ECU FLASHING INSTRUCTIONS FOR:
MINI F56 (2014 – 2018)

SOFTWARE IS NOT CARB APPROVED.
FOR OFF ROAD USE ONLY.

WARNING:

- **CONSUMER AGREES TO ALL BYTETRONIK, INC TERMS AND CONDITIONS. BYTETRONIK, INC. IS NOT RESPONSIBLE FOR PROPERTY DAMAGE, BODILY INJURY OR CONSEQUENTIAL LOSSES.**

- **READ OUT YOUR ECU AND SUBMIT YOUR SOFTWARE REQUEST BEFORE STARTING INSTALLATION. YOUR ECU MUST BE STOCK.**

TABLE OF CONTENTS

Introduction:

Thank you for purchasing the Bytetronik FlashAccess MINI-F Programming Tool.

To program your vehicle through the OBD2 port using a PC laptop, you will need to use the FA56 OBD2 programming tool together with our FlashAccess application program (downloaded from our website).

www.bytetronik.com/download/.

This instruction manual is a step-by-step guide and terms and conditions of use.

Bytetronik recommends that you do a pre- installation check.

- ECU must contain OEM *stock software*
- Make sure the vehicle has been correctly serviced and all factory recalls have been performed.
- Vehicle ignition must be ***ON***.
- Connect the car to a **battery charger**.

If you run into any errors during installation, refer to appendix for instructions.

*****Disclaimer*****

Bytetronik, Inc. is not responsible for damage that may occur and/or due to the use of 3rd party "piggyback" units or aftermarket exhaust valve control products installed prior to, during, or after the installation of FlashAccess Software.

Chapter 1: Installing the FlashAccess Software & Drivers

A1: Download and Install the FlashAccess Software Application

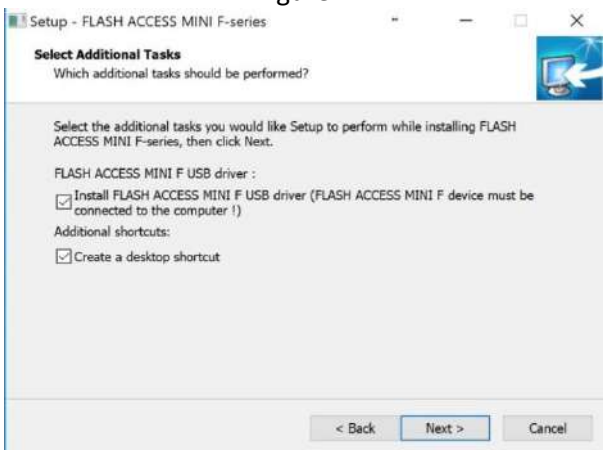
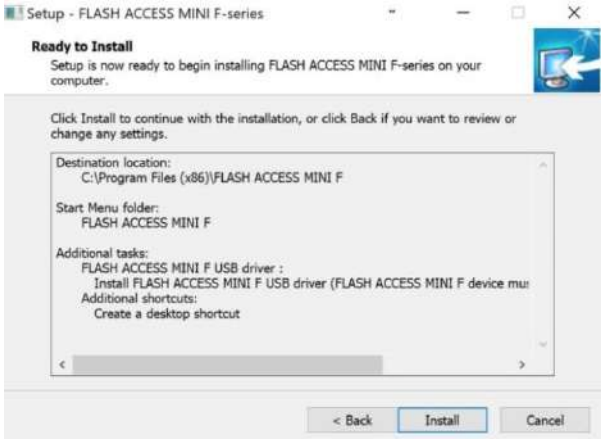
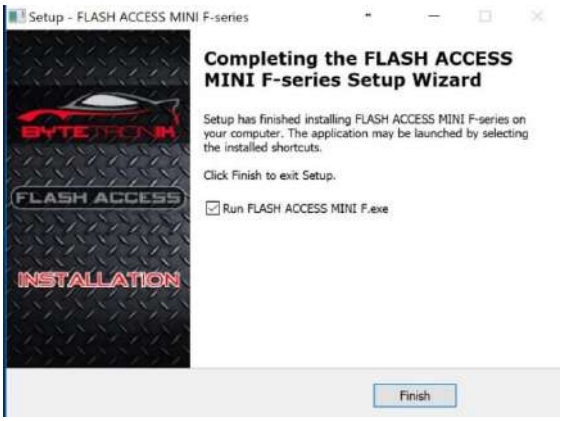
Figure 1  	**Step 1:** • Download the FlashAccess program onto your laptop • Leave the checkboxes at default values and click "Next"
Figure 2  	**Step 2:** • Click on "Install" to execute the installation process.
Figure 3  	**Step 3:** • Once the installation has completed, connect the FlashAccess OBD2 Device to your laptop • **The FA56 OBD Device will illuminate a blinking "green" light once it's connected.** • Then click on "Finish" to move forward to the next step.

Figure 4

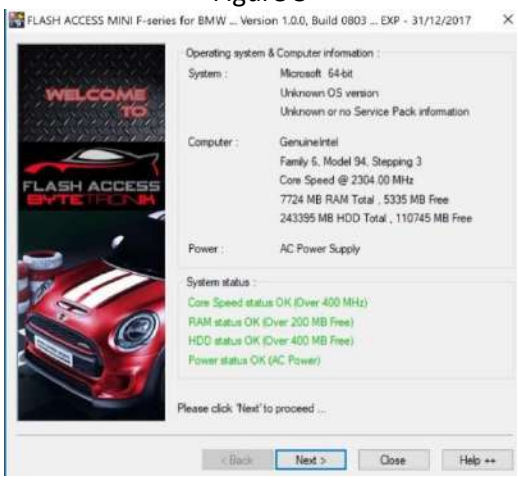
Step 4:

- The "Terms & Conditions" window will pop up; click "I Agree" to Continue to **Figure 4**.

*****Verify that the FA56 Flash Module is connected to your PC at this time *****

- Click "Next" to proceed.

Figure 5



Step 5:

- Software will conduct a hardware check and display the results.
- Green means it is good to go.
- Click "Next" to proceed.

Figure 6

Step 6:

- Figure 6 will appear, make sure to read the warning messages on the screen.
- Click "Next" to proceed.

Figure 7A

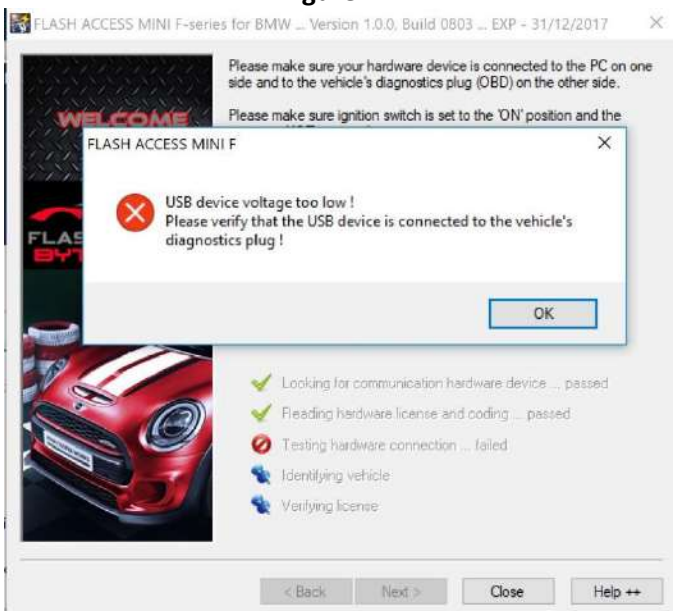
Steps 7A:

If **Figure 7A** Appears, then proceed to **Step 8** to Manually install the USB driver

Note: You may encounter an issue with your driver where it does not auto-install.

