



**BICYCLE ASSEMBLY & MAINTENANCE
INSTRUCTIONS**

SECTION I

Assembly Instructions

NOTE: If you bought your SWOBO bicycle directly from the SWOBO web site, this section of the manual will help you in the final assembly of the bicycle. Once the bicycle is assembled and before your first ride, please be sure to read the Safety and Maintenance sections of this manual, which start on page 13 and page 35.

⚠ WARNING: Bicycling can be a hazardous activity even under the best of circumstances. Proper assembly and maintenance of this bicycle is your responsibility, as it helps reduce the risk of injury. Riding a bicycle which is improperly assembled or maintained can result in possible injury or death.

BEFORE YOU START:

1. Make sure that you have received the correct model and size.
2. Review these instructions and illustrations.
3. NOTE that the directions *left*, *right*, *front* and *rear* are used here as seen by a rider while seated on the bicycle.

TOOLS NEEDED:

You will need most of the following tools:

- a 15 millimeter open-end wrench *or* a 6 or 8 inch adjustable wrench
- 2.5, 4, 5 and 6 millimeter metric hex wrenches
- a small tube of white Lithium grease
- a rag for cleaning off excess grease



For your convenience, SWOBO offers an assembly tool kit on its web site, www.swobo.com.

PREPARATION:

1. Review the Assembly section of this manual in its entirety.
2. Remove the bicycle and parts box from the shipping box. Check to make sure that no parts remain in the box.
3. Carefully remove the front wheel, which is attached to the side of the bicycle for shipping.
4. Carefully remove all other packing material from the bicycle. This includes all zip ties, axle caps and material protecting the frame. You can cut the zip ties with scissors, a knife, or with wire cutters.

ASSEMBLY:

⚠ CAUTION: NEVER squeeze the disc brake control lever when the front wheel is not securely installed. Be careful not to damage the disc rotor or calipers when inserting the wheel.

1. INSTALL THE FRONT WHEEL

If your wheel has fixed axle nuts (fig 1):

- a. With the fork facing forward, insert the wheel axle into the slots at the tip of the fork so that the axle seats firmly at the top of the slots.
- b. While pushing the wheel firmly to the top of the slots in the dropouts, and at the same time centering the wheel rim in the fork, use a 15mm box wrench or an adjustable wrench to tighten the axle nuts.
- c. Spin the wheel to make sure that it is centered in the frame and does not wobble. If the wheel is not centered, loosen the nuts and try again.



fig. 1

If your wheel has an axle skewer (fig 2):

- a. Unscrew the tension nut from the end of the wheel retention skewer; insert the skewer into the hollow axle with the narrow end of the conical springs facing the hub; then re-install the tension nut.
- NOTE: If the wheel has a disc brake rotor, exercise care during the next step when inserting the rotor into the brake caliper.*
- b. With the fork facing forward, insert the wheel axle into the slots at the tip of the fork so that the axle seats firmly at the top of the slots.
- c. While pushing the wheel firmly to the top of the slots in the dropouts, and at the same time centering the wheel rim in the fork, use a 5mm hex wrench to tighten the tension nut as tight as you can.
- d. Spin the wheel to make sure that it is centered in the frame and does not wobble. If the wheel is not centered, loosen the nuts and try again.



fig. 2

⚠ WARNING: Riding with an improperly tightened wheel can allow the wheel to wobble or disengage from the bicycle, causing damage to the bicycle, and serious injury or death to the rider.

2. INSTALL THE HANDLEBAR

a. Using a 5mm or 6mm hex wrench, remove the stem's handlebar clamp plate from the stem (fig. 3a & 3b). Put a little bit of grease on the threads of each bolt; then place the center of the handlebar in the groove of the stem. Hold the handlebar in position against the stem, then loosely replace the clamp plate and bolts. If your SWOBO has only one hand brake, the front brake lever should be on the left (fig 3c). If your SWOBO has two hand brakes, the front brake lever should be on the left and the rear brake lever should be on the right.

b. Rotate the handlebar to a comfortable position and angle.

c. Securely tighten the handlebar clamp bolts, first by turning them clockwise with the hex wrench the same number of turns until force is required; then tightening each alternatively an equal amount until they are secure and you cannot twist the handlebar out of position.

⚠ WARNING: Failure to properly tighten the handlebar clamp bolts 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 or turn the handlebars in relation to the stem, tighten the appropriate bolts.

If your SWOBO has a cable-activated hand brake:

3. CONNECT THE BRAKE CABLE AT THE LEVER

a. Squeeze the brake lever against the grip; then insert the barrel end of the front brake cable into the slot in the brake lever (fig 4a, b & c).

