Improved Piranha Cutter

Features:

Precision Machined all Stainless Steel Construction!
Compact size- 3/8"x about 1-5/8"
Lightweight- about 16gms
Uses a specially designed line cutting piston as the powder measure!

Parts List:

1-SS Housing
1-SS Line Cutter/ Piston/Powder Measure
1-SS Specially Designed Cap Screw
1-pk 004-70 Small Black O-rings
1-pk 006-70 Green O-rings
1-pk Hard Black 006-90 O-rings
1 - pk Zip-ties (Cable ties)
1 - 1/16" Long Allen wrench for disassembly
Small punch for disassembly
Cotton Swabs (Q-tips)
Powder Vial
1 - Container TR Lube

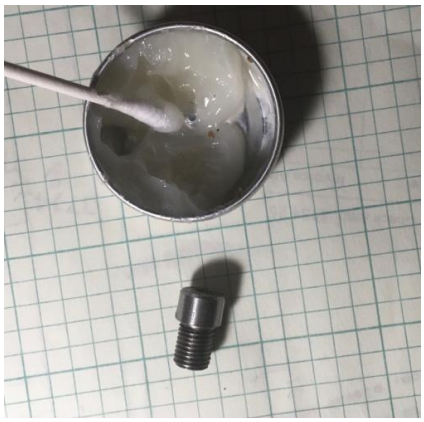
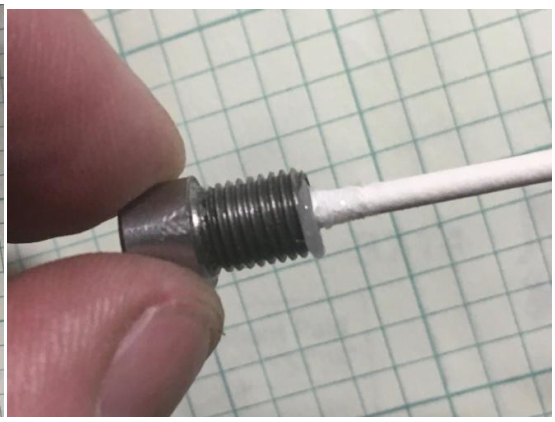
(Dual Piranha Line Cutter Kit Shown)

User Instructions

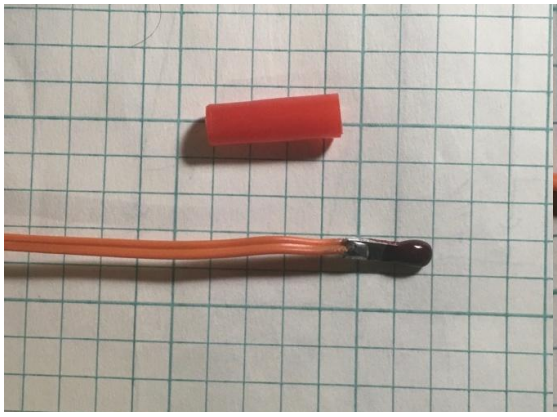
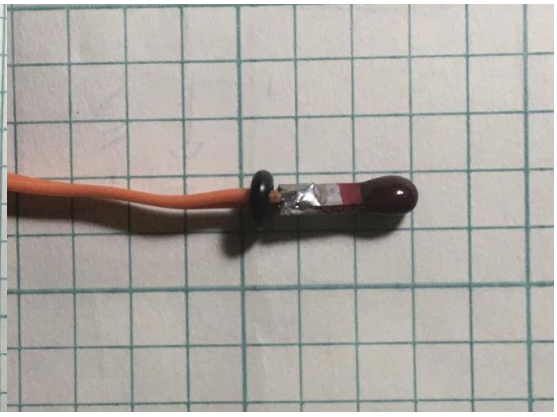
Note: These instructions are written for "rocketry folks" and it is assumed that all directions will be closely followed. If you are not a "rocket" guy or gal or you do not feel that you can follow these directions exactly, please do not use this device!

