Owner's manual

# ELECTRIC BICYCLE

HYENA

Assist system (Gen. 2)
20 mph

TREK

FX+ / Dual Sport+

EN

## Welcome

### WELCOME TO OUR BIKE FAMILY

Thank you for purchasing your new bicycle.
We believe in bicycles. We make high quality bicycles that are built to last.
That is why each bicycle we make comes with a limited warranty.
We wish you many carefree and enjoyable rides with your new bicycle.

However, if you experience any problems with your bicycle, do not hesitate to contact your local retailer. If the problem persists, please call our customer care team for a solution (see last page for contact information).

## Important to read before the first ride

**Supplemental Product Information**

**The most important points for you to do**

1. **Even if you have ridden a bicycle for years, it is important for every person to read the general "Bicycle Owner's Manual" and the specific "E-Bike Owner's Manual" carefully before you ride on the new e-bike.**
   - Both manuals contain detailed information and useful suggestions about your new bicycle.
   - Make sure that you understand the proper use, maintenance, and disposal of the components of the electrical system of your new e-bike.

2. **Think about safety. Your safety and that of other road users is very important.**
   - Check your bicycle for normal operation, loose parts and defects before riding. If you find any problem, visit your authorized bike shop for repairs before riding.
   - Be aware that other road users (cars, trucks, motorcycles) do not expect that an e-bike can ride faster than a normal bicycle. Riding faster also increases the risk of accidents. Distances will close much faster, and braking distances will become longer.
   - Do not ride abusively. Only ride in the use conditions specified for your bicycle. Please refer to the Use conditions table in the general Bicycle Owner's Manual.

3. **The electric system of your new bicycle needs special attention.**
   - Do not clean your e-bike with a high pressure washer. Any electrical system is sensitive to moisture. High pressure water might enter connectors or other parts of the electric system.
   - Do not allow a Li-Ion battery (separately or integrated in the down tube) to suffer any mechanical or physical impacts or make any internal modifications. In an extremely rare case, a battery that has been severely impacted or otherwise mishandled could potentially catch fire. If you suspect damage to your battery, visit your local authorized bike shop immediately for inspection.

4. **Maintain the battery as instructed in this E-Bike Owner's Manual.**
   Failure to follow these instructions may result in damage to your battery and may require battery replacement:
   - Only charge the battery with the included charger.
   - Charge the battery indoors or in a garage at room temperature to avoid exposure to rain or wind.
   - When you do not use the e-bike for an extended period of time, charge the battery to 80% to meet the optimum storage condition. Check the charge level again after six months. If the remaining charge of the battery is less than 30%, charge it again to 80%. Once charging the battery is complete, unplug the battery from the charger and unplug the charger from the wall socket.
   - Your e-bike has a built-in Li-Ion battery. Any Li-Ion battery will self-discharge over time. If the battery is left uncharged, then stored without charging, it may discharge to such a low state that the battery can no longer be charged and must be replaced.

- Store the e-bike in a dry, well-ventilated location. Protect the battery against moisture and water.
- The battery can be stored at temperatures between (minimum) -20°C (-4°F) and (maximum) +50°C (122°F). For a long battery life, however, it is best to store the battery at room temperature of approximately 20°C (68°F).

5. **Be careful when transporting an e-bike.**
   - An e-bike is heavier than a normal bicycle. If transporting on a vehicle, be aware of the maximum load capacity of the vehicle's roof, towing hitch and/or the bicycle carrier. Refer to the manuals of the vehicle and bicycle carrier for details.
   - Always respect local laws about transportation of an e-bike.
     Because Li-Ion batteries of this size and power are considered 'Dangerous goods, class 9' when transporting, regulations may restrict the transport of separate Li-Ion batteries in some places. Before booking your trip, make sure to check ahead with your airline or carrier if it is allowed to travel with your complete e-bike.

6. **Obey local regulations.**
   In most countries the regulations for the use of an e-bike are the same as those for a standard bicycle. However, there may be local differences such as where you can ride, minimum rider age, or required equipment and registration.
   It is the rider's responsibility to know the local regulations that apply to an e-bike and to obey them.

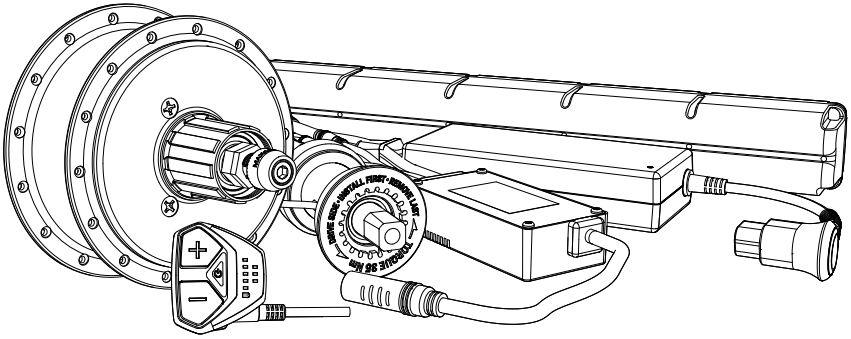
7. **Visit your bike shop on a regular basis for maintenance of your new bicycle.**
   Your bike shop has the right knowledge and equipment to maintain your e-bike.
   If you have questions about your new e-bike, ask your local authorized bike shop.

**Limited warranty**

Your bicycle is covered by a Limited Warranty.
Please visit our website for details.

HYENA

This manual is applicable to the Hyena assist system only



# Assist system

# Owner’s Manual

**Trek FX+ / Dual Sport +**

**ENGLISH**

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This owner’s manual is primarily intended for the user to operate the e-bike.

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# 1. Introduction

Thank you for choosing your new e-bike with the Hyena riding assist system.
We sincerely hope that you will enjoy your ride.

This owner's manual is intended for the user to operate the product and contains details of the assist system.

## 1.1. Important notices

**⚠ WARNING**

Please carefully read all of the safety warnings and instructions throughout the manual. Failure to follow these warnings and instructions could result in severe injury or death.

- Users who are not professionally trained for bicycle assembly should not attempt to install, disassemble, or modify components.
- If you have any concerns about the operation of the assist system or its components, or if you suspect damage to the battery, visit your local authorized dealer immediately for an inspection.
- The term 'battery' in this manual also applies to the (optional) range extender battery and can in some cases apply to both batteries with the range extender installed on the e-bike.

