

NORCO BMZ BATTERY EXTENDED USER GUIDE

NORCO

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1. Required Tools:

1. BMZ Diagnostic Tool

•915800-006

2. BMZ Service Tool Software

•[BMZ Service Tool Registration and Login](#)

3. SHIMANO

- SM-PCE02 PC Linkage Device
- 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



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



CHALLENGES FOR BATTERY SYSTEMS...

STORAGE TEMPERATURE



Storage Temperature

- Recommended: 10 - 25°C
- Maximum: -20 - 45°C
- Humidity: 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

Surname

Dealer name

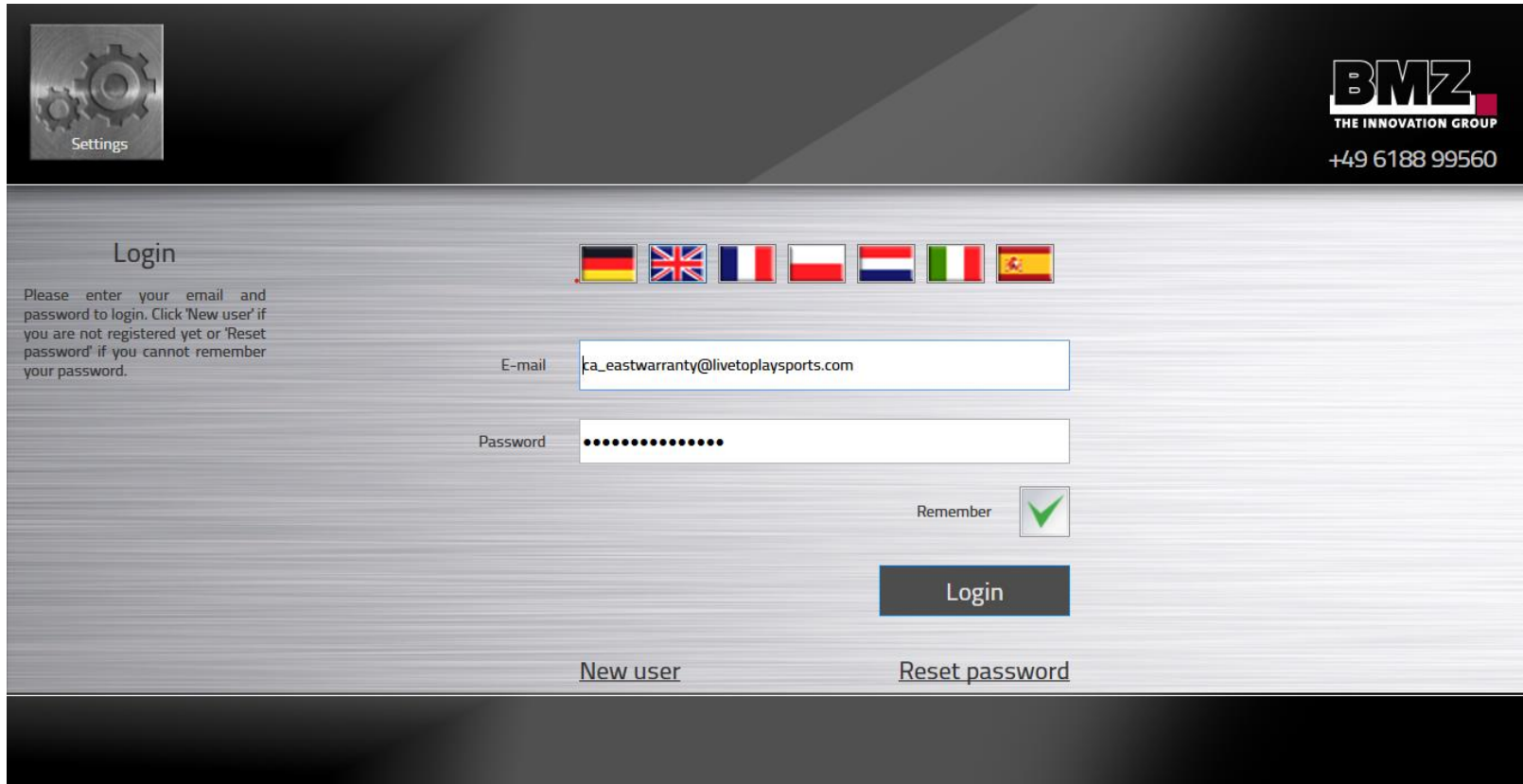
Brand

Mail address

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



The screenshot shows the login interface for the BMZ Service Tool program. At the top left is a 'Settings' icon with a gear. At the top right is the BMZ logo with 'THE INNOVATION GROUP' and the phone number '+49 6188 99560'. The main content area has a 'Login' heading and instructions: 'Please enter your email and password to login. Click 'New user' if you are not registered yet or 'Reset password' if you cannot remember your password.' Below this are several flags representing different countries: Germany, UK, France, Poland, Netherlands, Italy, and Spain. There are two input fields: 'E-mail' with the value 'ca_eastwarranty@livetoplaysports.com' and 'Password' with masked characters. A 'Remember' checkbox is checked. A 'Login' button is centered below the fields. At the bottom, there are links for 'New user' and 'Reset password'.

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.

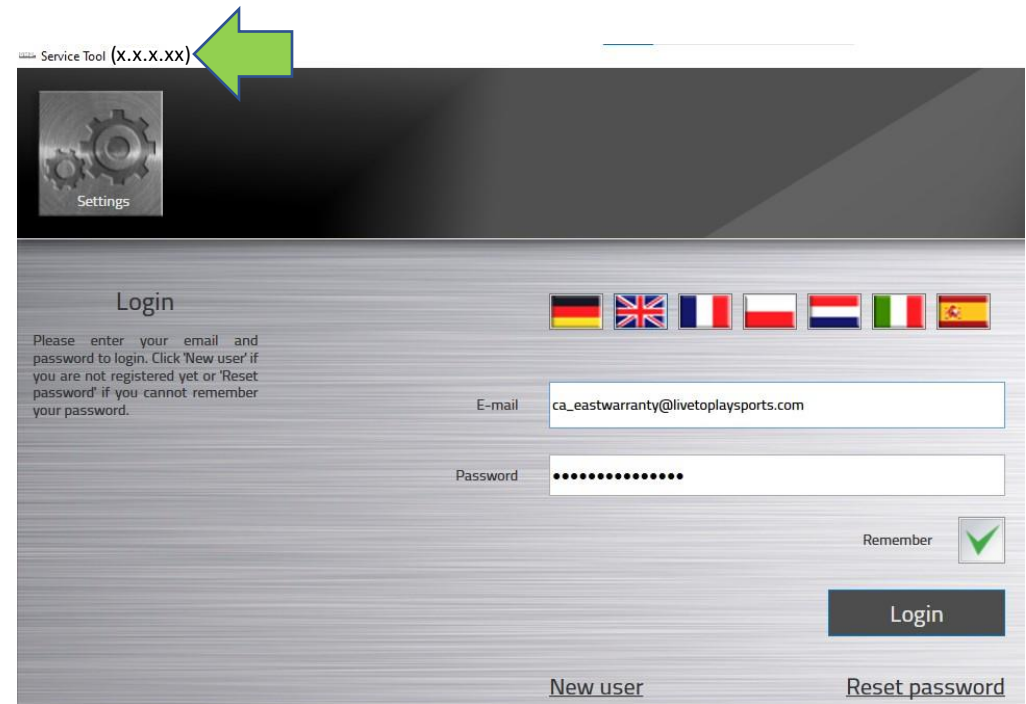
[Download BMZ Service Tool Software Version x.x.x.xx](#)

