



The L3 **Tender Descender** Tether & Release Device

Features:

Precision Machined Construction!
Works with BP or BP substitute
Lightweight- at about 5 oz
Up to 4000 lbs of initial shock load!
Can release with as much as 500 lbs still attached!
Works in a complete vacuum & in the deep cold of Space
Lifetime Tech Support & Lifetime Unconditional Warranty

Parts List:

Anodized Precision Machined Housing
Link Connector
Two 1/4" SS Quick Links
Sealing o-rings and putty
TR Assembly Lube
Powder Measure Vials & Cotton Swabs
Just add your own e-match(s) & Pyro powder



L3 Tender Descender Kit

2-15-25 Updated 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 Housing

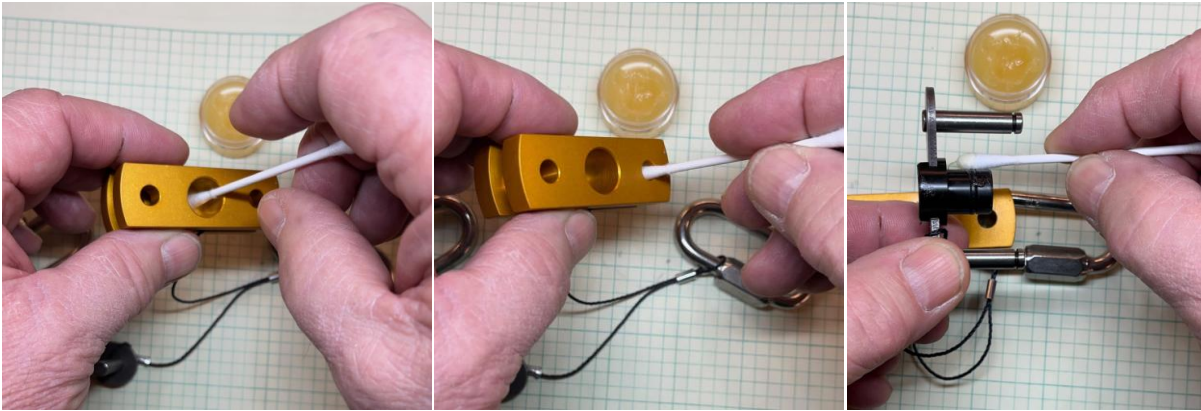
Using the supplied lube, completely lube the large cavity

Lube the small cavity at the bottom of the large cavity.

Thoroughly lube the Push Piston and its o-ring.

(Hint: Don't be stingy with the lube and do not substitute other lubes!)

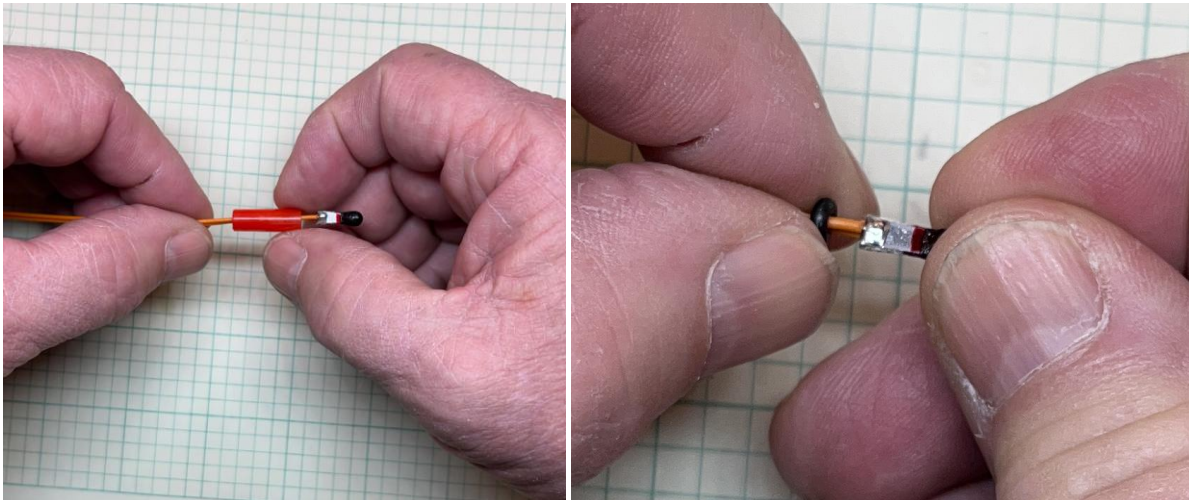
Lubing everything well, will make sure everything goes together easily and will significantly aid in cleanup after use!