**► About Warnings Symbols**

As you read this manual, you will see gray warning boxes like this:

**⚠ WARNING**

Text in a gray box with the safety alert symbol will warn you about a situation or behavior that could cause severe injury or death.

**► About Images**

The e-bike shown in this manual may differ visually from *your* Hyena equipped e-bike. All information provided in this manual is still applicable to your e-bike.

## 1.2. Safety instructions

**Instructions Pertaining To A Risk Of Fire, Electric Shock, Or Injury To Persons**

**⚠ WARNINGS**

When using e-bikes powered by the Hyena assist system, basic precautions should always be followed, including the following:

- To reduce the risk of injury, close supervision is necessary when the e-bike is used near children.
- Do not put fingers or hands into any e-bike component or touch the connector terminals with bare hands.
- Do not use the e-bike if any flexible power cord or output cable is frayed, has worn insulation, or shows any other signs of damage.
- Always check the charger, cables, and power cord for any damage before charging the battery.
- Only charge the battery using an original Hyena charger.

**⚠ WARNINGS, *continued.***

- Do not immerse the e-bike or any e-bike component in water.
- Do not place the e-bike or any assist system component (like the charger) near hot or flammable objects or materials.
- The assist system parts are not intended to be used at ambient temperatures lower than -10°C (14°F) or over temperatures of 45°C (113°F).
- Use only genuine Hyena replacement parts. If you use anything other than genuine Hyena replacement parts, you may compromise the safety, performance, or warranty of your e-bike.
- Do not modify your assist system to increase the power or maximum speed of your assist system.

## 1.3. Riding safety

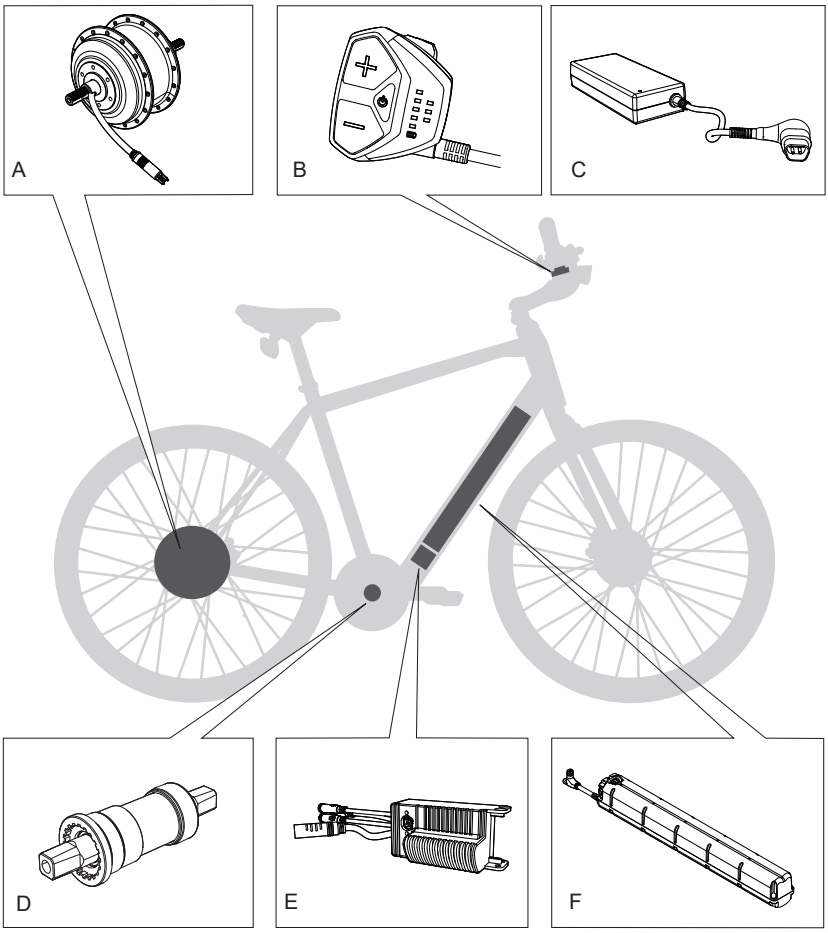
- Make sure you are familiar with your new e-bike before riding it on roads with multiple vehicle lanes and pedestrian footpaths.
- Do not start on the fastest setting right away. Start on the low assist setting for your first few rides.
- Do not focus on the console while riding. A distracted rider increases the risk of being involved in an accident.
- Riding with the assist system turned off is like riding a normal, non-electric powered bicycle.
- The assist system is designed to provide riding support up to the speed limits in compliance with local regulations (e.g. 25 km/h in the EU region and Australia, 32 km/h in New Zealand and 20 mph in the USA/Canada region). Do not modify your assist system or fit any other equipment to increase the power or maximum speed of your assist system, this will render the bike illegal and void the warranty.

**⚠ WARNINGS**

- When the assist system is switched on and an assist level is selected, the riding support is activated as soon as you start pedaling.
  You should be seated on the e-bike and engage at least one brake before starting to pedal.
- With the assist system switched on, do not put one foot on a pedal and throw the other leg over the bicycle, as the e-bike could accelerate unexpectedly.
  Failure to follow this warning may result in serious injury or death.

## 2. Assist system overview

The Hyena assist system includes the following system parts:




A. Rear hub motor, MRC-E250F
B. Console, CE-EL19A
C. Battery charger, 2A
D. Torque & cadence sensor, ST-SQ-1
E. Electronic controller, DP-TR19A
F. In-tube battery, BP-TR19A

## 3. Drive unit instructions

Your e-bike is equipped with a 250 Watt electric motor, which forms the hub of the rear wheel and also provides the electric riding assistance.

**⚠ CAUTION**

Do not dismantle the hub motor. The hub motor should only be serviced by a certified mechanic using genuine replacement parts from Hyena.

### 3.1. Motor safety instructions

- Do not allow the motor to suffer any mechanical or physical impacts or make any internal modifications.
- The motor can safely operate in rain and other adverse weather conditions. However, do not immerse the rear wheel in water or clean it with pressured water. Also make sure your e-bike fully dries after riding in wet weather.

**⚠ WARNINGS**

- Do not change or modify any assist system components or any components that are part of the bicycle drivetrain. Changing components could damage or overload the hub motor, which could lead to serious injury or death.
- Do not obstruct pedals, cranks, or wheels causing the motor to block. Wrong operations could damage or overload the hub motor, and may lead to serious injury or death.
- The motor can heat up during riding. After riding, do not touch the metal housing of the hub motor with bare hands or legs.

