Technical Bulletin 224
03.2022

Contents

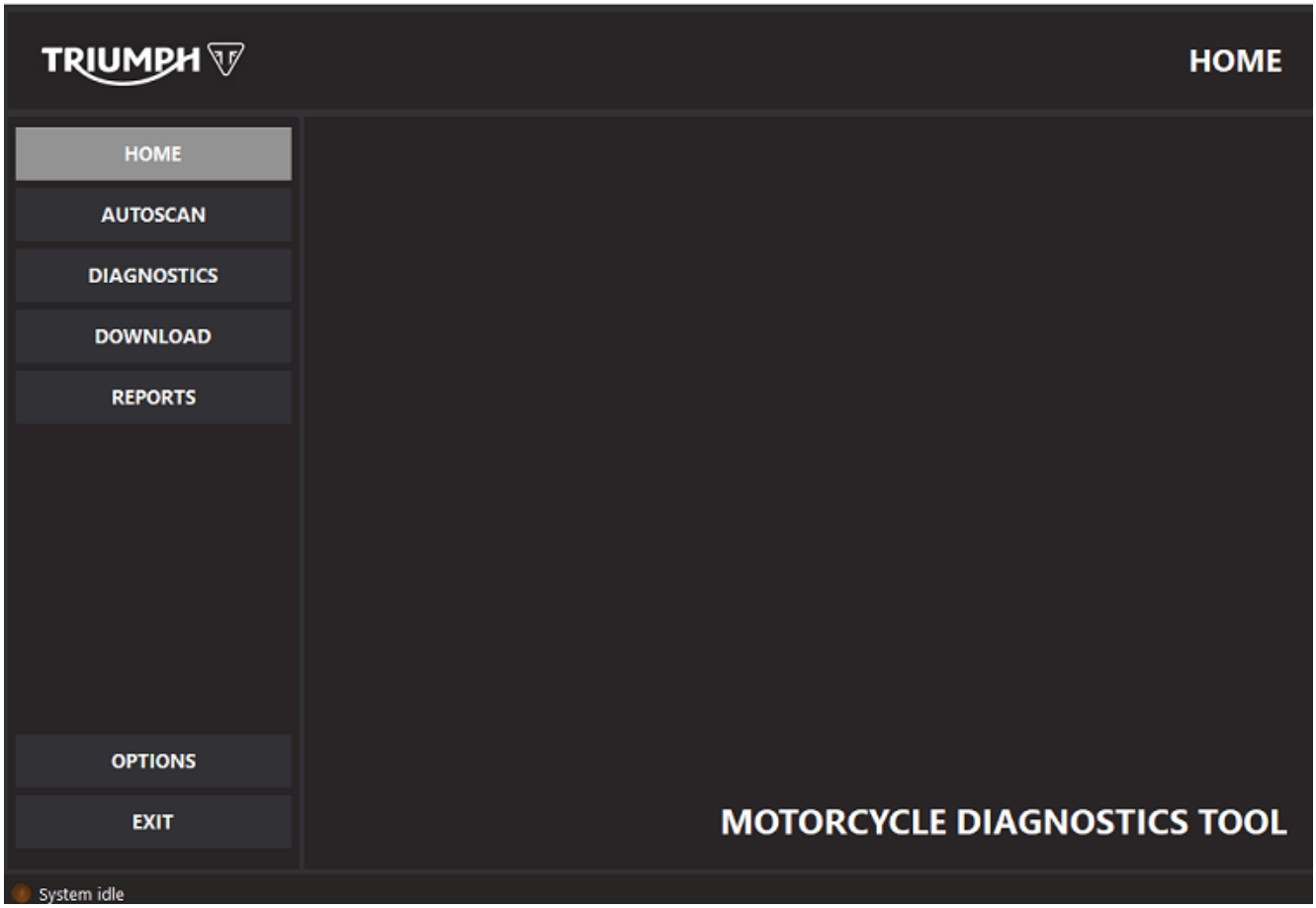
Item:	**224.1**
Description:	**Triumph Diagnostic Tool - New Diagnostic Functionality**
Model Affected:	**Tiger 1200 GT, Tiger 1200 GT Pro, Tiger 1200 GT Explorer, Tiger 1200 Rally Pro, Tiger 1200 Rally Explorer**

The Triumph Diagnostic Tool (TDT) 2022-02 update includes support for the above models:
The new features included in the update are as follows:

- Updated User Interface
- New Suspension Diagnostics support for the above model(s)
- Headlight Diagnostic and Download areas
- Blind Spot Radar Diagnostics (Tiger 1200 GT Explorer and Tiger 1200 Rally Explorer only)
- ABS Download (see ABS Download, page 29 which is item 5 of this Technical Bulletin (TB224.5) for more details).

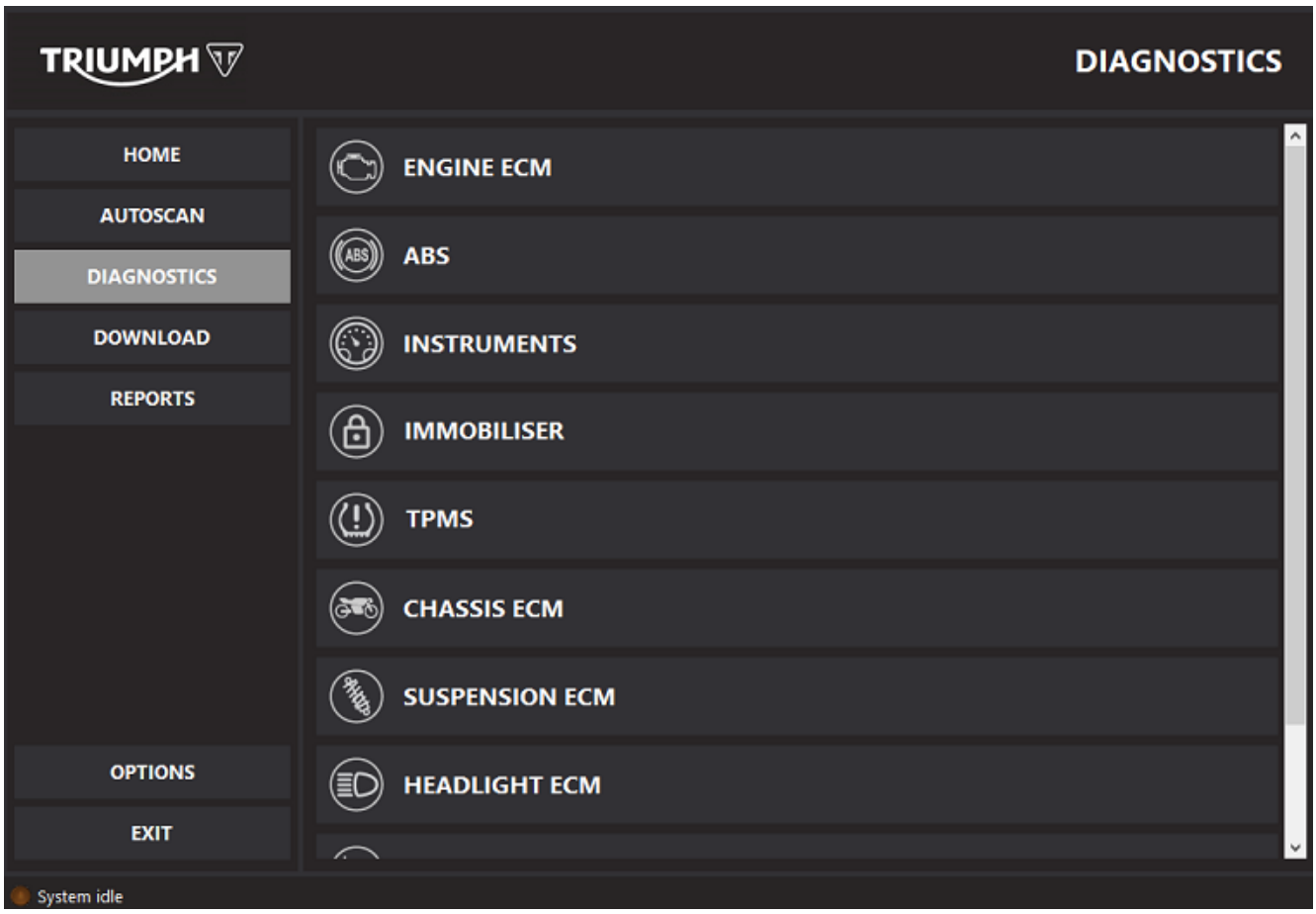
Updated User Interface

1. Upon launch of the Triumph Diagnostic Tool, the **Home** screen will be displayed. (The following images are for illustrative purposes only. Final images may differ.)

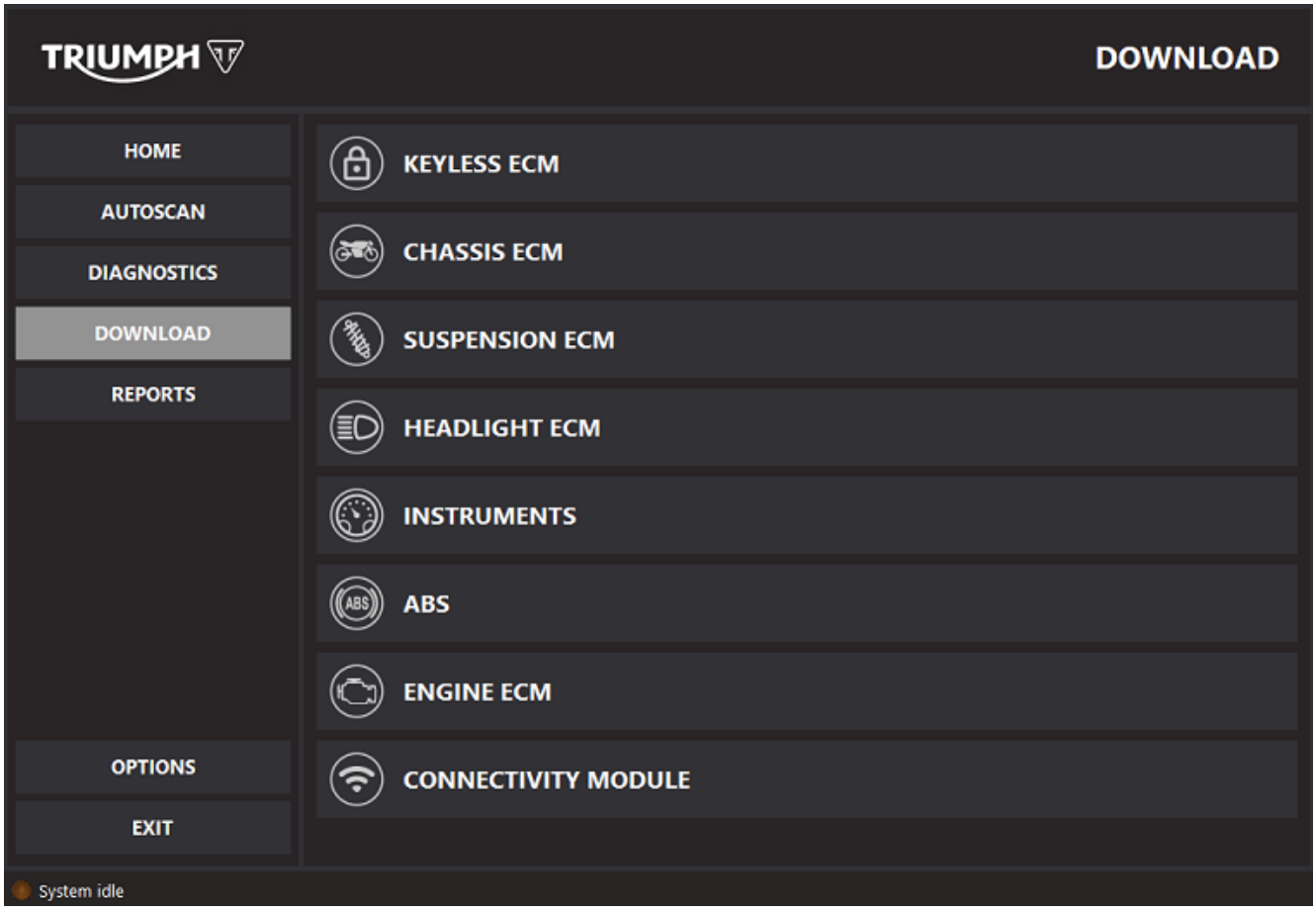


2. The Home screen displays the following main menu items on the left hand side:
   - Home
   - Autoscan
   - Diagnostics
   - Download
   - Reports
   - Options
   - Exit

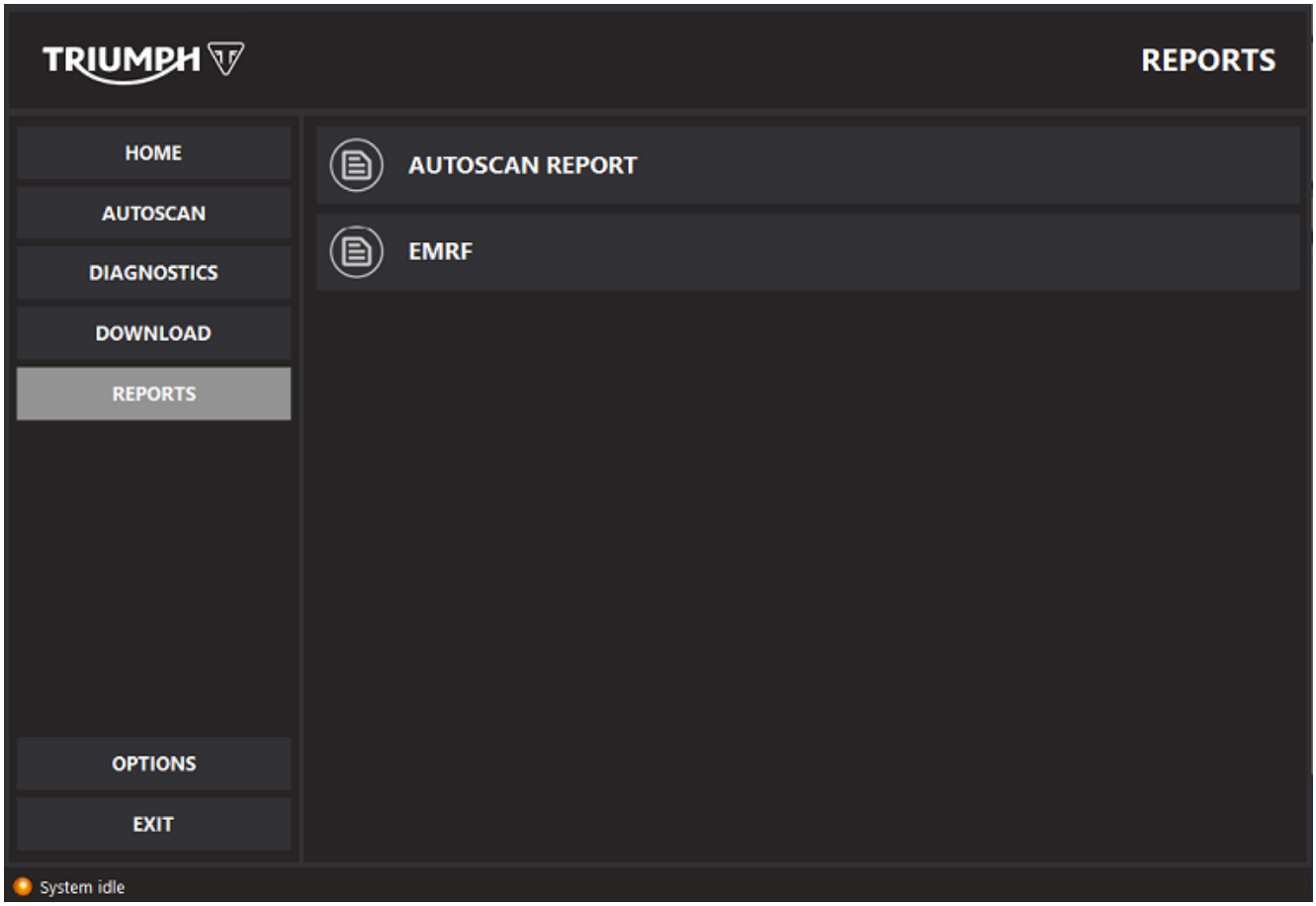
3. Clicking on **Autoscan** will begin the autoscan process which is unchanged in the 2022-02 update.
4. Clicking on **Diagnostics** will display a list of all available diagnostic areas. New additions to this list of ECMs for the 2022-02 update are **Headlight ECM** and **Blind Spot Radar.**



