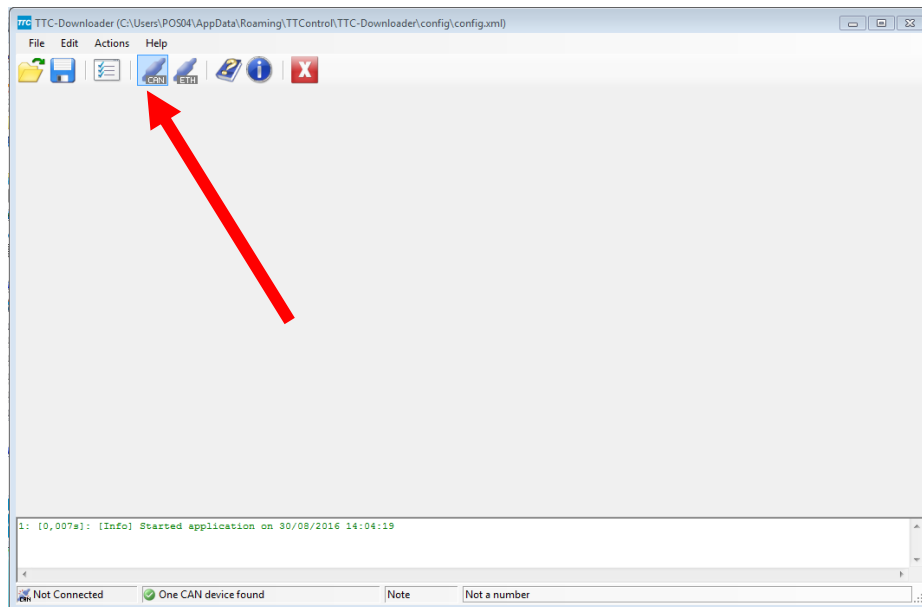
19. Close and align the machine, and make sure to have all the machine parameters available for when they will be verified or settled after the software update, otherwise they should be checked and recorded reading the remote control menus.
20. Make sure to not upload the software by the laptop while an uploading on the modem or from the modem is in progress, in case of doubt disconnect the modem bigger plug.



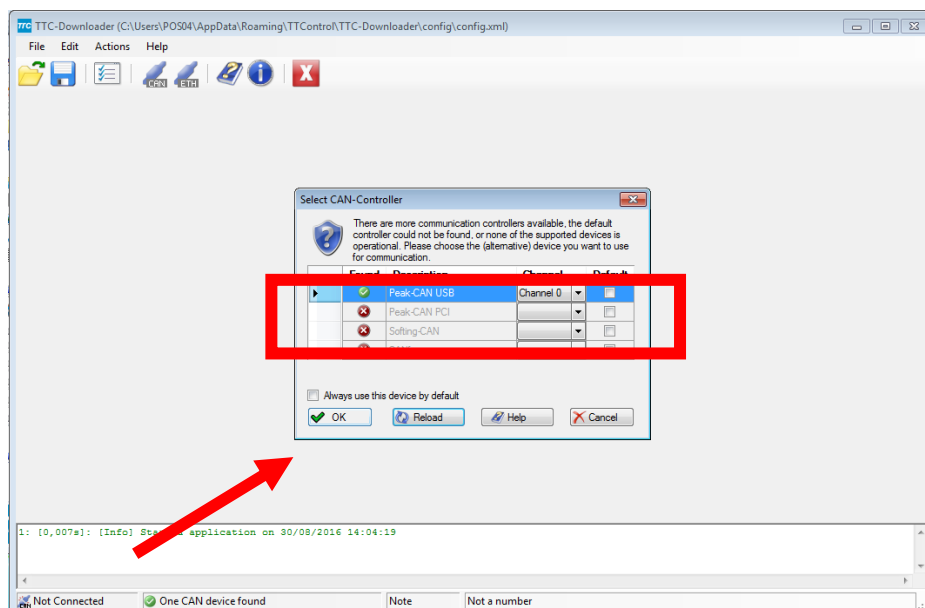
21. Open the program “TTC-Downloader” clicking on its icon.



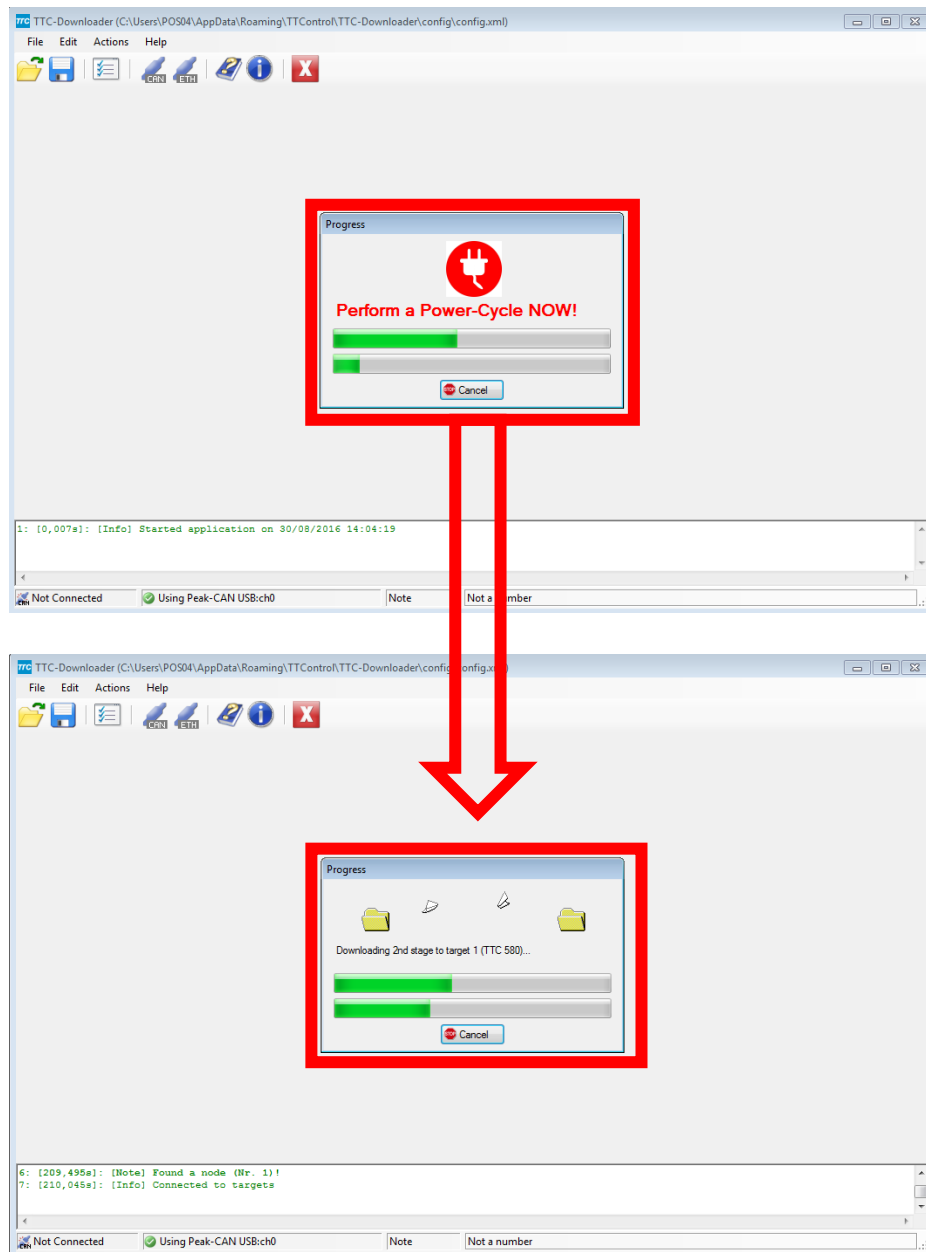
22. Press the button  “CAN”.