Step 1 - Prepare the E-match/Cap Screw

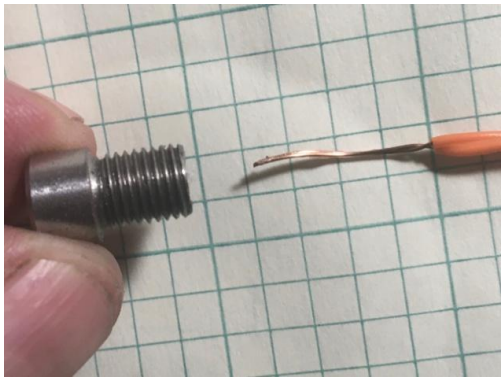
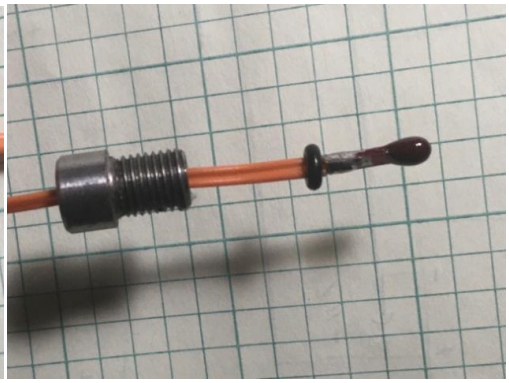
Using the supplied lube, thoroughly lube the Custom Cap Screw
(**Hint:** Don't be stingy with the lube and do not substitute other lubes!)

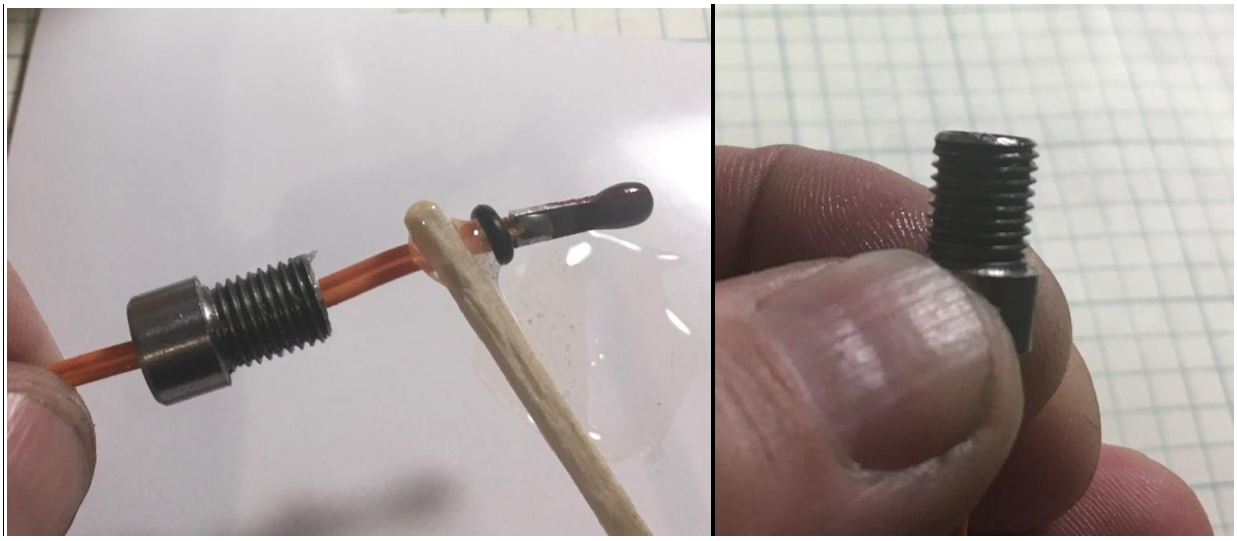
Remove the protective plastic cover from the e-match
Slide one of the small black o-rings over the wire and up to the e-match head

