



F/I-Chassis Turner Flash User Manual

Thank you for buying Turner Performance Software for your F/I-Chassis BMW! This guide will assist you in flashing your car with our performance software. We strongly suggest you review this guide in detail before beginning the flash. If there are any questions please contact us now.

Setup:

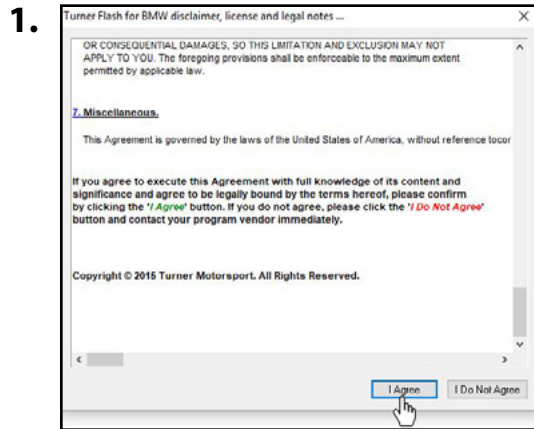
You should already have the following on hand and ready to use:

- Turner Flash OBD tool and USB cable
- Turner USB memory stick, containing:
 - Turner Flash Windows program set file
 - Turner Flash user manual PDF
 - Turner Flash setup guide PDF
- Turner Flash software installed on your laptop (refer to separate setup guide)
- Battery charger for the flash install

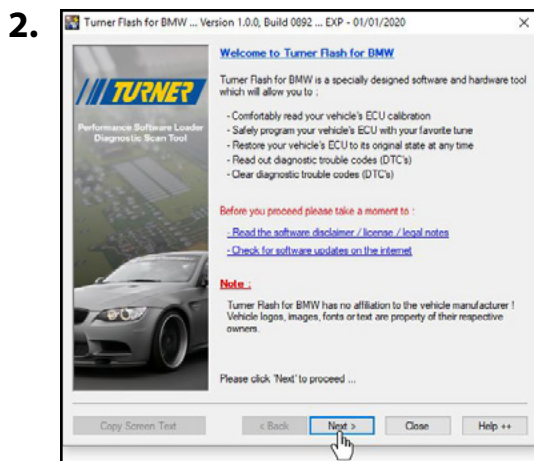
Pre-Install Notes:

- The Turner Flash will only install over stock BMW software. If your ECU was previously tuned by someone else please stop here and contact us.
- The 6-ft USB cable should be long enough to allow you to leave the laptop outside the car (on the roof, a table, tool cart, etc.), however, if necessary you can leave the laptop on the driver's seat and reach in through the open window.
- Make sure the keys remain inside the vehicle throughout the entire flashing procedure.
- A battery charger is **REQUIRED**.
- **The flash must be installed without any interruption!** During the reading and programming steps do not sit in the car, open the doors or windows, change any settings in the car, use the radio or iDrive, move the seat, change the A/C settings, etc.

Connection to the Vehicle



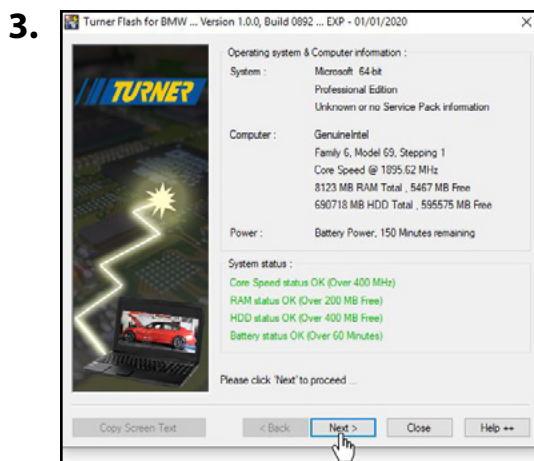
Open the Turner Flash program. Please read the license and user agreement and click the **[I Agree]** button to continue.



First time users do not need to check for software updates. If you just received the software from us you already have the latest version.