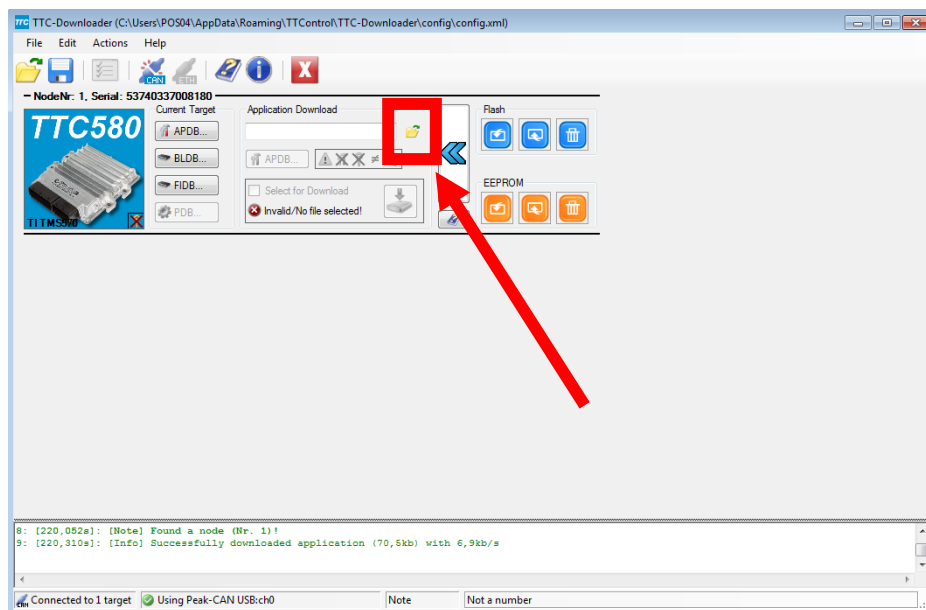
23. Verify that the Peak cable has been properly recognized by the laptop, as in the picture below. Otherwise press “Reload”. When the Peak cable has been properly recognized, press “OK”



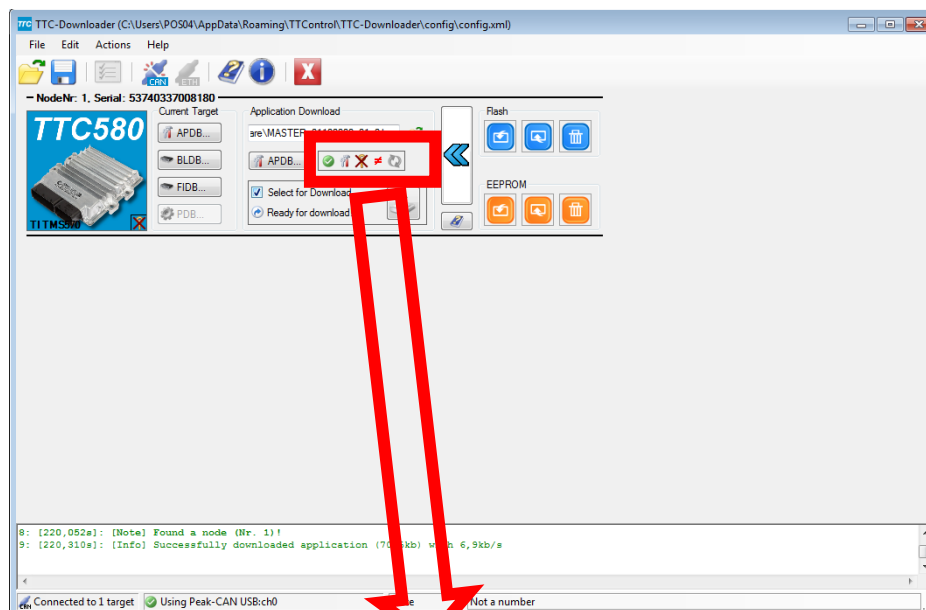
24. Wait that the program connects to the machine and check software possibly already present on the master board (ECM1).
Do not switch off the machine till the connection is achieved.



25. Press the icon of the yellow folder  as indicated here below, and select the software to download on the master board (ECM1).




