NORCO BMZ BATTERY EXTENDED USER GUIDE

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   - 915800-006

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   - EW-SD300 Shimano   E-TUBE Electric Wire - External Routing
   - EW-AD305 Shimano   Di2 Electric Wire SD300/SD50 Conversion Adaptor

Additional Resources:

1. [VLT Battery Installation Video](#)
2. [Gen 3 Spinlock Plug Installation](#)

2. Norco BMZ Charger LED sequences

READY TO CHARGE   BATTERY IS CHARGING   BATTERY IS CHARGED   ERROR

2. Norco BMZ Battery LED sequences

LED 1, 2, 3, 4, 5	STATE OF CHARGE
●●●●●	100...80 %
●●●●○	79...60 %
●●●○○	59...40 %
●●○○○	39...20 %
●○○○○	19...10 % *
✳○○○○	9...0 %

✳ A single flashing light can also indicate a battery stuck in bootloader, in this case charging will not bring the battery out of single flashing light mode and it must be replaced

2. Battery Handling

02 BATTERY HANDLING

BATTERY STORAGE

BMZ THE INNOVATION GROUP

CHALLENGES FOR BATTERY SYSTEMS...

STORAGE TEMPERATURE

Storge Temperature
- Recommended: 10 - 25°C
- Maximum: -20 - 45°C
- Humidiy: 0 - 80%

STORAGE CAPACITY

Storage Capacity
- Storage the battery at approx 50% state of charge

STATE OF CHARGE CHECK

State of Charge Check
- Check for SOC every 3 months
- Under 50%, charging required

2. Charge NORCO BMZ Battery

Connect Charger to receptacle using appropriate cable (based on region)

Connect Rosenberger connector to battery. Charge level is indicated by the number of flashing lights. Charge battery until all 5 LED's are illuminated.

3. BMZ Diagnostic Tool

LTP P# 915800-006

Requirements:
- Windows 7 or higher
- USB 2.0 or higher
- BMZ Service Tool (next page)

Instructions:
- Turn on PC
- Connect adapter
- Windows will automatically install drivers upon initial connection
- Start BMZ Service Tool

4. Register for BMZ Service Tool

Follow the link below to register a Norco dealer account.

BMZ Service Tool Registration

Complete required fields and create BMZ password.

REGISTRATION

Please enter all the information below in order to register as dealer for the BMZ-service tool.

Forename	Joe
Surename	Smith
Dealer name	Live to Play Sports
Brand	Norco
Mail address	Joes@livetoplaysports.com

Next >
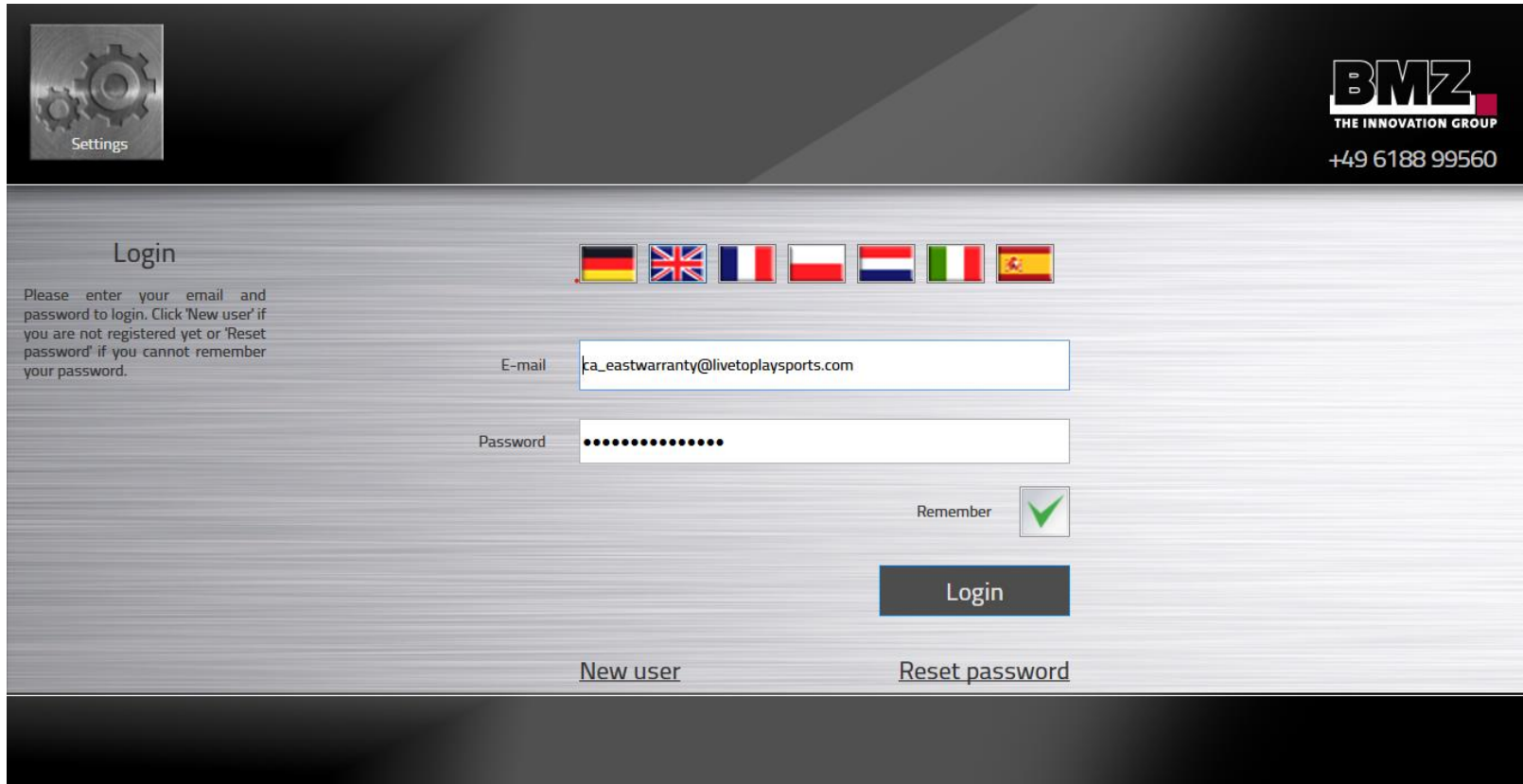
Once you have completed registration. You will receive a "BMZ-Service-Tool Download" Email. Download the most recent BMZ Service Tool Software Version. Registration can take up to 2 days to be active.

Save the Software in a readily accessible location on your computer.

4. Log into BMZ Service Tool program

Once your battery is charged, Open the BMZ home page and log into your service account.

4.1 Ensure BMZ Service Tool is Up-to-Date

Each time you use the BMZ Service Tool, Ensure the Software Version downloaded on your PC matches the most current Software version available on BMZ's Website. If Service Tool is NOT up-to-date, proceed to next slide.