### 3.2. Technical data of the hub motor

| Item | Specification |
|---|---|
| Model number | MRC-E250F |
| Rated voltage | 36 V |
| Rated power | 250 W |
| Max. torque at drive | 40 Nm |
| Operating temperature | -10°C (14°F) to 50°C (122°F) |
| Storage temperature | -20°C (-4°F) to 70°C (158°F) |
| Protection rating | IP54 |
| Weight, approx. | 2.2 kg (4.9 lbs) |

## 4. Battery handling instructions

**Note**
The term 'battery' in this manual also applies to the (optional) range extender battery and can in some cases apply to both batteries with the range extender installed on the e-bike.

**⚠ CAUTION**
The Hyena assist system is powered by a Lithium-Ion (Li-Ion) battery. Always read and adhere to the instruction manual before handling or charging the battery or when using the e-bike.

**⚠ WARNINGS**
- If your battery or charger exhibits any signs of damage, do not use the e-bike and immediately bring it to your local authorized dealer for inspection.
- Always turn off the assist system when not in use and/or when working on it.
- If the downtube has signs of visible damage, stop riding the e-bike immediately. Riding the e-bike with a damaged battery could result in a fire or explosion, which may cause severe injury or death.

### 4.1. Battery safety instructions

- Do not allow the internal battery to suffer any mechanical or physical impacts or make any internal modifications.
- A battery may leak fluid if damaged. Do not touch the battery fluid. Contact with the fluid may cause burns or skin irritation. If you come in contact with battery fluid, wash your hands immediately with soap and water. If you get battery fluid in your eye, immediately flush your eye with water and seek assistance from your physician.
- Store the e-bike in a dry and well-ventilated environment.
- To avoid a short circuit, keep the battery charging socket away from the contact of paper clips, coins, keys, screws, or other objects that can generate metallic attraction.

### 4.2. Technical data of the in-tube battery

| Item | Specification |
|---|---|
| Rated voltage | 36V |
| Nominal capacity | 7 Ah |
| Energy | 250 Wh |
| Operating temperature | -10°C (14°F) to 45°C (113°F). |
| Storage temperature | 1 month -20°C (-4°F) to 50°C (122°F)<br>3 months -20°C (-4°F) to 40°C (104°F)<br>1 year -20°C (-4°F) to 20°C (68°F) |
| Permitted charging temperature range | 0°C (32°F) to 45°C (113°F) |
| Protection rating | IPX5 |
| Weight, approx. | 1.74 kg (3.84 lbs) |

# 5. Assist system operation

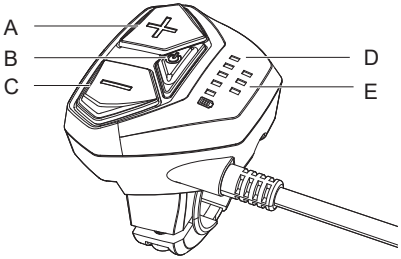
**IMPORTANT**

Before you ride:

- Regardless of your experience level, you should read the “Introduction” chapter of this Owner’s Manual and carry out all important safety checks.
- The assist system can only be activated when the battery is sufficiently charged.

## 5.1. Console overview

You can control the assist system using the console, including switching on/off the assist system, selecting the level of riding support, turning on/off the lights (if part of the equipment), and using the walk assistance function.




A. UP (+) button (Increase assist lever and switching on/off lights (if part of the equipment))
B. Power ON/OFF button
C. DOWN (-) button (Decrease assist lever and walk assist)
D. Battery charge level indicator
E. Riding assist lever indicator

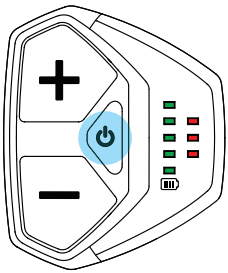
## 5.2. Technical data of the console

| Item | Specification |
|---|---|
| Operating temperature | -10°C (14°F) to 60°C (140°F) |
| Storage temperature | -20°C (-4°F) to 70°C (158°F) |
| Protection rating | IPX5 |
| Weight, approx. | <0.05 kg (0.11 lbs) |

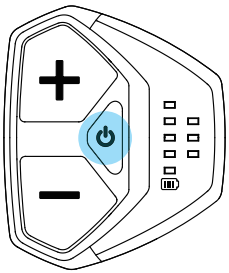
## 5.3. Turning on/off the assist system

- Single press the power button to switch on the system.
- Press the power button longer than 2 seconds to switch off the system.

Riding with the assist system turned off is like riding a normal, non-electric powered bicycle.



< 0.5 sec ON



> 2 secs OFF

**Notes**

- Always turn off the assist system after riding or when parking the e-bike.
- If the e-bike is not used and no buttons are pressed, the assist system will automatically turn off after six minutes to save power.

## 5.4. Selecting an assist level

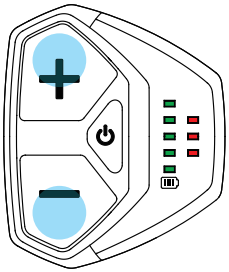
**⚠ CAUTION**

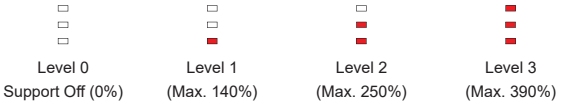
For safety reasons, always start riding at Level 0 or Level 1.

**⚠ WARNING**

When learning to ride an e-bike, start at the lowest assist level and gradually increase levels.

Once the assist system is switched on, the system will default start to Level 0.
Single press the UP (+) /DOWN (-) buttons to select the desired assist lever: Level 0 (0%, no assist), Level 1 (Max. 140%), Level 2 (Max. 250%) to Level 3 (Max. 390%).






Select the desired assist level using the UP (+) and DOWN (-) buttons.

**⚠ WARNING**

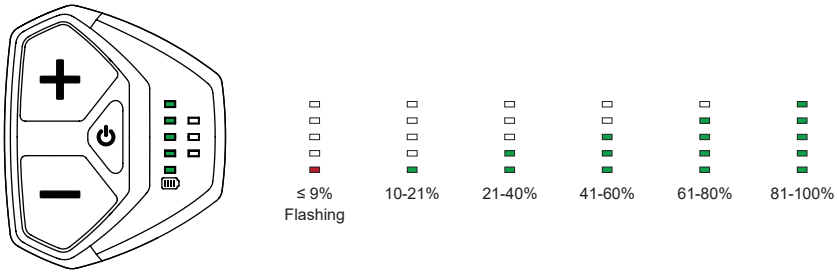
Do not use assist Level 2 or Level 3 when turning a sharp corner. This could cause the rider to lose control of the e-bike and fall, which may cause severe injury or death.