26. Verify the icons under the software name with the indication below.

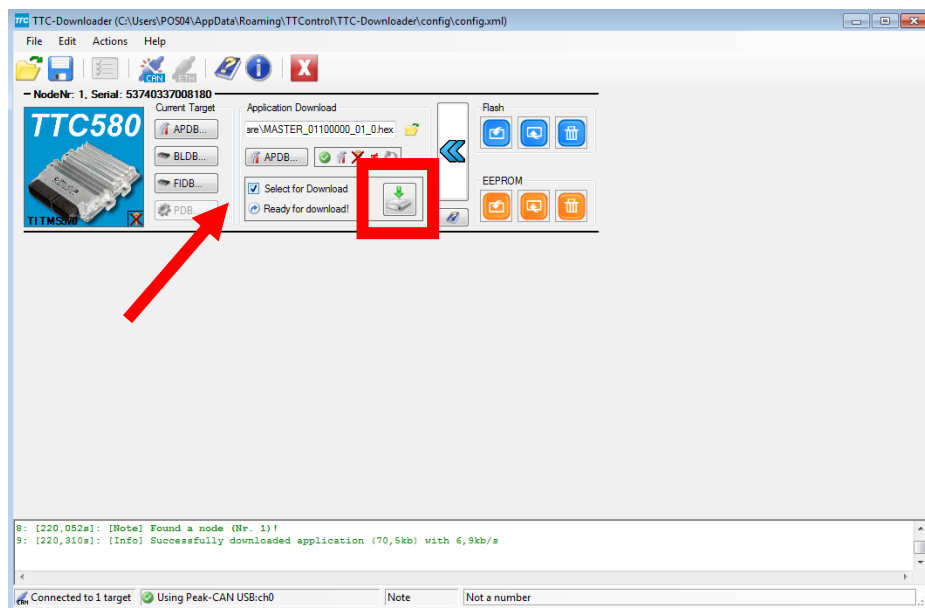


The file selected is adequate to be uploaded on the master board

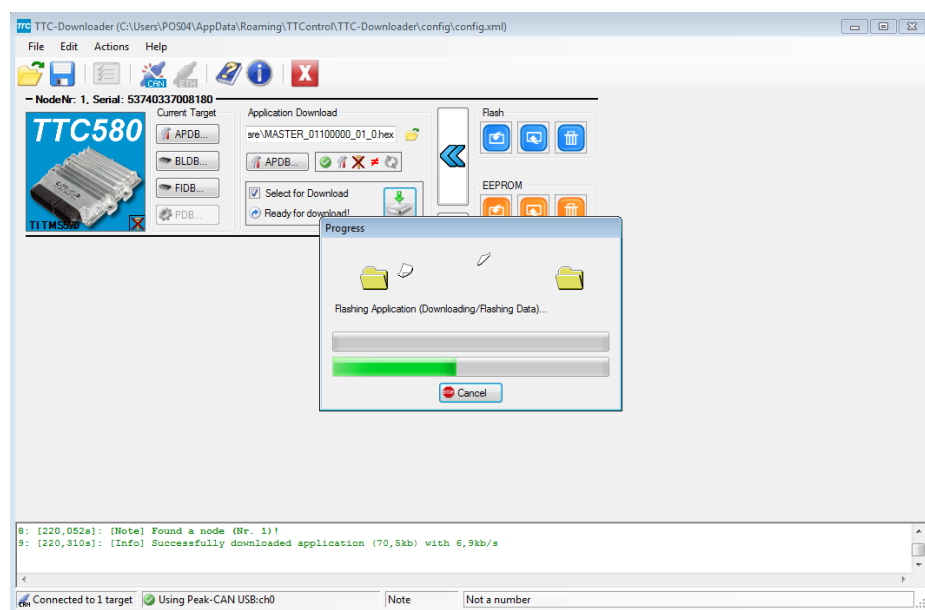
Do not consider

The file selected is different from the one already present on the master board

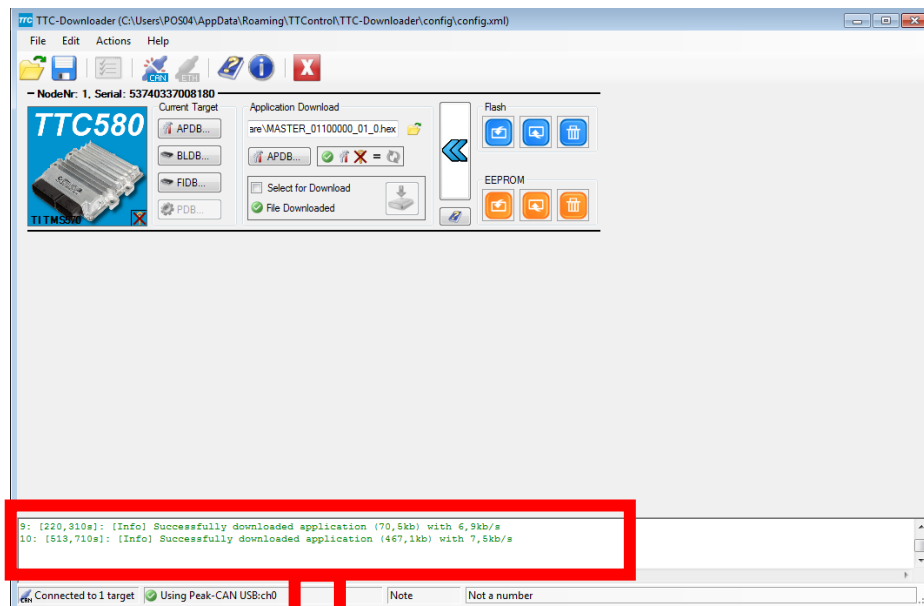
27. Check “Select for Download” and press the button  as indicated below, to download the software on the master board (ECM1).



28. Wait for the software downloading



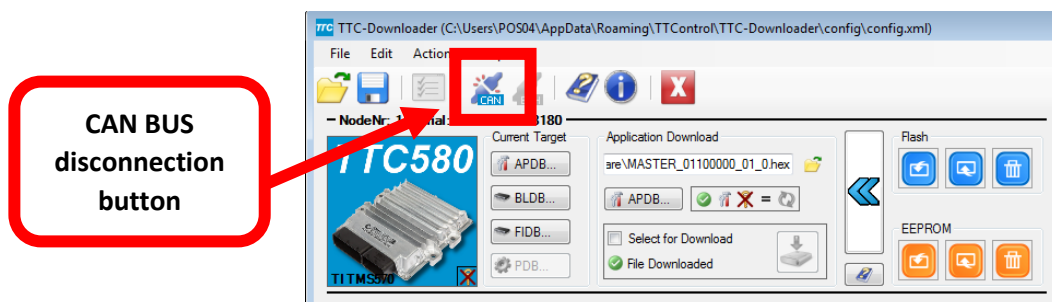
29. Verify on the bottom of the window the green writing, it should be:
“Successfully download application”



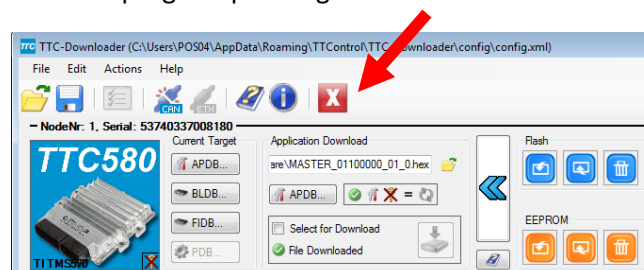
9: [220,310s]: [Info] Successfully downloaded application (70,5kb) with 6,9kb/s
10: [513,710s]: [Info] Successfully downloaded application (467,1kb) with 7,5kb/s

NOTE: If only one “Successfully downloaded application” line is displayed, instead of two, repeat the procedure from step 6.

30. Disconnect the CAN BUS connection pressing the button shown below.



31. Close the TTC-Downloader program pressing the white X.



MACHINE MAIN SOFTWARE INSTALLATION AND SETTING Only for machine without ground Dashboard:

PREMISES: Machine main software contains the software for all the TTC Hinowa machine models, updated to the point in which the main software has been released, therefore, after the software update, it could be necessary to select the machine model by remote control, connecting it on its ground cable.

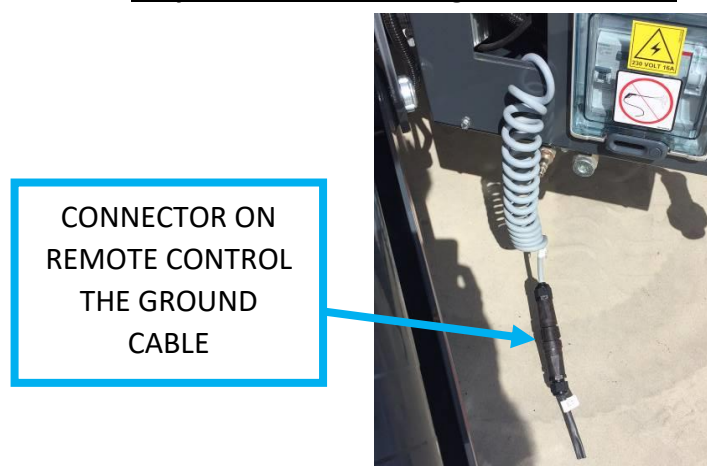
The master board (ECM1) is able to check if the machine model selected corresponds to the machine model where it is fitted on.

The machine main software, when uploaded directly by laptop to the master board (ECM1), is automatically installed.