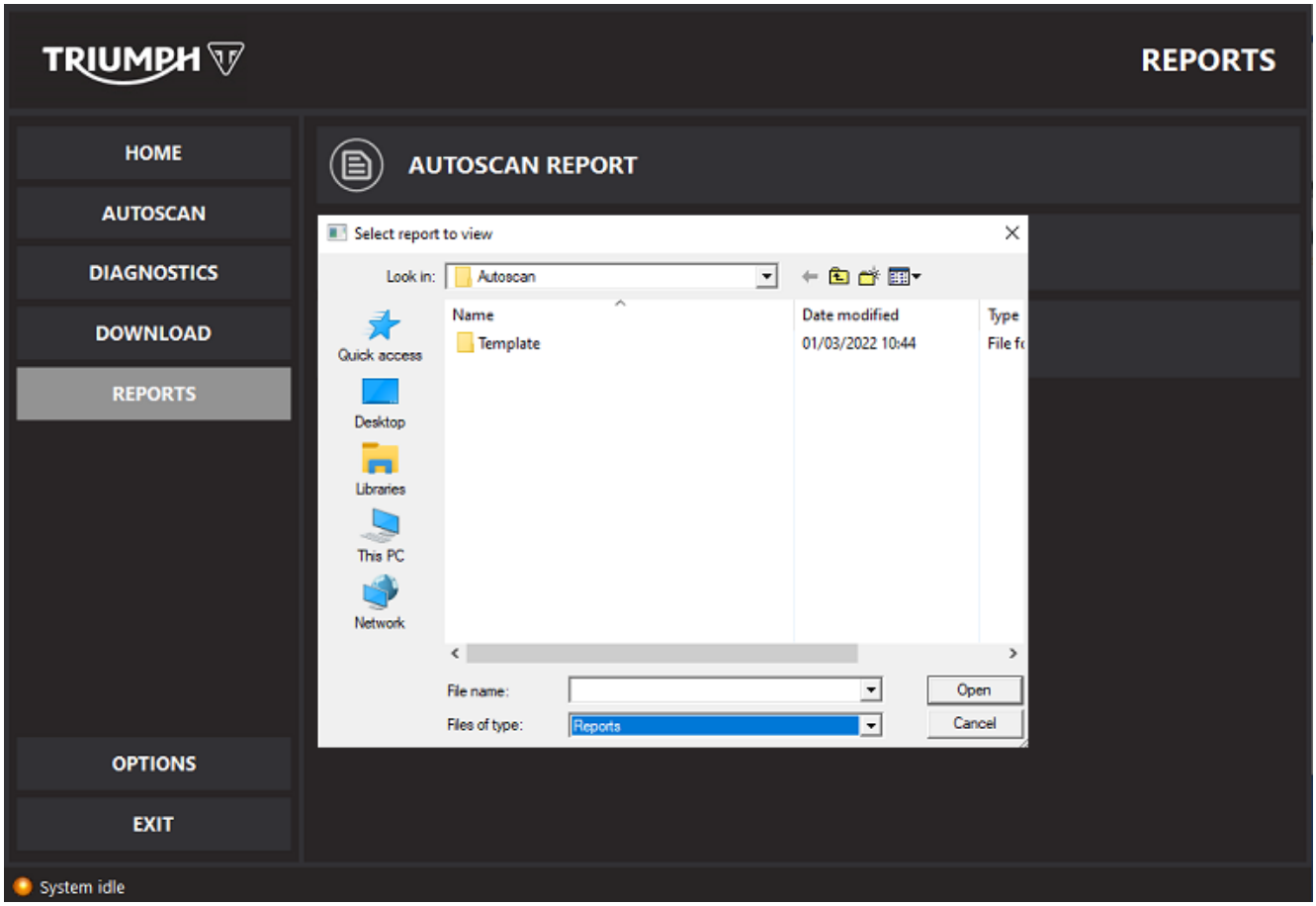
5. Clicking on **Download** will display a list of all available ECMs that downloads can be performed on. New additions to this list of ECMs for the 2022-02 update are **Headlight ECM** and **ABS.**



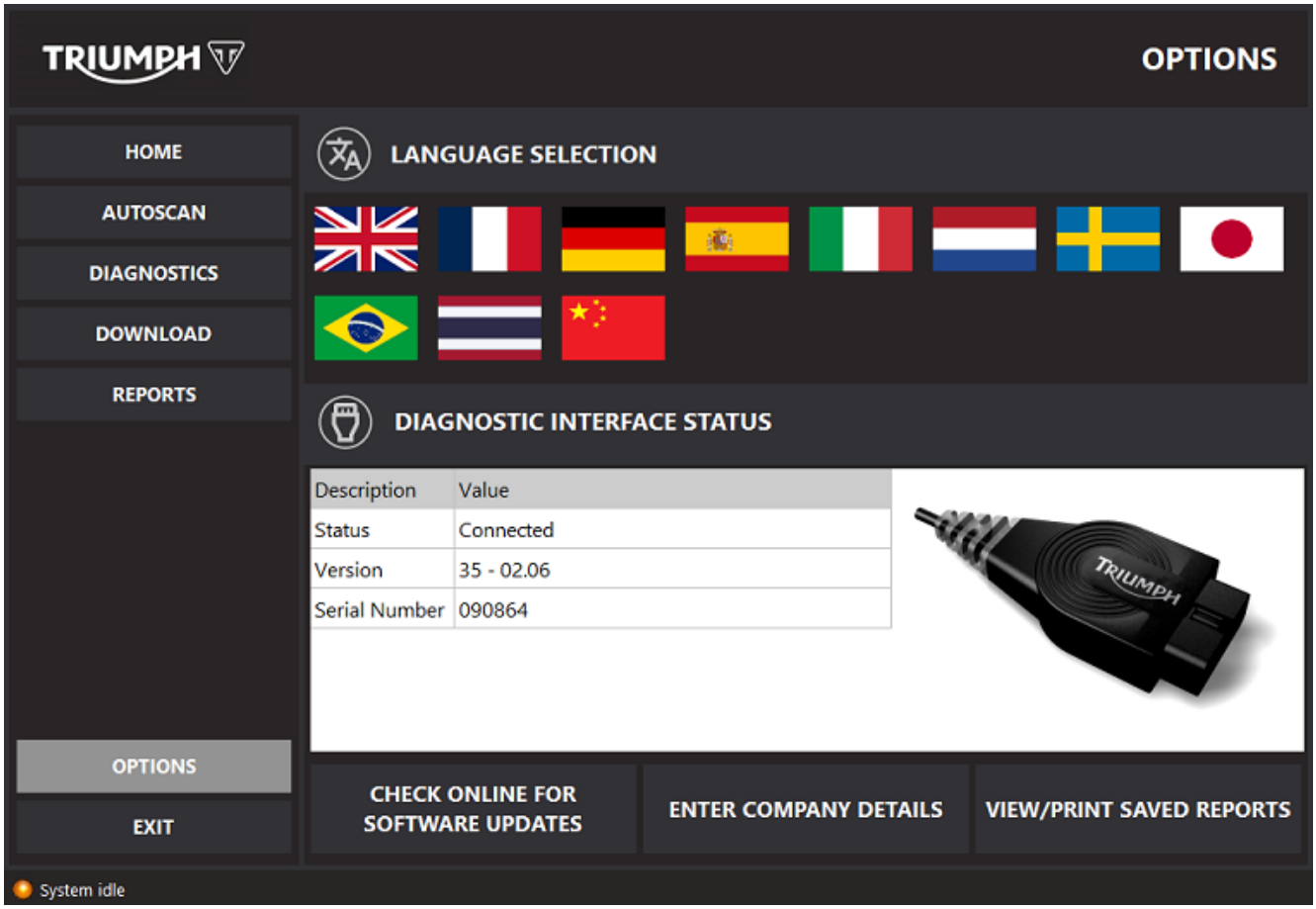
6. Clicking on **Reports** will display a list of available report forms that can be viewed. These include report forms from the **Autoscan** and the **EMRF**.



7. From the **Reports** screen, saved reports can be accessed and viewed from the location they have been saved in.



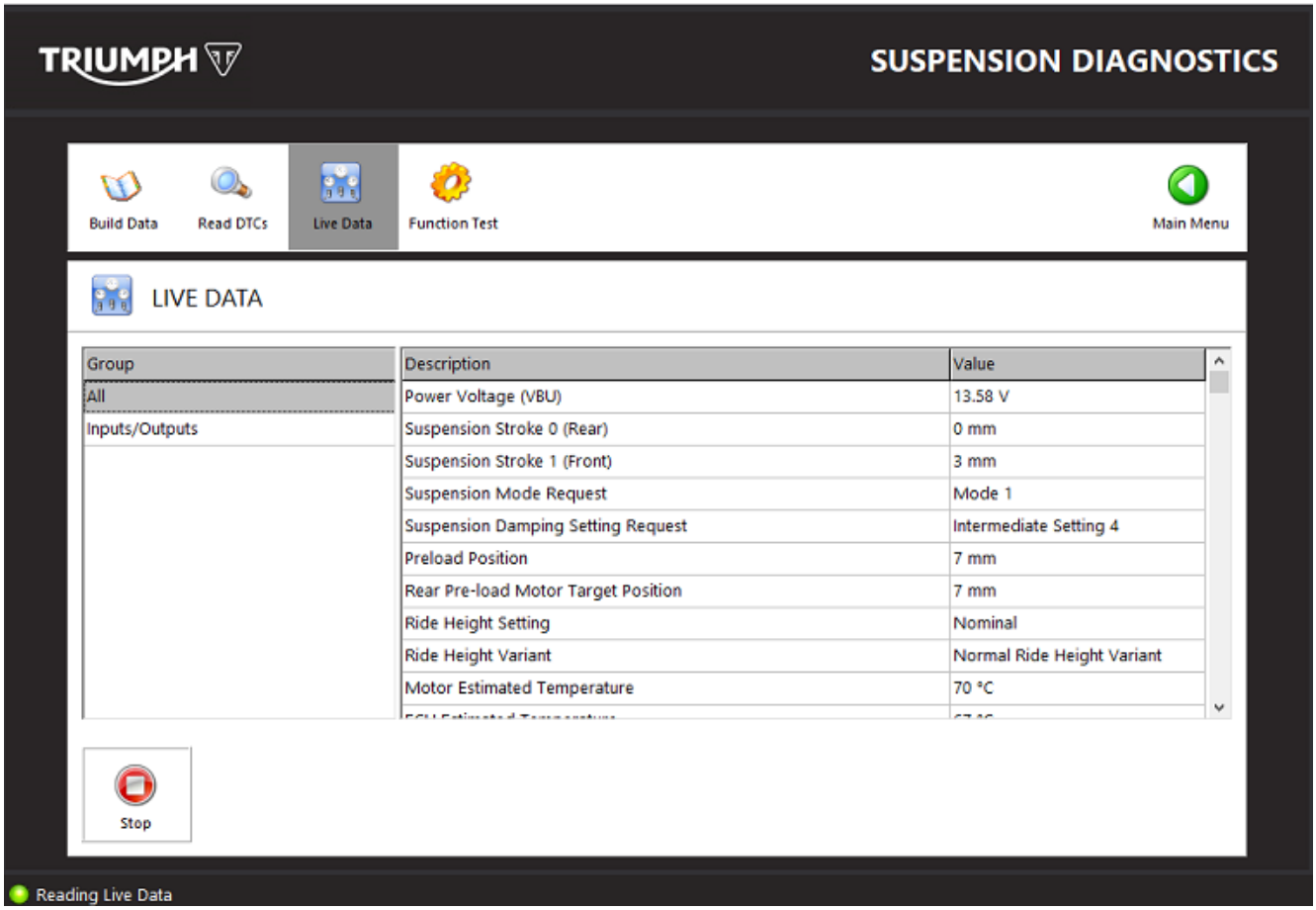
8. Clicking on the **Options** button will display the options screen.



9. Clicking on the **Exit** button will close the Triumph Diagnostic Tool.

Suspension Diagnostics

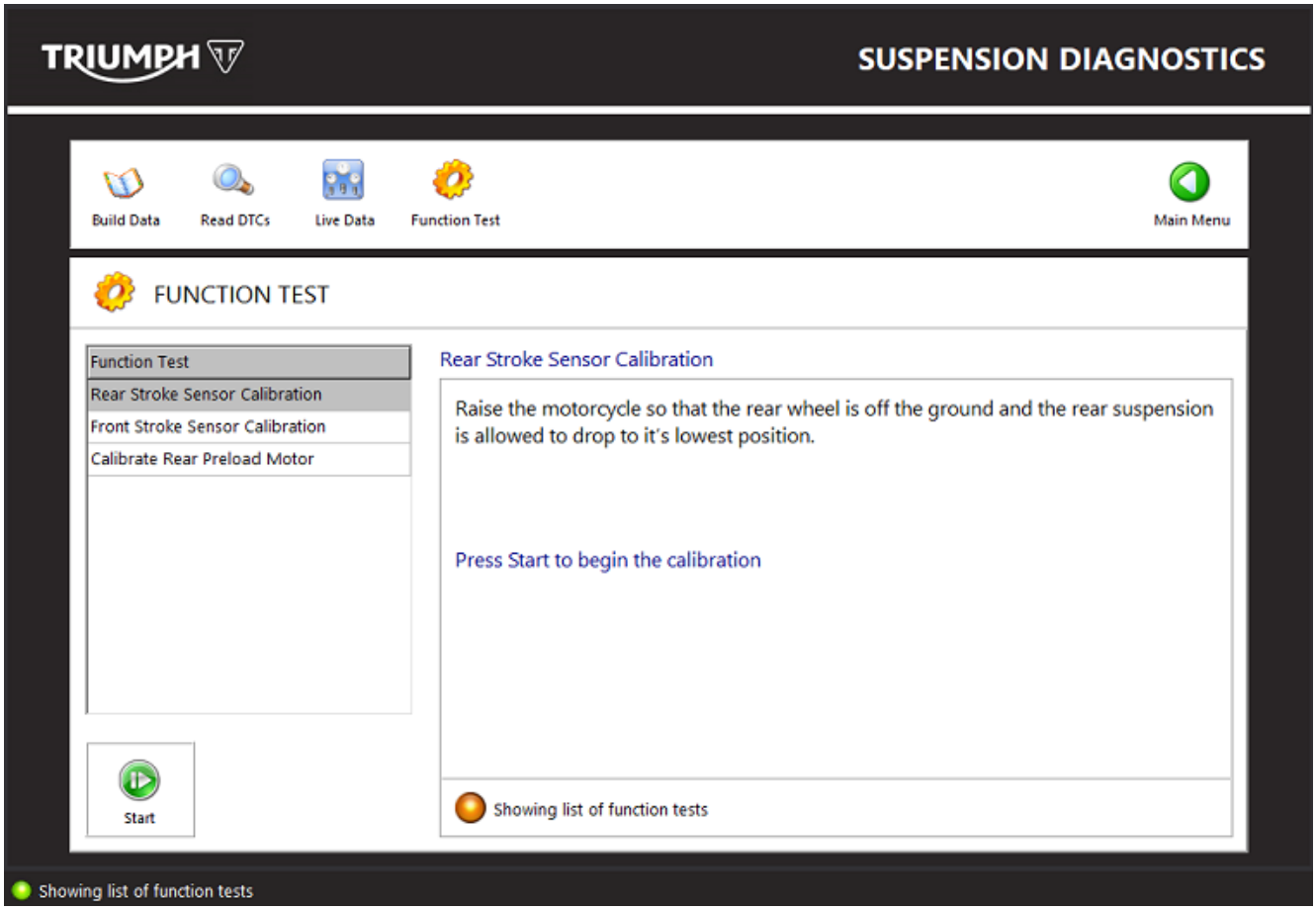
1. The Triumph Diagnostic Tool (TDT) 2022-02 update includes new Suspension Diagnostics functionality support for the above models.
2. These include updates to the **Live Data** as well as the **Function Test** menus.
3. From the **Home** screen, navigate to **Diagnostics** and then **Suspension Diagnostics.**
4. Clicking on the **Live Data** icon at the top of the screen will display the Live Data screen.



5. When using **Live Data** it is possible to check the status of various data items controlled by the Suspension Control Unit. The data displayed is dependant on model.
6. The data contained is as follows:

Description	Unit Value
Power Voltage	V
Suspension Stroke 0 (Rear)	mm
Suspension Stroke 1 (Front)	mm
Suspension Mode Request	Mode
Suspension Damping Setting Request	Setting
Preload Position	mm
Rear Preload Motor Target Position	mm
Ride Height Setting	Setting
Ride Height Variant	Variant
Motor Estimated Temperature	°C
ECU Estimated Temperature	°C
Sprung Front and Rear G	g
Front Wheel Speed	kph
Rear Wheel Speed	kph
True Engine Speed	rpm
X-Axis Acceleration	g
Y-Axis Acceleration	g
Z-Axis Acceleration	g
Yaw Rate	deg/s
Roll Rate	deg/s
Pitch Rate	deg/s
Lean Angle	°
Ignition Status	Status

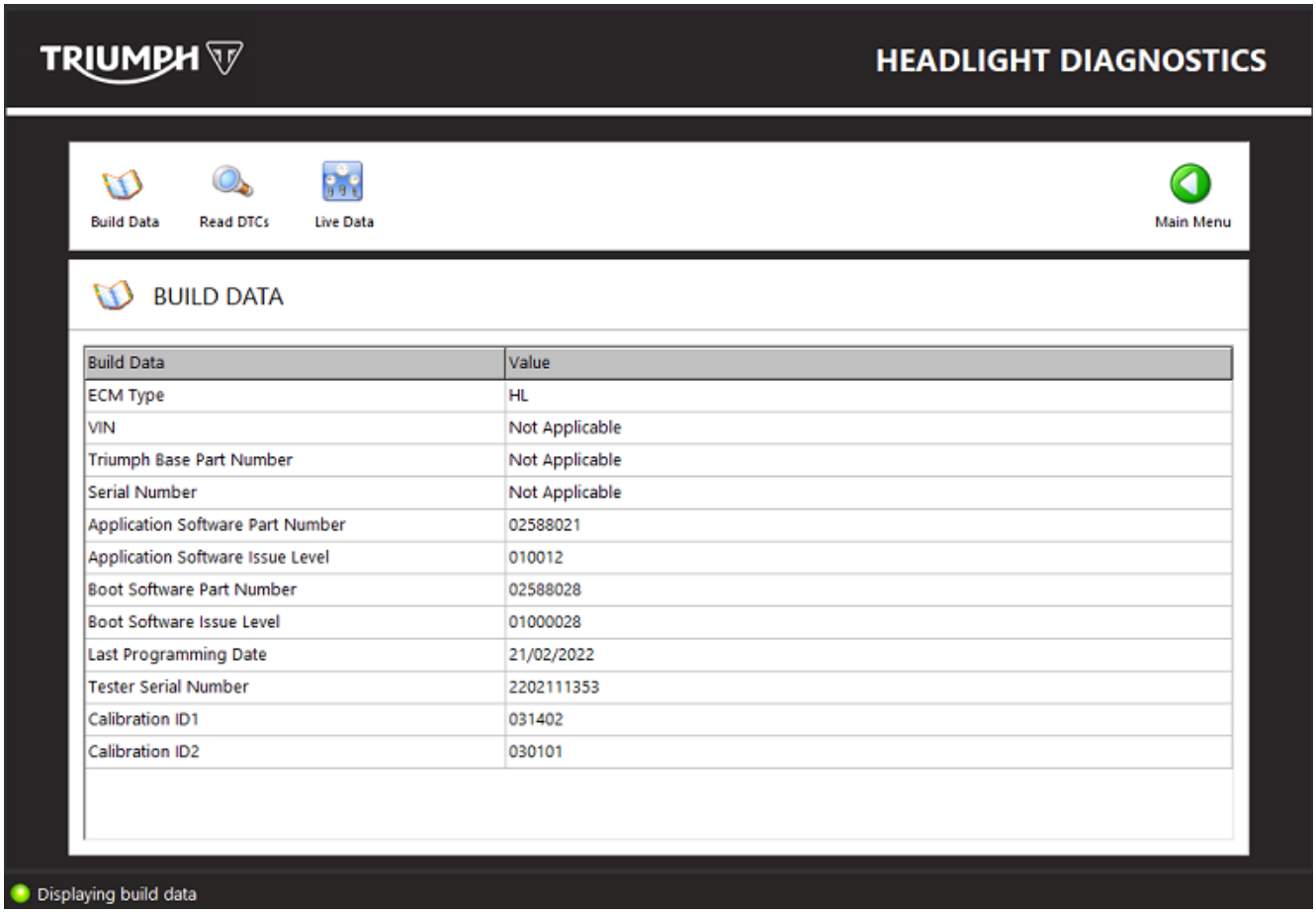
1. Clicking on the **Function Test** icon at the top of the screen will display the Function Test screen.



