



Technical Bulletin 212

02.2021

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212.3	Electronic Systems Commissioning and Motorcycle Unlocking	Trident 660
212.4	Electronic Systems Commissioning and Motorcycle Unlocking	Tiger 850 Sport, Tiger 900, Tiger 900 GT, Tiger 900 GT-LRH, Tiger 900 GT Pro, Tiger 900 Rally, Tiger 900 Rally Pro

Item: 212.1

Description: Triumph Diagnostic Tool Compatibility with Windows Operating Systems

Model Affected: Not Applicable

From February 2021 the Triumph Diagnostic Tool software will no longer operate on computers running Microsoft Windows 7®.

Triumph Diagnostic Tool users still using Microsoft Windows 7® should upgrade their operating system, and if necessary their hardware, before this date.

Details of the minimum equipment required to run the Triumph Diagnostic Tool are listed below:

- A desktop or laptop Personal Computer (PC) running 32 bit or 64 bit versions of Microsoft Windows 8®, Windows 8.1® or Windows 10®.
- Microsoft .net framework version 4.8 or later.
- A 1 GHz processor or equivalent, 10 GB of free hard disk space and a minimum of 512 to 1024 MB of memory (RAM).
- A 1024 x 768 standard XGA monitor or a 1200 x 800 widescreen monitor.
- A broadband internet connection.
- The PC must have a free USB (Universal Serial Bus) port.

Item: 212.2

Description: Triumph Diagnostic Tool (TDT) - Enable Connectivity System Process Update

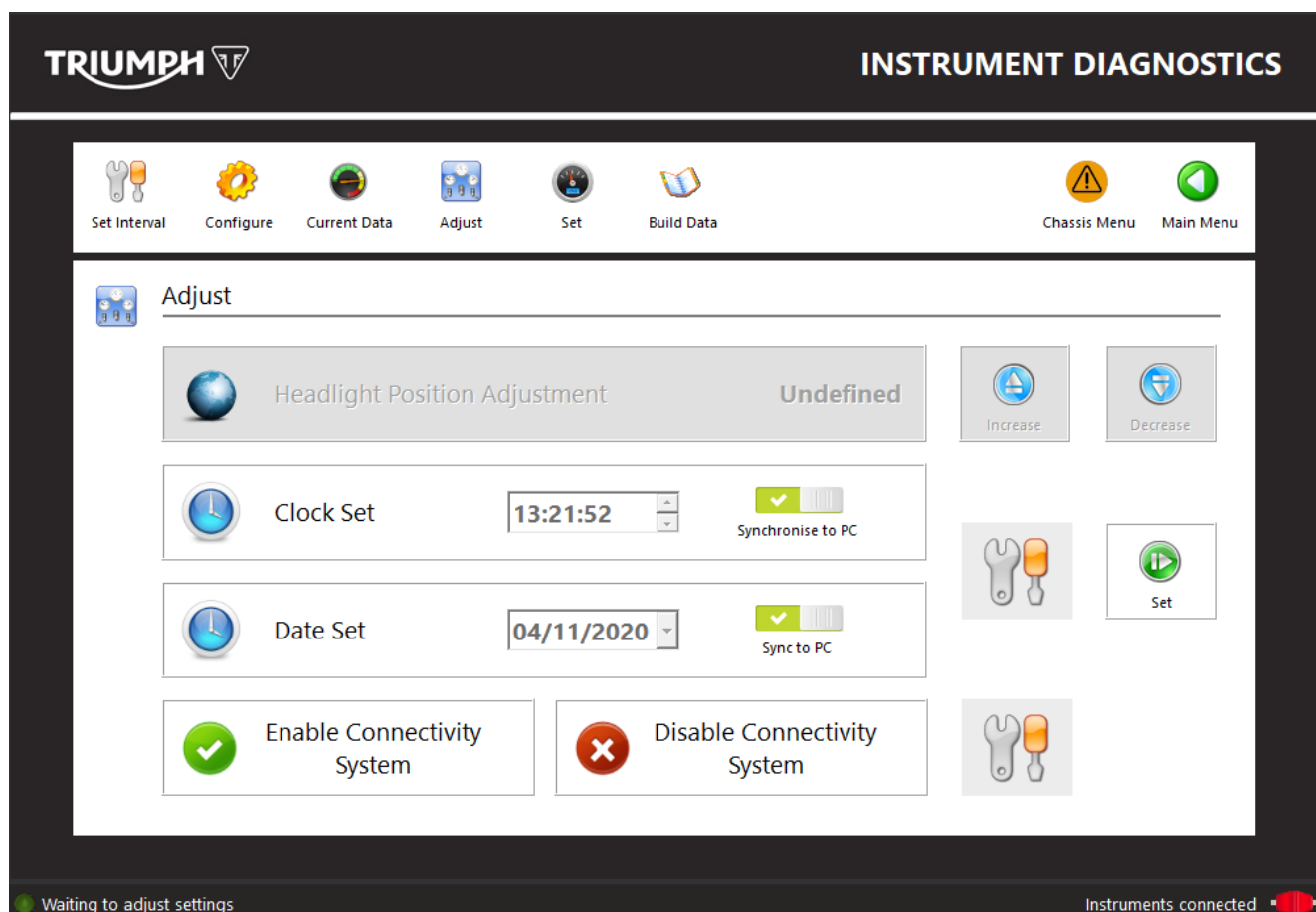
Model Affected: Rocket 3 GT, Rocket 3 R, Rocket 3 TFC, Scrambler 1200 XC, Scrambler 1200 XE, Scrambler 1200 Bond Edition, Street Triple R and Street Triple R-LRH from VIN 806646 to VIN 982751, Street Triple RS (all VINs), Tiger XRX, Tiger XRX-LRH, Tiger XRT, Tiger XCX, Tiger XCA, Tiger 900 GT, Tiger 900 GT-LRH, Tiger 900 GT Pro, Tiger 900 Rally, Tiger 900 Rally Pro

