

XTRACYCLE

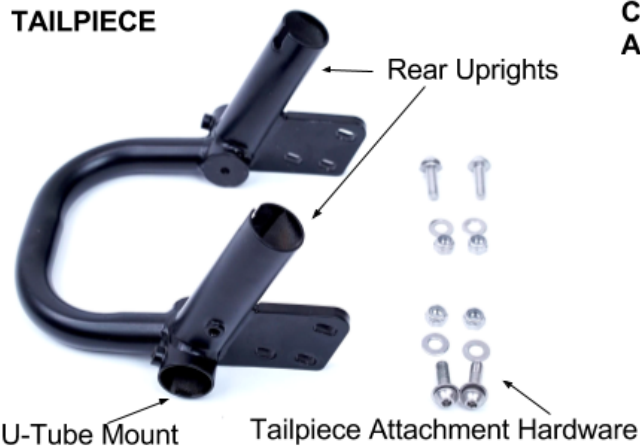
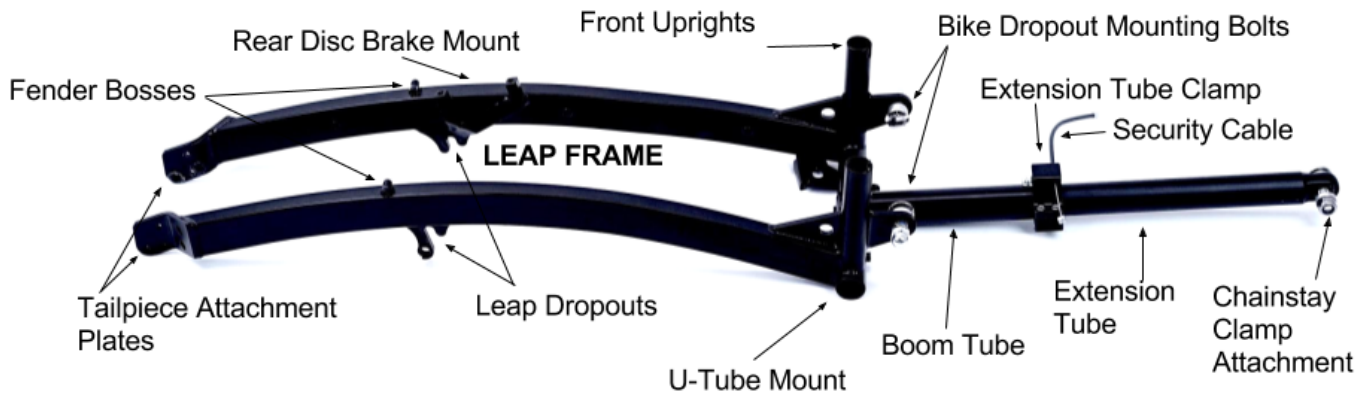
LEAP ASSEMBLY MANUAL



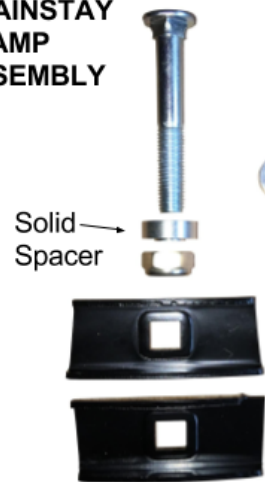
Leap[®]



Rev 1A



CHAINSTAY CLAMP ASSEMBLY



EXTENSION TUBE BRACKET ASSEMBLY



BE MOVED



Congratulations on purchasing an Xtracycle Leap DIY Cargo Bike Kit, and being one of the visionaries using the Leap to create your dream cargo- or passenger hauling bicycle. This guide will help you set up the Leap on your bicycle safely and easily.

For Attaching the LEAP:

- Metric open-end or box wrenches: **10, 17mm**
- Metric allen wrenches: **3, 4, 5, 6mm**
- Cable + housing cutters
- Needle nose pliers
- Bicycle grease (Park Tool PPL-1 or similar)
- Medium strength thread locking compound (Blue Loctite or similar)

Other Tools Required:

You will need all of the tools and materials required to:

- Remove and install your rear wheel
- Remove, install, and adjust your rear derailleur (if present)
- Remove, install, and adjust your rear disc brake
- Separate your chain
- Install a new, longer rear derailleur cable and housing
- Install a new, longer rear brake cable and housing (mechanical) or hose (hydraulic)

Please refer to the component's manufacturer instructions for the tools needed for each operation.