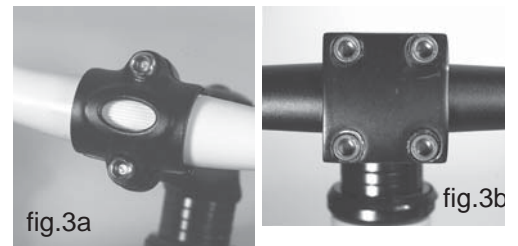
b. Release the brake lever, then tighten the adjusting barrel locknut snugly by turning it clockwise. If your SWOBO has a caliper brake, close its quick-release (fig 5).

c. Make sure that the brake lever is securely clamped and cannot rotate on the handlebar.

d. Squeeze the brake lever and make sure that there is at least one inch of clearance between the tip of the lever and the handlebar grip at the point where the brake is fully engaged. If there is less than one inch of clearance, go to **ADJUSTMENTS, 3. Brake adjustment** below.

f. Spin the wheel to make sure that the brake pads do not touch the disc rotor or wheel rim when the brake is fully released.

g. If one brake pad is touching the rotor or wheel rim, see **ADJUSTMENTS, 3. Brake adjustment** below.



⚠ WARNING: Riding with improperly adjusted brakes is dangerous and can result in serious injury or death.

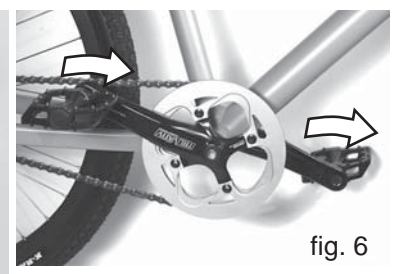
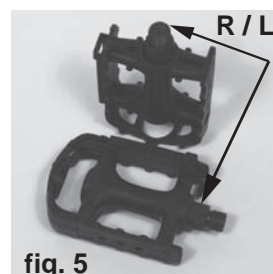
4. INSTALL THE PEDALS:

⚠ WARNING: Improperly installed and tightened pedals can work loose, damaging the bicycle and causing possible serious injury or death to the rider.

a. Apply a small amount of grease to the threads of each pedal.

b. Look for the letter "L" or "R" on the side or end of each pedal spindle (fig 6).

c. Turning the spindle *clockwise* by hand (fig 6), thread the pedal marked "R" into the crank arm on the right (drive) side of the bicycle. Make sure that you are not "cross-threading", which can strip the threads in the crank arm. If the threads do not turn easily, don't force them. Back the spindle out and start over. Once the pedal is threaded into the crank, tighten the spindle securely to the crank arm with a 15mm open end or an



adjustable wrench.

d. Turning the spindle *counterclockwise* by hand (fig 7), thread the pedal marked “L” into the crank arm on the left side of the bike. Make sure that you are not “cross-threading”, which can strip the threads in the crank arm. If the threads do not turn easily, don’t force them. Back the spindle out and start over. Once the pedal is threaded into the crank, tighten the spindle securely to the crank arm with a 15mm open end or an adjustable wrench.

5. ATTACH THE SEAT POST AND SADDLE:

a. Using a 5mm or 6mm hex wrench, loosen the seat post clamp bolt(s) just enough to loosen the clamp.

b. Put a light film of grease on the seat post at and below the “minimum insertion” mark; insert the seat post into the seat tube; then adjust the saddle to the desired height (see ADJUSTMENTS, below). The seat post must be inserted so that the “minimum insertion” line marked on the seat post (fig 8) is not visible.



⚠ WARNING: If your seat post projects from the frame beyond the Minimum Insertion or Maximum Extension mark (see fig 7) the seat post may break, which could cause you to lose control and fall and result in serious injury or death.

c. Using a 5mm or 6mm hex wrench, tighten the seat post clamp bolt(s). The bolt(s) should be in front of the seat post.

d. Try to twist the saddle from side to side. If the saddle moves in relation to the bicycle frame you will need to adjust (tighten) the seat post clamp a bit tighter. Repeat steps (c) and (d) until the seat post is securely clamped.

⚠ WARNING: Riding with an improperly tightened seat post can allow the saddle to turn or move and cause you to lose control and fall.

6. ATTACH THE REFLECTORS

⚠ WARNING: Do not fail to install the reflectors on your bicycle. They are an integral part of the bicycle’s safety system.

- Securely fasten the front (white) reflector to the bracket using the mounting screw.
- Securely fasten the reflector bracket to the handlebar.
- Repeat for the rear (red) reflector and attach to the seat post.
- Adjust each reflector’s angle so that it is at 90 degrees to the ground.
- Attach the two white wheel reflectors to a pair of adjoining spokes of each wheel, in a position opposite the tire valve stem and as close to the wheel rim as the mounting clips allow.

ADJUSTMENTS:

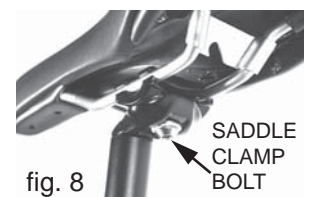
1. SADDLE ADJUSTMENT

Saddle height is important to comfort and pedaling efficiency. To get the correct saddle height:

- Sit on the saddle in a riding position
- Place one heel on a pedal. When you rotate the foot to the bottom of the pedal stroke (6 o’clock) your leg should be straight. Set your seat post at this height.
- Next, put the ball of your foot on the pedal and go to the bottom of the pedal stroke (6 o’clock). You should have a slight bend in your knee.