Slide the wire into the lubed Cap Screw to 1/2 or 3/4 inch or so of the o-ring touching the cap

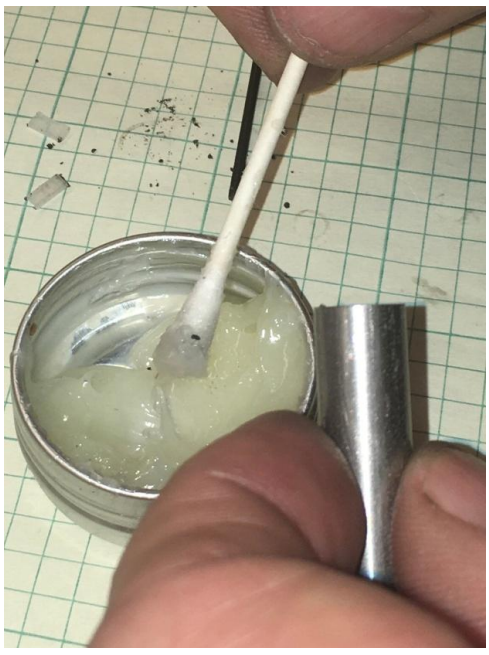



Add a dab of quick set epoxy to the wire between the o-ring and the cap
Pull the e-match wire so that the e-match is entirely inside the cap. (Note: If you cannot do this you probably have epoxy residue left inside the cap from previous use. Remove the e-match and see below under cleaning as to how to remove this epoxy residue)
Use Q-tip to wipe excess epoxy away from the threads and set aside, **hanging from the wire,** to cure overnight.
IMPORTANT: Make certain that you use enough epoxy so that it oozes out the wire hole when the wire is pulled!
Also VERY Important: make certain that you allow even this quick set epoxy to fully cure overnight! Failure to allow full cure of the epoxy WILL result in this device spitting the wire, shooting out burning powder and will reduce the cutting power of this device!



Step 2 - Prepare the cutter body

Wipe a generous amount of the supplied lube into the mouth of the cutter body to the full depth of the cutter body.



Check to make certain the larger hard **BLACK** o-ring is at the bottom of the cutter body
The supplied Allen wrench works well for this.
Insert the wrench to the bottom the cutter body.
"Feel" the bottom of the cutter body... do you feel metal or hard rubber?
If the larger hard **BLACK** o-ring is needed, seat it with the 3/16" Allen wrench
Note: You must NOT use the soft green o-ring for inside the cutter body!
You must NOT use any o-ring that you buy at your local hardware store for use inside the cutter body!
NOTE: This o-ring does not need to be removed and may not ever come out, it may be reused almost indefinitly. The reason to check for the o-ring is in case it fell out while cleaning.
The o-ring is shipped pre-intalled.

Step 3 - Add powder to the Cutter/Piston

Note: This kit comes with extra green o-rings for the cutter/piston. You may never need to replace this o-ring! Only replace this o-ring if the installed o-ring becomes severely damaged (Unlikely). Replacing this o-ring will be VERY challenging and is NOT recommended!

Notice that the actual cutter has a larger cavity machined into one end.

Completely fill this cavity with 3F or 4F black powder or BP substitute in the 3F or pistol granulation.

"Tamp" the powder down a bit then remove the excess. Do not add extra powder.

Drop the powder filled cutter into the Cutter body and carefully press into the cutter body mouth about 3/8". Try to avoid getting any powder in the threads! If you do, final assembly will be more difficult!

VERY IMPORTANT Note:

Do not ever use smokeless powder in this cutter! (Or any Tinder Rocketry device) **Use black powder or black powder substitutes such as Triple Seven or Pyrodex P ONLY!** The powder from a "disassembled bullet" is NOT black powder! The powder from a "disassembled fire cracker" is NOT black powder! (I tell you this because a few customers have used these with bad results!)

Step 4 - Finish Assembling Cutter

Keep the cutter body held down on a flat surface to avoid disrupting the powder and getting it in the threads.