**Notes**

- When the assist system is switched on and a assist lever is selected, the assist system is activated as soon as you start pedaling.
- The assist support modes affect how much support the assist system delivers based on your pedaling input.
- Generally, more support provides faster acceleration and easier climbing at the expense of shorter range. Lower assist levels that provide less support result in longer battery run times, longer range, and more control in situations where traction is limited.
- If your e-bike is equipped with gears, change gears appropriately, to get, in addition to adjusting assist modes, the most use out of your battery.
- The e-bike drive output only provides support up to the maximum speed permitted by local regulation (e.g. 25 km/h in the EU region, 20 mph in the USA/Canada region). As soon as you have reached this speed limit, the assist system will suspend the riding support and automatically reactivates when your speed is below the speed limit.

## 5.5. Charge level indicator

Each illuminated green LED on the console represents approximately 20% capacity.




- 100 % charged. Maximum range.
- 21-40% charged. Charge the battery.
- 10-20% charged. The battery is near empty. Charge the battery as soon as possible.
- < 9% charged. The LED flashes to warn the rider to charge the battery immediately.

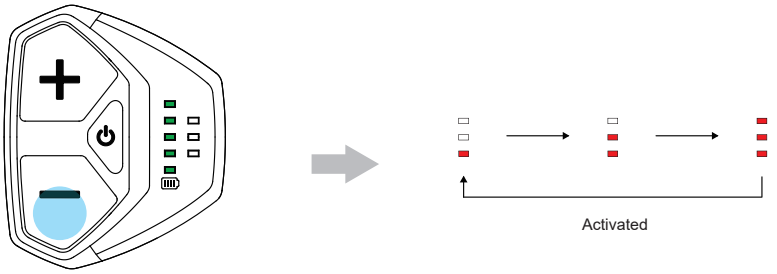
**Notes**

- When the (optional) range extender battery is connected, the charge level indicator shows the combined charge level of the in-tube battery and range extender battery.
- At 4% charge, the riding support will stop. The remaining charge capacity is reserved to power lights for up to two hours.

## 5.6. Walk assistance

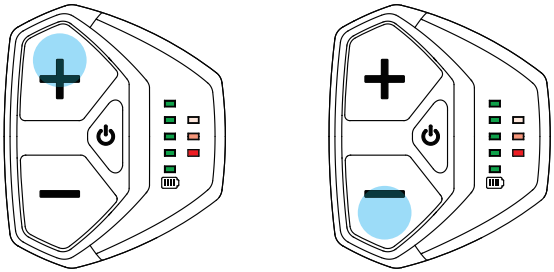
The Walk-assist mode can help you push your e-bike more easily, for example, up a hill, with a maximum speed of up to 3 km/h (2 mph).
You can only enable the Walk-assist mode when the system is switched on and you are pushing the e-bike.

- Press and hold the DOWN (-) button on the console for two seconds to activate the Walk-assist mode.
- When Walk-assist mode is activated, the assist level indicators on the console will blink in a waterfall pattern toward the front of the bike.




> 2 secs to active

- To propel the e-bike forward at a slow speed, press and hold the UP (+) button.



Press and hold to start the walk assist

< 0.5 secs to turn off

- Release the UP (+) button to stop the Walk-assist function on your e-bike.
- Short press the DOWN (-) button to turn the Walk-assist mode off.
- The Walk-assist mode will automatically turn off if no buttons are pressed in 5 seconds.

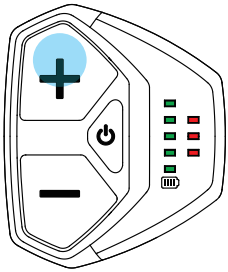
**⚠ WARNINGS**

- The walk assistance function may only be used when pushing the e-bike. Make sure you are ready and stand steady before activating the walk assistance.
- Do not activate the walk assistance when you are riding the e-bike or if the wheels are not in contact with the ground.

## 5.7. Turning on/off the lights (if part of the equipment)

With the system turned on, press and hold the UP (+) button for two seconds to turn the lights on or off (if the front and rear lights are powered by the assist system).

- If the charge indicator is flashing (at < 9% charge), the battery is almost empty. Charge the battery.
- At 4% charge, the riding support will stop. The remaining charge is reserved to power lights (if part of the equipment) for up to two hours.



> 2 Secs

**Note**

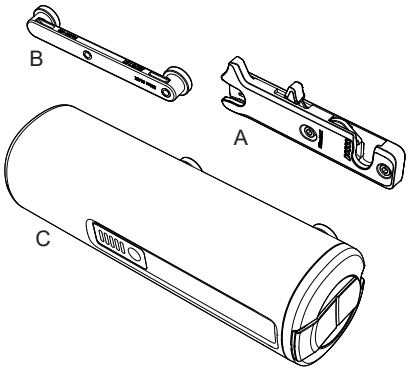
If your battery is empty, the lighting on your e-bike may not work until the battery is recharged.

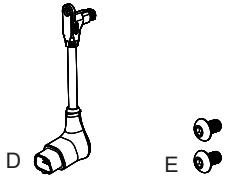
## 6. Range extender (optional)

Your e-bike system can be equipped with the (optional) range extender to extend your travel range with riding assist.
With the range extender installed, the battery charge indicator on the console will show the total capacity of the two batteries. The LEDs on the extender battery only show the range extender capacity.

**⚠ CAUTION**
To use the range extender battery, you shall follow the same rules stated in Chapter 4 - Battery handling instructions.

