



**C E R O**

# **Bicycle Owner's Manual**

**Version 1.2**

**IMPORTANT:** This manual contains important safety, performance and service information. Read it before you take the first ride on your new bicycle, and keep it for reference.

[www.cero.bike](http://www.cero.bike)



# C E R O

## About this Manual

Thank you for choosing a CERO electric cargo bike as your new ride!

**IMPORTANT:** This manual contains important safety, performance and service information. Read it before you take the first ride on your new bicycle, and keep it for reference.

In case of a conflict between the instructions in this manual and information provided by a component manufacturer, always follow the component manufacturer's instructions.

If you have any questions or do not understand something, take responsibility for your safety and consult with your local bike mechanic or with CERO Bikes directly.

**NOTE:**

**This manual is not intended as a comprehensive use, service, repair or maintenance manual. Please contact CERO or your local professional bike mechanic for all service, repairs or maintenance inquiries beyond your ability or this manual.**

**NOTE:**

**This manual and its contents are subject to change without prior notice. For the most up-to-date version of the manual, consult <http://cero.bike>**

*This manual meets ISO-4210, 16 CFR 1512 and EN 14764, 14766 and 14781 Standards*

# Contents

## GENERAL WARNING

Safe use of a cargo bike p. 1

A special note to parents p. 2

### 1. First

A. Bike fit p. 3

B. Safety first p. 3

C. Mechanical Safety Check p. 3

D. First ride p. 5

### 2. Safety

A. The Basics p. 5

B. Riding Safety p. 6

C. Wet Weather Riding p. 7

D. Night Riding p. 8

F. Changing Components or Adding Accessories p. 9

### 3. Fit

A. Saddle position p. 10

B. Handlebar height and angle p. 11

### 4. Tech

A. Wheels p. 12

1. Adjusting the cam action mechanism p. 12

B. Brakes p. 13

C. Shifting gears p. 15

D. Pedals p. 16

E. Tires and Tubes p. 16

### 5. Service

A. Service Intervals p. 18

B. If your bicycle sustains an impact p. 20

Intended use of your bicycle p. 21


Recommended cargo loads p. 21


**READ AND FOLLOW THE WEIGHT LIMIT INFORMATION ON  
PAGE 21 BEFORE YOUR FIRST RIDE!**

# GENERAL WARNING:

Like any sport, bicycling involves risk of injury and damage. By choosing to ride a bicycle, you assume the responsibility for that risk, so you need to know — and to practice — the rules of safe and responsible riding and of proper use and maintenance. Proper use and maintenance of your bicycle reduces risk of injury.

This Manual contains many “Warnings” and “Cautions” concerning the consequences of failure to maintain or inspect your bicycle and of failure to follow safe cycling practices.

- The combination of the  safety alert symbol and the word **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.

- The combination of the  safety alert symbol and the word **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or is an alert against unsafe practices.

- The word **CAUTION** used without the safety alert symbol indicates a situation which, if not avoided, could result in serious damage to the bicycle, injury to the rider, or the voiding of your warranty.

Many of the Warnings and Cautions say “you may lose control and fall”. Because any fall can result in serious injury or even death, we do not always repeat the warning of possible injury or death.

Because it is impossible to anticipate every situation or condition which can occur while riding, this Manual makes no representation about the safe use of the bicycle under all conditions. There are risks associated with the use of any bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider. Remember, use common sense and follow the instruction in this manual for your safety.

# Safe use of your Cargo Bike:



**WARNING: Read, Understand, and follow these instructions for your safety.**

1. Whether or not you have ridden a cargo bike before, always keep in mind that loading of the bike will affect how the bike rides, handles, and stops.
2. Several factors affect the bike ride, including weight distribution in the front and back, the total amount of weight, including rider weight, the terrain of the ride, and the skill level of the rider.
3. Make sure to familiarize yourself with how the bike handles with and without loads, and understand how much you are personally able to handle.
4. Always ensure that your cargo is properly secured and will not loosen from vibration shift. Use readily available accessories such as nets and bungee cords to secure cargo tightly in place for your safety. Loads should not be free to slip while riding, it could cause an accident.
5. With the bike loaded, use extreme caution on take-off, braking, turning, and stopping.
6. Use the step-through geometry of the bike to your advantage: put your feet down firmly when necessary. Always mount and dismount with care.
7. Utilize your double-leg kickstand to park the bike while loading it safely before getting underway.
8. We recommend using the lowest gear (biggest cog) when starting the ride, so it is easier to start pedaling.
9. Take advantage of your Shimano STEPS 3 pedal-assist modes to help with take-off and riding. But be careful, accelerating too fast can be dangerous too, so familiarize yourself with the STEPS system and its different levels of assist.
10. If the loads are too heavy to allow the bike to be maneuverable, dismount and walk the bike. For extra support, use the Shimano STEPS Walk Assist Mode.
11. Practice with small loads, slow speeds, and no traffic before your first serious ride. Be careful when riding through traffic and always follow road rules.
12. Apply the rear disc brakes first and use both front and rear for gentle, smooth breaking. Do not break suddenly! Allow ample time and distance for brakes to take effect. Be aware of the road surface as dirt, debris and sand extend stopping distance, as do heavy loads.

**IMPORTANT: Rider and passenger MUST wear helmets, wear light color clothing, use lights and reflectors for safety while riding.**

# A Special Note for parents:



## **WARNING:**

*As a parent or guardian, you are responsible for the activities and safety of a minor child. That includes making sure that the bicycle is properly fitted to the child; that it is in good repair and safe operating condition; that you and your child have learned and understand safe operation of the bicycle; that you and your child have learned, understand and obey all applicable local motor vehicle, bicycle, traffic laws, and road signs. Also the common sense rules of safe and responsible bicycling will help to keep you safe and make the ride enjoyable*

*When your child rides on a child seat in the rear of the bicycle, make certain that the child seat has been installed properly and securely Always have your child wear a helmet and secure the seatbelt on the child seat.*

*Under no circumstances should a child seat be mounted on the front stem or stem lifter. Failure to follow this warning could result in serious injury or death.*

*As a parent or guardian, you must follow this manual, as well as review its warnings and the bicycle's functions and operating procedures with your child, before letting your child ride the bicycle.*

**WARNING:** Make sure that your child always wears an approved bicycle helmet when riding. Make sure that your child understands that a bicycle helmet is for bicycling, and should be removed when not riding. An impact to a helmet may damage the structure of the helmet so it may not be able to do its job in the future. Do not wear your riding helmet while playing, in play areas, on playground equipment, while climbing trees, or at any time while not riding a bicycle. Failure to follow this warning could result in serious injury or death.