The process for performing the calibration updates and actions necessary to enable the accessory My Triumph Connectivity Module has changed in the Triumph Diagnostic Tool (TDT).

The TDT 2020-12 update includes a new 'Enable Connectivity System' wizard. The new wizard will perform all calibration checks, downloads and actions necessary to enable the system.

To enable the accessory My Triumph Connectivity system, simply follow the steps below:

1. Install the accessory My Triumph Connectivity Module as described in the relevant Accessory Fitting Instruction for your model.
2. Connect the diagnostic tool to the motorcycle and turn the ignition ON.
3. Navigate to Instrument Diagnostics - Adjust.
4. Click Enable Connectivity System.



5. Follow the onscreen instructions.

Note:

- You will be prompted to enter the download password. The current password for all downloads can be found at www.triumphonline.net.

The diagnostic tool will start a wizard which will perform the following actions:

- 1. **Connectivity Module Check/Update**
- 2. **Instrument Check/Update**
- 3. **Instrument VIN Check/Update**
- 4. **Enable Connectivity System.**

Procedure Running

Do not switch OFF the motorcycle ignition during this process.

Connectivity Module Check/Update...	
Instrument Check/Update...	
Instrument VIN Check/Update...	
Enable Connectivity System...	

6 %

Download 2 of 3. Gen1b patch application

Performing instrument check/update (stage 2 of 4)

Full details of the Enable Connectivity System process are provided with the My Triumph Connectivity Module Accessory Fitting Instructions.

Resulting Changes to the TFT Instrument Download Process

The instrument VIN check/update feature has now been removed from the Instrument download process for TFT instruments. This feature is now included in the Enable Connectivity System wizard described above.

Item: 212.3
Description: Electronic Systems Commissioning and Motorcycle Unlocking
Model Affected: Trident 660

 Warning

Make sure the motorcycle is stabilised and adequately supported.
A correctly supported motorcycle will help prevent it from falling.
An unstable motorcycle may fall, causing injury to the operator or damage to the motorcycle.