BICYCLE PREPARATION

Bicycle Inspection

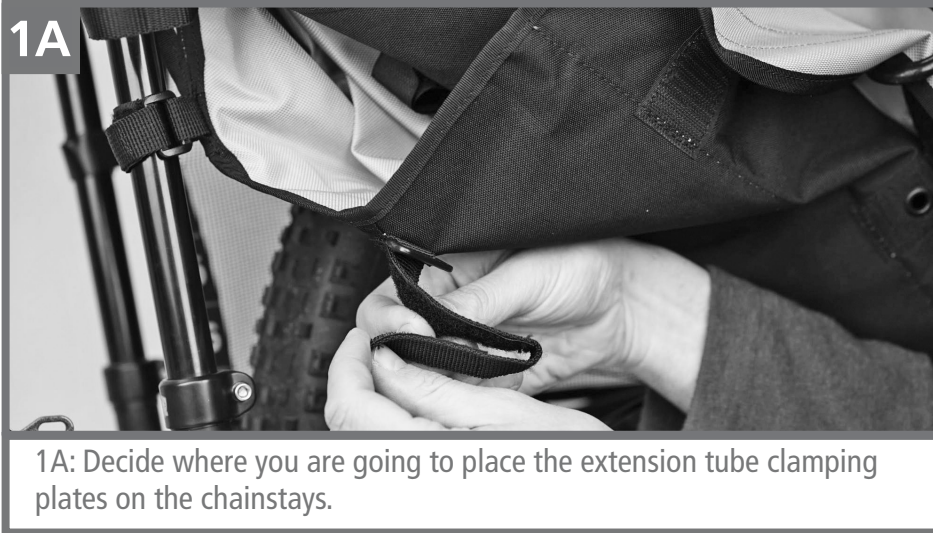
Before undertaking the LEAP conversion, check to make sure that your bicycle is in good working order. Make sure that the frame is sound and has no damage, cracks, or misalignment. Check all components for damage or wear and replace worn out components as needed.

Disassembly

- Remove the rear wheel from the bike. Separate the chain and remove it from the bike.
- Disconnect the rear derailleur cable and rear brake cable (if present).
- Remove rear derailleur and rear brake from the bike.

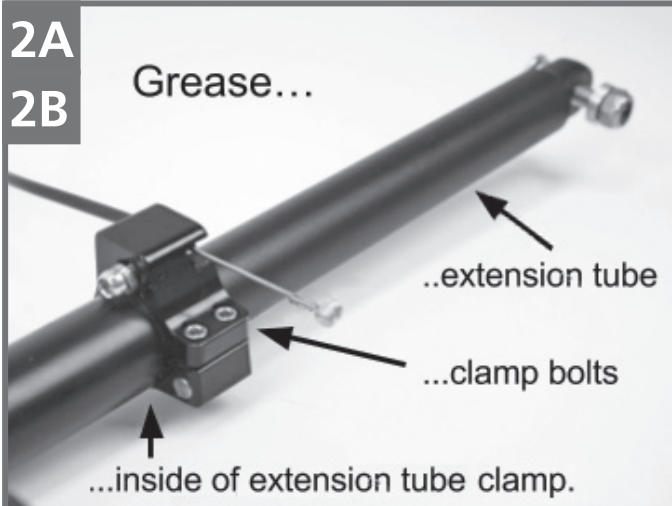
STEP 1

Install chainstay clamping plates



STEP 2

Assemble Leap Frame



2A: Lightly grease the extension tube where it inserts into the boom tube, the extension tube clamp bolts, and the inside face of the extension tube clamp.

2B: Assemble as shown.

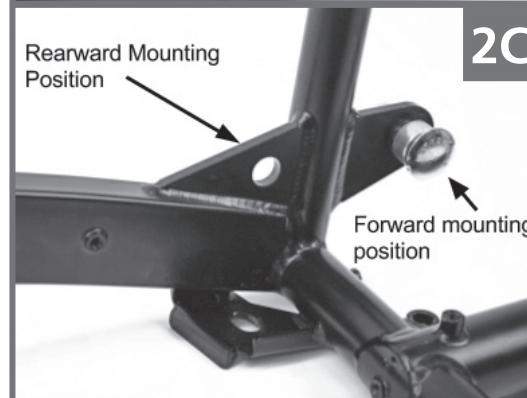
- Check that the clamp is fully seated onto the extension tube and that the security cable attachment faces up.
- **Do not** tighten the bolts yet.



