



## Steps to replace inner tube:

On the TerraTrike models you do not need to remove the front wheels in order to replace a tube, although if you have fenders installed on your trike you will need to remove the outer fender stays. Rear wheels will have to be removed on all models to affect a repair.

- 1) Observe outside of tire in order to try to determine why the tube failed. This could be in the form of a shard of glass or some metal object that has become embedded into the tire tread or a slice in the tread or sidewall of the tire. If you cannot see anything obvious, move on to step two.
- 2) Remove the tire and tube simultaneously so that the tube remains in the tire. This can be done by hand or with tire levers depending upon how tightly the tire fits on the rim.
- 3) Observe the orientation of the tube to the tire (i.e., where the valve stem is). It may help to make a mark on the tire for future reference.
- 4) Remove the tube from the tire while keeping the original orientation in mind. Inflate the flat tube so that you can see from where the air is escaping. If it is a single hole, move on to the next step. If it appears to be 2 holes in very close proximity to one another (looks almost like a snake bite) you have experienced a "pinch flat" where the tire/tube has compressed far enough to pinch the tire/tube between the rim and the ground. This can be caused from a pot hole or underinflated tires and is more common than you might think. If you are confident that it is a pinch flat move on to Step 8.
- 5) Compare the position of the hole in the tube to the location where the tube contacts the inside of the tire (or rim if the failure is on the area of the tube that contacts the rim) and inspect that area of the inside of the tire (or rim) thoroughly. If you don't see any foreign objects protruding from the inside of the tire move on to the next step.
- 6) Pick up the tire and slowly and carefully run your fingers along the inside of the tire to try to feel for any sharp object. Be careful! You can cut yourself if it is sharp metal or glass! If you find something, carefully and thoroughly remove it. If the puncture in the tube is on the area of the tube that contacts the rim, inspect the rim strip making sure that it is covering all of the spokes or spoke holes and that there are no sharp edges anywhere that could cause future tube failures.
- 7) If you don't find anything there is a good chance that the offending sharp object punctured your tire/tube but stayed where it was instead being embedded into the tire tread.
- 8) Now you are ready to install the new tube.
- 9) Inflate the new tube very slightly; only enough to "round it out" (maybe one or two pumps of the pump handle, or a mouthful of air on presta valve tubes). This will make reinstallation much easier.
- 10) In the event that your tire has suffered a cut in the sidewall you may still be able to affect a temporary repair until you can get a new tire. If the cut is relatively short in length, you can use a dollar bill (you may want to fold it one or two times depending upon the length of the cut) to cover the cut from the inside of the tube before reinstalling the tube. If you are using this temporary fix you will not want to take the tire up to full inflation as the dollar bill can be forced out of the cut by too much pressure. You just need enough air in there so that you do not get a pinch flat while riding it to get to a destination where you can get a new tire be that at home or a retail bike tire reseller.
- 11) Place the tube into the tire, being careful not to allow it to have any folds or creases in it. However, it shouldn't be "overflowing" out of the tube.
- 12) Find the valve stem hole on the rim and feed the tube's valve stem through it at the same time starting one side of the tire's bead onto the rim.
- 13) Continue to feed one side of the tire's bead onto the rim all of the way around circumference of the rim. Once this is accomplished, push the tube (you will actually be pushing the outside of the tire and moving the tube) in between the rim's sidewalls so that it is nested nicely between them.
- 14) During this step it is imperative that the brand new tube does not get pinched between the bead and the rim. Now start to feed the second bead onto the rim. It is generally easiest to start at the valve stem as that area of the tire/tube is sometimes harder to seat properly.
- 15) If you cannot push the second bead all of the way onto the rim with your fingers and thumbs you may have to use a tire lever to complete the task. Be very careful not to puncture or pinch the tube during this process. You may need to let the air out of the tube that you originally put into it in step 9.
- 16) Be sure that the valve stem of the tube is positioned perpendicular to the tangent of the rim. This may require some minor movement of the tire/tube about the rim.



- 17) Once the second bead is on the rim you may put a small amount of air in the tire to seat the tire's beads to the rim. Put about 20psi of air into the tube. This will "round out" the tire and tube but will still allow you to massage the tire if the beads are not seated on the rim properly.
- 18) While you are inspecting the seat of the beads on both sides of the assembly be sure to keep an eye out for a "herniated" tube (where a small portion of the tube can protrude from between the tire and the rim sidewall. This will explode very loudly upon full inflation and can be quite a surprise; not to mention ruining a brand new tube.
- 19) Once you are confident that the beads are seated and the tube is not protruding anywhere around either side of the rim you can take the tire up to full inflation.
- 20) Now the wheel is ready to ride again.