



Trek 4300 Front Derailleur Cable Replacement

Learn how to replace a broken or frayed front derailleur cable, on a Trek 4300 mountain bike in particular.

Written By: Keiran Hansen



INTRODUCTION

This guide gives simple directions on how to replace the front derailleur cable, an important component that is easy to replace. The derailleur is the part of the bike that allows a rider to quickly shift gears while riding. Most bikes have two, one in the front and one in the back. This guide deals only with the front one. A broken or overly frayed derailleur cable can cause the derailleur to misalign, create difficulty shifting, or prevent the chain from going on any of the sprockets (gears).



TOOLS:

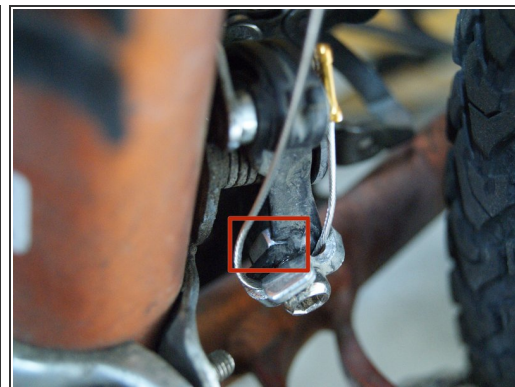
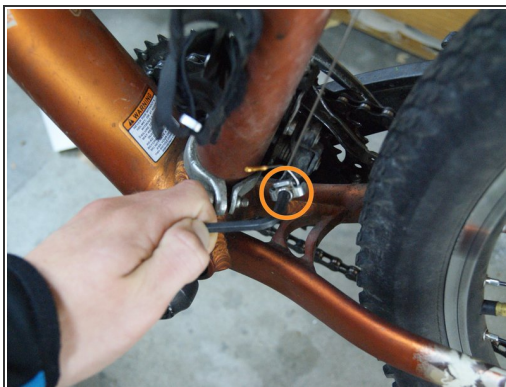
- [Phillips #0 Screwdriver](#) (1)
- [Phillips #1 Screwdriver](#) (1)
- [4mm Allen Wrench](#) (1)
- [Large Needle Nose Pliers](#) (1)
- [Flush Cutter](#) (1)



PARTS:

- [Shimano Zinc Derailleur Cable](#) (1)
- [Bike Cable End Crimp](#) (1)

Step 1 — Front Derailleur Cable



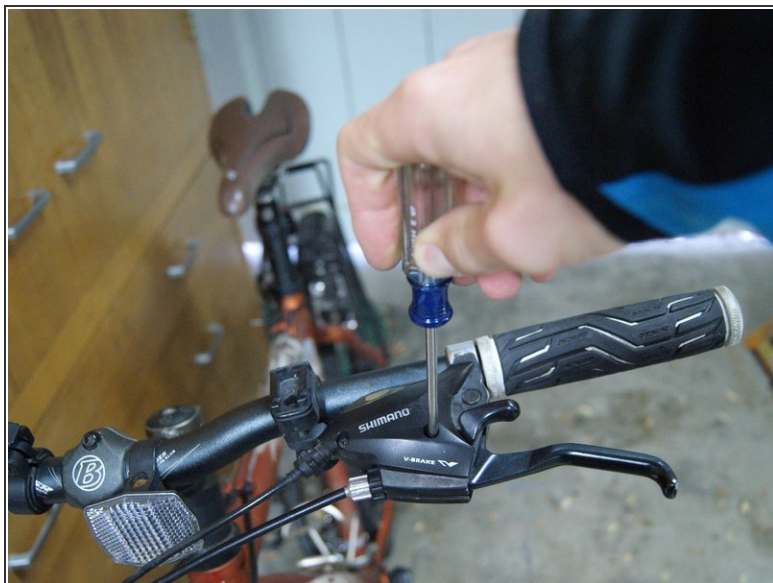
- Use the Allen wrench to loosen the Allen bolt that keeps the derailleur cable in tension and attached to the derailleur body.
- ⓘ The Allen bolt is located near the front sprockets (gears) on the opposite side (the left side of the frame).
- ⚠ Over-loosening can unthread the bolt from the small nut on the other side, which is hard to get rethreaded. Try to avoid backing off much farther than the diameter of the cable.

Step 2



- Free the cable from the derailleur body.
 - Depending upon the fit, this may require forcing the cable through the narrow gaps between the derailleur body and the small silver holding plate held by the Allen bolt.
- ⓘ Depending on the condition of the cable, this may require some cutting of the cable.

