The REACH

Electric Bike User Manual

BOWHEAD

bowheadcorp.com

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1 GENERAL

1.1 Use of the manual

Read this manual carefully before you start riding on your new Bowhead Reach. Safety instructions are very important and should not be overlooked. By doing so you will have a better understanding of the general operation of the bike and various bike parts. Some frequently asked questions and troubleshooting methods will be covered as well. Legal documentation, such as warranty, is included in this manual at your service. So, take a moment to read this manual before you start riding.

1.2 Service and technical support

This manual is not intended to be an extensive reference book about service, maintenance and/or repairs. Please consult your dealer for service and technical support. You can find more information about our products via our website(www.bowheadcorp.com) and various guided maintenance videos on our YouTube Channel (https://www.youtube.com/channel/UCqZii12qtvKGZOnqSHkXGQg).

IMPORTANT NOTICE

- Contact the place of purchase for information on installation and adjustment of the products which are not found in the user's manual.
- Do not disassemble or alter this product.
- Use the product according to local laws and regulations.

For safety, be sure to read this user's manual thoroughly before use, and follow them for correct use.

1.3 Initial Checks Before Use

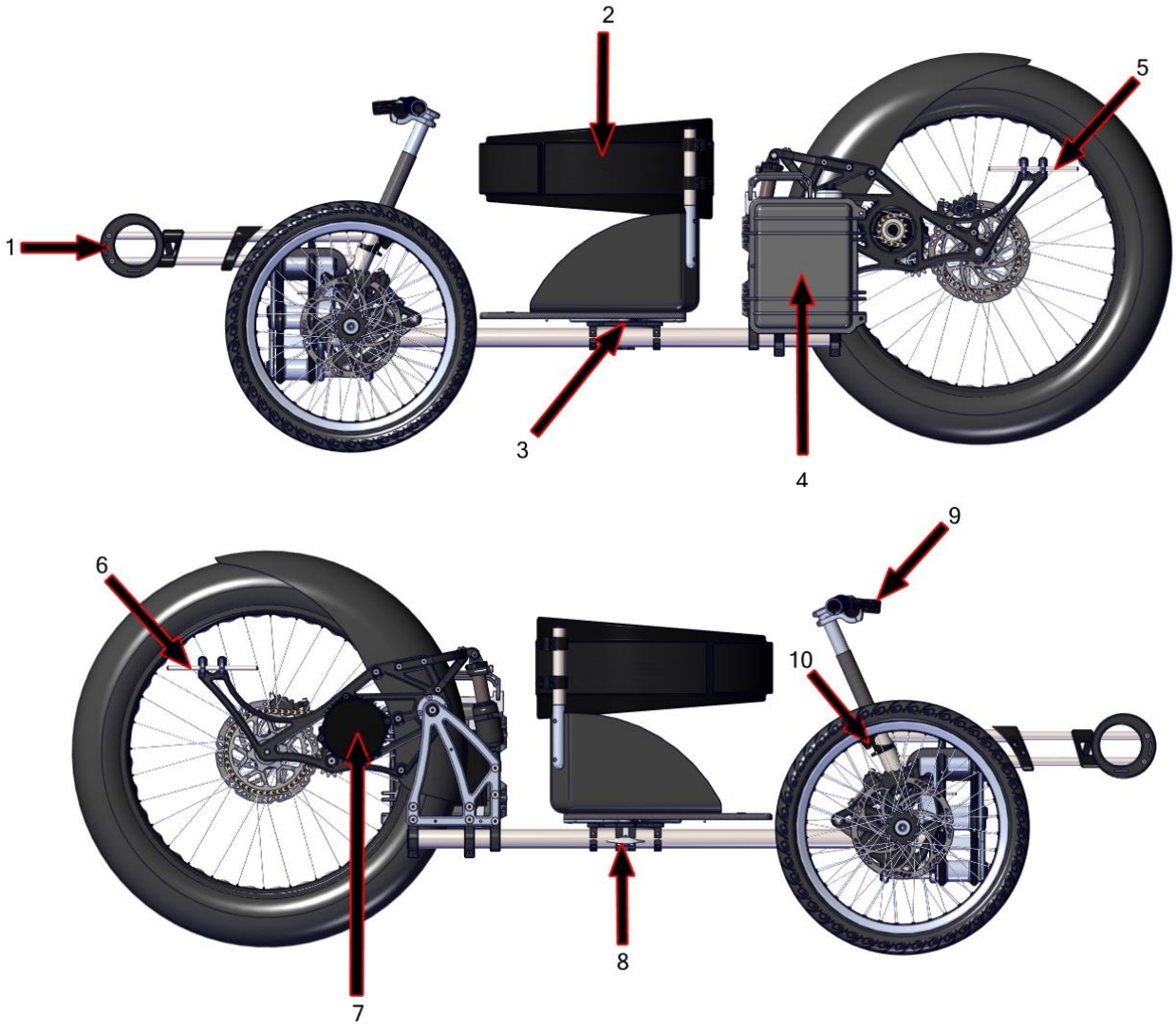
- Is the battery fully charged?
- Is the tire pressure adequate for usage? **Refer to tire for manufacturer recommended pressure inflation.**
- Are the brakes operating correctly?
- Are all adjustable screws securely tightened? **Refer to Figures A and B on Page 19 of this manual.**
- Are the shocks pumped to the correct pressure? **Refer to the shock User Manual to set appropriate pressure.**

