N52, N6U, N62TU, S54 User Manual

2008-2012 E82 BMW 128i Coupe	1999-2003 BMW E39 540i
2008-2012 E88 BMW 128i Convertible	2006-2010 BMW E60 525i, 528i, 545i, 550i
2006-2011 E90 BMW 325i, 328i Sedan	1999-2001 BMW E38 740i
2006-2012 E91 BMW 325i, 328i Wagon	2000-2006 BMW E53 X5 - 4.4i, 4.6is, 4.8is
2007-2013 E92 BMW 328i Coupe	2001-2002 BMW Z3, M Coupe, M Roadster
2007-2013 E93 BMW 328i Convertible	2006-2008 BMW E85 Z4 3.0i, 3.0Si, M Coupe, M Roadster

Thank you for buying Turner Performance Software for your 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 Shark OBD flash tool and USB cable

- Turner USB memory stick, containing:
    - Turner Shark Windows program setup file
    - Turner Shark User Manual PDF
    - Turner Shark Setup Guide PDF

- Turner Shark software installed on your laptop (refer to separate Setup Guide)

- Battery charger for the flash install

Pre-Install Notes:

- The Turner Shark 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 if you leave the laptop outside the car (on the roof, a table, tool cart, etc). If necessary you can leave the laptop on the driver's seat and reach in through the open window.
- A battery charger is **very** strongly recommended.
- If you previously had engine/DME coding done it may be deactivated after the flash.
- *The flash software 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.*
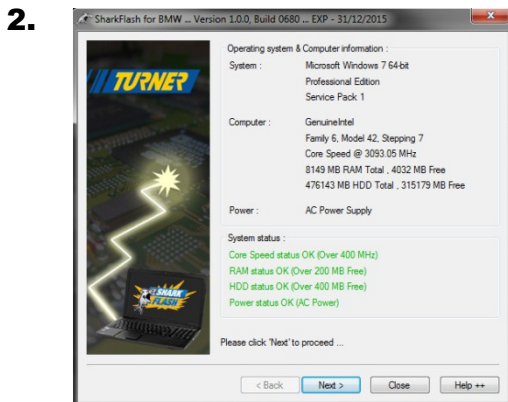
Connection to the Vehicle:

1.

Open the Turner Shark program. Please read the license and user agreement and click "I Agree" 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.
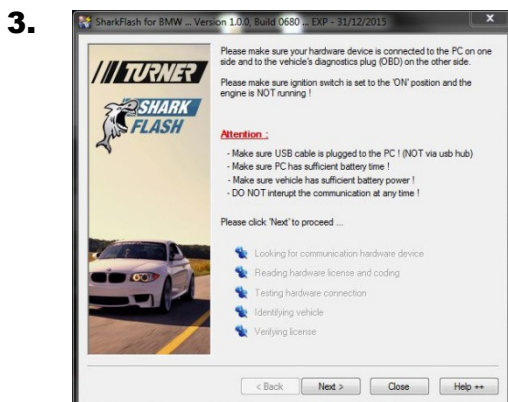
Click the [Next >] button.

2.

The Turner Shark 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.

3.

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 very strongly recommended.

Plug the Turner Shark tool directly into your computer. Then connect the Turner Shark 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.

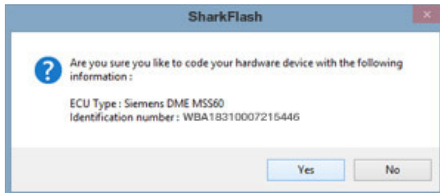Turner Shark will go through a series of communication checks with the car.

Click the [Next >] button.