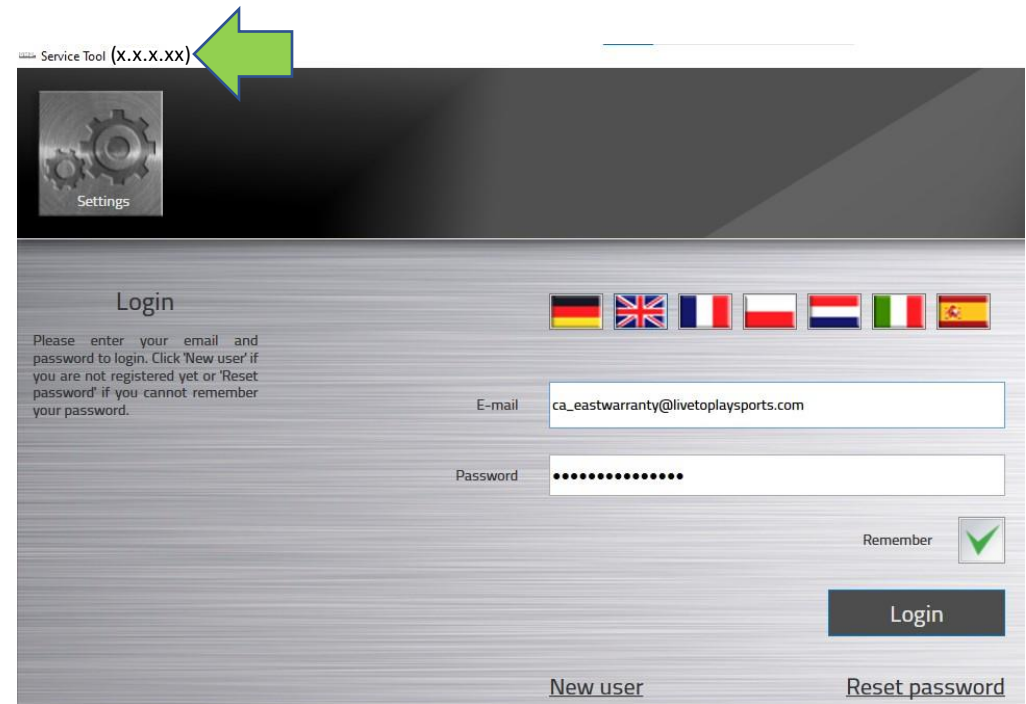## PROGRAM SOFTWARE

Click the following Link to download to the current service tool software.

Download BMZ Service Tool Software Version x.x.x.xx

Download Marquardt JD3 Driver

USB to Uart Adapter Treiber (Windows 10)
USB to Uart Adapter Treiber (Windows 7+8)

Login to confirm Software Version

4.1 Acquiring Up-to-Date Service Tool Software

Uninstall existing Service Tool Software.

- Reinstall BMZ Service Tool Software Version available through BMZ's Website.

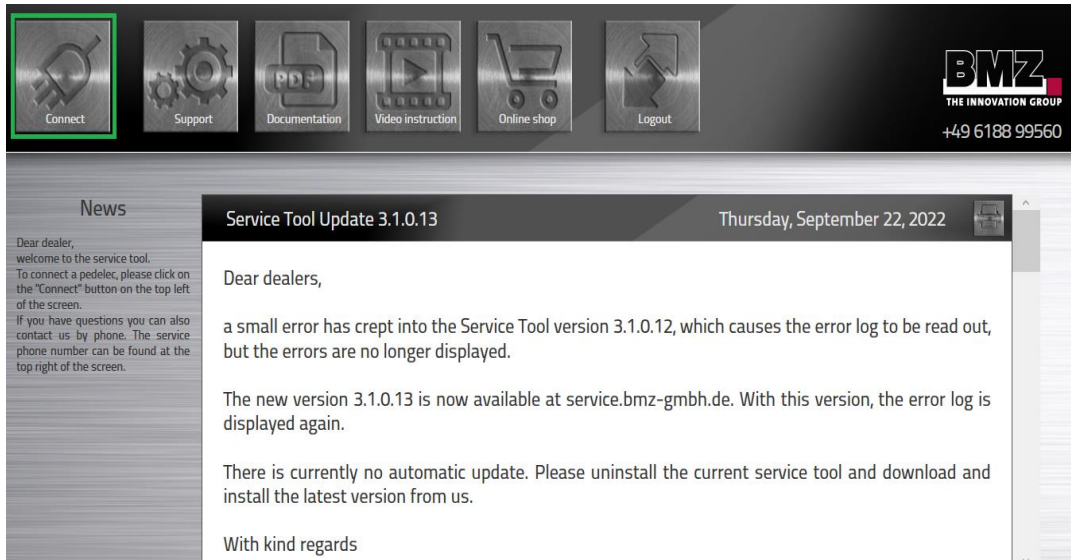# 4.2 Once Software is Up-to-Date, Log into BMZ Service Tool program
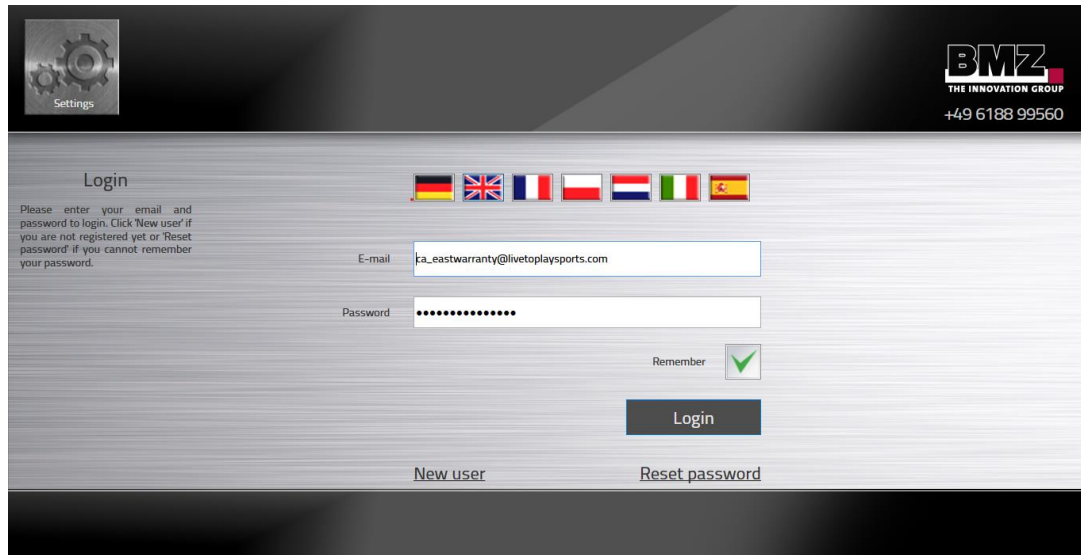
Once your battery is charged, Open the BMZ home page and log into your service account.