[Download Marquardt JD3 Driver](#)

[USB to Uart Adapter Treiber \(Windows 10\)](#)

[USB to Uart Adapter Treiber \(Windows 7+8\)](#)

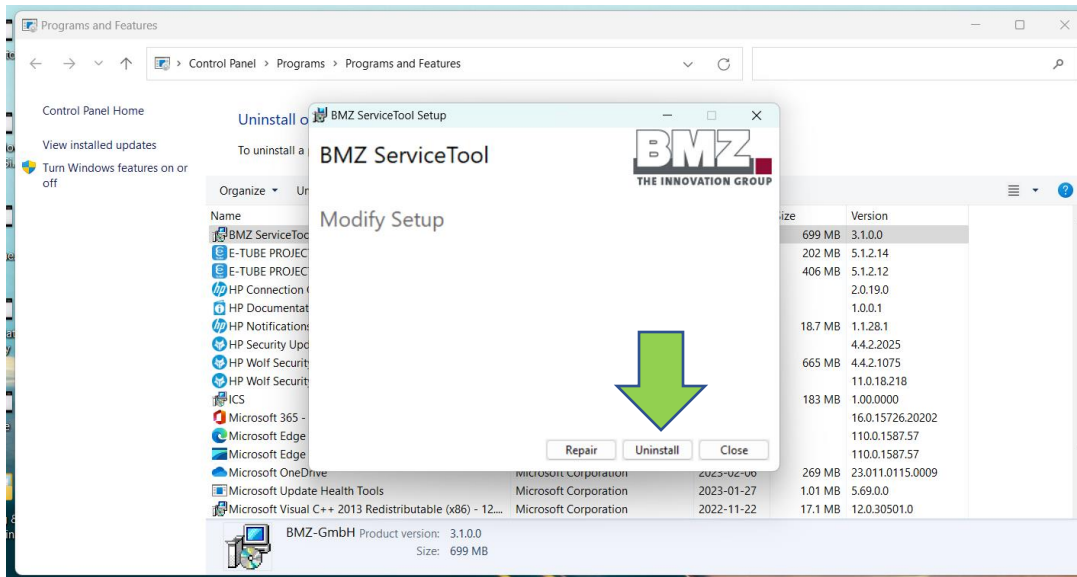
[Login to confirm Software Version](#)



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.



PROGRAM SOFTWARE

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

[Download BMZ Service Tool Software Version 3.1.0.13](#)

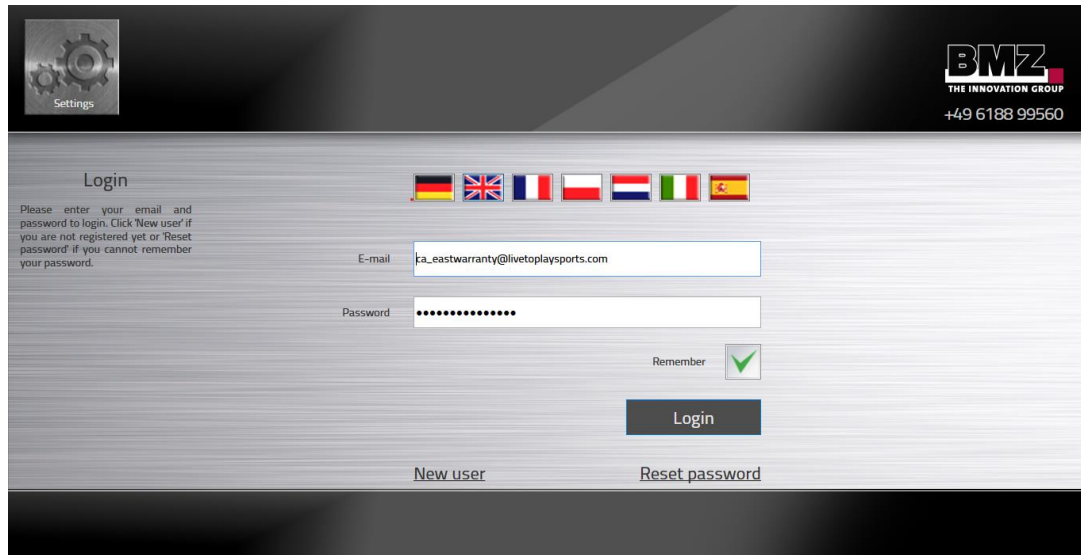


[Download Marquardt JD3 Driver](#)

[USB to Uart Adapter Treiber \(Windows 10\)](#)

[USB to Uart Adapter Treiber \(Windows 7+8\)](#)

4.2 Once Software is Up-to-Date, Log into BMZ Service Tool program

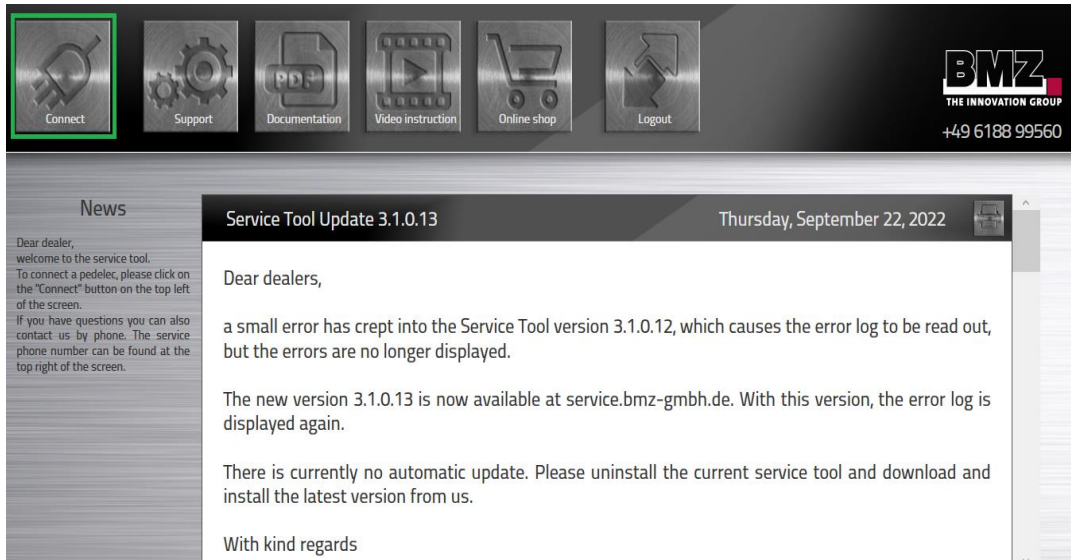


Once your battery is charged, Open the BMZ home page and log into your service account.