When riding use bike lanes when and where available; wear light clothing; keep reflectors in place, secure and clean; wear a helmet; use the lights on the bicycle; keep your bicycle properly maintained.

# 1. First

NOTE: You must read this Manual in its entirety before your first ride. Read and make sure that you understand each section in this Manual. Refer to the cited sections on any issue which you don't completely understand. Your safety is important!

## A. Bike Fit

1. Is your bike adjusted to the right size for you? To check, see Section 3. If your bicycle is improperly adjusted to your height, you may lose control and fall. Always make sure to adjust the bike before riding.



2. Is the saddle at the right height? If you adjust your saddle height, follow the Minimum Insertion instructions. See Section 3.B.

3. Are saddle and seat post securely clamped? A correctly tightened saddle will allow no saddle movement in any direction. See Section 3.B.



4. Are the stem and handlebars at the right height for you? Are they properly tightened? If not, they need to be adjusted and tightened. See Section 3.B.

5. Can you comfortably operate the pedals, steering, and brakes?

6. Do you fully understand how to operate your new bicycle? If not, before your first ride, have CERO explain any functions or features which you do not understand. Go to [www.cero.bike](http://www.cero.bike) for more information and to Contact CERO Bikes.



## B. Safety first

1. Always wear an approved bicycle helmet, properly secured, when riding your bike, and follow the helmet manufacturer's instructions for fit, use and care. Also, wear light-colored clothing to increase your visibility to others on the road.

2. Do you have all the other required and recommended safety equipment, such as lights and reflectors? See Section 2. It's your responsibility to familiarize yourself with the laws of the areas where you ride, and to comply with all applicable laws. Bikes using public roads are in most cases treated the same as motor vehicles. Know and follow the rules of the road.

3. Do you know how to correctly secure your front and rear wheels? Check Section 4.A. to make sure. Riding with an improperly secured wheel can cause the wheel to wobble or disengage from the bicycle, and cause serious injury or death. Make sure the wheels are securely fastened.

## C. Mechanical Safety Check

Always check the condition of your bicycle before every ride.

**Nuts, bolts screws & other fasteners:** Make sure that the many fasteners on your bicycle are correctly and securely tightened. Fasteners being properly tightened is essential for riders safety! Correctly tightening a fastener requires a calibrated torque wrench. A professional bicycle mechanic with a torque wrench should torque the fasteners on your bicycle. If you choose to work on your own bicycle, you must use a torque wrench and the correct tightening torque specifications from the bicycle or component manufacturer. If you need to make an adjustment at home or in the field, we urge you to exercise care, and to have the fasteners you worked on checked by your mechanic as soon as

possible. *Note that there are some components which require special tools and knowledge. In Sections 3 and 4 we discuss the items which you may be able to adjust yourself. All other adjustments and repairs should be done by a qualified bicycle mechanic.*



**WARNING: Correct tightening force on fasteners –nuts, bolts, screws– on your bicycle is important. Too little force, and the fastener may not hold securely. Too much force, and the fastener can strip threads, stretch, deform or break. Either way, incorrect tightening force can result in component failure, which can cause you to lose control and fall, and may cause serious personal injury or death. Proper tightness can be checked on most fasteners with a torque wrench with the proper sockets and bits. Contact CERO for more information on torque values.**

Make sure nothing is loose. Lift the front wheel off the ground by two or three inches, then let it bounce on the ground. Anything sound, feel or look loose? Do a visual and tactile inspection of the whole bike. Any loose parts or accessories? If so, secure them. If you're not sure, ask someone with experience to check. Also, do the same test on the rear wheel.

**Tires & Wheels:** Make sure tires are correctly inflated (see Section 4). Check by putting one hand on the saddle, one on the intersection of the handlebars and stem, then bouncing your weight on the bike while looking at tire deflection. Compare what you see with how it looks when you know the tires are correctly inflated; and adjust if necessary.

Tires in good shape? Spin each wheel slowly and look for cuts in the tread and sidewall. Replace damaged tires before riding the bike. Make sure this inner tube is properly inside the tire and the tire is fitted in the rim properly.

Wheels true? Spin each wheel and check for brake clearance and side-to-side wobble. If a wheel wobbles side to side even slightly, or rubs against or hits the brake pads, take the bike to a qualified bike shop to have the wheel trued.



**CAUTION: Wheel truing is a skill which requires special tools and experience. Do not attempt to true a wheel unless you have the knowledge, experience and tools needed to do the job correctly.**

Wheel rims clean and undamaged? Make sure the rims are clean and undamaged at the tire bead and, if you have rim brakes, along the braking surface. Check to make sure that any rim wear indicator marking is not visible at any point on the wheel rim.



**WARNING: Bicycle wheel rims are subject to wear. Riding a wheel that is at the end of its usable life can result in wheel failure, which can cause you to lose control and fall.**

**Brakes:** Check the brakes for proper operation (see Section 4). Squeeze the brake levers. Are the disc brakes engaging the wheels? All control cables seated and securely engaged? Do not ride the bike until the brakes are properly adjusted by a professional bicycle mechanic.



