INTRODUCTION

TigerTool V2.0 runs under Windows XP & later operating systems and includes features to allow the user to:-

- Reset the service interval and clear the 'service due' wrench symbol from the instruments
- Read & clear diagnostic trouble codes (DTCs) and the Malfunction Indicator Light (MIL)
- Read & clear ABS DTCs
- Check throttle body balance
- Read VIN, ECU serial & engine map reference codes

DISCLAIMER

TigerTool V2.0 is provided as-is and without warranty of any sort.

*The software is provided free of charge for non-commercial use. It allows the user limited access to the ECU on **Triumph Tiger 800 and Explorer models ONLY**, and can be used to perform various functions as part of a regular maintenance and/or servicing schedule.*

Using this software, and the consequences therein, remains the sole responsibility of the user. Neither the author nor anyone associated with the officially supported forums will be held liable for any subsequent costs, losses or damages as a result of downloading, installing or using this software.

The software MUST NOT be copied to other web-sites, internet forums, social media sites etc without the express written authority of the original author. Software support and new releases will only be provided by the author via the forums at Tiger800.co.uk and Tiger-Explorer.com.

All reasonable steps have been taken to ensure the accuracy of the instructions and suitability of the software, but be aware that editing or modifying your bike's ECU may cause undesirable effects and/or invalidate your warranty. The software has been scanned at VirusTotal prior to release.

OBD INTERFACE

Accessing ECU data can be achieved using the ISO9141-2 and ISO15765-4 (aka CAN bus) protocols. To help with managing and interpreting the comms signals, ELM Electronics developed & released their ELM327 chip. Unfortunately for them the early releases were not protected and so were quickly copied and now the market is flooded with cheap clones, largely distributed out of China. This may be bad news for ELM but it means cheap OBD2 interfaces are available to the rest of us.

This software is intended to work with just about any ELM327-based OBD2 interface and has been tested with several of the USB & Bluetooth ELM327 Mini interfaces (all bought from ebay). Some of the USB versions have the FTDI USB-to-serial chipsets which seem to work well under any version of Windows, as FTDI are usually on-the-ball with releasing drivers. There are also many interfaces that use different serial chipsets, e.g. the PL2303 interface from Prolific Tech, and most of these have been tested. The key is to ensure that you have the latest drivers for the device that you're using to support the version of Windows that your PC is running.

NOTE:

- ***This software WILL NOT work with the VAG/KKL leads such as those from Lonelec that are used with TuneECU.***
- ***This software WILL NOT work with ELM327 devices that claim to be V2.1.***
- ***This software will ONLY WORK with ELM327 OBD2 devices that are V1.4 or V1.5.***

INSTALLATION

TigerTool is a standalone application that needs no installation process and no additional files to run. You can manually add a shortcut to your desktop to make access easier if you like.

This latest TigerTool software has been thoroughly tested on my 2011 Tiger 800XC & 2012 Tiger Explorer using Windows versions XP (SP3), 7 (Starter) and 8.1Pro. Several Beta testers have also checked it on various other combinations. The screenshots used in the following instructions were all taken from within Windows XP but it should look similar under other Windows versions.

CONNECTION

Before running TigerTool you'll need to connect & install your ELM327 OBD2 interface as per the manufacturer's instructions. The ELM327 interface should appear in Device Manager as a serial port with an assigned port number. If you have problems installing then please post details in the supported forums for possible help.

Most ELM327 interfaces will not run unless they're connected to the OBD socket on the bike. The socket has a large black moulded shroud and is located under the pillion or rider seat depending on the Tiger model. The socket can be carefully lifted from its mounting lug and connected to the ELM327 interface. When you connect, most interfaces run through a sequence of tests causing various LED to flash.

Make sure that the bike's engine kill switch is in the 'run' position then turn on the ignition switch. There's no need to start the engine (unless you're checking the throttle body balance – see later).