- Proceed to **Step 8** to Manually install the USB Drivers for the FlashAccess OBD Module.

Figure 7B

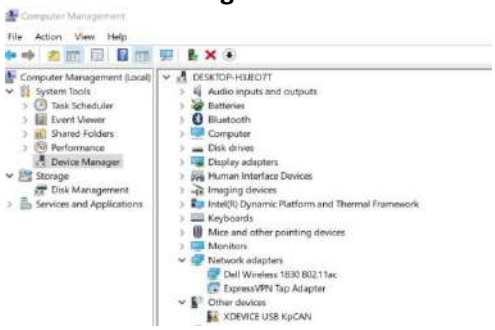


Steps 7B:

*** If **Figure 7B** Appears, then skip ahead and proceed to **Chapter 2** ***

- This screen indicates that the software and hardware are able to communicate properly.
- The "USB device voltage too low" indicates that the OBD Device is not currently connected to the vehicle's OBD2 Port.
- Proceed to **Chapter 2**.

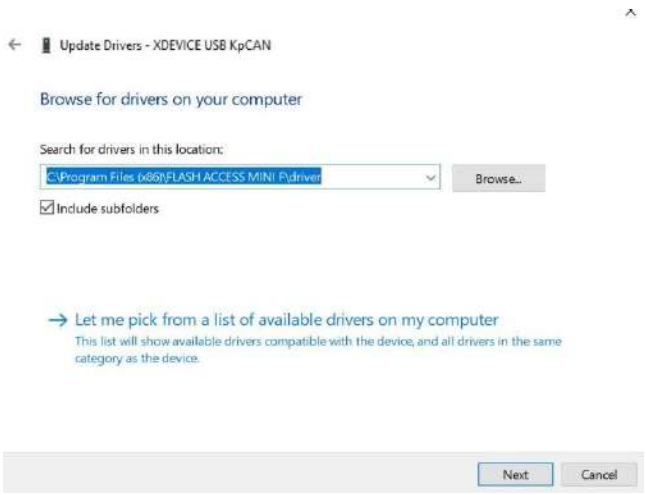
Figure 8



Step 8:

- Open "Computer Management" and check **Device Manager**
- Look for the device name "**XDEVICE USB kpCAN**"
- Right-click and select "**Update Driver**"

Figure 9



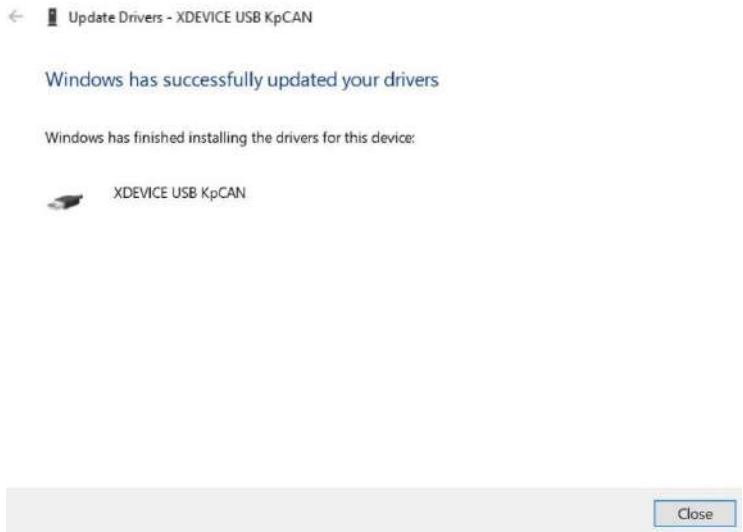
Step 9:

- Select **"Browse my computer for driver software"**
- Click Browse and point to the default folder: C:\Program Files (x86)\FLASH ACCESS MINI F\driver

Note: If you changed the installation path, then you'll have to point to the program location on your local hard drive.

- Click "Next" and install the USB Driver

Figure 10



Step 10:

- Figure 10 shows driver has been successfully installed.
- Click "Close" and exit out.

Figure 11

Step 11:

- **Figure 11** indicates the XDEVICE USB kpCAN driver is good to go…

***** Congratulations!! You can proceed to Chapter 2 for Flashing instructions *****

Chapter 2: Querying Your ECU

Summary: Before we can send you a tune file for your car, we need to gather some information about your ECU/DME.

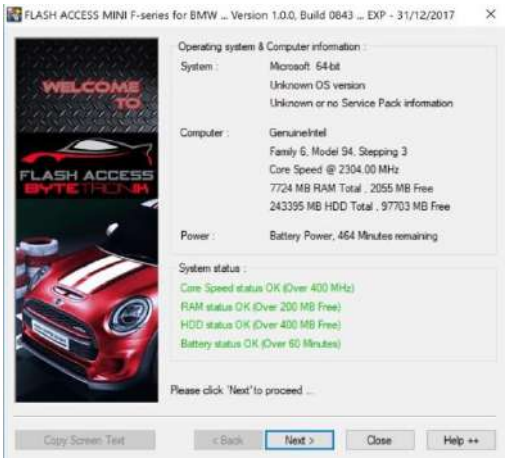
Step 12:

Connect FA56 OBD Module to your PC via the MINI USB port. Connect the OBD end to the car's OBD2 port.

Turn Ignition switch to "**ON"** position

Launch FlashAccess software.

Buckle the driver seat belt and leave driver door open.



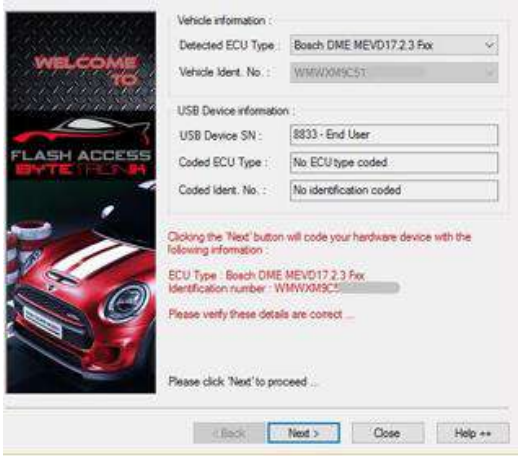
Step 13:

Make sure the items under System Status are all Green.

Step 14:

Make sure the USB cable is plug in directly to the PC and not via a USB Hub.