1.4 Product Information and Specifications

	Model	The REACH
Bike Specifications	Overall Length and Width	80 in 26.5 in
	Front Wheel Diameter	20 in (406 ERD)
	Rear Wheel Diameter	26 in (559 ERD)
	Max Speed	33 km/h
	Range Per Charge	25-30 km (80V) 50-60 km (140V)
	Weight	96 lbs
	Turning Radius	80 in
	Wheelbase	49 in
	Front Suspension Travel	3 in
	Rear Suspension Travel	7.5 in
Battery	Rated Voltage	Standard: 80V X-Lrg: 140V
	Capacity	Standard: 15 Ah X-Lrg: 21 Ah
	Charging Time	~5 hours

1.5 Diagram of General Bike Components

1	Adjustable Foot Rest	**6**	Right side Accessory Mount
2	Harness	**7**	Motor
3	Seat Plate	**8**	Swivel Seat Lever
4	Battery	**9**	Brake and Throttle Controls
5	Left side Accessory Mount	**10**	Articulation Pin Storage Holder



2 SAFETY

2.1 Battery and Charger

- Keep the battery & charger away from water and open fire.
- Do not use the battery & charger for other purposes.
- Do not connect positive and negative terminals.
- Keep the battery away from children and pets.
- Do not subject the battery & charger to shocks (e.g. by dropping).
- Do not cover the battery & charger or place objects on top of it.
- Stop the charging procedure immediately if you notice a strange smell or smoke.
- Do not deform, modify, disassemble or apply solder directly to the battery. Doing so may cause leakage, overheating, bursting, or ignition of the battery.
- In the unlikely case that the battery is on fire, do NOT try to put it out with water. Use sand instead and call emergency services immediately.

2.2 Bike Usage

Before using the Reach on the open road, ride the bike in a secure area to get acquainted with riding this bike. Try all settings and differing terrain on the bike and get familiar with the results.

- Be sure to remove the battery and charging cable before wiring or attaching parts to the bicycle. Otherwise, an electric shock may result.
- When charging the battery while it is installed on the bicycle, do not move the bicycle. The power plug for the battery charger may come loose and not be fully inserted into the electrical outlet, resulting in risk of fire.
- If bolts and nuts are left loosened or the product is damaged, the bicycle may suddenly fall over and serious injury may result.
- Do not disassemble the product. Disassembling it may cause injury to persons.
- After reading the user's manual carefully, keep it in a safe place for later reference.

IMPORTANT NOTICE

The following section regarding usage of the rear push handle must be read and all safety procedures should be followed to avoid rider, or any other injury.

2.3 Rear Push Handle Usage

- The rear push handle is mounted to the rear swing arm and is equipped with a separate throttle and brake system. When the rear drive system is engaged the rider will only be able to supply steering input.
- The individual pushing the bike MUST be secured to the push handle via the waist and wrist strap at ALL times when the bike is powered on.

To attach the waist strap:

- Grab the free cord end and wrap it around your waist at approximately belly button level
- Secure the cord end by clipping the carabiner to a loop on the chain at a comfortable position

To attach the wrist strap:

- Slide the wrist strap over your hand and around your wrist and twist it around 2-3 times to fasten it

2.4 Transportation and Riding

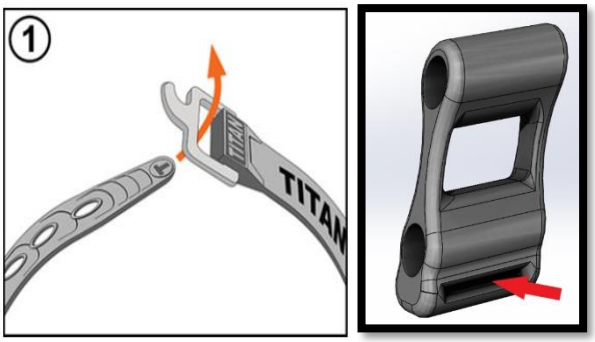
IMPORTANT NOTICE

All riders MUST wear a helmet and leg straps at ALL TIMES when operating the Bowhead Reach. A step by step demonstration of leg strap usage is outlined in section 2.5 following.

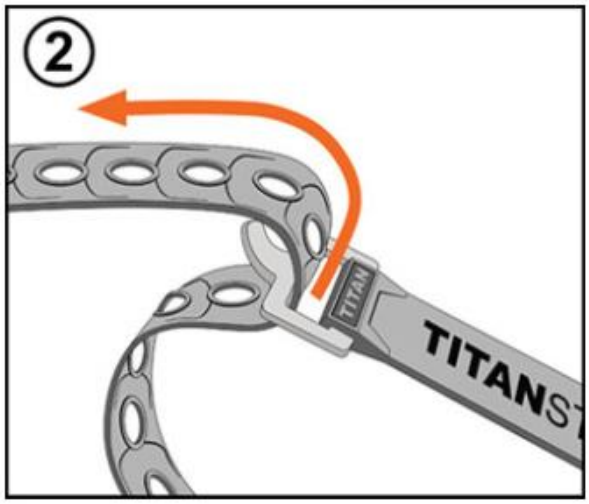
Batteries are not designed to be on the bike during transportation by car. Batteries must be taken off the bike(s) and transported separately inside the car. Battery removal steps will be covered in section 3.2 of this manual.