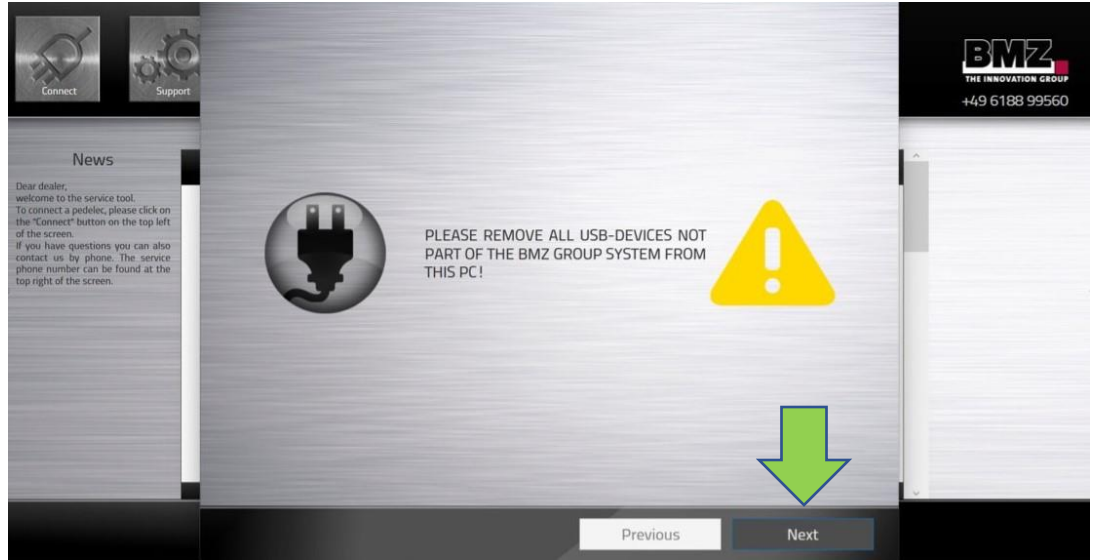


Connect BMZ diagnostic tool to computer and to the BMZ battery. A battery firmware check will automatically begin. A Steady Red Status LED confirms positive connection.

4.3 Connect Battery to BMZ Service Tool

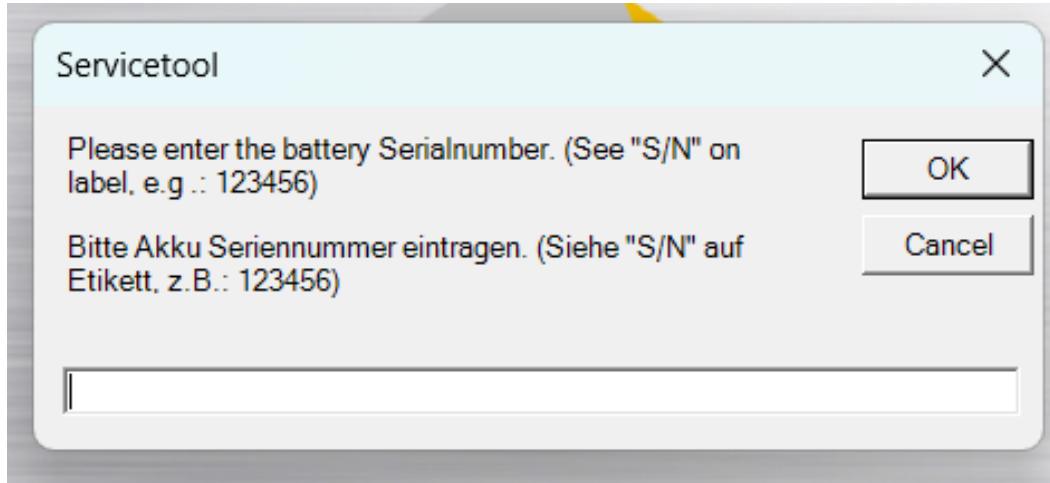


Once the BMZ Service Tool is open. select "Connect" in the top left corner of the BMZ application.

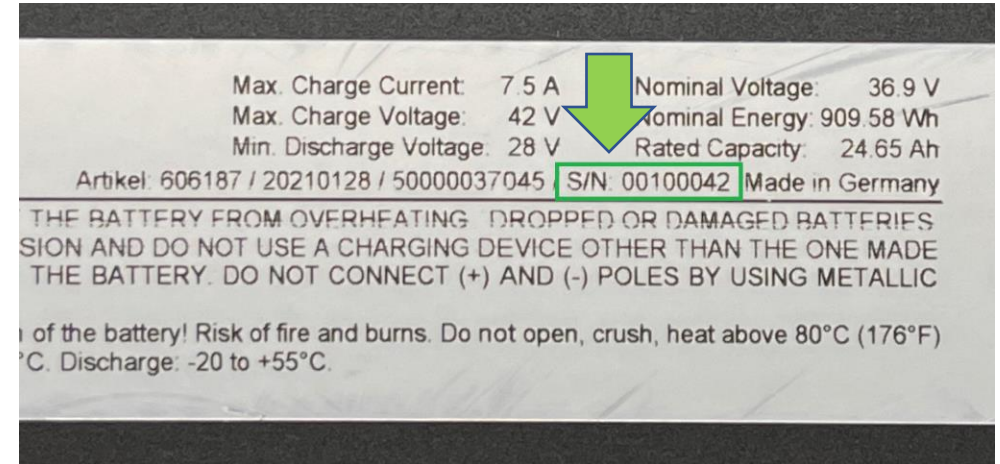


When the above prompt is displayed, do not unplug the BMZ Diagnostic tool, click the "Next" button.