Hit Next to Continue…



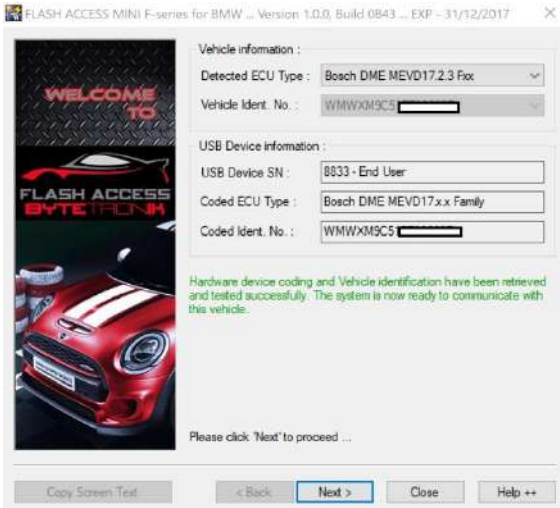
****ONE TIME PROCESS****

Locking of the OBD Flash Module to your ECU.

- Clicking "Next" will "lock" this Flashing Module to your ECU.
- **THIS PROCESS CANNOT BE REVERSED!**

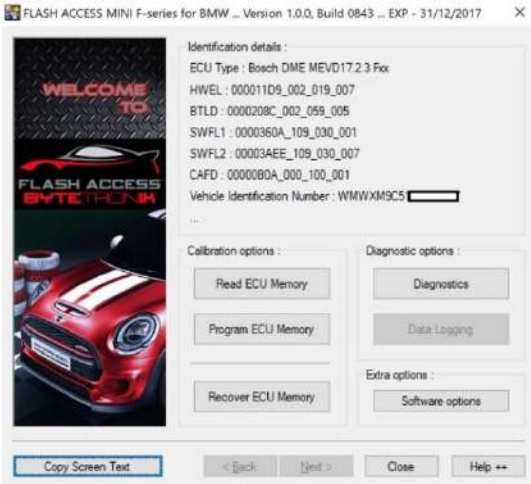
Step 15:

ECU Query in Progress…



Step 16:

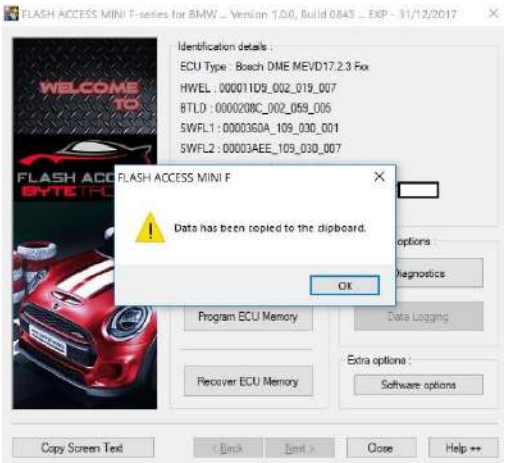
ECU Info identified.



Step 17:

DETAILED ECU info has been gathered; we need this info!

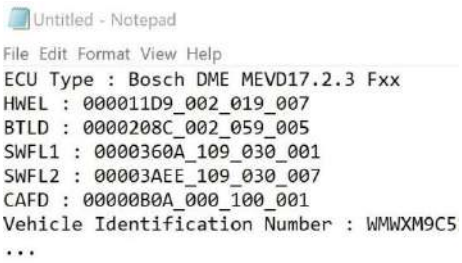
Hit the box that says: **"Copy Screen Text"**



Step 18:

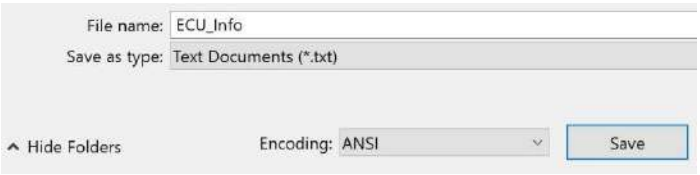
Screen text has been copied, need to paste this onto a Notepad.

Open **Notepad** (press the "Windows" key and type in "Notepad", hit Enter.



Step 19:

Paste the detailed ECU info onto Notepad.



Step 20:
Save this file as txt and email to:
support@bytetronik.com

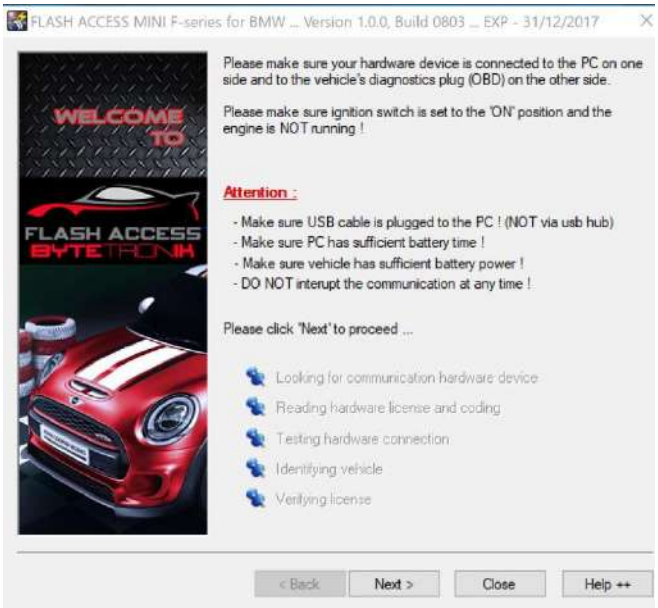
Be sure to also include your device Serial number.

NOTE: Once we have received your ECU info, Bytetronik will reply back with your tune file within ONE BUSINESS DAY (EXCLUDING WEEKEND AND HOLIDAYS).

Chapter 3: Flash Tuning Your MINI Cooper F56

Before you begin, make certain you have downloaded your **TUNE FILE** onto your local hard drive (either via email or DropBox).

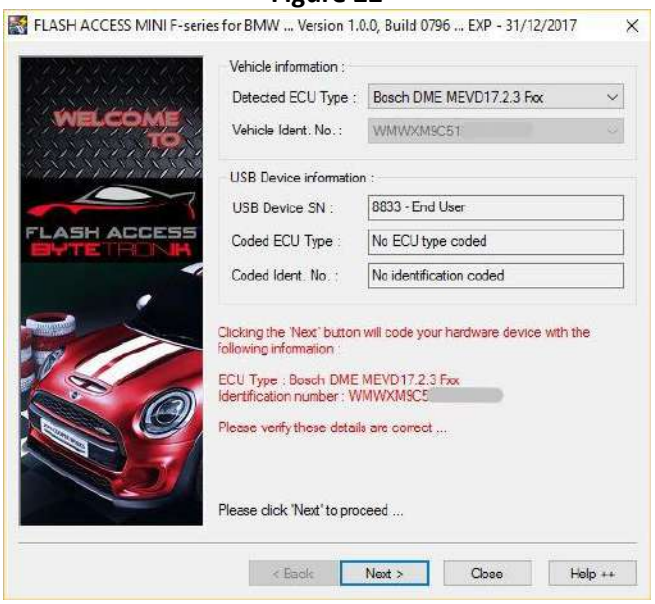
Figure 21



Step 21:

- Connect FA56 OBD Module to your PC via the MINI USB port. Connect the OBD end to the car's OBD2 port.
- Make sure all other electrical components (eg. Headlights, A/C, etc.) are turned off.
- It is also recommended that a battery charger is connected to the car battery.
- Turn Ignition switch to "**ON**" position
- Click "Next" to continue.