- The Bowhead Reach is not a street legal vehicle
- Riders MUST obey all posted speed limits and signage
- Not designed for downhill racing
- Not designed for any jumps including ramps or voids

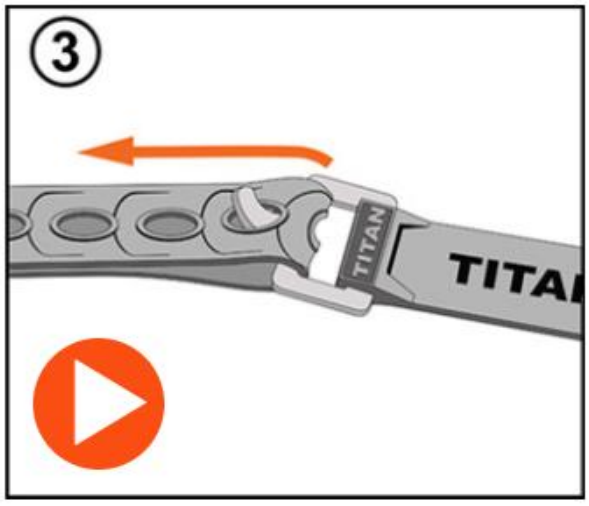
2.5 Leg Strap Information



Ensure the logo is facing outward and thread through the slot in the plastic foot rest spacer.

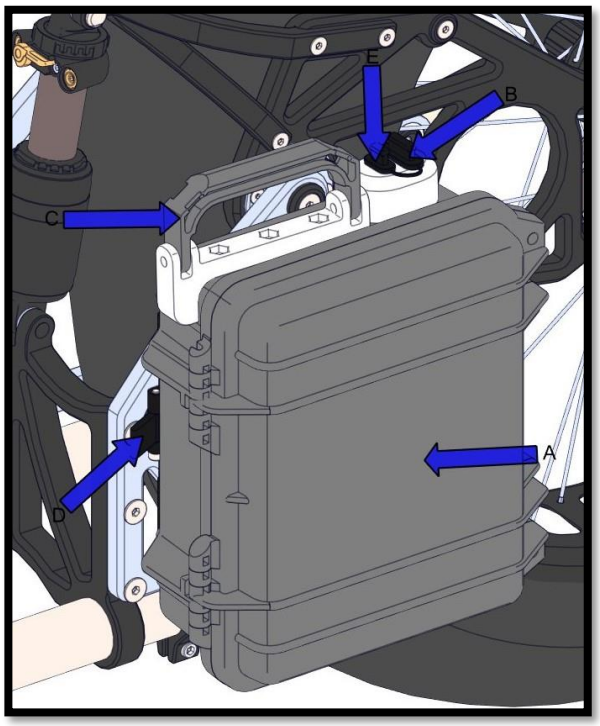


Thread the end around both of your legs and then through the buckle.



Stretch and secure the strap over flange. The tension in the strap is what secures it in place.

