

Cable Tie Tightener, version 2.0

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Today I visited my local Ace Hardware store and they had a tool for tightening cable ties. It was so simple that I immediately made one when I got home. To my surprise, it did not work very well. As it tightened, it also rotated the tie so never got very tight. Time to improve on their idea.



There are two parts to the tool I made plus you will need a socket driver.

On the left is a 3/8-16 bolt, as soft as you can find. It is slit about half way down. On the right is a piece of 1/2" X 1/2" steel tubing which has been cross drilled and slit part way through.



With the bolt in the tubing and the slots aligned, a cable tie can be slid inside.

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The first step is to attach the cable tie and pull it snug by hand.



The tail of the cable tie slides into the slot from the side.



Then the wrench turns the bolt and winds up the tail of the tie. You must judge how tight to make it. Too tight can damage the cable.

"Moby Duck" from homemadetools.net wrote in

"Larger sized cable ties are very strong, and if for example a 10mm wide nylon cable tie was tightened until the tail sheared off, it would probably damage the insulation of any type of cable. If a bunch of cables carrying current was clamped very tightly, it would create a hot spot as cables are given current ratings that assume they are freely ventilated.

Cable ties can and do slip, and shearing them off, assuming they shear at the last tooth of the ratchet, would mean that they are only being held by one of the two teeth that they were originally designed with to make a secure tie.

I have never seen electricians shear off cable ties like this, they just cut the tails.

My observations were in a marine/military environment where they are now largely forbidden, and stainless steel ties are used instead. They still use thousands of plastic ties in the wiring installation process as they are easy to use, but on

completion they are removed and/or backed up by expensive stainless steel ones at around \$6 each."



When the tie is tight enough, unwind the tail from the tool and cut it off.

Want to make one? Read on...

There are a few tricks to making this tool. First of all, locate two brand new hacksaw blades that are identical. Mount them both on a hacksaw frame. This will give you an extra wide kerf. If the blades are not identical, one will bow and the cut will not be even.



Use the hacked hacksaw to cut a slot in the 3/8 X 16 bolt. Saw down about the height of the blade.



Cross drilling the steel 1/2" x 1/2" tubing with a 3/8" drill. Then fit the tubing over the bolt which is still clamped in the vise. Use the hacked hacksaw to cut down to the bottom of the existing slot.

Deburr and you are done.

Acknowledgement

Thanks to "Moby Duck" for his insights on how cable ties can damage cables.

I welcome your comments and questions.

If you wish to be contacted each time I publish an article, email me with just "Article Alias" in the subject line.

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