TIGERTOOL V3.0 INSTRUCTIONS

INTRODUCTION

TigerTool V3.0 runs under the Windows operating systems and with versions from XP to 10. It includes features to allow the user to do the following:-

- Reset the service interval and clear the 'service due' wrench symbol from the instruments
- Configure ABS / TPMS menu items & default units for the instruments
- Read & clear diagnostic trouble codes (DTCs) and the Malfunction Indicator Light (MIL)
- Read & clear ABS DTCs
- Bleed ABS brake modulator
- Check throttle body balance
- Read, enable/disable & program TPMS sensors
- Erase Immobiliser/TPMS DTCs and monitor live TPMS data
- · Read VIN, ECU serial & engine map reference codes

DISCLAIMER

TigerTool V3.0 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, 900, Sport & Explorer/1200 models** and can be used to perform various functions as part of a regular maintenance and/or servicing schedule. Note: TigerTool may work, but is not fully tested on other Triumph models. Details on how to try TigerTool with other models are shown at the end of this document.

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 www.tiger800.co.uk and www.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. This software is intended to work with most USB & Bluetooth ELM327-based OBD2 interfaces, including clones. There are a number of ELM327-based interfaces around that don't work with TigerTool because they contain very poor quality components and/or firmware and don't support some the of the basic ELM327 commands that are needed, in particular 'ATD'.

Some of the USB interfaces 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. Unfortunately FTDI released driver updates a few years back that bricked many of the clone chips that were being used in cheap OBD2 interfaces so it can be a case of buyer beware.

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 version supports ELM327 OBD2 interfaces that are V1.n or V2.n.

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 various models of Tiger 800, 900, Sport & Explorer/1200 using Windows versions from XP to 10Pro. The screenshots used in the following instructions were all taken from Windows 10Pro but 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 first. 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:-

ABS T-Bal TPMS Info

DTC

elect Port

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GERTOOL

TROOKC

TigerTool - Service Utility
DISCLAIMER / CONDITIONS OF USE
This software is provided free of charge by its author for non-commercial use. It allows the user limited access to the ECU on a range of Triumph Tiger motorcycles 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.
By selecting 'I Agree' below you are agreeing to all of the above conditions of use.
Disagree I Agree

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 images show a typical port selection and the updated 'Connect' button & port status message at the bottom of the screen once the port is opened:-

TigerTool - Service Utility	
Comms Insts DTC ABS T-Bal TPM Select Port T800AC Connect Select Com Port	15 Info
COM port: COMIO	
TIGERTOC V3.0 Not Connected	DL



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 the interface is initialised and 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 those listed at the start of this document, the following images will be displayed and the operation will be aborted:-





The image on the right shows some additional detail read from the ECU. There's nothing further you can do about this for now as the software is intended only for use with the bikes listed. As mentioned at the top of this document, it's possible to try connecting this version of TigerTool to other unsupported models. Details on how to do this are shown at the end of this document.

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 SB505), the VIN may read all zeros making it impossible to decode, so the Model will appear as shown in the second image.

SERVICE INTERVAL RESET & INSTRUMENTS CONFIGURATION

By selecting the 'Insts' tab, you can change the service interval reminder on your Tiger and clear the spanner / wrench symbol from the dash / instrument panel. You can also configure the units for the odometer, ambient temperature and TPMS, and enable / disable the TPMS & ABS menu items.

The following image shows the Instruments tab:-



In TigerTool V3.0 the odometer reading and units (miles / km) are automatically read when the initial connection is made to the ECU. The current odometer reading is displayed together with the preset service interval and the 'service due' value. All odometer values are stored in the instruments in kilometres. Due to different conversion factors and rounding used across the Triumph model range, if miles are selected as the distance units there may be a 1mile discrepancy between the 'ODO Reading' shown in TigerTool and that displayed on the bike.

Resetting the Service Interval

Use the up/down arrows to scroll through and select the service interval that you want to use. Note that the service interval can only be set in multiples of 100 (miles or km).

For the Tiger 800, 900 & Sport models, the maximum service interval limits are 6000 miles or 10000km, and for the Explorer/1200 the limits are 10000 miles or 16000km. The settable limits are controlled by the TigerTool software to match the Tiger model so it shouldn't be 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' 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' 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 messages shown in the following images should appear:-

TigerTool - Service Utility	TigerTool - Service Utility
Comms Insts DTC ABS T-Bal TPMS Info Set Service Interval 0D0 Reading 23456 miles Distance to service 6000 miles Flesset	Comms Insts DTC ABS T-Bal TPMS Info Set Service Interval 000 Reading 23456 miles Distance to service 6000 miles
Service due at 29456 miles Configure Instrument Menu Config UNITS MENU DD0 TPMS Temp TPMS Select Select	Service due at 2945b miles Configure Instrument Menu
TIGERTOOL V3.0 Resetting Service Interval COM10 open	TIGERTOOL V3.0 Service Interval Reset - Success COM10 open

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.

Note: When you reset the SIA (Service Interval Announcement), a new countdown begins based on the bike's current odometer reading. The spanner / wrench reminder symbol will reappear when the bike reaches 500 miles (800km) of the 'Service due at' distance that you set.