3 BATTERY OVER VIEW



A-Battery

B-Charging plug

C-Handle

D-Magnetic self-locking tab

E-Power socket

A- Power cord

B- Fuse

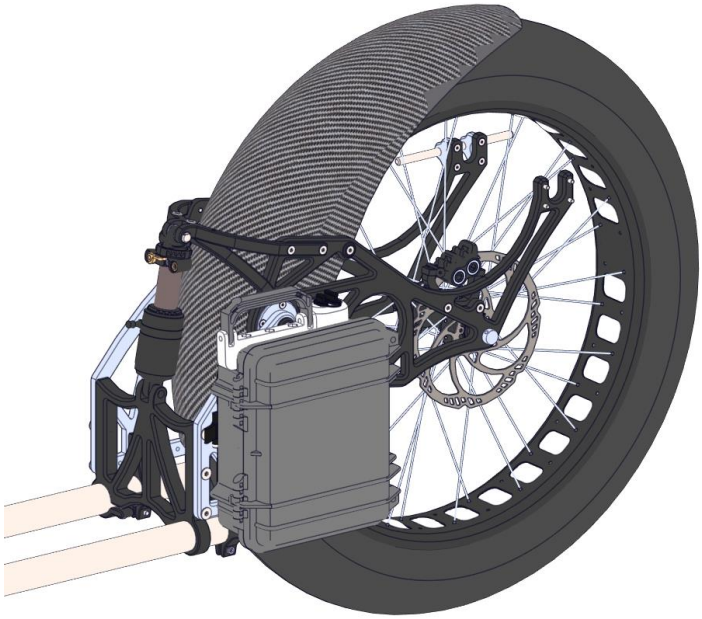
C- Power Supply to Battery

3.1 General Remarks

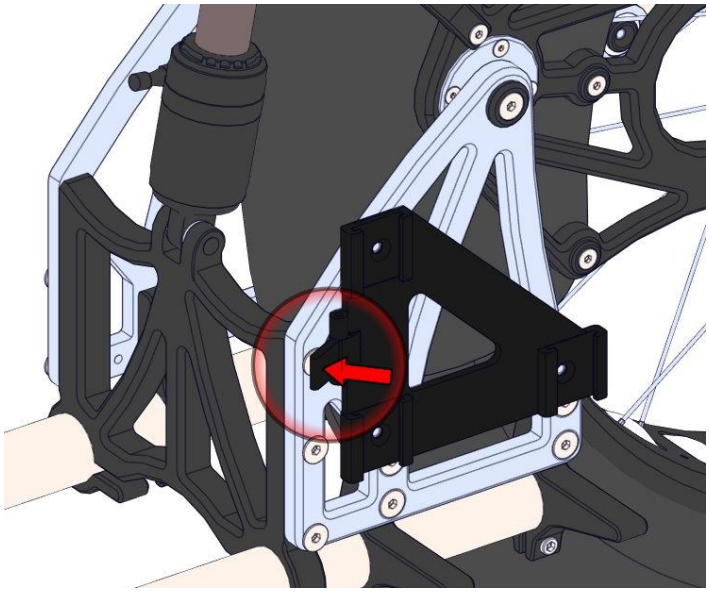
• Stop the charging procedure immediately if you notice a strange smell or smoke. Call the dealer for service or replacement.

• In the unlikely case that the battery is on fire, do NOT try to put it out with water. Use sand instead to cover the fire and call emergency services as soon as possible.

3.2 Removal of Battery

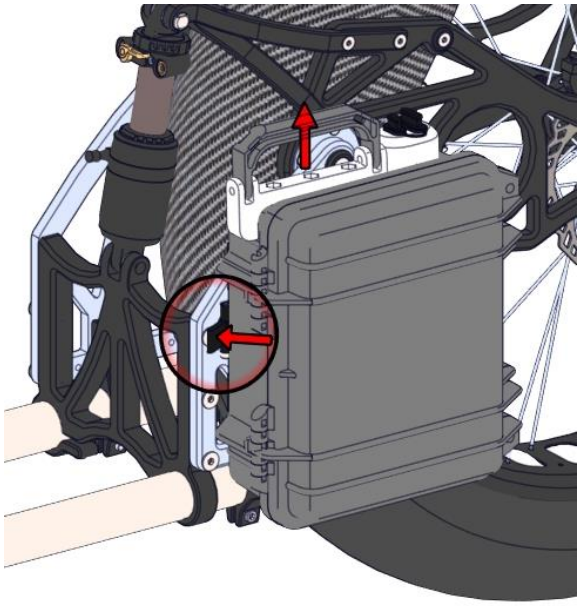


The battery is locked in place via a secure magnetic locking system under typical operating conditions.
User input is required to remove the system and recharge the battery.

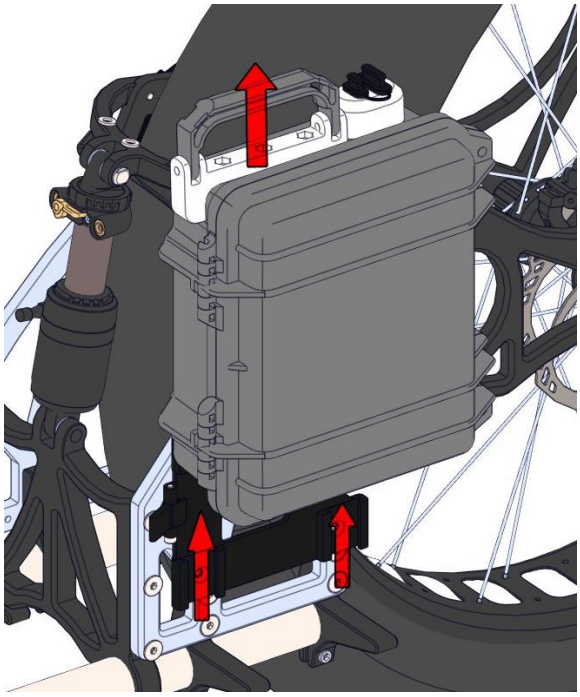


To remove the battery:

i. Press down (the direction indicated by the red arrow in the diagram) on the self-locking tab



ii. While pressing down on the self-locking tab, grab the handle mounted on the top of the battery case and pull upwards.



iii. Once the case begins to move along the case slots it is no longer necessary to manually engage the tab. The battery will slide up and out of the slots.

NOTE:

Please ensure to fully charge the battery if you are planning to ride your bike in the next 30 days AND leave it charging for at least 1 hour once a full charge is achieved. (This allows the Battery Management System to completely balance the individual cells inside the battery ensuring longevity and proper functioning of your battery.)

- If you are not planning on riding the bike in 30 days, the battery should be charged to approximately 80%. At this point the battery is safe for storage.

3.3 Charging the Battery

Charging the battery should be at room temperature (±20°C/68°F). Charging below 0°C or above 40°C (32°F~104 °F) can lead to insufficient charging and can be harmful to the battery life cycle.