 Warning

Failure to download the latest calibrations to the above model(s) may cause an unsafe riding condition leading to loss of motorcycle control and an accident.

 Warning

Always use Automatic Model Selection when downloading calibrations.
Manual model selection must only be used when attempting to restart an interrupted or failed download, or if an incorrect model is detected by Automatic Model Selection.
Always ensure that the correct model is detected or selected before selecting a calibration for download and never attempt to download calibrations listed for an incorrect model.
Downloading calibrations for an incorrect model will cause a dangerous riding condition which may lead to loss of motorcycle control and an accident.

 Caution

Do not interrupt or cancel calibration downloads before they have completed.
If a calibration download is cancelled or interrupted before it has completed, the Electronic Control Module (ECM) will not operate in the normal way. This is because the operating system has been erased from ECM memory and has not yet been fully replaced. Under these circumstances, it will not be possible to use Automatic Model Detection when restarting the calibration download.
Turn the motorcycle ignition off for at least 60 seconds to allow the electronic systems to power down, then restart the calibration download using Manual Model Selection.
If a calibration download fails to restart, it may be necessary to follow a specific recovery process.

Note:

- The current password for all downloads can be found at www.triumphonline.net.
- It is normal for DTCs to be stored after a download has completed. This is due to the download process interrupting CAN communications between the ECMs.
- After a download has completed, you will be prompted to check all ECMs for stored DTCs and erase them as necessary. This must be completed after all downloads are finished.

Description

The above motorcycle(s) are delivered in a locked condition. In this condition, the engine will not start. When performing a Pre-Delivery Inspection on the above models, the motorcycle's electronic systems must be commissioned and the motorcycle unlocked before the engine can be started.

Dealers are requested to commission the electronic systems and unlock the motorcycle by performing the following operations:

1. Download the latest TFT Instrument calibration.
2. Download the latest Engine ECM calibration.
3. Unlock the Engine ECM.
4. Adapt the crankshaft position (if required).

Preparation

Download and install the latest version of the Triumph Diagnostic Tool to your computer as described in the Triumph Diagnostic Tool Installation Guide. Triumph Diagnostic Tool Version 2021-02 or later is required to complete this procedure.

Note:

- **It can take up to 40 minutes to complete the system downloads necessary to commission the above motorcycle.**
 - **Please take the following precautions to avoid accidental disruption of the calibration downloads performed during this process.**
1. If using a laptop computer to run the diagnostic software, make sure the laptop battery is fully charged. Connect a charger to avoid draining the laptop battery.
 2. Disable any sleep and screen saver settings. The PC/laptop must remain turned on and awake for the duration of the process.
 3. Make sure all other PC/laptop applications (including Internet browsers) are closed down.
 4. Make sure the motorcycle battery is fully charged (battery voltage of at least 12.8 Volts). Connect an approved battery charger (suitable for use with maintenance free batteries) to maintain the battery charge during this process.
 5. During calibration download, DO NOT do the following unless instructed to do so by the diagnostic tool:
 - Turn the ignition OFF.
 - Switch the engine stop switch to a different position.
 - Disconnect the diagnostic interface.

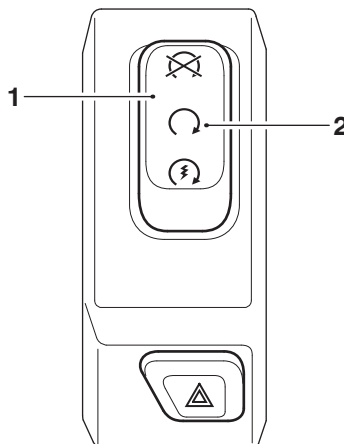
Initial Steps

1. Unpack the motorcycle as described in the Motorcycle Unpacking Guide.
2. Assemble the motorcycle as described in the Motorcycle Assembly Guide.
3. Ensure that the motorcycle battery is fully charged and installed as described in the service manual.
4. Remove the rider's seat.
5. Connect the Triumph Diagnostic Tool to the motorcycle as described in the Triumph Diagnostic Tool User Guide and turn the ignition switch ON.