On newer models with a calendar function, the service due date *IS NOT* reset by TigerTool. In these circumstances the wrench symbol may still be shown on the display and you will have to reset the due date manually from the instrument's menu. See the relevant owner's manual for details on how to do this.

If the service interval reset fails, you should see the error message as shown in 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.

Occasionally the ECU may take too long to respond to the reset request and this message can appear even though the SIA has been reset. You can check this by scrolling through the menu on the bike's instruments to see if it's been reset.

At this point all other TigerTool functions may 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.

Configuring Instrument Units & Menu

TigerTool V3.0 allows several settings in the bike's instrument menu to be configured. These are grouped as Units & Menu items.

The Units section allows selection of Odometer, TPMS & Temperature units.

The Menu section allows the TPMS or ABS menu items to be enabled or disabled.

The following images show the options that are available for each section:-



Set Service Interv	DTC ABS	T-Bal	TPMS I Info
ODO Reading	23456 mil	es	
Distance to se	r vice 6000 mil	es 🔺	Reset
Service due at	29456 mil	es	
Configure Instrum	ent Menu		Thomas
			Config
	UNITS		MENU
ODO	TPMS Temp	TPMS	ABS
Miles UK 👱	Select Select	Select	Select -
	Select		
	PS		
	Bar		
TIC		TO	OI
TIC		ТО	OL
TIC		ТО	OL
TIC 3.0 U Ready		ТО	OL
TIC 3.0 U Ready M10 open		TO	OL
TIC 3.0 U Ready M10 open		ΤΟ	OL
TIC 3.0 U Ready M10 open		ΤΟ	OL
3.0 U Ready M10 open	Bar Bar DER	ΤΟ	OL
TIC 3.0 U Ready M10 open	Utility	TO	OL

Dentero Ir	ete DTC	L ARC L	T.R.J	TRMC 1 1	- (-
Cot Convice In	storual	I ABS I	I-Dal		011
ODO Readi	ng	23456 miles			
Distance to	service	6000 miles	•	Rese	Ğ.
Service due	e at	29456 miles			
Configure Inst	rument Menu				
				Config	Ê
	UNITS			MENU	
ODO	TPMS	Temp	TPMS	ABS	
Select	▼ Select	▼ Select ▼	Select	▼ Select	•
	· · · ·		Select		
			Enable		
			Disable		
		- 1 2	()		
3.0					
U Ready					
M10 open					

The 'Config' button remains disabled until a valid selection is made under the Units or Menu options. During selection, unavailable options have their text colour changed to red once another selection is made.

In the Units section, all three values must be selected, but in the Menu section, either the TPMS or ABS enable/disable items must be selected before the 'Config' button is enabled.

Note: Not all bike models will have all Units or Menu items available, but they still need to be selected and configured. e.g. Early Tiger 800s didn't have the option to select kPa for the TPMS unit display, or didn't have an ambient temperature indicator. In such cases the bike will ignore the setting and use a default value. Similarly, not all bikes allow the ABS menu item to be disabled so this command may get ignored if issued.

When you've selected the menu options and you're ready to make the changes, click on the 'Config' button and the messages in the following images will be displayed:-

Comms Insts DTC ABS Set Service Interval 000 Reading 23456 mill Distance to service 6000 mill Service due at 29456 mill	es 🔹 Reset
Set Service Interval ODO Reading 23456 mill Distance to service 6000 mill Service due at 29456 mill	es 🚖 Reset
DDD Reading 23456 mill Distance to service 6000 mill Service due at 29456 mill	es 🔺 Reset
Distance to service 6000 mile Service due at 29456 mile	es 🔺 Reset
Service due at 29456 mil	
	es
Configure Instrument Menu	
	Config
UNITS	MENU
ODO TPMS Temp	TPMS ABS
Miles UK - PSI - C	- Select - Select -

Comms I	nsts D1	IC ABS	T-Bal	TPMS	Info
Set Service I	nterval	- 10 AAAA	7.7 - 2.50 (0.2) - 7.7	-Sedener -	0.000
ODO Read	ling	23456 miles			
Distance to	o service	6000 miles	•	F	leset
Service du	e at	29456 miles			
Configure Ins	trument Menu			1/	
					Config
	UNITS			MENU	
ODO	TPMS	i Temp	TPMS	ABS	ŝ (
Miles UK	- PSI	- °C -	Select	- Sele	ct 🕋
N				5-344	_
		E DT			
					-
	CONTRACTOR OF				-
13.0					
73.0	nu Settina	- Complete			

Once completed, the odometer details are re-read from the bike in case the distance units have been changed between miles & km.