Figure 22

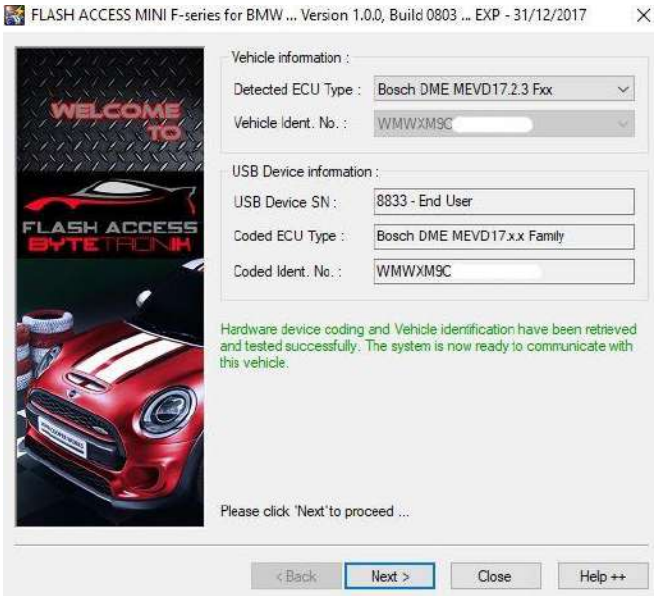


Step 22:

Buckle the driver side seatbelt and don't touch any electronics inside the car or close any doors!

- **Make sure to connect an external battery charger to your car battery!**
- **Make sure your laptop is connected to a power supply!**
- **Buckle the driver side seat belt!**

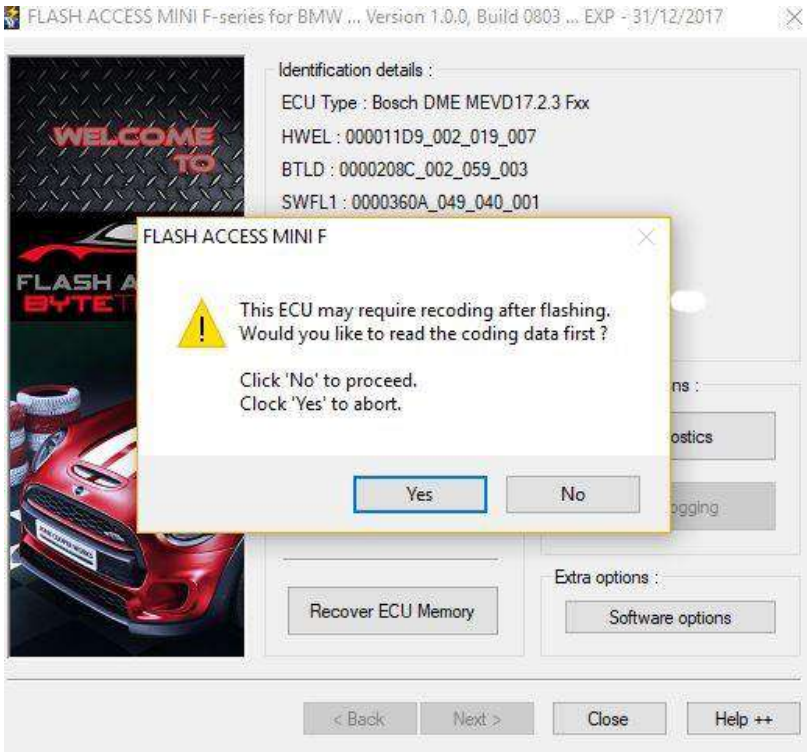
Figure 23



Step 23:

- The application will auto-detect which ECU version you have.
- It also detects your Flash Module's Serial number.
- Verify the vehicle information matches your vehicle
- **If any of the above info is NOT correct, then STOP!!!** Contact us for additional assistance.
- If the vehicle info is correct, then click "Next".

Figure 24



Step 24:

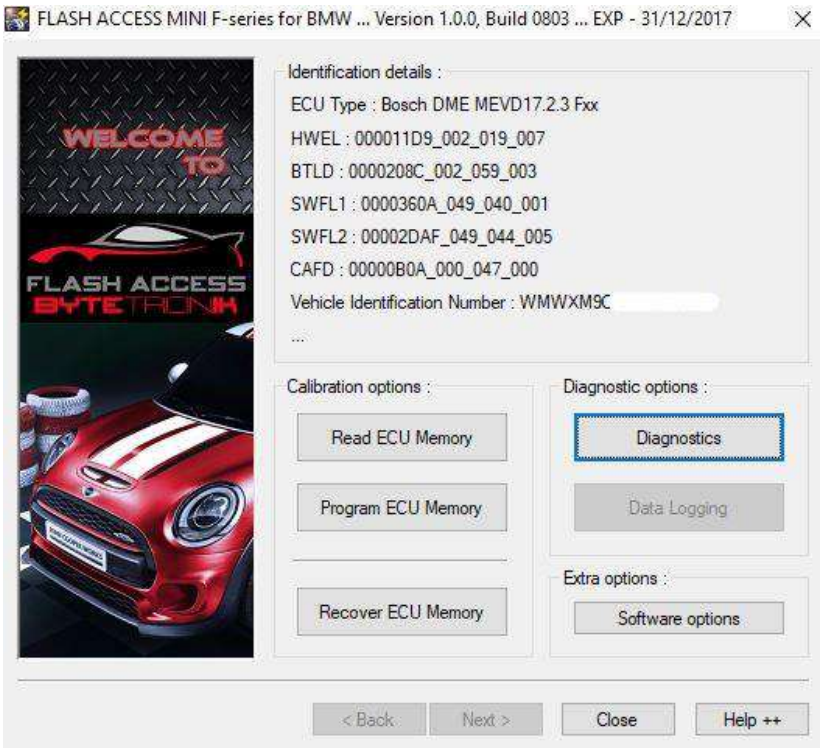
- Before flashing your ECU, you MUST "**read the coding data**" and save it on your computer.
- If this pop up window appears and you have not saved the coding data, then click "**Yes**" to abort the flashing process.
- Click on the "**Diagnostics**" button to **read coding data**.

WARNING

Failure to save your coding file will cause issues with your vehicle's drive train functions!!!