Instruments Calibration Download

Note:

- The instrument calibration download can take up to 15 minutes to complete.
1. Switch the engine stop switch to the RUN (ON) position.



1. Engine stop switch

2. RUN (ON) position

2. Download the latest instrument calibration as normal, using automatic model detection.

Note:

- During the download, the instrument display may turn off or become distorted. This is normal behavior while the download is in progress. The instrument display will return to normal operation when the download has completed.
- Multiple files are transferred during the download. The progress bar displayed on the diagnostic tool may repeatedly rise from 0% to 100% as each file is downloaded.
- Do not assume the download has completed when the instrument display turns back on. Always wait for the Verifying Download screen to appear to confirm the download has successfully completed.
- If the download is accidentally disrupted or does not complete for any reason, turn the ignition off for at least 60 seconds then restart the download using Manual Model Selection.

3. At the end of the instrument download you may be required to enter the VIN. The download process will not complete until the VIN has been entered.

TRIUMPH  **Enter VIN**

Please enter the 17 digit VIN in UPPER CASE

Enter VIN

Invalid VIN entered

Confirm VIN

Invalid VIN entered

OK Cancel

4. If the engine ECM contains a valid VIN and the engine stop switch is in the RUN (ON) position, the VIN will be written to the instruments automatically.

Engine ECM Calibration Download

Note:

- The Engine ECM calibration download will take approximately 8 minutes to complete.

1. Download the latest engine ECM calibration as normal, using automatic model detection.

Note:

- If the download is accidentally disrupted or does not complete for any reason, turn the ignition off for at least 60 seconds then restart the download using Manual Model Selection.

Unlock the Engine ECM

1. Unlock the engine ECM as described in the Triumph Diagnostic Tool User Guide.

Note:

- There is a small delay while the instruments are checked for up-to-date calibrations.
- The software will report if any calibrations are out of date and will prevent unlocking until the correct calibrations are installed.
- The unlock code can be found at www.triumphonline.net.

Adapt the Crankshaft Position (if required) - Euro 5 Markets Only

Motorcycles are typically delivered from the factory with the crankshaft position adapted. However, a small number of models may need to have the crankshaft position adapted at PDI.

Check the Engine ECM for stored DTCs. If the crankshaft position is not adapted, DTC P0315 will be stored and the Malfunction Indicator Light (MIL) will be illuminated. DTC P0315 cannot be erased by using the Erase DTCs function. To clear the DTC the crankshaft position must be adapted as described in the adaption process below.

If DTC P0315 is not present at PDI, it is not necessary to adapt the crankshaft position.

Crankshaft Position Adaption Process

Warning

Exhaust fumes are poisonous, always operate a motorcycle in the open-air or in an area with adequate ventilation.

Do not operate a motorcycle in an enclosed area without adequate ventilation.

Operating a motorcycle in an enclosed area without adequate ventilation can cause loss of consciousness and death within a short period of time.

1. Turn the motorcycle ignition OFF for at least 60 seconds.
2. Turn the motorcycle ignition ON. Make sure the engine Stop switch is in the RUN position.
3. Make sure the transmission is in neutral.
4. Navigate to ENGINE DIAGNOSTICS - Function Tests.
5. Select Crankshaft Position Adaption and click **Start**.
6. Follow the on screen instructions.
7. When the adaption has completed, click **Finish** and turn the motorcycle ignition switch OFF. Wait for at least 60 seconds to allow the motorcycle's electronic system to fully power down.

Note:

- **DTC P0315 will not clear until the motorcycle's electronic system has fully powered down.**
8. After 60 seconds, turn the motorcycle ignition switch ON. Make sure that DTC P0315 and the MIL have cleared.

Refer to the Service Manual for more details on the crankshaft position adaption process.

Final Steps

- Check and erase all stored Instrument, Immobiliser, Engine ECM and ABS DTCs.
- Disconnect the Triumph Diagnostic Tool.
- Refit the rider's seat.
- Check that the motorcycle can be powered ON and started using each key.
- Set the instruments to display the correct language and units for your region, as described in the Owners Handbook.