2C: Insert the dropout fixing bolts into the holes on the Leap frame, with the dome nuts and lock washers facing outwards, and the dropout spacer on the inside of the frame.

Note: There are two mounting positions for the dropout fixing bolts on the Leap frame. The forward position will give the finished bike a longer overall wheelbase for more stability, greater clearance between the rider and passengers/cargo on bikes with short chainstays, and less potential for interference between the bike frame and Leap frame.

The rearward position will give the finished bike a shorter overall wheelbase for more maneuverability/ease of parking, will move the passengers/cargo closer to the rider on bikes that have long chainstays, and will provide even greater stiffness to the already-stiff Leap mounting.



STEP 3

Install dropout fixing bolts

3A



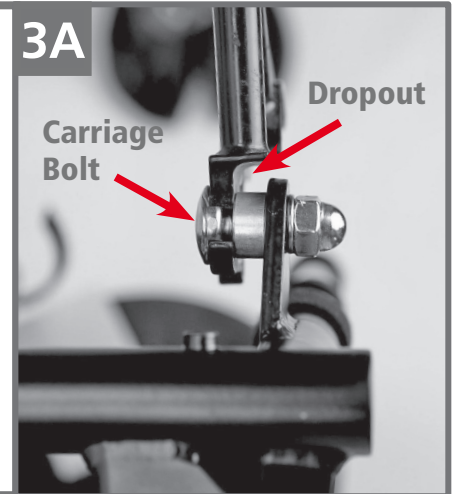
3A: Attach the Leap frame to the bike frame, by inserting the dropout fixing bolts into the rear dropouts of the bicycle as shown.

The curved side of the dropout insertion tab needs to be placed into the dropout. You can get it to sit the opposite way but it will not seat fully causing issues.

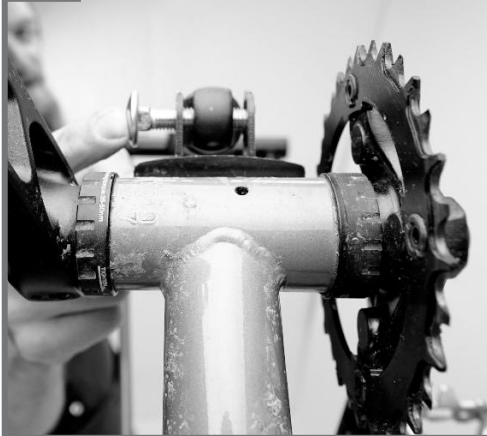
- Check that the tabs on the dropout fixing bolt heads can fully seat into the dropout.

Note: This step may be easiest to accomplish with the bike upside down.

3A



3B



3B: Adjust the length of the extension tube until it aligns with the extension tube bracket on the clamping plates.

- Temporarily place the shorter M10 carriage bolt through the bracket and extension tube as a pin to hold in place.

3C



3C: Use a 17mm wrench to tighten both dropout fixing bolts to 30-40 N-m.

Note: If you turned the bicycle upside down, you may now turn it right side up again.

STEP 3

Cont'd: Install dropout fixing bolts

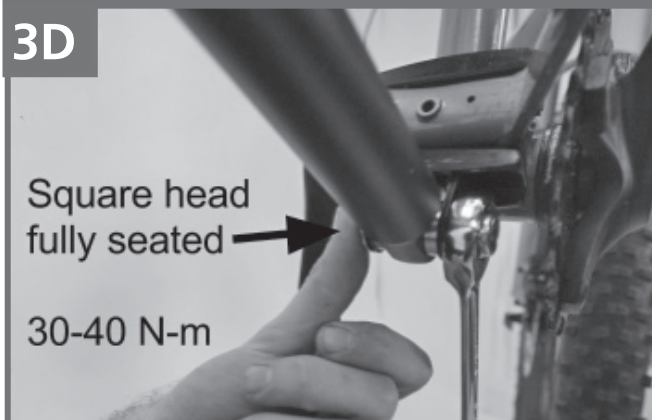
3D

Cups face outward



3D

Square head fully seated



30-40 N-m

3D: Remove and re-assemble the shorter M10 carriage bolt on the extension tube bracket.

