

# Reverb Rebuild

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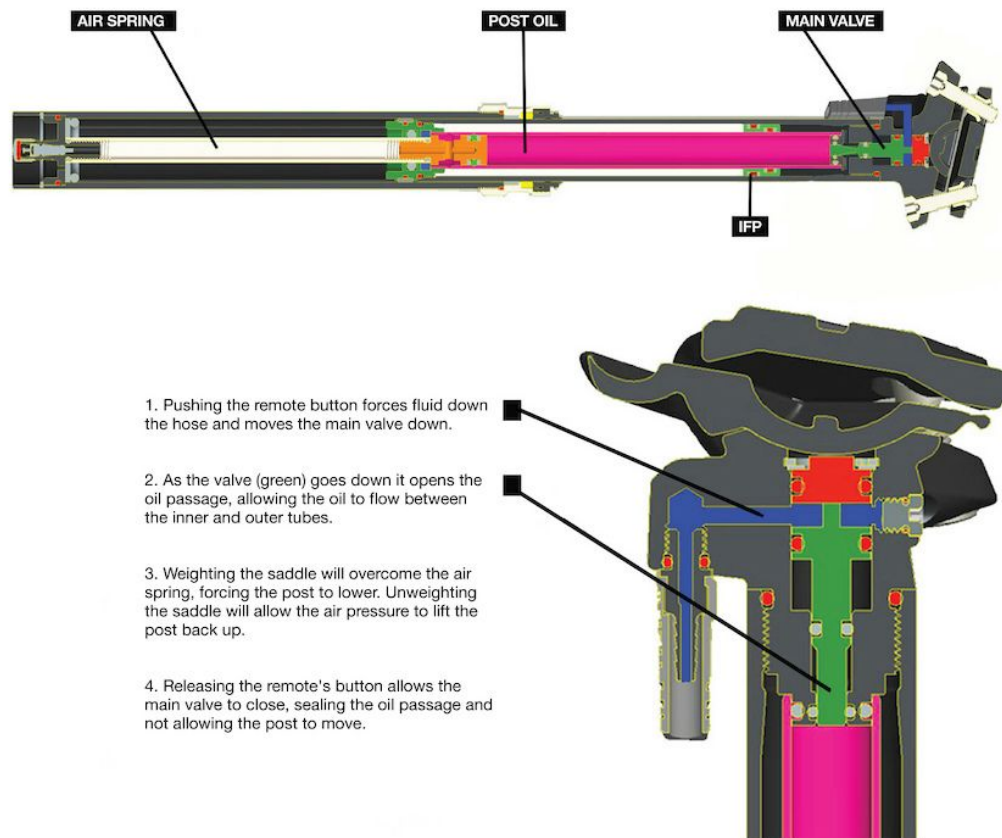
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## Cutaway of the post

<http://www.pinkbike.com/news/rockshox-reverb-review-2011.html>



## IFP tool size

<http://singletrackworld.com/forum/topic/reverb-ifp-height-tool>

Rockshox Reverb IFP height tool

A small metal tube.

- 170mm long
- 19mm external diameter
- 16mm internal diameter

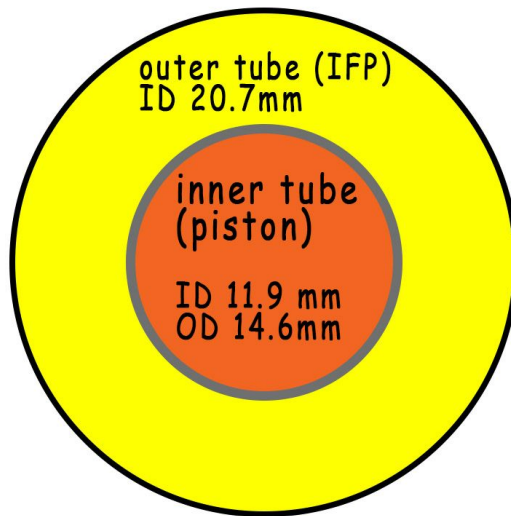
With height markings from the bottom.

- "Stealth all" (30mm)
- "Reverb 100mm travel" (100mm)
- "Reverb 125mm travel" (125mm)

## Calculate IFP initial depth and IFP tool

As the oil volume will be constant in this solution, we need to take account the piston displacement when placing the IFP. I.e. when the piston is inserted, the IFP will rise.

To calculate this, we need to know the diameters of the tubes, in my case:



Then we calculate the area for each tube:

inner tube:  $A_{inner\ tube} = \pi * r^2 = \pi \left(\frac{ID}{2}\right)^2 = 111.22mm^2$

outer tube:

$$A_{IFP} = A_{outer\ tube} - A_{inner\ tube\ OD} = \pi \left(\frac{ID_{outer}}{2}\right)^2 - \pi \left(\frac{OD_{inner}}{2}\right)^2 = 336.54mm^2 - 167.42mm^2 = 169.12mm^2$$

Next I checked the displacement of the piston from **seal engagement** (closes air hole in inner tube) to **bottom position** (tested by pressing the internal seal head against inner tube and then lifting it up, without moving the piston), giving 12mm of piston movement.