Connect BMZ diagnostic tool to computer and to the BMZ battery. A battery firmware check will automatically begin. A Steady Red Status LED confirms positive connection.
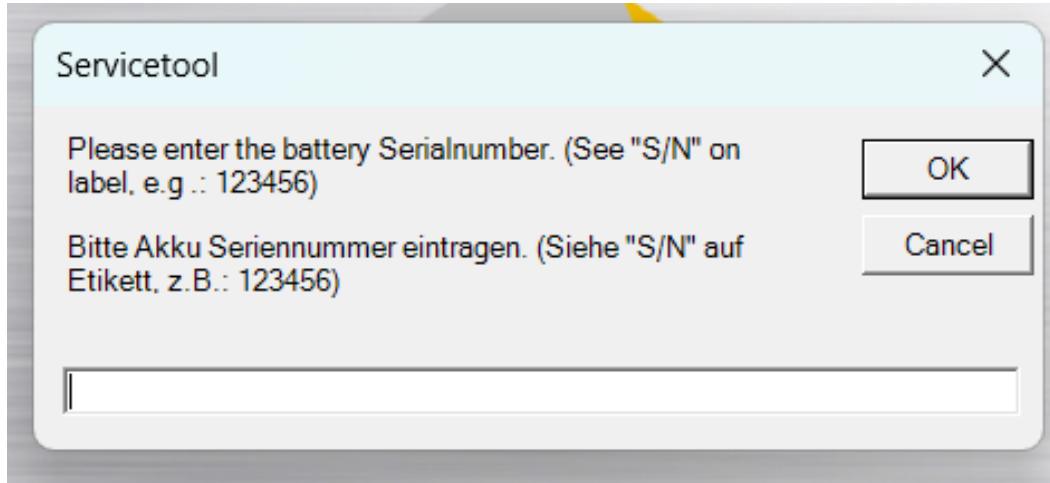
4.3 Connect Battery to BMZ Service Tool

Once the BMZ Service Tool is open. Select "Connect" in the top left corner of the BMZ application.
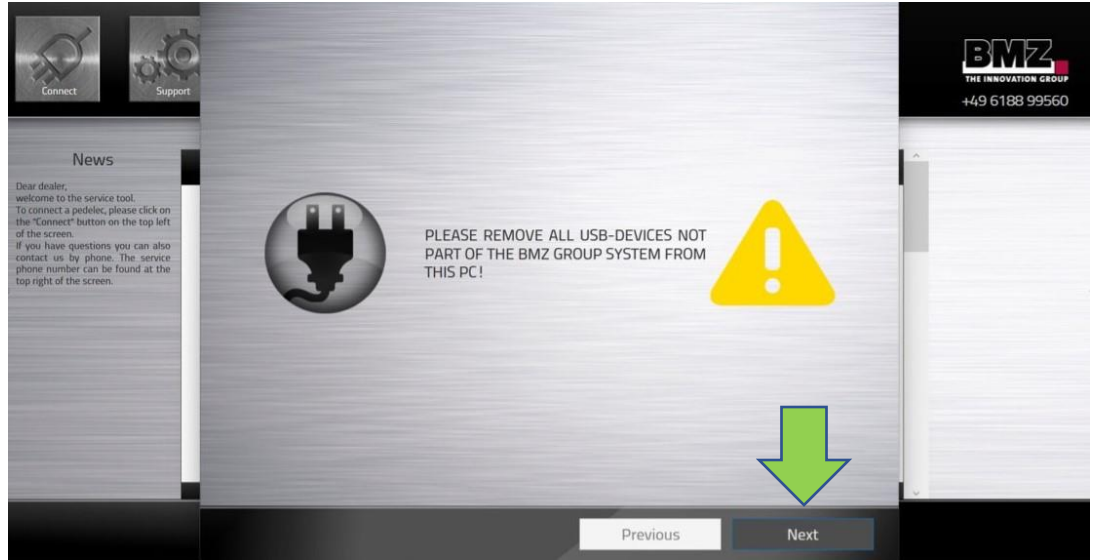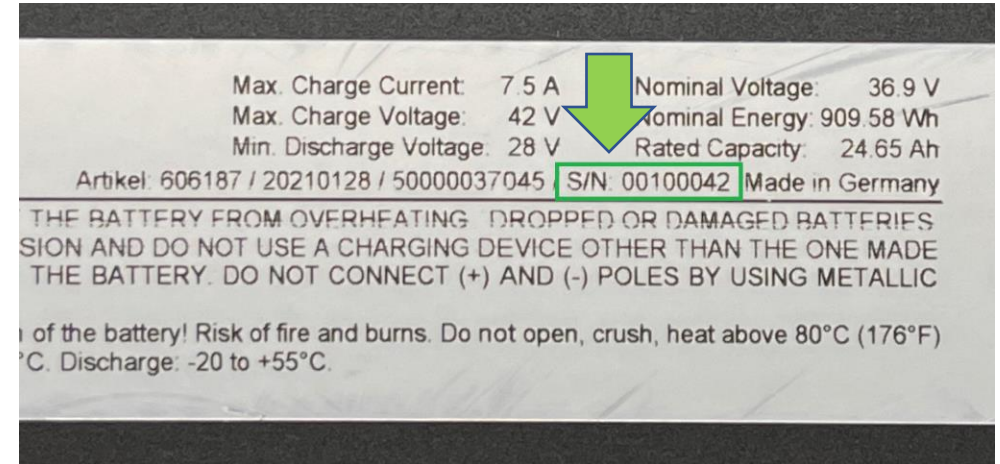
When the above prompt is displayed, do not unplug the BMZ Diagnostic tool, click the "Next" button.
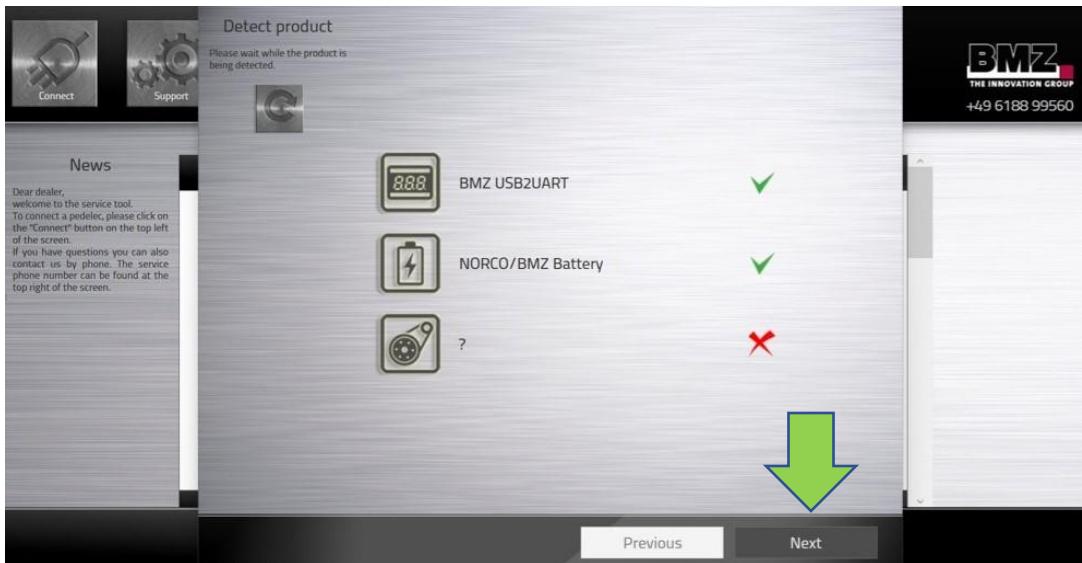
4.3 Serial Number Input