DIAGNOSTIC TROUBLE CODES - DTC

By selecting the 'DTC' tab, you can check for and clear any confirmed error codes from the ECU. 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:-

	service of	ility							
Comms	Insts	DTC	ABS	1	T-Bal	1	TPMS	1	Info
Reading D1	ſC Data								^
									~
	13	Sheck DTO	51	Eras	DTC				
		Check DT(Eras	e DTC				-
		Dheck DTI		Eras			1	T	2
Т	IC	Check DTO	R	Eras			0	I	
T v3.0	IC	Check DTC	R	Eras			0	I	



If any confirmed DTCs are found the 'Erase DTC' button will be enabled and the codes will be listed. You can scroll down through the list if there are too many to show in one pane. The following example image shows a typical DTC result list:-



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

Reading DTC Data DTC Court = 2 DTC List P0031 D2 sensor heater D/C or short to Gind P0108 MAP sensor 1 D/C or S/C to 5V supply DTC Check Complete CONFIRM DTC ERASE?	^
CONFIRM DTC ERASE?	
Are you sure you want to erase error DTCs & MIL?	
Yes	

CAUTION

Always check the nature of any DTCs and investigate the reason for their presence. Never just assume that it's safe to simply erase the DTCs as there may be a serious problem that needs to be rectified!

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

The engine may run slightly differently for a time after a DTC reset

while it recalibrates. These 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 messages shown in the following images should appear:-

0						
Lomms	Insts	DTC	ABS	T-Bal	TPMS	Info
Reading DT DTC Count DTC List P0031 02 s P0108 MAF P0108 MAF DTC Check Erasing DT(Complete	°C Data = 2 • sensor heat • sensor 1 0 Complete Ds	er 0/C or sh 0/C or S/C 1	nort to Gind to 5V supply			
	_(Check DTC	Ena	ise DTC		

Once the DTCs have been successfully erased, you can confirm this by re-clicking the 'Check DTC' button. It 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 check for and clear any error codes stored in the ABS modulator's ECU. You can also run the ABS Bleed process to purge old brake fluid from the modulator during a brake service. 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 'Bleed ABS' button has been enabled because no ABS DTCs were found.





The following image 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 'Erase ABS DTC' button will be enabled to allow you to clear the ABS DTCs. The 'Bleed ABS' button remains disabled because the bleed process should not be run if there are any ABS DTCs present.



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



CAUTION

Always check the nature of any ABS DTCs and investigate the reason for their presence. Never just assume that it's safe to simply erase the ABS DTCs as there may be a serious problem that needs to be rectified!

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 messages shown in the following images should appear:-



Comms	Insts	DTC	ABS	T-Bal	TPMS	Info
Reading AF ABS DTC (ABS DTC L C1654 Sole ABS DTC (Erasing AB Complete	35 DTC Data Jount = 1 .ist moid relay - stu Theck Complet S DTCs	ick OFF o e	r ON			
	Check ABS DTC		Erase ABS DTC	Ble	ed BS	

After erasing ABS DTCs it may also be necessary to re-check & erase 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, or the ABS ECU takes too long to respond, either of the following images may appear when checking for ABS DTCs:-



Comms Reading AB Failed!	Insts D IS DTC Data	TC ABS	T-Bal	TPMS	Info
	Check	Erase	Ble	ed IS	

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

ABS Bleed Process

The 'ABS' tab includes a button to allow old brake fluid to be purged from the ABS modulator, i.e. 'Bleed ABS'.

As noted in the section above, the bleed process should only be run when there are no ABS DTCs. The 'ABS Bleed' button remains disabled until an ABS DTC check has been carried out and no codes were found. Additionally, when the bleed process starts, it re-checks for any DTCs and prevents the process from completing.

CAUTION

Before bleeding the ABS modulator, refer to the service manual for your bike model to familiarise yourself with the bleed process! In general, manual bleeding of the front & rear brake systems should be performed before bleeding the ABS modulator.

On the most recent ABS systems such as that fitted to the latest Tiger 1200 range, the bleed process consists of three stages - Flush Stage, Bleed Stage 1 & Bleed Stage 2 - and takes around 140s to complete. On other models this can be between 90 & 140s. On older ABS systems the bleed process takes just 7s and may have to be executed several times.

When the bleed process has started the text on the 'Bleed ABS' button changes to 'STOP Bleed' to allow the button to be used to interrupt the bleed process, should that be necessary. This is mainly for use on newer ABS systems that take upto 140s to complete.

The following images show the normal sequence of events when the 'Bleed ABS' button is pressed:-







If the 'STOP Bleed' button is pressed during a bleed process the messages shown in the following images should appear:-

	Service U	tility						
Comms	Insts	DTC	ABS	T-Bal	11	PMS	1	Info
Reading A ABS DTC ABS DTC Initialising A Bleeding A	BS DTC Da Count = 0 Check Com ABS Bleed BS	ita plete						
	Che	ck	Erase		Bleed			

igerlool	- Service Utility						
Comms	Insts	DTC AB	3S ⊺	Bal	TPMS	Info	į
ABS DTC ABS DTC Initialising Bleeding / ABS Blee	IDS DTC Data Count = 0 Check Complete ABS Bleed ABS I Stopped	2 2					
	Check	Era	se DTC	Ble	ed		ŝ

If ABS DTCs are found while starting the bleed process, the messages shown in the following images should appear:-





Refer to the previous section to investigate & clear the ABS DTCs.

If there's a problem during the ABS bleed initialisation, the following images may appear:-



This error can be caused by a faulty supply to the ABS modulator. It usually indicates that the ABS ECU is responding but there's no power to drive the solenoids & pump sections. The ABS fuses and wiring should be checked.