4.3 Serial Number Input

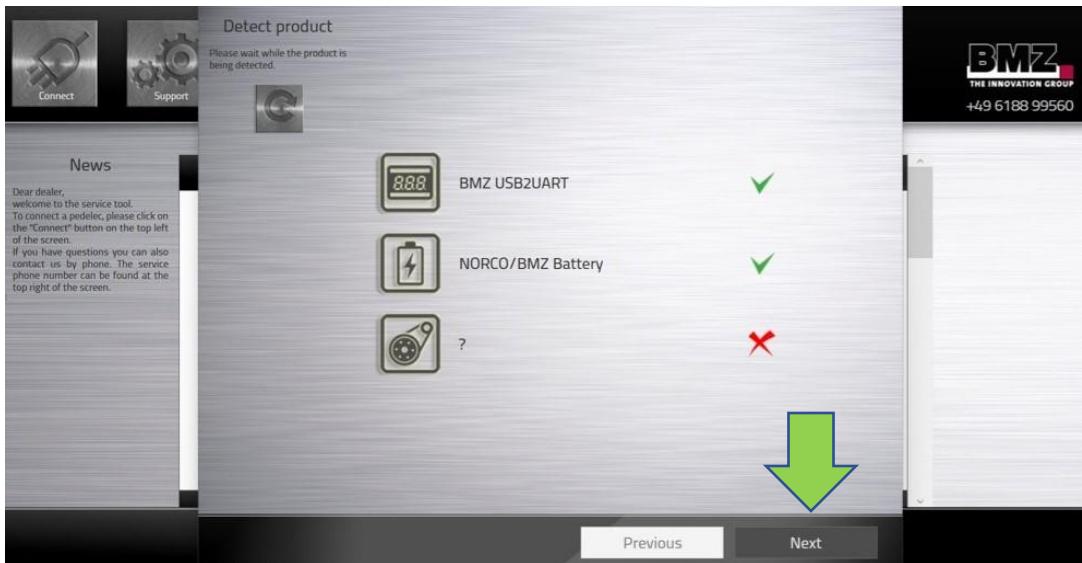


If prompted, enter the serial number. This will only need to be done once per battery.

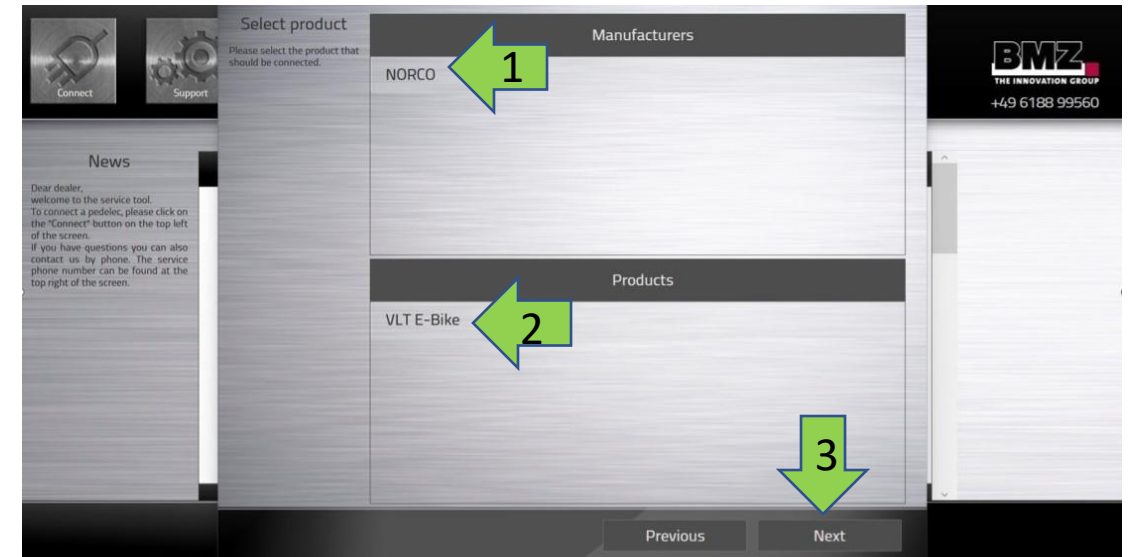


Serial numbers (S/N) can be found on the packaging from the battery or on the label affixed to the battery.

4.3 Determine Battery Firmware Version



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".

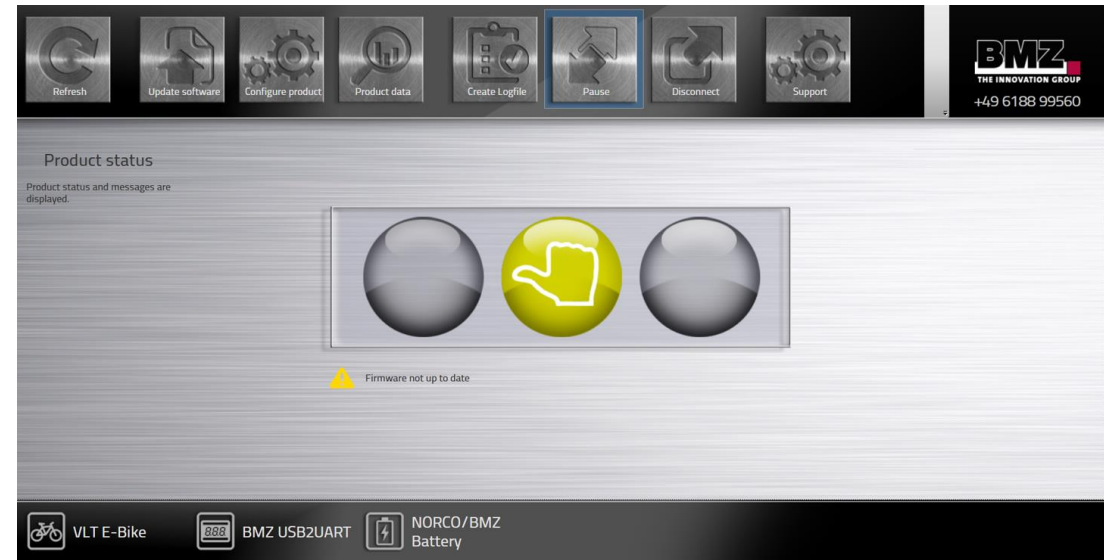
4.3 NORCO BMZ Battery Firmware Update

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



Green Thumb Logo

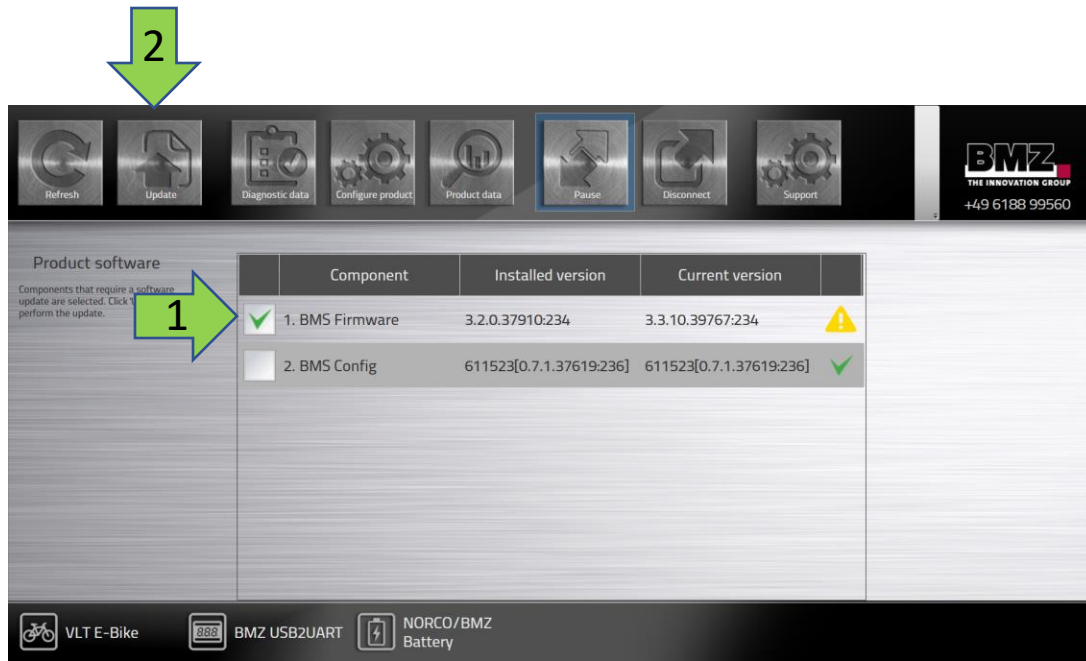
Firmware is up to date. Disconnect battery.