This gave 12mm for piston displacement height, so the volume is

$$V = A_{inner\ tube} * h = 111.22mm^2 * 12mm = 1334.64mm^3$$

Using this volume with IFP area, we can calculate the IFP movement for same Volume

$$h = \frac{V}{A_{IFP}} = \frac{1334.64mm^3}{169.12mm^2} = 7.89mm$$

→ IFP should be set 7.89mm below the desired final depth.

Apparently the markings in IFP tool are same as the adjustment range, i.e. 125mm for 125mm post. ( <http://singletrackworld.com/forum/topic/reverb-ifp-height-tool> )

So the final measure for this solution would be  $125mm + 7.89mm = 132.89mm$

Markings on the IFP tool (cut with a knife, then added numbers with a marker).



## Bleeding

<https://www.youtube.com/watch?v=rbHc4V6Ei14>

## Install pop-it-open valve and plug

If you removed pop-it-open valve, re-install it now:

insert a small amount of slick honey into the o-rings of the pop-it-open valve



insert the pop-it to the post head

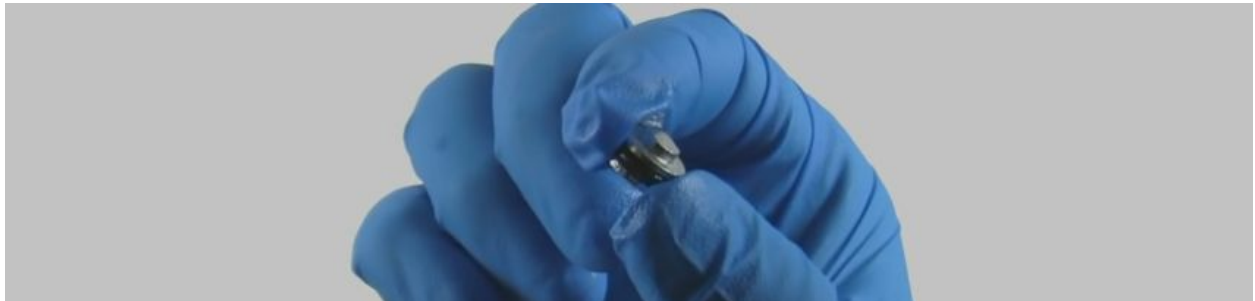




push firmly until it stops



apply small amount of slick honey to the plug o-ring



insert the plug into the post head and press firmly until it clears the snap ring groove





install the plug washer (make sure it also clears the snap ring groove) and insert the snap ring



check that the snap ring is properly seated by rotating it back and forth with the snap ring pliers