Charger

- Not connected: Charger LED is green (constant).
- During charging: Charger LED is red (constant)
- Charging issue: Charger LED is red (blinking)
- Charging is completed (100%): Charger LED is green (constant)

Charger time table (Standard Size Battery)

	Charge time in kilometers
	15 Ah
80% Charge	15-20 km
100% Charge	25-30 km

Charger time table (XL Size Battery)

	Charge time in kilometers
	21 Ah
80% Charge	40-45 km
100% Charge	50-60 km

NOTE: When the battery is first received, please ensure you charge it for a minimum of 7 hours

- The battery takes approximately 5 hours to fully charge

3.4 Storage

If the bike is not used for a longer period (one month or more) the battery is best stored:

- At 80% of its capacity.
- Separate from the bike.
- At temperatures between 0°C and 40°C.
- In a safe and dry location.
- Checked every month. Charge when needed. Charging the battery should be done at a minimum of every 3 months. Negligence to do this could void the warranty of the battery.

3.5 Battery: Further Information

- Do not expose battery or charger to wet, rainy, or extremely humid conditions
- If battery or controller are exposed to moisture (from rain or washing your bike) you must open both cases and allow the internal components to completely dry before usage
- Only use the designated charger supplied with the battery

4 BIKE USAGE

4.1 Maintenance

Do not use high-pressure water or air hoses for cleaning. It can force water into electric components, which may cause malfunctioning.

Do not wash plastic components with excessive water. When the internal electrical parts are infected with water, the insulator may corrode which leads to power-drain or other problems.

Do not use soap solutions to wash the plastic components. Non-neutral solutions may cause color change, distortion, scratching etcetera.

Avoid leaving the bike outdoors.

When not riding, keep the bike in a location where it will be protected from snow, rain, sun etc. Snow and rain can cause the bike to corrode. The ultraviolet from the sun can fade the paint or crack any rubber or plastic on the bike. The carbon and anodized aluminium will fade if left out exposed to the sun.

NOTE: The following maintenance checks should be performed after the first 5 rides and again after every 15 rides or 6 months, whichever measurable occurs first.

- Check the M6 Socket head cap screws (6) on the rear frame clamp to ensure they are sufficiently tight (7.8 Nm or 5.75 lbft torque)
- Check the M8 socket countersunk head screws (16) on the rear system mount to ensure they are sufficiently tight (19.1 Nm or 14.09 lbft torque)
- Check all screws involved in the seat plate adjustment and footrest adjustment to ensure they are sufficiently tight
- Check the M8 flat head screws (6) on the front of the articulation to ensure they are sufficiently tight (19.1 Nm or 14.09 lbft torque)
- Check the tire pressure of all wheels referring to the manufacturer specifications on the side of the tire to ensure adequate levels for your riding environment
- Check shock pressure referring to the shock User Manual provided with the bike to achieve accurate levels

IMPORTANT NOTICE

A full torque chart and specs in metric and imperial units may be found on the following page.

DO NOT exceed the specified torque value as this may damage the bike and void warranty.

4.1.1 Torque Chart – Metric and Imperial

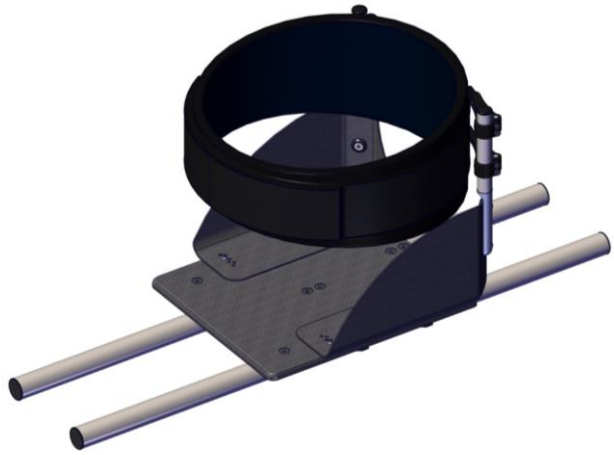
Torque Chart		
Size of Screw	Required Torque (Nm)	Required Torque (lbft)
M5	5.1	3.76
M6	7.8	5.75
M8	19.1	14.09

4.2 Range

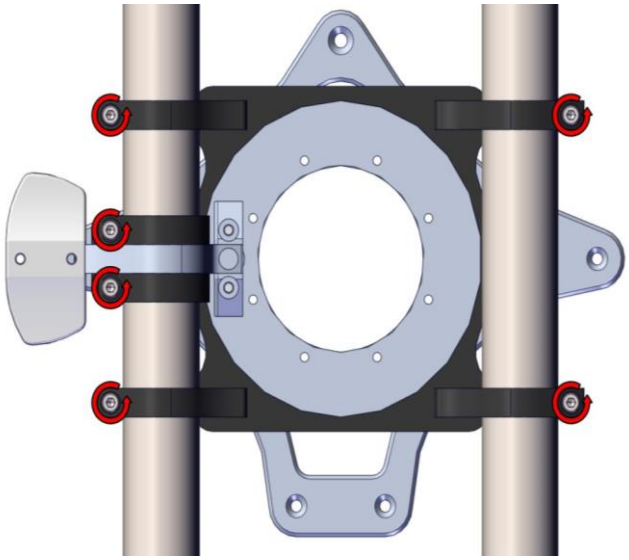
The range on one charge strongly depends on several circumstances, such as (but not limited to):

- Weather conditions such as ambient temperature and wind;
- Road conditions such as elevation and road surface;
- Bike conditions such as tire pressure and maintenance level;
- Bike usage such as acceleration;
- Rider and luggage weight;
- Charge and discharge cycles.