Step 3



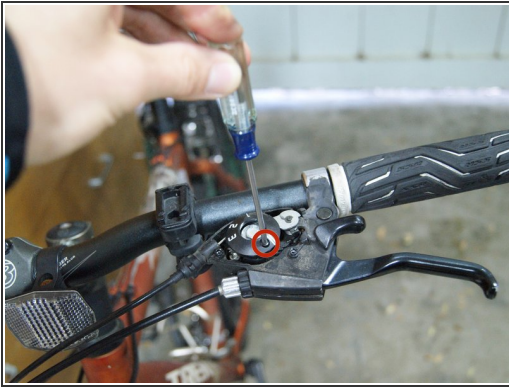
- Remove the #1 Phillips 6 mm screws that hold the shifter casing onto the shifter.
- ⓘ To avoid losing these small parts, use a sandwich container or jar to hold them while you do other things.

Step 4



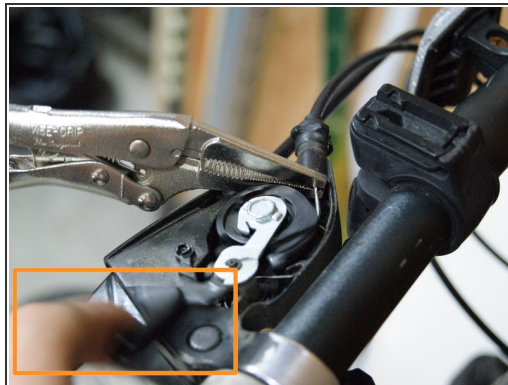
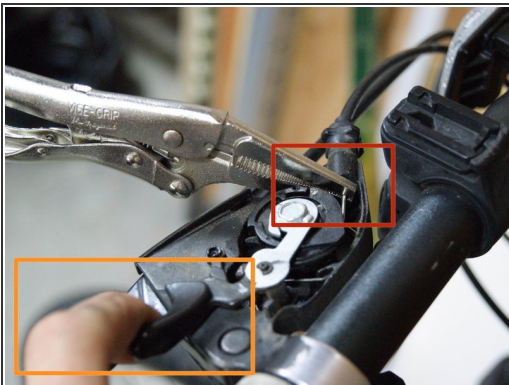
- Remove the shifter casing (the top) from the shifter body.

Step 5



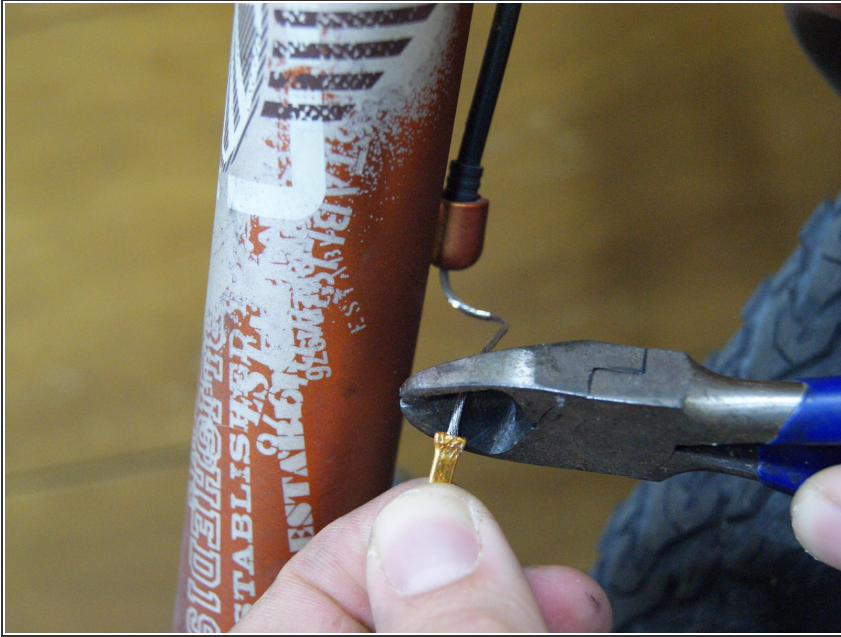
- Remove the #0 Phillips 6 mm screw attaching the indicator dial onto the shifter mechanism.
- Remove the indicator dial.

Step 6



- Free the end of the cable from the shifter.
- Trick: use pliers or vise grips to hold the cable in front of the shifter mechanism.
- Downshift while holding the cable.
- The end is forced out!