2. Clicking on the **Start** button will begin the chosen function test. If faults are present after the test, DTCs may be logged in the Suspension ECM.
3. The Function Tests available are:
   - Rear Stroke Sensor Calibration
   - Front Stroke Sensor Calibration
   - Calibrate Rear Preload Motor
4. To return to the **Home** screen, click the **Main Menu** icon at the top right hand side of the screen.

Headlight Diagnostics

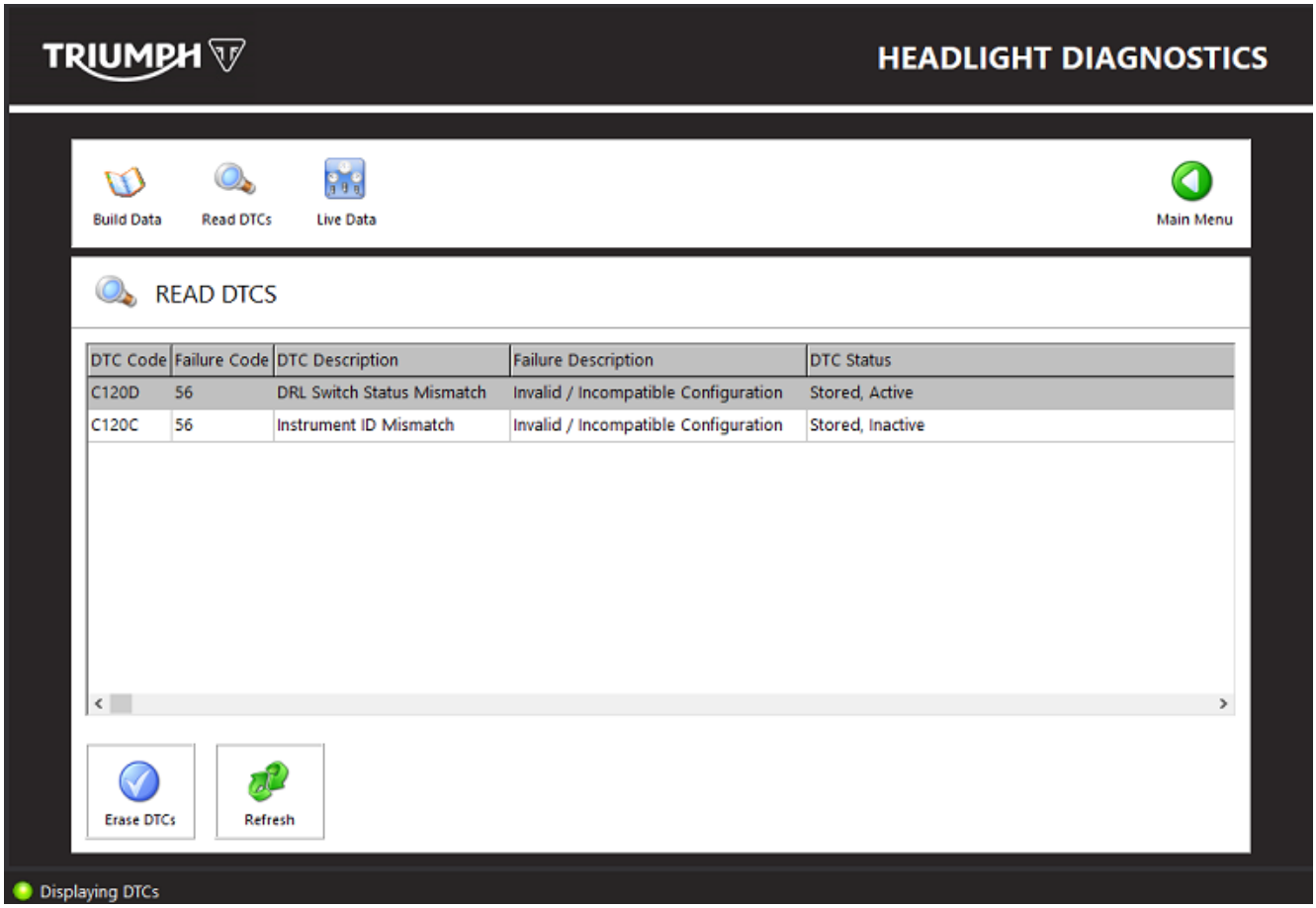
1. From the **Home** screen, navigate to **Diagnostics** and then **Headlight Diagnostics.**
2. Once the diagnostic tool has connected to the motorcycle, and the **Headlight Diagnostics** button has been selected, the **Build Data** screen will be displayed.



Build Data	Value
ECM Type	HL
VIN	Not Applicable
Triumph Base Part Number	Not Applicable
Serial Number	Not Applicable
Application Software Part Number	02588021
Application Software Issue Level	010012
Boot Software Part Number	02588028
Boot Software Issue Level	01000028
Last Programming Date	21/02/2022
Tester Serial Number	2202111353
Calibration ID1	031402
Calibration ID2	030101

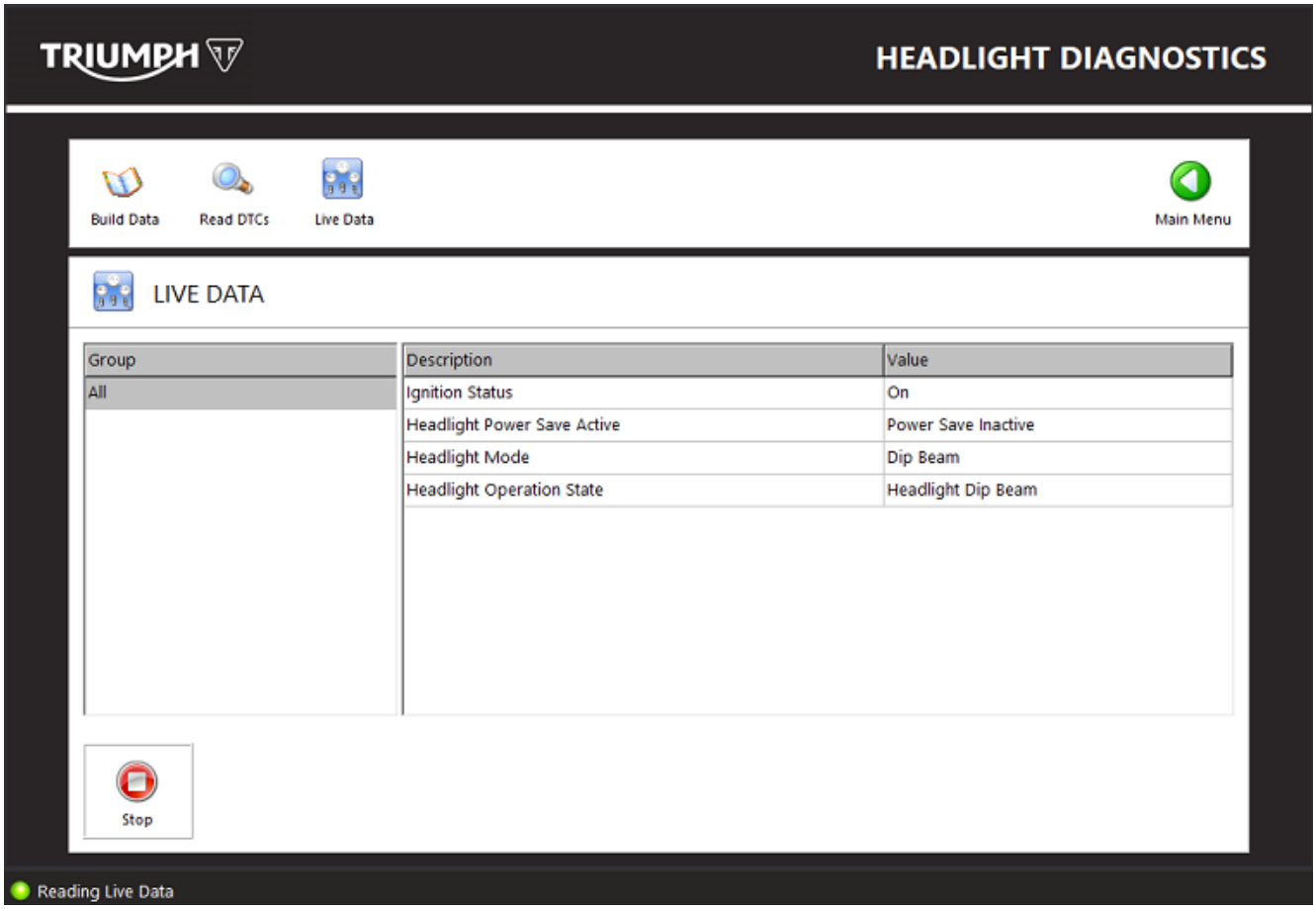
3. The **Build Data** screen may display the following information where applicable:
   - ECM Type
   - Vehicle Identification Number (VIN)
   - Triumph Base Part Number
   - Serial Number
   - Application Software Part Number
   - Application Software Issue Level
   - Boot Software Part Number
   - Boot Software Issue Level
   - Last Programming Date
   - Tester Serial Number
   - Calibration ID1
   - Calibration ID2
4. From this screen it is possible to access the following additional screens by clicking the icons located along the top:
   - **Read DTCs**
   - **Live Data**

5. Clicking on the **Read DTCs** icon at the top of the screen will display the **Read DTCs** screen. This screen will display a list of all stored Diagnostic Trouble Codes (DTCs), and a brief description of the trouble code. Refer to the relevant Triumph Service Manual for additional information on individual DTCs and for pinpoint tests to fully diagnose and repair the fault.



6. Click the **Erase DTCs** button at the bottom of the screen to delete **All** stored DTCs from the Headlight ECM's memory. Once all of the DTCs are erased the diagnostic tool will automatically check again for faults which might still be present on the motorcycle. Recurring DTCs will be displayed after a few seconds, and will not be erased until the fault has been repaired.

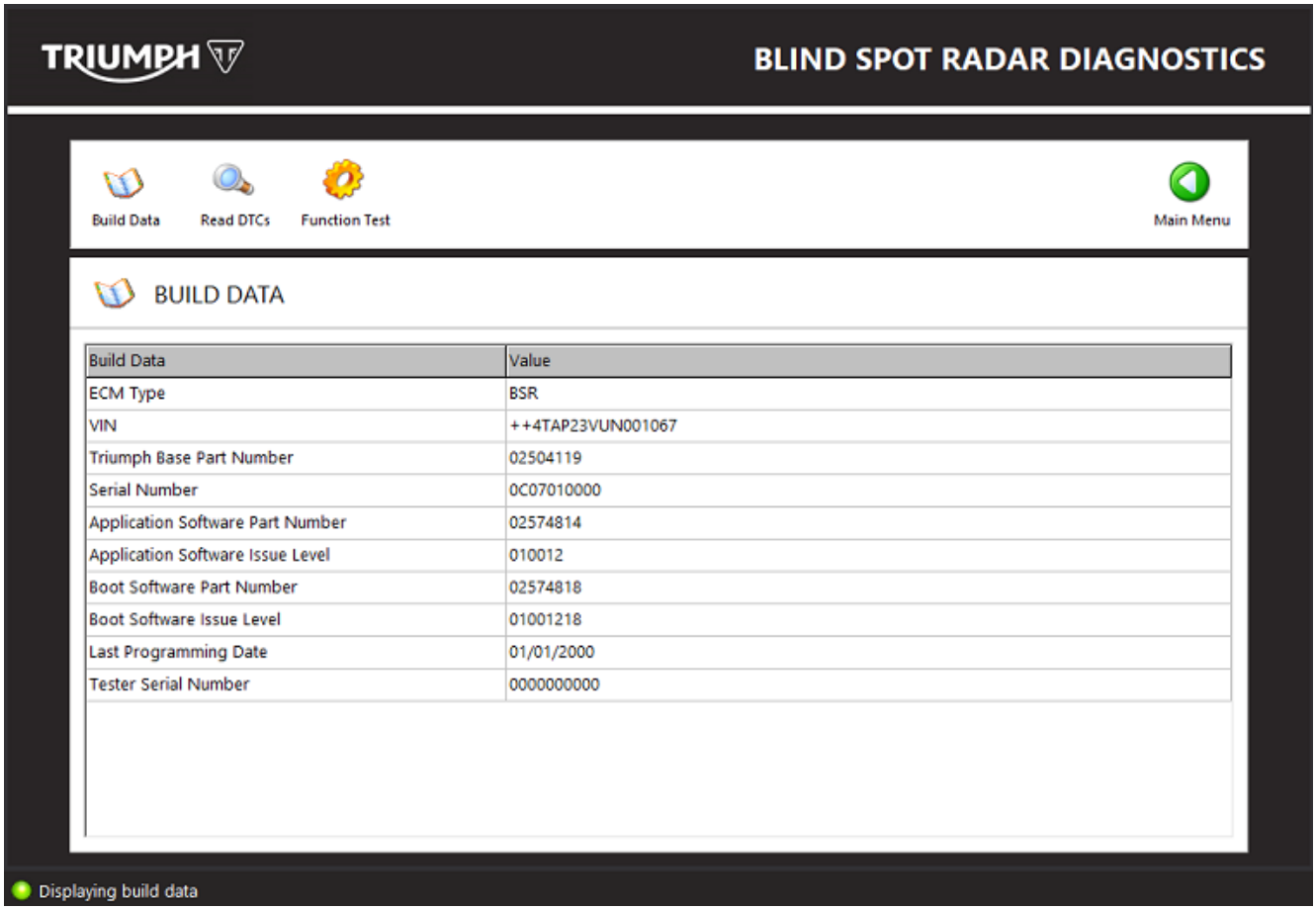
7. Clicking on the **Live Data** icon will display the Live Data screen.



8. When using this function it is possible to check the status of the following. The data displayed is dependent on model.
   - Ignition Status
   - Headlight Power Save Active
   - Headlight Mode
   - Headlight Operation State
9. To return to the **Home** screen, click the **Main Menu** icon at the top right hand side of the screen.

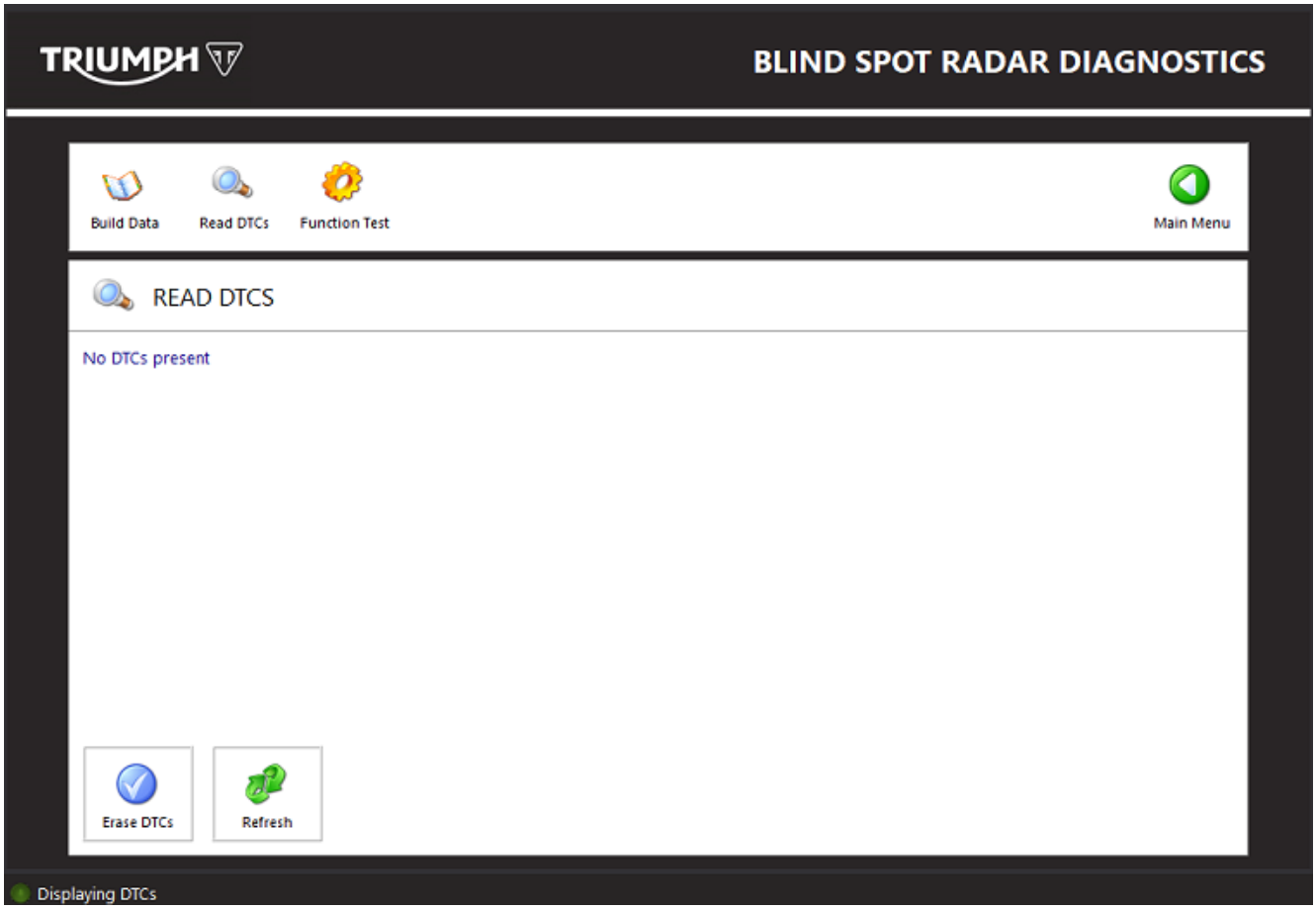
Blind Spot Radar Diagnostics

1. From the **Home** screen, navigate to **Diagnostics** and then **Blind Spot Radar Diagnostics.**
2. Once the diagnostic tool has connected to the motorcycle, and the **Blind Spot Radar Diagnostics** button has been selected, the **Build Data** screen will be displayed.