4.3 Seat Plate Adjustment



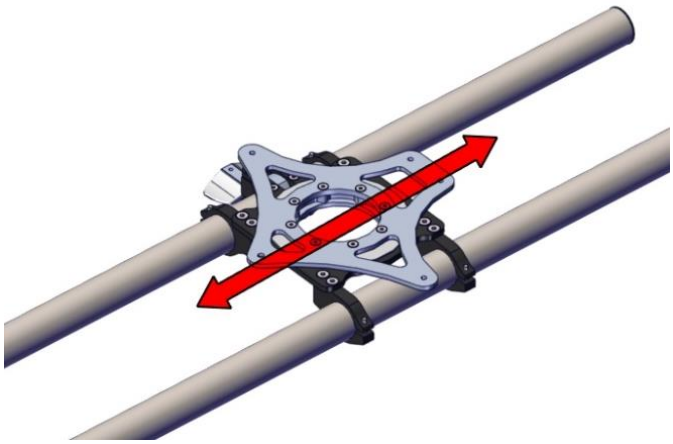
The seat is adjustable to slide along the frame rails to accommodate various user height requirements. It is secured in place by 6 M5 socket head cap screws.



To move the seat plate:

i. The 6 screws located on the bottom of the rail mount must be loosened.

A 5 mm Allen Key should be used in the direction depicted in the figure on the left to loosen these screws.

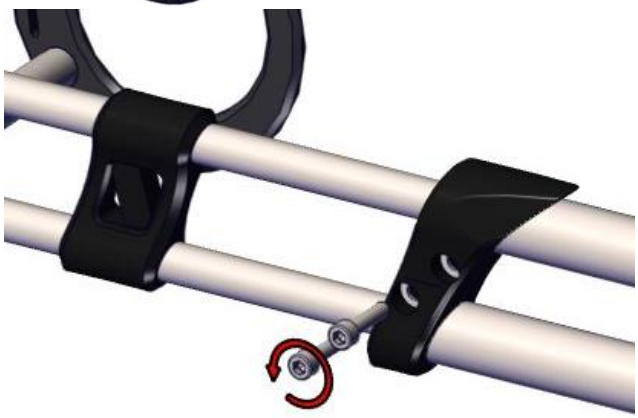


ii. The entire seat assembly may now be slid forward and backward to reach a comfortable position.

iii. After locating the seat in the appropriate position, the 6 screws must be tightened (4.6 Nm or 3.39 lbft torque) to secure the seat in its' new location.

4.4 Foot Rest Adjustment

Similar to the seat, the footrest may also be adjusted to an appropriate length for each individual user.
It is secured in place by 2 M6 socket head cap screws.

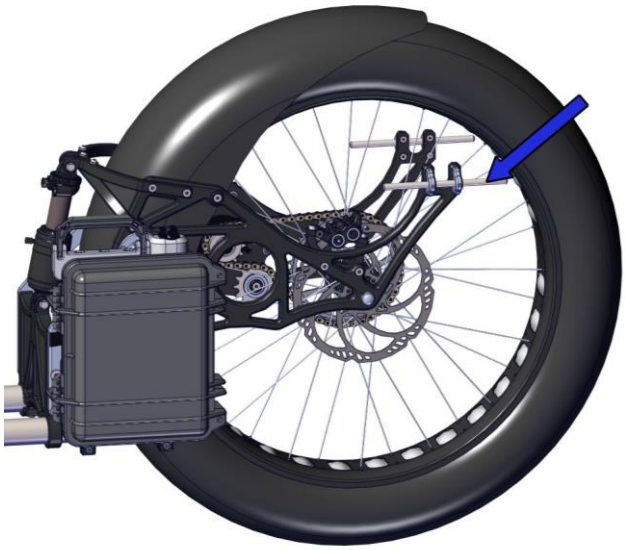


To move the footrest:

i. The 2 screws located on the left side of the footrest frame must be loosened.
   A 6 mm Allen Key should be used in the direction depicted in the figure to loosen/remove these screws.

ii. The footrest may now be slid forward or backward to lengthen or shorten this distance.
iii. Once the footrest is in a comfortable location for riding the 2 screws must be tightened (7.8 Nm or 5.75 lbft torque) to secure the new position.