At this point all other TigerTool functions will have been disabled and further access prevented. You'll need to reconnect 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 messages similar to those in the following images when these functions are processed:-

gerloof - Servic	e Utility				
Comms Inst	s DTC	ABS	T-Bal	TPMS	Info
Check Throttle	Balance				
ci 🗌					0
C2					0
23					0
			en.		kPa
	IN	ITTALISIN	G		
	Start		Stop		
				/	
TEL	CF	DT	0	0	1
	GE	\mathbf{K}	\mathbf{O}		-
Carriel Country	And and a second second				and a
0.0					
73.0	a Ralance Ch	ack			







The flashing dot between the 'Start' & 'Stop' buttons is there to indicate that live readings are being taken.

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

If the MAP sensor is not providing any readings, you will see the following image:-

Comms I Ins	ts DTC	ABS	T-Bal	TPMS	l Info
Check Throttle	Balance				
л					0
					-
2					0
3					0
	NO MA	P SENSO	R DATA!		kPa
		1			
	Start	_ • .	Stop		
					~
				15	
	C.F	DT		\cap	
	UL				

This can be caused if the engine is not running, or your MAP sensor is disconnected.

The software will continue to request the values from the ECU and if you start the engine or re-connect the MAP sensor the readings should appear after a couple of seconds.

When you've finished checking 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:-

Comms I In		T-Bal	TPMS	Info
Check Throttl	Balance		THE I	1110
C1				65
-				
C2				65
C3				64
	CTORDED		ł	<pa< td=""></pa<>
	STOPPED	2		
	Start	Stop		
	Louis and Louis			
			/	
	CEDT	0	01	
Sand Sand	GEIG	-		-
/3.0				

TPMS – TYRE PRESSURE MONITORING SYSTEM

New to TigerTool V3.0 is the ability to read & program TPMS sensors, enable / disable the system, read & clear immobiliser DTCs and monitor live TPMS data.

Note:- The TPMS feature will currently only work on bikes that have an immobiliser that also acts as the TPMS controller. Due to access restrictions it cannot be used on newer bikes that have a Chassis ECU. Work is ongoing to provide support for these bikes.

The following image shows the main TPMS tab page as it appears when you first connect to the ECU:-



If you click on the 'Connect' button TigerTool will try to establish a connection with the immobiliser, read any stored DTCs, read the enabled/disabled status and finally read any stored sensor IDs, as shown in the following sequence of images:-

ive
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Info
ive 1
•

	Utility			
Comms Insts Configure / Read	DTC DTMS Senso	ABS 1 #s	-Bal TPMS	Info
Connect			<u> </u>	Live
Sensor ID	Edit	Status Disabled	DTCs 0	
R: 00000000	Edit	Enable	Ērase	
				^
				~
	GE	RT		
V3.0				
leading Immobilis	er DTCs			
OM10 open				
GaarTool - Sanica	Nelleo			
figerTool - Service Comms Insts	Utility	ABS 1	-Bal TPMS	× Info
FigerTool - Service Comms Insts Configure / Read	Utility DTC TPMS Senso	ABS 1 NS	r-Bal TPMS	× Info
TigerTool - Service Comms Insts Configure / Read	Utility DTC TPMS Senso	ABS 1 MS	r-Bal TPMS	× Info
FigerTool - Service Comms Insts Configure / Read Connect Sensor ID	Utility DTC TPMS Senso	ABS 1 ors Status	T-Bal TPMS	Info
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000	Utility DTC TPMS Senso	ABS 1 अड Status Enabled	-Bal TPMS	X Info
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 R: 00000000	Utility DTC TPMS Senso Edit	ABS 1	Bal TPMS	X Info Live
Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 F: 00000000 F: 00000000 F: 00000000 Immobiliser DTC Lis	Utility DTC TPMS Senso Edit Edit	ABS 1 ABS 1 Status Enabled Disable	r-Bal TPMS	Live
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 R: 00000000 Immobiliser DTC Li L0008 Invalid Key:	Utility DTC TPMS Senso Edit Edit st Key authentid	ABS 1 Status Enabled Disable	r-Bal TPMS	Live
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 R: 00000000 Immobiliser DTC Li L0008 Invalid Key:	Utility DTC TPMS Sensc Edit Edit st. Key authentic	ABS 1	r-Bal TPMS	Live
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 R: 00000000 Immobiliser DTC Li L0008 Invalid Key:	Utility DTC TPMS Senso Edit Edit st Key authentic	ABS 1	r-Bal TPMS	Live
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 R: 00000000 Immobiliser DTC Li L0008 Invalid Key.	Utility DTC TPMS Senso Edit Edit st Key authentio	ABS 1	r-Bal TPMS	Live
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 R: 00000000 Immobilizer DTC Lis L0008 Invalid Key:	Utility DTC TPMS Senso Edit Edit st Key authentio	ABS 1 Status Enabled Disable	r-Bal TPMS	Live
TigerTool - Service Comms Insts Configure / Read Connect Sensor ID F: 00000000 R: 00000000 Immobilieer DTC Li L0008 Invalid Key:	Utility) DTC TPMS Senso Edit Edit st Key authentic	ABS 1 Status Enabled Disable cation unsuccess	r-Bal TPMS	Live
TigerTool - Service Comms Insts Configue / Read Connect Sensor ID F: 00000000 R: 00000000 R: 00000000 Immobiliser DTC Li L0008 Invalid key:	Utility DTC TPMS Senso Edit Edit st Key authentic	ABS 1 INS Status Enabled Disable sation unsuccess	r-Bal TPMS	× Info



If any DTCs are found the 'Erase' button will be enabled. Similarly, if the TPMS is enabled the text on the status button will change to 'Disable' and the 'Live' button will be enabled to allow live monitoring of TPMS data (see later). Finally, if any sensor IDs are found they will be listed for the Front & Rear tyres.