You can download the latest version of Turner Flash from our website here: www.turnermotorsport.com/t-turner-flash.

Click the **[Next >]** button.



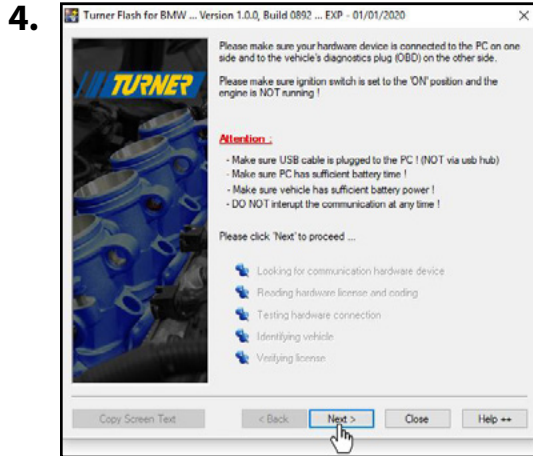
The Turner Flash program will now scan your computer and check its compatibility and settings.

All four lines under “System status” should be green, indicating your computer meets the requirements for software use.

If any red text is shown, check your system against the requirements.

Click the **[Next >]** button.

Connection to the Vehicle



Check the condition of your car's battery. Do not continue if the battery is old, does not hold a charge, or the **"Increased battery discharge!"** warning is shown on the iDrive. Turn off all electrical loads: air conditioning, interior lights, headlights, radio, etc.

A battery charger is required.

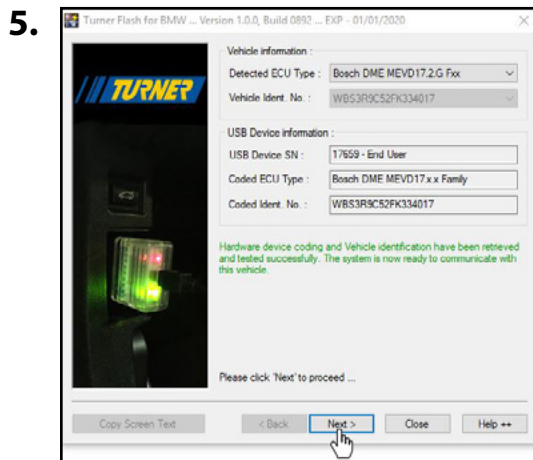
Plug the Turner Flash tool directly into your computer. Then connect the Turner Flash tool to the OBD socket on your car.

Turn the ignition on (but do not start the engine). The Service Engine Soon (SES) or Check Engine light should be shown in the instrument cluster.

Click the **[Next >]** button.

Turner Flash will go through a series of communication checks with the car.

Once completed, click the **[Next >]** button.



The next screen will display the information from your car: ECU type, VIN, and the Turner Flash device info. All of this info should match your car. If there are any discrepancies, please contact our customer support team at customerservice@turnermotorsport.com.

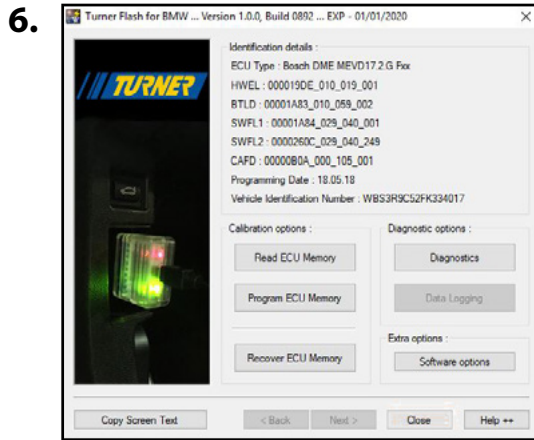
Click the **[Next >]** button.

First time users only:

A window will pop up asking for confirmation of the information shown in the previous screen. The Turner Flash tool is now permanently linked to this VIN.

Click **[Yes]** to continue.