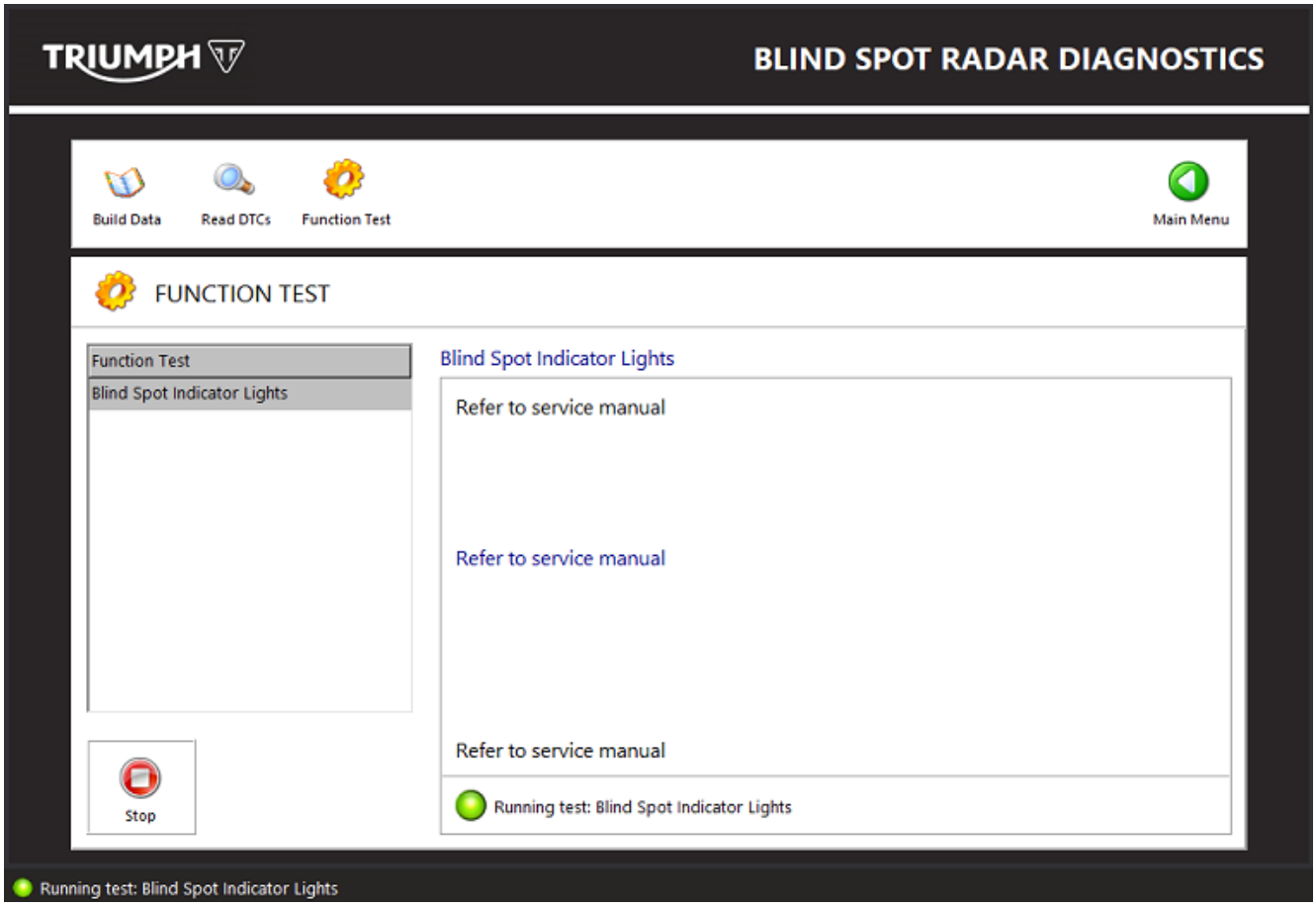
3. The **Build Data** screen may display the following information where applicable:
   - ECM Type
   - Vehicle Identification Number (VIN)
   - Triumph Base Part Number
   - Serial Number
   - Application Software Part Number
   - Application Software Issue Level
   - Boot Software Part Number
   - Boot Software Issue Level
   - Last Programming Date
   - Tester Serial Number
4. From this screen it is possible to access the following additional screens by clicking on the icons located along the top:
   - **Read DTCs**
   - **Function Test**

5. Clicking on the **Read DTCs** icon at the top of the screen will display the Read DTCs screen. This screen will display a list of all stored Diagnostic Trouble Codes (DTCs), and a brief description of the trouble code. Refer to the relevant Triumph Service Manual for additional information on individual DTCs and for pinpoint tests to fully diagnose and repair the fault.



6. Click the **Erase DTCs** button at the bottom of the screen to delete **All** stored DTCs from the Blind Spot Radar ECM's memory. Once all of the DTCs are erased the diagnostic tool will automatically check again for faults which might still be present on the motorcycle. Recurring DTCs will be displayed after a few seconds, and will not be erased until the fault has been repaired.

7. Clicking on the **Function Test** icon will display the Function test screen.



8. The Function Test available is:
   - Blind Spot Radar Indicator Lights.
9. Clicking on the **Start** button will begin the function test. During this Function Test, it is necessary to make a visual observation of the Blind Spot Radar Indicator lights and if faults are present, DTCs may be logged in the Blind Spot Radar and Chassis ECM.
10. To return to the **Home** screen, click the **Main Menu** icon at the top right hand side of the screen.

Item:	**224.2**
Description:	**Electronic Systems Commissioning and Motorcycle Unlocking**
Model Affected:	**Tiger 1200 GT, Tiger 1200 GT Pro, Tiger 1200 GT Explorer, Tiger 1200 Rally Pro, Tiger 1200 Rally Explorer**

⚠ 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 Keyless ECM calibration.
2. Download the latest Chassis ECM calibration.
3. Download the latest Suspension ECM calibration.
4. Download the latest Headlight ECM calibration.
5. Download the latest TFT Instrument calibration.
6. Download the latest ABS calibration.
7. Download the latest Engine ECM calibration.
8. Unlock the Engine ECM.
9. Set the date, time and first service interval on the instruments.
10. Calibrate the following Triumph Semi Active Suspension (TSAS) Items:
    - Rear Preload Motor
    - Rear Stroke Sensor
    - Front Stroke Sensor.
11. Function test the Blind Spot Radar Indicator Lights.
12. Adapt the crankshaft position (if required).
13. Erase DTCs from all motorcycle ECMs.

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 2022-02 or later is required to complete this procedure.

Note:

- **It can take up to 1.75 hours to complete the actions required to commission the above motorcycles.**
- **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). A Triumph recommended battery charger specifically designed for lithium batteries should be used 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. Remove the rider's seat.
4. Ensure that the motorcycle battery is fully charged and installed as described in the Service Manual. Observe the information provided in the Service Manual regarding $LiFePO_4$ lithium-ion batteries.

⚠ Caution

Only charge the battery using a Triumph recommended battery charger specifically designed for lithium batteries.

Always refer to the instructions supplied with the battery charger.

Do not use a lead-acid battery charger, as this may seriously damage or destroy the battery.

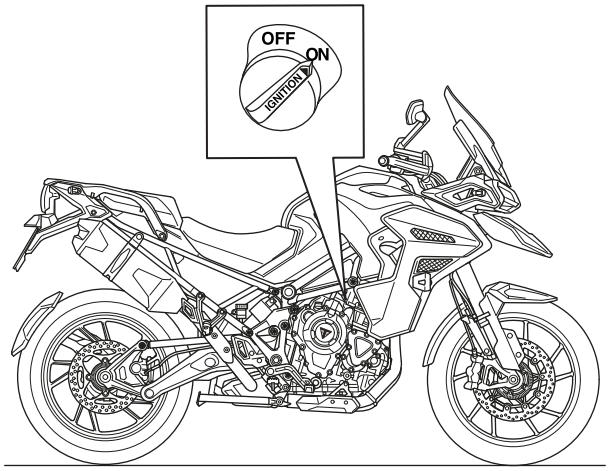
Do not use a battery charger that has an automatic 'de-sulphation' or 'conditioning' mode as this will seriously damage or destroy the battery.

5. Connect a Triumph recommended battery charger (specifically designed for lithium batteries) to maintain battery charge during this process.

Note:

- **The motorcycle is supplied with one smart key and two passive keys.**
- **The smart key should be set to active mode and kept within 1 metre (3 feet) of the LF antenna for the duration of this procedure.**

6. Check that the smart key is in active mode. Press the smart key button and make sure the LED flashes green. If the LED flashes red, press and hold the button until the LED changes to green.
7. Position the smart key within 1 metre (3 feet) of the motorcycle.
8. **US markets Only:** Turn the master ignition switch to the ON position.



Master Ignition Switch (Tiger 1200 GT Explorer shown)

9. Connect the Triumph Diagnostic Tool to the motorcycle as described in the Service Manual and turn the ignition ON.

Calibration Downloads

Note:

- **Use the Automatic Model Detection option when performing the calibration downloads detailed below.**
- **Make sure that the correct model is detected and that the correct calibration for your region is selected for each download.**
- **Follow all on-screen instructions during each download.**
- **Multiple files are transferred during each calibration 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 that each download has successfully completed.**
- **If a calibration download is accidentally disrupted or does not complete for any reason, turn the ignition off for at least 120 seconds then restart the download using Manual Model Selection.**

1. Download the latest Keyless ECM calibration.
2. Download the latest Chassis ECM calibration.

Note:

- **The Chassis ECM calibration download is required to unlock the Chassis ECM. This download must be performed even if the diagnostic tool reports that the Chassis ECM software is up to date.**

3. Download the latest Suspension ECM calibration.
4. Download the latest Headlight calibration.
5. Download the latest Instrument calibration.
6. Download the latest ABS calibration (see ABS Download, page 29 which is item 5 of this Technical Bulletin (TB224.5) for more details).
7. Download the latest Engine ECM calibration.

Unlock the Engine ECM

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

Note:

- **Follow all onscreen instructions.**
- **There is a small delay while the motorcycle's ECMs are checked for up-to-date calibrations.**
- **The diagnostic tool 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.**

Set the Date, Time and First Service Interval on the Instruments

1. Navigate to **Diagnostics** -> **Instruments** -> **Service**.
2. Set the instruments to display the correct time and date.
3. Set the first service interval to:
   - 600 miles/1,000 km
   - 6 months/183 days.

Calibrate Triumph Semi Active Suspension (TSAS).

1. Calibrate the Rear Preload Motor. See TSAS Calibration - Rear Suspension Unit Preload Motor Calibration, page 23 which is item 3 of this Technical Bulletin (TB224.3) for more details.
2. Calibrate the Front and Rear Stroke Sensors. See TSAS Calibration - Front and Rear Stroke Sensor Calibration, page 26 which is item 4 of this Technical Bulletin (TB224.4) for more details.

Function Test the Blind Spot Radar Indicator Lights (Tiger 1200 GT Explorer and Tiger 1200 Rally Explorer models only).

Test that the mirror mounted Blind Spot radar Indicator Lights illuminate correctly.

1. Navigate to **Diagnostics** -> **Blind Spot Radar** -> **Function Test**
2. Select the Blind Spot Radar Indicator Lights function test and click **Start**.
3. Observe the Blind Spot Radar Indicator Lights. The lights should illuminate in the following sequence:
   - Left light On only
   - Right light On only
   - Both lights On
   - Finish.

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 **Diagnostics** -> **Engine ECM** -> **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.

Erase DTCs from All ECMs

1. Check the motorcycle ECMs for stored DTCs in the following order. Erase any stored DTCs as necessary:
    - Engine ECM
    - ABS ECM
    - Instruments
    - Immobiliser/Keyless ECM
    - Chassis ECM
    - Suspension ECM
    - Headlight
    - Blind Spot Radar (Tiger 1200 GT Explorer and Tiger 1200 Rally Explorer models only).

Final Steps

1. Disconnect the Triumph Diagnostic Tool.
2. Refit the rider's seat.
3. Check that the motorcycle can be turned ON and started using each key.

Item:	**224.3**
Description:	**TSAS Calibration - Rear Suspension Unit Preload Motor Calibration**
Model Affected:	**Tiger 1200 GT, Tiger 1200 GT Pro, Tiger 1200 GT Explorer, Tiger 1200 Rally Pro, Tiger 1200 Rally Explorer**

⚠ 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.

The rear preload motor must be calibrated under the following circumstances:

- After installation and setup of a new suspension ECM
- After removal/installation of the rear suspension unit.

Note:

- **If installing a new suspension ECM, the rear preload motor will calibrate automatically after turning the ignition switch ON.**
- **If the rear suspension unit has been removed/refitted, the Triumph Diagnostic Tool must be used to calibrate the rear preload motor.**

Preliminary Steps

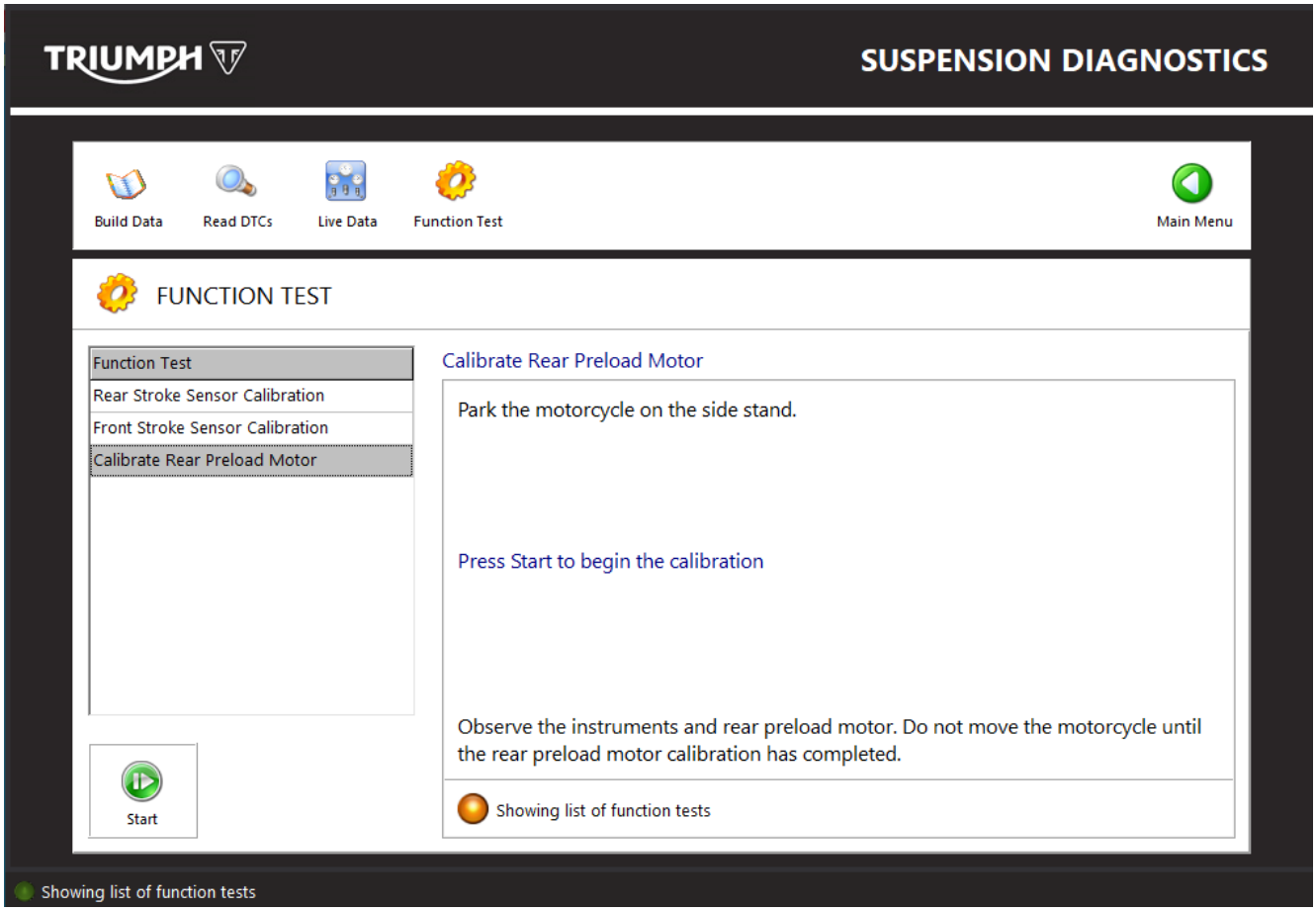
1. Park the motorcycle on it's side stand.
2. Remove the rider's seat.
3. Connect the Triumph Diagnostic Tool and turn the ignition On.
4. Make sure all motorcycle ECMs have the latest calibrations installed.

