



Adjusting the Rear Derailleur

Adjusting the rear derailleur to be in the proper position for optimal shifting.

Written By: Travis Tonder



INTRODUCTION

The derailleur is your bike's gear shifting device. When you adjust the shifter on your handlebars, the derailleur pushes your bike chain to the next gear over, and then adjusts the length of the chain to accommodate the change in gear size.

There are many ways to adjust a derailleur. For small adjustments, there is no need to remove the chain or the derailleur. This guide demonstrates one way to adjust the derailleur to the proper position after removing the derailleur and chain for maintenance.

In steps 2 and 3, we adjust the high and low end adjustment stops, which set the maximum inward and outward distance that the derailleur can move the bike chain. Setting these boundaries prevents the derailleur from shifting the chain off of the sprockets and onto the axle.

By putting the shifter in the highest gear in step 4, the cable is let out as far as possible when we clamp down on it. This ensures that all slack is removed from the line.



TOOLS:

- [Hex Key/Allen Wrench](#) (1)
 - [Phillips #2 Screwdriver](#) (1)
 - [Chain Tool](#) (1)
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Step 1 — Bike Chain Removal



- Slide the chain cutting tool onto the desired link.
- Align the push pin of the tool with the pin on the chain, and tighten the tool until the pin protrudes out the other side without falling all the way out.

Step 2



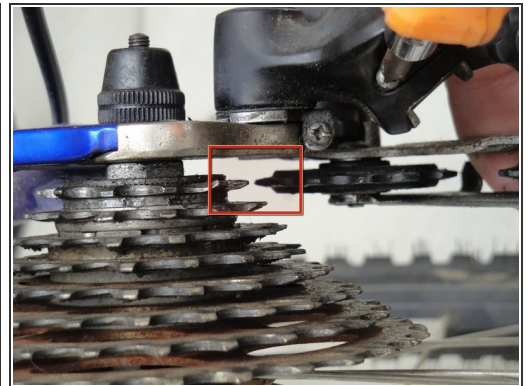
- Stop pushing the pin out when it is just held in by the outer link, so it doesn't fall all the way out. You will still be able to separate the links.
- Repeat the previous step to take off sections of links.

Step 3 — Rear Derailleur



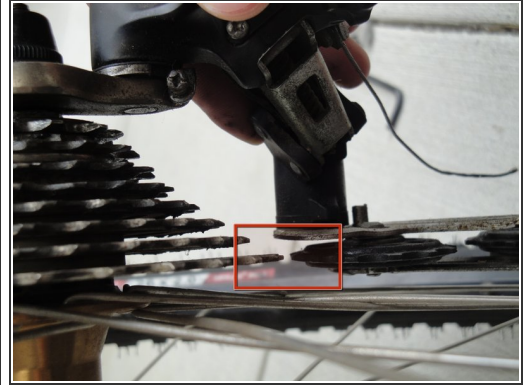
- Bolt the derailleur to the mounting tab with an Allen wrench.
- ⚠ Be careful not to over-tighten the steel bolt, as this can strip the aluminum mounting tab.

Step 4



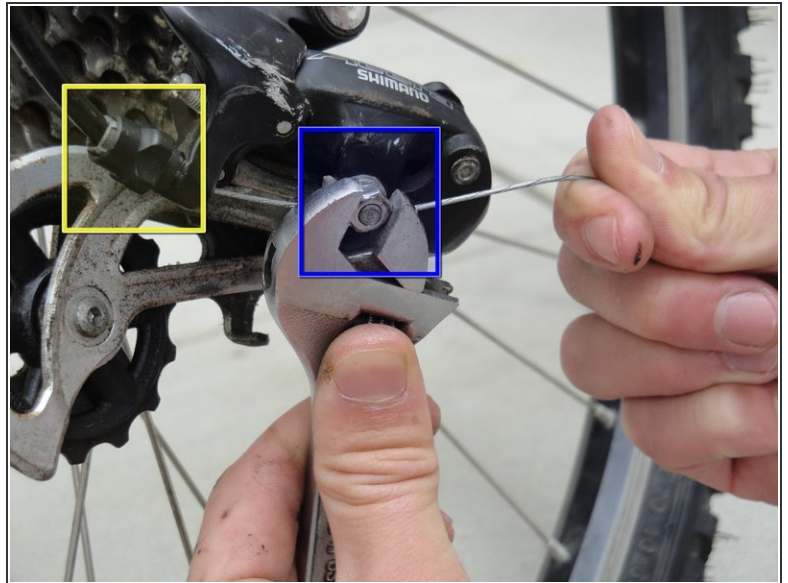
- Shift the rear derailleur into the highest gear(smallest sprocket).
- Align the rear guide sprocket of the derailleur with the highest gear (smallest sprocket), by tightening or loosening the screw labeled "H".

Step 5



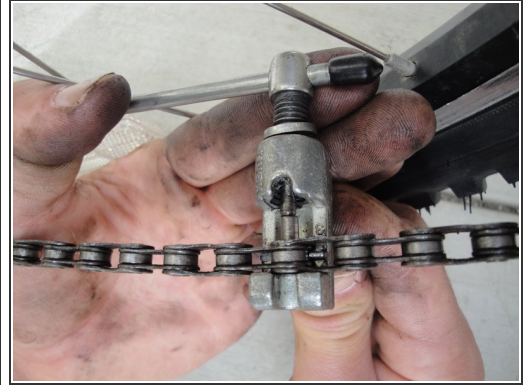
- Shift the rear derailleur into the lowest gear(largest sprocket).
- Align the rear guide sprocket of the derailleur with the lowest gear(largest sprocket), by tightening or loosening the screw labeled "L".

Step 6



- Shift the bike into the highest numbered gear.
- Slide the cable through the barrel adjuster screw until the cable housing bottoms out.
- Pull the slack out of the cable while clamping it down with the nut that is attached to the derailleur.

Step 7



- Route the chain around the chain rings, cassette, and derailleur.
- Reconnect both ends of the chain using a master link or a chain cutter tool.
- See the chain connection guide.

Step 8



- Fine tune the derailleur by tightening or loosening the barrel adjuster screw. Loosening this screw causes the derailleur to move slightly towards a larger sprocket, while tightening it moves the derailleur towards a smaller sprocket.
- Shift through each gear while pedaling. The derailleur should move the chain one gear over each time you shift up or down.
- If the chain skips or makes noise when you are not shifting, use the barrel adjustment screw to fine tune the derailleur alignment.
- Repeat the previous steps until the derailleur shifts smoothly and makes a minimal amount of noise.

For future adjustments it is likely that you will only need to adjust the barrel adjuster screw for fine adjustment.