Check for Existing Fault Codes



This is the main Turner Flash functions menu. At the top is the specific info for your car's ECU. At the bottom are the buttons for running the various Turner Flash functions:

Read ECU Memory: Read and save a copy of the software currently installed.

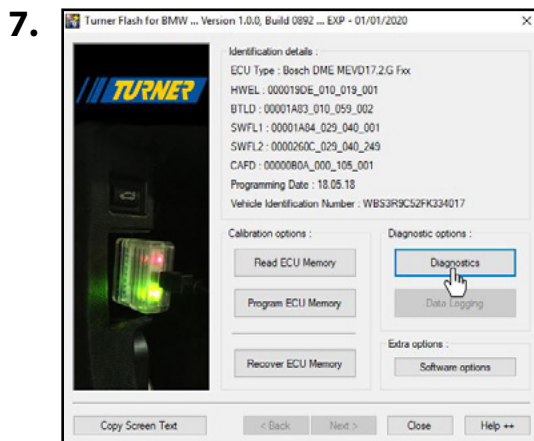
Program ECU Memory: Write a new version of software into the ECU.

Recover ECU Memory: Contact us before clicking this.

Diagnostics: Fault code reading and clearing, read and write coding, Adaptation clearing.

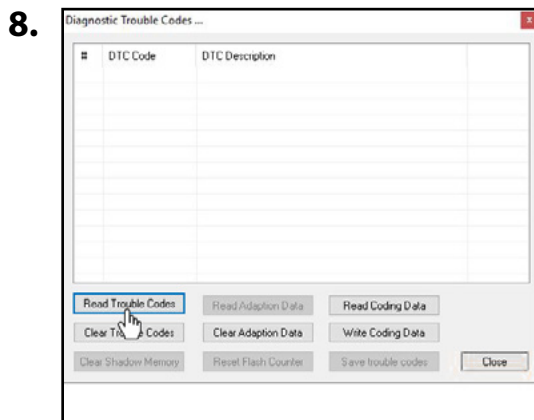
Data Logging: Used for R&D. Not currently activated for end-user.

Software Options: Contact us before clicking this.



The first action is to check for existing fault codes in your ECU. This is also a communications test between your car and the Turner Flash tool.

Click the **[Diagnostics]** button on the right.



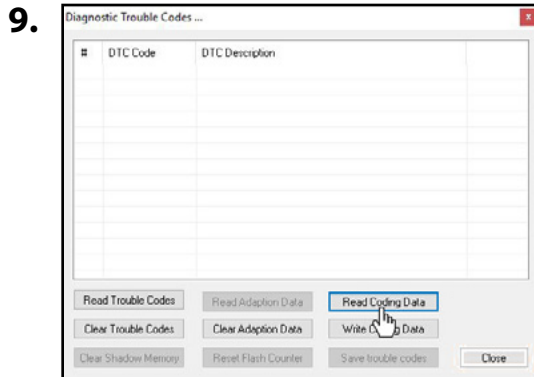
In the new screen, click **[Read Trouble Codes]**.

In our service shop we've seen instances of a CDA904 code, this can be disregarded. If no other codes are present then click **[Close]** and continue to Step 9.

If there are any unexpected codes you may want to stop the software upgrade now and address these issues first.

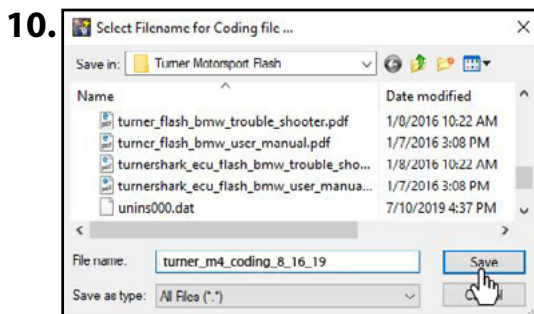
There is an option to save the fault codes (.txt file) if you want to refer back to them later. You will be checking and clearing codes again after the software is installed.