Step 2 - Prepare the E-match

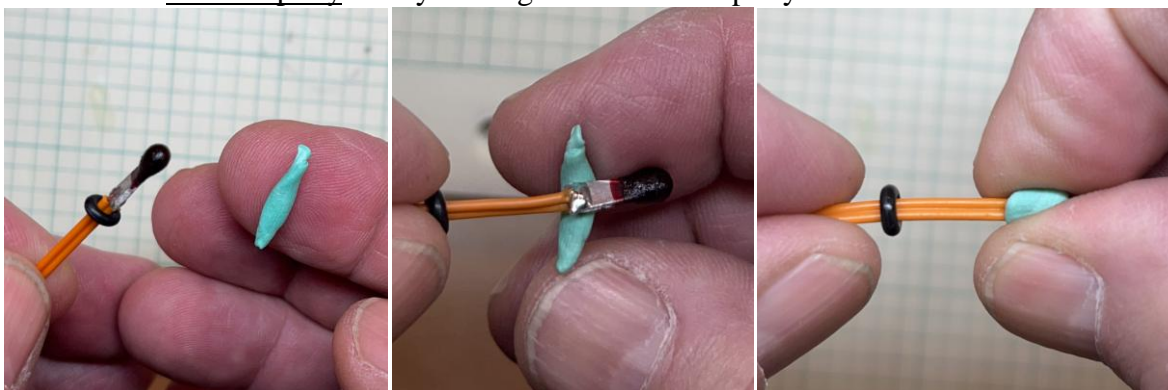
Remove the protective plastic cover from the e-match

Slide one of the small black o-rings over the wire and up to the e-match head

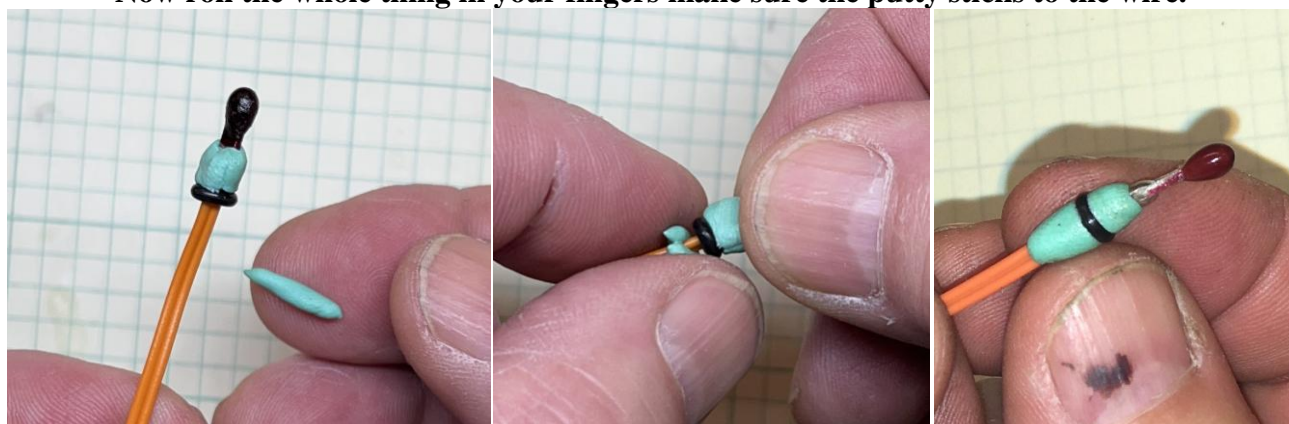


With a hobby knife cut one of the putty "squares" into quarter sections
Remove one of those quarter sections and roll it in your fingers the putty looks like a very long grain of green rice

Fold the putty around the wire below the e-match head.
Roll the putty with your fingers to mold the putty around the wire.

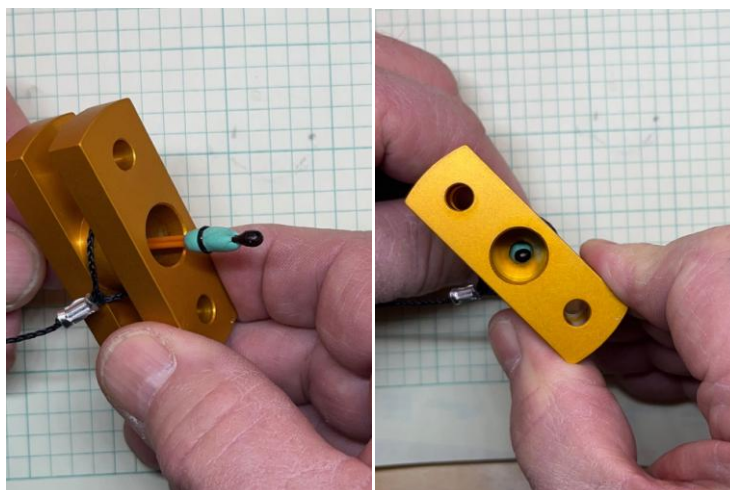


Slide the o-ring back up towards the e-match head
Roll up another long grain of green putty and wrap it around the wire on the bottom side of the o-ring.
Now roll the whole thing in your fingers make sure the putty sticks to the wire.