Saddle angle and position is also important to your comfort. Most people prefer a horizontal saddle; but some riders like the saddle nose angled up or down just a little. To adjust saddle angle or front-to-back position:

- With a 6mm hex wrench, loosen the clamp bolt under the saddle (fig. 8) enough to be able to change saddle angle and fore-and-aft.
- Once the saddle is in the position you want, tighten the saddle clamp bolt as tight as you can.



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 tightened before riding. A loose saddle clamp or seat post binder 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. Periodically check to make sure that the saddle adjusting mechanism is properly tightened.

2. HANDLEBAR HEIGHT

Handlebar height has a small range of adjustment in two ways: you can rotate the handlebars to move the grips slightly closer or further away from you; or you may be able to lower the handlebars slightly by moving spacers at the handlebar stem. This second adjustment requires special knowledge and should only be done by a qualified bicycle mechanic.

3. BRAKE ADJUSTMENT

Coaster brakes are not adjustable. Hand brakes are adjustable.

If your SWOBO has a hand brake:

Hand brakes are generally adjusted with the adjusting barrel at the brake lever. If the brake is rubbing, turn the adjusting barrel and its lock nut *clockwise*. If the brake is not engaging soon enough, turn the adjusting barrel *counterclockwise*. Be sure to turn the adjusting barrel locknut all the way against the brake lever body when finished adjusting.

On a caliper brake, you must make sure that the quick release, which opens the brake to allow the tire to pass between the brake pads, is in the closed position (fig 9) before turning the adjusting barrel.

On a disc brake, the cable adjusting barrel adjusts one pad, while the other pad is adjusted by turning the large knurled ring on the side of the brake caliper.

For additional information on brake adjustment, see the brake instructions which came with your bicycle or the brake link on the SWOBO web site.



If you have a multi-speed SWOBO:

4. SHIFTING

- a. If shifting the gears is not smooth, click on the [SRAM i-Motion 3](#) or [SRAM I-Motion 9](#) links on this web site.

5. TIRES

Before every ride, make sure that the tires are inflated to the pressure marked on the sidewall.

6. FINAL CHECK

While this bicycle has been pre-assembled, some loosening of components may have occurred during shipping and handling. Before attempting to ride this bicycle, check all nuts, bolts and other hardware and tighten if necessary.

SECTION II

Maintenance

⚠ WARNING: Many bicycle service and repair tasks require special knowledge and tools. Do not begin any adjustments or service on your bicycle until you have learned from a qualified bicycle mechanic 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.

We recommend that you have a qualified bicycle mechanic check the quality of your work the first time you work on something and before you ride the bike, just to make sure that you did everything correctly. There may be a modest charge for this service.

A. Service Intervals

Some service and maintenance can and should be performed by the owner, and requires 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. Your Mechanical Safety Check (Section II subsection 1.C of the **BICYCLE OPERATION & SAFETY GUIDE**) will help you identify some things that need readjustment. If you think something is wrong with the bike, take it to a qualified bicycle mechanic before riding it again. But even if everything seems fine to you, it’s best to take your bike to a qualified mechanic for a checkup a couple of times a year.

2. Before every ride: Mechanical Safety Check (Section II subsection 1.C of the **BICYCLE OPERATION & SAFETY GUIDE**).

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 oil the chain. Wipe off excess oil. Lubrication is a function of climate. Talk to a qualified bicycle mechanic about the best lubricants and the recommended lubrication frequency for your area.

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

- Hold the front wheel firmly between your knees 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 may have a loose headset. Have a qualified bicycle mechanic check it.

- 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 a qualified bicycle 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 a qualified bicycle mechanic check it.

- If the bicycle has a hand brake, take a look at the brake pads. Starting to look worn or not hitting the wheel rim or disc rotor squarely? Time to have a qualified bicycle mechanic adjust or replace them.

- Carefully check any control cables and cable housings. Any rust? Kinks? Fraying? If so, have a qualified bicycle mechanic replace them.

- 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 a qualified bicycle mechanic check the wheel for tension and trueness.

- 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 seat post 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.

⚠ 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 are covered by a warranty for a specified period of time, this is no guarantee that the product 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.

Fastener Torque Specifications

The following fastener torque tightening guidelines are just that: guidelines.

A good rule of thumb for all but wheel and brake mounting hardware fasteners is to use the least amount of force needed to clamp the component in place. Always use the Component manufacturer's torque specifications when available.

2.5 mm = 1.3 to 1.6 Nm

4 mm = 13 to 14 Nm

5 mm = 15 to 18 Nm

6 mm = 18 to 20 Nm

15 mm = 30 to 40 Nm