Obtaining ECU Information



Next, we will download your factory ECU coding.

Click the **[Read Coding Data]** button on the right to begin the save process.

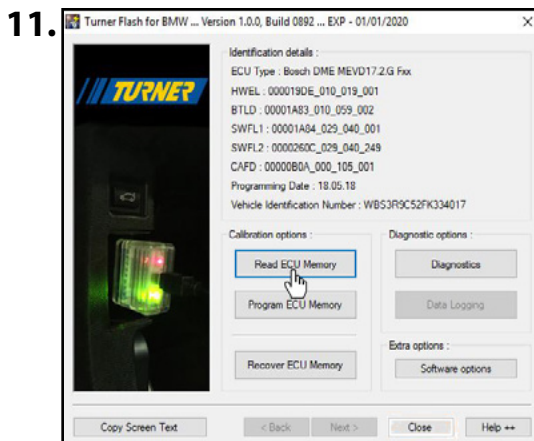


Save the file using the format: customer name_vehicle_coding_date.

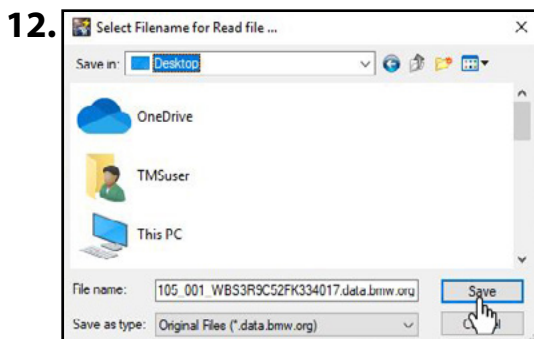
Example: turner_m4_coding_8_16_19

Click the **[Save]** button.

Click **[Close]** to exit the diagnostics page



Next we want to save a copy of your stock software. From the Turner Flash menu screen click the **[Read ECU Memory]** button.

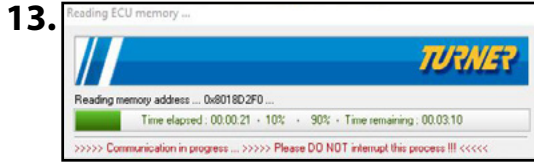


Select a folder to save your files. **DO NOT CHANGE THE FILE NAME.**

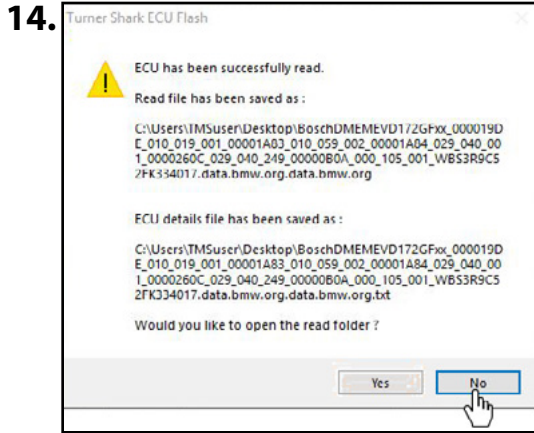
Click **[Save]**.

Two files are created: the full copy of your stock file (.org file) and a text summary of your ECU details (.txt file).

Obtaining ECU Information

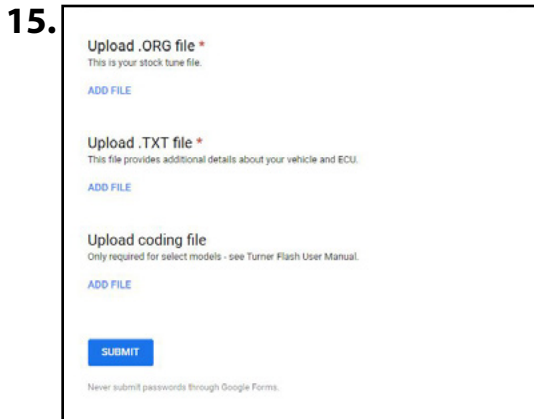


A new window will open with a green progress bar displaying the progress of the read. It will take about 5-7 minutes. **Do not interrupt this process! Do not open/close doors or touch anything inside the car or on the laptop or cable.**



Once you see this screen, the ECU read has been successfully completed.