- **Wheel retention system:** Make sure the front and rear wheels are correctly secured. See Section 4.
- **Seat post:** Check that it is properly adjusted and that the bolt is properly tightened to hold it at the required height. Follow all instructions on the seat post concerning minimum insertion. See Section 4.
- **Handlebar and saddle alignment:** Make sure the saddle and handlebar stem are parallel to the bike's center line and clamped tight enough so that you can't twist them out of alignment. Check the handlebar by straddling the front wheel and turning the wheel from side to side. If the handlebar stem moves when the wheel contacts your leg, the stem must be tightened. See Section 3.
- **Handlebar ends:** Make sure the handlebar grips are installed properly, secure and in good condition, with no cuts, tears, or worn out areas. Make sure the handlebar ends and extensions are plugged.



**WARNING: Loose or damaged handlebar grips or extensions can cause you to lose control and fall. Unplugged handlebars or extensions can cut you and cause serious injury in an otherwise minor accident.**

#### **VERY IMPORTANT SAFETY NOTE:**

**Please also read and become thoroughly familiar with the important information on the lifespan of your bicycle and its components in Appendix A.**

## **D. First ride**

When you buckle on your helmet and go for your first familiarization ride on your new bicycle, be sure to pick a controlled environment, away from cars, other cyclists, obstacles or other hazards. Ride to become familiar with the controls, features and performance of your new bike.

Familiarize yourself with the braking action of the bike. Test the brakes at slow speed, putting your weight toward the rear and gently applying the brakes, rear brake first. **Sudden or excessive application of the front brake could pitch you over the handlebars.** Applying brakes too hard can lock up a wheel, which could cause you to lose control and fall. Skidding is an example of what can happen when a wheel locks up.

Practice shifting the gears. Remember to never move the shifter while pedaling backward, nor pedal backwards immediately after having moved the shifter. This could jam the chain and cause serious damage to the bicycle, its components and the rider.

Check out the handling and response of the bike; and check the comfort.

If you have any questions, or if you feel anything about the bike is not as it should be, consult your mechanic before you ride again.

# **2. Safety**

## **A. The Basics**

**WARNING: The area in which you ride may require specific safety devices. IMPORTANT: It is your responsibility to familiarize yourself with the laws of the area where you ride and to comply with all applicable laws, including properly equipping yourself and your bike as the law requires.**

**Observe all local bicycle laws and regulations. Observe regulations about bicycle lighting, licensing of bicycles, riding on sidewalks, laws regulating bike path and trail use, helmet laws, child carrier laws, special bicycle traffic laws. It's your responsibility to know and obey the laws.**

1. Always wear a cycling helmet which meets the latest certification standards and is appropriate for the type of riding you do. Always follow the helmet manufacturer's instructions for fit, use and care of your helmet. Most serious bicycle injuries involve head injuries which might have been avoided if the rider had worn an approved, properly aligned, and properly secured helmet. Some cities and states have laws requiring helmet use.



**WARNING: Failure to wear a helmet when riding may result in serious injury or death.**

2. Always do the Mechanical Safety Check (Section 1.C) before you get on a bike.

3. Be thoroughly familiar with the location of the controls of your bicycle: brakes; pedals; steering and shifting, and how to use them and control them.

4. Be careful to keep body parts and other objects away from the sharp teeth of chain rings, the moving chain, the turning pedals, sprockets and cranks, and the spinning wheels of your bicycle.

5. Be sure passengers are secured in approved infant carriers and all loads are secured and properly balanced.

6. Always wear:

- Shoes that will stay on your feet and will grip the pedals. Make sure that shoe laces cannot get into moving parts, and never ride barefoot or in sandals.
- Bright, light colored, visible clothing that is not so loose that it can be tangled in the bicycle or snagged by objects at the side of the road or trail, should be worn at all times while riding, especially between sunset and sunrise.
- Protective eyewear, to protect against airborne dirt, dust and bugs — tinted when the sun is bright, clear when it's not.

7. Ride at a speed appropriate for road and weather conditions. Higher speed means higher risk.

## **B. Riding Safety**

1. Obey all Rules of the Road and all local and state traffic laws.

2. You are sharing the road or the path with others — motorists, pedestrians and other cyclists. Respect their rights.

3. Ride defensively. Always assume that others do not see you.

4. Look ahead, and be ready to avoid:

- Vehicles slowing or turning, entering the road or your lane ahead of you, or coming up behind you.
- Parked car doors opening into the roadway.

- Pedestrians stepping out in front of you
- Children or pets playing near the road.
- Pot holes, sewer grating, railroad tracks, expansion joints, road or sidewalk construction, debris and other obstructions that could cause you to swerve into traffic, catch your wheel or cause you to have an accident.

• There are many other hazards and distractions which can occur on a bicycle ride, stay focused on safely riding and controlling the bike.

5. Ride in designated bike lanes, on designated bike paths or as close to the edge of the road as possible, in the direction of traffic flow or as directed by local governing laws.

6. Stop at stop signs and obey traffic lights; slow down and look both ways at street intersections. Remember that a bicycle always loses in a collision with a motor vehicle, so be prepared to yield even if you have the right of way.



7. Use approved hand signals for turning and stopping or mount an accessory signaling device on your bicycle.

8. Never ride with headphones. They mask traffic sounds and emergency vehicle sirens, and may distract you from concentrating on what's going on around you, and their wires can tangle in the moving parts of the bicycle, causing you to lose control.

9. Never carry passengers on the racks. If mounting a Yepp Maxi Child Seat on the Rear Rack, make sure that the child seat is correctly and securely mounted and the child is secured and wearing an approved helmet.

10. Never carry anything which obstructs your vision or your complete control of the bicycle, or which could become entangled in the moving parts of the bicycle.

11. Never hitch a ride by holding on to another vehicle.

12. Don't do stunts, wheelies or jumps.

13. Don't weave through traffic or make any moves that may surprise auto drivers or other people with whom you are sharing the road.

14. Observe and yield the right of way.

15. Never ride your bicycle while under the influence of alcohol or drugs.

16. If possible, avoid riding in bad weather, when visibility is obscured, at dawn, dusk or in the dark, or when extremely tired. Each of these conditions increases the risk of accident. If you must ride at night, make sure reflectors are in place and not obscured, use front white and rear red lights, as required by law in most places, wear a helmet and light-colored or reflective clothing.

