

Lectric XP Flat Tire Repair Step by Step Checklist

Important Things to keep in mind before starting:

1. Be extra careful with the exposed pins from the motor cable when you've disconnected it. A bent pin could make the motor not work at all.
2. Do not lay the rim down on the motor cable at any time if possible
3. Do not touch the brake's disk with your hand at any time (finger oil is really bad for brakes)
4. Tire levers can scratch your rim, it is good to put a rag between the levers and rim when removing the tire. (I forgot about this during the video)
5. Screws and nuts should be on very tight, BUT they can be over tightened and stripped so be careful. Using a torque wrench is recommended if you have one. (I don't have one, but will get one soon)
6. Keep your area dry

Tools to have ready

- a. 18mm wrench
 - b. 4mm Hex Key (aka Allen Wrench or Allen Key)
 - c. Wire cutter or something that can cut a zip tie off
 - d. Extra zip ties to replace the one removed
 - e. Rag or towel to protect rack or seat from getting scratched
 - f. Bucket or tub of water
 - g. Sharpie pen or other permanent marker (optional but helpful)
 - h. Tire patches, (or new tube)
 - i. Tire levers (optional, some people can remove fat tires from the rim without any tools)
 - j. Handlebar Jacks (or something to put under your hand grips to elevate them high enough to prevent damaging your bike's display screen and other accessories).
Suggestions of items to use other than handlebar jacks include:
 - i. Wood blocks
 - ii. Bricks
 - iii. Yoga blocks
 - iv. Anything that is very sturdy and can handle some weight without getting damaged
2. Put the bike in the highest gear. (the bike is in the highest gear when the chain is on the smallest sprocket)
 3. Remove the battery (optional, but recommended. Also makes the bike lighter. Great time to charge it up so you have a full battery to ride with when your flat is fixed!)
 4. Remove the seat (optional – helps to prevent the seat from getting damaged from being scraped on the ground)
 5. Protect your rack or seat with the rag or towel from getting scratched against the ground
 6. Flip the bike over and stabilize it (be sure that your display screen or any of your accessories on your handlebars will not get damaged)

7. Take a ton of pictures close-up near the motor and at every angle on BOTH sides of the bike. Make sure you can see how each washer is in place, each connector is made, and the order of each part on each side of the frame.
8. Snip off the zip tie that holds the motor cable to the frame (be careful not to damage the motor or brake cable)
9. Remove (pull off) the black plastic caps that cover and protect the rear wheel nuts.
10. Remove the 4mm hex screws that hold in the retaining clips. Removing this 4mm screw first will help make it easier to remove the derailleur guard.
11. Loosen the 18mm rear wheel nuts on both sides of the bike
12. Remove the derailleur guard and check to see that the retaining clips are pulled away from the frame (these are the clips the 4mm screw held in on step 10)
13. Slowly and carefully remove the wheel from the frame by pulling it out as straight as possible while keeping an eye on how the chain needs to be pulled off the gear. Remember that the disk brakes are still in place and the brake pads and calipers surrounding the Disk brakes should not be moved around too much or they may need adjustment later.
14. Using your tire levers, take one side off the tire off the rim. (It is possible to do this without levers)
15. Take off the cap from the tube's valve stem and push the valve stem into the rim and tire so the tube can now be pulled out of the tire and off the rim. BE SURE TO TAKE NOTE ON WHICH WAY THE TIRE IS ON THE RIM. IT MUST BE PUT BACK THE SAME WAY LATER.
16. Optional things you can do with the tire off the rim:
 - a. Highly recommended – Take the tire fully off the rim (which should be fairly easy) and inspect the inside of the tire for any holes, tears, or things that punctured through that may still be stuck in the tire)
 - b. Check the Rim liner to make sure that it is covering ALL the spoke screws that could create holes in your tube. Tape over the holes areas that are not covered properly if needed.
17. Inspect the tube and locate the hole that needs patching. Filling the tube with air and submerging it in water while looking for air bubbles is a great way to find leaks.
 - a. There may be more than one leak so I would check the entire tube while you are at it.
 - b. If you have a permanent marker, dry the leaking area well and circle the hole that needs to be patched
18. Use something rough like sand paper (or the metal scraping tool that comes in your patch kit) to roughen up the area that the patch will be applied to. Make sure the area you are sanding in a little bigger than the patch that will be applied.
19. Add the patch glue to the tube and spread it over the area that was sanded. Again, be sure that the area where you applied the glue is bigger than the patch you are applying.
20. WAIT FOR A FEW MINUTES TILL THE GLUE IS COMPLETELY DRY AND KEEP THE AREA CLEAN.
21. Once the glue is dry, remove the patch's protective sheet (usually clear plastic) and stick the patch on the tube and press it hard while making sure all the edges of the patch are on good.
22. Put one side of the tire back on the rim. **Be sure to put the tire back on the correct way. There are usually arrows indicating the way the tire should be rotating when moving the bike forward.**

23. Deflate the tube and star by placing the valve back in the rim hole. Place the valve cap back on the tube so it won't pull back out of the rim hole.
24. Gently shove the rest of the tube into the tire. Make sure that the tube does not twisted or bunched when putting it back in the tire. You can put a little air in the tube and massage it to straighten it out if there are too may twists and bunched areas.
25. Put the other side of the tire on the rim and look closely to assure that the tire is evenly positioned around the rim.
26. Carefully put the rim back on the bike's frame.
 - a. Find a good position to stand to get a good view of the back side of the bike while you will be lowering it on the frame.
 - b. Get the wheel as close as possible to be able to hook the chain over the smallest gear first before continuing to get closer to the bike.
 - c. Once the chain is over the gear, push the derailleur gently down out of the way and look to make sure that the disk brake is lining up to go between the brake pads as straight in as possible
 - d. Continue to lower the rim into the frame carefully
 - e. Check to make sure the washers and other parts like the retaining clips are in exactly the same position before you removed the wheel.
 - i. If the frame is too tight to insert the wheel (some older Lectric XP classic models are known to be extremely tight) seek help.
27. Secure the retaining clip with the 4mm hex screw tightened back into place
28. Tighten the nuts on both sides of the wheel while checking the wheels alignment by slowly spinning the wheel to assure that the brakes are centered.
29. Slowly pump up the tire while massaging the wheel as necessary to make sure that the tire is evenly inflating around the rim. Check the tire closely and spin the wheel to see that it is not wobbling and balanced.
30. Check the tire pressure and inflate to the level you like to ride. (My preference is that I like riding 3 pounds below the max recommended for street riding.)
31. Double check all the nuts again to make sure they are nice and tightly secured
32. Double check the 4mm hex retaining clip screws to make sure they are also securely tightened
33. CAREFULLY plug in the motor cable. Double check the alignment closely and be careful not to bend any of the pins. Do not force the connection.
34. Secure the cables with a new zip tie (don't over tighten the tie, it can damage the cables)
35. Flip the bike right side up and remove the handlebar jacks, put your seat back on, and go have fun riding again!