Click **[No]** to continue.

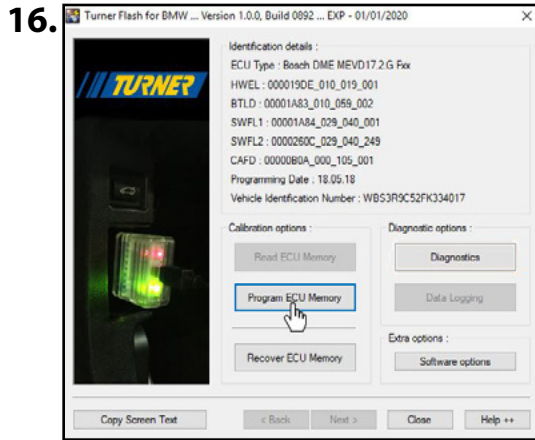


You will now send us your ".org" , ".txt" and coding files. When you placed your order with Turner Motorsport (or one of Turner's dealers) you should have received an email containing a link to a stock file submission form.

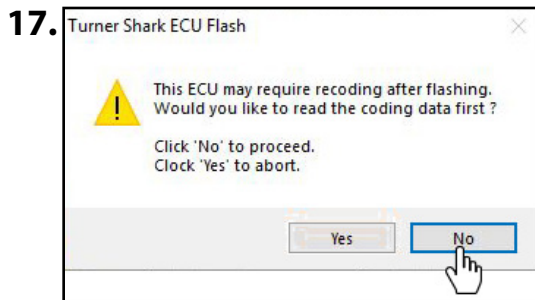
Fill this form out completely and we will quickly (usually within 24 hours - less during business hours) prepare your performance ECU tune.

Don't have the required link? Please contact our customer support team at customerservice@turnermotorsport.com and we will send it to you.

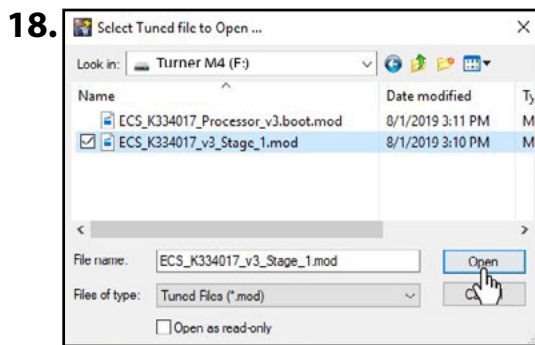
Installing the Turner Performance Software



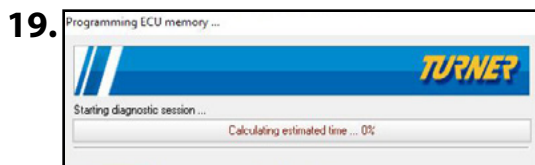
Once you receive your ECU tune file, re-open the Turner flash software and from the main menu screen click **[Program ECU Memory]**.



You have already saved your coding file so click **[No]**.



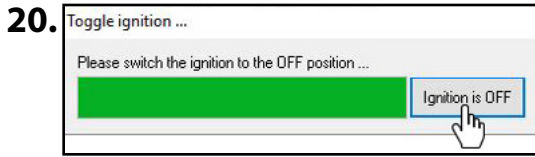
Select the ".mod" tuned file which was sent to you from "tuning@turnermotorsport.com" and click **[Open]**. This is the actual Turner Motorsport Performance Software file.