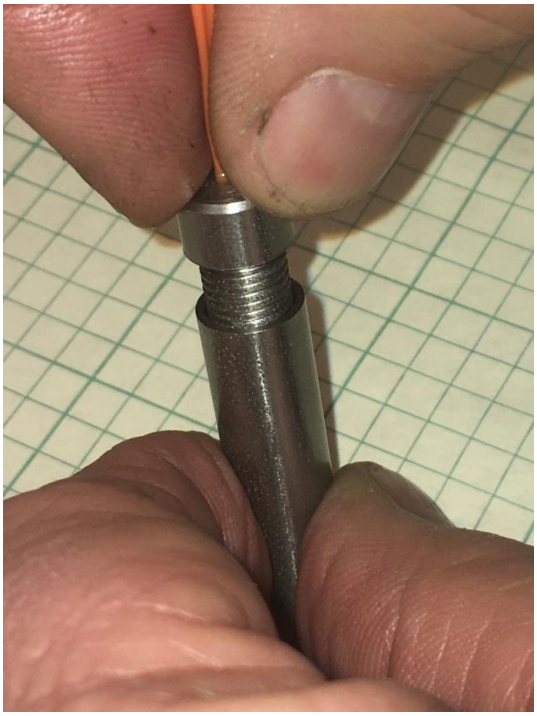
Insert pre-assembled Cap Screw Assembly that has cured overnight into the body and tighten while continuing to hold the cutter body down on a flat surface.

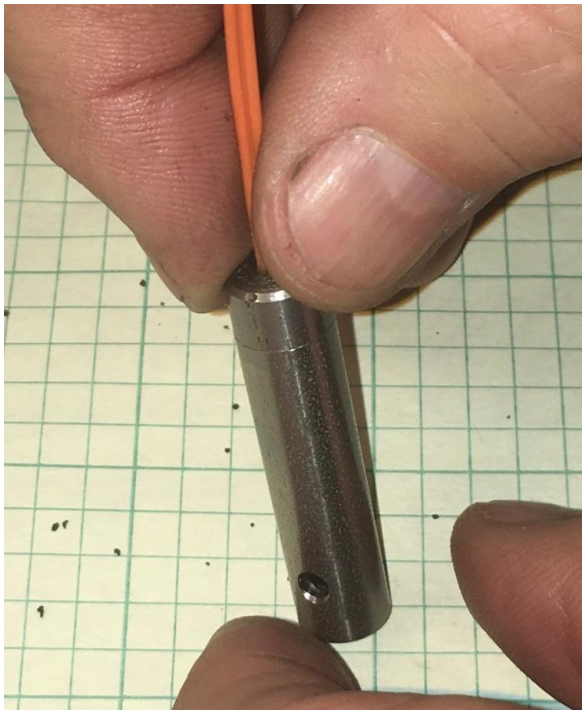
Tighten hand tight only.

The all new and improved Piranha cutter is ready to be used.

You may use it right away or keep it in your go box.

Note: If loaded exactly as directed, the e-match wire can act as a lanyard. If desired, you may also use a length of Masons Twine (Or thin Kevlar cord) tied to the Cap Screw neck prior to assembly as an additional lanyard.





Plain talk about Pyro Powder

Black Powder (BP) or BP substitutes in the 3F (fffG) or "pistol" granulation (Also 4F) are to be used in the Piranha.

As BP becomes more difficult to find, be assured that BP substitutes such as Triple Seven (Made for BP pistols) or Pyrodex P (Made for BP pistols), work very well in the new and vastly improved Piranha cutter where they did not work in the old design. Please note that since the amount of pyro powder is determined by the precisely machined cavity in the cutter/piston, no weighing of this minuscule amount of pyro is needed. And also note that BP or the BP substitutes are all measured by volume, not by weight. (They do have different weights for a given volume)

Under no circumstance should you ever use smokeless powder in this cutter!

Do not use smokeless powder in any Tinder Rocketry device for that matter!