## C. Wet Weather Riding



**WARNING: Wet weather reduces traction, slows braking and reduces visibility, both for the bicyclist and for other vehicles sharing the road. The risk of an accident is dramatically increased in wet conditions, so you must take extra precautions.**

Under wet riding conditions, the stopping power of your brakes (as well as the brakes of other vehicles sharing the road) is dramatically reduced and your tires don't grip nearly as well, especially in turns. This makes it harder to control speed and easier to lose control. To make sure that you can slow down and stop safely in wet conditions, ride more slowly and apply your brakes earlier and more

gradually than you would under normal, dry conditions.

## E. Night Riding

**Riding a bicycle at night is much more dangerous than riding during the day.** A bicyclist is very difficult for motorists and pedestrians to see. Therefore, children should never ride at dawn, at dusk or at night. Adults who chose to accept the greatly increased risk of riding at dawn, at dusk or at night need to take extra care both riding and choosing specialized equipment which helps reduce that risk. Always use your lights when riding at night. Also, see #16 above.



**WARNING: Reflectors are not a substitute for required lights. Riding at dawn, at dusk, at night or at other times of poor visibility without an adequate bicycle lighting system and without reflectors is dangerous and may result in serious injury or death.**

Bicycle reflectors are designed and placed to pick up and reflect car lights and street lights in a way that may help you to be seen and recognized as a moving bicyclist.



**CAUTION: Check reflectors and their mounting brackets regularly to make sure that they are clean, straight, unbroken and securely mounted. Have your mechanic replace damaged reflectors and straighten or tighten any reflectors or mounting brackets that are bent or loose.**



**WARNING: Do not remove the front or rear reflectors or reflector brackets from your bicycle. They are an integral part of the bicycle's safety system. Removing reflectors to place front and rear lights in their place is also dangerous. Lights require power to operate and must be maintained. Reflectors use other light sources to help identify you as a bicycle.**

**Removing the reflectors reduces your visibility to others using the roadway. Being struck by other vehicles may result in serious injury or death.**

If you choose to ride under conditions of low light or poor visibility, check and be sure you comply with all local laws about night riding, and take the following strongly recommended additional precautions:

- Wear light colored, reflective clothing and accessories, such as a reflective vest, reflective arm and leg bands, reflective stripes on your helmet, flashing lights attached to your body and/or your bicycle ... any reflective device or light source that moves will help you get the attention of approaching motorists, pedestrians and other traffic.
- Make sure your clothing or anything you may be carrying on the bicycle does not obstruct a reflector or light.
- Make sure that your bicycle is equipped with functional, correctly positioned and securely mounted reflectors.

While riding at dawn, at dusk or at night:

- Always turn on your lights.
- Ride more slowly.
- Avoid dark areas and areas of heavy or fast-moving traffic.
- Avoid road hazards.
- If possible, ride on familiar routes.

If riding in traffic:

- Be predictable. Ride so that drivers can see you and predict your movements. Use hand signals.
- Be alert. Ride defensively and expect the unexpected.

## F. Changing Components or Adding Accessories

There are many components and accessories available to enhance the comfort, performance, safety and appearance of your bicycle. However, if you change components or add accessories, you do so at your own risk. The bicycle's manufacturer may not have tested that component or accessory for compatibility, reliability or safety on your bicycle. Before installing any component or accessory, including but not limited to a different size tire, rims, a lighting system, a luggage rack, a child seat, a trailer, etc., make sure that it is compatible with your bicycle by checking with the manufacturer. Be sure to read, understand and follow the instructions that accompany the products you purchase for your bicycle.



**WARNING:** Failure to confirm compatibility, properly install, operate and maintain any component or accessory can result in serious injury or death.



**WARNING:** Exposed springs on the saddle of any bicycle fitted with a child seat can create a pitch point and potentially cause serious injury to the child.



**WARNING:** Changing the components on your bike with other than genuine replacement parts may compromise the safety of your bicycle and may void the warranty. Check with CERO before changing the components on your bike.

## 3. Fit

**NOTE:** Correct fit of rider and bicycle is an essential element of bicycling safety, performance and comfort. See the drawing on the carton package for information on proper sizing or consult CERO for more information.



**WARNING:** If your bicycle does not fit properly, you may lose control, fall, and be injured. Always make sure you adjust the bike to fit you properly for safety, comfort, and best performance.

## A. Saddle position

Correct saddle adjustment is an important factor in getting the best performance and comfort from your bicycle.

The saddle can be adjusted in three directions:

1. Up and down adjustment. To check for correct saddle height:

- Sit on the saddle;
- Place one heel on a pedal;
- Rotate the crank until the pedal with your heel on it is in the down position and the crank arm is parallel to the seat tube.

If your leg is not completely straight, your saddle height needs to be adjusted. If your hips must rock for the heel to reach the pedal, the saddle is too high. If your leg is bent at the knee with your heel on the pedal, the saddle is too low.

To make saddle height adjustments:

- loosen the seat post clamp
- raise or lower the seat post in the frame seat tube
- make sure the saddle is facing straight forward
- re-tighten the seat post clamp until it's tight and secure

Once the saddle is at the correct height, make sure that the seat post does not project from the frame beyond its "Minimum Insertion" or "Maximum Extension" mark (fig. 4).



**WARNING: If your seat post is not inserted in the seat tube as described above, the seat post, binder or even frame may break, which could cause you to lose control and fall.**

2. Front and back adjustment. The saddle can be adjusted forward or back to help you get the optimal position on the bike. If you choose to make your own front and back adjustment, make sure that the clamp mechanism is clamping on the straight part of the saddle rails and is not touching the curved part of the rails with all fasteners tightened securely.

3. Saddle angle adjustment. Most people prefer a horizontal saddle; but some riders like the saddle nose angled up or down just a little. If you choose to make your own saddle angle adjustment and you have a single bolt saddle clamp on your seat post, it is critical that you loosen the clamp bolt sufficiently to allow any serrations on the mechanism to disengage before changing the saddle's angle, and then that the serrations fully re-engage before you securely re-tighten the clamp bolt.