Step 7




- If the cable is not already cut, cut any excessively frayed ends or crimps off the end by the derailleur so the cable can easily be pulled back through the housings.

Step 8



- Pull on the shifter end of the cable to pull the cable free of the bike, through the shifter and all the housings.

 Keep track of all the parts as they come free of the cable!

Step 9



- Push the new cable through the shifter.
- ⓘ To get a better angle into the shifter mechanism or the exit housing, use the upshifter and downshifter to rotate the shifting mechanism, similar to the way downshifting could be used to force out the end in Step 6.

Step 10



- Continue feeding the new cable through the shifter and through all the housings.
- ⓘ The housings may be easier to feed if held straight until the end is all the way through to avoid catching the end in the bends.

Step 11



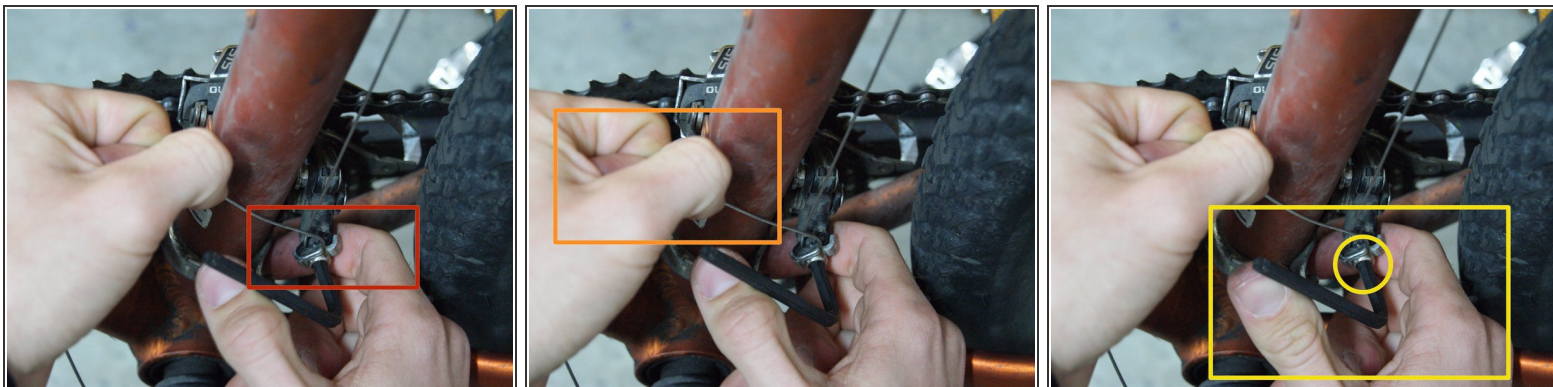
- Make sure the head of the derailleur cable is properly seated in the shifter mechanism.
- Pushing against the head while also pulling the cable tight can help check this.

Step 12



- Run the end of the cable around the tightening Allen bolt, between the silver holding plate and the derailleur body.

Step 13



- Lift the derailleur into position.
- Pull the derailleur cable tight, while still holding the derailleur in position.
- Tighten the Allen bolt to fix the derailleur cable to the derailleur and hold the derailleur in position.