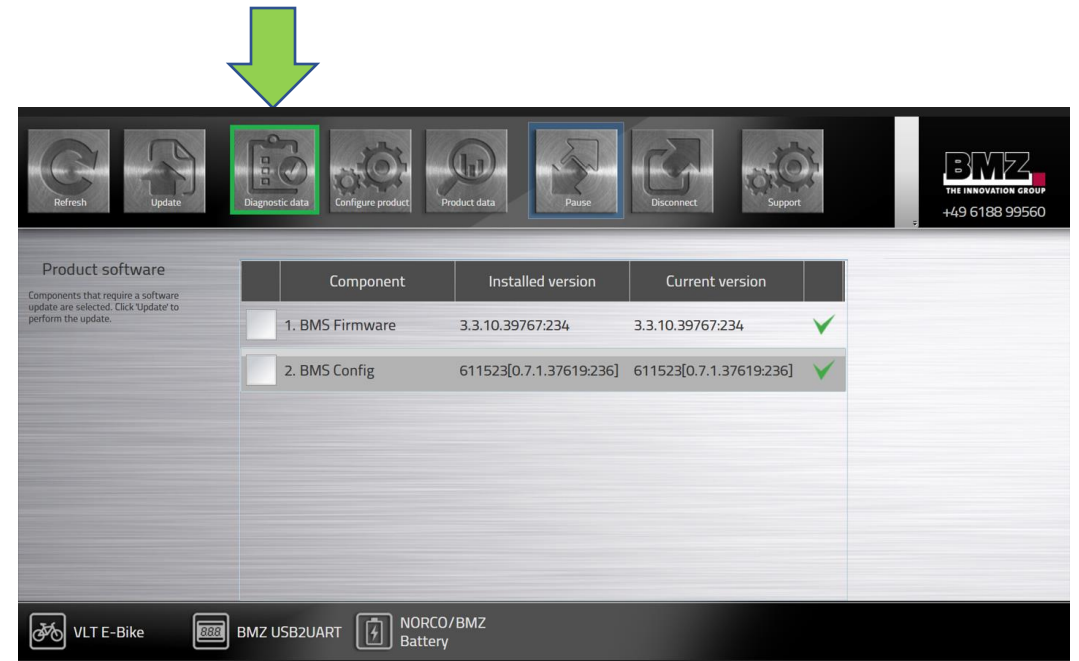
Yellow Thumb Logo

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.

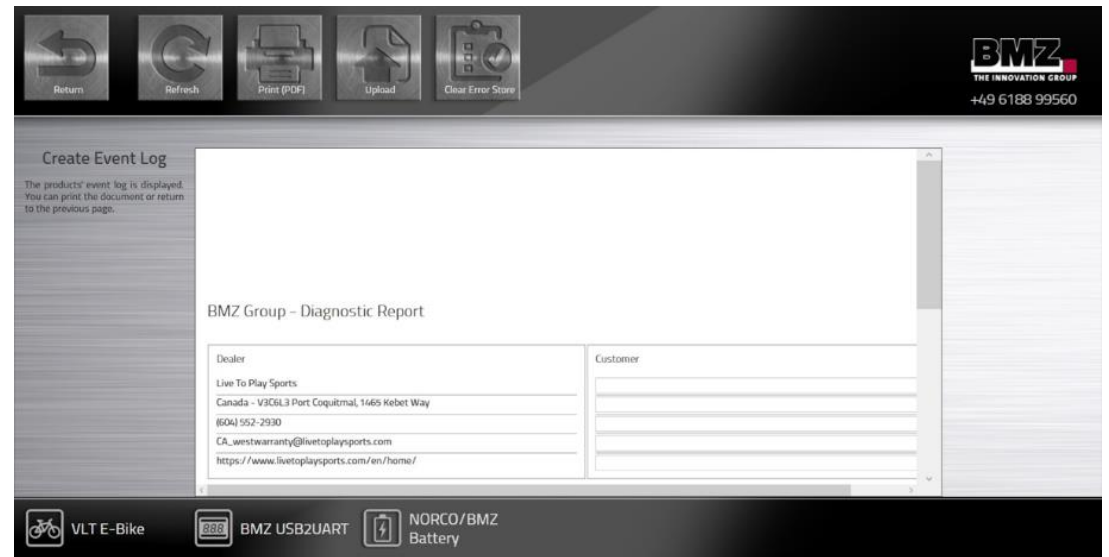


Once the battery has been updated you will see both components with green checkmarks, next click diagnostic data (see arrow).

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

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Create Event Log
The products' event log is displayed. You can print the document or return to the previous page.

Component	Serial number	Firmware version
BMZ USB2UART		
NORCO/BMZ Battery	00300006	3.2.0.37910236

Time stamp	Error description	Max. voltage (mV)	voltMin. cell voltage-Current (mA)	Max. temperature (°C)	Min. temperature (°C)	SOX (%)	Occurrence	Recommended action
2022-08-14 1859:23	Undefined Error 4106 (Code 0x1000)	4178	0	22.1	21.8	72	5	-
2022-08-01 2013:00	Diagnostic error 3783 detected (Code 0x5441)	3778	0	30.6	30	54	4	Restart the battery.
2022-07-14 1754:01	Diagnostic error 4017 detected (Code 0x5478)	4009	4388	25.1	24.3	63	1	Remove battery and restart by pressing and holding the button. If this happens repeatedly, replace the battery.

VLT E-Bike | BMZ USB2UART | NORCO/BMZ Battery

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

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Create Event Log
The products' event log is displayed. You can print the document or return to the previous page.