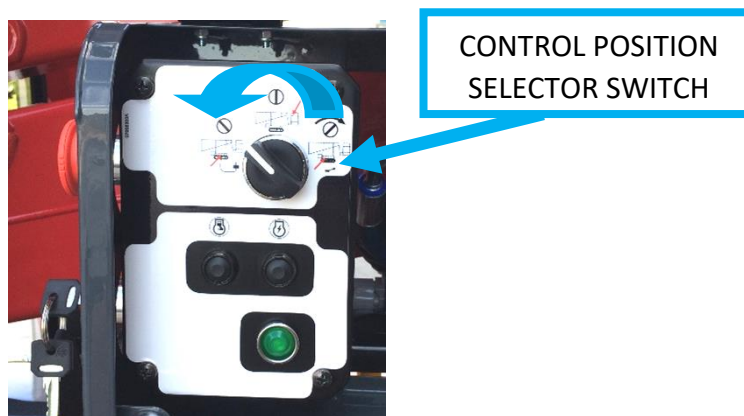
Instead, when the machine main software is uploaded on the modem, its installation must be requested by remote control.

From rev.2.0, the machine main software contains also the BMS software (for lithium machines), BMS software installation must be requested by remote control.

1. Verify that the lead battery is fully charged, otherwise plug the machine to the electric network.
2. Connect the remote control to its connector on the remote control ground cable, which is beside the slot of the electric components compartment, after having unplugged the connector from its opposite connector. **Only for machine without ground Dashboard.**



3. Select the ground position control turning leftward (counterclockwise) the control position selector switch.



4. Turn the main key on, if the display shows the DOWNLOAD process in progress, verify that download process step number increases (on the bottom of the display), and wait a few minutes till the end of it, then turn the main key OFF.

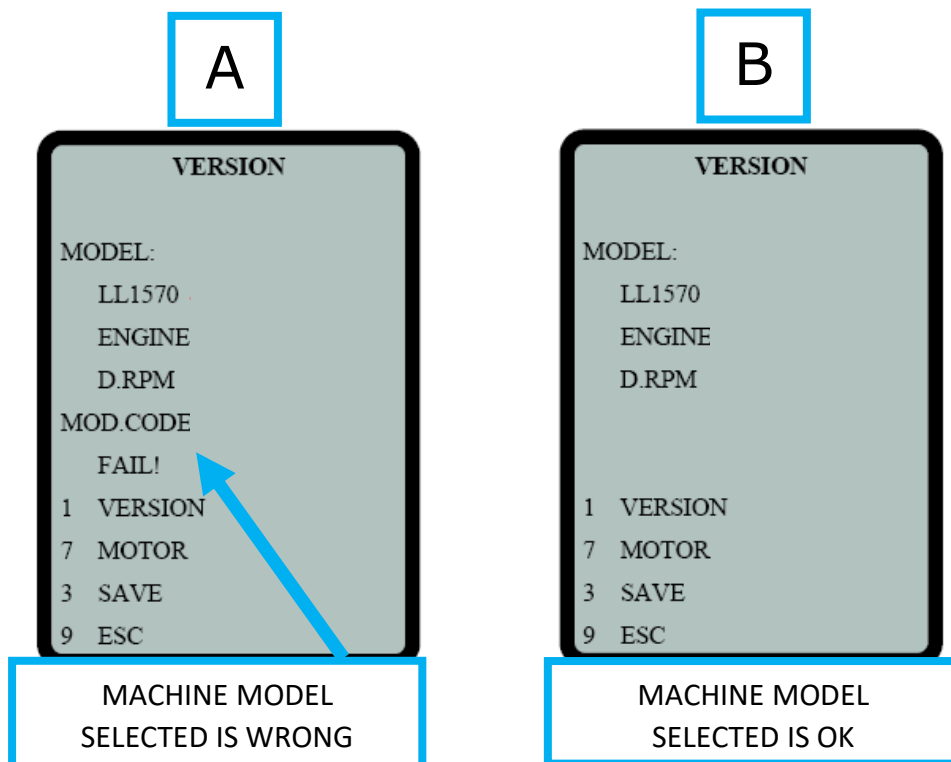
5. Turn the main key ON, if display shows the VERSION selection page, select the correct machine model with button n.1 (VERSION), the display shows the machine model selected.

If the alarm “MOD.CODE FAIL!” appears, it means that the machine model selected is not correct.

Even if that alarm does not appear on the display, the machine model selected must be verified after every software updating by the following path

6-SERVICE / 7-SETUP / 5-PASSWORD / 3684 / 9-ESC / 2-VERSION

The example here below shows on the image A the case of machine model wrongly selected, and on image B the case of machine model selected is the right one (for a LL15.70).



In case that the engine model selected is not correct, with button n.7 (MOTOR) select the correct one (for instance “D.RPM” is the diesel Hatz 1B40 and “G.13L” is the gasoline Honda iGX390)

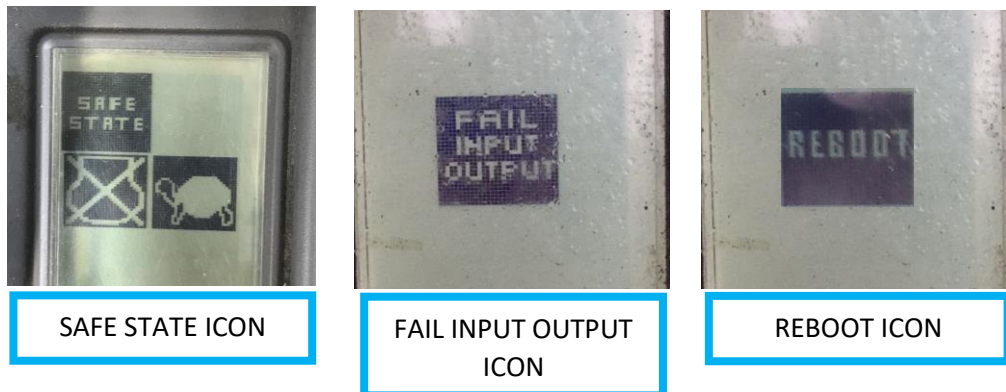
Press button n.3 (SAVE) to save the setting and then cycle (turn it OFF and ON after 30 seconds) the main key.

6. If the display shows the DOWNLOAD process in progress, verify that download process step number increases (on the bottom of the display), and wait a few minutes till the end of it, then turn OFF the main key.
7. Turn on the main key, when the SAFETY STATE icon appears, press and release the remote control emergency stop button to initialize the machine.



8. In case that the SAFE STATE icon appears on the display, verify that the machine model selected is correct by the following path

6-SERVICE / 7-SETUP / 5-PASSWORD / 3684 / 9-ESC / 2-VERSION

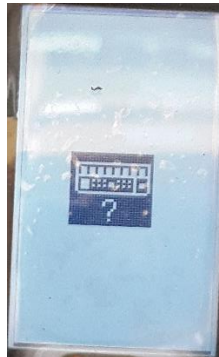


9. If remote control display shows “REBOOT”, main key must be cycled.
10. If pressing one joystick the remote control display shows “FAIL INPUT OUTPUT”, the main key must be cycled.
11. If remote control display shows “LOAD CAL”, the load cell calibration must be carried out following the relevant procedures, then the main key must be cycled.
12. If remote control display shows “INCL CAL”, the tilt sensor calibration must be carried out following the relevant procedures, then the main key must be cycled.
13. Once the main display appears (with machine main conditions such as stabilized, aligned etc..), all the machine parameters (ramps, currents, etc..) must be verified or settled by remote control, then the main key must be turned OFF.
14. Connect the remote control to its basket connector and put the ground control plug back on the opposite connector.
15. Reconnect the modems bigger connector.
16. Select the basket position control turning the control position selector switch in the central position.