clean the post head



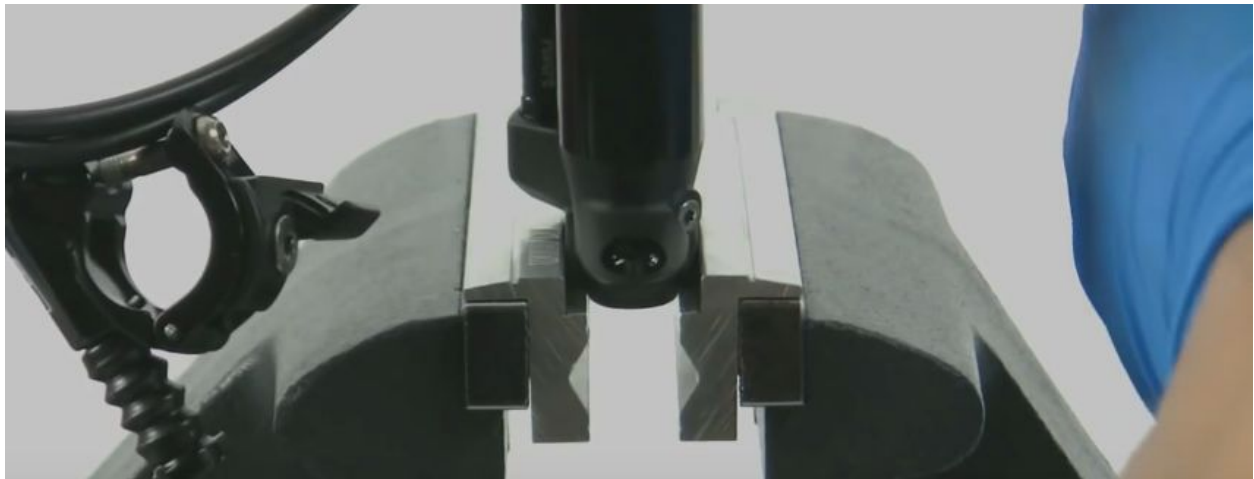


## Bleeding the post

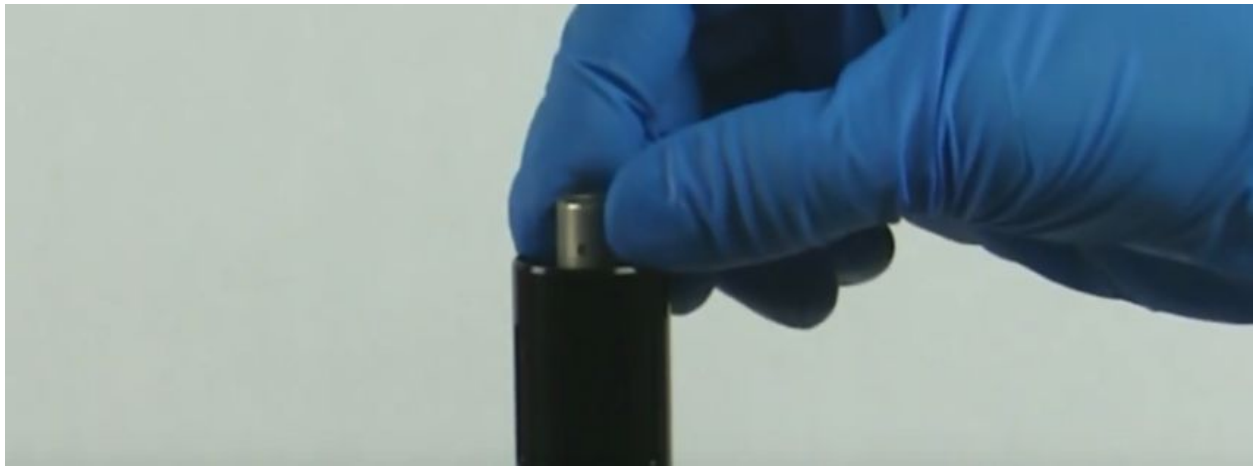
Make sure that the remote is properly bled, see reverb bleed procedure

[http://cdn.sram.com/cdn/farfuture/ra8pEA8zIP5M5phNdo6jygia2oQ0U3L\\_ZMjg67R\\_1ms/mtime:1372788191/sites/default/files/techdocs/reverb\\_remote\\_assembly\\_bleed\\_gen\\_0000000003215\\_rev\\_b.pdf](http://cdn.sram.com/cdn/farfuture/ra8pEA8zIP5M5phNdo6jygia2oQ0U3L_ZMjg67R_1ms/mtime:1372788191/sites/default/files/techdocs/reverb_remote_assembly_bleed_gen_0000000003215_rev_b.pdf)

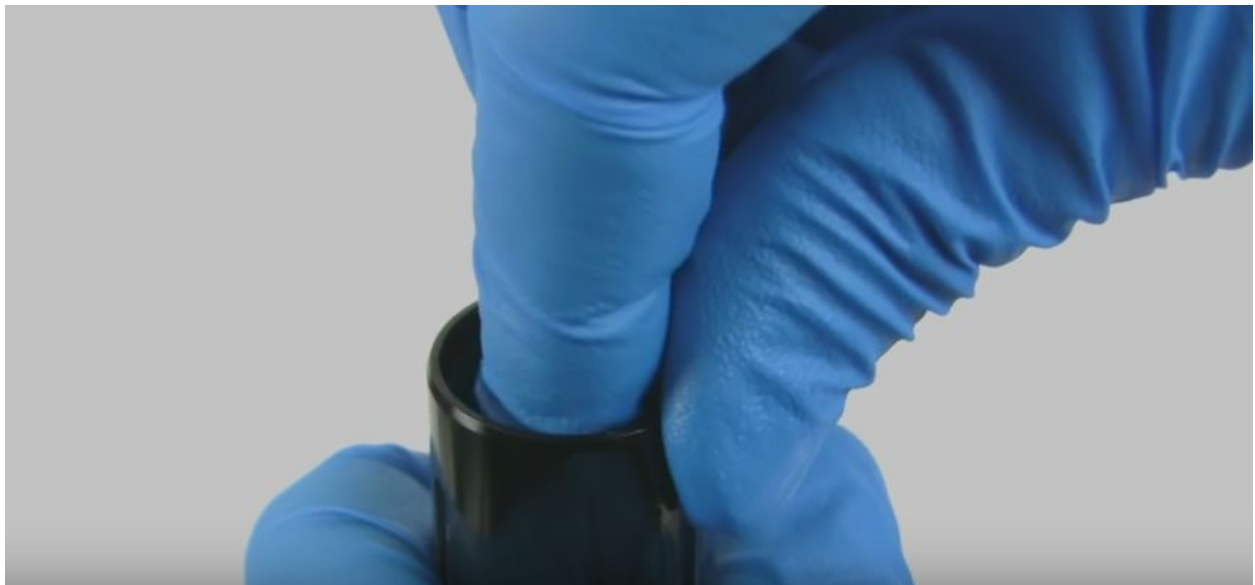
clamp the top post to the soft jaw vise from the flat section