- Insert the cupped spacers between the extension tube and the inside of the extension tube bracket. The cups should face outwards.
- Slide the M10 carriage bolt back through the bracket, spacers, and extension tube, checking to make sure that the head of the carriage bolt fully seats in the square hole on the bracket.
- Thread the other M10 nyloc nut onto the carriage bolt and use a 17mm wrench to tighten it to 30-40 N-m.

3E



6 N-m

3E: Use a 4mm allen wrench to tighten the bolts on the extension tube clamp to 6 N-m.

After a caterpillar buries itself inside its cocoon, it waits to morph into a butterfly. The caterpillar doesn't simply shrink a bit and sprout wings. Instead, it sort of disintegrates into a puddle of ooze within the cocoon. New cells are called imaginal cells start popping up and they are so completely different from the original ooze cells that they are thought to be a virus or some other form of enemy so the ooze cells begin attacking the imaginal cells. However, even though the imaginal cells are being killed off for not fitting in, they still keep showing up, more and more of them. Eventually, the imaginal cells begin to find each other and cluster together. Like attracts like, and the clusters begin to join up with other clusters. Eventually, the imaginal cells get to be a large enough community and they switch gears from simply being a group of like-minded cells into the programming cells of the butterfly. Some imaginal cells start changing into wing cells, some start changing into antenna cells, some start changing into digestive tract cells, and so on. Imaginal cells transform into butterfly anatomy cells. As we all know, if left alone to do his thing, the butterfly eventually emerges as a completely new entity from the original caterpillar.



STEP 4

Assemble Security Cable



4: Assemble the security cable on the extension tube clamp.

- The security cable is similar to a brake cable, with a short length of housing.
- Cut security cable housing to length such that it loops around the left chainstay as tightly as possible and fully seats into stops on extension tube clamp.
- Place a ferrule on the cut end.
- Pass security cable through extension tube clamp, through housing, around left chainstay, and back through extension tube clamp.
- Pull tight and clamp with the M5 bolt.
- Cut off excess cable and crimp on a cable end cap.

STEP 5

Assemble Rest of LEAP Frame

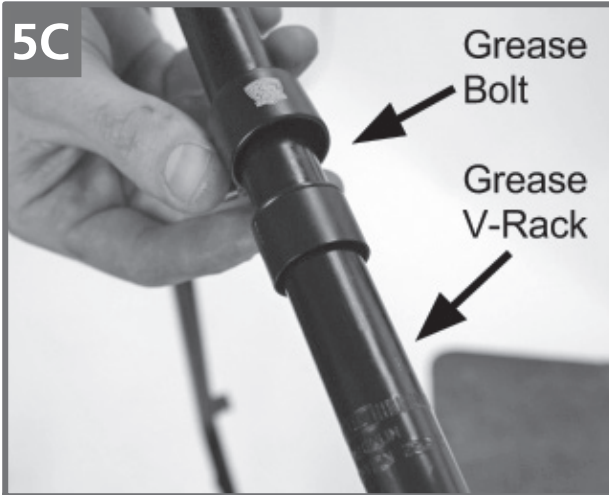


5A: Install the rear wheel in the Leap Frame.

5B: Attach the tailpiece with 4 M6 bolts, washers, and nyloc nuts.

Do not tighten the bolts yet.