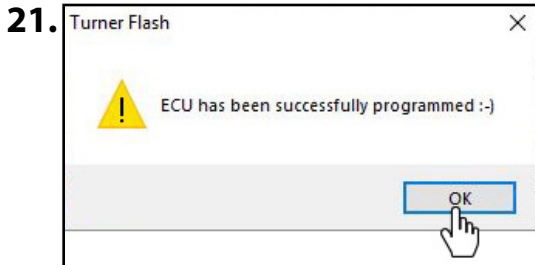
A new window will open with a Red status bar displaying the progress of the software upgrade. This takes about 10 minutes to install.

Do not interrupt this process! Do not open/close doors or touch anything inside the car or on the laptop or cable. It is normal for systems in the car to cycle on/off and error messages to appear in iDrive as the engine ECU is taken offline to be programmed.

Installing the Turner Performance Software

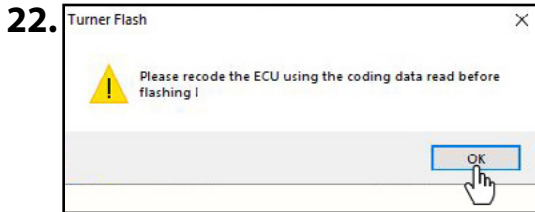


After the flash is complete turn off the ignition via the Start/Stop button. Click the **[Ignition is OFF]** button on the screen and wait for the green status bar to finish counting down.



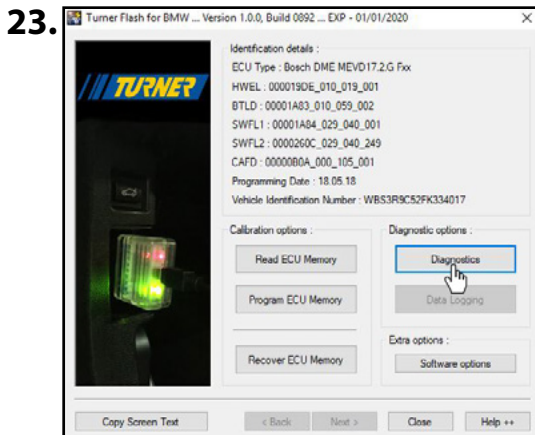
Once completed you will see a screen notifying you that the ECU has been tuned successfully.

Click **[OK]**



A screen will pop up reminding you to reinstall your ECU coding that you downloaded previously.

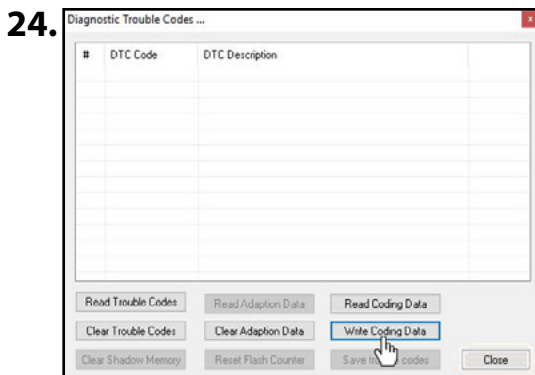
Click **[OK]**.



Lastly, you will need to reinstall your ECU coding that you saved previously.

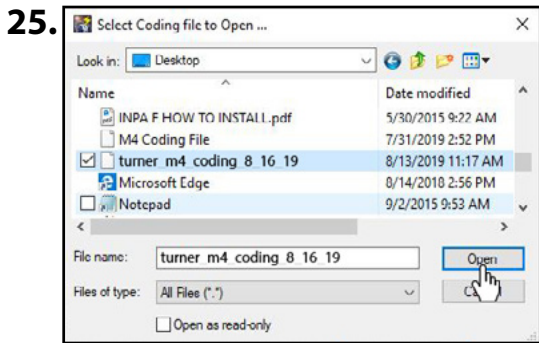
Turn the ignition back on.

From the main menu screen, click the **[Diagnostics]** button on the right.

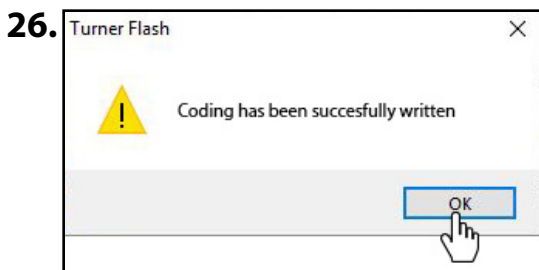


Click **[Write Coding Data]**.