If prompted, enter the serial number. This will only need to be done once per battery.
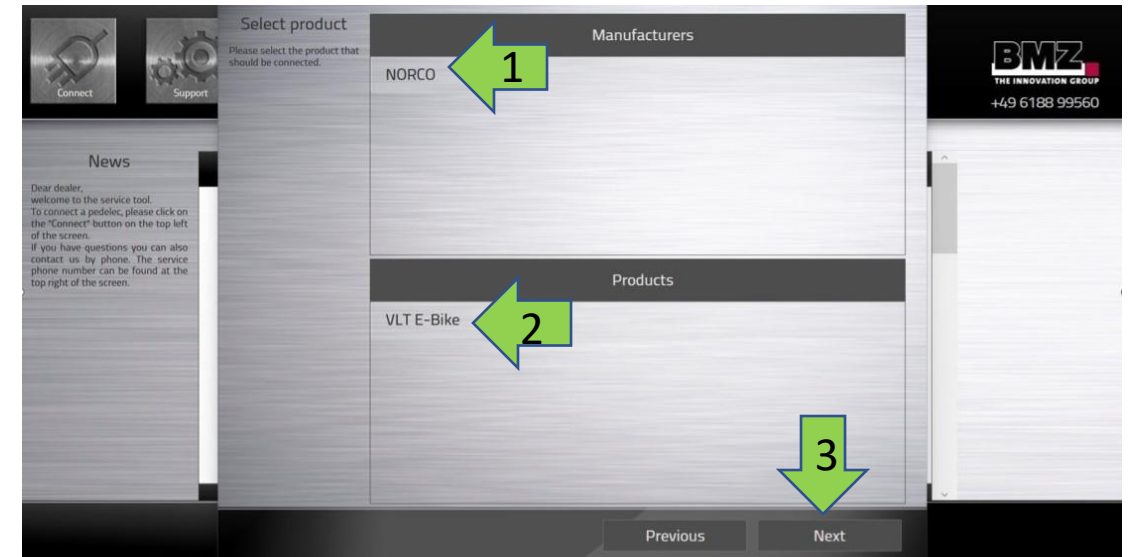

Serial numbers (S/N) can be found on the packaging from the battery or on the label affixed to the battery.

Once the battery has been detected the screen above will appear. Click NEXT when the "BMZ USB2UART and NORCO/BMZ Battery have checkmarks, if checkmarks do not appear disconnect the battery, close the software and start over.

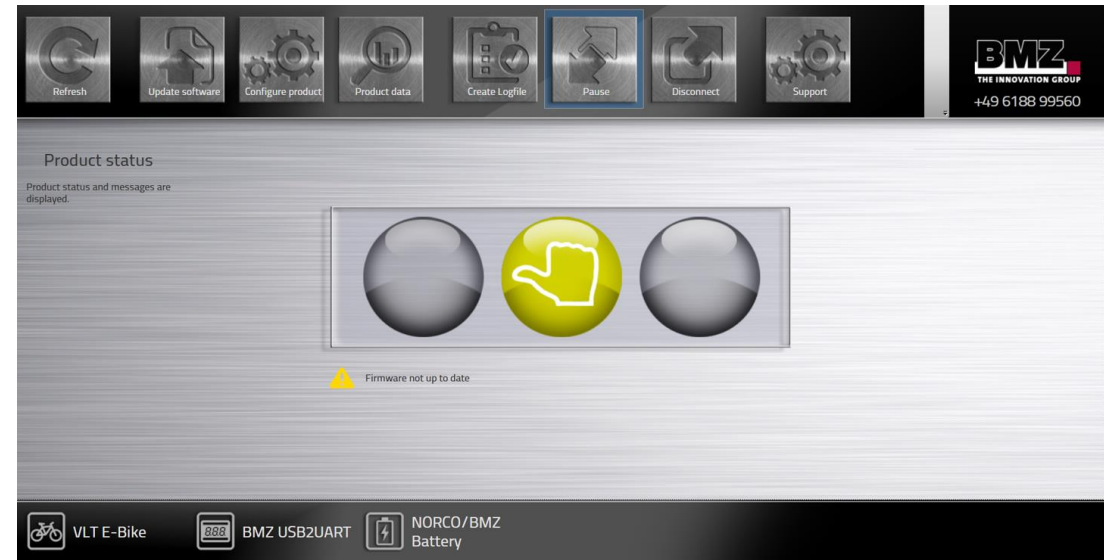Select "Norco" as the Manufacturer and "VLT E-Bike" as the Product then click "NEXT".

4.3 NORCO BMZ Battery Firmware Update

The BMZ Diagnostic Tool will prompt either of the below statuses.
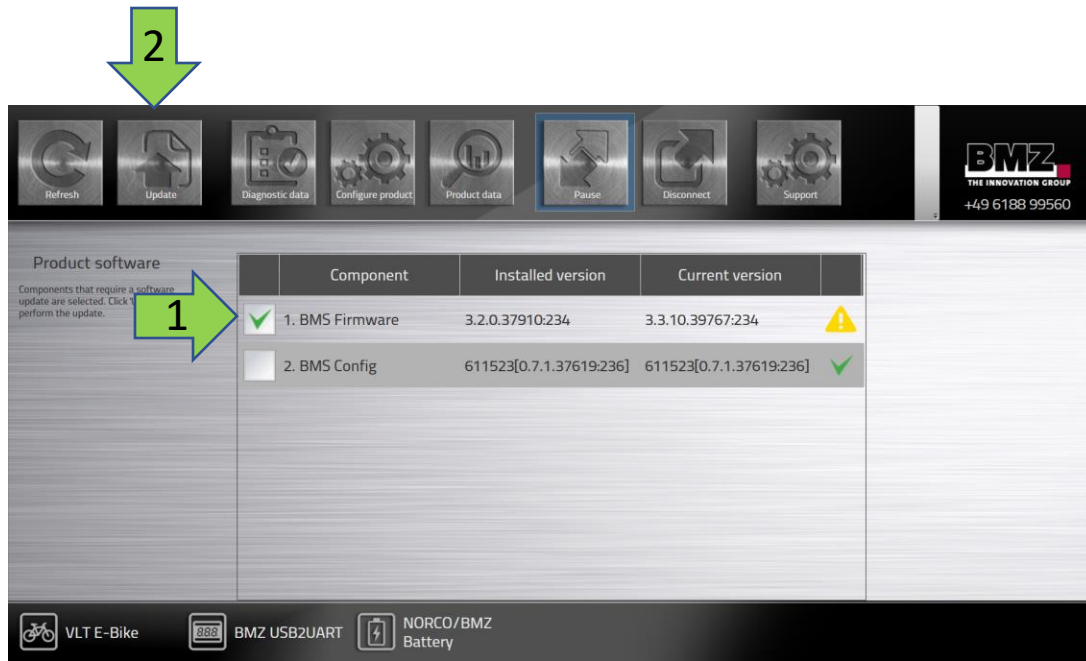