Cont'd: Assemble Rest of LEAP Frame



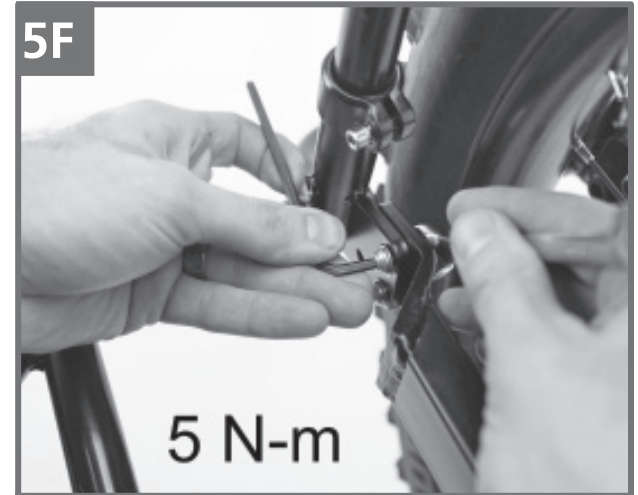
5C: Prep the V-Racks and RackLocks

- Grease the M4 bolts on the RackLocks, and the ends of the V-Racks where they insert into the Leap Frame.
- RackLocks have 3 pieces: outer collar, o-ring, and inner collar. Slide them onto the ends of the V-racks in this order.



5D: Install V-Racks

- Insert the V-Racks into the Leap Frame and check that they are fully seated.
- Slide the RackLocks down the V-Racks until the bottom edge of the outer collar is even with the bottom edge of the inner collar and both are fully seated on the Leap Frame.
- Tighten the RackLock bolts to 4 N-m.



5E: If U-Tubes are being installed, install them now. See the U-Tube LT2 Assembly Guide for more information.

Note: Leap U-Tubes are Leap-specific and are not width adjustable.

5F: With V-Racks and U-Tubes (if present) installed, tighten the 4 M5 bolts on the tailpiece to 5 N-m, by holding the bolt head with a 4mm allen wrench and tightening the nut on the backside with a 10mm wrench.

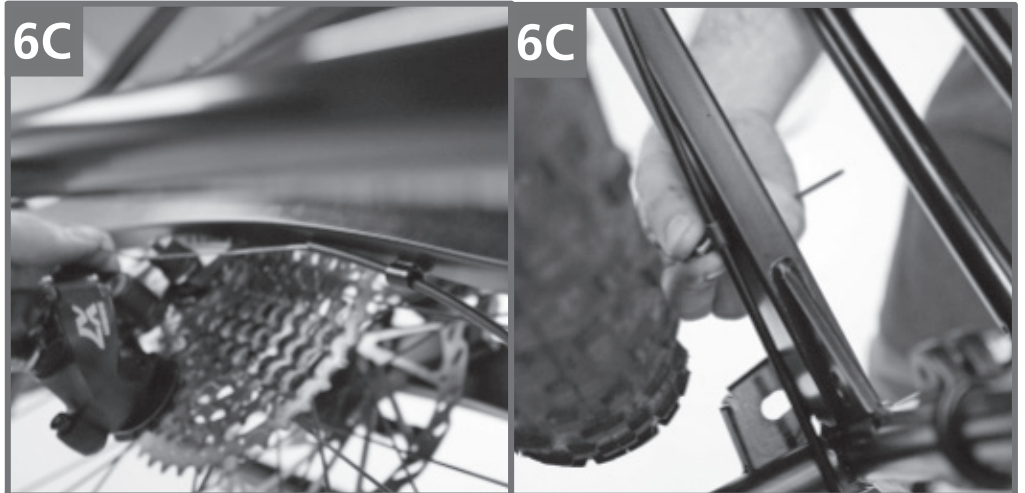
Reassemble Drivetrain and Rear Brake



6A: Install the rear brake caliper on the Leap frame. Check that the rear brake caliper is properly spaced for the rear rotor being used (minimum rotor size is 180mm).

For some disk brakes, the shape/size of the caliper body causes interference with the leap frame when using a 160mm rotor. Take note when installing. You must switch to 180mm rotor and post mount adapter if your caliper touches the frame. Do not risk lowering the braking capacity by adding spacers to make the 160mm rotor work. Also, with cargo bikes, your braking needs increase significantly and thus it is highly recommended that you use 180mm rotors minimum.

6B: Install the derailleur on the Leap frame.




6C: Install longer rear derailleur and brake cable and housing (if rear brake is mechanical). If rear brake is hydraulic, refer to manufacturer instructions for running a longer hose to the brake.

Notes:

- The housing can run continuously from the rearmost housing stop on the bike frame to the derailleur or brake, or the full length from the lever if no stops are present on the frame.
- The derailleur housing should be run under the forward bar of the Leap frame to avoid interference with the chain. There is a welded-on cable guide for the derailleur cable ahead of the dropout.
- There are three bolt-on cable guides for the rear brake cable or hose included. Use as many as you need to secure the rear brake cable while also providing for a smooth cable path into the rear caliper.

