LECTRIC SERVICE CENTER: MECHANICAL BRAKES TO HYDRAULIC BRAKES SWAP

BEFORE YOU BEGIN

To accompany these instructions, Lectric eBikes has created a video to walk you through these steps with the XP 3.0. Find the video at **LectriceBikes.com/XP3-Mechanical-Hydraulic-Brake-Swap**

Or scan the QR code with your mobile device to watch the video.

LectriceBikes.com/XP3-Mechanical-Hydraulic-Brake-Swap

We recommend performing this with a bike on the bike stand. This will make this process easier and safer.

We highly encourage you to remove the battery from the bike when performing this maintenance. This will ensure that there is no voltage running through the bike.

WHAT'S INCLUDED IN THE KIT

- Right Hydraulic Brake Lever
- Left Hydraulic Brake Lever
- Front Wheel Hydraulic Brake Caliper
- Rear Wheel Hydraulic Brake Caliper
- Front Wheel Assembly

TOOLS NEEDED

- 2.5mm Allen Wrench
- 5mm Allen Wrench
- 4mm Allen Socket
- 5mm Allen Socket
- 15mm Allen Socket
- Torque Wrench
- Flathead Screwdriver
- Side Cutters
- Zip Ties

REMOVE CABLE WRAPPING AND HANDLEBAR GRIPS

1. Undo the cable wrapping holding the cables from the handlebars together, and the two spots of cable wrapping under the frame of the bike. Hold on to these as you will be wrapping the new cables up with it.
2. Remove the plug by working a flat head screwdriver around the edges of the plugs. Be careful not to pull too hard in one area as this may damage the plug. Make sure to save these as you will need them when putting everything back together.
3. Remove the washer from the throttle, make sure not to lose the throttle washer as your throttle will not function properly without it.
4. Then, use a 2.5mm allen wrench to remove the throttle.

REMOVE THE REAR MECHANICAL BRAKE CALIPER

1. Use cable cutters to snip the end of the brake cable off, This will remove the silver cap at the end of the brake cable.
2. Next, loosen the cable retention screw with a 5mm allen wrench so you can remove the brake cable from the cable retention arm.
3. Unscrew the two caliper mounting bolts with a 5mm allen wrench. Make sure to save these bolts as you will need them to mount your new caliper onto the bike.
4. Snip the three zip ties that are fastened to the bosses on the rear dropouts on the non driveside of the bike. (If you are replacing the brake caliper on a XP Step-Thru, there will be two additional cylinders on the dropout that the brake cable is fed through. This means that the zip ties will be attaching two cables together rather than attaching to the bike. You can snip these zip ties but be careful not to cut the cables.)
5. Then, track the brake cable housing all the way back up to the rear brake lever.
6. Unplug the brake inhibitor, this is the cable that has a quick plug a few inches down from the brake lever. Unhook the brake cable from the brake cable mount and pull the housing and cable all the way out, through the bike.
7. You will now need to remove the brake lever. Use a 5mm allen wrench to loosen the screw on the underside of the brake lever base. Then slide the brake lever off of the handlebar.

REMOVE THE FRONT MECHANICAL BRAKE CALIPER

1. Now, on the other side of the handlebar, disconnect the brake inhibitor for the front brake, loosen the mounting screw with a 5mm allen wrench, then slide the brake lever off of the handlebar.
2. Down on the front fork, the brake housing runs through a clip to keep it in place, make sure to remove the housing by angling the housing and pull it through the opening.
3. Now, remove the front brake caliper by removing the caliper mounting bolts with a 5mm allen wrench.

REMOVE FRONT WHEEL

1. Using a 15mm socket, loosen the axle nuts, Then unhook the hangers from the fork and pull the wheel out of the dropouts.

INSTALL THE REAR HYDRAULIC BRAKE CALIPER

Let's start the install with the rear brake caliper. Make sure you use the longer of the two cables. The front brake cable will not reach the rear caliper.