insert the non ported part of the inner tube to the upper post



press firmly until it snaps securely into the upper post



pour hydraulic fluid to the inner tube



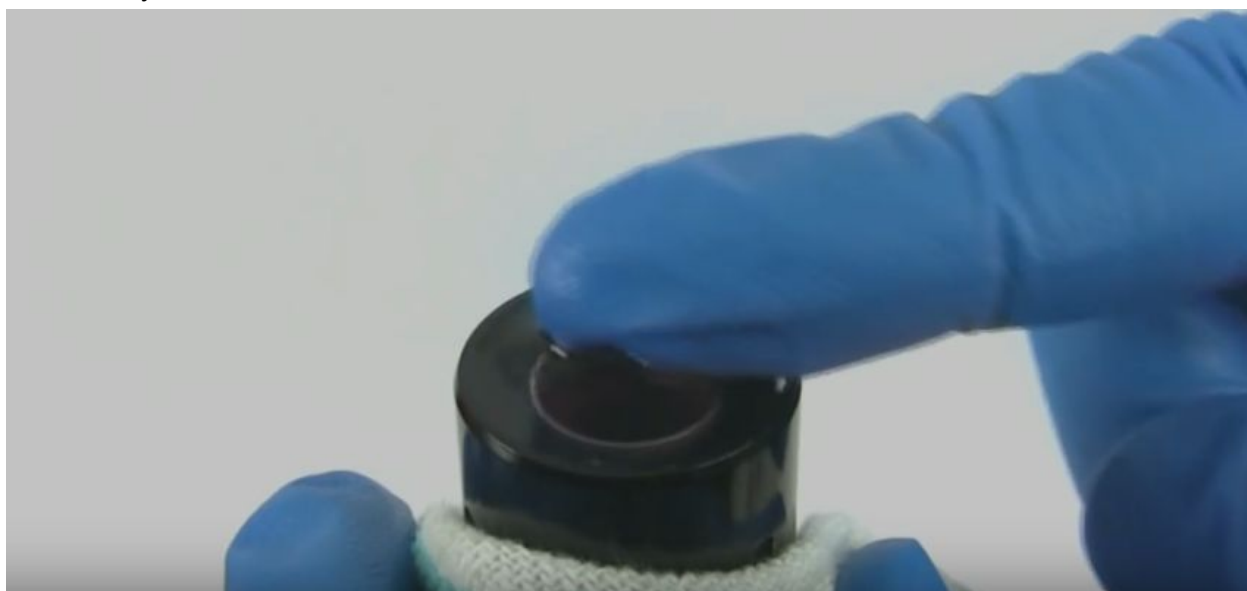
After the inner tube is filled, you can test that the remote works by inserting the piston and pressing it down with and without the remote being pressed. It should not move if remote is not pressed as it enables the oil to flow from inner tube to the post.

continue to pour until the fluid is level with the top of the post

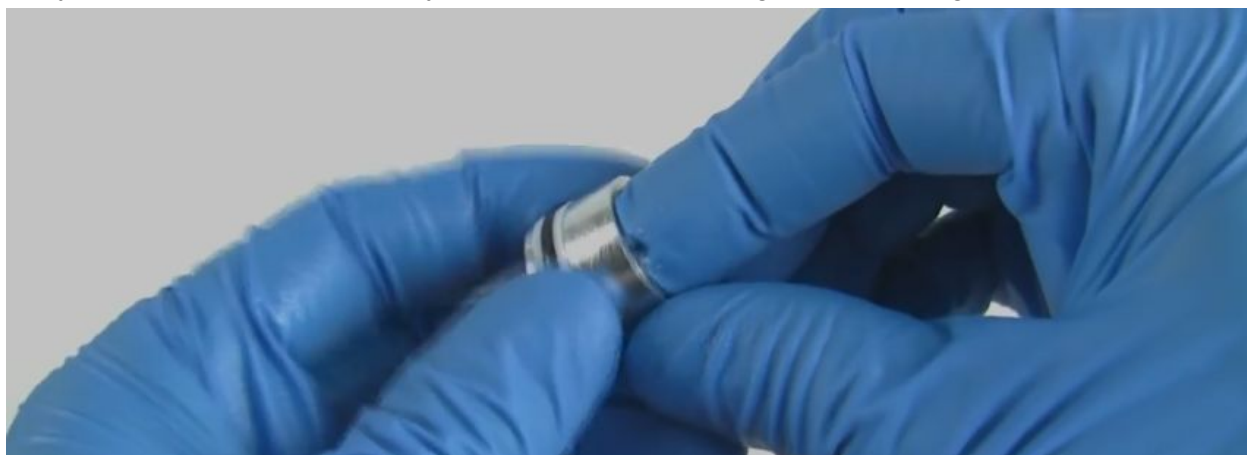




remove any bubbles from the surface



apply small amount of slick honey to internal and external glide- and o-rings of the IFP