On your PC, locate & run the TigerTool application from where you saved it. When you run TigerTool, you will see the 'disclaimer & conditions of use' screen firstas follows:-
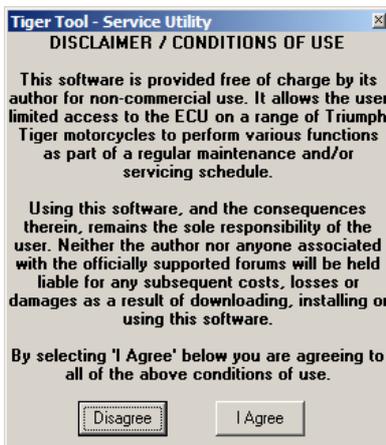
To continue you must agree to the conditions and click on 'I Agree'. If you click on 'Disagree', TigerTool will close. If you agree, the next (main comms tab) screen will appear as follows:-

Click on the 'Select Port' button then use the arrow in the list box to select the serial port for your ELM327 interface. Depending on your PC configuration you may have several serial ports so it's worth looking at Windows Device Manager to check which one is assigned to your ELM327 interface. In the case of Bluetooth interfaces, there may be two assigned serial ports (depending on the drivers) so you may have to try both to see which one provides access.

The following image shows a typical port selection:-

Now click OK to select the port. The 'Connect' button should now be enabled and the new port status updated at the bottom of the screen as follows:-

Now click the 'Connect' button to start communicating with the ELM327 interface and ECU - this may take several seconds and should indicate progress according to the following images:-

If the interface can't be found, the following image will be displayed and the operation will be aborted:-

The most likely causes of this error are either the wrong serial port being selected or no power to the ELM327 interface. Try to unplug then reconnect the interface from the bike (and observe the active LEDs) and/or try a different serial port. Also make sure that the ignition & engine kill switches are on.

Once connection has been established with the interface, you should see the following sequence of images while communication is attempted with the ECU:-
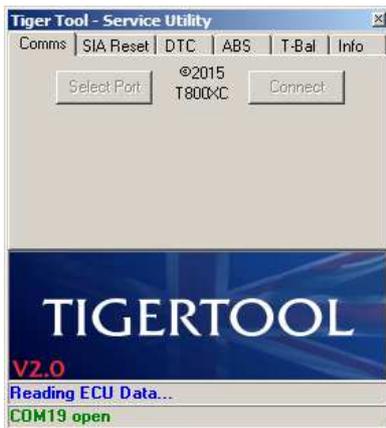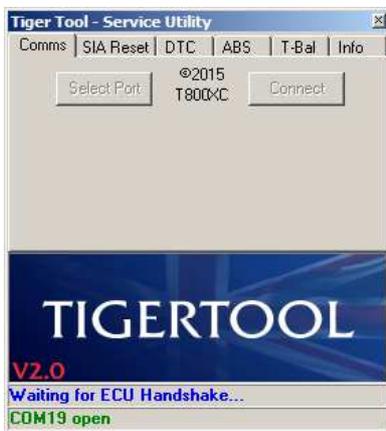
If the ECU type-check matches and data was read successfully, the 'ECU Information' pop-up box should appear, as shown above, to display the VIN number, ECU serial number, engine map/tune number, the date the tune was installed, and the approximate battery voltage.

Note: The reported battery voltage is only an estimate and is based on a reading from within the ELM327 interface rather than directly from the ECU. Some interfaces are more accurate at measuring this than others.

At this point, if the interface can't connect with the ECU, the following image will be displayed and the operation will be aborted:-
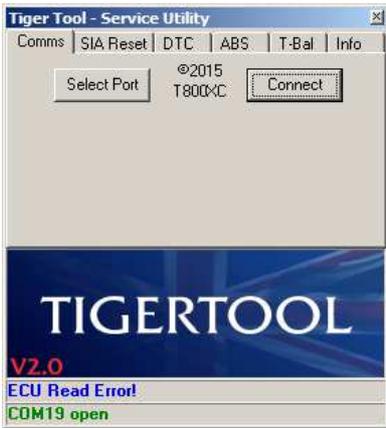
The most likely cause of this error is the bike's ignition or engine kill switch being in the off position. Ensure that the both switches are on and try again.