Installing the Turner Performance Software



Select your previously saved coding file and click **[Open]**.

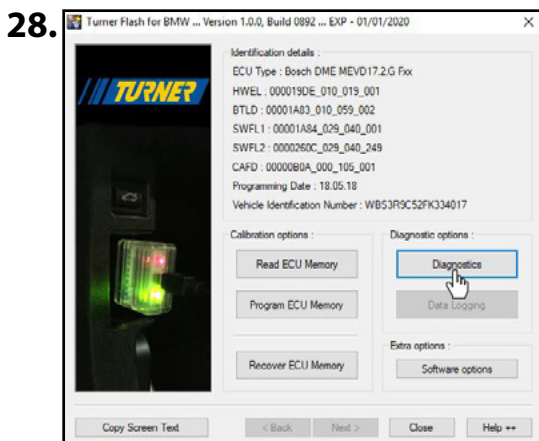


You will see a message confirming that the coding was successfully written.

Turn the ignition off.



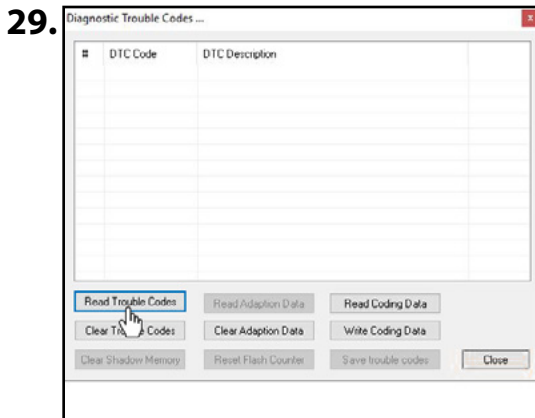
Start the engine and let it idle. As long as the car starts and idles normally you can now turn it all the way off. You can ignore any error messages in the iDrive screen (you will clear fault codes and adaptations in the next step).



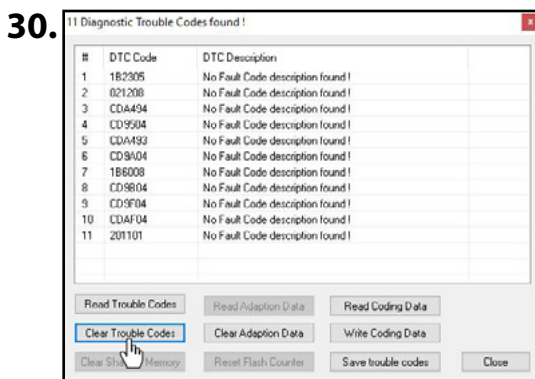
Turn the ignition back on (but do not start the engine).

Back in the Turner Flash main menu screen click the **[Diagnostics]** button.

Clear Fault Codes and Adaptation

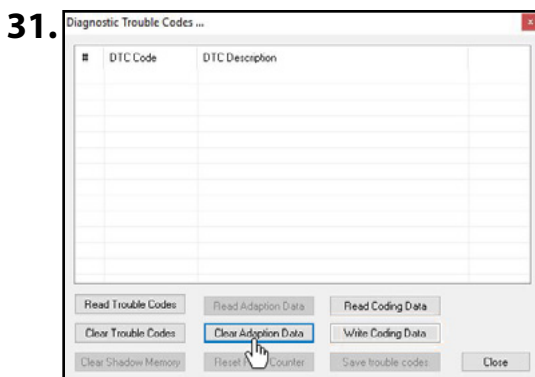


Click **[Read Trouble Codes]**. There may be some harmless codes here after flashing the ECU. These are typically message errors from programming.



Click **[Clear Trouble Codes]** to erase the codes.