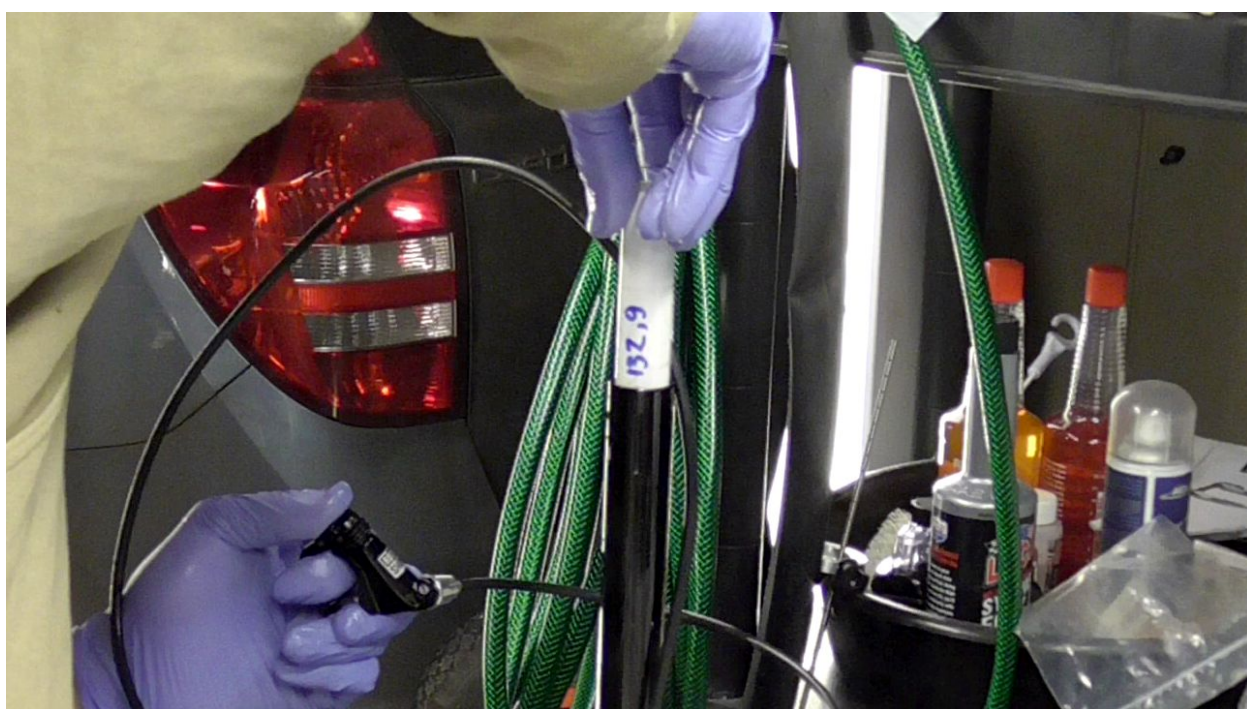
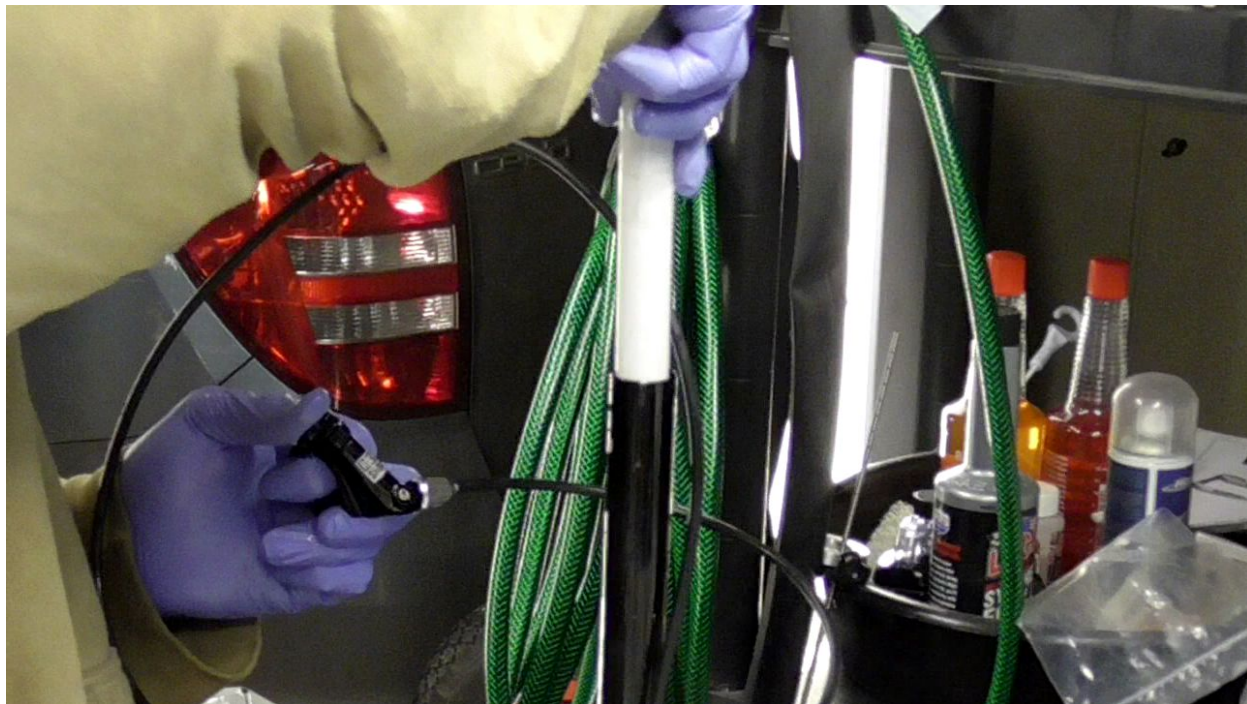


insert the IFP into the upper post





Press the remote to open the pop-it-open-valve and use "IFP tool" to push the ifp to calculated length (132.9mm).