If the wrong ECU type was detected, which may happen if you attempt to use TigerTool on a bike other than a Tiger 800 or Explorer, the following images will be displayed and the operation will be aborted:-
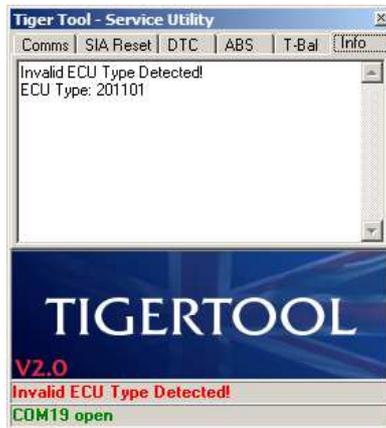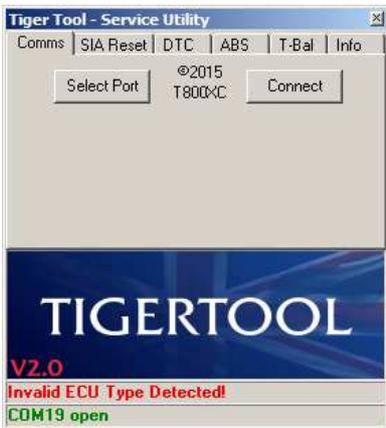
The image on the right shows some additional detail about the ECU type from the 'Info' tab. There's nothing further you can do about this as the software is only intended for use on a Tiger 800 or Explorer.

If connection was made successfully then at this point you're ready to continue and use all of the TigerTool features. The last 'Info' tab will show some more details about the ECU etc. The following images show typical examples:-
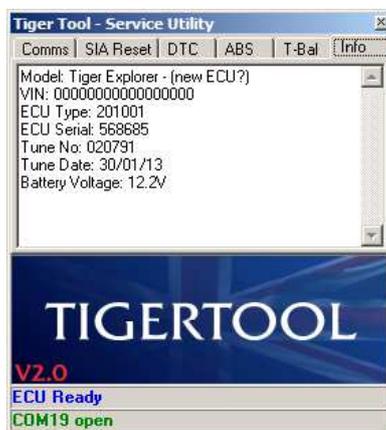
The model info is selected from a list based on the VIN.

In the case of Explorers that have had their ECU replaced under recall (Triumph service bulletin SB505), the VIN will most likely read all zeros making it impossible to decode, so the Model will read "*Tiger Explorer – (new ECU?)*", as shown in the second image.

SERVICE INTERVAL RESET

By selecting the 'SIA Reset' tab, you can change the service interval on your Tiger and clear the spanner / wrench symbol from the dash / instrument panel. The following image shows the SIA Reset tab:-

Click on the check box to select either 'miles' or 'km' to suit the current settings on your bike's instruments. Use the up/down arrows next to the units to scroll through to the service interval that you want to use. If you click between the miles & km check boxes on TigerTool a rough conversion will be made and the distance updated (rounded to the nearest 100 units), within the acceptable limits.

MAKE SURE THAT YOU SELECT THE CORRECT UNITS TO AVOID POTENTIAL RESET ERRORS!

Note that the service interval can only be set in multiples of 100 (miles or km). For the Tiger 800 the maximum limits are 6000 miles or 10000km, and for the Explorer the limits are 10000 miles or 16000km. The settable limits are controlled by the TigerTool software to match the Tiger model so it's not possible to set a service interval that the bike doesn't support.

When you've selected the new service interval, and you're ready to complete the reset procedure, click on the 'Reset SIA' button and the following image will be displayed:-

If you select 'No' the pop-up window will close and nothing more will happen. You can select 'Reset SIA' again at this point if you change your mind, or you can choose one of the other tab items.

If you select 'Yes' to reset the service interval, the following images should appear:-

If successful, that's it, you're done and you can go into the instrument's menu on the bike to check that your service interval has been updated to the new value.

If the reset fails, you should see the following image:-

As with other diagnostic features, the most likely cause of this error is the bike's ignition or engine kill switch being in the off position. Ensure that the both switches are on and try again.

At this point all other TigerTool functions will have been disabled and further access to the ECU prevented, so you'll need to re-connect to the ECU from the first 'Comms' tab to re-establish communication and to try again.