Calibrating the Rear Preload Motor using the Triumph Diagnostic Tool

Note:

- **Make sure the motorcycle battery is fully charged before calibrating the rear preload motor.**

1. Navigate to **Diagnostics** -> **Suspension Diagnostics** -> **Function test** and select Calibrate Rear Preload Motor.



Note:

- **The rear preload motor will begin to calibrate immediately upon clicking Start.**
- **When the rear preload motor is calibrating, the suspension warning light will flash on the instrument display and a message will be displayed indicating that the TSAS (Triumph Semi Active Suspension) system is calibrating.**
- **The motorcycle must remain stationary while the rear preload motor is calibrating. If the motorcycle is moved or ridden, this will halt the calibration process and the suspension warning light will be illuminated. In this situation the calibration process will be restarted the next time the ignition switch is turned Off for more than 30 seconds, then turned On again.**
- **When the calibration process is complete, the suspension warning light will stop flashing and the instruments will briefly display a message indicating that calibration has completed.**
- **After calibration has completed, the motorcycle may then proceed to adjust the rear preload motor to the settings selected on the instrument menus. In this situation, the instruments will briefly display a message indicating that the TSAS system is adjusting. When adjustment is complete, the instruments will return to the normal display.**

2. Click **Start**, and allow the rear preload motor to calibrate.
3. Do not move or ride the motorcycle while the rear preload motor is calibrating.
4. Observe the instruments and wait for the suspension warning light to stop flashing to confirm the that the rear preload motor calibration is complete.
5. When complete, the Diagnostic tool will also report back: **Test Complete.**

After Rear Preload Motor Calibration has Completed

Warning

Never start the engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate the motorcycle in the open-air or in an area with adequate ventilation.

1. Start the engine and check that the suspension warning light remains off. If the warning light resumes flashing, the rear preload motor is being calibrated again due to low battery voltage. Wait for the warning light to stop flashing before turning the engine off.
2. Check the motorcycle ECMs for stored DTCs in the following order. Erase any stored DTCs as necessary:
   - Engine ECM
   - ABS ECM
   - Instruments
   - Keyless ECM (Immobiliser)
   - Chassis ECM
   - Suspension ECM
   - Headlight
   - Blind Spot Radar (Tiger 1200 GT Explorer and Tiger 1200 Rally Explorer models only).
3. Disconnect the Triumph Diagnostic Tool and turn the ignition Off.
4. Refit the rider's seat.
5. Road test the motorcycle then recheck for any warning lights or stored DTCs. Investigate and rectify any faults as necessary.

Item:	**224.4**
Description:	**TSAS Calibration - Front and Rear Stroke Sensor Calibration**
Model Affected:	**Tiger 1200 GT, Tiger 1200 GT Pro, Tiger 1200 GT Explorer, Tiger 1200 Rally Pro, Tiger 1200 Rally Explorer**

⚠ 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.

The front and rear stroke sensors must be calibrated under the following circumstances:

- Installation and setup of a new suspension ECM
- After removal/installation of the rear suspension unit (rear stroke sensor)
- After removal/installation of the front forks (front stroke sensor).

Preliminary Steps

1. Remove the rider's seat.
2. Connect the Triumph Diagnostic Tool and turn the ignition On.
3. Make sure all motorcycle ECMs have the latest calibrations installed.

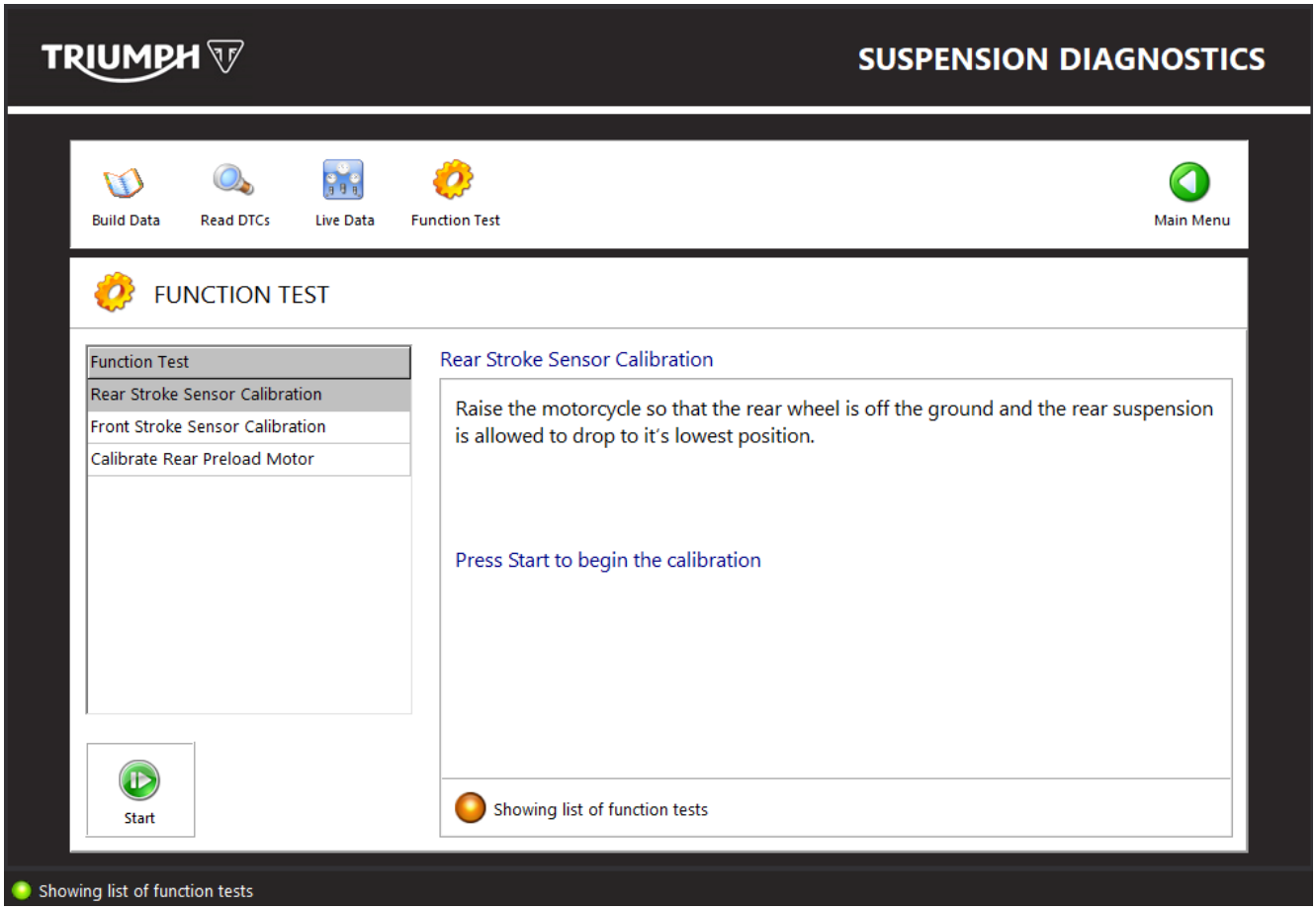
To Calibrate the Rear Stroke Sensor

⚠ Warning

Before calibrating the rear stroke sensor, the motorcycle must be raised and supported such that the rear wheel is off the ground and the rear suspension is allowed to hang freely.
Failure to raise and support the motorcycle as described above will result in incorrect calibration of the rear stroke sensor.
Incorrect calibration of the rear stroke sensor may cause an unsafe riding condition resulting in loss of motorcycle control and an accident.

1. Raise and support the rear of the motorcycle so that the rear wheel is off the ground and the rear suspension is allowed to hang freely.

2. Navigate to **Diagnostics** -> **Suspension ECM** -> **Function test** and select Rear Stroke Sensor Calibration.



Note:

- **Upon clicking start, a command will be sent to the suspension ECM to read the output from the rear stroke sensor and register this reading as position zero (rear suspension at full extension). This calibration occurs instantaneously.**

3. Click **Start**. The calibration will be completed instantaneously as described above.

To Calibrate the Front Stroke Sensor

Warning

Before calibrating the front stroke sensor, the motorcycle must be raised and supported such that the front wheel is off the ground and the front suspension is allowed to hang freely.

Failure to raise and support the motorcycle as described above will result in incorrect calibration of the front stroke sensor.

Incorrect calibration of the front stroke sensor may cause an unsafe riding condition resulting in loss of motorcycle control and an accident.

1. Raise and support the front of the motorcycle so that the front wheel is off the ground and the front suspension is allowed to hang freely.
2. Navigate to **Diagnostics** -> **Suspension Diagnostics** -> **Function test** and select Front Stroke Sensor Calibration.

Note:

- **Upon clicking start, a command will be sent to the suspension ECM to read the output from the front stroke sensor and register this reading as position zero (front suspension at full extension). This calibration occurs instantaneously.**

3. Click **Start**. The calibration will be completed instantaneously as described above.

Final Steps

1. Lower the motorcycle and park on its side stand.
2. Check the motorcycle ECMs for stored DTCs in the following order. Erase any stored DTCs as necessary:
   - Engine ECM
   - ABS ECM
   - Instruments
   - Keyless ECM (Immobiliser)
   - Chassis ECM
   - Suspension ECM
   - Headlight
   - Blind Spot Radar (Tiger 1200 GT Explorer and Tiger 1200 Rally Explorer models only).
3. Disconnect the Triumph Diagnostic Tool and turn the ignition Off.
4. Refit the rider's seat.

Item: **224.5**

Description: **ABS Download**

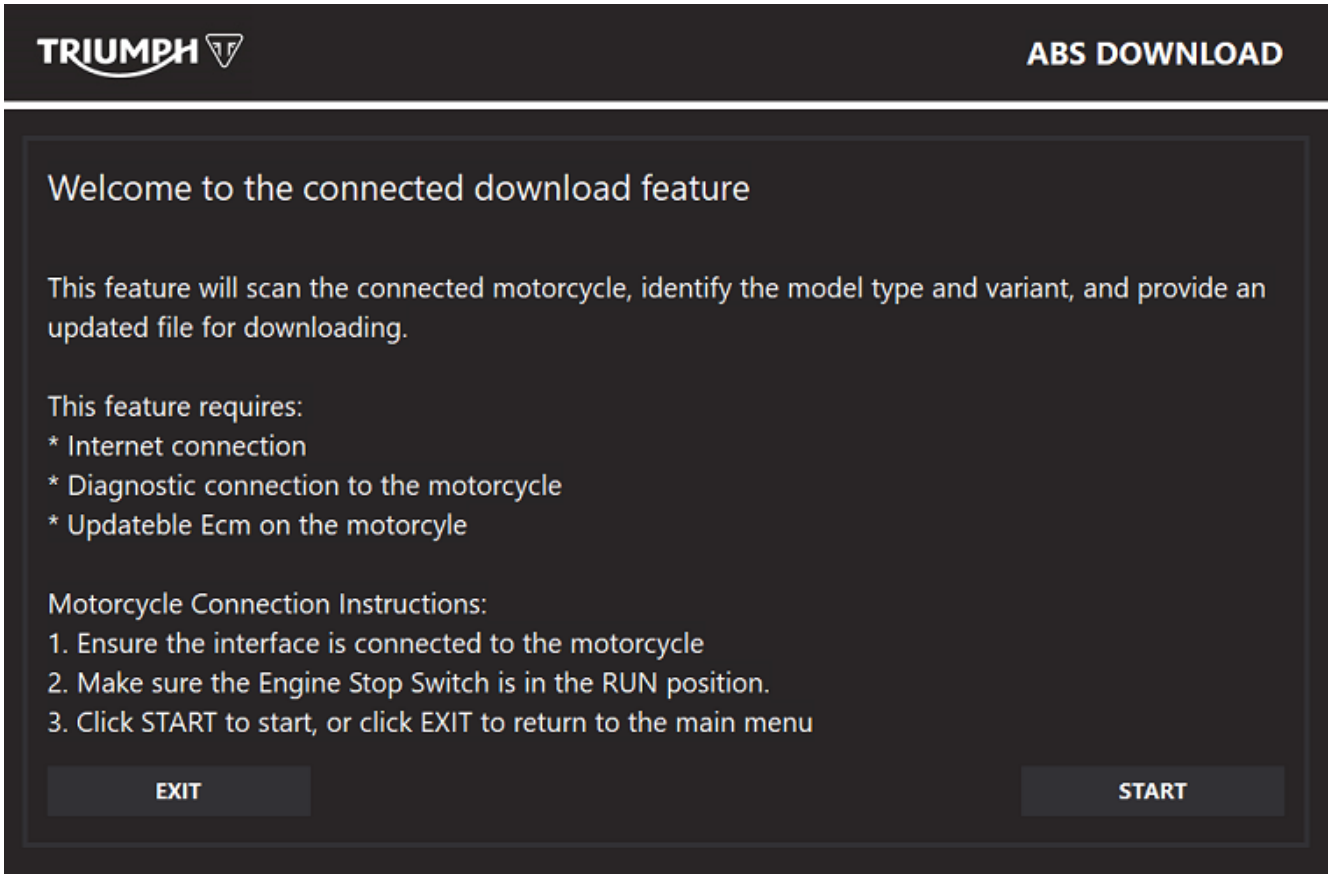
Model Affected: **Tiger 1200 GT, Tiger 1200 GT Pro, Tiger 1200 GT Explorer, Tiger 1200 Rally Pro, Tiger 1200 Rally Explorer**

1. The Triumph Diagnostic Tool (TDT) 2022-02 update includes a new connected download feature for the ABS ECM on the following models:
   - Tiger 1200 GT
   - Tiger 1200 GT Pro
   - Tiger 1200 Rally Pro
   - Tiger 1200 GT Explorer
   - Tiger 1200 Rally Explorer

Notice

A broadband internet connection is required for the ABS download feature to work.

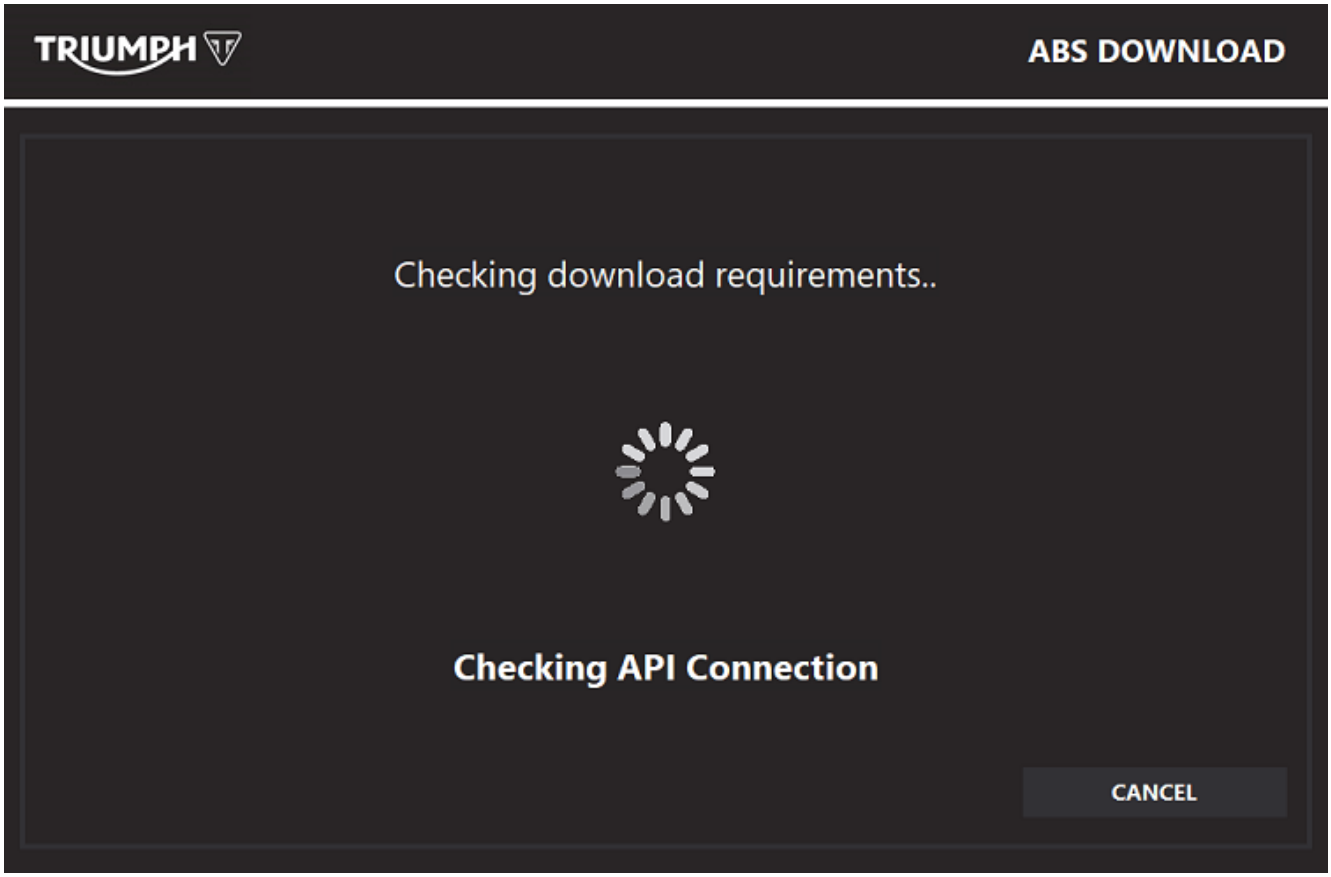
2. Upon launch of the Triumph Diagnostic Tool, navigate to the **Download** menu and select the **ABS** button.
3. Clicking on the **ABS** button will display a screen providing information, requirements and instructions on how to use the new Connected Download Feature. Click **Exit** to go back to the download menu or click **Start** to begin.