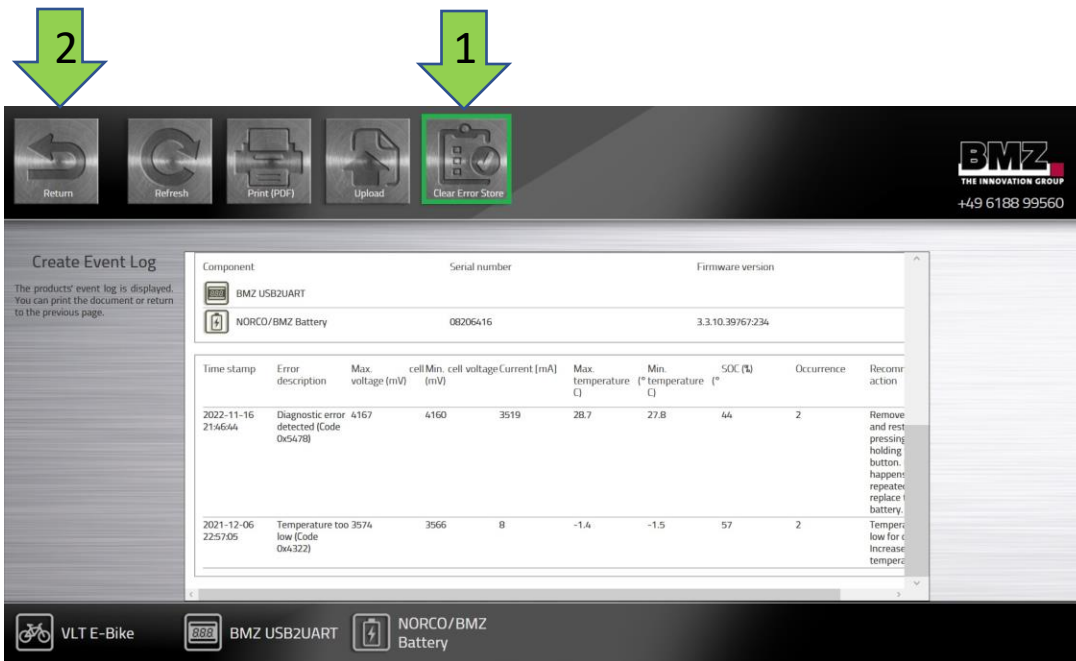
BMZ Group - Diagnostic Report

Dealer	Customer
Live To Play Sports	
Canada - V3C6L3 Port Coquitlam, 1465 Kebet Way	
(604) 552-2930	
CA_westwarranty@livetoplaysports.com	
https://www.livetoplaysports.com/en/home/	

VLT E-Bike | BMZ USB2UART | NORCO/BMZ Battery

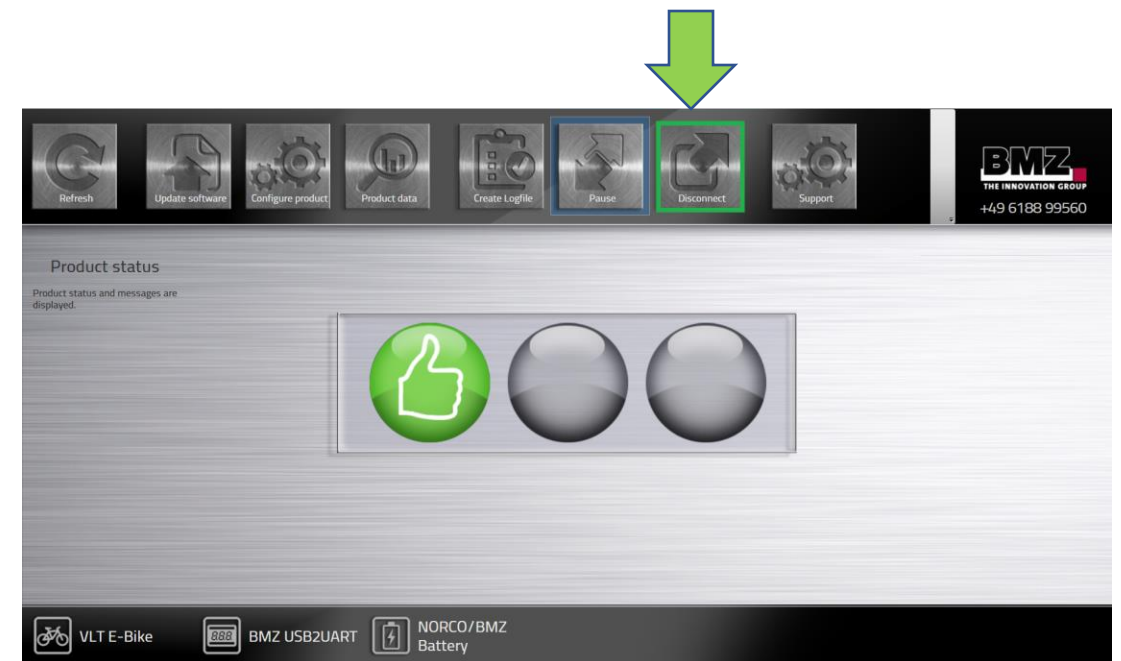
Save this Logfile by clicking "Print PDF" or select to save it as a PDF. Once saved, clear the battery log file by clicking "clear error store"

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

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

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

5. STePS Setup

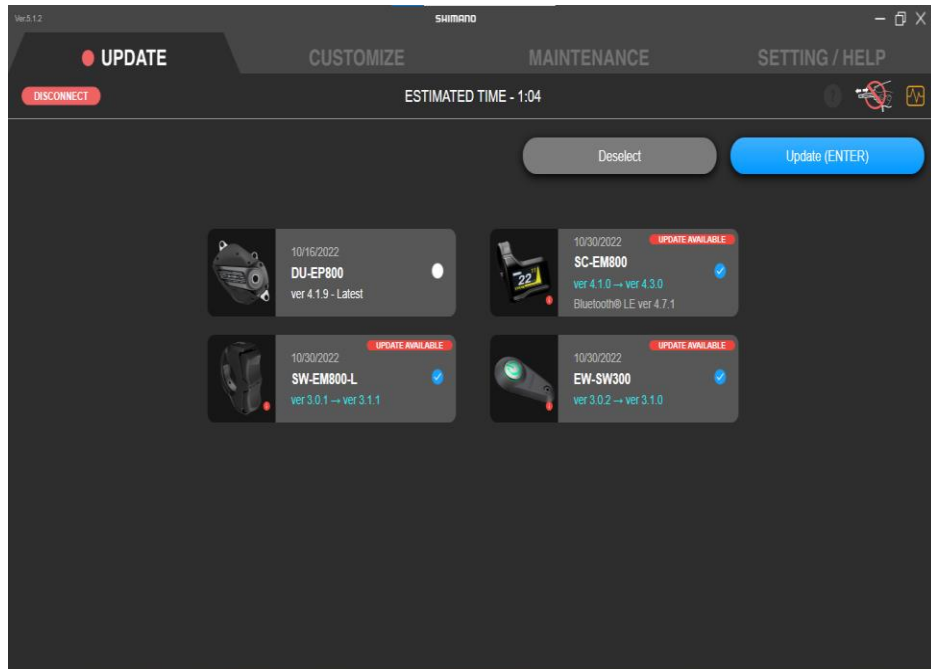


Ensure Norco BMZ Battery is NOT installed in VLT E-Bike. Connect the Shimano SM-PCE02 PC linkage device to a computer via the USB port.