WARNING

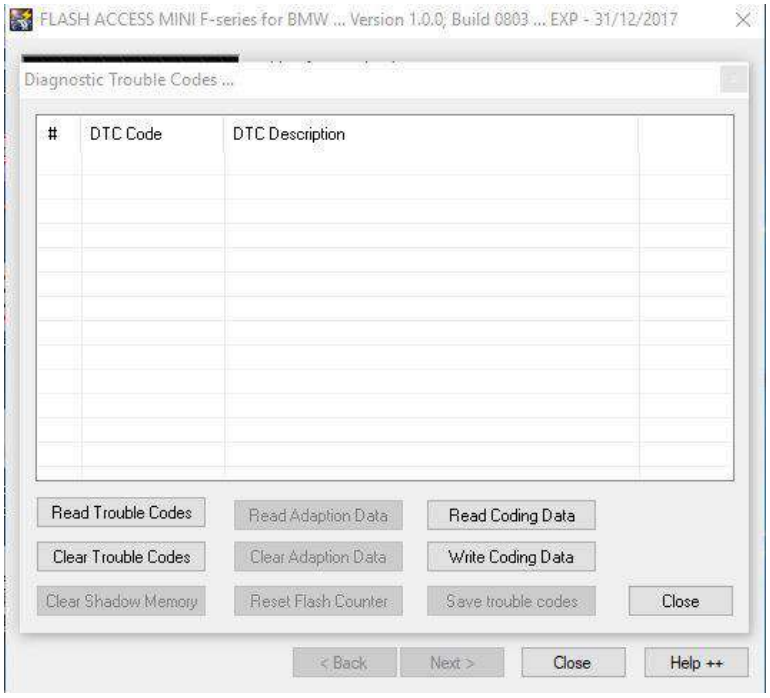
Figure 25



Step 25:

- **DO NOT "Read ECU Memory"!!!!**
- To save a copy of your Coding Data, click the "**Diagnostics**" button.

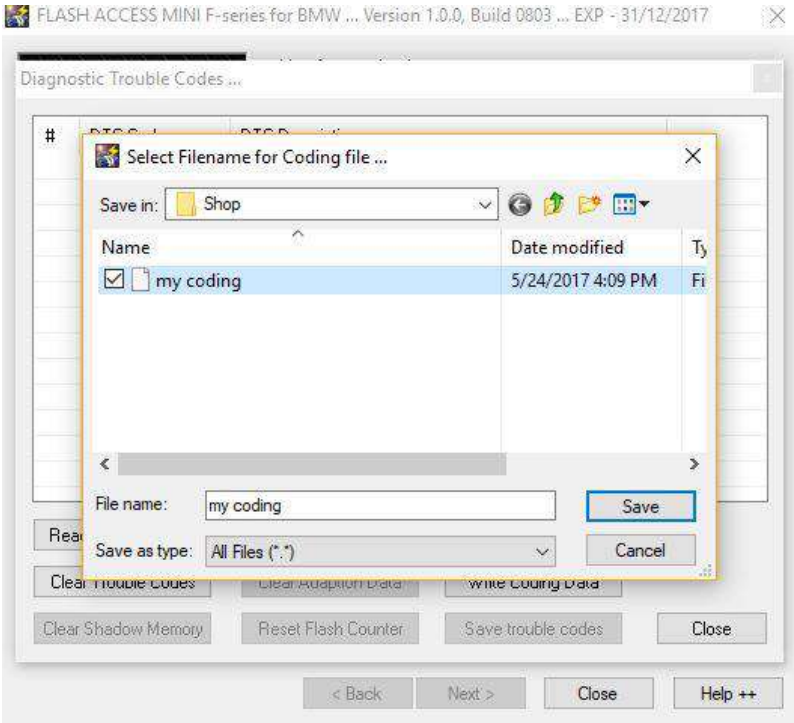
Figure 26



Step 26: Saving Coding Data

- Click "**Read Coding Data**"

Figure 27



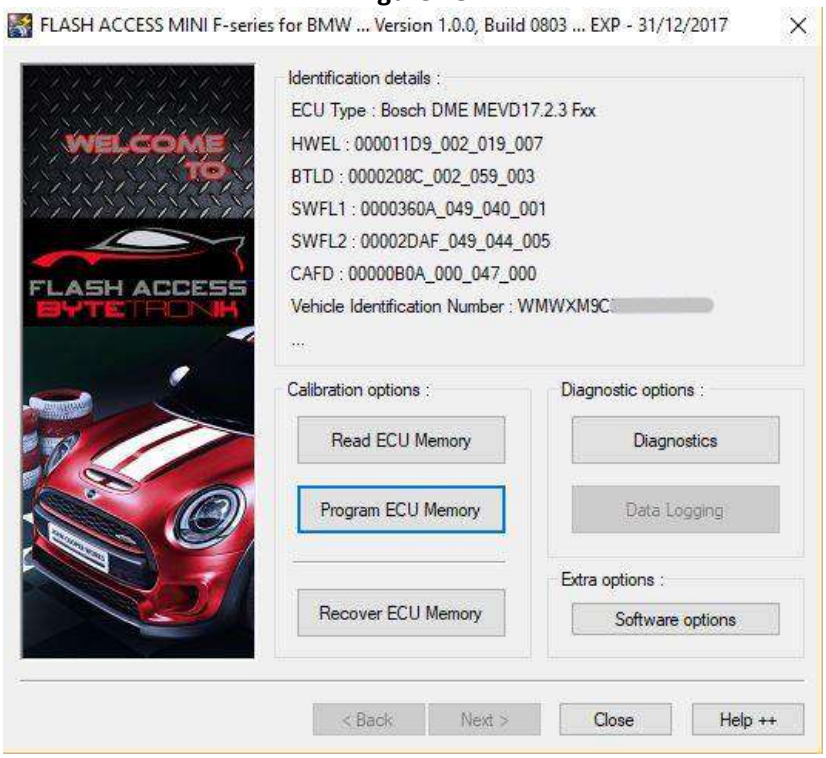
Step 27:

- Save the "**Coding Data**" on to your computer and **give it a name**. In this example, we named the file "my coding"; you may give it your unique file name.

  DO NOT LOSE THIS FILE!

- Remember the location of this file because you will need to "Recode" your ECU after it has been flashed.

Figure 28

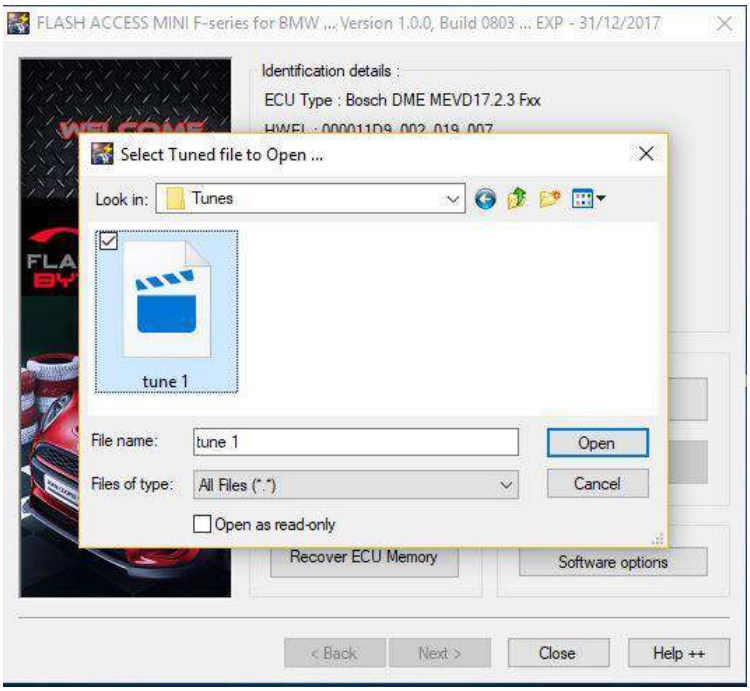


Step 28: Programming the ECU

- With the Coding Data saved, it is safe to proceed with Flashing

- Select "**Program ECU Memory**"