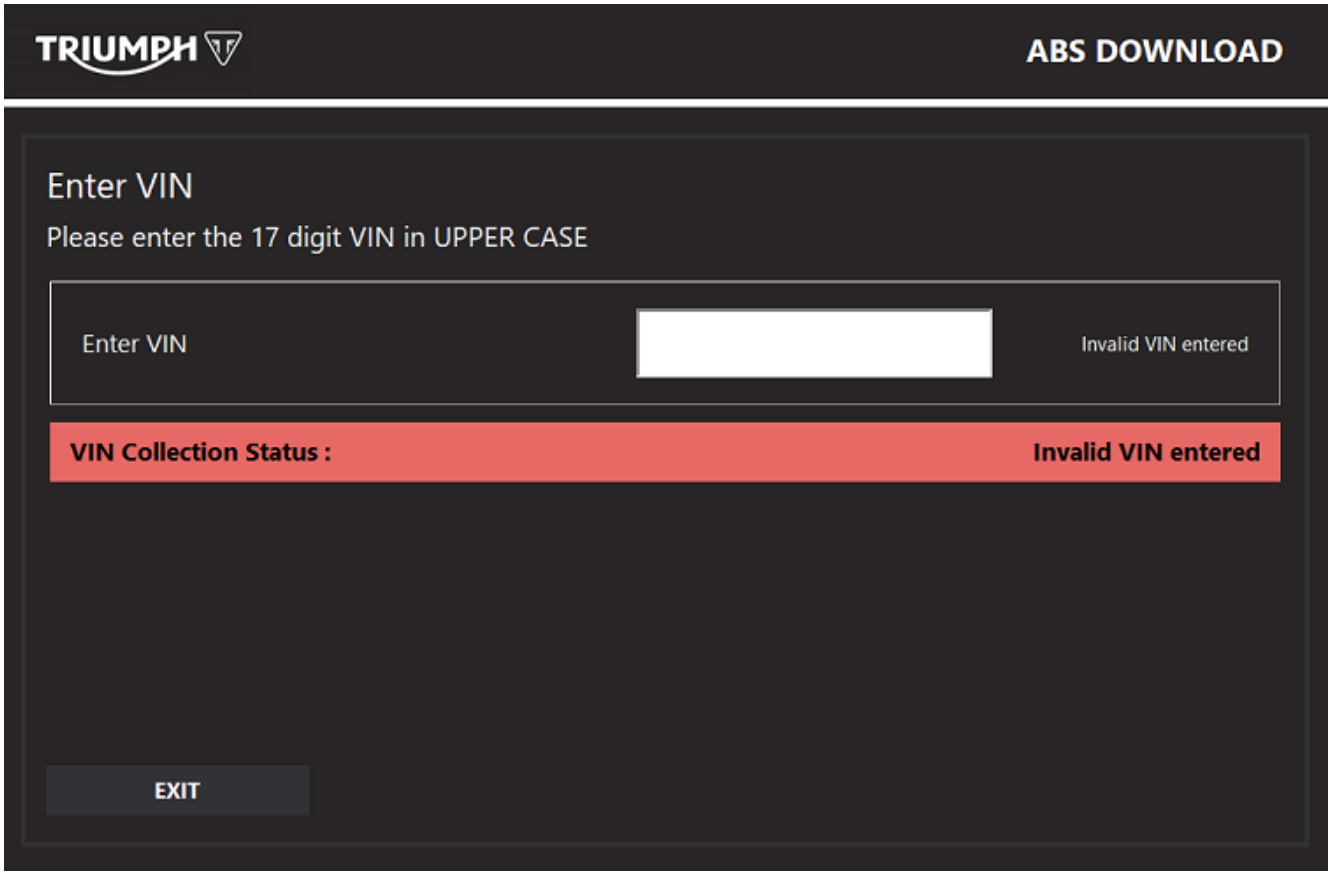
Notice

You may be instructed to turn the motorcycle ignition Off and On at various stages during this process. Follow all on-screen instructions.

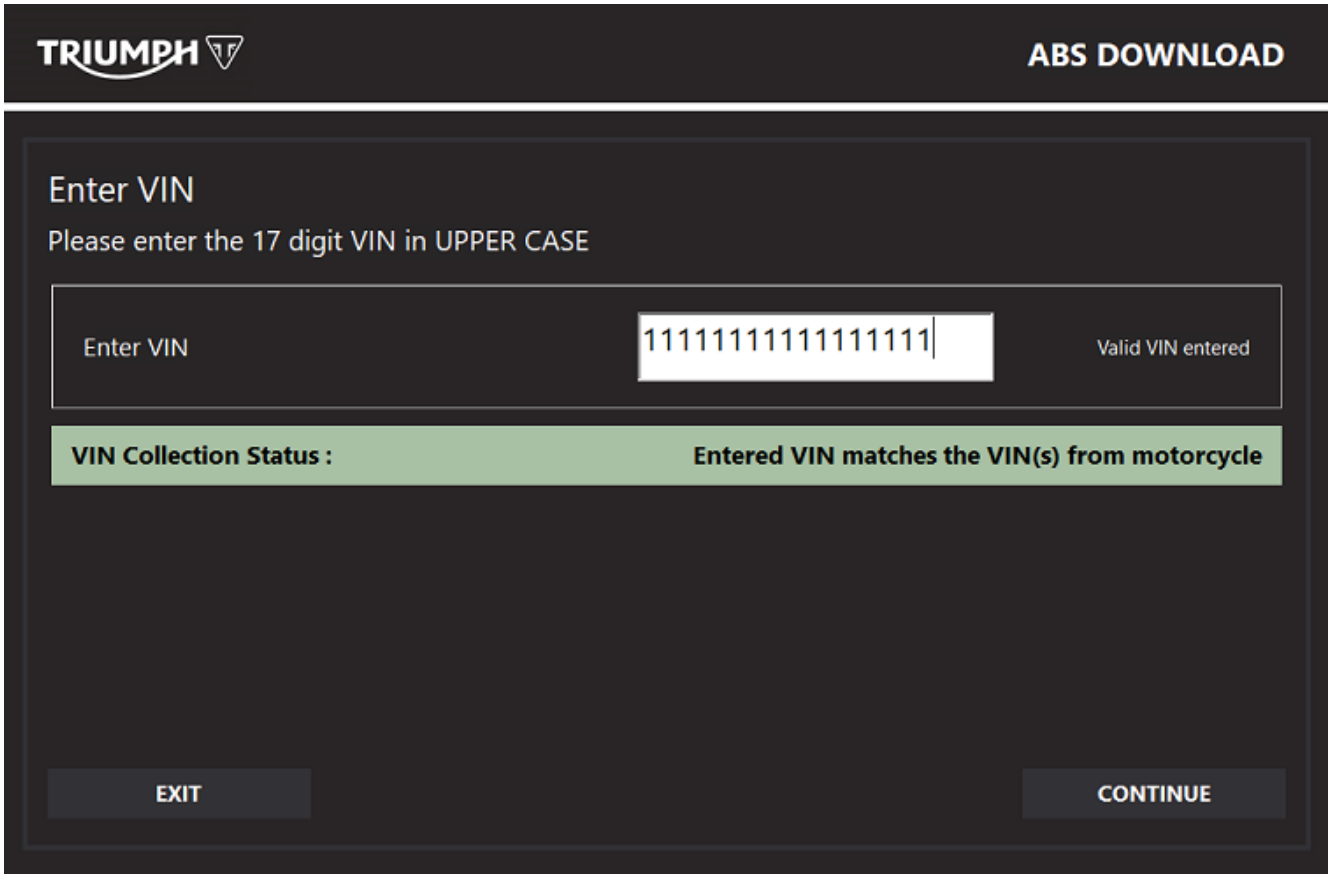
4. Next, the diagnostic tool will begin checking if the criteria it needs in order to update the ABS ECM is fulfilled.



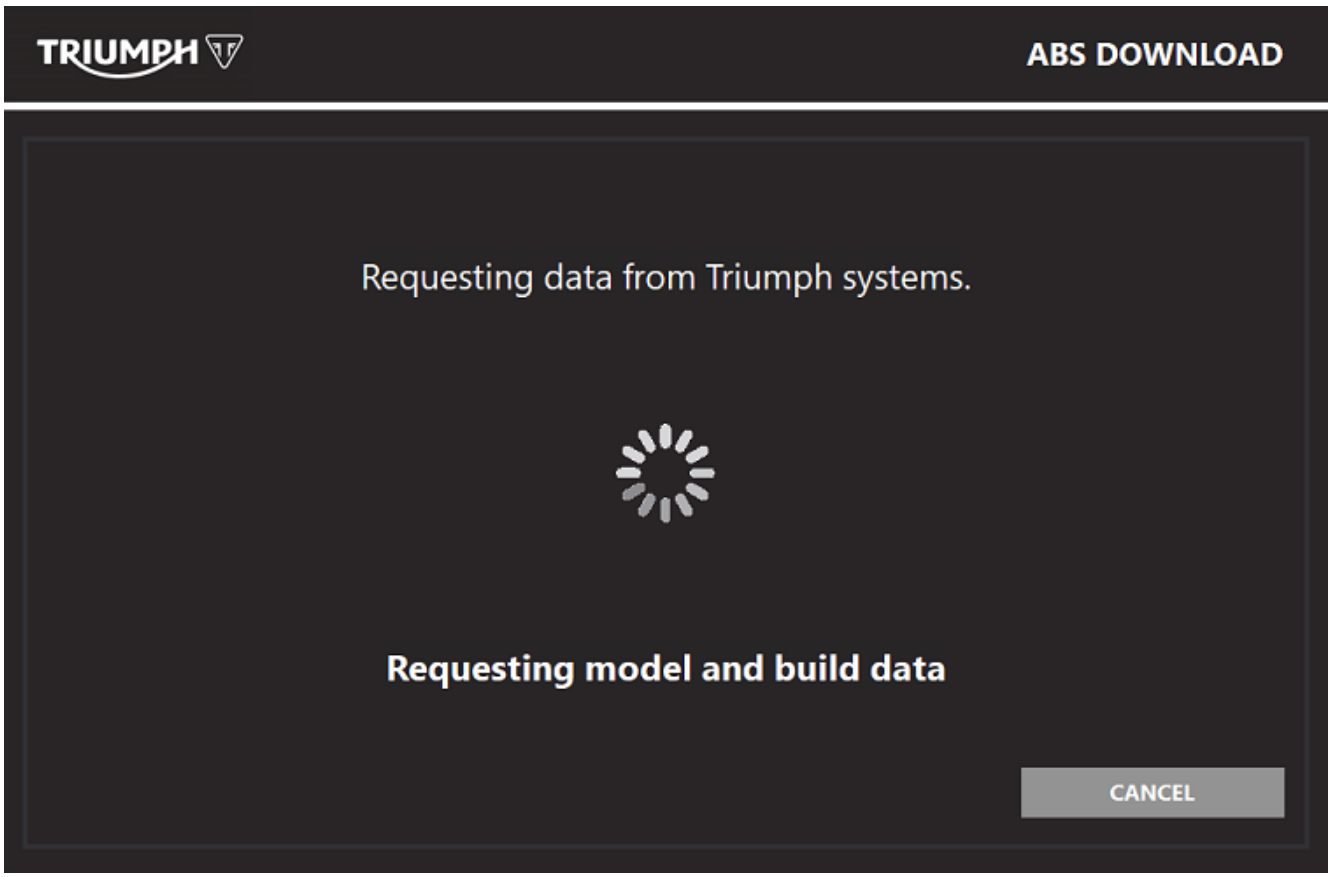
5. You will then be instructed to enter the full 17 digit VIN of the connected motorcycle.



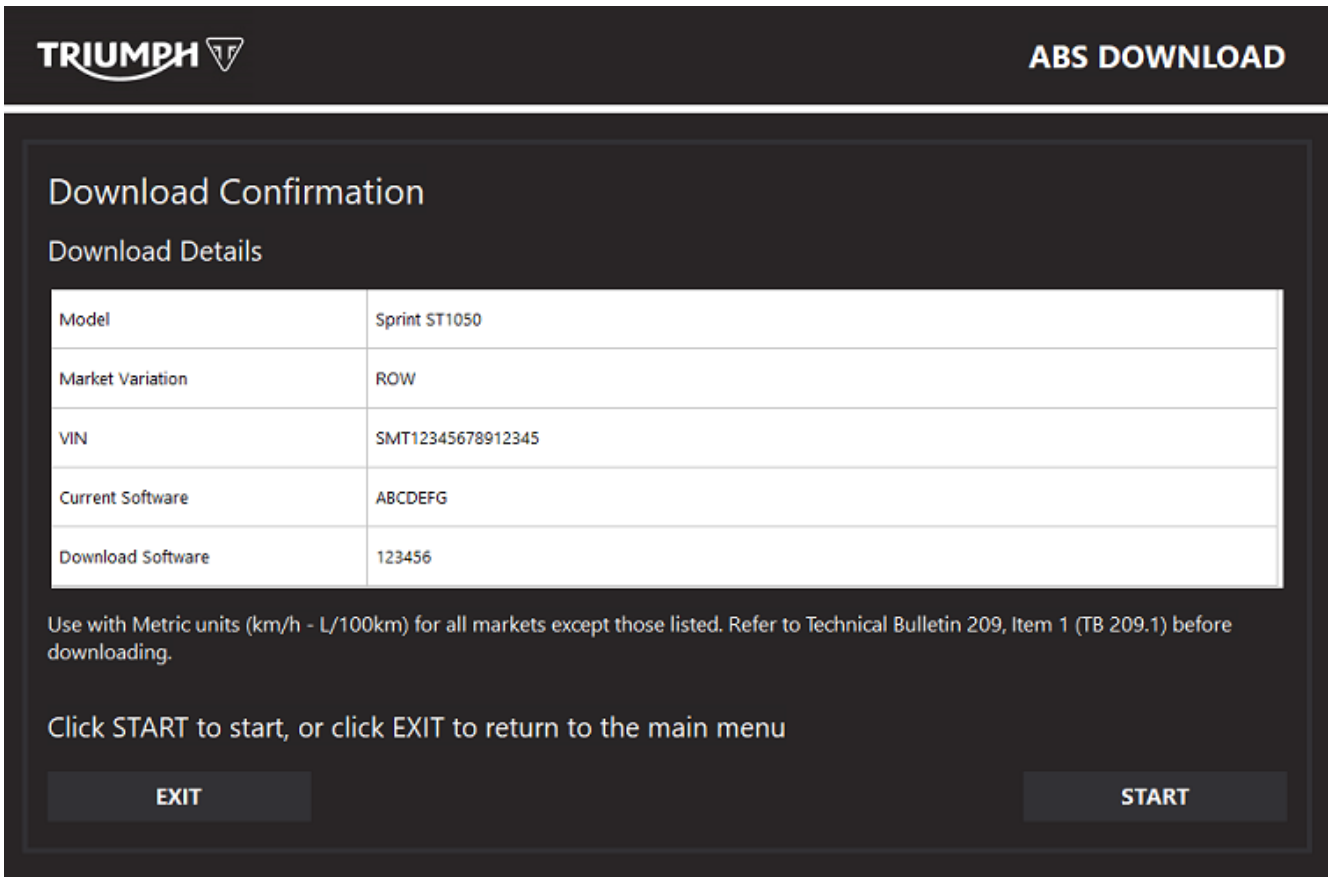
6. Once the VIN has been entered, click **Continue**.