17. Turn on the main key, if display shows the REMOTE CONTROL WRONG POSITION icon, as indicated below, verify if the machine model selected is correct by the following path

6-SERVICE / 7-SETUP / 5-PASSWORD / 3684 / 9-ESC / 2-VERSION



REMOTE CONTROL
WRONG POSITION ICON

In case the display does not allow any action, connect the remote control to the ground cable, switching accordingly the control position key selector, turn on the main key and verify if the machine model selected is correct by the following path

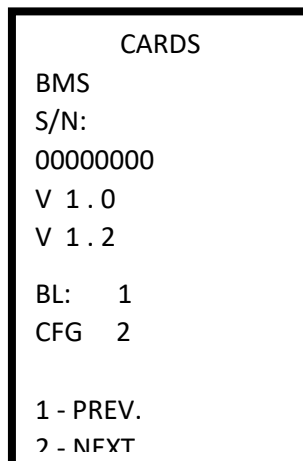
6-SERVICE / 7-SETUP / 5-PASSWORD / 3684 / 9-ESC / 2-VERSION

18. Turn on the main key, if display shows the DOWNLOAD process in progress, verify that download process step number increases (on the bottom of the display), and wait a few minutes till the end of it, then turn the main key OFF.
19. For lithium machines, BMS software installation must be requested from the remote control firmware menu.
It's possible to check both the currently installed BMS software and the newer one on the remote control page CARD, following the below path, after having installed the relevant password.

6-SERVICE / 7-SETUP / 5-PASSWORD / 1883 / 9-ESC / 3-EXTRA / 3-CARD

With buttons n.1 and n.2 it is possible to move through the software list, press button n.2 until CARD menu shows BMS software page.

The BMS software available, but not currently installed, is the one indicated on the second row (V. 1.2 in the example here below).

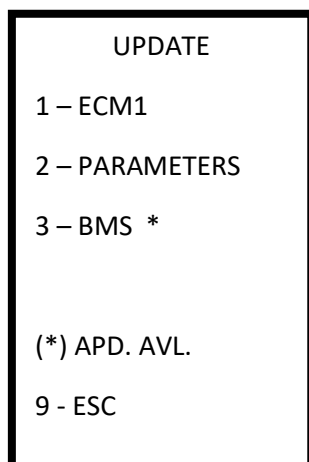


NOTE: Even if BMS software available is newer than the one currently installed, it is not marked with the asterisk and it does not show the SOFTWARE UPDATE AVAILABLE icon on main display.

20. To install BMS software, the below path must be followed, entering page FIRMWARE after having installed the relevant password.

6-SERVICE / 7-SETUP / 5-PASSWORD / 1883 / 9-ESC / 3-EXTRA / 2-FIRMWARE

The presence on the master board of a BMS newer software version, updated comparing to the currently installed one, is indicated by an asterisk on BMS row.



21. With buttons n.3 it is possible to select the BMS software available, and then to install it by pressing button n.0 (indicated in the picture below) and button n.1 at the warning messages. Installing the newer software will overwrite the previous one.



22. In case the procedure was not successfully completed, disconnect the modem bigger plug and retry it.



MACHINE MAIN SOFTWARE INSTALLATION BY MODEM:

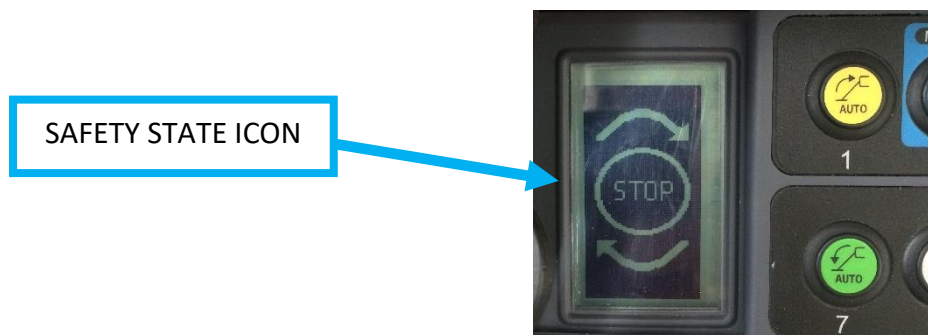
PREMISES: Machine main software contains the software for all the TTC Hinowa machine models, updated to the point in which the main software has been released, therefore, after the software update, it could be necessary to select the machine model by the remote control, connecting it on its ground cable.

The master board (ECM1) is able to check if the machine model selected corresponds to the machine model where it is fitted on.

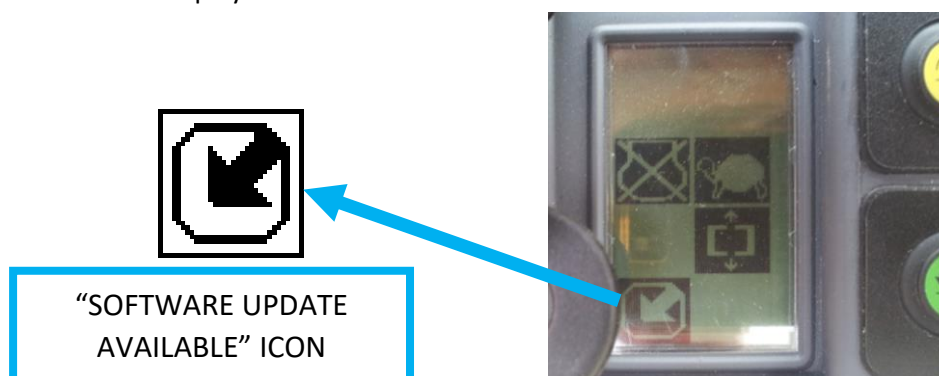
If the machine main software is present on the modem, and it is newer than the one installed on the master board (ECM1), it can be installed on the master board (ECM1), its installation must be carried out manually by the remote control, except in the case in which the machine main software currently installed on the master board (ECM1) is corrupted or missing.

From rev.2.0, machine main software contains also the BMS software (for lithium machines), BMS software installation must be asked by the remote control.

1. Verify the lead battery is fully charged, otherwise plug the machine to the electric network.
2. Turn the main key ON, when the SAFETY STATE icon appears, press and release the remote control emergency stop button to initialize the machine.



3. When on the modem is present a newer software version, updated comparing to the one currently installed on the master board (ECM1), on the display left-down corner, the "SOFTWARE UPDATE AVAILABLE" icon is displayed.



It is possible to check both the currently installed software and the newer one on the remote control page CARD, following the here below path after having installed the relevant password.

6-SERVICE / 7-SETUP / 5-PASSWORD / 1883 / 9-ESC / 3-EXTRA / 3-CARD

The newer software, not currently installed on the master board (ECM1), is indicated by an asterisk.

With buttons n.1 and n.2 it's possible to move through the software list.

CARDS
ECM1
S/N:
61870202008180
BL: 2.3
FP: 16.5
V 1.2
V 1.3 *
1 - PREV.
2 - NEXT
9 - ESC

NOTE: When "TTC 580" is indicated, it is the ECM1, the master board software.