Step 14



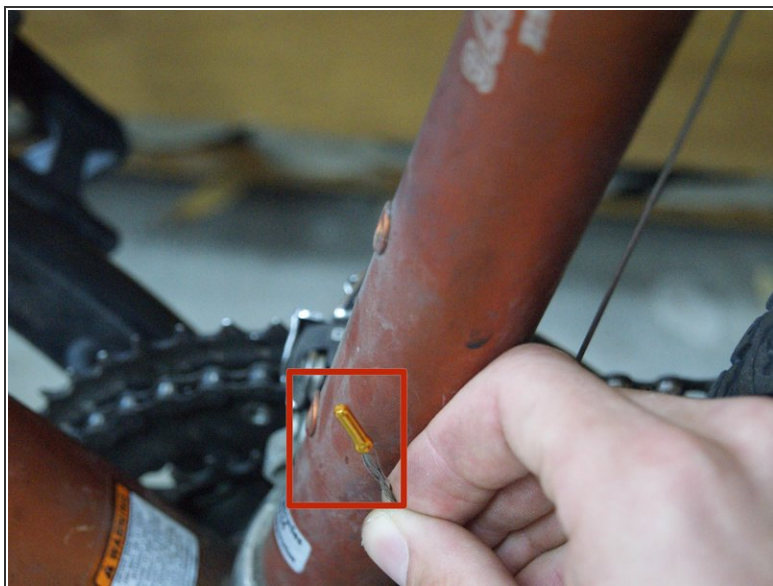
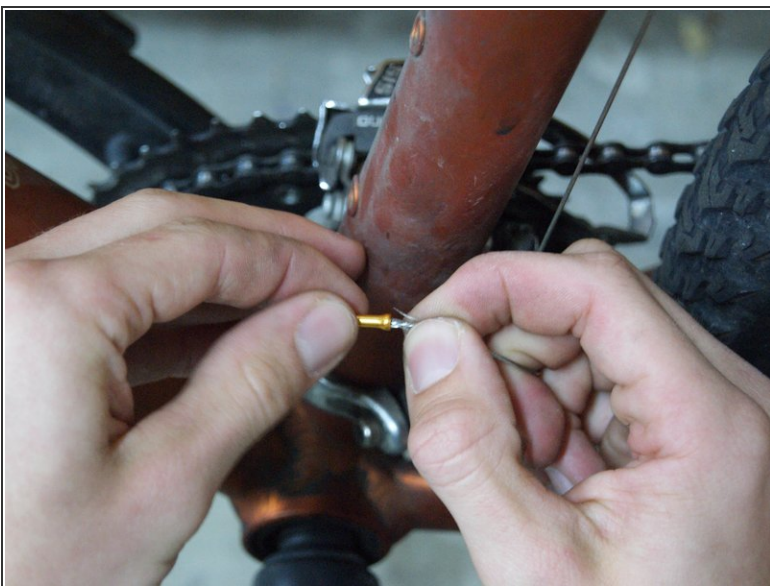
- Check the derailleur placement.
 - The chain should be roughly centered in the derailleur, so that no extra friction is caused, and that the chain is not unintentionally pushed off the sprocket.
 - If not in the correct position, loosen the tightening bolt and redo step 13. This may take several tries.
- ⚠ Make sure the shifter is in the same position as the chain. For example, in these pictures the chain is in position 2, and so is the shifter (the gears are numbered smallest to biggest). Otherwise the bike will not be able to properly shift.

Step 15



- Once the derailleur is in the correct position, cut the cable to length, leaving 2 to 3 inches to allow for later adjustment if needed.

Step 16



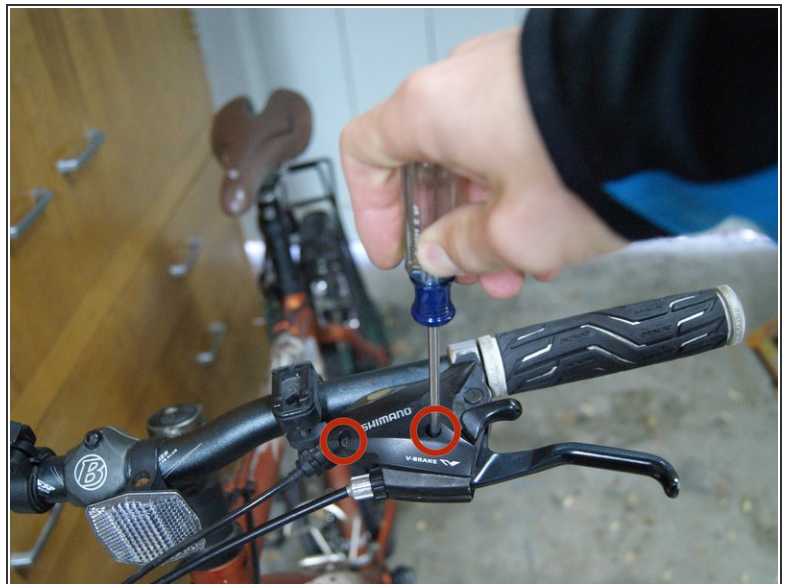
- Place the crimp on the cut end of the cable, making sure to get any loose strands within the crimp as well.

Step 17



- Using vise grips or pliers, clamp down on the crimp and crimp the end of the cable
- ⓘ If done properly, this should prevent any fraying at the end of the cable.

Step 18



- Reassemble the shifter, putting back the indicator, the case, and their corresponding screws

Before putting away the tools, test the alignment of the derailleur by shifting between the gears while pedaling the bike to make sure it smoothly and easily changes gears. If not, the tightening bolt can be readjusted until it is properly adjusted. Also look into the derailleur adjustment screws on the top of the derailleur for fine adjustment if desired.