Use black powder or black powder substitutes such as Triple Seven or Pyrodex P ONLY!

The powder from a "disassembled bullet" is NOT black powder!

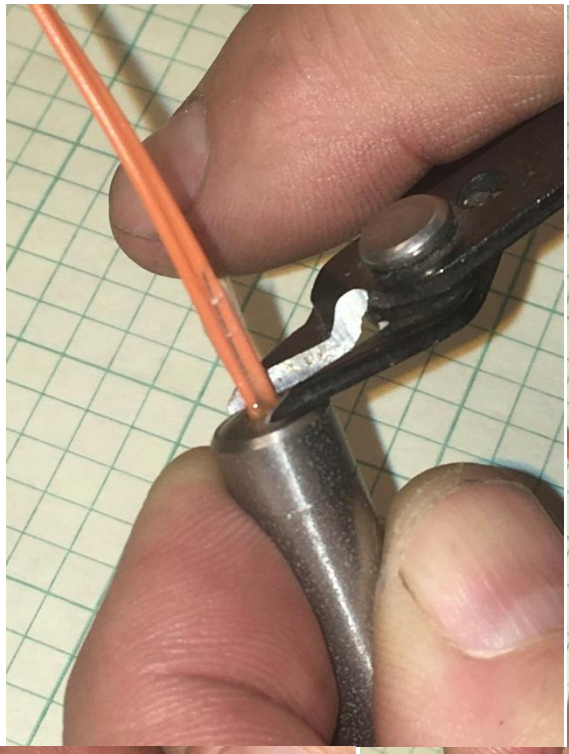
The powder from a "disassembled fire cracker" is NOT black powder.

Much to my surprise, I have found that a few people have used these other pyro powders with bad results. **Please do not use any pyro powder other than BP or the BP substitutes listed above!**

After use Disassembly & Cleaning

Step 1 Disassemble

Clip the e-match wire as close to the surface of the cap as possible.
Using a sharp side cutter (Such as the Xuron 2175 Maxi-Shear Flush Cutter on Amazon) is advised.
Disassemble completely (Try not to remove the o-rings that are inside the SS Housing).
Use the supplied Allen Wrench to push out the Cutter piston from the cutter body.
Sometimes the cutter/piston is slow to move, immersing the body in warm water may help. Also, pushing from one end then the other may allow for movement. Normally, if the supplied lube was used as directed, this thing comes apart with relative ease.





Use the supplied punch to free the spent e-match, o-ring and epoxy

Place the cap back into the cutter body and screw it at least halfway back in to help you hold the cap.

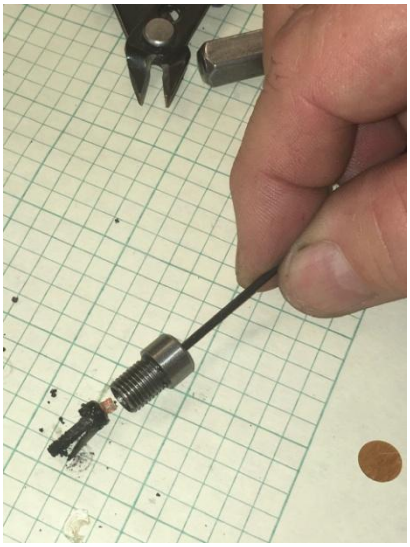
Center the punch on the clipped wires

Tap gently with small lightweight hammer to gain movement of the spent e-match.

The design of the punch will only allow some movement of the spent e-match.

You will need needle nosed pliers or hemostats to grab the protruding spent e-match or simply push it out with the supplied Allen wrench.