Step 3 - Assemble the Device

Inset the e-match into the Housing and gently pull it into the seat at the bottom of the large cavity



Fill one of the supplied Powder Measure Vials "to the line" with 3F or 4F black powder or BP substitute in the 3F or pistol granulation (Such as **Triple Seven or Pyrodex P**).

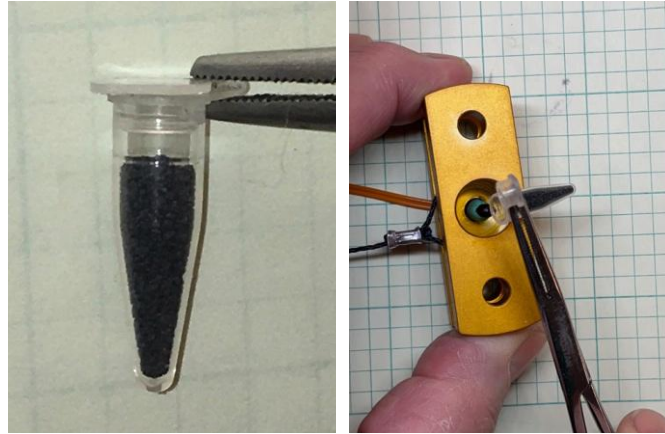
There is no need to add extra powder as this is already a max load!

Adding more pyro powder will only damage the device.

You may find it convenient to fill the vials ahead of time and close the lid for later use.

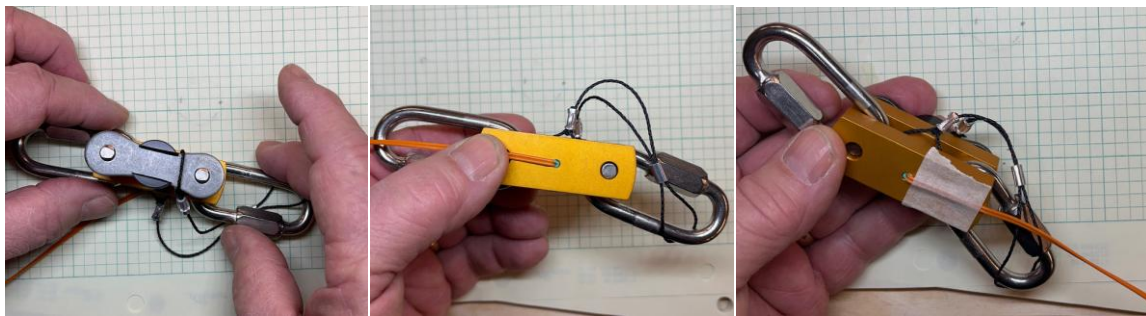
Carefully add the pyro powder to the prepped Housing.

(For those of us that have fat fingers, holding the powder measure vial with hemostats can be helpful.)



Assemble the device.

Once the device is assembled, tug on the wire just a little, then bend and secure it with a little masking tape. Contrary to what is pictured below, the blue painters tape can sometimes be easier to remove than standard masking tape!



This poster/mounting putty that is supplied with this device can be found on Amazon or at your local hardware store.

The putty that is supplied in all Tinder Rocketry products is:

"Holotap Removable Adhesive Poster Putty"

found on Amazon and elsewhere.

Other poster putties have been tested and all have also worked well.

VERY IMPORTANT Note:

Do not ever use smokeless powder in this device! (Or 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!

(I tell you this because I have had a few customers that have used these powders with bad results!)