4. Make sure to upload the software from the modem only while no laptop is connected to the machine.
5. To install newer software, follow the path below, entering page FIRMWARE after having supplied the relevant password.

6-SERVICE / 7-SETUP / 5-PASSWORD / 1883 / 9-ESC / 3-EXTRA / 2-FIRMWARE

The presence on the modem of a newer software version updated comparing to the currently installed one, is indicated by an asterisk on "TTC 580".

UPDATE
1 – ECM1 *
2 – PARAMETERS
3 – BMS
(*) APD. AVL.
9 - ESC

NOTE: When on first row it is indicated "TTC 580", it is the ECM1, the master board software.

6. With buttons n.1 it's possible to select master board software and then install it, and then install it pressing button n.0 (indicated in the picture below) and button n.1 at the warning messages.. Installing the newer software will overwrite the previous one.



7. After the software update has been launched, the remote control display will switch OFF, main key must be kept turned ON for about 10÷15 minutes till the ground control box light starts flashing green.
If main key is turned OFF before the software updating is complete, main key must be turned ON again waiting again about 10÷15 minutes, till green light starts flashing.



CONTROL BOX
GREEN LIGHT

8. When ground control box light starts flashing green, main key must be cycled and software updating will be completed, next step will be to follow the indications of the previous chapter MACHINE MAIN SOFTWARE INSTALLATION AND SETTING.

NOTE: If the machine main software present on the master board (ECM1) is corrupted or missing, and the modem contains the machine main software, this is able to install the main software in the master board (ECM1) at the machine switching ON, in that case as soon as the main key is turned ON the software installation will start, even if display stays OFF it must be waited, with main key turned ON, about 10÷15 minutes till the ground control box light starts flashing green (software updating fulfilment)

MACHINE MAIN SOFTWARE INSTALLATION AND SETTING Only for machine WITH ground Dashboard:

PREMISES: Machine main software contains the software for all the TTC Hinowa machine models, updated to the point in which the main software has been released, therefore, after the software update it could be necessary to select the machine model by the remote control.

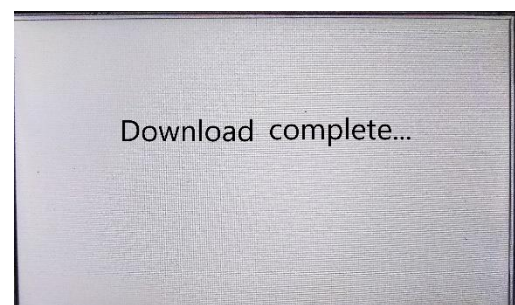
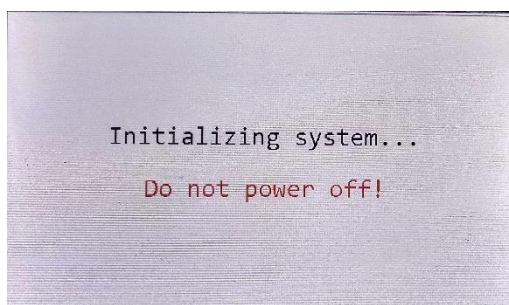
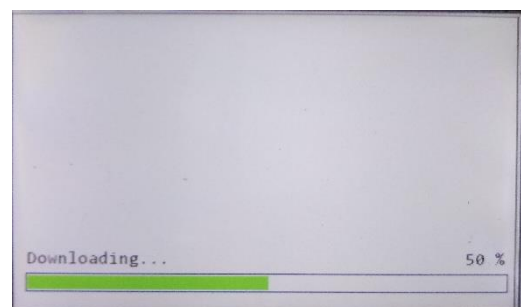
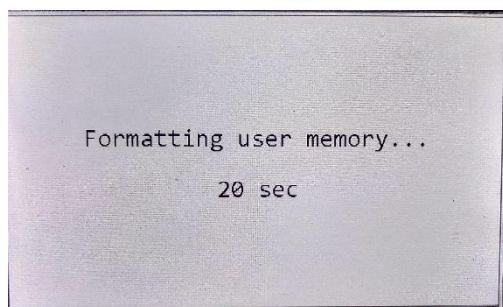
The master board (ECM1) is able to check if the machine model selected corresponds to the machine model where it is fitted on.

The machine main software, when uploaded directly by the laptop to the master board (ECM1), is automatically installed.

1. After the software upload by TTC Downloader, and closing the program, the machine needs to be restarted by main key. Turn off the key, wait about 30 seconds before turning the key back ON.



2. Depending of the kind of software upgrade release, machine screen could show a different message after the software download.
3. Remote control display shows information about the software installation. Do not turn off the machine during the installation till the display shown "Download Complete" .



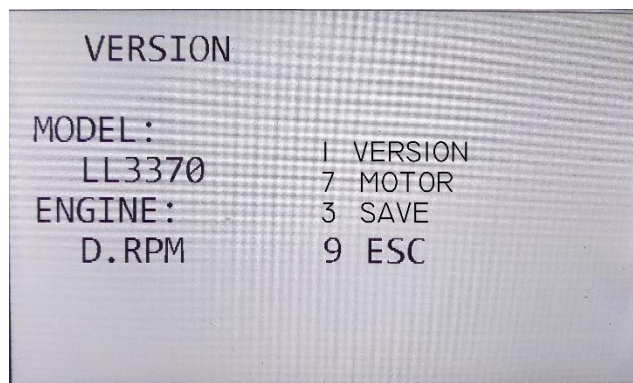
4. Once the complete download has been reached, remote control display will become white. Shut off the machine turning the main key, wait about 30 seconds and restart it.
5. Turn ON the main key, if display shows the VERSION selection page, select the correct machine model with button n.1 (VERSION), the display shows the machine model selected.

If the alarm "MOD.CODE FAIL!" appears, it means that the machine model selected is not correct.

Even if that alarm does not appear on the display, the machine model selected must be verified after every software updating by the following path

6-SERVICE / 7-SETUP / 5-PASSWORD / 3684 / 9-ESC / 2-VERSION

The example here below shows machine model selected right one for LL3317 with Diesel engine.



In case the engine model selected is not correct with button n.7 (MOTOR) select the correct one (for instance "D.RPM" and "LITIUM" is the machine with electric motor fed by Lithium battery pack.

Press button n.3 (SAVE) to save the setting and then cycle the main key.

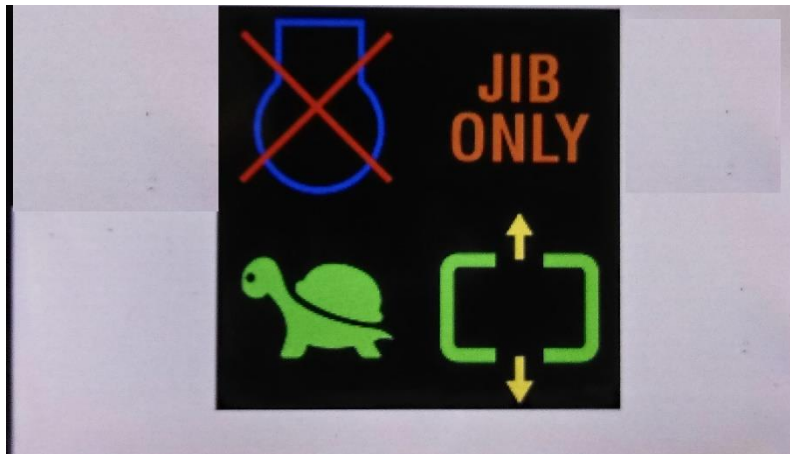
6. If display shows the DOWNLOAD process in progress, verify that download process step number increases (on the bottom of the display), and wait a few minutes till the end of it, then turn OFF the main key.
7. Turn on the main key, when the SAFETY STATE icon appears, press and release the remote control emergency stop button to initialize the machine.