The following image shows the contents of the 'Info' tab where the Immobiliser Type has been added:-



If the immobiliser is not found, as would be the case if the bike is equipped with a Chassis ECU, the following image should appear:-

Configure / Read TI	PMS Sensors	тва птиз	Live
Sensor ID F: 00000000 _ R: 00000000 _	Status Disabled Edit Enable	DTCs 0 Erase	
Immobiliser Not Foun	ų		· · · · · · · · · · · · · · · · · · ·
			3
		00	-
TIC			

You can try connecting again in case it was a communications error, but if it continues to fail then it would suggest that the bike doesn't have an immobiliser module.

During connection to the immobiliser and reading of the data various error messages may be displayed. In most cases these are caused by communication timeouts so simply trying again may be successful. A summary of these is shown in the following images:-

TigerTool - Service Utility	TigerTool - Service Utility
Comms Insts DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors	Comms Insts DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors
Live	Connect
Sensor ID Status DTCs F: 00000000 Edit Disabled 0	Sensor ID Status DTCs F: 0000000 Edit Disabled 0
R: 00000000 Edit Enable Erase	R: 00000000 Edit Enable Erase
TIGERTOOL	TIGERTOOL
Immobiliser Access Timeout!	Immobiliser DTC Read Error!
TigerTool - Service Utility	TigerTool - Service Utility
Comms Insts DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors	Comms Insts DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors
Connect	Connect
Sensor ID Status DTCs F: 00000000 Edit Disabled 1	Sensor ID Status DTCs F: 00000000 Edit Enabled 1
R: 00000000 Edit Enable Erase	R: 00000000 Edit Disable Erase
Immobiliser DTC List A L0008 Invalid key: Key authentication unsuccessful	Immobiliser DTC List L0008 Invalid key: Key authentication unsuccessful
TIGERTOOL	TIGERTOOL
COM10 open	COM10 open

Editing TPMS Sensor IDs

The front & rear sensor IDs must be edited individually. Click on the 'Edit' button next to the tyre sensor that you want to edit and the edit pop-up window should appear as shown in the following image:-

Connect				[Live
Sensor I F: 0F5E62	D 7C	TPMS Sens	or ID	DTCs 1	
R: 095E95	60 📕 Fre	ont OF	5E627C	Erase	
mmobiliser DT L0008 Invalid I	C List Key: Key	ar 09	5E9560		
		Save	Cancel	-8	
					1
		\mathbf{D}	TC		

The current sensor ID for the selected tyre can now be edited. The 'Save' button will only be enabled when the full 8 digit ID has been entered. The IDs are in hexadecimal format so only characters 0-9 & A-F can be entered. The ID for the other tyre will be displayed but greyed-out to prevent editing.

You can abort the editing by clicking on the 'Cancel' button and the edit window will close. To update the ID stored in the immobiliser click on the 'Save' button.

If you save without changing the ID a message will temporarily appear in the status area at the bottom of the main TigerTool window to say 'TPMS ID not changed'.

If the sensor ID has been changed the following pop-up message window will appear (the text will change to suit which tyre's sensor is being changed) for you to confirm:-



If you select 'Yes' to change the ID the following sequence of images should appear:-



Once the new ID has been programmed into the immobiliser it is read back out again for confirmation. If successful the 'TPMS ID Edit Complete' message should be seen as shown in the 4th image above.

The example images above are for the front TPMS sensor but equivalent images will be displayed for rear sensor editing.

In the event of an error during the ID programming, one or more of the following images may appear:-



This error is caused by the immobiliser not responding to the sensor ID programming command.

If you see this message try editing and saving the ID again.

This error is caused by a timeout while waiting for confirmation that the new sensor ID has been stored in the immobiliser. The sensor ID was accepted but not confirmed.

If you see this message you'll need to re-edit & save the ID again.

After the new sensor ID has been saved it is read back from the immobiliser to check that it matches the number that was edited. This error is caused by a mismatch between the two numbers.

If you see this message you'll need to re-edit & save the ID again.

This is a general failure notice if any of the above errors occurred.

Enabling / Disabling TPMS

In order to use the TPMS it must first be enabled in the immobiliser. (See comments above about support for bikes with a Chassis ECU). Once the TPMS is enabled it will transmit sensor data over the CAN bus to the instruments.