4.5 Mounting Accessories

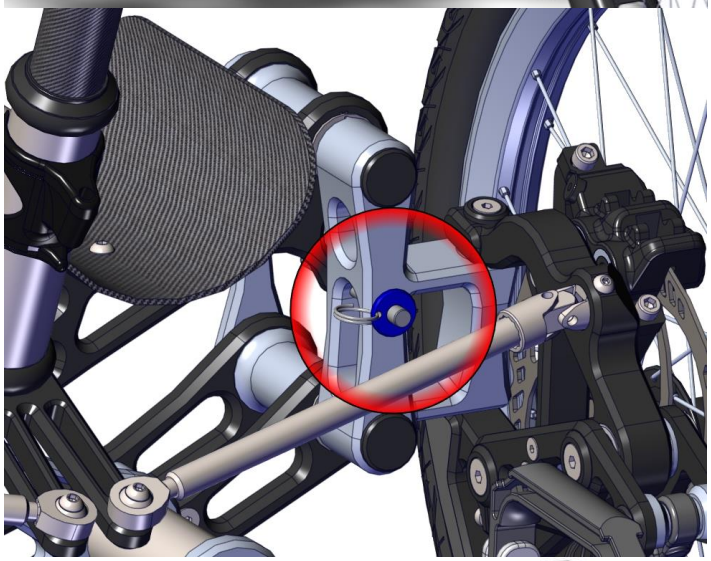


The rails installed on either side of the swing arm can be used to mount various accessories such as panier bags.

4.6 Articulation Locking Pin Removal and Storage

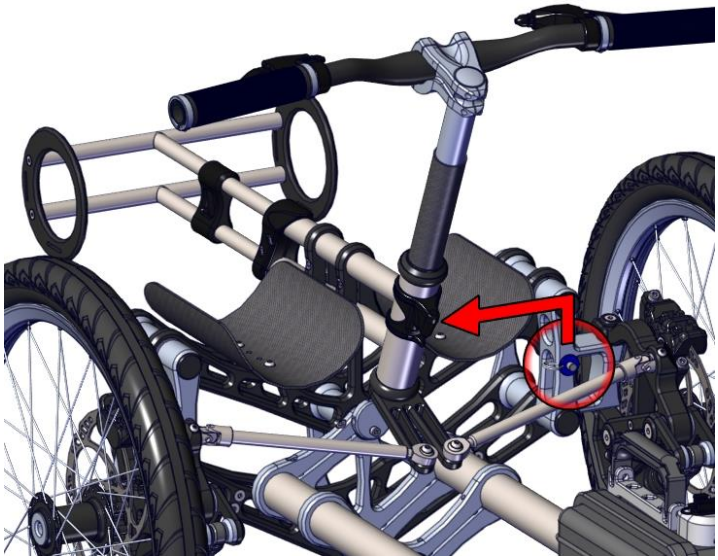
The pin highlighted by the red circle as seen in the figure locks any articulation movement of the bike.

This pin MUST be removed before riding the bike.



To remove the pin:

i. Press down on the pin and pull the pin from its slot ensuring you have a firm grip on the seat or harness so the bike will not fall once the pin is removed.



To store the pin:

ii. The pin should be stored in the mount shown in the figure on the left. The top of the pin must be pressed down in order to insert the pin in this storage mount.

iii. After riding, the pin should be put back in the original location to lock articulation movement once again.