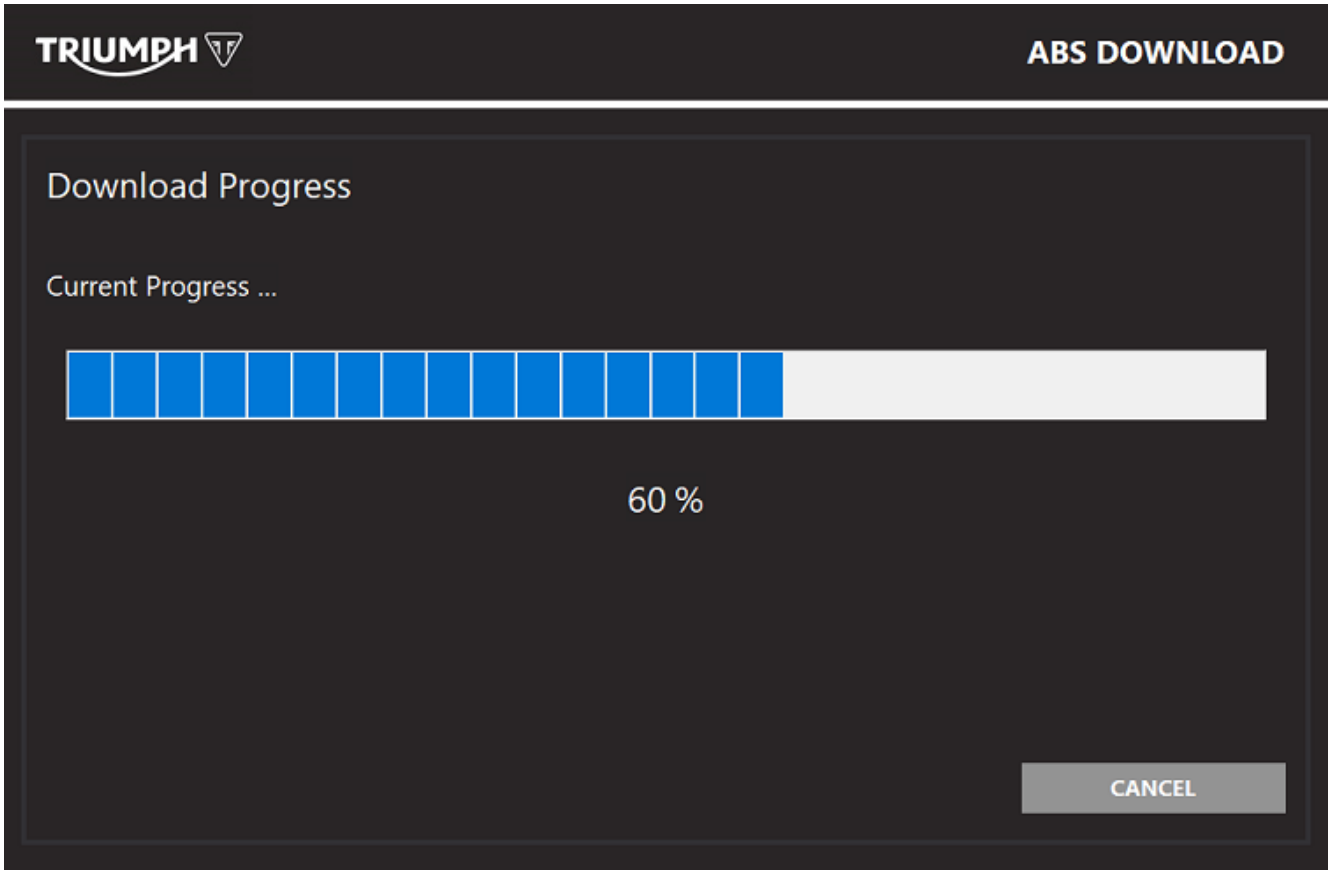
7. The VIN entered will now be validated and submitted to Triumph systems.



8. Once the diagnostic tool has retrieved data from Triumph systems for the VIN submitted, a download confirmation screen showing the **Download Details** will be displayed.
9. Click **Start** to begin the download.

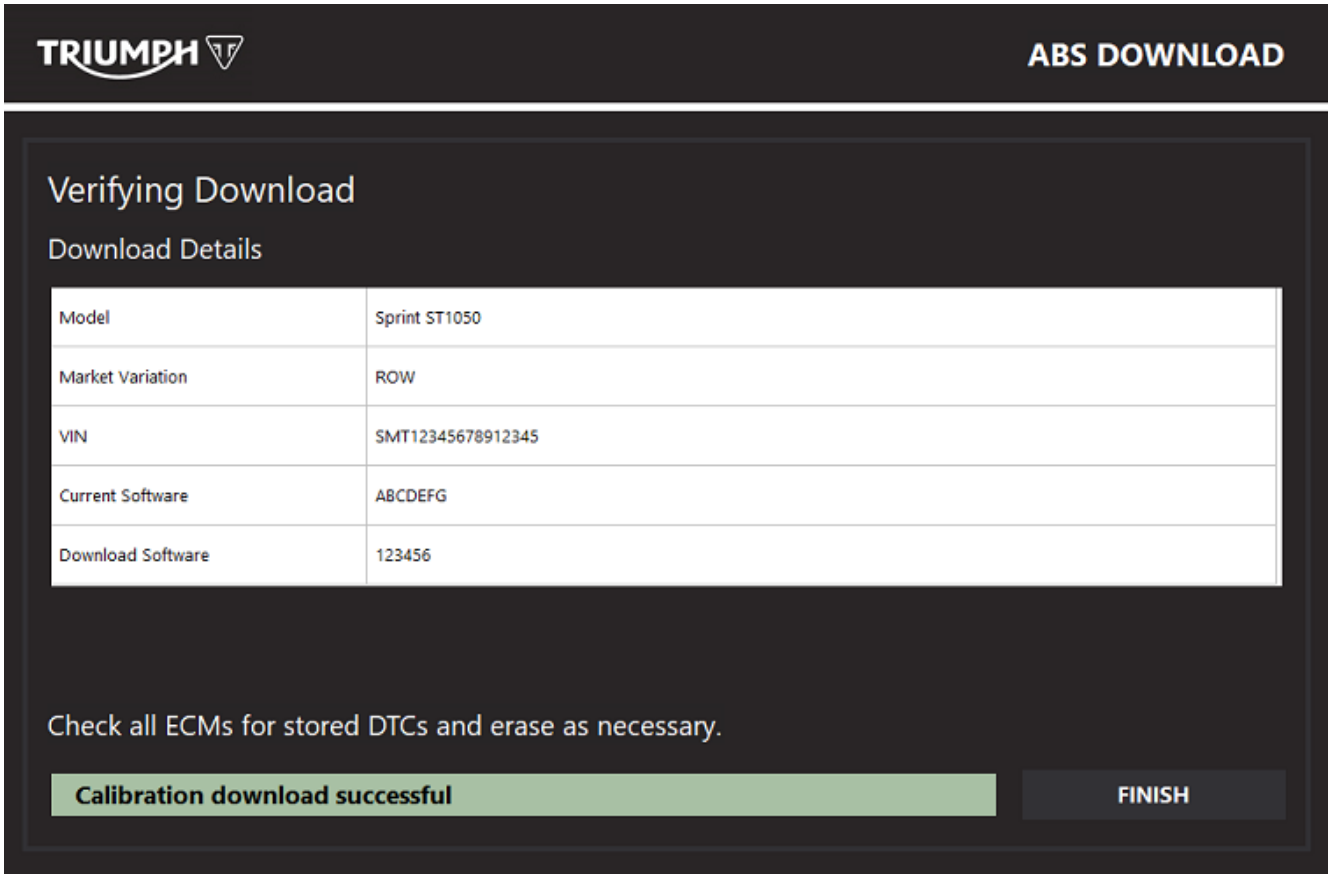


10. The ABS ECM download will now begin and current progress will be displayed.

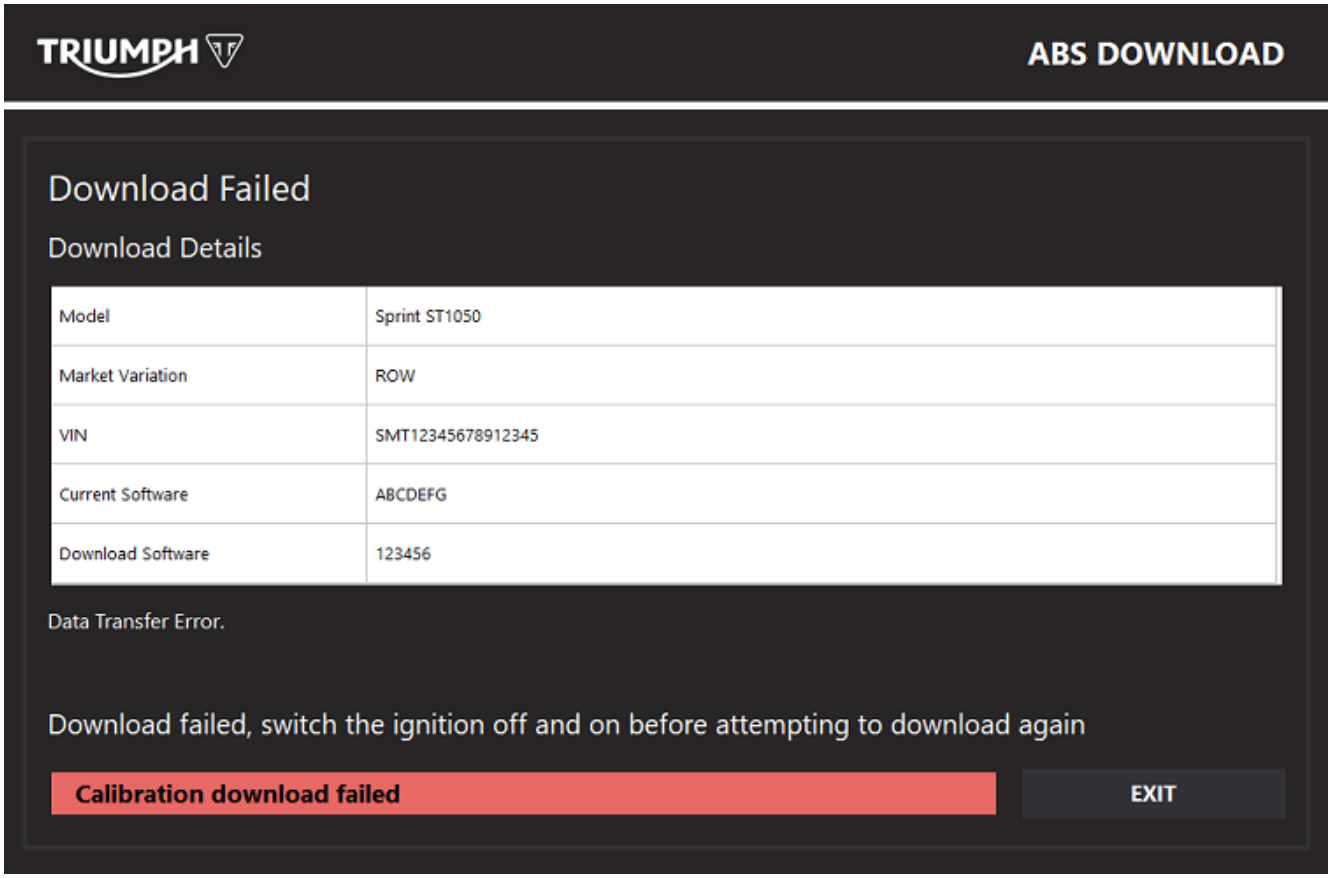


11. Upon successful completion of the download, the **Verifying Download** screen will be displayed.
12. The message **'Calibration Download Successful'** will be displayed at the bottom of the screen.

13. Click **Finish** to go back to the download menu.



14. If the ABS ECM download is cancelled by the user or interrupted before it has been completed, the following screen will be displayed.



15. Restart the download following the above process.

Item:	**224.6**
Description:	**Updated Unlock ECM Functionality**
Model Affected:	**Tiger 1200 GT, Tiger 1200 GT Pro, Tiger 1200 GT Explorer, Tiger 1200 Rally Pro, Tiger 1200 Rally Explorer**

Note:

- **Each new Triumph model has a unique Engine ECM unlock code. The unlock code will be released via 'Triumphonline.net' on a pre-arranged date. The specific date when this code will be released will vary from model to model.**
- **New motorcycles (and replacement Engine ECMs supplied by Triumph Genuine Parts) are delivered in a locked condition. The engine ECM must be unlocked before the motorcycle can be started.**
- **Once the engine ECM is unlocked, the Unlock ECM button will be greyed out.**

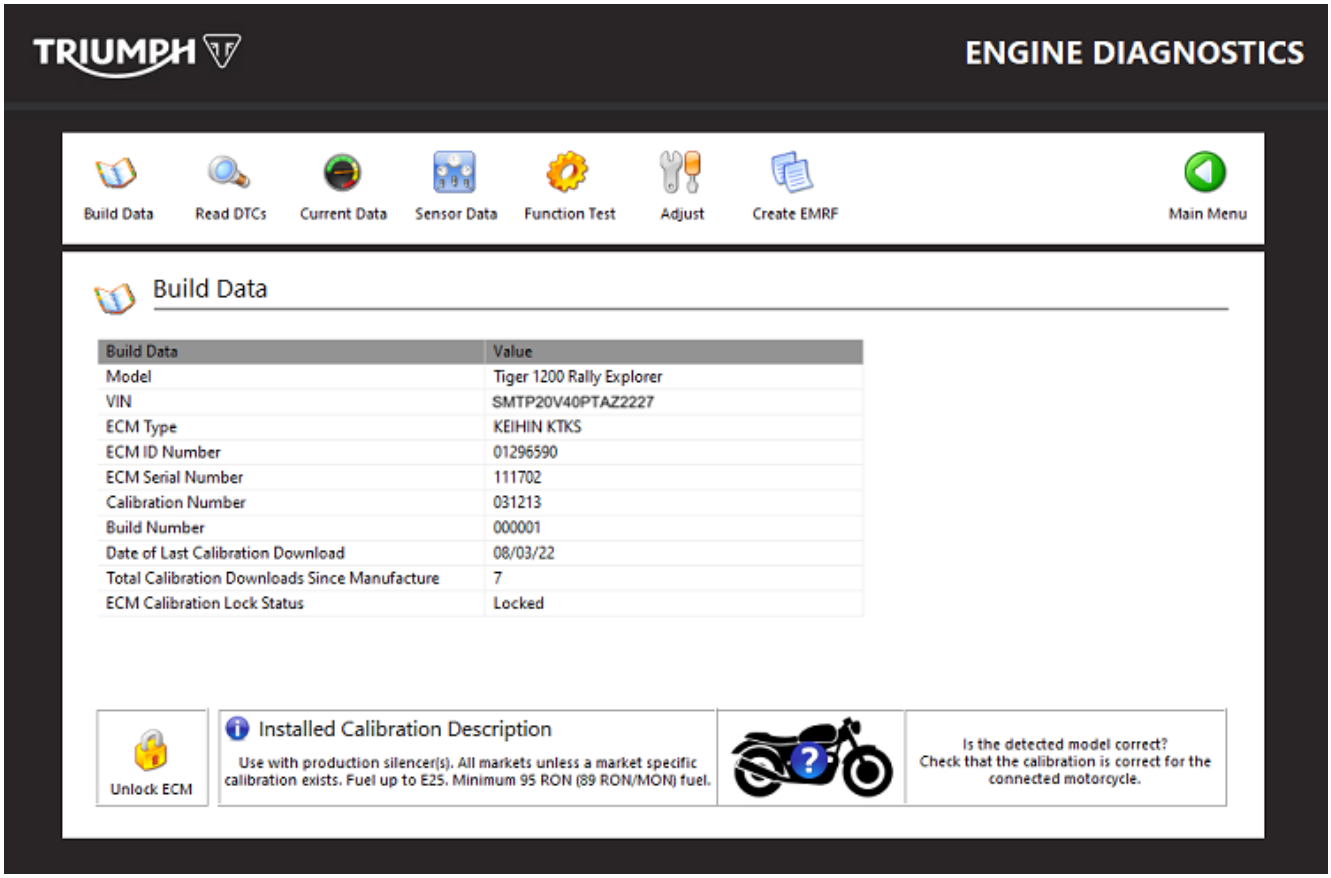
The Triumph Diagnostic Tool (TDT) 2022-02 release includes an updated Unlock ECM feature. The updated feature now includes checks for up to date calibrations on the ABS and Headlight ECM fitted to the above models.

The check for up to date calibrations on the ABS is fulfilled by using a full 17 digit VIN taken from the connected motorcycle and entered by the user. This VIN is then validated and submitted to Triumph systems. This means that a stable **Broadband Internet Connection** is required when performing the Unlock ECM feature using the diagnostic tool.

1. Navigate to Diagnostics -> Engine Diagnostics -> Build Data.

Notice

For motorcycles delivered from the factory, the ECM Calibration Lock Status should report as 'Locked' and the Unlock ECM button will be visible in the bottom left hand corner.

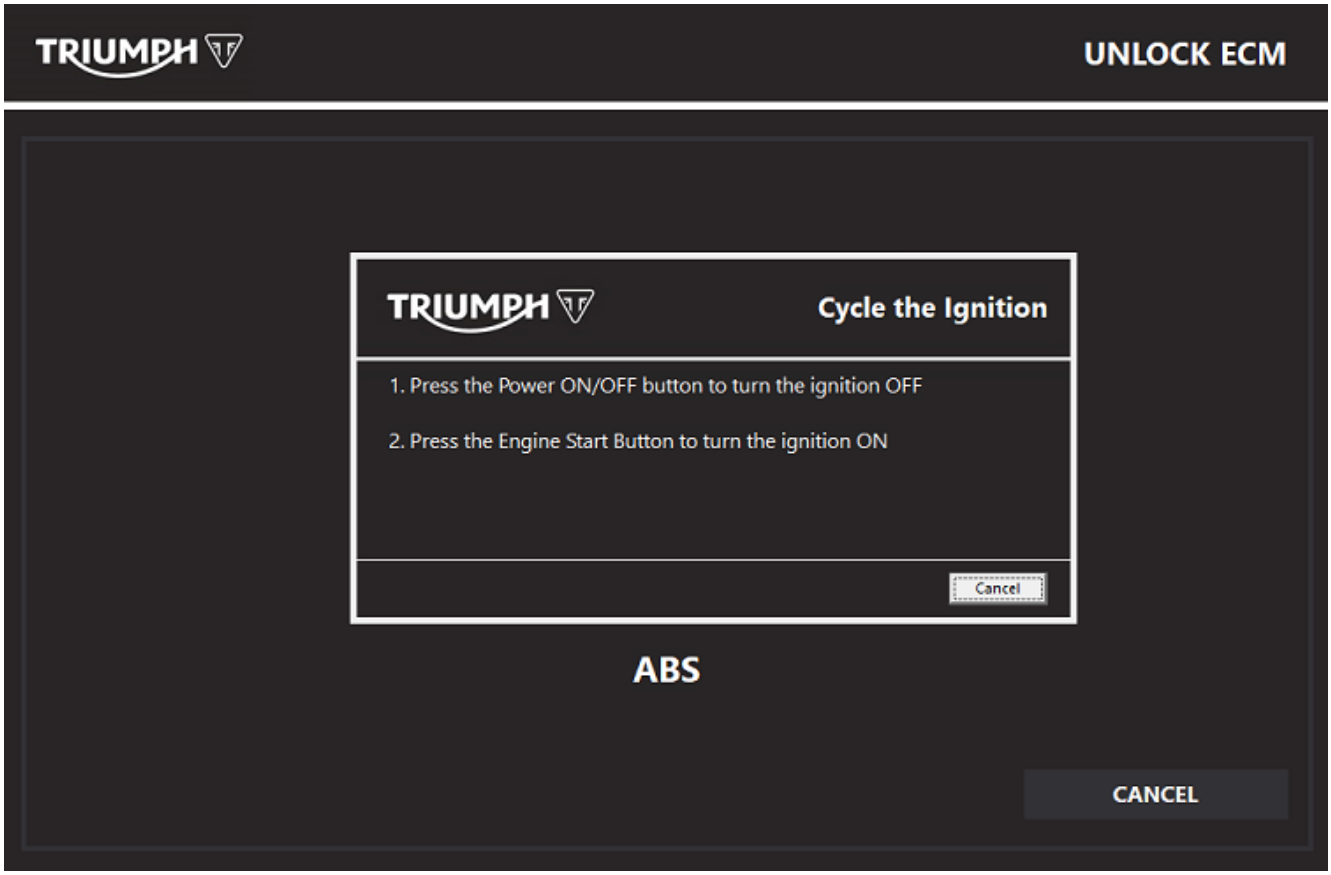


2. Upon clicking the **Unlock ECM** button, the diagnostic tool will begin to check that calibration versions are up to date.