Green Thumb Logo

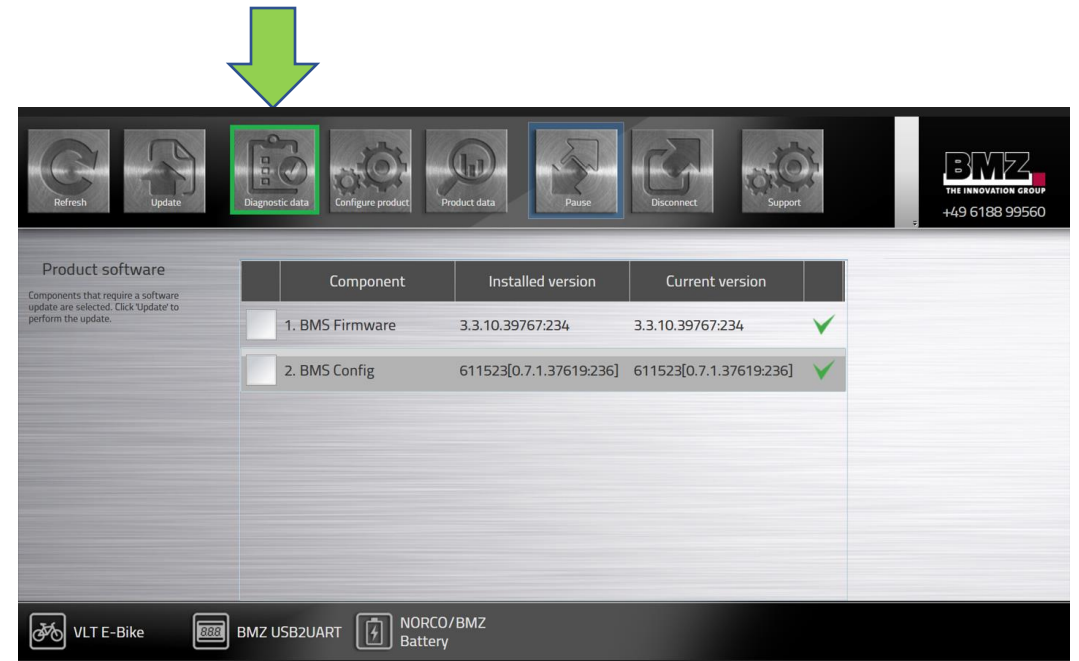Firmware is up to date. Disconnect battery.

Yellow Thumb Logo

Firmware update required. Proceed to next page.

4.3 Updating BMZ Battery (Yellow Thumb ONLY)

Select all unchecked components and proceed with Update. Do not disconnect BMZ Battery until update is complete.
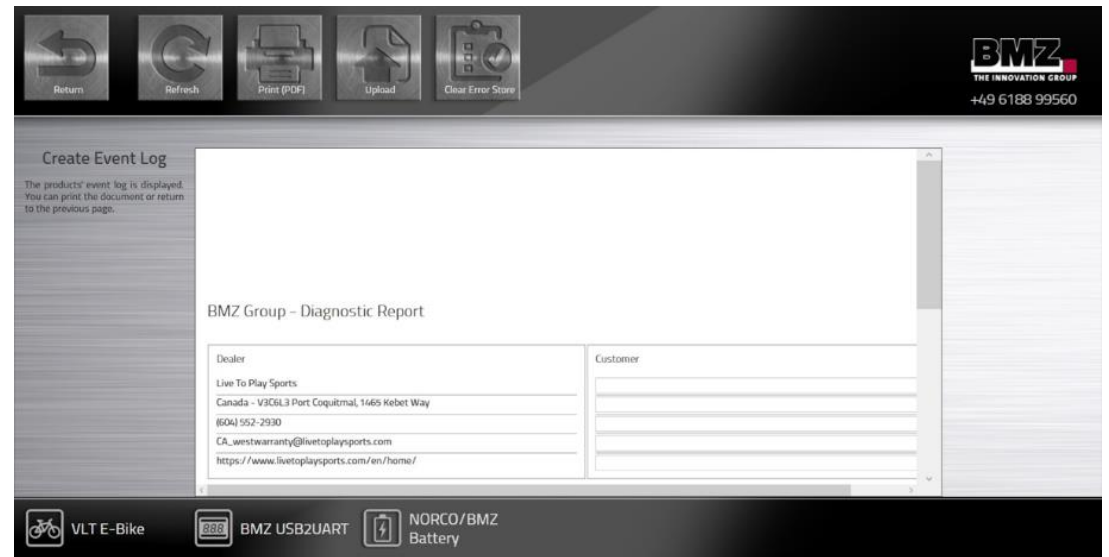
Once the battery has been updated you will see both components with green checkmarks, next click diagnostic data (see arrow).

4.4 Creating Logfile

Click create logfile

Once the logfile creation is completed, you will be provided a diagnostic report, or "Logfile"

4.4 Printing Logfile

Any potential errors that occurred with the battery prior to updating will be displayed at the bottom of the logfile page.

Save this Logfile by clicking "Print PDF" or select to save it as a PDF. Once saved, clear the battery log file by clicking "clear error store"

4.4 Clearing Logfile
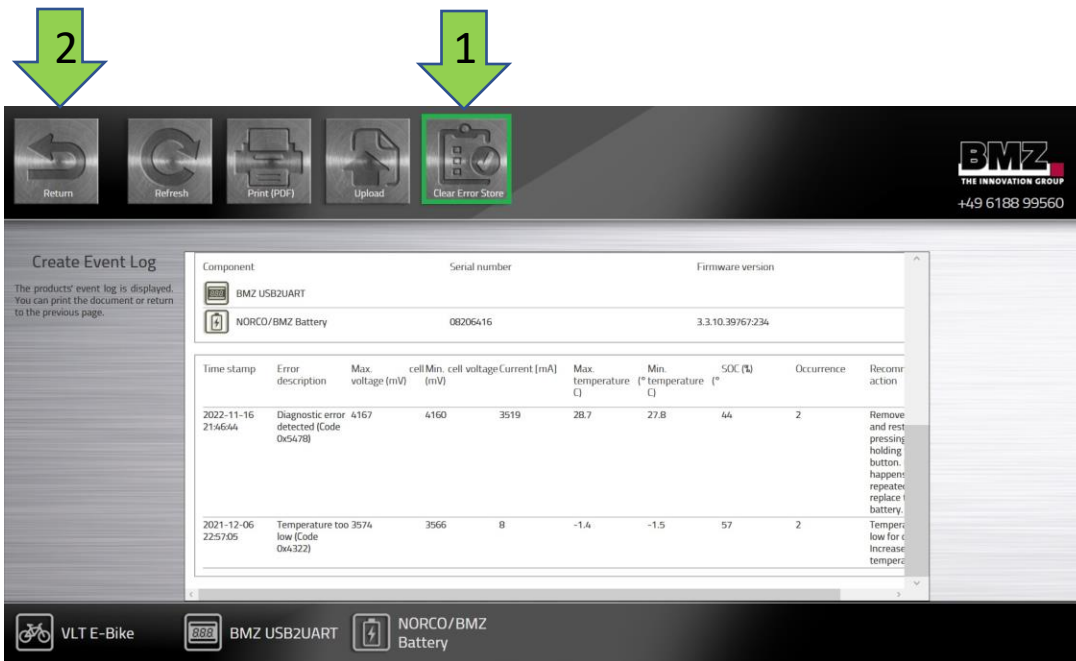
Once the logfile is saved you can clear the log by clicking "clear error store". This will clear any stored errors.