4.7 Adjustable Screw Callout

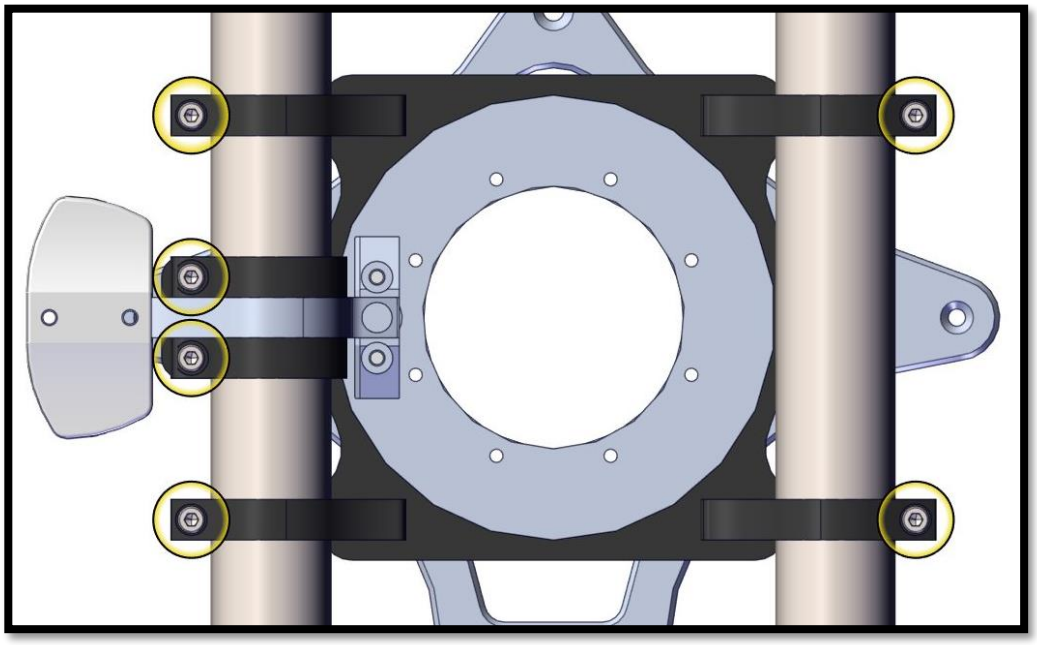


Figure A: Adjustable Seat Screws

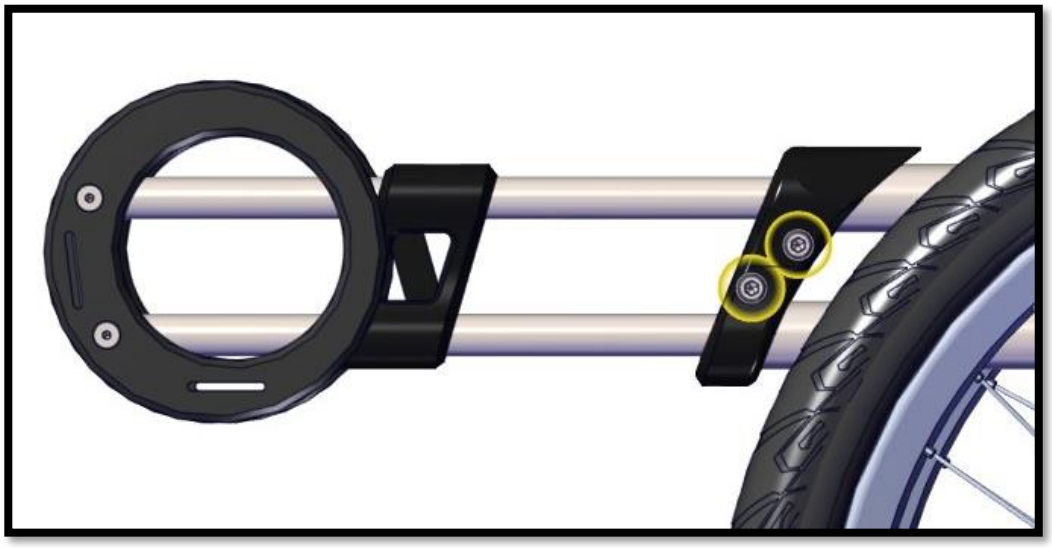


Figure B: Adjustable Footrest Screws

5 TROUBLESHOOTING

Issue/Problem	Description of Potential Cause	Troubleshooting Methods
No power: Bike is not moving	a. One or more of the connections may be loose, not plugged in, or damaged. b. Battery has been drained to unsafe levels.	1. Check the throttle connection. 2. Check the battery/controller connection. 3. Unplug and re-plug all connections if necessary. 4. Test the battery with a multi-meter to determine voltage

For any additional troubleshooting assistance, refer to www.bowheadcorp.com for contact information.

6 FREQUENTLY ASKED QUESTIONS

- **How do I bleed brakes?**
  - ✓ Refer to our Youtube Channel (https://www.youtube.com/channel/UCqZii12qtvKGZOnqSHkXGQg) for a complete brake bleeding demonstration.
- **Do I require a license or registration for the Reach bike?**
  - ✓ No.
- **How do you turn the battery on/off?**
  - ✓ Most are controlled from the handlebar
- **How long does it take to charge?**
  - ✓ Approximately 5 hours to charge, depending on the state of the battery prior to charge. If the battery is completely dead an additional charge time of 4 hours should be allotted.
- **How does it charge?**
  - ✓ The battery charges like any personal computer or cell phone. Plug the charger into a wall outlet and connect the charger to the battery. The Reach doesn't require you to remove the battery to charge, but it's always an option. Lights on the charger indicate when it is completely charged.
- **What's a watt hour?**
  - ✓ A watt hour is a measurement of battery capacity. Think of it as the "size of the gas tank."
- **What's the range?**
  - ✓ General range is 25-30 km/50-60 km depending on the battery size (80V or 140V respectively), terrain, and other riding conditions like load or wind.
- **Do I need insurance for my bike?**
  - ✓ No, you do not require any insurance to ride the Reach; however, many of our customers do choose to add these bikes to their home / tenants insurance policies.
- **Does it matter if the electronics get wet?**
  - ✓ Generally, the electronic items are sealed units, from the motor to battery to controller. They are all weatherproof and have been designed for all purpose use i.e mountain biking, where occasionally there are deep puddles. Your bike is expected to be able to handle this without any issues. If possible, try not to completely submerge your bike. If you fall into a lake for example, make sure the bike is recovered quickly, along with yourself. Allow the bike to dry off before turning back on and returning to the trail.
- **Where can I buy spare parts for my bike?**
  - ✓ Remember many of the components are regular cycle components, so you can pick up spares e.g inner tubes, tires, brake pads, etc from any good cycle shop. The electrical components are a little more niche. This is why we offer the

complete range of parts and spares available directly from our shop found on the bowheadcorp.com website.

- **I don't live local to you, what happens in the event of a problem?**
  - ✓ In the unlikely event of a problem, you can contact us via email where we will be happy to assist getting any issues resolved. Most cycle shops can work on the regular components and carry spares if required. These parts can also be ordered from us, again we can assist with fitting over the phone.