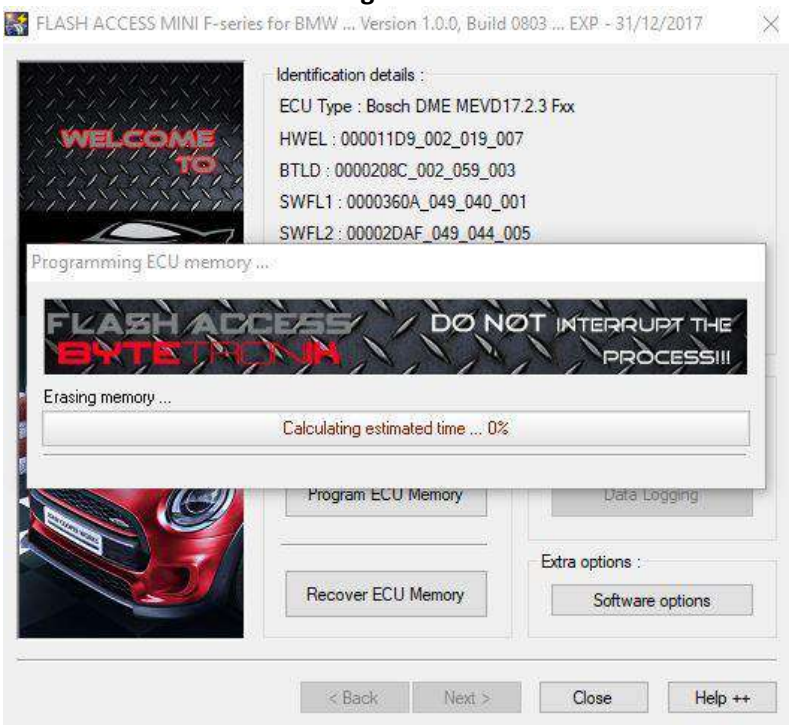
Figure 29



Step 29:

- Select the Tuning file to flash (This would be the tune file received from Bytetronik).
- Click "Open" and follow the prompts on the screen.

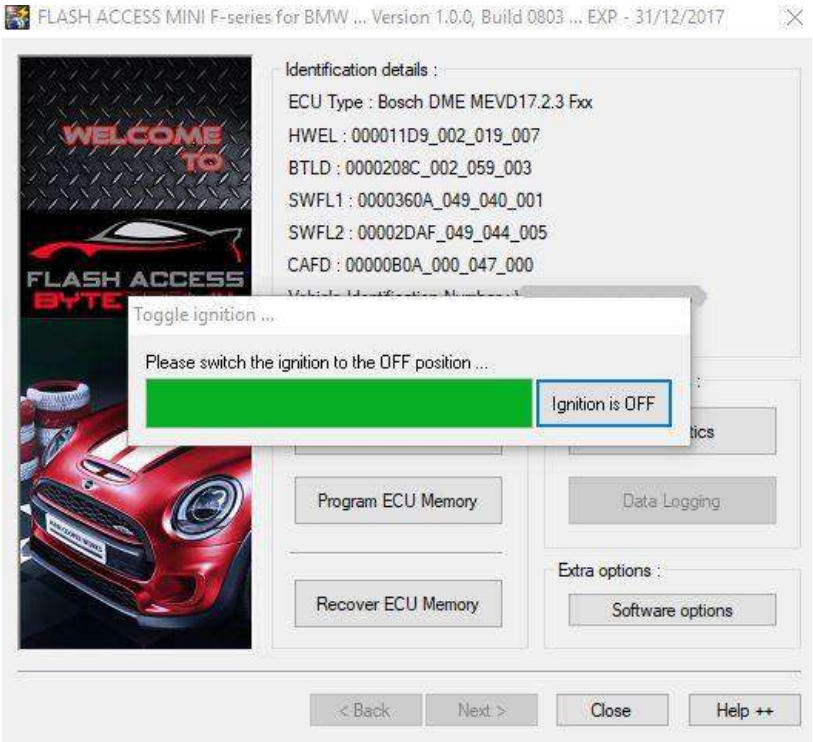
Figure 30



Step 30:

- Programming in progress.

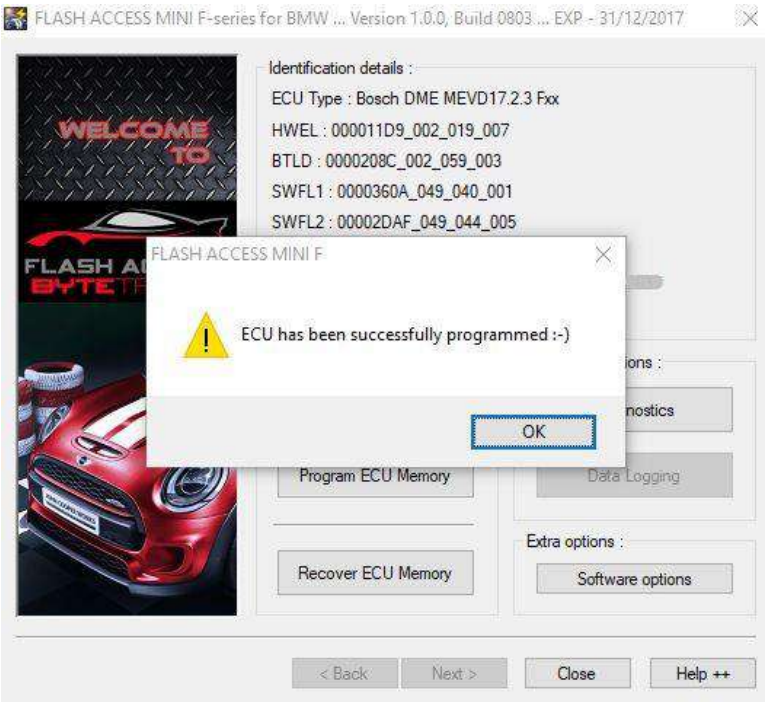
Figure 31



Step 31:

- Programming completed.
- **Switch ignition to "OFF" position.**
- Once ignition is switched OFF, click on the "**Ignition is OFF**" and continue.