### 6.1. Range extender overview




A. Range extender mounting plate
B. Range extender bottle cage adapter
C. Range extender battery (250 Wh)
D. Down tube cable (sold separately*)
E. M5x12 mm bolts and M5 washers (2 pieces each)

### 6.2. Technical data of the range extender

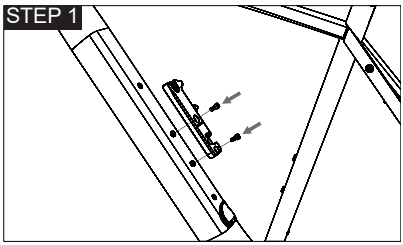
| Item | Specification |
|---|---|
| Rated voltage | 36V |
| Nominal capacity | 6.6 Ah |
| Energy | 250 Wh |
| Operating temperature | Charge: 0°C (32°F) to 45°C (113°F)<br>Dischagre: -20°C (-4°F) to 60°C (140°F) |
| Storage temperature | 1 month -20°C (-4°F) to 50°C (122°F)<br>3 months -20°C (-4°F) to 40°C (104°F)<br>1 year -20°C (-4°F) to 20°C (68°F) |
| Permitted charging temperature range | 0°C (32°F) to 45°C (113°F) |
| Protection rating | IPX5 |
| Weight, approx. | 1.49 kg (3.28 lbs) |

**Trek part number down tube cable: 5255915*

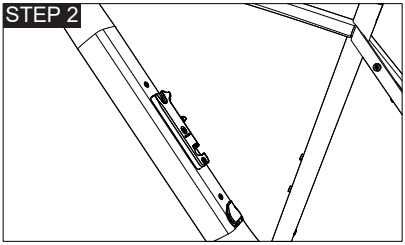
## 6.3. Mounting the range extender kit

Before the range extender battery can be used, the e-bike must be prepared by mounting the range extender kit. Follow these steps to complete the installation:

1. Install the range extender mounting plate on the down tube:



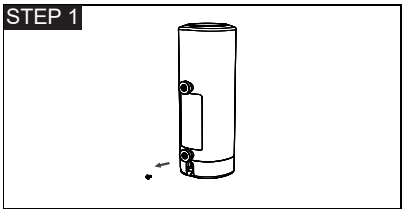

Insert the range extender mounting plate on the down tube. Apply the washers and align the two M5x12 mm bolts with holes on the mounting plate and down tube, then tighten the two M5x12 mm bolts.



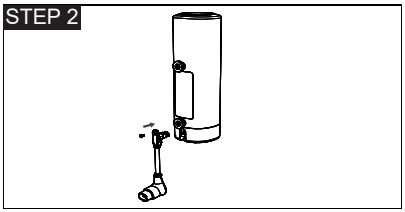

The finished mounting of the range extender mounting plate.

**⚠ CAUTION**
Only use the supplied bolts. Bolts too short will not fully engage with the bike frame. Bolts too long will leave the mount loose on the frame.

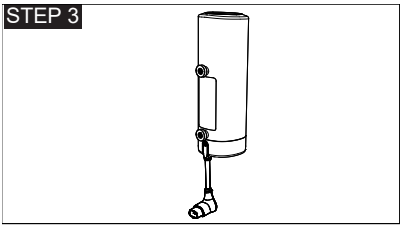
2. Connect the down tube cable with the range extender battery:




Remove the M3 bolt on the snap side on the charge port of the battery.



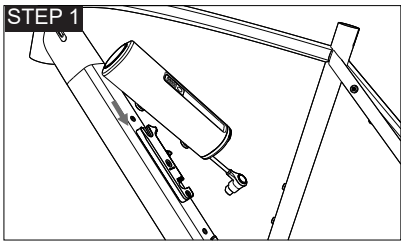

Mount the down tube cable into the charging port on the connector side of the battery and secure it with the M3 bolt. Be sure that the cable plug is facing away from the range extender battery.



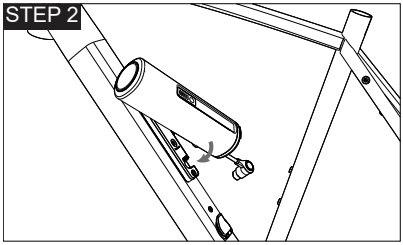

The finished connection of the down tube cable with the range extender battery.

## 6.4. Installing the range extender battery

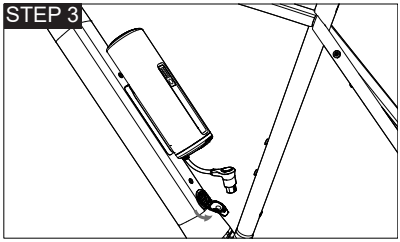
Before the range extender battery can be used, it must be installed on the e-bike.
Follow these steps to install the range extender on the e-bike**:**



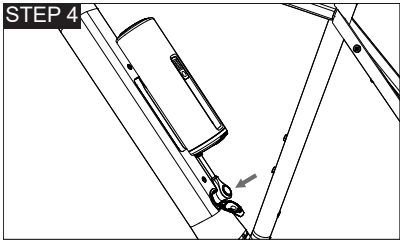

Align the upper range extender's lock tab with the top insertion at the mounting plate. Be sure to insert in the right way, the down tube cable will be face towards the seat tube.




Next, turn the lower lock tab of the range extender to the bottom insertion in the mounting plate. It should snap in and lock in place.




Make sure the range extender is firmly attached on the mounting plate.
Uncover the charging socket cover on the down tube.



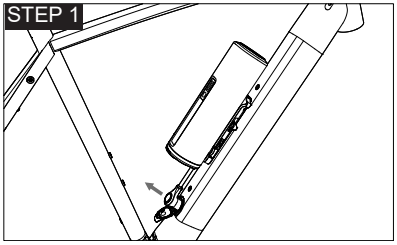

Plug the down tube cable into the charging port on the down tube to connect the in-tube battery with range extender battery.

**IMPORTANT**

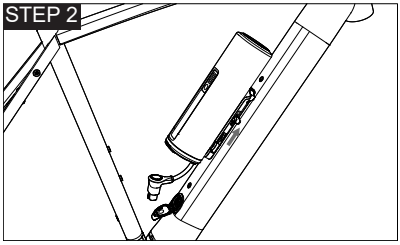
When the range extender battery is physically attached to the e-bike, it must also be electrically attached to the bike.

## 6.5. Removing the range extender battery

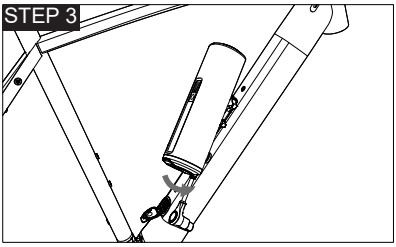
To remove the range extender from the e-bike, follow these steps:



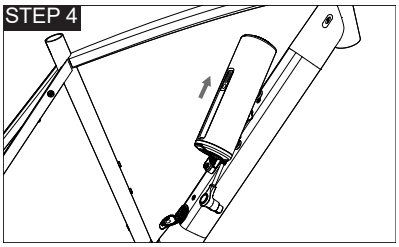

Unplug the down tube cable.