Click return to return to the main menu.

Click disconnect to disconnect the battery from the tool.
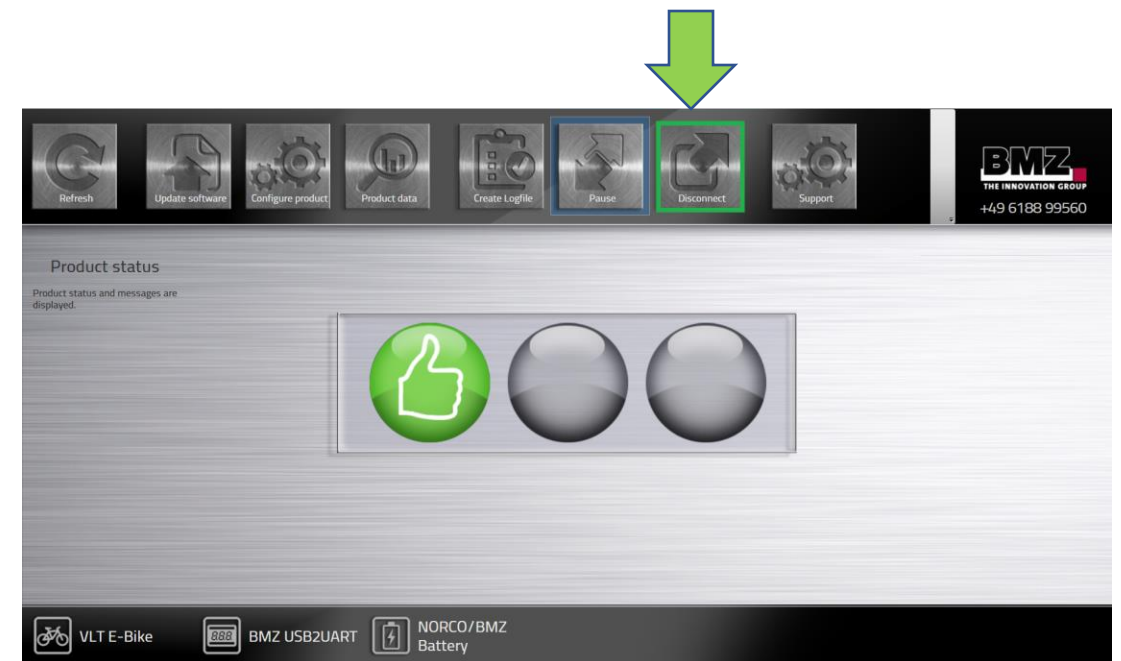
4.4 Understanding Logfiles

Time stamp	Error description	Max. cell voltage (mV)	Min. cell voltage (mV)	Current [A]	Max. temperature (° C)	Min. temperature (° C)	SOC (%)	Error number	Recommended action

Time Stamp- The date and time the error occurred

Error Description- A description of the error

Max/Min temperature- The temperature of the battery when the battery error was populated*

Error Number- A BMZ coded number for tracking each error

SOC%- State of Charge, how much charge is in the battery when the error occurred

Recommended action- Potential "fixes" for an error

Max and Min temperature can be helpful to inform you where the bike is stored, all other headings are not relevant to battery diagnosis
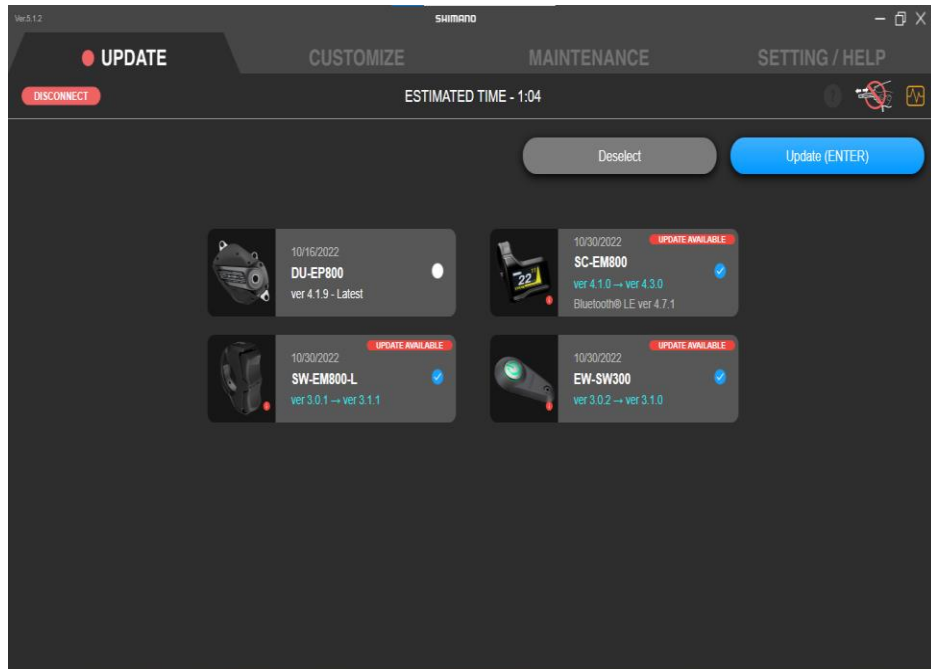
5. STePS Setup