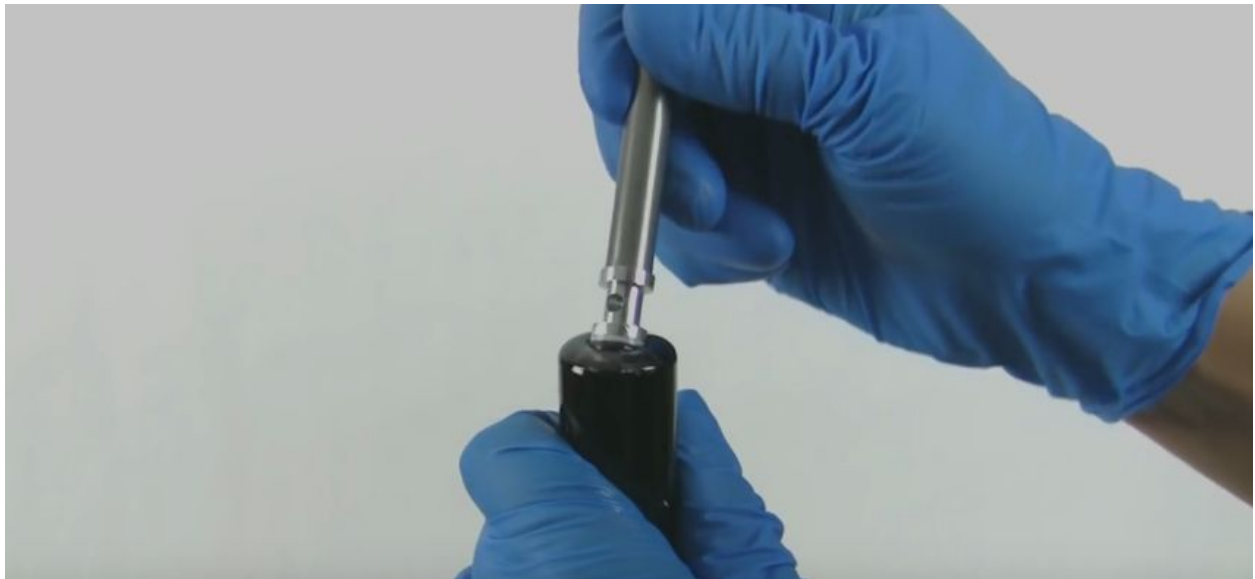
pour additional fluid and again remove the bubbles



apply slick-honey to the piston glide rings and o-ring



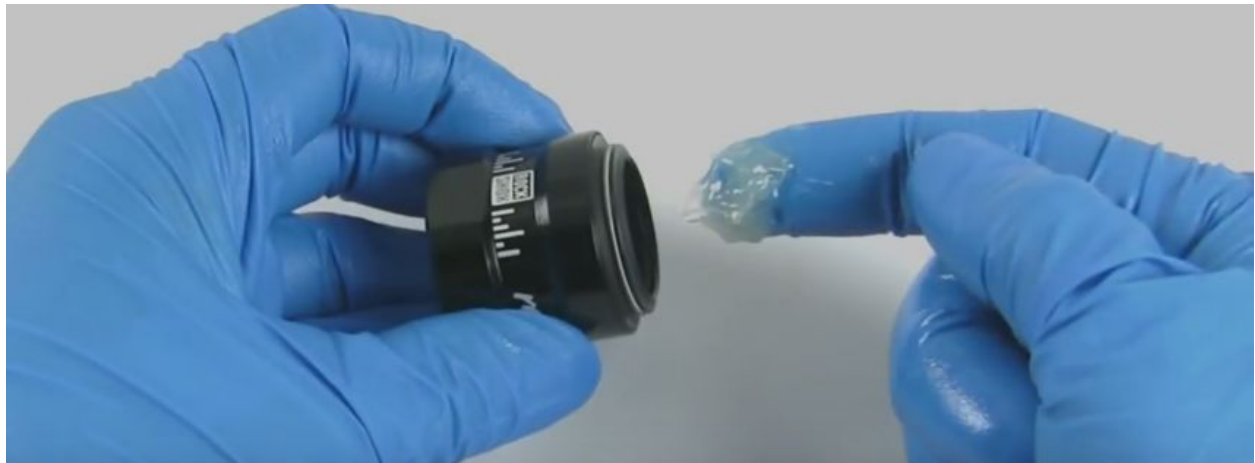
Press the remote and insert shaft piston into the upper post inner tube, so that the piston head stays just above the inner tube. (this will also rise the IFP to it's desired depth)