Item:	212.4
Description:	Electronic Systems Commissioning and Motorcycle Unlocking
Model Affected:	Tiger 850 Sport, Tiger 900, Tiger 900 GT, Tiger 900 GT-LRH, Tiger 900 GT Pro, Tiger 900 Rally, Tiger 900 Rally Pro

This revised item replaces Technical Bulletin 209 item 5 (TB 209.5) dated August 2020. Changes to this revised item are as follows:

- **Tiger 850 Sport added to list of applicable models.**
- **Instrument VIN check/writing feature has been removed from the instrument calibration download. This feature is now performed as part of the Enable Connectivity System process.**

Warning

Make sure the motorcycle is stabilised and adequately supported.
A correctly supported motorcycle will help prevent it from falling.
An unstable motorcycle may fall, causing injury to the operator or damage to the motorcycle.

Warning

Always use Automatic Model Selection when downloading calibrations.
Manual model selection must only be used when attempting to restart an interrupted or failed download, or if an incorrect model is detected by Automatic Model Selection.
Always ensure that the correct model is detected or selected before selecting a calibration for download and never attempt to download calibrations listed for an incorrect model.
Downloading calibrations for an incorrect model will cause a dangerous riding condition which may lead to loss of motorcycle control and an accident.

Caution

Do not interrupt or cancel calibration downloads before they have completed.
If a calibration download is cancelled or interrupted before it has completed, the Electronic Control Module (ECM) will not operate in the normal way. This is because the operating system has been erased from ECM memory and has not yet been fully replaced. Under these circumstances, it will not be possible to use Automatic Model Detection when restarting the calibration download.
Turn the motorcycle ignition off for at least 60 seconds to allow the electronic systems to power down, then restart the calibration download using Manual Model Selection.
If a calibration download fails to restart, it may be necessary to follow a specific recovery process.

Note:

- **The current password for all downloads can be found at www.triumphonline.net.**
- **It is normal for DTCs to be stored after a download has completed. This is due to the download process interrupting CAN communications between the ECMs.**
- **After a download has completed, you will be prompted to check all ECMs for stored DTCs and erase them as necessary. This must be completed after all downloads are finished.**

Description

The Engine ECM, Chassis ECM and Instruments are delivered in a locked condition on the above motorcycle(s). In this condition, the engine will not start. When performing a Pre-Delivery Inspection on the above models, the motorcycle's electronic systems must be commissioned and the motorcycle unlocked before the engine can be started.

Dealers are requested to commission the electronic systems and unlock the motorcycle by performing the following operations:

1. Download the latest Chassis ECM calibration.
2. Download the latest Suspension ECM calibration (Tiger 900 GT Pro models only).
3. Download the latest TFT Instrument calibration.
4. Download the latest Connectivity Module calibration (Tiger 900 GT Pro and Tiger 900 Rally Pro models only).
5. Enable the Connectivity System (Tiger 900 GT Pro and Tiger 900 Rally Pro models only).
6. Download the latest Engine ECM calibration.
7. Unlock the Engine ECM.
8. Adapt the crankshaft position (if required).

Preparation

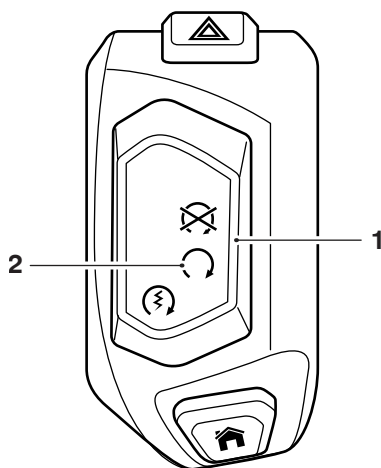
Download and install the latest version of the Triumph Diagnostic Tool to your computer as described in the Triumph Diagnostic Tool Installation Guide.