3. The check will be performed on the following ECMs if they are updatable and fitted to the connected motorcycle:
   - ABS
   - Chassis ECM
   - Keyless ECM
   - Instruments
   - Suspension ECM
   - Connectivity Module
   - Headlight ECM.
4. Once the diagnostic tool has reached the ABS up to date check, the user will be asked to **Cycle the Ignition**. Follow all on screen instructions.

Notice

Use the Engine Start button to turn the ignition ON when cycling the ignition. This is to ensure that Engine ECM communications are maintained after the calibration checks are complete.

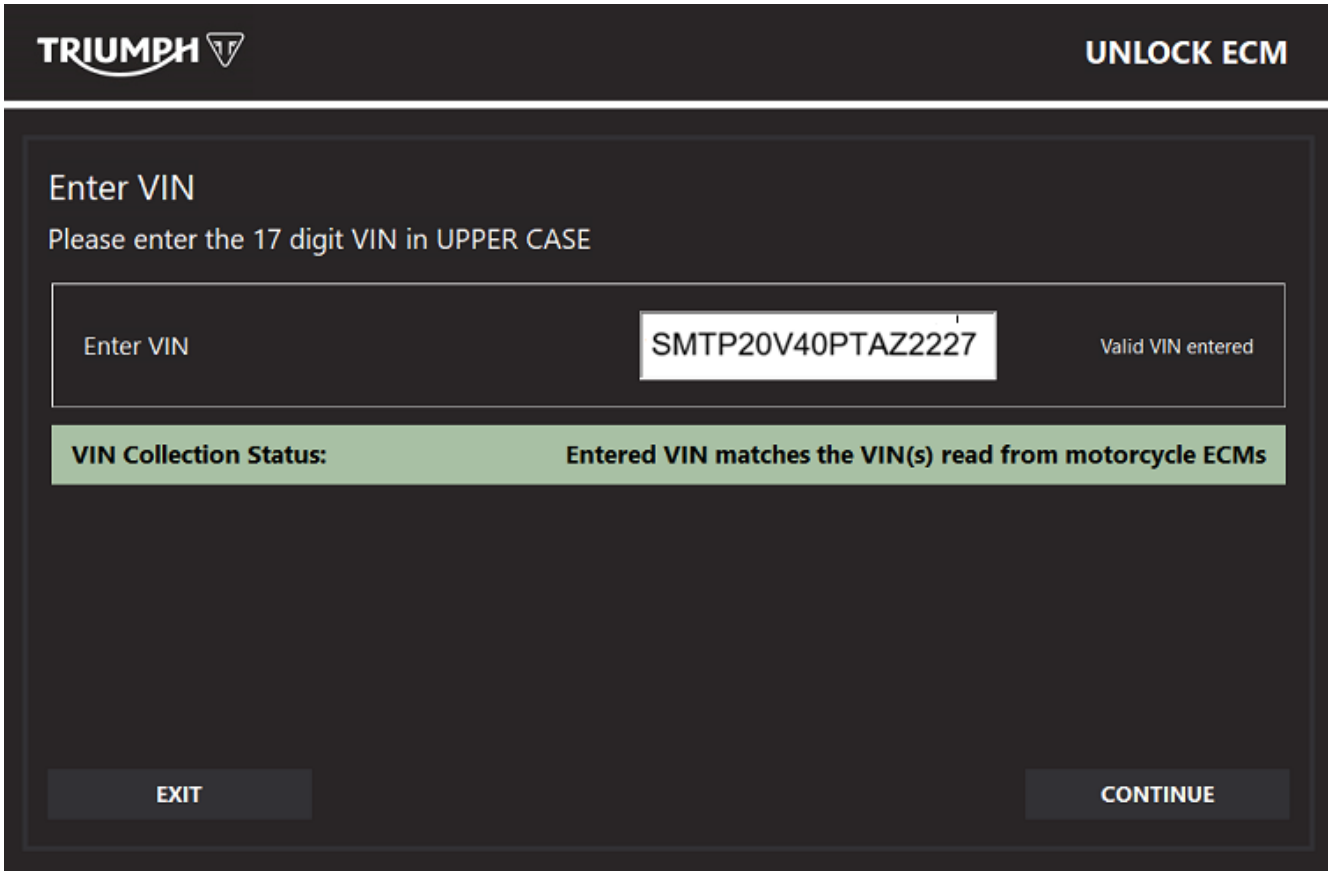


5. After the ignition cycle, the diagnostic tool will prompt the user to enter the full 17 digit VIN from the connected motorcycle.

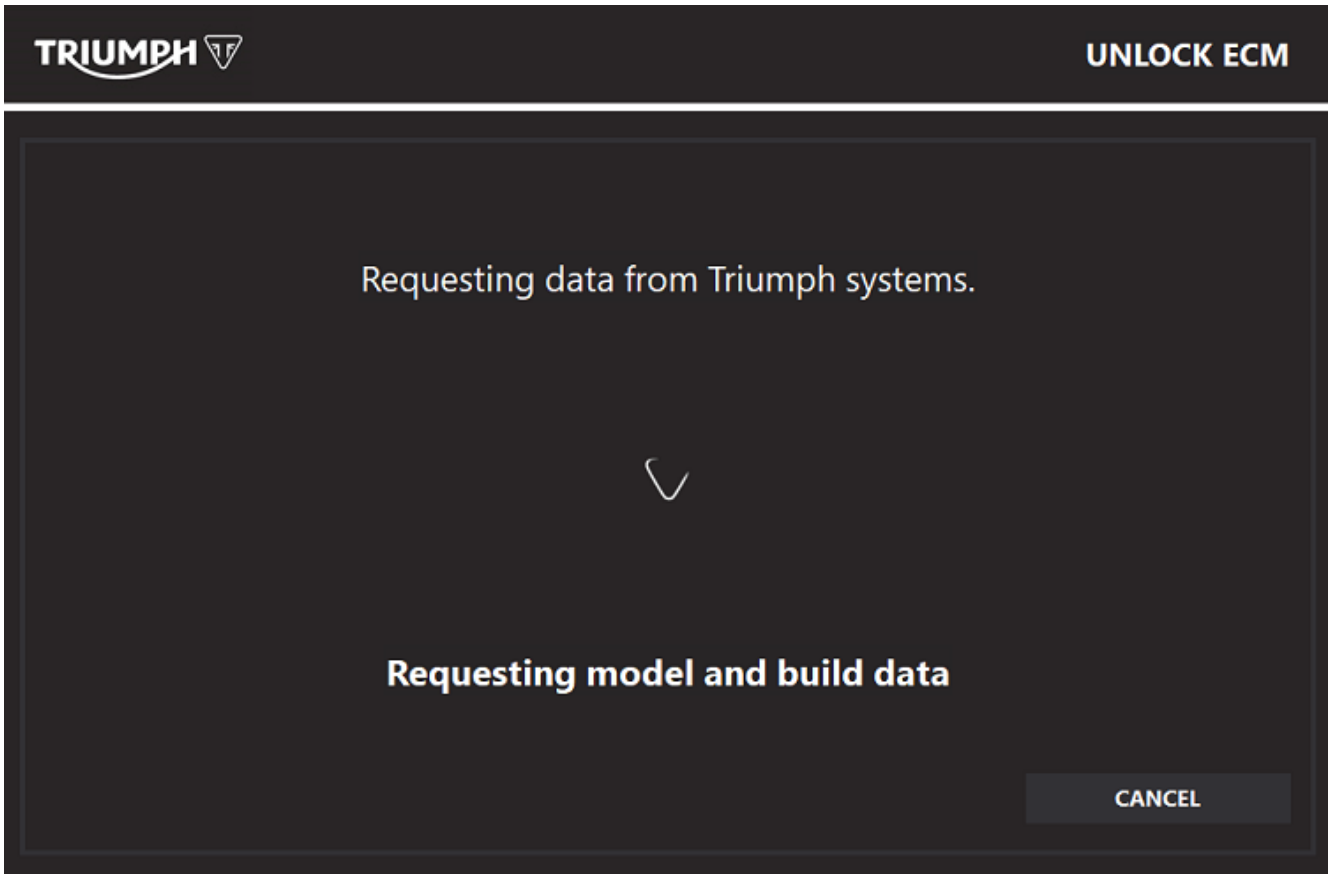
Notice

The VIN can be found stamped into the right hand side of the steering head area of the frame.

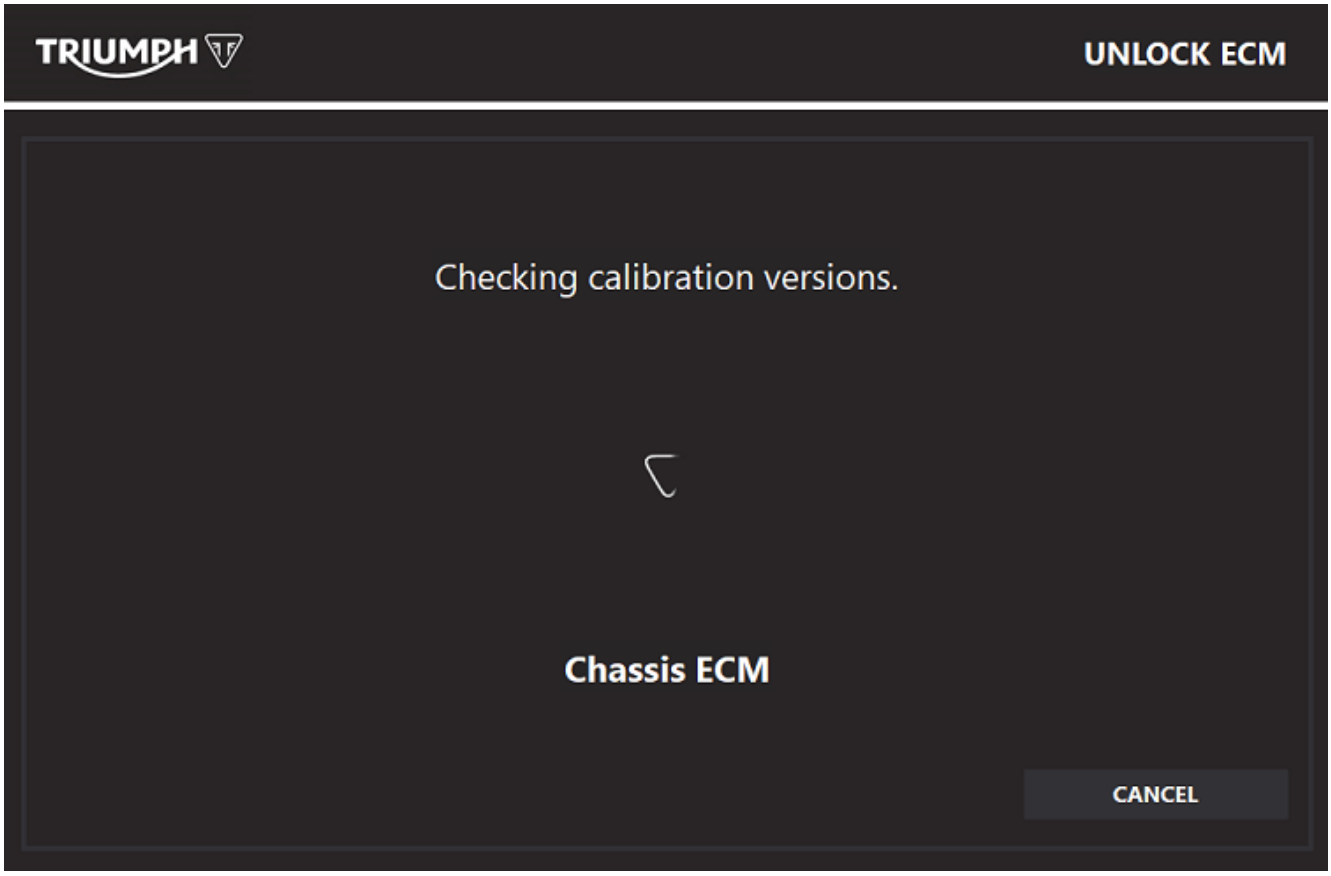
6. The diagnostic tool will confirm when the entered VIN matches that of the connected motorcycle.



7. Click **Continue**. The VIN will then be submitted to Triumph systems.

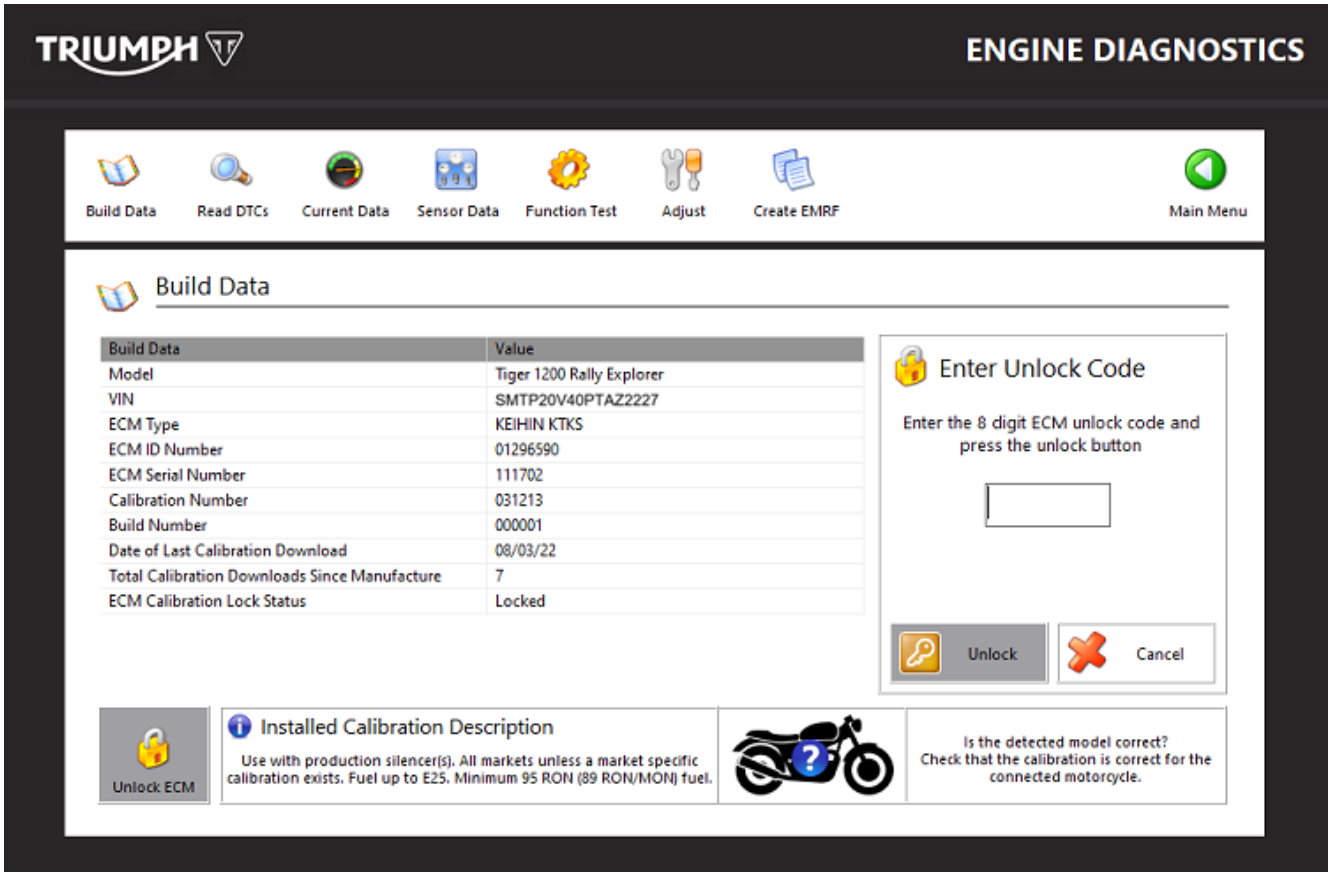


8. Once the diagnostic tool has progressed through this stage, all other ECMs fitted will be checked for up to date calibrations.



9. If all ECMs are up to date, the **Enter Unlock Code** box will be displayed on the right hand side of the screen.

10. Enter the numeric unlock code in the box and click the **Unlock** button or press enter on the keyboard.



Circulation

Initial and date when read and return to central file holder

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