23. In case of the SAFE STATE icon appears on the display, verify if the machine model selected is correct at the following path

6-SERVICE / 7-SETUP / 5-PASSWORD / 3684 / 9-ESC / 2-VERSION

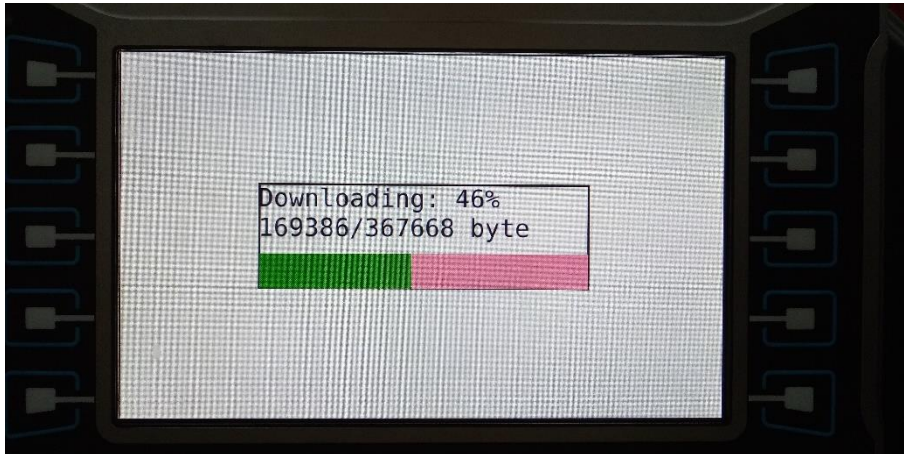
24. If remote control display shows “REBOOT” main key must be cycled.
25. If pressing one joystick the remote control display shows “FAIL INPUT OUTPUT”, the main key must be cycled.
26. If remote control display shown “LOAD CAL”, the load cell calibration must be carried out following the relevant procedures, then the main key must be cycled.
27. If remote control display shown “INCL CAL”, the tilt sensor calibration must be carried out following the relevant procedures, then the main key must be cycled.
28. If remote control display shown “CARD” and “SAFETY STATE”, wait a few seconds till icon “REBOOT” appears, then the main key must be cycled.
29. Once the main display appears (with machine main conditions such as stabilized, aligned etc..), all the machine parameters (ramps, currents, etc..) must be verified or settled by remote control, then the main key must be turned OFF.



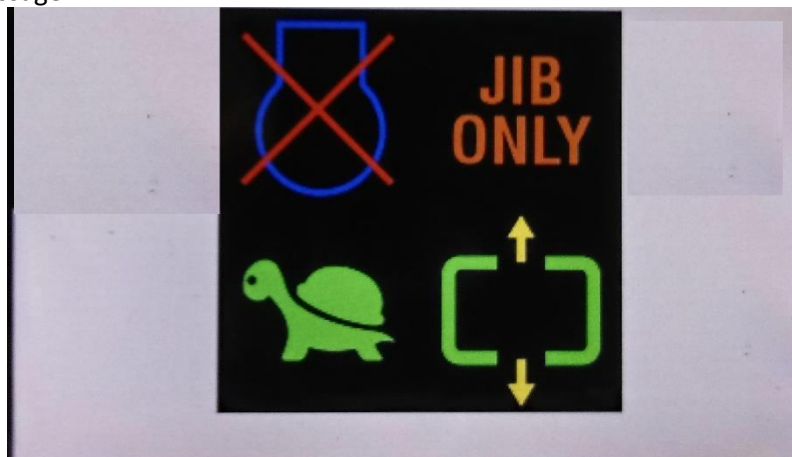
30. To download the icons upgrade on Dashboard, turn off the main key, select the ground control position turning the switch on right side.



31. Turn on the machine by main key, if Dashboard needs to download the newer icons, it will show the downloading progress bar. Don't shut off the machine till the download end.



32. Once the download is complete, shut off the machine, select the remote control position turning back the selector. Switch on the machine and verify that the remote control display does not show the error message.



33. Reconnect the modem's bigger connector.

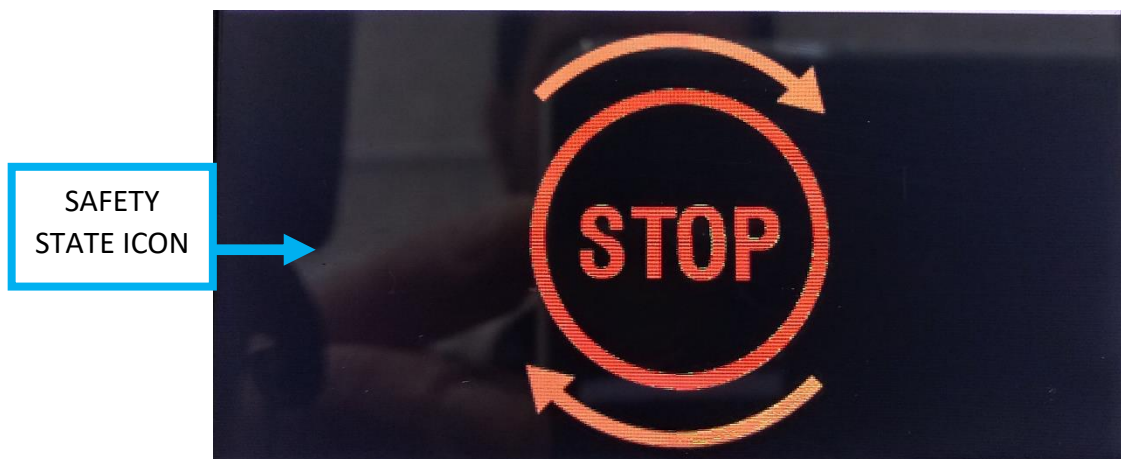
MACHINE MAIN SOFTWARE INSTALLATION BY MODEM Only for machine WITH ground Dashboard:

Assumptions: Machine main software contains the software for all the TTC Hinowa machine models, updated to the latest version which has been released, therefore, after the software update it might be necessary to select the machine model by the remote control, connecting it on its ground cable. The master board (ECM1) is able to check if the machine model selected corresponds to the machine model where it is installed on.

If the machine main software is present on the modem, and it is newer than the one installed on the master board (ECM1), it can be installed on the master board (ECM1). Its installation must be carried out manually by the remote control, except in the case in which the machine main software currently installed on the master board (ECM1) is corrupted or missing.

From rev.2.0, machine main software also contains the BMS software (for lithium machines), BMS software installation must be requested via remote control.

9. Verify that the lead battery is fully charged, otherwise plug the machine to the electric network.
10. Turn ON the main key, when the SAFETY STATE icon appears, press and release the remote control emergency stop button to initialize the machine.