**WARNING: When making saddle angle adjustments with a single bolt saddle clamp, always check to make sure that the serrations on the mating surfaces of the clamp are not worn. Worn serrations on the clamp can allow the saddle to move, causing you to lose control and fall.**

**Always tighten fasteners to the correct torque. Fasteners that are too tight can stretch and deform. Fasteners that are too loose can move, wear excessively and fatigue. Either mistake can lead to a sudden failure of the bolt or component, causing you to lose control and fall with possible injury.**

Small changes in saddle position can have a substantial effect on performance and comfort. To find your best saddle position, make only one

adjustment at a time.

**⚠ WARNING:** After any saddle adjustment, be sure that the saddle adjusting mechanism is properly seated and tightened before riding. A loose or improperly mounted saddle clamp or seat post clamp can cause damage to the seat post, or can cause you to lose control and fall. A correctly tightened saddle adjusting mechanism will allow no saddle movement in any direction. Regularly check to make sure that the saddle adjusting mechanism is properly tightened.

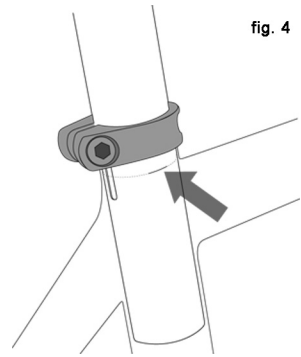


fig. 4

**⚠ WARNING:** Some people have claimed that extended riding with a saddle which is incorrectly adjusted or which does not support your pelvic area correctly can cause short-term or long-term injury to nerves and blood vessels, or other serious problems. If your saddle causes you pain, numbness or other discomfort, listen to your body and stop riding until you get components properly and safely adjusted. Also, contact CERO or see your mechanic about saddle adjustment or a different saddle to improve rider comfort.

## B. Handlebar height and angle

The CERO One is equipped with an adjustable stem for better rider comfort and control. To make adjustments:

1. For up and down adjustments of up to 100mm, release the clamp at the bottom of the Satori stem adjuster and lift up and down to fit your comfort level.
2. For angle adjustments, use a key wrench on the Satori stem to loosen up the bolts. After adjusting the angle, make sure to re-tighten the bolts until they are fully tightened.
3. After adjusting the angle, you might notice that the handlebar angle is not correct. To adjust the handlebar angle, loosen the 4 stem cap bolts on the front of the stem, rotate the handlebar for your best level of comfort and control, and securely tighten the bolts on the stem cap.

**⚠ WARNING:** Always tighten the clamp correctly. Never ride with the adjustable Satori stem lifter past the minimum point of 100mm. On the Satori Stem, always tighten all the bolts securely.

**⚠ WARNING:** An insufficiently tightened stem clamp bolt, handlebar clamp bolt may compromise steering action, which could cause you to lose control and fall. Place the front wheel of the bicycle between your legs and attempt to twist the handlebar/stem assembly. If you can twist the stem in relation to the front wheel, turn the handlebars in relation to the stem, or turn the bar end extensions in relation to the handlebar, the bolts are insufficiently tightened. Do not ride the bicycle until these

components are securely tightened.

## 4. Tech

It's important to your safety, performance and enjoyment to understand how things work on your bicycle. We urge you to ask a professional to do the things described in this section before you attempt them yourself.

### A. Wheels

Bicycle wheels are designed to be removable for easier transportation and for repair of a tire puncture. The wheel axles are inserted into slots, called “dropouts” in the fork and frame.



**WARNING: Riding with an improperly secured wheel can allow the wheel to wobble or fall off the bicycle, which can cause serious injury or death. Therefore, it is essential that you:**

- 1. Ask a professional to help you make sure you know how to install and remove your wheels safely.**
- 2. Understand and apply the correct technique for clamping your wheel in place.**
- 3. Each time, before you ride the bike, check that the wheel is securely tightened.**

**The clamping action of a correctly secured wheel must emboss the surfaces of the dropouts at the contact point in the front or rear of the unit.**

#### **1. IMPORTANT: Adjusting the cam action mechanism (fig. 8a)**

The wheel hub is clamped in place by the force of the over-center cam pushing against one dropout and pulling the tension adjusting nut, by way of the skewer, against the other dropout. The amount of clamping force is controlled by the tension adjusting nut. Turning the tension adjusting nut clockwise while keeping the cam lever from rotating and increases clamping force; turning it counterclockwise while keeping the cam lever from rotating reduces clamping force. Less than half a turn of the tension adjusting nut can make the difference between safe clamping force and unsafe clamping force. Learn how to use this device before the first ride and always be sure the wheel is clamped securely.





**DANGER:** The full force of the cam action is needed to clamp the wheel securely. Holding the nut with one hand and turning the lever like a wing nut with the other hand until everything is as tight as you can get it will **NOT** clamp a cam action wheel safely in the dropouts.



**WARNING:** If your bike has a disc brake, exercise care in touching the rotor or caliper. Disc rotors have sharp edges, and both rotor and caliper can get very hot during use.

## B. Brakes



### **WARNING:**

1. Riding with improperly adjusted brakes, worn brake pads, or wheels on which the rim wear mark is visible is dangerous and can result in serious injury or death.

2. Applying brakes too hard or too suddenly can lock up a wheel, which could cause you to lose control and fall. Sudden or excessive application of the front brake may pitch the rider over the handlebars, which may result in serious injury or death.

3. Disc brakes are extremely powerful. Take extra care in becoming familiar with how these brakes work and exercise particular care when using them.

After extended use, be careful not to touch a disc brake until it has had plenty of time to cool.

4. If replacing worn or damaged parts, use only manufacturer-approved genuine replacement part of the type found on the unit when purchased. If you have questions, contact CERO directly.