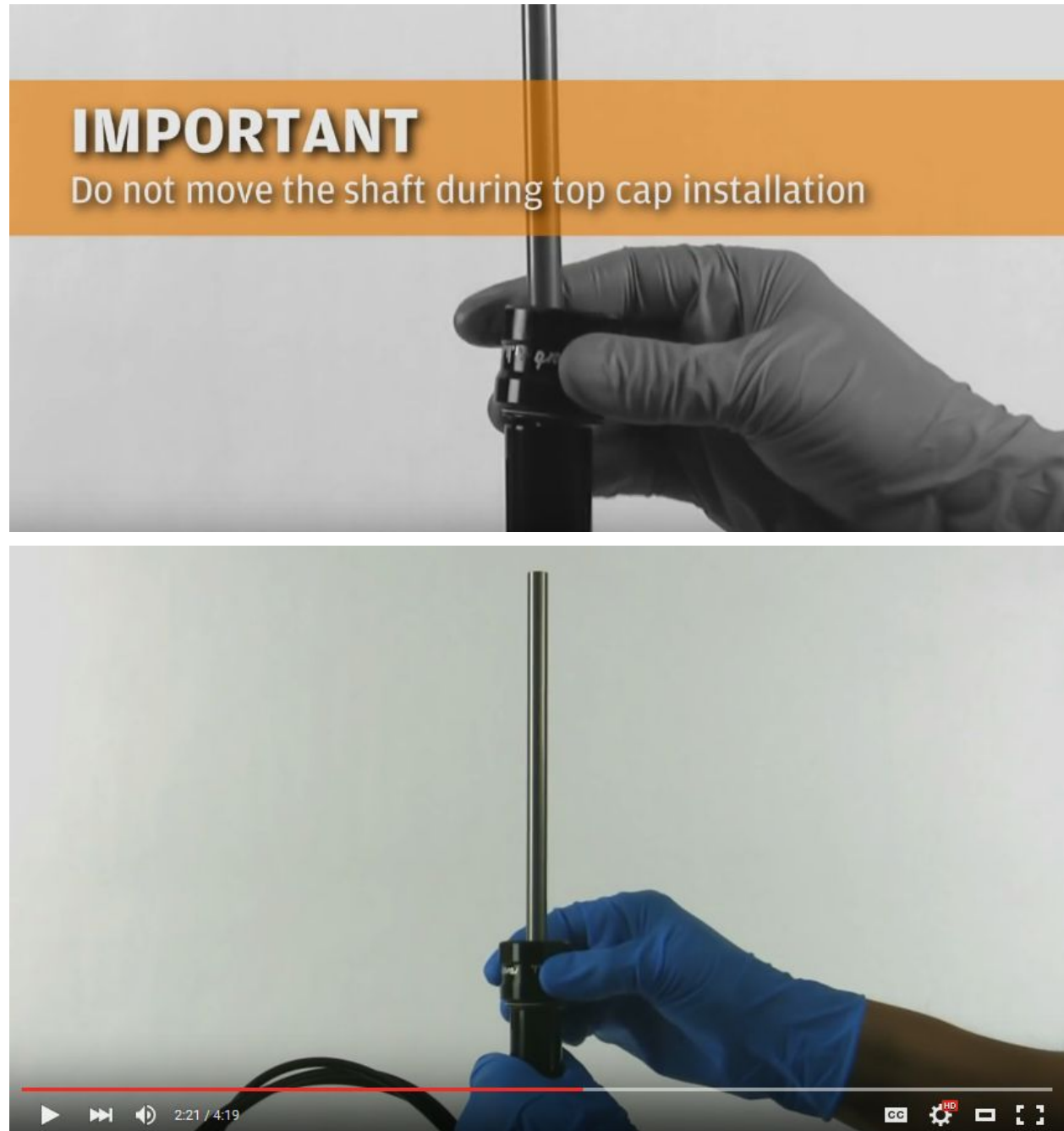
pour excess fluid out

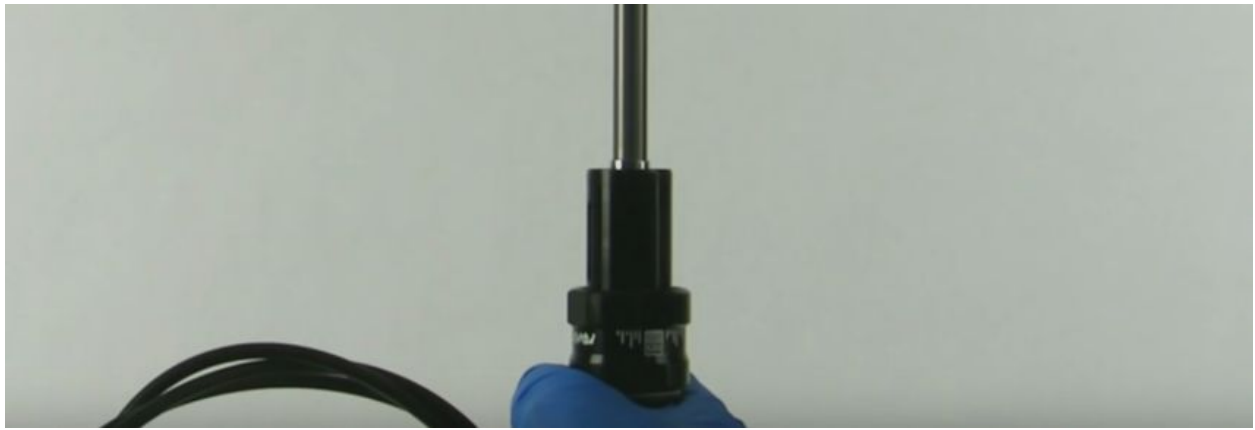


apply liberal amount of slick honey to the top cap seals and bushing



install the top cap to the upper post and slide it until it clears the key slots