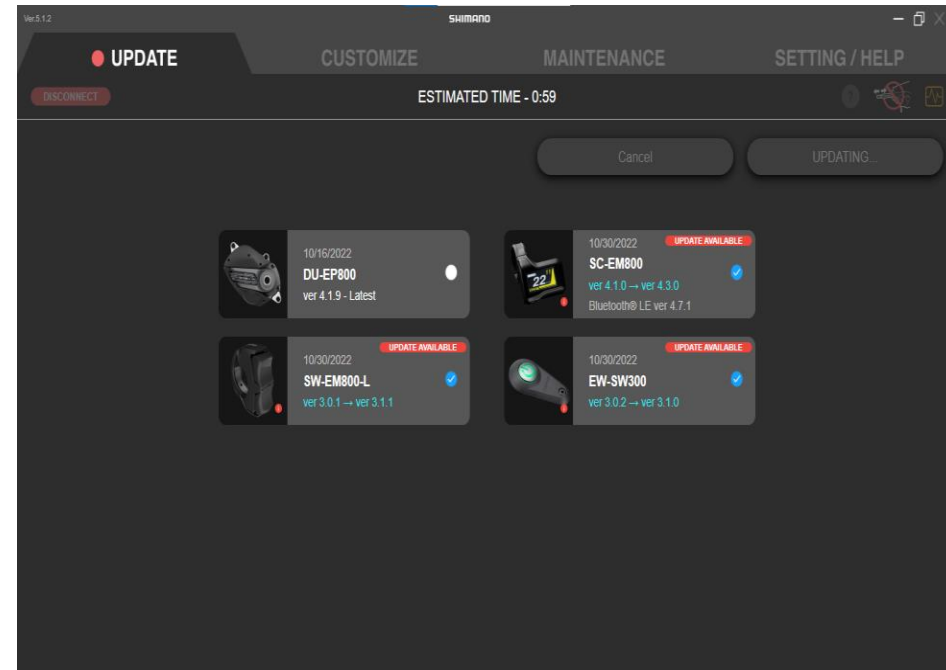


Using a Shimano TL-EW02 tool, remove one of the blind plugs from the backside of the display port and install the SM-PCE02 port connector.

5. STePS Setup

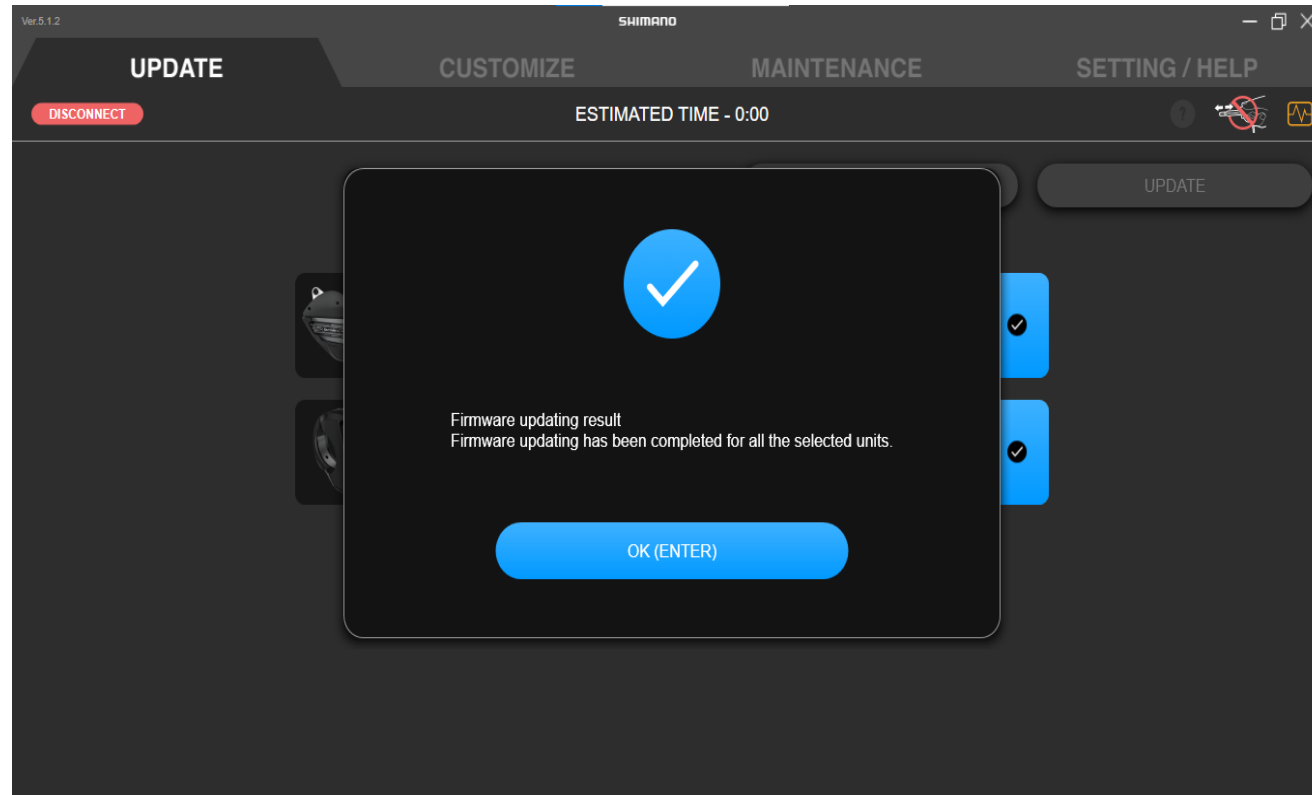


Click "select all" then "update" to select and update any out-of-date components.



Each component will update individually.