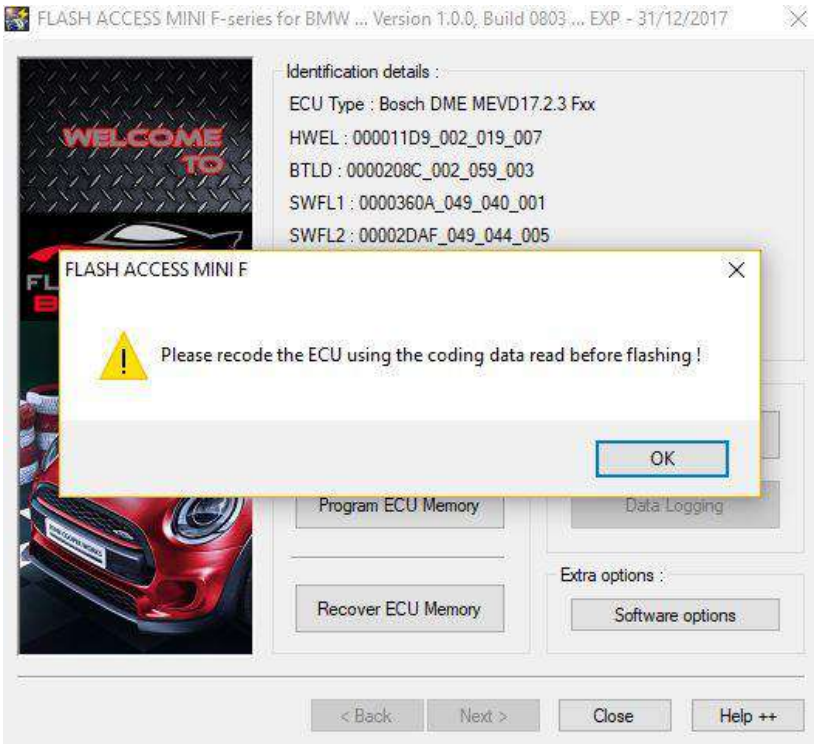
Figure 32



Step 32:

- ECU Programming completed, click on "OK" to continue.

Figure 33

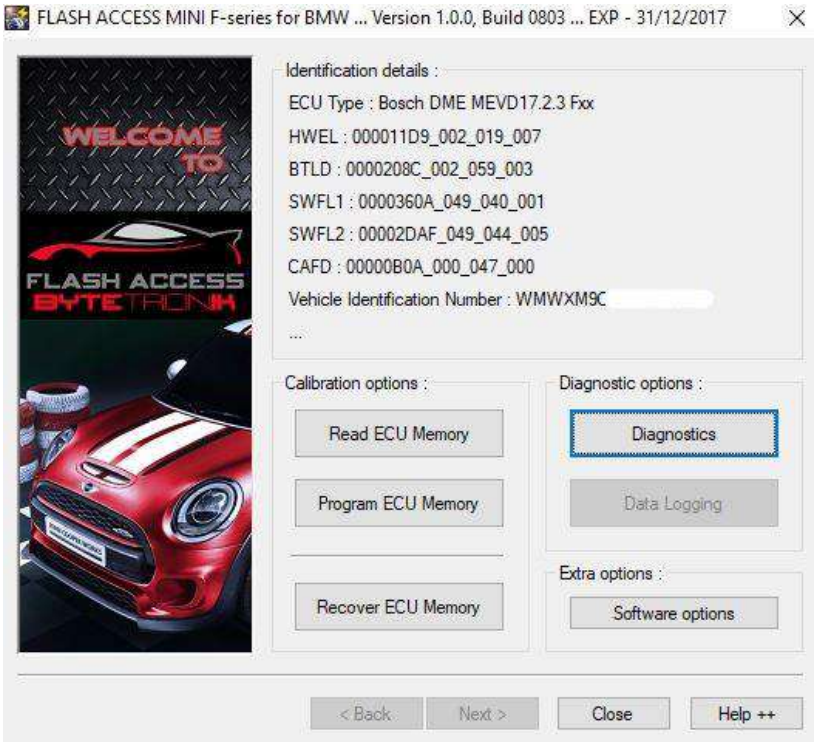


Step 33: **Recoding the ECU**

- Click "OK" to continue with recoding of your ECU.

- Turn Ignition switch to "**ON**" position

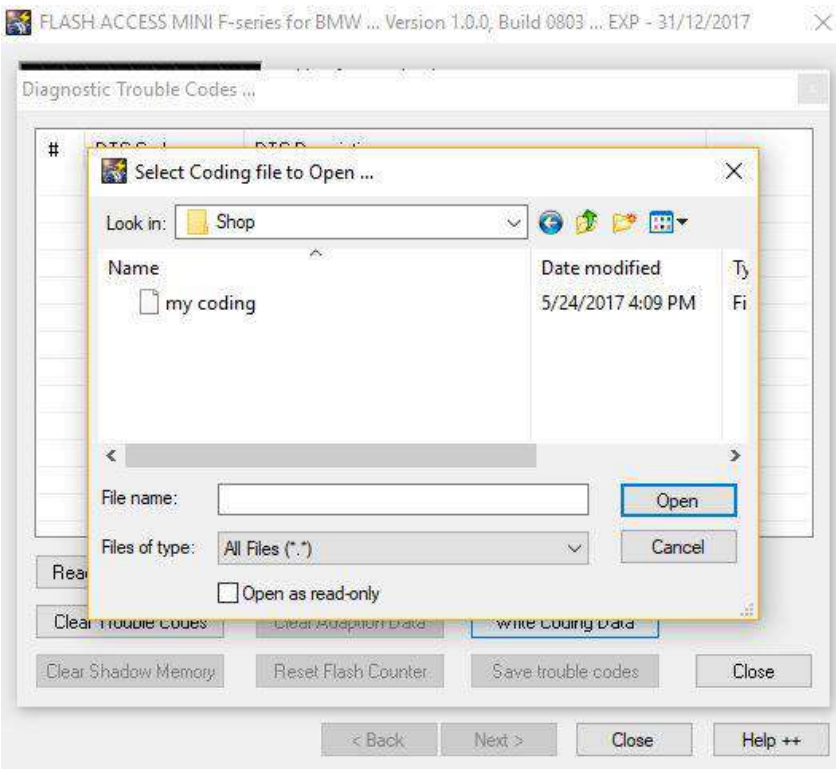
Figure 34



Step 34:

- Click the "Diagnostics" button.

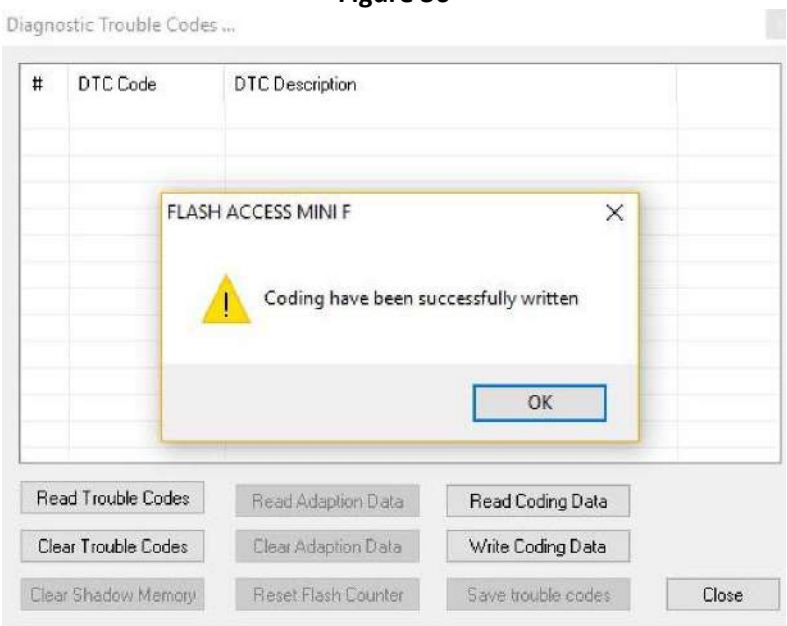
Figure 35



Step 35:

- Select the "Coding Data" that was saved prior to the flashing of the ECU. In this example, we named our coding file "my coding"; your file may be different than ours.
- Click the "Open" button to recode the ECU.