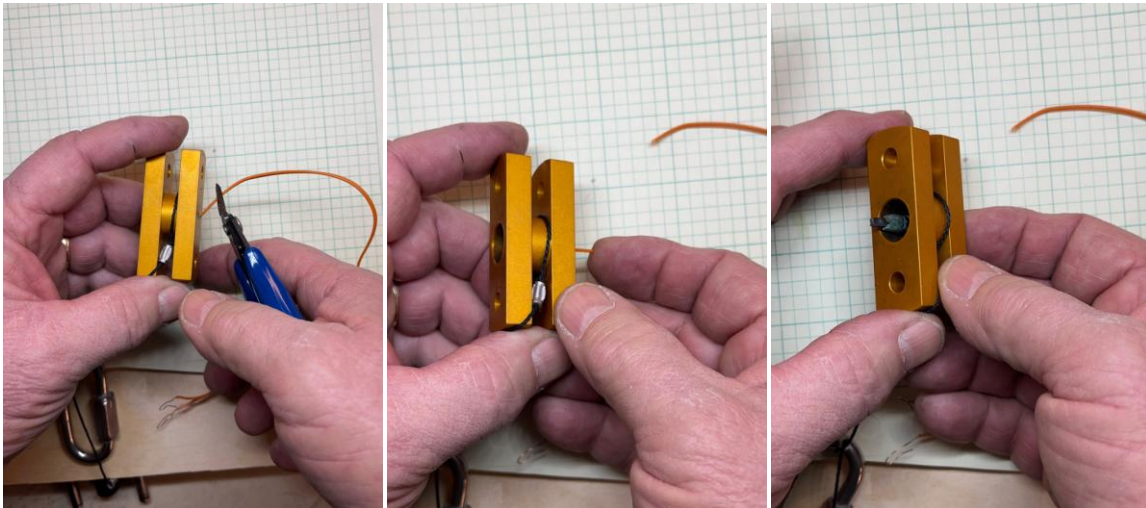
After use Disassembly & Cleaning

Step 1 Disassemble the device

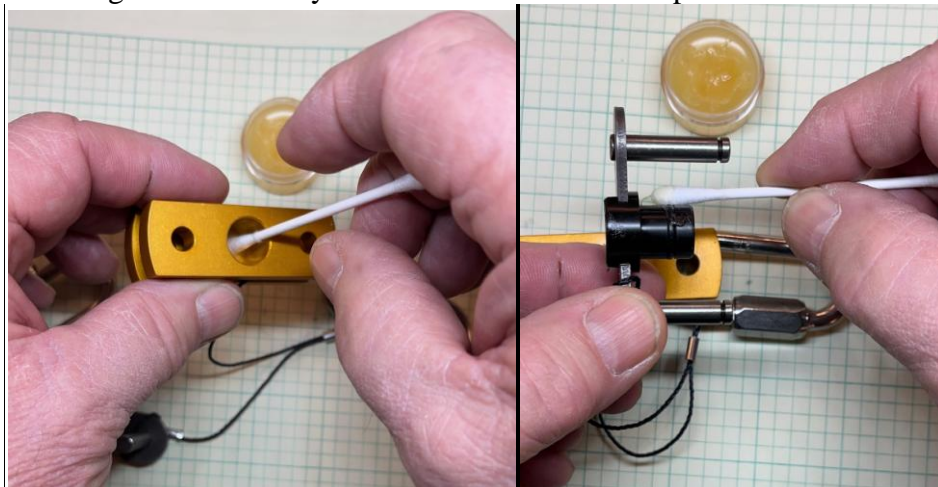
Clip the e-match wire(s) to about an inch or so from the Housing.

Push on the clipped wire to push out the spent e-match

The spent e-match should fall out, if not pull it out.



At this point you can literally clean the device with a **lubed** cotton swab! You will need to do this at least twice to get it clean and you will not need to re-lube prior to the next assembly!



If you choose to thoroughly clean the device in soapy HOT water, be sure to dry the connecting link with paper towels or use compressed air to quickly dry it. The connecting link will rust if is not completely dried and moisture is allowed to set.

Plain talk about Pyro Powder

Black Powder (BP) or BP substitutes in the 3F (fffG) or "pistol" granulation (Also 4F) are the only pyro powders that are to be used in the L3 Tender Descender tether & Release device.

As 3F or 4F BP become more difficult to find, be assured that BP substitutes such as Triple Seven (Made for BP pistols) or Pyrodex P (Also made for BP pistols), work very well in the L3 Tender Descender tether & Release device.

Please note that since the small amount of pyro powder is determined by the precise **volume** of the Powder Measure Vial, no weighing of this very small amount of pyro is needed.

Also note that BP or the BP substitutes are all measured by volume, not by weight as they do have different weights for a given volume.

Under no circumstance should you ever use smokeless powder in this or ANY other 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!

Much to my surprise, I have found that a few people have used these other pyro powders with bad results.

Under no circumstance should you ever use any pyro powder other than BP or the BP substitutes listed above in this or ANY Tinder Rocketry device!

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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