Note:

- **It can take up to 60 minutes to complete the system downloads necessary to commission the above motorcycle.**
 - **Please take the following precautions to avoid accidental disruption of the calibration downloads performed during this process.**
1. If using a laptop computer to run the diagnostic software, make sure the laptop battery is fully charged. Connect a charger to avoid draining the laptop battery.
 2. Disable any sleep and screen saver settings. The PC/laptop must remain turned on and awake for the duration of the process.
 3. Make sure all other PC/laptop applications (including Internet browsers) are closed down.
 4. Make sure the motorcycle battery is fully charged (battery voltage of at least 12.8 Volts). Connect an approved battery charger (suitable for use with maintenance free batteries) to maintain the battery charge during this process.
 5. During calibration download, DO NOT do the following unless instructed to do so by the diagnostic tool:
 - Turn the ignition OFF.
 - Switch the engine stop switch to a different position.
 - Disconnect the diagnostic interface.

Initial Steps

1. Unpack the motorcycle as described in the Motorcycle Unpacking Guide.
2. Assemble the motorcycle as described in the Motorcycle Assembly Guide.
3. Ensure that the motorcycle battery is fully charged and installed as described in the Service Manual.
4. Connect the Triumph Diagnostic Tool to the motorcycle as described in the Service Manual and turn the ignition ON.
5. Make sure the engine stop switch is in the RUN position.



1. **Engine stop switch**
2. **RUN (ON) position**

Chassis ECM Calibration Download

Note:

- It will take approximately five minutes for the Chassis ECM calibration download to complete.
 - Multiple files are transferred during the download. The progress bar displayed on the diagnostic tool may repeatedly rise from 0% to 100% as each file is downloaded.
 - Always wait for the Verifying Download screen to appear to confirm the download has successfully completed.
 - If the download is accidentally disrupted or does not complete for any reason, turn the ignition OFF for at least 60 seconds then restart the download using Manual Model Selection.
1. Download the latest Chassis ECM calibration using Automatic Model Detection.
 2. Make sure that the correct model is detected and that the correct calibration for your region is selected for download.
 3. Follow all onscreen instructions during the download.

Suspension ECM Calibration Download (Tiger 900 GT Pro models only)

Note:

- It will take approximately five minutes for the Suspension ECM calibration download to complete.
 - Multiple files are transferred during the download. The progress bar displayed on the diagnostic tool may repeatedly rise from 0% to 100% as each file is downloaded.
 - Always wait for the Verifying Download screen to appear to confirm the download has successfully completed.
 - If the download is accidentally disrupted or does not complete for any reason, turn the ignition OFF for at least 60 seconds then restart the download using Manual Model Selection.
1. Download the latest Suspension ECM calibration using Automatic Model Detection.
 2. Make sure that the correct model is detected and that the correct calibration for your region is selected for download.
 3. Follow all onscreen instructions during the download.

Instruments Calibration Download

Note:

- The instrument calibration has a large file size and may include updates to the instrument graphics. It can take up to 40 minutes for the calibration download to complete.
 - During the download, the instrument display will turn off and the red immobiliser/alarm LED will flash.
 - Multiple files are transferred during the download. The progress bar displayed on the diagnostic tool may repeatedly rise from 0% to 100% as each file is downloaded.
 - Do not assume the download has completed when the instrument display turns back on. Always wait for the Verifying Download screen to appear to confirm the download has successfully completed.
 - If the download is accidentally disrupted or does not complete for any reason, restart the download using Manual Model Selection. If the download fails to restart normally, refer to the 'Instrument Calibration - Failed Download Recovery Flow Chart' provided in the Service Manual.
1. Download the latest instrument calibration using Automatic Model Detection.
 2. Make sure that the correct model is detected and that the correct calibration for your region is selected for download.
 3. Follow all onscreen instructions during the download.