Click **[Read Trouble Codes]** again. Unless you had pre-existing faults this screen should now be empty.



Click the **[Clear Adaptation Data]** button to clear ECU adaptations.

Remember, you can use this tool again to check fault codes or restore the ECU back to stock.

Close the program and disconnect the Turner Flash tool from your OBD port.

Congratulations on flashing your ECU! You're now ready to enjoy the extra power, torque, smoothness, and response of a Turner-tuned BMW!

Post-Install Notes:

Turner Program Updates: Once every six months a new version of the Turner flash program will be released. Your older version may no longer open or have limited functions. You can download the latest version of Turner Flash from our website here: www.turnermotorsport.com/t-turner-flash.

OBD Readiness: Clearing fault codes and adaptation settings will also reset the OBD Readiness monitors. These will need to be set before taking the car for an inspection. Drive normally and the Readiness monitors will set one-by-one. For track or race cars, note that not all Readiness monitors will set.

Additional Files and Upgrades: If you have installed new hardware or modifications, for a nominal charge we can provide you with another software file. We can email you the new file(s) or we can send you a Drop-box link. You do not have to send the tool back to us for any updates.

Dealer Updates: Make sure your BMW dealer does not install any new software updates to your ECU. Installing a new version of BMW software will overwrite your Turner Performance Software. If BMW does update your ECU contact us for further instructions. We cannot guarantee compatibility with all BMW software versions, including updates. In some cases an update fee may apply.

Laptop Program Help:

I get an error message that the software has expired: Our software developer only licenses the software for certain periods of time. This usually coincides with the end of the calendar year or when a major update has been released. For the most recent version of our software, visit this page: www.turnermotorsport.com/t-turner-flash.

Windows is telling me your software is unknown and may damage my computer: This is a Windows warning to protect you against malware and viruses. But since you already know the software is from a reputable source you can continue with the installation. Look for an option to "Ignore" this warning or "Run Anyway". Our software has been in use since 2009 and has never been the cause of any Windows issues.

I still get an unrecognized device error, even after following the supplemental instructions: Try a different USB port on the computer. If that doesn't work, try a different cable.

There may be a conflict between our flashing tool and another device that you use. However, it may not be desirable to uninstall the other driver or software if it's for something you use often (camera, printer, etc). The next step would be to try another laptop.

The flashing tool failed to recognize my car and/or DME info (Step 4 in the user guide):

Make sure you have the ignition turned on. It's usually two taps on the Start button. The Service Engine Soon icon must be visible in the instrument cluster.

It is possible the tool is not compatible with your car. Are you sure you received the correct flashing tool?

Turner Software Tune Help:

My car won't start after the flash: Cycle the ignition using the Start/Stop button. Does the Service Engine Soon light come on? If it does not, then the car is not communicating with the DME. Most likely the ignition is not turned on all the way (two taps of the Start button). Or the installation was interrupted by some other event – opening a door, playing with the radio, loss of battery power, or other interference. Try loading your original stock software and ensure the car will start. Then contact us for further instruction.

The engine will not idle and stalls: Did you forget to install the new base file and jumped straight into the tuned file? BMWs have numerous stock versions of software but our tune is based on one specific version. If you installed our tune on one of the other versions the maps and data could be in different locations. Install the Turner Base File now, ensure the engine runs on that file, and then install the Turner tuned file on top of the new base file.

The engine runs but it's lumpy and rough (not stalling though): Were the adaptations not cleared in the last step? Installing the new software over the old adaptations will make the engine run rough. Turn the car off and log back in with your laptop and clear the adaptations in the Diagnostics menu. The engine may still run rough for a few minutes but will smooth itself out.

I have a Service Engine Soon light after driving it. Log in with your laptop and scan the fault codes using the Diagnostics menu. It may not be related to the software tune. If you think it is, call or email us with the codes (you can save them as a .txt file for easy email attachment). We prefer getting an email so we can see the complete list, the specific code number(s), and description first hand. Other scan tools will only give generic fault codes that might be harder to track down.