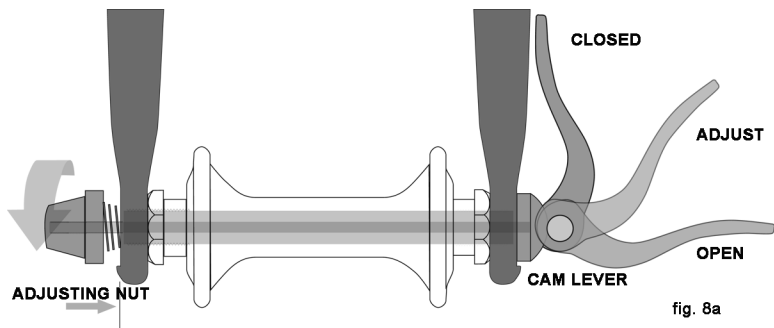
### 1. Brake controls and features

It's very important to your safety that you learn and remember which brake lever controls which brake on your bike. Traditionally, in the U.S. the right brake lever controls the rear brake and the left brake lever controls the front brake. This is done because most riders are right dominant. Excessive pressure on the front wheel brake can cause a pitch over accident and rider injury. To check how your bike's brakes are set up, squeeze one brake lever and look to see which brake, front or rear, engages. Now do the same with the other brake lever.

Make sure that your hands can reach and squeeze the brake levers comfortably, and always begin brake activation with the rear brake.

### 2. How brakes work

The braking action of a bicycle is a function of the friction between the braking surfaces. To make sure that you have maximum friction available, keep your wheel rims and brake pads or the disk rotor and caliper clean and free of dirt, lubricants, waxes or polishes. Also remember when riding in wet conditions that water is a lubricant so apply brakes earlier to add extra stopping distance to have a safe stop.



Brakes are designed to control your speed, not just to stop the bike. Maximum braking force for each wheel occurs at the point just before the wheel “locks up” (stops rotating) and starts to skid. Once the tire skids, you actually lose most of your stopping force and all directional control. You need to practice slowing and stopping smoothly without locking up a wheel. The technique is called progressive brake modulation. Instead of jerking the brake lever to the position where you think you’ll generate appropriate braking force, squeeze the lever, progressively increasing the braking force. If you feel the wheel begin to lock up, release pressure just a little to keep the wheel rotating just short of lockup. It’s important to develop a feel for the amount of brake lever pressure required for each wheel at different speeds and on different surfaces. To better understand this, experiment a little by walking your bike and applying different amounts of pressure to each brake lever, until the wheel locks.

When you apply one or both brakes, the bike begins to slow, but your body wants to continue at the speed at which it was going. This causes a transfer of weight to the front wheel (or, under heavy braking, around the front wheel hub, which could send you the rider over the handlebars).

A wheel with more weight on it will accept greater brake pressure before lockup; a wheel with less weight will lock up with less brake pressure. So, as you apply brakes and your weight is transferred forward, you need to shift your body toward the rear of the bike, to transfer weight back on to the rear wheel; and at the same time, you need to both decrease rear braking and increase front braking force. This is even more important while descending a hill, because descents shift weight forward.

Two keys to effective speed control and safe stopping are controlling wheel lockup and weight transfer. Practice braking and weight transfer techniques on flat surfaces first. Try a parking lot early in the day to avoid traffic and crowds.

Everything changes when you ride on surfaces with loose materials like sand, leaves or gravel or in wet weather. It will take longer to stop on loose surfaces or in wet weather. Tire adhesion is reduced, so the wheels have less cornering and braking traction and can lock up with less brake force. Moisture or dirt on the brake pads reduces their ability to grip. The way to maintain control on loose surfaces like gravel, dirt, sand, or wet surfaces is to go more slowly.

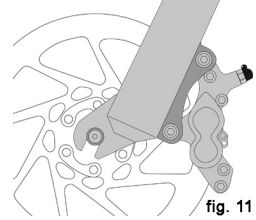
Additionally, when loading your bike with weight, it is even more critical to practice and apply all these safe breaking techniques since the bike becomes more difficult to control with more weight added.

## C. Shifting gears

### 1. How a derailleur drivetrain works

Your bicycle has a derailleur drivetrain, so the gear-changing mechanism will have:

- a rear cassette or freewheel sprocket cluster
- a rear derailleur to move the chain from one sprocket to another
- one shifter
- one set of chain rings
- a drive chain



#### a. Shifting Gears

The vocabulary of shifting can be pretty confusing.

A downshift is a shift to a “lower” or “slower” gear, one which is easier to pedal. An upshift is a shift to a “higher” or “faster”, harder to pedal gear.

So, at the rear gear cluster, what is called a downshift looks like an upshift. The way to keep things straight is to remember that shifting the chain in towards the centerline of the bike is for accelerating and climbing and is called a downshift. Moving the chain out or away from the centerline of the bike is for speed and is called an upshift.

Whether upshifting or downshifting, the bicycle derailleur system design requires that the drive chain be moving forward and be under at least some tension. A derailleur will shift only if you are pedaling forward. Trying to shift when the components are not moving can damage the drivetrain.

**⚠ CAUTION: Never move the shifter while pedaling backward, nor pedal backwards immediately after having moved the shifter. This could jam the chain and cause serious damage to the bicycle. Do not shift when the bicycle is not in motion. This could cause an accident and injure to the rider.**

#### b. Shifting the Rear Derailleur


The rear derailleur is controlled by the right shifter.

The function of the rear derailleur is to move the drive chain from one gear sprocket to another. The smaller sprockets on the gear cluster produce higher gear ratios. Pedaling in the higher gears requires greater pedaling effort, but takes you a greater distance with each revolution of the pedal cranks. The larger sprockets produce lower gear ratios. Using them requires less pedaling effort, but takes you a shorter distance with each pedal crank revolution. Moving the chain from a smaller sprocket of the gear cluster to a larger sprocket results in a downshift. Moving the chain from a larger sprocket to a smaller sprocket results in an upshift. In order for the derailleur to move the chain from one sprocket to another, the rider must be pedaling forward.