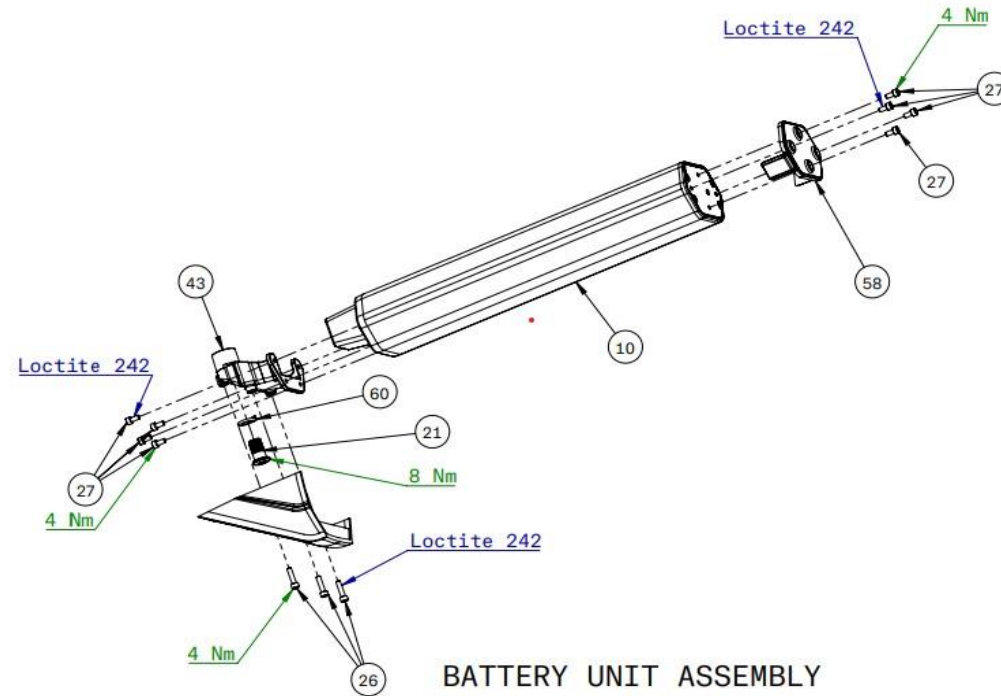
5. STePS Setup



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.



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

6.2 Battery Installation

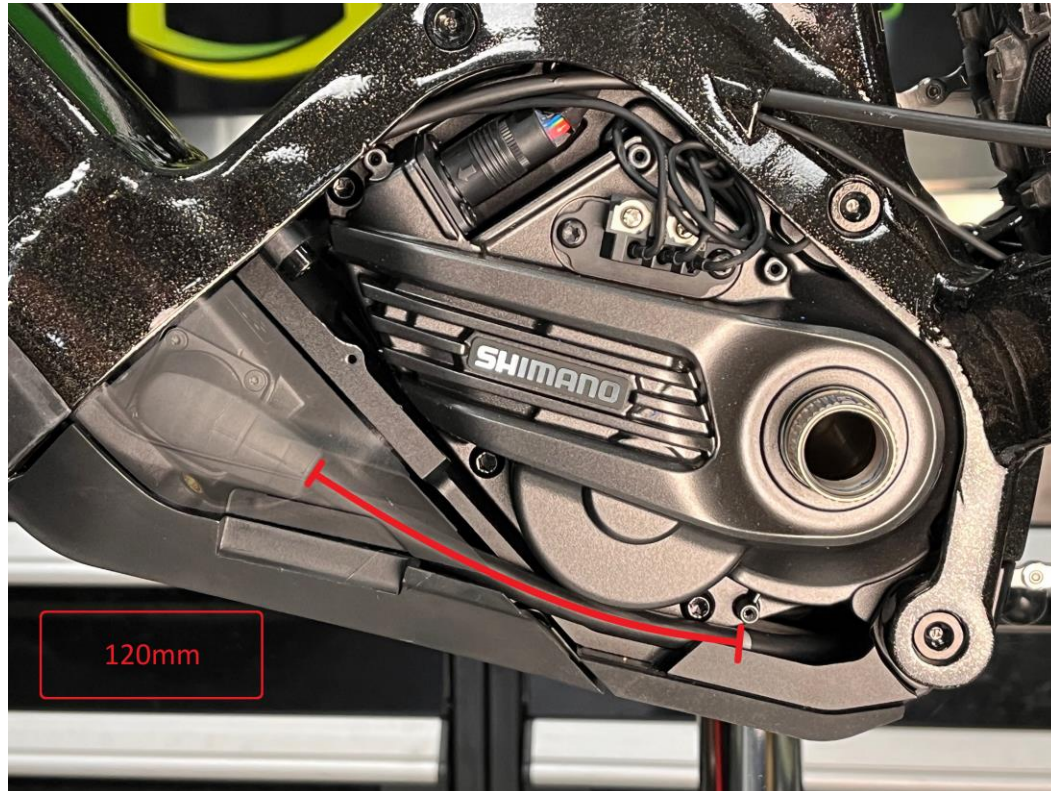


Slide battery into downtube. Use index finger to retain Battery Fixing Bolt ensuring it does not contact the Drive Unit Cover during installation.

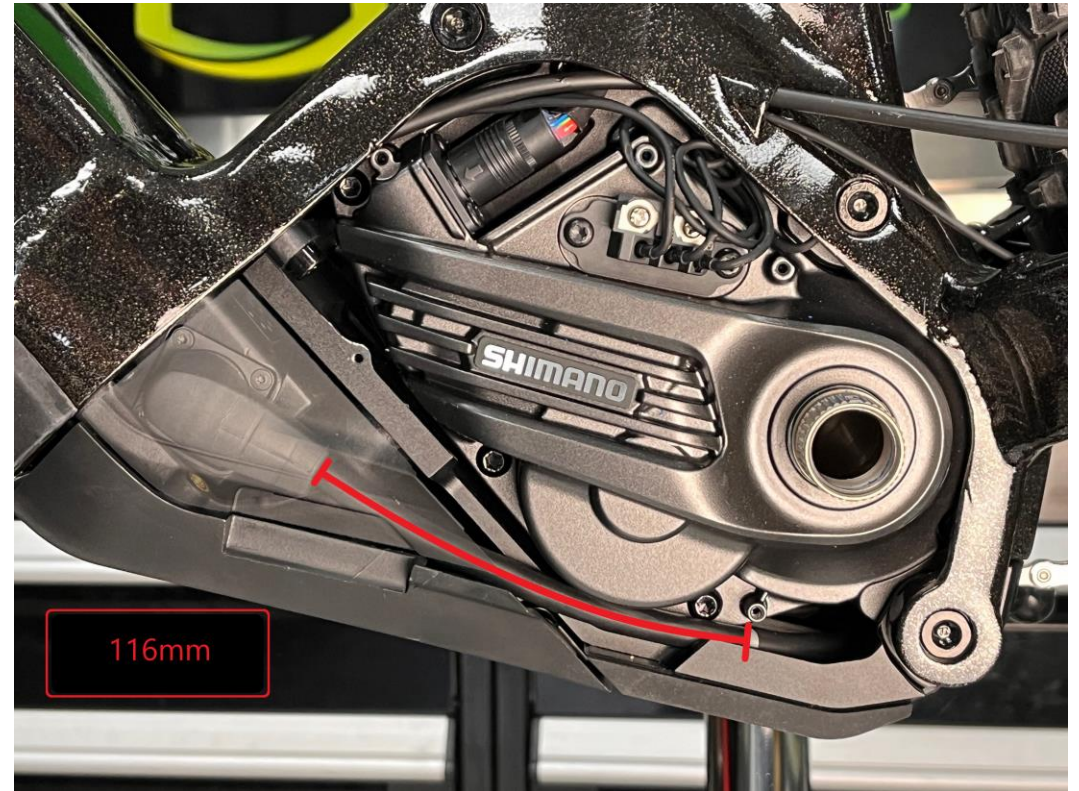


Use T-Handle Battery installation Tool to tighten battery Fixing Bolt to 8nm.

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.