If the system is currently disabled the text on the Status button will show 'Enable'. If you click on this button to enable the TPMS the following images show the sequence of messages during the enable process:-

TigerTool - Service Utility	TigerTool - Service Utility
Comms Insts DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors	Comms Insts DTC ABS T-Bal TPMS Info
Connect	Connect
Sensor ID Status DTCs	Sensor ID Status DTCs
R: 095E956	R: 095E9560 Edit Enable Erase
Immobiliser DTCL CARE you sure you want	Immobiliser DTC List
to ENABLE the TPMS?	
Yes No	· · · · · · · · · · · · · · · · · · ·
TIGERTOOL V3.0 ECU Ready CDM10 open	TIGERTOOL V3.0 Connecting to Immobiliser CDM10 open
TigerTool - Service Utility	TigerTool - Service Utility
Comms Insts DTC ABS T-Bal TPMS Info	Comms Insts DTC ABS T-Bal TPMS Info
Connect Live	Connect Live
Sensor ID Status DTCs	Sensor ID Status DTCs
F: 0F5E627C Edit Disabled 1	F: 0F5E627C Edit Disabled 1
Immobiliser DTC List	Immobiliser DTC List.
L0008 Invalid key: Key authentication unsuccessful	L0008 Invalid key: Key authentication unsuccessful
	· · · · · · · · · · · · · · · · · · ·
TIGERTOOL V3.0 Enabling TPMS CDM10 open	TIGERTOOL V3.0 Reading TPMS State COM10 open
TigerTool - Service Utility	TigerTool - Service Utility
Comms Insts DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors	Comms Insts DTC ABS T-Bai TPMS Info
Connect	Connect
Sensor ID Status DTCs	Sensor ID Status DTCs
F: 0F5E62/C Edit Enable F R: 095E9560 Edit Disable Erase	R: 095E9560 Edit Disable Erase
Immobiliser DTC List	Immobiliser DTC List
·	
TIGERTOOL	TICERTOOL
V3.0	M30
TPMS Enable Complete COM10 open	ECU Ready CDM10 open

In the 4th image above, now that the TPMS is enabled, the text on the Status button has been changed to 'Disable' and the 'Live' monitor button has been enabled.

The example images above are for enabling TPMS but equivalent images will be displayed for disabling.

In the event of an error during TPMS Enable / Disable, one or more of the following images may appear:-



This error is caused by the immobiliser not responding to the TPMS Enable command.

If you see this message try enabling again.

This error is caused by a timeout while waiting for confirmation that the TPMS Enabled status has been set in the immobiliser. The command was accepted but not confirmed.

If you see this message try enabling again.

This error is caused by the TPMS Enable command completing but the status read-back suggesting that TPMS is not enabled.

If you see this message try enabling again.

This is a general failure notice if any of the above errors occurred.

Erasing Immobiliser (TPMS) DTCs

The immobiliser stores error codes (DTCs) for the TPMS as well as its own functions. To erase these codes, if you click on the 'Erase' button the following message will appear for you to confirm the next action:-

Comms Insts Configure / Read TF	DTC ABS T MSSensors	-Bal TPMS	Info
Connect			Live
Sensor ID	Status	DTCs	
F: 0F5E627C	Edit Enabled	1	
R: 095E956	NFIRM TPMS DTC ERASE?		
	Are you sure you wa	nt	
L0008 Invalid key	to erase TPMS DTCs	?	
	Yes No.		~
	da da		-
	and the second second		-
TIC	IFRT(
/3.0			and the second value of th
CU Ready			
JM10 open			

CAUTION

Always check the nature of any Immobiliser/TPMS DTCs and investigate the reason for their presence. Never just assume that it's safe to simply erase the DTCs as there may be a serious problem that needs to be rectified!

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 messages shown in the following images should appear:-