Figure 36



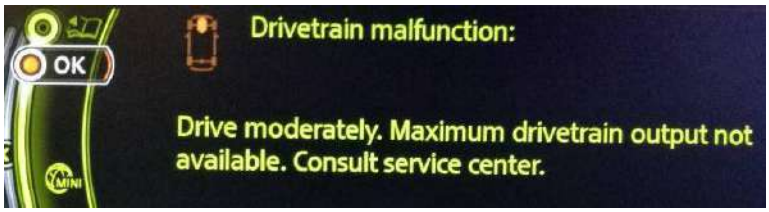
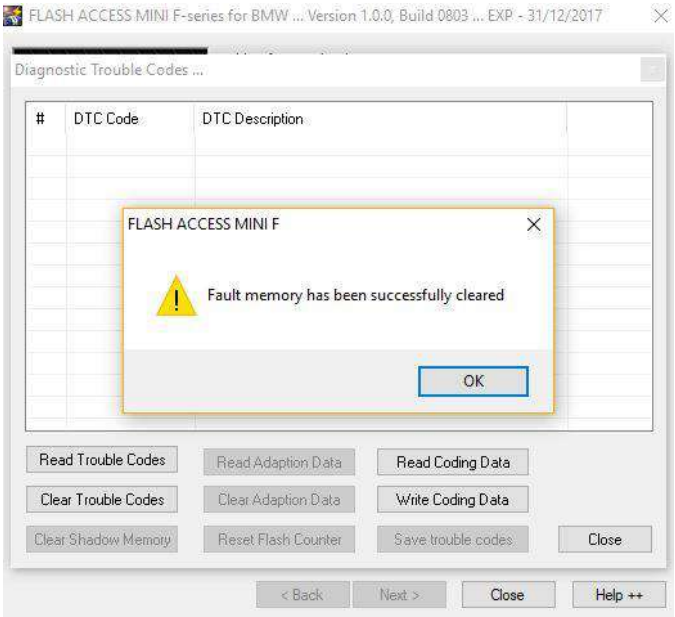
Step 36:

- Recoding completed; click "OK" and hit the "Close" button.
- Click on the second "Close" go back to previous screen.

NOTE: The Processor inside your ECU can only be reprogrammed 60 times!! So try to avoid unnecessary flashing.

End of Reprogramming for Manual Vehicles!!!

A3: Clearing DTC for Automatic Transmission (Post Flash).

Figure 37  	**<u>Step 37:</u> Clearing DTC for Automatic transmission!** • **For vehicles with Automatic transmission, the follow error will show up (Figure 27).**
Figure 38  	**<u>Step 38:</u>** • Turn Ignition switch to "**ON**" position • Simply click the button "Clear Trouble Codes" to clear this DTC. **End of Reprogramming for Automatic Vehicles!!!**

*** END OF Chapter 3 ***

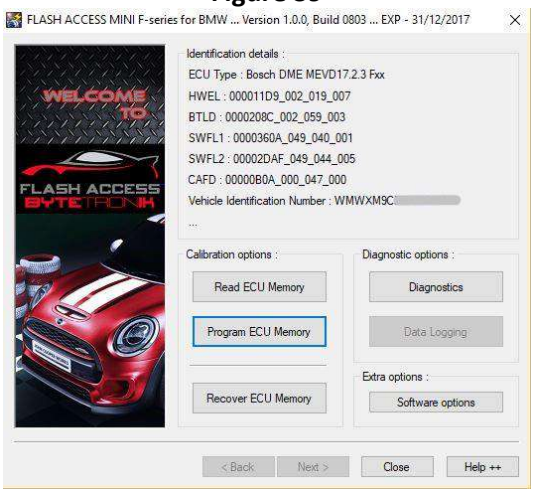
Chapter 4: FAQs & Troubleshooting Error Messages

Error: "**Drivetrain Malfunction"** error post flash on a F56 Automatic, how do I clear it?	**Answer:** Refer to Step #27 above… and read the Installation Guide one more time.
Error: "Crypto routine error"?	**Answer:** Your tuned file may have been corrupted by your email security routine. If your tune file has been sent to you unzipped, you may wish to request it be resent in a zipped format.
Error: "Version expired"…	**Answer:** You need to download the newest version from the Bytetronik website.
Error: Forgot to read out the Coding Data, post-flash, the car behaves "funny"…	**Answer:** You will need to pay a BMW/MINI shop to recode your car using the factory BMW Tool.
Question 1: In the FlashAccess software, there is a "read function". Can I read out my ECU and then flash it back into my ECU?	**Answer:** No. Doing this will BRICK your ECU. Don't even try!!! You will get a copy of your OEM Tune that you can use to flash your ECU with stock mappings. And all tune files will come from Bytetronik; so there's no need for you to read anything out from your ECU.
Question 2: How much is to recover a BRICKED ECU?	**Answer:** It cost **$500 to recover a BRICKED ECU**, plus you have to cover Round-trip shipping.
Question 3: What is the ECU Read function for?	**Answer:** That's a function reserved for Dealers. The End-User cable is not able to read the entire usable rom. You have been warned (for the second time).
Question 4: I have exceeded the 60-flash limit on my ECU and it won't let me flash it anymore, what now?	**Answer:** You'll have to send the ECU back to us for a recovery and to reset the counter. The cost of this service is **$200** plus round-trip shipping prepaid.
Question 5: Does the Flash Module data-log?	**Answer:** No, not yet. We are working on this feature.

Chapter 5: Flashing the ECU back to Stock

If you wish to revert back to your ECU back to Stock, then follow the below steps. The Stock Rom should have been emailed to along with your Tune or Structure ROM file. Locate your Stock Rom and place this file onto your PC's Desktop.

Figure 39



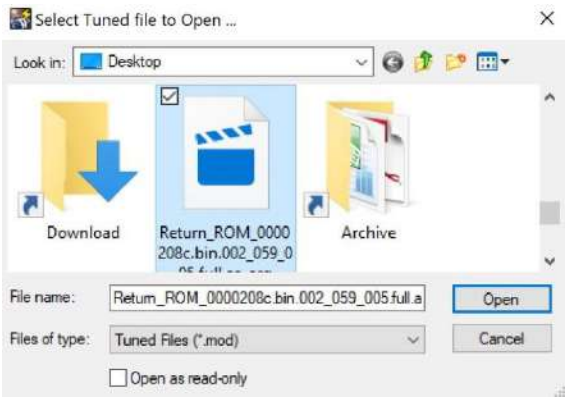
Step 39:

- Open FlashAccess and advance to this screen to the left.
- Click on "Program ECU Memory" button on the bottom left.

Step 40:

- Since you should already have the coding file for this MINI; so click "NO" to proceed.

Buckle the driver side seatbelt and avoid closing any doors!



Step 41:

- Select the "**Return_ROM_xxx**" MOD file to flash (This would be the tune file received from Bytetronik).
- Click "Open" and follow the prompts on the screen.
- ECU will be flashed back to Stock.
- Then follow the same steps as illustrated above (from **Step 30** through **Step 38**).

*** END OF Chapter 5***