#### d. Which gear should I be in?

Find the “starting gear” which is right for your level of ability — a gear which is hard enough for quick acceleration but easy enough to let you start from a stop without wobbling — and carefully test upshifting and downshifting to get a feel for

the different gear combinations. Such testing is best done in a smooth level area with no auto traffic present. Test first at slower speeds, then at higher speeds. Learn to anticipate the need to shift, and shift to a lower gear *before* the hill gets too steep. If you have difficulties with shifting, the problem could be mechanical adjustment. See your mechanic for help.

 **WARNING: Never shift a derailleur onto the largest or the smallest sprocket if the derailleur is not shifting smoothly. The derailleur may be out of adjustment and the chain could jam, causing you to lose control and fall, resulting in injury to the rider.**


**e. What if it won't shift gears?**

If moving the shift control one click repeatedly fails to result in a smooth shift to the next gear chances are that the mechanism is out of adjustment. We recommend taking then the bike to your local mechanic to have it adjusted.

## **D. Pedals**

1. Toe Overlap is when your toe can touch the front wheel when you turn the handlebars to steer while a pedal is in the forwardmost position. This is common on small-framed bicycles. First check your foot position on the pedal. Having your heel on the pedal causes toe extension. Pedaling with the arch on the pedal can injure your arch. It is strongly recommended you pedal with the toe area of your foot on the pedal surface for better power, balance, and control. Also, the risk of toe overlap is avoided by keeping the inside pedal up and the outside pedal down when making sharp turns. On any bicycle, this technique will also prevent the inside pedal from striking the ground in a turn, as bicycles turn during turning.


**NOTE: Changing tire size or pedal crank arm length affects toe overlap. Consult your bike Mechanic before making pedal changes**

 **WARNING: Toe Overlap could cause you to lose control and fall. Whether you have overlap or not, you must keep the inside pedal up and the outside pedal down when making sharp turns.**

## **E. Tires and Tubes**


**1. Tires**

The size and pressure ratings are marked on the sidewall of the tire. The part of this information which is most important to you is Tire Pressure, measured in PSI.

 **WARNING: Never inflate a tire beyond the maximum pressure marked on the tire's sidewall or the wheel rim. If the maximum pressure rating for the wheel rim is lower than the maximum pressure shown on the tire, always use the lower rating. Exceeding the recommended maximum pressure may blow the tire off the rim or damage the wheel rim, which could cause damage to the bike and injury to the rider and bystanders. Always check for proper pressure with a good tire gauge**

after inflating and be sure the tire is properly seated on the rim, and that the tube is not pinched between the tire and rim. Incorrect inflation can cause an accident with rider injury.


The best and safest way to inflate a bicycle tire to the correct pressure is with a hand or foot bicycle pump which has a built-in pressure gauge.

 **WARNING:** There is a safety risk in using gas station air hoses or other air compressors. They are not made for bicycle tires. They move a large volume of air very rapidly, and will raise the pressure in your tire very rapidly, which could cause the tube to explode, with possible injury to the person inflating the tire or while riding.

Tire pressure is given either as maximum pressure or as a pressure range. How a tire performs under different terrain or weather conditions depends largely on tire pressure. Inflating the tire to near its maximum recommended pressure gives the lowest rolling resistance; but also produces the harshest ride. High pressures work best on smooth, dry pavement.

Very low pressures, at the bottom of the recommended pressure range, give the best performance on smooth, slick terrain such as hard-packed clay, and on deep, loose surfaces such as deep, dry sand.


Tire pressure that is too low for your weight and the riding conditions can cause a blowout of the tube by allowing the tire to deform sufficiently to pinch the inner tube between the rim and the riding surface. Blowouts could cause accidents and injure rider.

 **CAUTION:** Pencil type automotive tire gauges can be inaccurate and should not be relied upon for consistent, accurate pressure readings. Instead, use a high quality dial gauge.

## 2. Tire Valve


There are primarily two kinds of bicycle tire valves: The Schraeder Valve and the Presta Valve. The bicycle pump you use must have the fitting appropriate to the valve stems on your bicycle. The CERO One's tires are outfitted with Presta Valves.


To inflate a Presta valve tire using a Presta headed bicycle pump, remove the valve cap; unscrew (counterclockwise) the valve stem lock nut; and push down on the valve stem to free it up. Then push the pump head on to the valve head, and inflate. To inflate a Presta valve with a Schraeder pump fitting, you'll need a Presta adapter (available at your bike shop) which screws on to the valve stem once you've freed up the valve. The adapter fits into the Schraeder pump fitting. Close the valve after inflation. To let air out of a Presta valve, open up the valve stem lock nut and depress the valve stem.

 **WARNING:** We highly recommend that you carry a spare inner tube when you ride your bike, unless the bike is fitted with tubeless tires. Patching a tube is an emergency repair. If you do not apply the patch correctly or apply several patches, the tube can fail, resulting in possible tube failure, which could cause you to lose control and fall. Replace a

patched tube as soon as possible.

## 5. Service

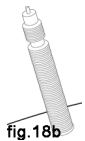
 **WARNING:** Bicycle are no longer simple products. Technological advances have made bicycles and their components more complex, and the pace of innovation is increasing. It is impossible for this manual to provide all the information required to properly use, repair and/or maintain your bicycle. In order to help minimize the chances of an accident and possible injury, the owner and rider must check and maintain the unit. It is also critical that you have any repair or maintenance which is not specifically described in this manual performed by your mechanic. Equally important is that your individual maintenance requirements will be determined by everything from your riding style, amount of use, proper storage, to geographic location. Consult CERO or your mechanic for help in determining your maintenance requirements.

 **WARNING:** Many bicycle service and repair tasks are best performed by persons with special knowledge and tools. Do not begin any adjustments or service on your bicycle until you have learned from this manual and/or one of the many books on bicycle service and repair and/or your mechanic on how to properly complete them. Improper adjustment or service may result in damage to the bicycle or in an accident which can cause serious injury or death to riders and passengers.

### A. Service Intervals

Some service and maintenance can and should be performed by the owner, and require no special tools or knowledge beyond what is presented in this manual.

The following are examples of the type of service you should perform yourself. All other service, maintenance and repair should be performed in a properly equipped facility by a qualified bicycle mechanic using the correct tools and procedures specified by the manufacturer.