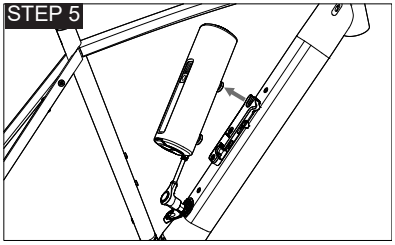

Pull the range extender lock tab in upwards direction to unlock it.




Turn the range extender from the bottom insertion to loosen the lower lock tab from the mounting plate.



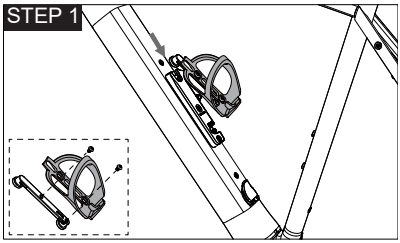

Move the range extender upwards to unhook it from the mounting plate.



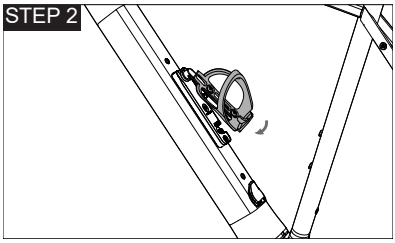

Pick up the range extender towards you to remove it from the mounting plate.

## 6.6. Mounting the bottle cage adapter

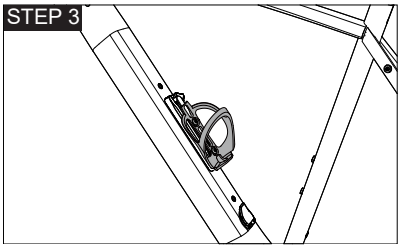
The bottle cage adapter allows you to fit a bottle cage of your own choice to the mounting plate instead of the range extender battery.
Please install the bottle cage on the adapter and follow the instructions below to install the adapter properly to the mounting plate:




Align the upper bottle cage adapter's lock tab with the top insertion of the mounting plate.




Next, turn the lower lock tab of the bottle cage adapter's to the bottom insertion of the mounting plate. It should snap in and lock in place.




Make sure the bottle cage adapter is firmly attached on the mounting plate.

## 6.7. Removing the bottle cage adapter

To remove the bottle cage adapter:

1. Turn the adapter from the bottom insertion to loosen the lower snap from the mounting plate.
2. Move the adapter upwards to unhook it from the mounting plate.
3. Pick up the adapter towards you to remove it from the mounting plate.

# 7. Charging instructions

Your e-bike is equipped with a charging socket on the frame to charge the integrated battery.

## 7.1. Charging safety instructions

**⚠ CAUTION**
Ensure the e-bike battery is fully charged before the first use.

Only charge the battery by following all safety descriptions.
Please read and follow the instructions for using the battery charger.

**► About charging**

- Charge the battery indoors or in a garage at room temperature, to avoid exposure to rain or wind. Do not use the charger outdoors or in environments with high humidity.
- Do not leave a charging battery unattended. Once the battery is fully charged, disconnect it from the charge cable right away.
- Do not try to use the e-bike or charge the battery if the location where the integrated battery is mounted (downtube) has any signs of damage.
- When charging the e-bike, do not move the battery charger. Else, the battery charger's AC-plug may come loose from the electrical outlet, resulting in a risk of fire.
- Do not leave the charger plugged into the e-bike for more than 24 hours.
  If the e-bike battery is not fully charged in 24 hours, contact your local authorized dealer for assistance.

**► About the charger**

- Only use a genuine certified Hyena charger to charge your Hyena battery.

**⚠ WARNING**
Use of an uncertified battery charger presents a fire risk, which may result in serious injury or death.

- Do not place the battery charger in locations that are easily accessible to children.
- Do not place the battery charger on the floor or other dusty places when it is in use.
- Place the battery charger on a stable, heat resistant surface, such as a table, when it is in use.
- Do not cover or place any objects on top of the battery charger or its cable.
- Do not use the battery charger with commercially-available electrical transformers designed for overseas use (travel converters). They may damage the battery charger.

**⚠ CAUTION**
Prevent the charger getting wet. If the charger is wet, do not touch any parts of the charger, electric shocks may occur.

**► About the outlet and power cord**

- Do not apply excessive tension to the power cord and AC-plug.
- Only use a 100V to 240V AC electrical outlet.
- Do not overload the outlet beyond its rated capacity by connecting too many appliances. Overloading the outlet can lead to overheating, resulting in fire.
- Be sure to hold the AC-plug to (dis)connect the charger to the outlet. Do not pull on the power cord to disconnect the charger. Failure to do so may damage the power cord and/or AC-plug and cause short-circuits, an electric shock, or a fire.
- When charging the e-bike, be careful not to trip over the charger cord. This may lead to injury or cause the bicycle to fall over, damaging the components.
- The charger is equipped with a power cord that has an equipment-grounding conductor and a grounding plug. The AC-plug must be plugged into an outlet with a circuit breaker that is properly installed and grounded in accordance with all local codes and ordinances. If there is a charging malfunction, grounding provides a path of least resistance for electric current to reduce the risk of an electric shock.

**⚠ WARNING**

Improper connection of the equipment grounding conductor may result in electric shock. Check with a qualified electrician if you are in doubt as to whether the product is properly grounded. Do not modify the AC-plug provided with the product. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

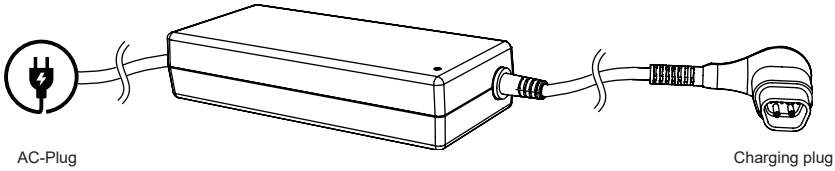
**► About malfunctions**

If the following symptoms are observed, stop using the device, immediately disconnect it from the outlet and contact your local authorized dealer.