Commis Inst. DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors Connect Sensor ID Status DTCs F: 0F5E627C C B Enabled 1 R: 095E9560 EdR Disable Erase Inmobiliser DTC List L0008 Invalid key: Key authentication unsuccessful Sensor ID Status DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors Connect ID Status DTC S F: 0F5E627C EdR Disable I Configure / Read TPMS Sensors Connect ID Status DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors Connect ID Status DTC S F: 0F5E627C EdR Disable I Configure / Read TPMS Sensors Connect ID Status DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors Connect ID Status DTCs F: 0F5E627C EdR Disable I Consect Immobiliser DTC List Live Insteined I Status DTCS F: 0F5E627C EdR Disable I Consect Immobiliser DTC List COURT ABS T-Bal TPMS Info Sensor ID Status DTCS F: 0F5E627C EdR Disable I Consect Immobiliser DTC List COURT ABS T-Bal TPMS Info Sensor ID Status DTCS F: 0F5E627C EdR Disable I Consect Immobiliser DTC List	igerTool - Service Utility		
Example Finded Finde Connect Sensor ID F: 0F5E627C Enabled 1 R: 095E9560 Edd Disable Erase Inmobiliser DTC List L000B Invalid Key: Key authentication unsuccessful Disable Finded Finde Connecting to Immobiliser DMII 0 open Sensor ID Sensor ID Status DTCs F: 0F5E627C Edd Info Connect Live Live Sensor ID Sensor ID Status DTCs F: 0F5E627C Edd 1 R: 095E9560 Edd Erase TICGEERCIOCIC Live Live Live	Comms Insts E	DTC ABS 1 1	r-Bal TPMS Info
Sensor ID Status DTCs F: 0F5E627C Enabled 1 R: 095E9560 Edit Disable Erase Inmobiliser DTC List Erase Info Sensor ID Status DTCs F: 0F5E627C Erase 1 R: 09559560 Erase Erase Inmobiliser DTC List Disable Erase Inmobiliser DTC List Disable Erase Inmobiliser DTC List Disable Erase Info Destet DTC List Disable Erase Info Destet DTC List Erase Erase Info Destet DTC List Erase Erase Info Destet DTC Eras Erase Erase Info Destet DTC Eras Erase	Loningule / Head IT Mo	Jerisona	1
Sensor ID Status DTCs F: 0F5E627C Edd 1 R: 095E9560 Edd Dtable Erase Immobiliser DTC List Dtable Erase L000B Invalid key: Key authentication unsuccessful Sensor ID Colspan="2">Sensor ID Field I Sensor ID Status DTCs F: 0F5E627C Edd Info Connecting to Immobiliser DMIGE Service Utility Live Sensor ID Field I F: 0F5E627C Edd Connecting Leve Wither Sensors Connecting Leve Wither Sensors Connecting Status DTCs F: 0F5E627C Edd I R: 095E9560 Edd Erase Immobiliser DTC List Connecting Immobiliser DTCs	Connect		Live
F: 0F5E627C Edit Disabled 1 R: 095E9560 Edit Disable Erase Immobiliser DTC List D008 Invalid key: Key authentication unsuccessful Immobiliser DTC List D010 open Sector Service Utility Commes Inst DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors Connect Live Sensor Disable 1 R: 095E9560 Edit Disable 1 R: 095E9560 Edit Disable 1 R: 095E9560 Edit Disable Erase Immobiliser DTC List	Sensor ID	Status	DTCs
R: 095E9560 Edd Disable Erase Immobiliser DTC List L0008 Invalid key: Key authentication unsuccessful Immobiliser DTC List UM10 open Immobiliser DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors Connect Sensor ID Status DTCs F: 0F5E627C Edd Enabled 1 R: 095E9560 Edd Disable Erase Immobiliser DTC List UM10 Brite DTC List UM10 Brite DTCs Immobiliser DTCs	F: 0F5E627C	Enabled	1
Inmobiliser DTC List LOODS Invalid key: Key authentication unsuccessful TIGGERTOOOL 3.0 Innecting to Immobiliser DM10 open gerTool - Service Utilify Comme Inst DTC ABS T-Bal TPMS Info Configure / Read TPMS Sensors Connect Live Sensor ID Status DTCs F: 0F5E627C Edit Enabled 1 R: 095E9560 Edit Disable Erose Immobiliser DTC List LOODS Invalid key: Key authentication unsuccessful Erose Info DTCs	R: 095E9560	Disable	Erase
		ERT	OOL
DM10 open gerTool - Service Utility Connex Into Configure / Read TPMS Sensors Connect Live Sensor ID Status DTCs F: 0F5E627C Edit Enabled 1 R: 095E9560 Edit Disable Erase Immobiliser DTC List. L0008 Invalid key: Key authentication unsuccessful Erase Control	onnecting to Immobilis	er	
Sensor ID F: 0F5E627C Edit R: 095E9560 Edit Disable Disable Erase mmobiliser DTC List L0008 Invalid key: Key authentication unsuccessful Erasing Immobiliser DTCs	gerTool - Service Utility Comms Insts E Configure / Read TPMS	DTC ABS 1 1 Sensors	r-Bal TPMS Info
Sensor ID F: 0F5E627C Edit R: 095E9560 Edit Disable Disable Disable Disable Trase Trase TRANSITION OF COMPARING TOTOLIST. DISABLE TABLE	Lotified		Live
F: 0F5E627C Edit Enabled 1 R: 095E9560 Edit Disable Erase mmobiliser DTC List L0008 Invalid key: Key authentication unsuccessful trasing Immobiliser DTCs	Sensor ID	Status	DTCs
R: 095E9560 Edit Disable Erase mmobiliser DTC List. L0008 Invalid Key: Key authentication unsuccessful Erasing Immobiliser DTCs	F: 0F5E627C Edit	Enabled	1
Immobiliser DTC List L0008 Invalid Key: Key authentication unsuccessful Erasing Immobiliser DTCs TIGERTOOL 3.0 ading Immobiliser DTCs	R: 095E9560	Disable	Erase
TIGERTOOL 3.0 ading Immobiliser DTCs	Immobiliser DTC List L0008 Invalid Key: Key au Erasing Immobiliser DTCs.	thentication unsuccess 	ful
eading Immobiliser DTCs	TIG	ERT	DOL
	eading Immobiliser DT	Cs	

igerTool - Service Utility			
Comms Insts DTC	ABS 1	F-Bal TPMS	Info
Configure / Read TPMS Sen	sors		
Connect			Live
Sensor ID	Status	DTCs	
F: 0F5E62/C Edit	Enabled	1 (Contraction of the second	
R: 095E9560 Edit	Disable	Erase	
L0008 Invalid key: Key authen Erasing Immobiliser DTCs	LRT(Ĺ
Tasing miniophiser DTCs	5		
UM IU open			
igeriool - Service Utility			,
Comms Insts DTC Configure / Read TPMS Sen:	ABS 1 sors	F-Bal TPMS	Info
Connect			Live
Sensor ID	Status	DTCs	
F: 0F5E627C Edit	Enabled	0	
R: 095E9560	Disable	Erase	
Immobiliser DTC List L0008 Invalid key: Key authen Erasing Immobiliser DTCs Complete	tication unsuccess	ful	~
TICE	DT	20	
V3.0		50	
V3.0 mmobiliser DTC Erase Com	plete	50	