Ensure Norco BMZ Battery is NOT installed in VLT E-Bike. Connect the Shimano SM-PCE02 PC linkage device to a computer via the USB port.
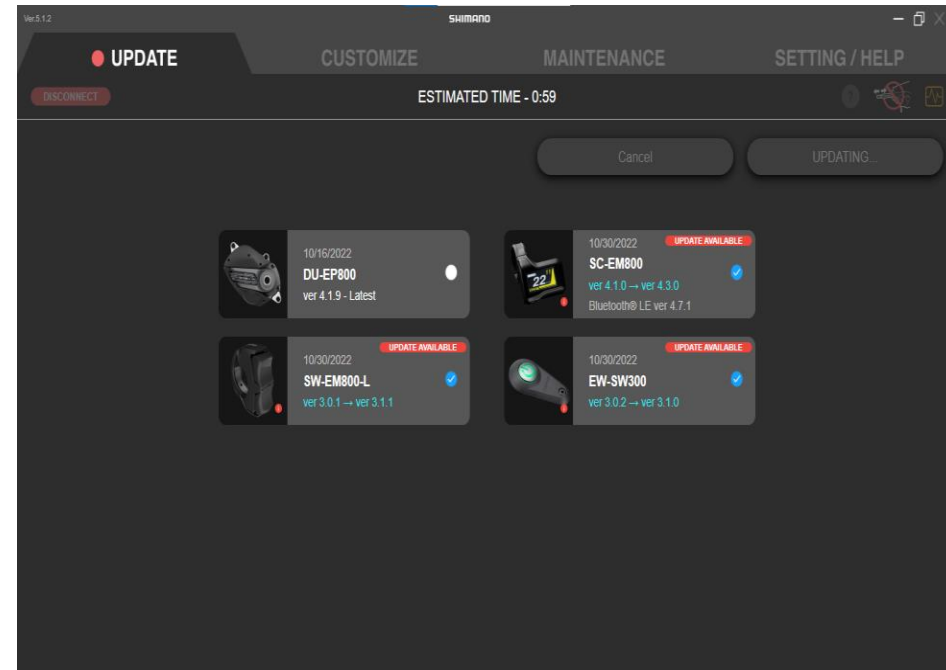

Using a Shimano TL-EW02 tool, remove one of the blind plugs from the backside of the display port and install the SM-PCE02 port connector.
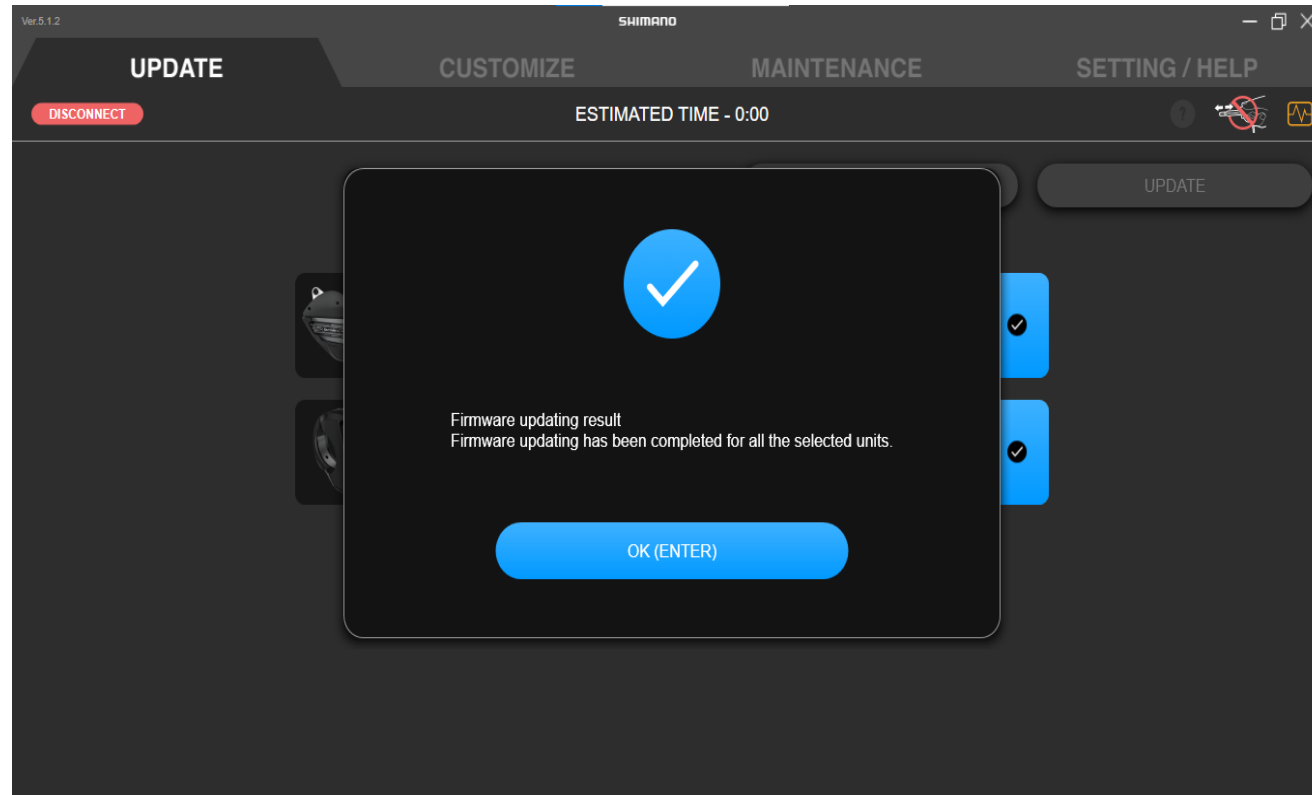
5. STePS Setup

Click "select all" then "update" to select and update any out-of-date components.

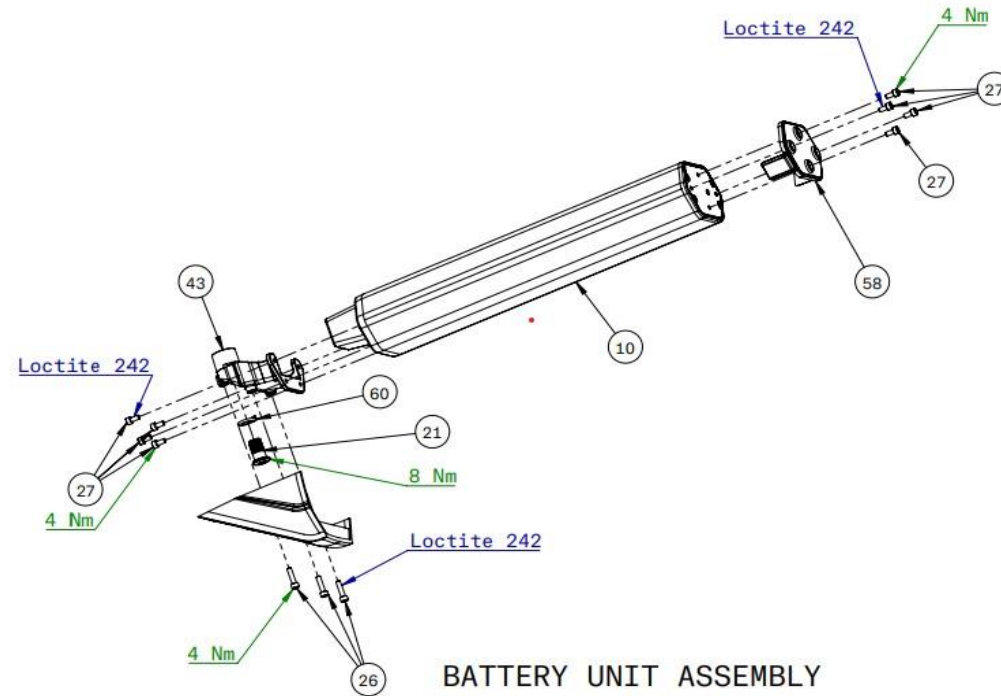Each component will update individually.