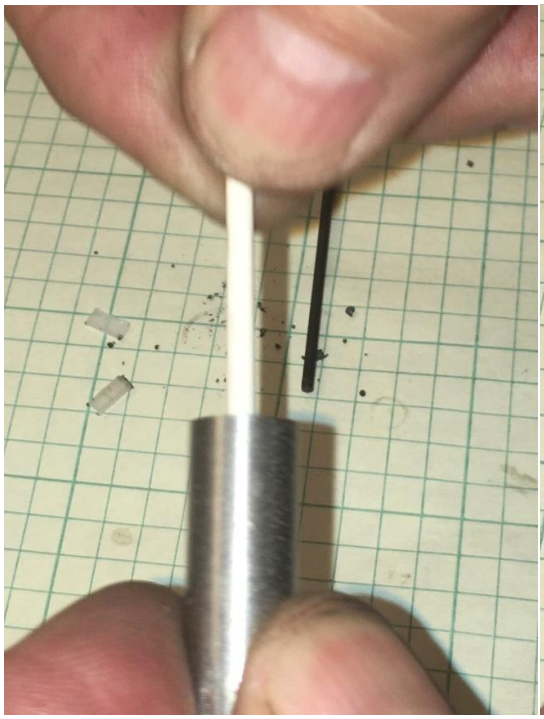
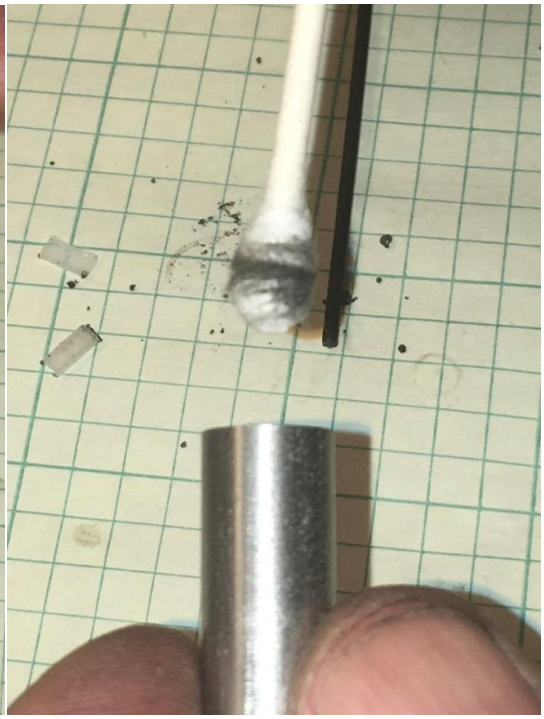
If the Cap was well lubed as instructed prior to loading, the e-match, o-ring and epoxy will all come out together and entirely with relative ease.



If there is epoxy still in the cap, you will need to obtain a 7/32" drill bit (Good idea to have one of these drill bits on hand anyway) and holding the drill bit in your hand only, twist it inside the cap to remove the remaining epoxy.
NOTE: If there is epoxy still in the cap, it MUST be removed prior to reloading the device or the e-match will not properly seat!