In the event of an error when erasing Immobiliser/TPMS DTCs, one or more of the following images may appear:-



This error is caused by a timeout while waiting for confirmation that the DTC erase command has been executed.

This error usually follows the one above and indicates that the DTC erase process failed.

If you see this message try erasing again.

This error is caused by the DTC erase command completing but the immobiliser DTC read-back failing.

If you see this message try erasing or connecting again.

Monitoring Live TPMS Data

Once TPMS is enabled it's possible to monitor the live pressure & temperature data from the immobiliser. By clicking on the 'Live' button the following TPMS data window will appear:-

Sensor ID Status DTCs F: 0F5E6 Live TPMS Data R: 095E9 PSI °C Status Front © 36.0 19 Sig0k	
F: 095E6 Live TPMS Data Z R: 095E9 PSI 'C Status Front © 36.0 19 Sign/k	
R: 095E9 PSI *C Status	
Front @ 36 0 19 SigOk	
mmobiliser D 11011 . JO.O 15 5160K	
L0008 Invalid Rear C 42.0 20 SigOk	
Complete Cancel	

The pressure, temperature and status data for the front & rear pressure sensors will be displayed. The flashing dots near the 'Front' & 'Rear' labels are there to indicate that live readings are being taken.

The units displayed in the live data window can be changed by clicking on the text labels above the displayed pressure and temperature. The pressure options are PSI, Bar or kPa, and the temperature options are °C or °F. The following image shows some of the option changes:-

Sensor	ID	Sta	itus	DTCs		
R: 095E9 nmobiliser D .0008 Invalic irasing Immo Complete	Front © Rear C	Bar 2.48 2.90 	⁺F 66 68 ∞el	Status Sig0k Sig0k	1	2

The status labels will indicate if there is a problem with either tyre sensor data. In the images above the normal signal status is shown.

The following three images show the possible status conditions that may be displayed:-



In this image the front tyre sensor is reporting a low battery voltage and the rear tyre sensor is indicating there's a change in pressure (up or down).

The battery warning message should also be displayed on the bike's instruments when the sensor first wakes when riding.



In this image the rear tyre sensor is reporting a low tyre pressure alert. The TPMS warning light should also be displayed on the bike's instruments.

Comms	Insts D	TC AE	IS	T-Bal TP	MS Info
Configure /	Read TPMS 9	iensors			
Connect					Live
Sensor	ID	Sta	itus	DTCs	
F: 0F5E6	Live TPMS D)ata			
R: 095E9		PSI	*C	Status	
mmobiliser D	Front 🕫	36.0	19	Sig0k	
_0008 Invalio	Rear C			NoSig	
zrasing immo Complete			a f		
		Lan	cei		~
					~
		F D		n	T
		- K			
0					
/3.0					

In this final image the rear tyre sensor is not transmitting any data. This message may be seen if the TPMS sensor has gone to sleep.

Note:- If the bike has been stationary for longer than 7 minutes the *TPMS* sensors will go to sleep until the wheel rotates again to wake them up.

Other causes of this status message are the battery having gone flat or the wrong sensor ID is programmed into the immobiliser.

UNSUPPORTED MODEL USAGE

It's possible to test some / all of TigerTool V3.0's features with other Triumph models through the use of command-line switches, although not all of the features will be supported by all models.

The command-line switches should only be used when testing TigerTool V3.0 on unsupported models.

The switches are:-

-tryecu1	This forces TigerTool to attempt comms based on the protocols used by similar ECUs to
	those typically fitted to the Mk1 Tiger 800. These ECUs use a combination of ISO9141-2
	& ISO15765-4 (aka CAN bus) protocols.
-tryecu2	This switch forces TigerTool to attempt comms based on the protocols used by later ECUs
-	that primarily use ISO15765-4 (aka CAN bus) protocols.
-twin	This switch forces TigerTool to only read MAP sensor data (during throttle balance checks)
	for cylinders 1 & 2 and is intended for use with 2-cylinder Triumph models.

To run TigerTool V3.0 with command-line switches, create a shortcut to the *TigerTool.exe* file on your Desktop (or a location to suit your preferences). Right-click on the shortcut and set the 'Target' line of the shortcut properties as shown in the following example:-

C:\TigerTool\TigerTool.exe -tryecu2

If your TigerTool directory is different to the example shown above then edit accordingly.

It's possible to append the '-twin' to either of the '-tryecu' switches by adding a space between them in the shortcut properties. If the 'twin' switch is used, it *must* be set *after* the 'tryecu' switch.

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