It is possible to check both the currently installed software and the newer one on the remote control CARD page, following the path below, after entering the relevant password:

6-SERVICE / 7-SETUP / 5-PASSWORD / 1883 / 9-ESC / 3-EXTRA / 3-CARD

An asterisk will indicate the newer software, not currently installed on the master board (ECM1).

With buttons n.1 and n.2, it is possible to move through the software list.

CARDS
ECM1
S/N:
61870202008180
BL: 2.3
FP: 16.5
V 1.2
V 1.3 *
1 - PREV.
2 - NEXT
9 - ESC

NOTE: When "TTC 580" is indicated, it is the ECM1, the master board software.

11. Make sure to upload the software from the modem, only when there is no laptop connected to the machine.
12. To install the newer software, you must follow the path below, entering page FIRMWARE, after having supplied the relevant password.

6-SERVICE / 7-SETUP / 5-PASSWORD / 1883 / 9-ESC / 3-EXTRA / 2-FIRMWARE

An asterisk on "TTC 580" indicates the presence on the modem of a newer software version, updated compared to the currently installed one.

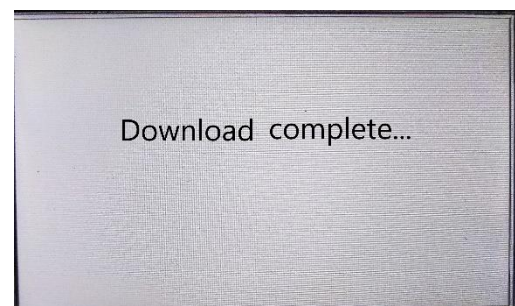
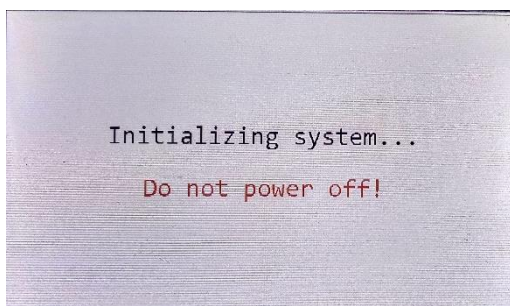
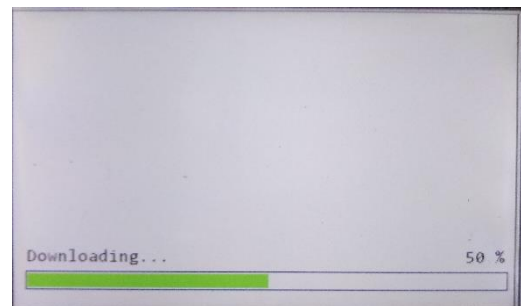
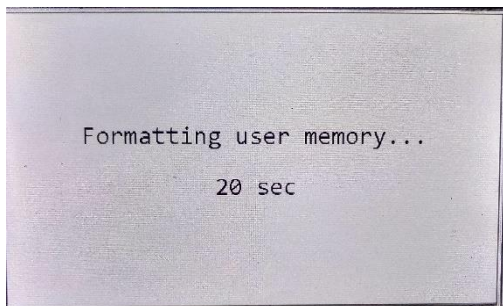
UPDATE
1 – ECM1 *
2 – PARAMETERS
3 – BMS
(*) APD. AVL.
9 - ESC

NOTE: When on the first row it is indicated "TTC 580", it is the ECM1, the master board software.

13. With button n.1 it is possible to select the master board software and then install it by pressing button n.0 (indicated by the picture here below) and button n.1 at the warning messages. Installing the newer software will overwrite the previous one.



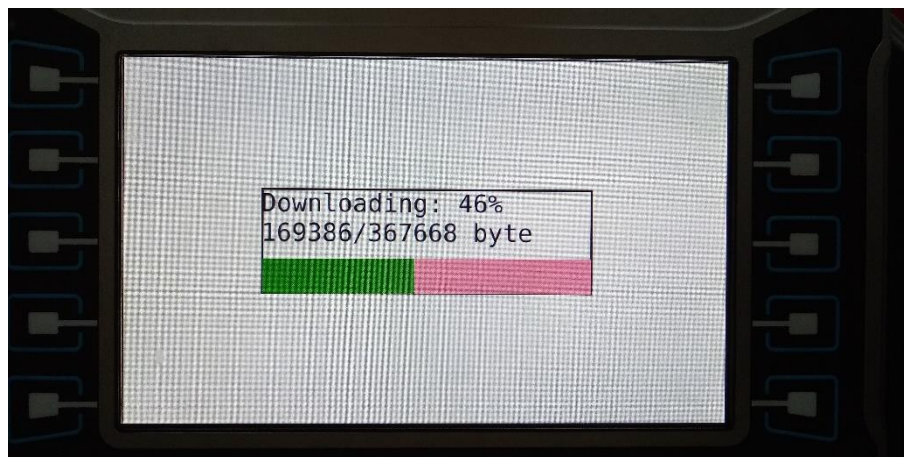
14. Depending of the kind of software upgrade release, machine screen could show a different message after the software download.
15. Remote control display shows information about the software installation. Do not turn off the machine during the installation till the display shows “Download Complete”.



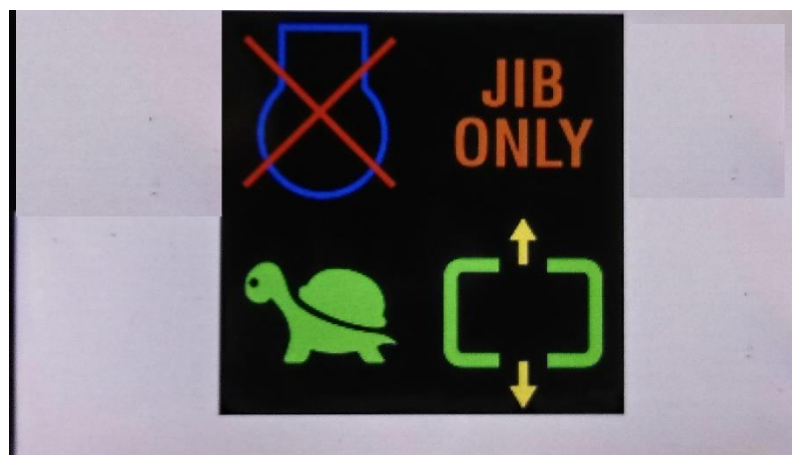
16. After the software update has been launched, the remote control display will switch OFF, main key must be kept turned ON for about 15 minutes. If the main key is turned OFF before completing the software update, the same main key must be turned back ON, again waiting for about 15 minutes.
17. To download the icons upgrade on Dashboard, turn off the main key, select the ground control position turning the switch on right side.



18. Turn on the machine by main key, if Dashboard needs to download the newer icons, it will show the downloading progress bar. Don't shut off the machine till the download ends.



19. Once the download is complete, shut off the machine, select the remote control position turning back the selector. Switch on the machine and verify that the remote control display does not show the error message.



NOTE: If the machine main software currently present on the master board (ECM1) is corrupted or missing, and the modem contains a newer version of the machine main software, the main software can be

installed on the master board (ECM1) when the machine is switched ON. In that case, as soon as the main key is turned ON, the software installation will start, and even if the display remains OFF it is necessary to wait, with the main key turned ON, for about 15 minutes, until the ground control box light starts flashing green (software updating completed)

In case of doubts, contact Hinowa after sales dept.

HINOWA Spa

Service Department