4.
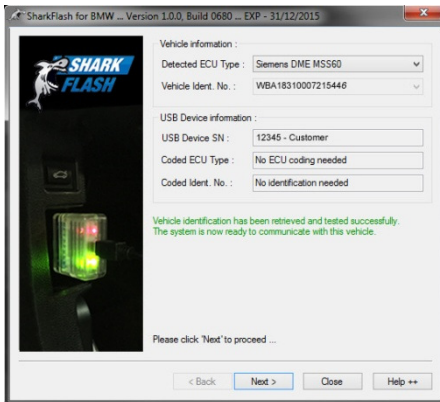
The next screen will display the information from your car: ECU type, VIN, and the Turner Shark device info. All of this info should match your car.
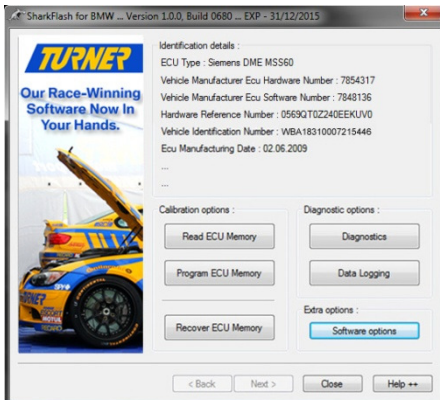
Click the [Next >] button.

First time users only:
A window will pop up asking for confirmation of the information shown in the previous screen. This is a one-time pop-up on the first install only. The Turner Shark tool is now permanently linked to this VIN.

Click [Yes] to continue.

5.

This is the main Turner Shark 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 Shark 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, Adaptation clearing.
Data Logging: Used for R&D. Not currently activated for end-user.

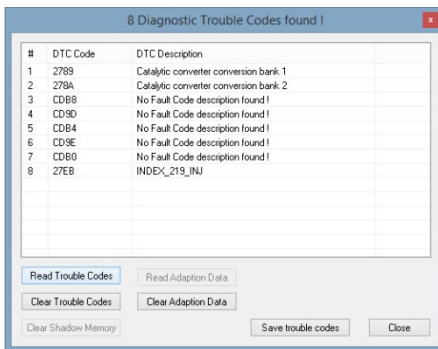**Software Options:** Contact us before clicking this.

Check for Existing Fault Codes

6.

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 Shark tool.

Click the [Diagnostics] button on the right.

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

If no codes are present then click [Close] and continue to Step 7.

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.
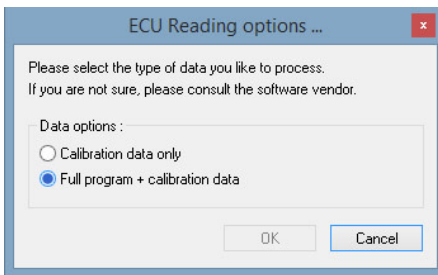
When done checking codes click [Close].

Read and Save Your Original Software

7.

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

In the Read Options window select the "Full Program + calibration data" option and then click [OK].

Select a folder to save your files. Two files are created: the full copy of your stock file and a text summary of your ECU details.
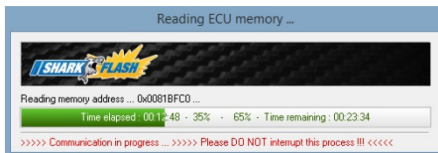
A new window will open with a green progress bar displaying the progress of the read. It will take about 35 minutes. **Do not interrupt this process! Do not open/close doors or touch anything inside the car or on the laptop or cable.**
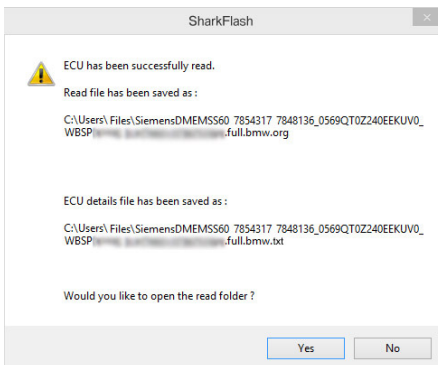
ECU Read is complete.

Click [No] to continue.

Clicking [Yes] will open the folder where your files are stored (optional).