5. STePS Setup

Once updating is complete for all components click the RED "disconnect" button to complete the setup.

6.1 Technical Assembly
Battery Hardware Kit Gen 3.

Loctite 242

4 Nm

27

27

43

58

10

Loctite 242

60

21

8 Nm

27

4 Nm

Loctite 242

4 Nm

26

BATTERY UNIT ASSEMBLY

Install provided Battery Cover and Battery Upper Cap onto the BMZ Battery with the included hardware.
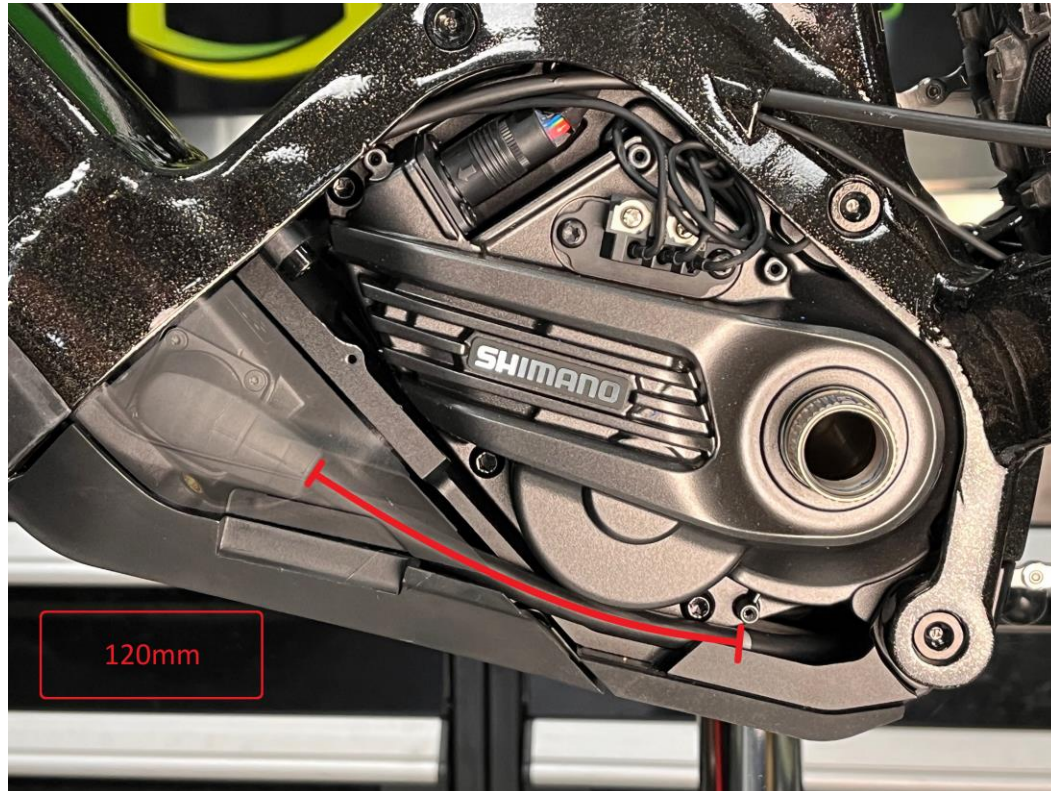
6.2 Battery Installation

Slide battery into downtube. Use index finger to retain Battery Fixing Bolt ensuring it does not contact the Drive Unit Cover during installation.
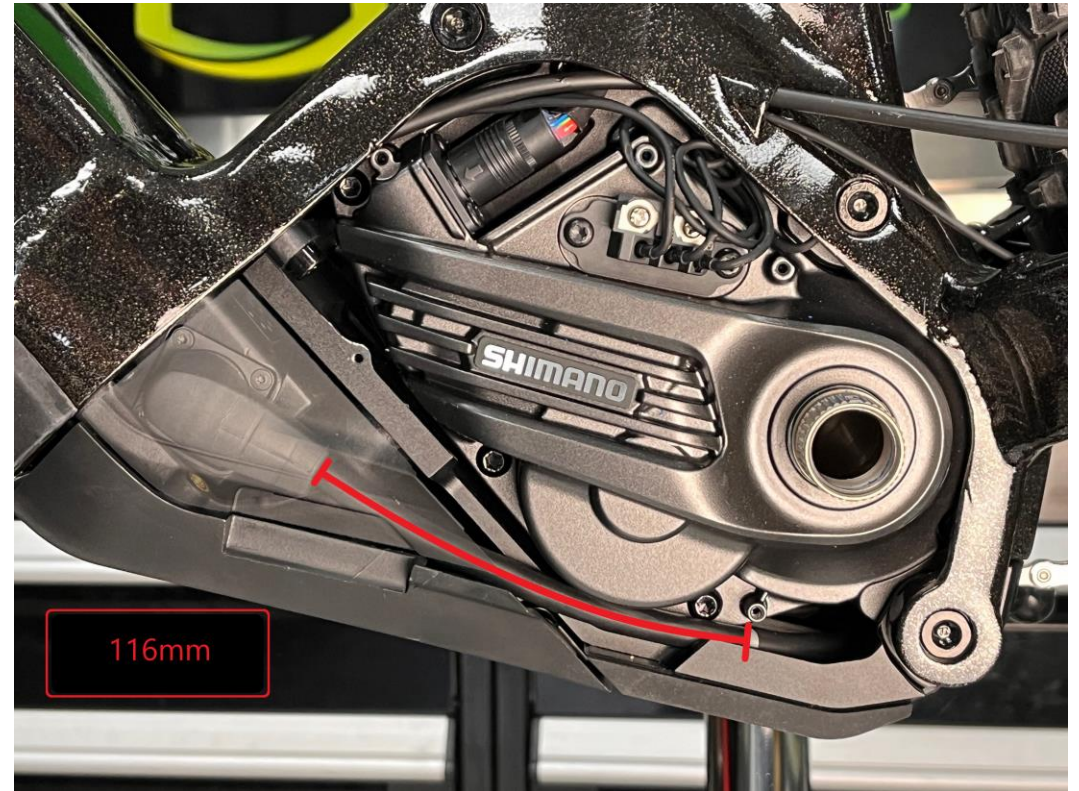
Use T-Handle Battery installation Tool to tighten battery Fixing Bolt to 8nm.

6.3 Wiring Harness Setup

Fluid VLT, **Sight VLT**, and **Range VLT -** Ensure Harness length measures **120mm (+/- 2mm)** from Rosenberger Connector to threaded mount displayed above.

Bigfoot VLT - Ensure Harness length measures **116MM (+/-2mm)** from Rosenberger Connector to threaded mount displayed above.

6.4 Install Rosenberger Connector

Connect Drive Unit Rosenberger Connector to BMZ Battery Charge Port.

Ensure Rosenberger Connector is flush with Drive unit and Battery cover.

Listen for audible click affirming the connection has been made.

Turn on VLT... Ready to ride.