Connectivity Module Download (Tiger 900 GT Pro and Tiger 900 Rally Pro models only)

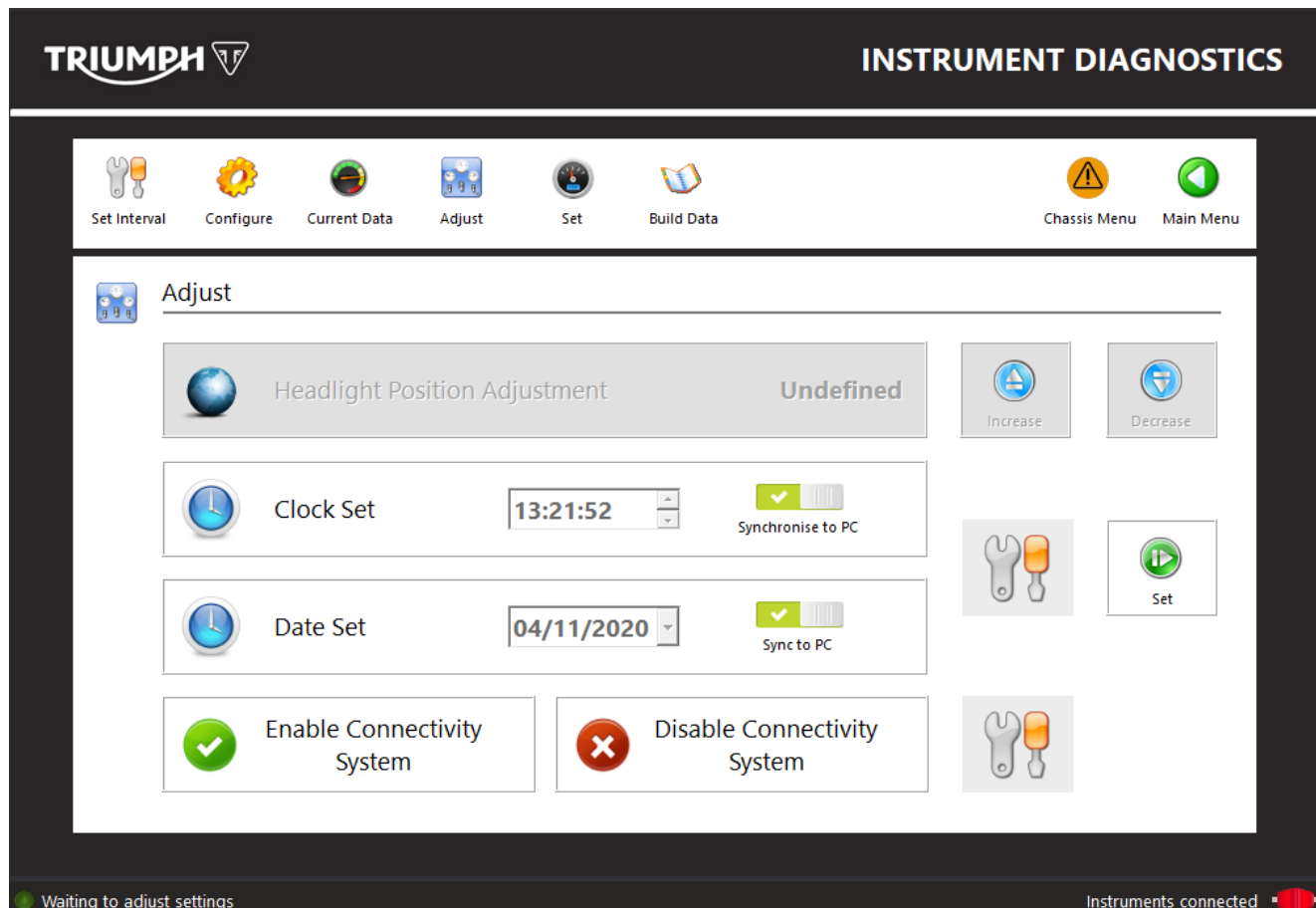
Note:

- The Connectivity Module is fitted as standard on Tiger 900 GT Pro and Tiger 900 Rally Pro models. The Connectivity Module is available as an accessory for other models in the Tiger 900 range. The accessory fitting instructions should be followed if installing an accessory Connectivity Module.
 - There is only one Connectivity Module calibration available for download.
 - It will take approximately 3 minutes for the calibration download to complete.
 - Always wait for the Verifying Download screen to appear to confirm the download has successfully completed.
 - If the download is accidentally disrupted or does not complete for any reason, turn the ignition OFF for at least 60 seconds then restart the download.
1. Download the latest Connectivity Module calibration.
 2. Follow all onscreen instructions during the download.