DIAGNOSTIC TROUBLE CODES - DTC

By selecting the 'DTC' tab, you can change check for and clear any confirmed error codes. The following image shows the main DTC tab page:-

To read the list of confirmed DTCs from the ECU, click on the 'Check DTC' button and the following images should appear if no DTCs are found:-
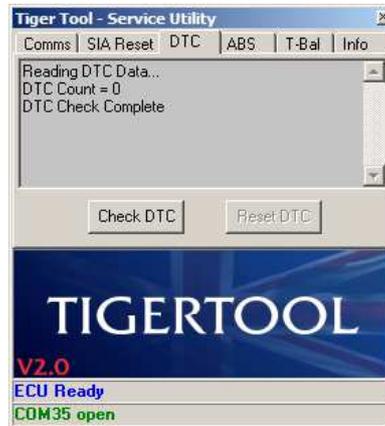
If any confirmed DTCs are found they will be listed as shown in the following example images. You can scroll down through the list if there are too many to show in one pane.
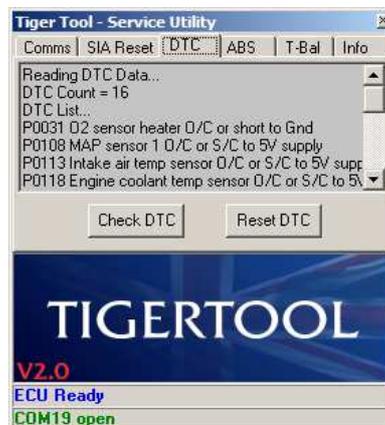
If any DTCs are found then the 'Reset DTC' button will be enabled. If you click on the 'Reset DTC' button, the following message will appear for you to confirm the next action:-

CAUTION
Before resetting the DTCs and clearing the MIL, be aware that the following *may* also occur as a result:-
  Reset the number of DTCs (count)
  Erase any stored DTCs
  Erase any freeze-frame diagnostic data
  Erase the DTC that initiated the freeze-frame
  Erase all oxygen sensor data

Additionally, the engine may run slightly differently for a time after a DTC reset while it recalibrates.

The above conditions are not unique to TigerTool and *may* occur when any diagnostic scan tool issues a DTC reset on any vehicle.

If you click on the 'No' button, the pop-up message will disappear and nothing further will happen. If you click on the 'Yes' button, the following images should appear:-

Once the DTCs have been successfully reset, you can confirm this by re-clicking the 'Check DTC' button. It is may be necessary to switch off the ignition, wait 1 minute then switch on again to allow the ECU and other systems to fully reset before re-checking for DTCs.

ABS DIAGNOSTIC TROUBLE CODES

By selecting the 'ABS' tab, you can change check for and clear any error codes stored in the ECU of the ABS modulator. The following image shows the main ABS tab page:-
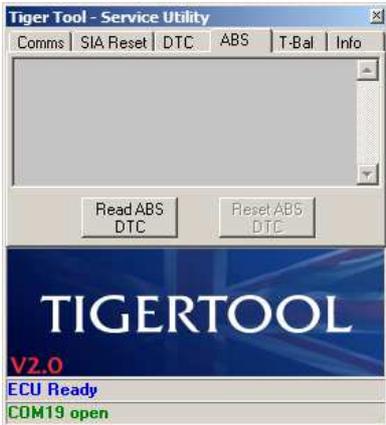
To read the list of confirmed ABS DTCs, click on the 'Check ABS DTC' button and the following images should appear if no DTCs are found. The image on the right shows the contents of the 'Info' tab where the ABS ECU Type has been added.
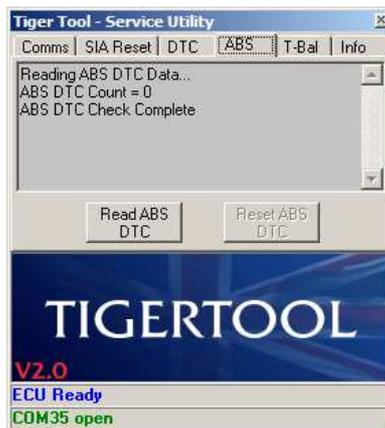
If any ABS DTCs are found they will be listed as shown in the following image. The 'Reset ABS DTC' button will also be enabled.

If you click on the 'Reset ABS DTC' button, the following message will appear for you to confirm the next action:-

If you click on the 'No' button, the pop-up message will disappear and nothing further will happen. If you click on the 'Yes' button, the following images should appear:-

After resetting ABS DTCs it may also be necessary to re-check & reset non-ABS DTCs as some are inter-linked. You may also need to switch off the ignition, wait 1 minute then switch on again to allow the ECU and other systems to fully reset before re-checking for ABS DTCs.