Send Us Your Stock File

8. You will now send us your stock software calibrations. 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? Contact us and we will send it to your email.
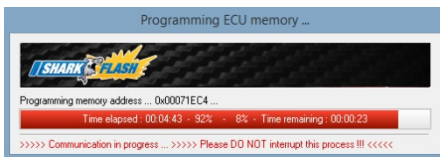
# Installing the Turner Performance Software

9.
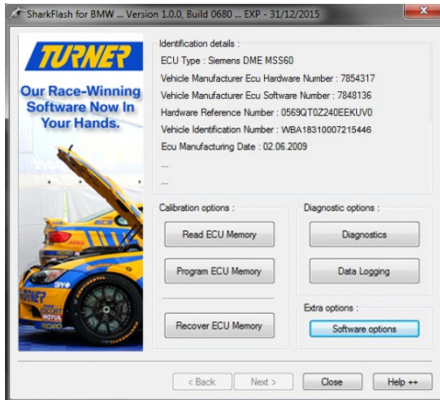
Back in the Turner Shark menu screen click [Program ECU Memory].

Select the tuned file which we emailed to you 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 5 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.
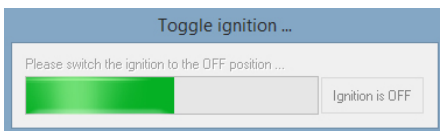
After the flash is complete turn off the ignition via the Start/Stop button. Click the [Ignition is OFF] button on the screen. When the green status bar is done counting down your ECU is now tuned!

10.

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

Clear Fault Codes and Adaptation

11.
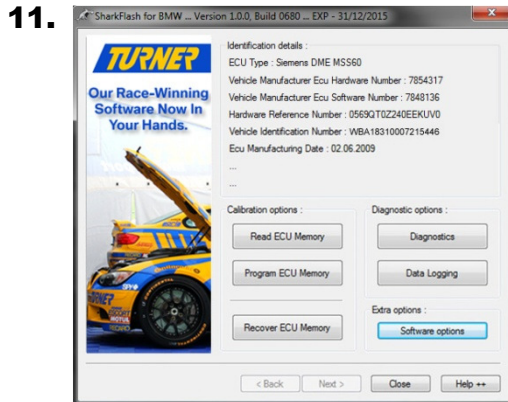
Turn the ignition back on (but do not start the engine).

Back in the Turner Shark menu screen click the [Diagnostics] button again.
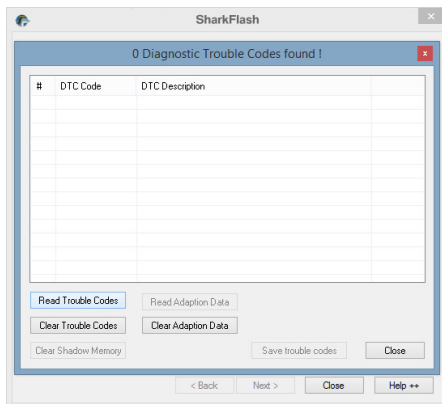
Click [Read Trouble Codes]. There may be some harmless codes here after flashing the ECU. These are typically message errors from programming.

Click [Clear Trouble Codes] to erase them.

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

You must also 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 Shark 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:

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.

Previous Coding. Because we are reflashing your DME, any previous DME coding and flashing will be over-written. If you had coding done to your car it may be deactivated after the flash.

Octane. Your Performance Software is set to either 91 or 93 minimum octane. Plan ahead if 93 is not available and reinstall your stock software. Additional performance software files can be purchased separately if you want to have multiple software versions.

Additional Files and Upgrades. 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 Dropbox 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. The new Base software that we use is already the best version available so there should be no need to update to a newer version. 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.

Turner Program Updates. Occasionally a newer version of the Turner flash program will be released. Your older version may no longer open or have limited functions. You can download a new version of Shark Injector from our website here: http://www.turnermotorsport.com/shark.

All Wheel Drive 3 Series 2006-2012. After flashing your DME it is normal to receive a dashboard warning light for a center differential error. It is safe to drive the vehicle, rest assured the warning will clear itself after a few drive cycles.

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/shark

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 on with the installation. Look for an option to "Ignore" this warning or "Continue Anyway". Our software has been in use since 2009 and has never been the cause of any known 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.

The other possibility is 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.