STEP 6

Cont'd: Re-Assemble Drivetrain and Rear Brake



6E

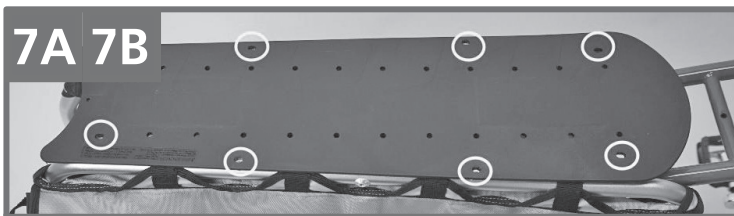
6D: If you are using the Chain Roller (recommend for protecting your LEAP frame and riding off-road), now is a good time to install it.

6E: Then, install the chain, using the chain extension and included master links to extend it, if present.

6F: Adjust the rear derailleur and brake according the manufacturer's instructions.

STEP 7

Install remaining accessories



7A 7B

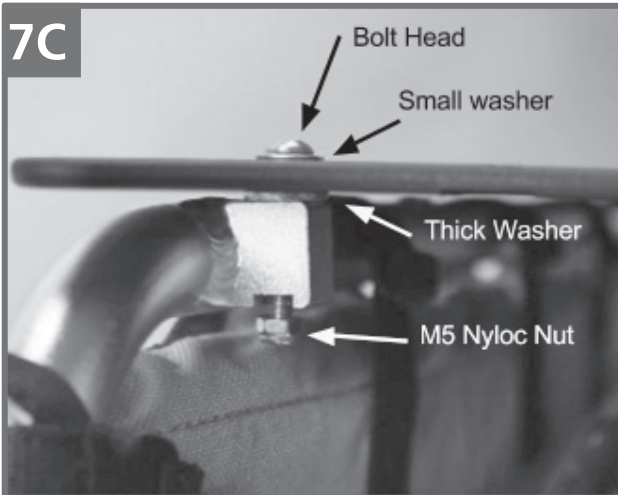
7A: CarryAll Bags, CargoBays, WheelSkirts, Hoopties and Yepp Seat Adapters should be installed before the FlightDeck is installed. If you're going to install a Yepp Maxi EasyFit, you will want to cut out the front or rear rectangular window and mount the seat adapter at the same time that you install the deck.

7B: Place the FlightDeck on top of the V-racks with the logo side up and the wide end facing forwards.

- Line the 8 mounting holes on the FlightDeck with their corresponding mounting points on the V-Racks.

STEP 7

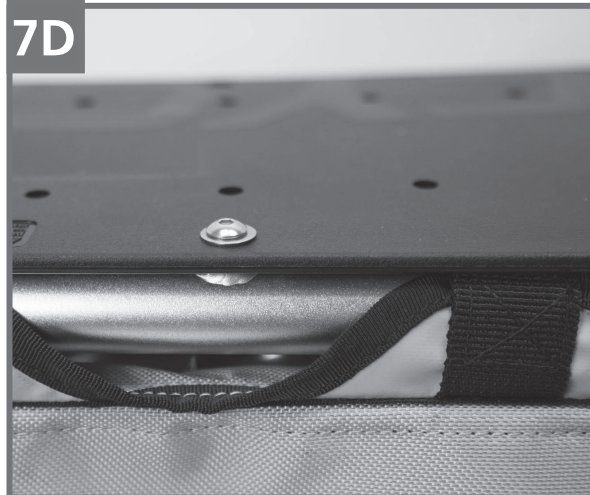
Cont'd: Install remaining accessories



7C: The holes at either end of the deck use the longer M5x35mm bolts.

- Insert one of the 35mm bolts into each hole with one small washer and one thick washer as shown.
- Thread a M5 Nyloc nut onto each bolt.

Note: No washer is needed under the nut; it will be captured by the notch in the underside of the block, and a washer will interfere with that fit.



7D: Thread the shorter 15mm bolts into the V-Rack bosses under the middle mounting holes.

- Use a small washer under the head of each bolt.

NOTE: it is a good idea to start the bolt into the aluminum rack boss with your fingers to make sure that it doesn't cross-thread.



