

How to repair a flat tire, rear instructions first, front second.

How to change a rear tire flat:

Preparation:

open the tool kit and get an area that you can put pieces off the bike cleanly and in order if you have to. Look over the tire before you take it off. Is there a bolt, nail or other object in the tire that has punctured it? If so, remove it from the entry side, not the inside.

Wait 10 minutes before you attempt to repair the tire. There is a strong possibility that someone will come along and help you if you require help.

The steps to do it yourself:

1. look around for a beer box or something to prop the bike up on while you have the tire off. Sometimes you can use the 24 mm wrench as well under the rear suspension in the middle of the bike. Look at the tire axle bolts. There is a marked piece that should be set at a mark on each side at the same number. Make a note of this as you will have to put this calibration mark the same when re-installing the tire.
2. Use the 24 mm box end of the wrench to loosen the nut on the right side of the bike at the rear tire axle. Loosen the nut and then use your hand to get the nut off.
3. Use the 24 mm wrench to knock the axle thru the tire hub. It should go a few centimeters until you can use the open end of the wrench to pull/tug out the axle. Do not pull the axle all the way out, $\frac{3}{4}$ of the way. When using the 24 mm wrench, be careful to not damage the end of the axle where the screw threads are. If possible, place wood or another medium hard surface between the end of the axle and the wrench impacts.
4. Bump/slap the tire forward to increase the amount of slack in the chain. Then take the top of the chain on the rear sprocket(gear) and pull up and to the outside of the sprocket. Roll the tire so the chain unwinds from the sprocket.
5. Remove the axle the entire way. You will have a few pieces and keep track of what comes off the left side and right side. There is a calibrated piece with marking on the right side and a washer along with the main nut. Inside a small hard rubber spacer may fall loose when you take the axle out, keep them on the correct sides as they are different sizes. The axle itself has the opposite piece of the calibrated marked piece welded to it.
6. Pull the tire off the bike and place the tire on the ground, brake disc side up and in a clean area if possible.
7. Take the large flat head screwdriver and wedge it between the rear brake pads and separate them. They need to be apart when you re-install the repaired tire. Push them apart as far as they go but be gentle.
8. Remove the valve stem nut on the rim of the tire.

9. Stand on the tire to break the seal it has against the rim on at least 50% of the tire.
10. Use the tire irons curved end. Slip the iron between the tire and the rim. Wedge the iron as a lever to lift the tire over the rim for the first iron. The second iron, place about 10 cm or less away from the first and repeat the motion to get the tire over the rim. Use the third iron a little further away. Once you start this motion, you will be able to get the tire over the rim all the way around.
11. Push the valve stem up and remove the inner tube. Examine the tube for damage and see if you can match it to the inside of the tire (using the valve stem as a mark). Run your hand carefully and slowly along the inside of the tire wall, then along the flat road side of the tire and lastly along the tire wall still on the inside of the rim. You are feeling for anything sharp like a small nail or sliver of metal that punctured your tire. Be careful as you may cut yourself if you run your hand in the tire fast. Do this twice.
12. Sit the tire upright and look at the bottom inside. It should be clean but there will be bits of chaffed rubber inside and maybe a few silver pieces, try to clean them out.
13. Insert the replacement inner tube into the rim/tire. Start with the valve stem first and get the locking nut on the valve stem very loose.
14. Run the inner tube around the rim of the tire and tuck it up so it is all the way inside.

TIP: Use a little shampoo along the edge of the tire that will be slipped back over the rim. It acts as a lubricant and helps a lot.

15. Start to push the tire back over the rim with pressure only from your hands. Make sure you are not pinching the inner tube against the rim and tire, it must be completely inside the tire and not on the rim.
16. About 70 % of the tire will reseal by hand. Use the tire irons to reseal the remainder. It is important to make sure the tire is completely off both sides to the inside of the rim to allow you to stretch it around. Be careful in the last little bit of the tire, if it is too tight, check again the tire is not up against the rim snugly.
17. Now you have the tire ready for air. Pump up the tire as much as you can because the inside of the tire needs to get snug against the rim. You can take pressure out of the tire after you have insured it is up against the rim. Look at the other tire and you will see how it seats.
18. Put the tire back under the bike and line the disc up with the brake pads.
19. Insert the axle from the left side of the bike and include any spacers between the frame and tire center if they fell out. Slide/push the axle all the way thru to the other side hole.
20. Push the tire forward as far as possible. Lace the chain over the sprocket and roll the tire to get the chain on the sprocket 100%.

21. Pull back on the tire to increase tension on the chain.
22. Use the numbers on the calibration piece on each side and get them set as you saw before you removed the tire. Put the locking nut on by hand until it is too difficult to turn, then use the 24 mm box end of the wrench. Do not make it too tight as you may have to tap the calibration parts to the correct number. Once it is all set on the right number, tighten the nut as tight as you can. Do not stand on the wrench to apply pressure. If you are not strong, you may use this technique but do not apply all your weight on the wrench – this may snap the bolt.
23. Check to insure that the plastic protector that is along the swing arm is replaced in the proper slots. To do this, run the tire backwards and forwards while listening for any contact.
24. Push down on the rear brake foot lever at least 10 times. This pushed the pads together that you separated.
25. Keep the replaced inner tube, if you can, try to get it fixed in the next town as you may need it again.
26. Ride the bike a little with no passenger. If it has a bounce – bounce to it, the tire is not inflated enough, try to get more air into it and then release the excess air. Feel the tire for how hard it is. If you have the air gauge, use it. The tire should be no more than 1.9 k or 30 lbs. as marked on the gauge.

Front tire

1. Read the directions for the rear tire. They are similar with only a few differences.
2. Look at the front right side of the middle of the tire, you will see 4 small nuts, loosen them but do not take them off completely.
3. Remove the axel buy using a 17 cm wrench, box end.
4. Push the axel thru the tire completely.
5. Remove the tire.
6. Spread the brake pads apart with a screwdriver.
7. Use the directions above (steps 8 – 19).
8. Tighten the axel but not 100%.
9. Tighten the 4 small nuts on the axel you loosened. When you do so, get them snug all around then tighten them to completion in the order of –top left – bottom right – top right – bottom left and repeat this process. This insures that they are uniformly tight.
10. Tighten the axel bolt as much as possible. Do not use the wrench and stand on it as this is too much pressure for the locking nut.