- If heat or smoke is coming from the AC-plug.
- If the AC-plug or charger plug is visually damaged.
- If the LED indicator on the charger still does not illuminate with the charger connected to the outlet.
- If the red LED on the charger flashes during the charging process to indicate a charging error has occurred.
- If you suspect any other malfunction.

## 7.2. Technical data of the charger

| Item | Specification |
|---|---|
| Charging current (max.) | 2A |
| Rated Input voltage | 100 to 240 VAC |
| Input frequency range | 47-63 Hz |
| Rated output voltage | 42 ± 0.2V |
| Charging time, approx. | 3 hours 30 minutes (from empty to full; per single battery) |
| Permitted charging temperature range | 0°C (32°F) to 40°C (104°F) |
| Storage temperature | -20°C (-4°F) to 55°C (131°F) |



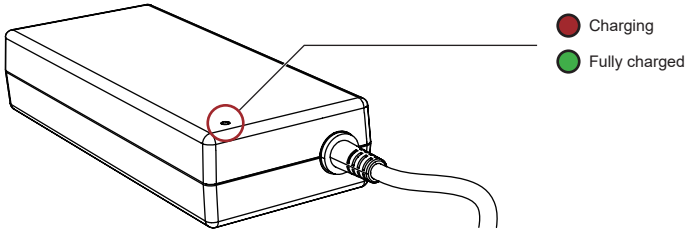

## 7.3. Charging the battery

**► Before charging**

- Regularly inspect the charging socket and charger for damage. Never charge the battery, or use the e-bike, when you suspect it to be damaged or broken.
- Make sure the outlet and AC-plug of the charger are undamaged and dry before connecting and charging the battery.

**► Indicator on charger**

- During the charging process, the LED indicator on the charger will illuminate red.
- When the battery is fully charged, the LED indicator on the charger will turn green.




**Note**

If the red LED indicator flashes during the charging process, a charging error has occurred. In that case, immediately remove the charger from the socket. Discontinue the use of the assist system and contact your local authorized bike shop.

**Notes**

- The battery is equipped with a Battery Management System (BMS). It is designed to protect a fully discharged battery from damage.
  However, in order to maintain the best possible battery performance and lifespan, Hyena recommends regularly recharging your battery to at least 80% of the full capacity.
- The Li-ion batteries gradually lose capacity depending on age and use.
  A significantly reduced operating range after charging can be a sign that the battery is reaching the end of its useful life and has to be replaced.

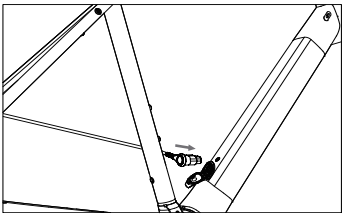
### ► Charging procedure

- The battery can always be charged, regardless of the current charge level.
- The charging can be interrupted at any moment. Interrupting the charging process will not damage the battery.
- Please perform charging in environments between 0°C (32°F) to 40°C (104°F).

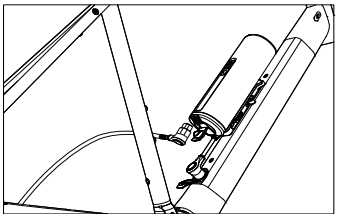
**⚠ CAUTION**

Always turn off the assist system manually before charging.

1. Open the cover of the charging socket on the e-bike, or, when installed, the cover on the (optional) range extender battery.
2. Connect the charging plug with the charging socket on the battery.



*Charging socket on the frame*



*Charging socket on the (optional) range extender (when installed)*

3. Plug the AC-plug of the charger into an outlet (100V to 240V). The LED on the charger will illuminate red while charging.
4. While charging, the charge level indicator on the console will show the charge level of the battery. Each illuminated green LED on the console represents approximately 20% capacity. The battery is fully charged when the indicator on the charger turns green and all green LEDs on the charge level indicator on the console illuminate.

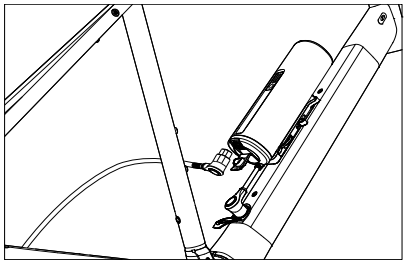
**Notes**

- When the range extender is installed, the main battery will be charged to its full capacity first, then the range extender will be charged. Discharging: always starts from the range extender, the main battery will be used when the extender battery is empty.
  The charge indicator shows the combined charge level.
- The e-bike system will power off after reaching full charge (within about six minutes).

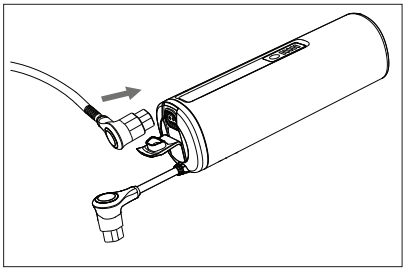
5. After charging, disconnect the AC-plug from the outlet and the charging plug from the battery.
6. Close the charging socket cover to protect the charging socket.

► **Charging the (optional) range extender**

- **Dual battery charge**:
  With the range extender installed, open the charging socket cover an the bottom of the range extender, then plug in the charger cable.
  The main battery will be charged to its full capacity first, then the range extender will be charged.
  Discharging: always starts from the range extender, the main battery will be used when the extender battery is empty.



- **Charging the range extender serarately**:
  To charge the range extender battery from the e-bike, disconnect it first and remove the range extender battery from the e-bike.
  Open the charging socket cover at the bottom of the range extender, then connect the charger plug to the range extender's charging port.



► **Charge time**

**Note**
With the range extender installed, the charge time will be doubled.

- **Single battery**

| **Approximate Charge Time / Charge Percent*** | |
|---|---|
| After 1 hour | 30% |
| After 2 hours | 60% |
| After 3 hours | 85% |
| After 3.5 hours | 100% |

**From empty*

- **With installed range extender**

| **Approximate Charge Time / Charge Percent*** | |
|---|---|
| After 2 hour | 30% |
| After 4 hours | 60% |
| After 6 hours | 85% |
| After 7 hours | 100% |

**From empty*

# 8. Storage and transportation instructions

## 8.1. Storage

- During storage, it is not recommended to have the battery permanently connected to the charger.
- Store the e-bike in the following locations: in a dry, well-ventilated room with a smoke alarm, away from combustible or easily flammable objects and away from heat sources.
- Store the e-bike on a fireproof surface and without contact to water, heat sources, or sand. Protect the battery against moisture and water.
- Do not store the e-bike at ambient temperatures lower than -20°C (-4°F) or over ambient temperatures of 50°C (122°F). For a long battery life however, it is best to store a battery at room temperature of approximately 20°C (68°F).
- Protect the e-bike from damage by direct sunlight if you store it.
- Do not place any heavy items on the e-bike or any e-bike component.