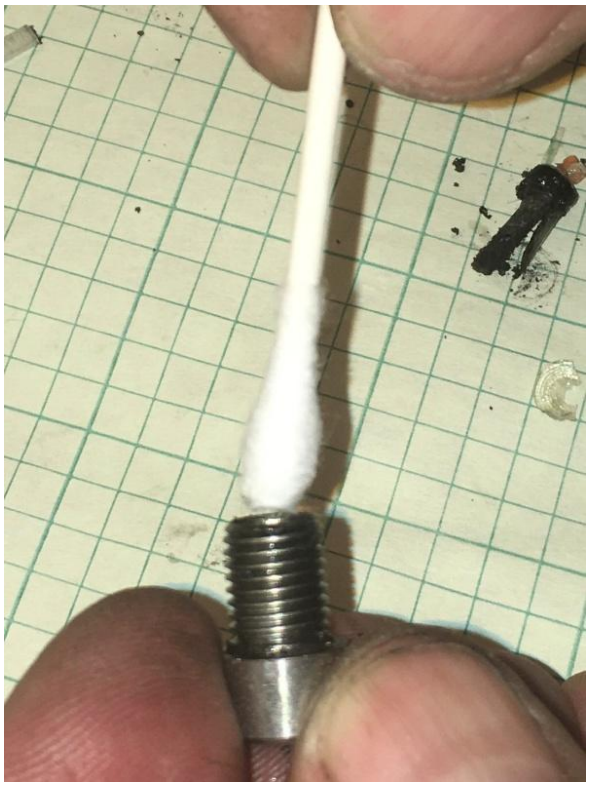
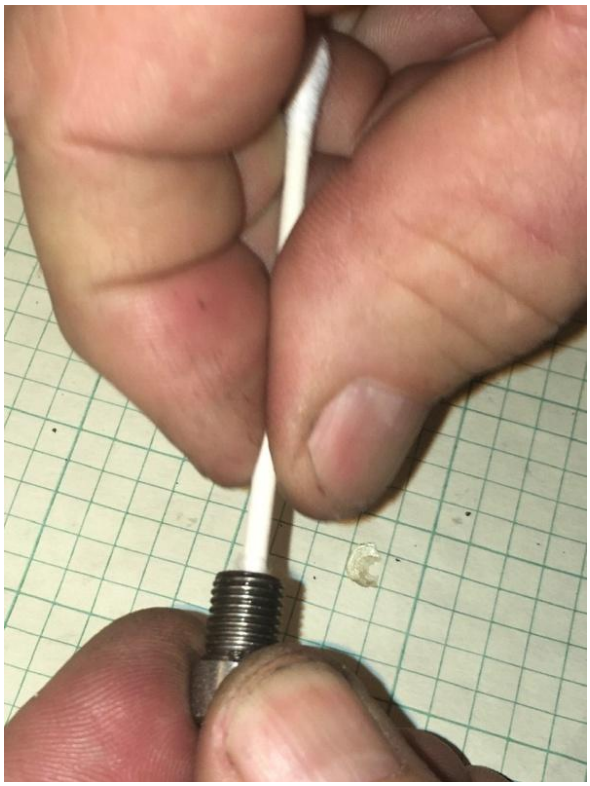

Step 2 Rinse & Clean

Wash all parts in soapy hot water
Swab the inside of Piranha body with cotton swab while still wet
Swab again to dry and remove remaining residue
(Do not be surprised if some of the dirty the lube is still in the threads after washing with soapy water, this is GOOD! The discolored lube will help with sealing the device upon next use!)

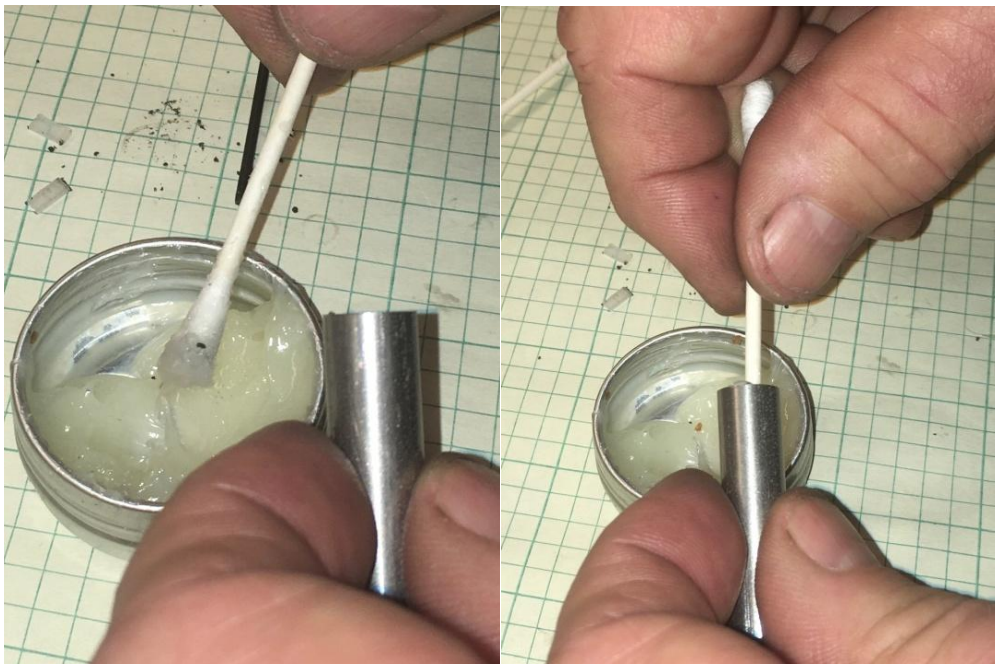
Roll a paper towel to a point to thoroughly clean Cutter/piston cavity. The powder residue will be stubborn to remove, soapy hot water will help. You may need to repeat this several times.
Note: The cutter cavity need not be absolutely clean but MUST be absolutely dry before use!