1. Break-in Period: Your bike will last longer and work better if you break it in before riding it hard. Control cables and wheel spokes may stretch or “seat” when a new bike is first used and may require readjustment by you or your mechanic. Your Mechanical Safety Check (Section 1.C) will help you identify some things that need readjustment. But even if everything seems fine to you, it’s best to take your bike back to your mechanic for a checkup. Professionals typically suggest you bring the bike in for a 30 day checkup. Another way to judge when it’s time for the first checkup is to bring the bike in after three to five hours of hard riding, or about 10 to 15 hours of on-road or more casual off-road use. But at any time if you think something is wrong with the bike, take it to your mechanic or contact CERO before riding it again.

2. Before every ride: Mechanical Safety Check (Section 1.C)

3. After every long or hard ride; if the bike has been exposed to water or grit; or at least every 100 miles: Clean the bike and lightly lubricate the chain’s rollers

with a good quality bicycle chain lubricant. Wipe off excess lubricant with a lint-

free cloth. Lubrication is a function of climate. Talk to your mechanic about the best lubricants and the recommended lubrication frequency for your area. Areas where there is salt, sand or high moisture require more maintenance.

4. After every long or hard ride or after every 10 to 20 hours of riding:

- Squeeze the front brake and rock the bike forward and back. Everything feel solid? If you feel a clunk with each forward or backward movement of the bike, you probably have a loose headset. Have your mechanic check it. If the brakes are pressed tight and the wheel still rolls, adjustment is needed.

- Lift the front wheel off the ground and swing it from side to side. Feel smooth? If you feel any binding or roughness in the steering, you may have a tight headset. Have your mechanic check it.

- Grab one pedal and rock it toward and away from the centerline of the bike; then do the same with the other pedal. Anything feel loose? If so, have your mechanic check it.

- Take a look at the brake pads. Starting to look worn or not hitting the disc brake pads properly? Time to have your mechanic adjust or replace them.

- Carefully check the control cables and cable housings. Any rust? Kinks? Fraying? If so, have your mechanic replace them if needed.

- Squeeze each adjoining pair of spokes on either side of each wheel between your thumb and index finger. Do they all feel about the same? If any feel loose, have your dealer check the wheel for spoke tension and trueness.

- Check the tires for excess wear, cuts or bruises. Have your dealer replace them if necessary.

- Check the wheel rims for excess wear, dings, dents and scratches. Consult your dealer if you see any rim damage.

- Check to make sure that all parts and accessories are still secure, and tighten any which are not.

- Check the frame, particularly in the area around all tube joints; the handlebars; the stem; and the seatpost for any deep scratches, cracks or discoloration. These are signs of stress-caused fatigue and indicate that a part is at the end of its useful life and needs to be replaced. See your mechanic for help.

5. As required: If either brake lever fails the Mechanical Safety Check (Section 1.C), don't ride the bike. Have your dealer check the brakes and repair as needed.

If the chain won't shift smoothly and quietly from gear to gear, the derailleur is out of adjustment, see your mechanic and adjust or repair if needed.

**Visit [www.cero.bike](http://www.cero.bike) to learn more about your limited warranty.**



**WARNING:** Like any mechanical device, a bicycle and its components are subject to wear and stress. Different materials and mechanisms wear or fatigue from stress at different rates and have different life cycles. If a component's life cycle is exceeded, the component can suddenly and catastrophically fail, causing serious injury or death to the rider. Scratches, cracks, fraying and discoloration are signs of stress-caused fatigue and indicate that a part is at the end of its useful life and needs to be replaced. While the materials and workmanship of your bicycle or of individual components may be covered by a warranty for a specified period of time by the manufacturer, this is no guarantee that the product or component will last the term of the warranty. Product life is often related to the kind of riding you do and to the treatment to which you subject the bicycle. The bicycle's warranty is not meant to suggest that the bicycle cannot be broken or will last forever. It only means that the bicycle is covered subject to the terms of the warranty.

### **B. If your bicycle sustains an impact:**

First, check yourself for injuries, and take care of them as best you can or seek a professional. Seek medical help if necessary.

Next, check your bike for damage.

After any crash, take your bike to your dealer for a thorough check. Bike helmets also need to be checked after impact as they may begin to crack or separate and be unable to protect you. Replace any helmet that has had a serious impact.



**WARNING:** A crash or other impact can put extraordinary stress on bicycle components, causing them to fatigue prematurely.

Components suffering from stress fatigue can fail suddenly and catastrophically, causing loss of control, serious injury or death.

**Enjoy your new CERO Bicycle and maintain it properly for safe use and years of riding enjoyment. Read this manual and retain it for future use.**



## Intended use of your bicycle



**WARNING:** Understand your bike and its intended use as a light duty cargo transport. Using the bicycle for other purposes can be hazardous. Using your bike the wrong way is dangerous.

**INTENDED** To be ridden on paved roads, plus smooth gravel roads and improved trails with moderate grades where the tires do not lose ground contact.

**NOT INTENDED** For off-road, mountain bike, cyclocross, for touring with racks or panniers, or for any kind of jumping. Do not ride on extremely rough surfaces, even if paved.

## RECOMMENDED MAX CARGO LOADS:

### Individual Racks

REAR: 55 lbs / 25 kg

or

FRONT: 55 lbs / 25 kg

### COMBINED Front and Rear Racks

(55 lbs / 25 kg Rear + 22 lbs / 10 kg in Front)

or

(55 lbs / 25 kg Front + 22 lbs / 10 kg in Rear)



**WARNING:** Note that loading the front and rear of the bike to capacity will severely affect performance and safety of the bike and rider. Familiarize yourself with a front/back weight distribution you plan to use before beginning to ride to ensure a safe ride. Failure to follow the warning could result in an accident serious injury or death.



**WARNING: MAXIMUM LOADS (RIDER WEIGHT + CARGO) NOT TO EXCEED 300 LBS**



Failure to follow these limits could damage your bicycle and/or cause an accident and injuries to the rider.