If the bike isn't fitted with ABS, the following images will appear when checking for ABS DTCs:-
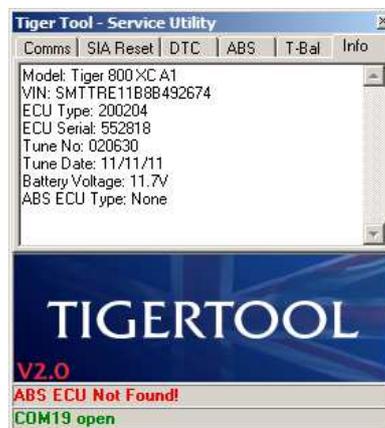
The image on the right shows the contents of the 'Info' tab where the ABS ECU Type has been added.

At this point the software has been disconnected from the ECU and all other TigerTool functions also disabled, so you'll need to re-connect to the ECU from the first 'Comms' tab to re-establish communication and to try again.

THROTTLE BODY BALANCING

By selecting the T-Bal tab, you can access the controls to check the throttle body balancing. These instructions only cover the use of TigerTool to check the throttle body balancing. You will need to refer to the relevant service manual for your bike for details on how to access, check & adjust the throttle balance.

The throttles can't be balanced using traditional vacuum gauges and can only be checked using diagnostic software which uses the bike's ECU & built-in sensors. During the checks, the ECU decides whether the throttles are balanced and TigerTool simply reports this status.

The following image shows the main T-Bal tab page as it appears when you first connect to the ECU:-
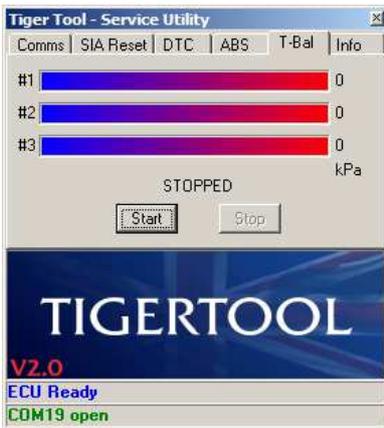
Before attempting to check the throttle balancing, start & run the engine and allow the bike to idle.

When you click on the 'Start' button, the software will initialise then request and display the values for each throttle from the ECU. It will also check if the engine is running. You may see the following images when these functions are processed:-
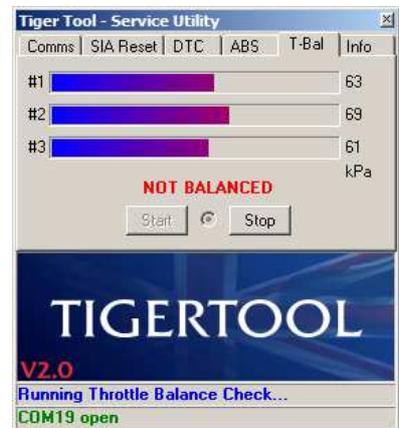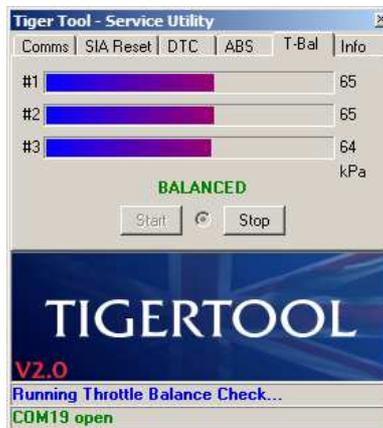
The flashing dot between the 'Start' & Stop' buttons is there to indicate that the engine is running and that readings are being taken.

If you want to toggle the displayed units, simply click on the actual units text ('*kPa*' or '*mmHg*') below the bottom reading and the units will toggle between the two for each click.

If the engine is not running you will see the following image:

The software will continue to request the values from the ECU but as the engine is not running it should report a zero value. If you start the engine the readings should appear after a couple of seconds.

When you've finished checking and/or adjusting the throttles, click on the 'Stop' button and the process will quit. The last recorded values will remain on display and the 'ECU Ready' message should appear on the status line near the bottom of the window, as shown in the following image:-