1. First, slide the new lever on the right side of the handlebars. Again, Make sure you are placing the lever that is connected to the longer brake hose on the right side of the handlebars.
2. Next, plug in the brake inhibitor by lining up the arrows on the quick plug.
3. Now, run the hose down the bike, over the front fork, down the length of the frame (if you have a Step-Thru model, you will need to feed the caliper through the bottom base of the frame).
4. Feed the caliper through the inside of the dropout, then between the back rack, and the spokes on the non driveside of the bike.
5. Now, remove the orange tag from the inside of the brake caliper and toss it.
6. Place the caliper into the mounting points and tighten the mounting bolts with a 5mm allen wrench to the point where the caliper stays on, but can still freely move over the rotor.
7. Now, place the front tire back into the front dropouts, and hook the hangers back up.
8. Snug up the axle bolts with a 15mm socket, then put the bike on the ground as straight as possible, and torque them down to 35 Nm

INSTALL THE FRONT HYDRAULIC BRAKE CALIPER

Make sure you are installing the shorter of the two cables.

1. Slide the brake lever onto the left side of the handlebar, then plug in the brake inhibitor.
2. Next, down at the fork, insert the housing into the clip on the fork. Make sure to feed the caliper between the fender stay, and the spokes.
3. Now, line the holes up on the caliper with the holes on the caliper mounting system. Use a 5mm allen wrench to snug up the caliper mounting bolts.
4. Now that both calipers are secured, on the rear dropouts, you will need to re-zip tie the cables to the bosses on the dropouts. (A reminder, if you have a Step-Thru model, there will be two cylinder bosses that you will be zip tying the cables to.)

RE-WRAP THE CABLES

1. Next, re-wrap all three cables under the frame starting behind the second boss.
2. Then re-wrap the next section of cables in between the last boss, and the first boss.
3. Next, grab the three cables, and the front brake cable.
4. Wrap until you get to the light cable, then include that into the wrapping process.
5. Continue wrapping until you get to the large cable housing on the front cables. Wrap the cables that aren't connected to that, then once past the cable housing, begin to wrap and include all of the cables again.
6. Continue that cable wrap until you reach the quick plugs. Then continue the wrap only on the brake housing and shifter cable. Leaving the quick plugs exposed.
7. Then finish the wrap with all of the cables after the quick plug until there is no longer any cable wrap.
8. Then use the shortest cable wrapping for the left side of the handlebars. Wrap all those cables, leaving the two cables from the display exposed.
9. Down on the back of the bike, you will see a cable boss, and two cable hanging spots. Grab all three cables and zip tie them to the boss on the inside of the dropout.
10. Then find the first cable hanging spot, and zip tie the three cables to that, and repeat the process on the next cable hanging spot.

We recommended waiting to snip the excess until the very end in case you need to make adjustments.

RE-INSTALL EVERYTHING ON THE HANDLEBARS

1. Place the throttle on the handlebars, sliding both the throttle and new brake lever into place.
2. Tighten the brake lever down with a 5mm allen wrench, then tighten the throttle down with a 2.5mm allen wrench.
3. Then slide the throttle washer back into place.
4. Finally, slide the grip back into place, and place the plugs back into the end of the handlebar.
5. Now onto the other side, repeat this process.
6. Tighten the brake lever down with a 5mm allen wrench, slide the grip back on, and insert the plug.
7. Next, tighten the brake levers down to 6 Nm.

ALIGN THE FRONT AND REAR HYDRAULIC BRAKE CALIPERS

Now, back down at the rear caliper, you will want to align your brake caliper.

1. Using a 5mm allen wrench, align the caliper so that there is a quarter to a half a millimeter of space between either side of the rotor.
2. You can repeat this process exactly on the front rotor.
3. Make sure that both brake levers are parallel to the handlebars when they are pulled. If they are not, please contact our customer support team immediately.
4. Finally, torque down the caliper mounting bolts to 6-8 Nm.

If you test your brakes and they are not working properly please contact our customer support team before your next ride.

If you have any questions please feel free to contact our customer support team at **contact@lectricebikes.com** or give us a call at **608.715.0907**.

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