7E: Once all bolts are installed, tighten the bolts to 3-4Nm.

7F: Install KickBack, if present. Refer to KickBack instructions.

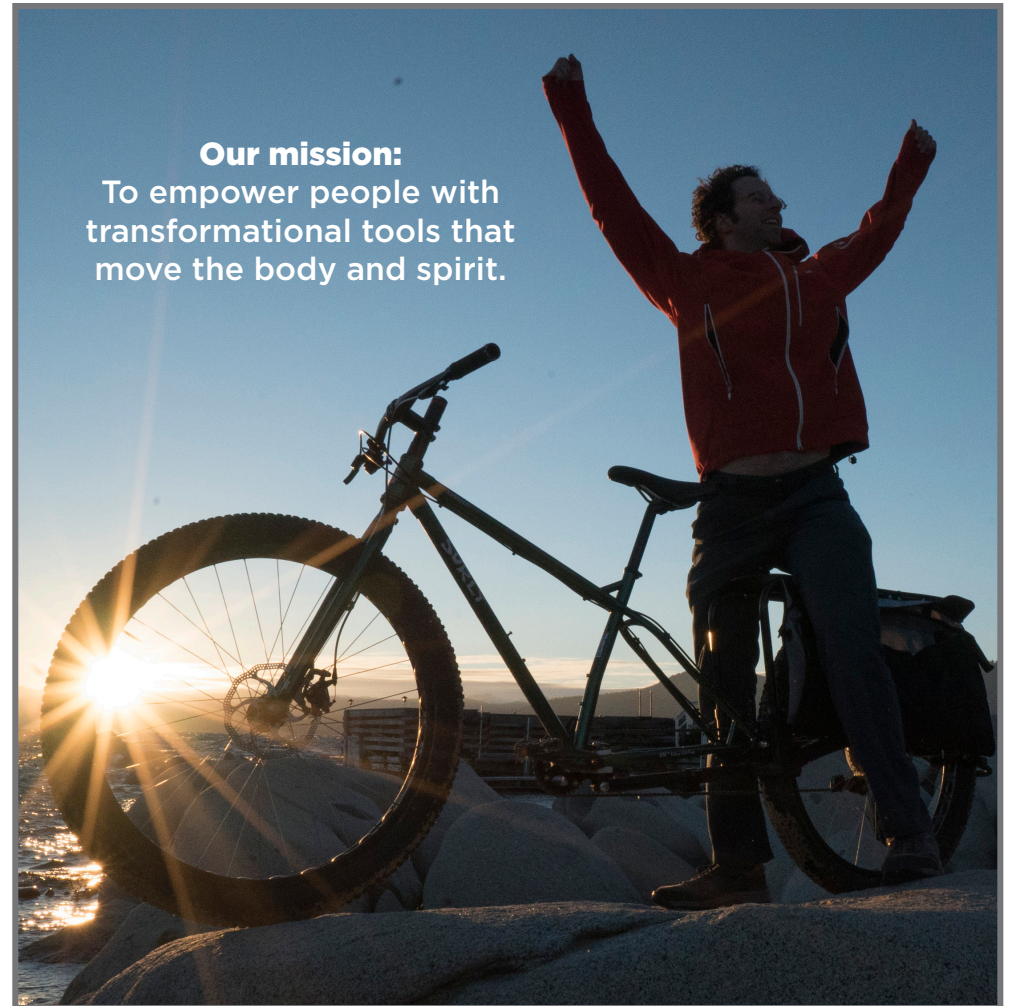
STEP 8

Test Ride and Enjoy!



Test ride time! Congratulations on transforming your bike into an Xtracycle.

- Before hauling your first big load, test ride your bike in a safe, car-free area to check brakes, shifting, and the Leap attachment points.
- Use caution on your first few rides with a load--it'll take some time to get used to how the new bike handles, but you'll soon get the hang of it.
- After a week of normal riding, check that all of the attachment bolts are still tight, and check them on a regular basis after that.
- If anything doesn't feel or work right, bring it to a local bike shop and have a professional mechanic check it out.
- **Warning:** Never carry passengers without WheelSkirts, CarryAll Bags, or CargoBays.



Our mission:
To empower people with
transformational tools that
move the body and spirit.

Yep - That's how excited we are!