## 8.2. Charging the battery before and during storage

- When you do not use the e-bike for an extended period of time, charge the battery to 80% to meet the optimum storage condition.
- Check the charge level again after six months. If the remaining charge of the battery is less than 30%, charge it again to 80%.

**⚠ CAUTION**

A Li-Ion battery will self-discharge over time. If the battery is left uncharged, then stored without charging, it may discharge to such a low state (‘deep-discharge’) that the battery can no longer be charged and must be replaced.

## 8.3. Transportation of an e-bike

- An e-bike is heavier than a normal bike. When transporting on a vehicle, be aware of the maximum load capacity of the vehicle’s roof, towing hitch and/or of the applied bike carrier. Refer to the manual of the vehicle and bike carrier for details.
- Always respect local laws about transportation of a(n electric) bicycle.
- Because Li-Ion batteries of this size and power are considered ‘Dangerous goods, class 9’ when transporting, regulations may restrict the transport of separate Li-Ion batteries in some places. Make sure to check ahead with your airline or carrier, before booking your trip, if it is allowed to travel with your complete e-bike.
- The e-bike, including batteries, is subject to legislation on the transport of dangerous goods. Private users can only transport undamaged batteries by road without having to comply with additional requirements. If you have any questions about transporting the e-bike, contact an authorized bike dealer.

**⚠ CAUTION**

Shipping of all types of (separate) batteries, including lithium-ion and lithium metal types, may require the use of specialized packaging, specific hazard labeling, and specific documents certifying in compliance with the applicable local regulations.

# 9. Troubleshooting

**Note**
The term 'battery' in this manual also applies to the (optional) range extender battery and can in some cases apply to both batteries with the range extender installed on the e-bike.

When your e-bike has issues, you can check the following instructions for basic troubleshooting. If the problem cannot be identified or solved, please contact your local authorized dealer.

## 9.1. System issues

► **System cannot be turned on**
- Check the battery charge level: If the battery charge is low or if the battery is empty, recharge the battery.
- Check the cable connections: Check all cable connections to ensure they are properly connected. If all cables are properly connected and the issue still persists, please contact your local authorized dealer.

► **No assistance power**
- Charge level: check the charge level. At 4% battery charge and below, the riding support will stop. The remaining charge is reserved to power lights for up to two hours.
- Check your assist level on the console: You will only feel the riding support from Level 1 to Level 3.
- Pedal the e-bike: The e-bike only provides riding support power when you keep pedaling. Riding support will be shut off immediately when you stop pedaling.
- System overheat: If you ride on prolonged hills or ride with an excessive load on your e-bike, the e-bike assist system may overheat. Turn off the system, and let it cool down for at least 10 minutes.
- Speed limitation: The assist system's output only supports to a maximum speed as permitted by local regulations. As soon as you have reached this speed limit, the assist system will suspend the riding support, and automatically reactivates when your speed is below the speed limit.

► **The lights (if equipment) do not illuminate**
- Check the charge level of the battery, charge if necessary.
  When the battery charge is below 4%, the remaining charge is reserved to power the lights for up to two hours. At 0% charge, the lights will not illuminate anymore.
- Check if all the connectors of the electric cables are properly connected.
  If you are not sure, contact your local authorized dealer.

## 9.2. Battery & charging issues

► **The battery quickly loses energy**
- The battery may be near the end of its service life, contact your local authorized dealer for further service.
- The battery capacity may be affected by ambient temperature, especially in cold weather.

► **The battery cannot be charged**

- Check if the connection terminals of the charger plug and charging socket at the charge port are clean. If not, wipe them clean with a dry cloth.
- With the (optional) range extender installed, check the electric connection between the range extender and the charge port on the frame.
- Securely connect the charging adapter to the battery charging port and charge again. If the battery still does not charge, consult your local authorized dealer.

► **The LED indicator on the charger does not illuminate.**

- Turn on the assist system. If the battery charges properly, the charge level indicators on the console will flash and show the current charge level.
- Disconnect and then reconnect the AC-plug of the charger, and then repeat the charging operation.
- If the LED indicator on the charger still does not illuminate, contact your local authorized dealer.

## 9.3. Other issues

If your e-bike does not work properly due to mechanical problems, assist system issues, or any other problem that cannot be identified or solved, contact your local authorized dealer.

## 10. Cleaning

- To avoid an electrical shock when cleaning the e-bike, disconnect the AC-plug from the electrical outlet and the charging plug from the battery.
- Do not immerse the assist system or any individual e-bike component in water.
- Do not clean any assist system component with pressurized water.
- Only clean the product with a water-dampened soft cloth.
- Do not clean any assist system component with any detergent or organic solvent.
- The system is designed to operate in rain and other adverse weather conditions. However, damage due to pressure washing or other heavy cleanings may void the assist system warranty.

## 11. Disposal

- The e-bike assist system drive unit including the motor, driver, battery, speed sensor, console, wiring, accessories, and packaging should be disposed of in an environmentally correct manner according to local rules.
- Do not dispose of e-bikes and their components with household waste.
- About rules in EU: In accordance with Directive 2012/19/EU and Directive 2006/66/EC respectively, electronic devices that are no longer usable and defective/drained batteries must be collected separately and recycled in an environmentally friendly manner.



This symbol is only valid within the European Union.
Follow local regulations when disposing of used batteries and other electrical parts.
If you are not sure, consult the place of purchase or a bike dealer.



**⚠ WARNING**
Failure to follow the instructions in this section may result in damage to the components on your e-bike and will void your warranty, but, most importantly, may result in serious injury or death.

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## Contact

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Customer Service
801 W Madison street
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53594
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Tel.: 920.478.4678

www.trekbikes.com

## Limited warranty

Your bicycle is covered by a Limited Warranty.
Please visit our website for details.

For Service and Warranty, please contact your local authorized bike shop.
Refer to our website (Support) for the latest revision of this manual.

New features, as described in the latest manual, may not be applicable on your e-bike.

PN 5284737 - EN-US Rev.1, May 2022
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PN 5284737 - EN-US Rev. 1 (Gen-2)