Use cotton swab to thoroughly clean the inside of the Cap while still wet
(Do not be surprised if the lube is still in the threads after washing with soapy water, this is ok)

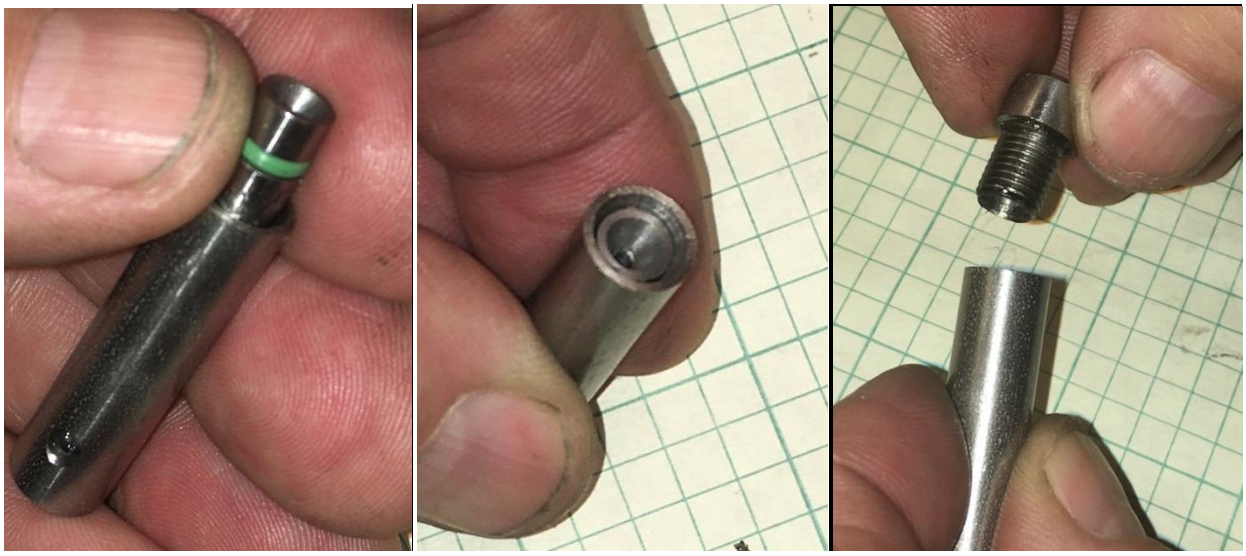
Step 4 Lube and re-assemble for later use

Make sure all parts are completely dry before re-assembly!
Use a **generous** amount of the supplied lube and wipe the inside of the cutter body.



Use a **generous** amount of the supplied lube and wipe the inside of the Cap.
DO NOT lube the cutter/piston, keep it free of lube (Mainly it's the pyro cavity we want free of lube).

Insert the cutter/piston back into the body and reinstall the cap to keep all components together.



Final note:

This device has been specially designed and manufactured to the highest standards to do a job and do it well. I have gone to great effort to explain how to use this most excellent little device! If this device is used exactly as described, you can expect it to work 100% of the time, 100% as expected!

Contact me if you see or feel that there have been omissions or if you still have questions.

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