TD5 ECU FLASHING PROCEDURE(rev 3.0/ 05.12.23)

This guide contains general information about the TD5 ECU flashing procedure, basic steps and various details that will aid the users to safely and successfully reprogram their ECUs. The process is fairly intuitive, but requires special attention because any mistake or missed step can possibly result in an unusable vehicle.

Attention: The flashing procedure will take around 20 minutes. During this period the Nanocom should not be disconnected or moved. Movement can affect the connections causing an interruption of the Flashing procedure, resulting in an unusable vehicle. We strongly recommend to connect a suitable power supply to the vehicle battery to avoid voltage fluctuations as these can interrupt the process.

The Flashing Procedure must be done with the Ignition at Stage 2, Engine Off, doors closed. Switch off any auxiliary power consuming items, including the head, dome, roof lights, sound system and any other accessories.

The TD5 Map menu has the following list of functions:

READ MAP FROM ECU: This function reads the map files from the ECU and stores it onto a SD card in .map format or alternatively if the data is protected the file will be saved as a .tun file. The ignition must be on stage 2, and the engine off for the Nanocom to read the file from the ECU.

WRITE MAP TO ECU: This function writes stock or tuned map files into the ECU. The Nanocom Evolution will read the transfer of the map from the SD card to the unit's flash memory to eliminate any possible issues with the transferring from the SD card.

WRITE TUNING MAP TO ECU: This function writes protected - tuned map files into the ECU. It will only write the map if the ECU VIN and the Nanocom ID match with the VIN and ID of the .tun file. Therefore the .tun file must be created specifically for use with the Nanocom and vehicle VIN. We do not offer tuning maps, these can be procured from various approved custom tuning shops.

Modifying the map files of the ECU is your own responsibility and you need to use these functions in accordance to the emissions law. We are not responsible for any damage caused to an ECU. Once the ECU ROM is erased, any failure in the writing back of that information may render the ECU unusable. It does not matter if you use your own device such as the Nanocom or go to a professional tuner, the same situation can occur so you need to be aware of this fact before modifying the system. Again Blackbox Solutions as Nanocom manufacturers will not be held responsible for destroyed ECUs. Remember to switch off all the electronic devices inside the car during the map file writing, to prevent problems that can be caused from RF interference.

There are 2 very important points to note before attempting to read or write a map to a TD5 ECU with the Nanocom Evolution. This is not a guarantee that the procedure will work as there are many factors involved in the remapping of the ECU, but this will minimize the chances of a failure.

1. You need to procure a good quality SD card, from a reputable manufacturer with any capacity from 1GB up to 16GB, formatted using the special SD Card Application located on the restricted area: www.nanocom-diagnostics.com/login

2. You must use a power supply that's constantly connected to the ECU during the process. It is essential that the vehicle battery is maintained at a constant voltage level otherwise the ECU drops communication and the map write will fail and data can be lost, possibly resulting in an unusable ECU.

Note: Regular trickle type battery chargers are not suitable, you need a proper power supply, something the equivalent of a CTEK charger on "supply" mode.

Below you will find a complete step by step procedure on how to successfully achieve the TD5 mapping function:

1. Insert a good quality SD/SDHC Card into the Nanocom, as previously mentioned, which should contain the TD5 map you wish to flash on the ECU.
2. Connect the OBD lead to the Nanocom Evolution without it being connected to the vehicles OBD socket.
3. Ensure the Ignition is OFF and connect the OBD lead to the vehicle.
4. Select the "TD5 Map" function from the Nanocom Evolution menu.
5. Select the "Write map to ECU" function and then from the selection box that pops up select the .map file you wish to write to the ECU which should already be stored on the SD card.
6. Switch the ignition ON (stage 2, engine off) when prompted and wait.
7. Switch the ignition OFF then wait 15 seconds (the screen shows the message to wait so you cannot actually go any further).
8. Switch the ignition ON (stage 2, engine off) and the system should start to load the map to the ECU.

Please note that you MUST turn the ignition ON or OFF when requested BEFORE confirming the messages on the Nanocom screen, otherwise the system will believe you have already done this. Failure messages experienced range from "MAP not for TD5" (despite being read and saved from the ECU) to "Map Read Error". If you check the SD card files you will find an Error.txt file has been created which may give an indication as to why the issue occurred. On the Defender TD5 it has also been noted that the 10AS alarm can cause interference when remapping. There is a central fuse (number 4) under the driver's seat which will disable the 10AS alarm, but allow everything else to work. With the ignition off, carefully remove it, turn the ignition on, flash the ECU and then turn the ignition off and refit the fuse.