Enable the Connectivity System (Tiger 900 GT Pro and Tiger 900 Rally Pro models only)

Note:

- The Connectivity Module is fitted as standard on Tiger 900 GT Pro and Tiger 900 Rally Pro models. The Connectivity Module is available as an accessory for other models in the Tiger 900 range. The accessory fitting instructions should be followed if installing an accessory Connectivity Module.
1. Navigate to CHASSIS DIAGNOSTICS - INSTRUMENT DIAGNOSTICS - Adjust.
 2. Click Enable Connectivity System.
 3. Follow all onscreen instructions.



Engine ECM Calibration Download

Note:

- The Engine ECM calibration download will take approximately 8 minutes to complete.
1. Download the latest Engine ECM calibration using Automatic Model Detection.
 2. Make sure that the correct model is detected and that the correct calibration for your region is selected for download.
 3. Follow all onscreen instructions during the download.

Note:

- If the download is accidentally disrupted or does not complete for any reason, turn the ignition OFF for at least 60 seconds then restart the download using Manual Model Selection.

Unlock the Engine ECM

1. Unlock the Engine ECM as described in the Triumph Diagnostic Tool User Guide.

Note:

- There is a small delay while the motorcycle's ECMs are checked for up-to-date calibrations.
- The software will report if any ECMs are out of date and will prevent unlocking until the correct calibrations are installed.
- The unlock code can be found at www.triumphonline.net.

Adapt the Crankshaft Position (if required) - Euro 5 Markets Only

Motorcycles are typically delivered from the factory with the crankshaft position adapted. However, a small number of models may need to have the crankshaft position adapted at PDI.

Check the Engine ECM for stored DTCs. If the crankshaft position is not adapted, DTC P0315 will be stored and the Malfunction Indicator Light (MIL) will be illuminated. DTC P0315 cannot be erased by using the Erase DTCs function. To clear the DTC the crankshaft position must be adapted as described in the adaption process below.

If DTC P0315 is not present at PDI, it is not necessary to adapt the crankshaft position.

Crankshaft Position Adaption Process

Warning

Exhaust fumes are poisonous, always operate a motorcycle in the open-air or in an area with adequate ventilation.

Do not operate a motorcycle in an enclosed area without adequate ventilation.

Operating a motorcycle in an enclosed area without adequate ventilation can cause loss of consciousness and death within a short period of time.

1. Turn the motorcycle ignition OFF for at least 60 seconds.
2. Turn the motorcycle ignition ON. Make sure the engine Stop switch is in the RUN position.
3. Make sure the transmission is in neutral.
4. Navigate to ENGINE DIAGNOSTICS - Function Tests.
5. Select Crankshaft Position Adaption and click **Start**.
6. Follow the on screen instructions.
7. When the adaption has completed, click **Finish** and turn the motorcycle ignition switch OFF. Wait for at least 60 seconds to allow the motorcycle's electronic system to fully power down.

Note:

- **DTC P0315 will not clear until the motorcycle's electronic system has fully powered down.**
8. After 60 seconds, turn the motorcycle ignition switch ON. Make sure that DTC P0315 and the MIL have cleared.

Refer to the Service Manual for more details on the crankshaft position adaption process.

Final Steps

- Check and erase all stored Engine ECM, ABS, Chassis ECM, Suspension ECM and Immobiliser DTCs.
- Disconnect the Triumph Diagnostic Tool.
- Refit the rider’s seat.
- Set the instruments to display the correct language and units for your region, as described in the Owner’s Handbook.

Circulation

Initial and date when read and return to central file holder

Service Manager	Parts Manager	Sales Manager	Workshop Supervisor	Technician 1	Technician 2