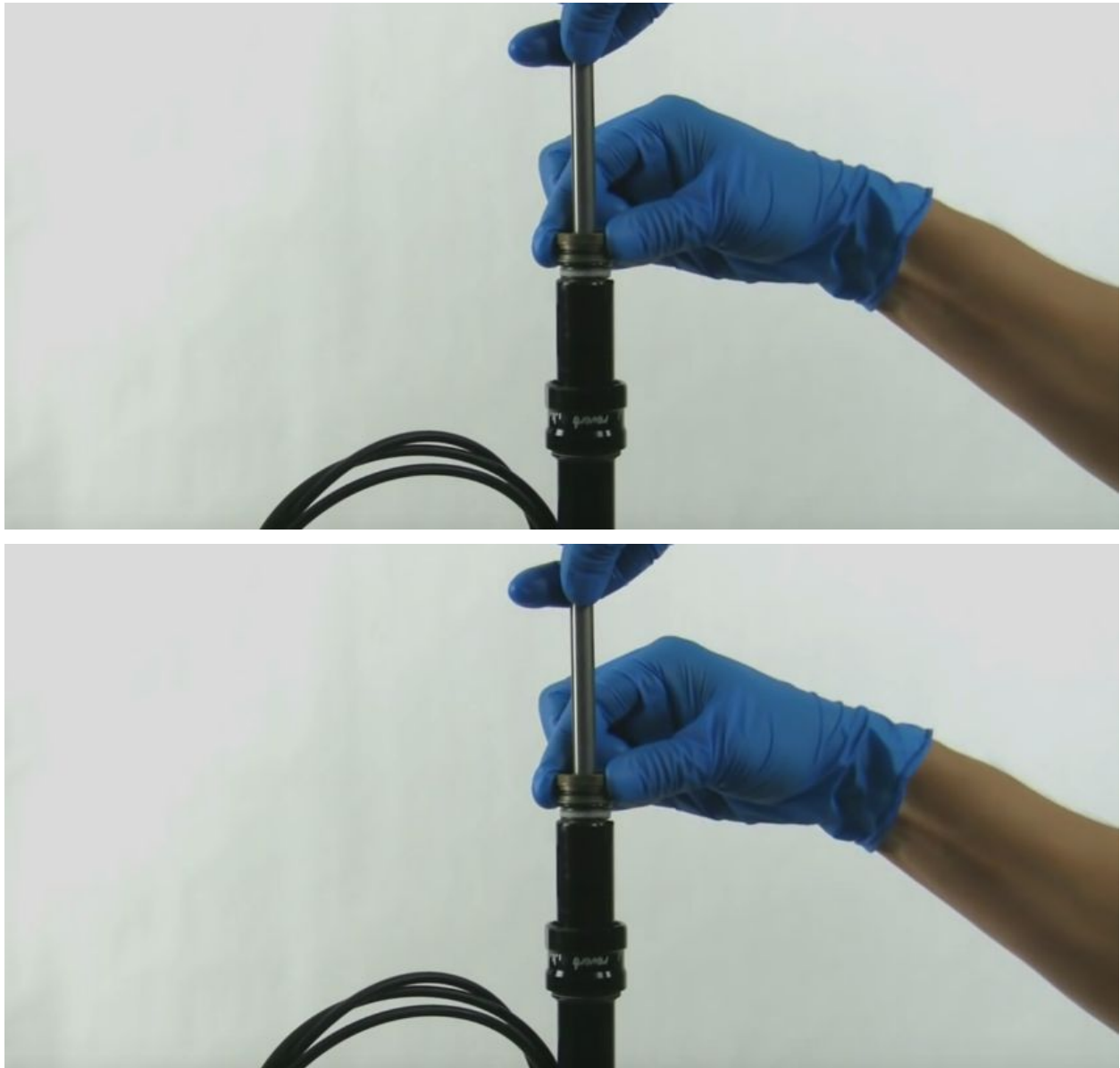
apply liberal amount of slick honey to the inside and outside seals and bushing of the inner seal head





While holding the shaft in place, slide the inner seal head to place and thread it to upper post via hand. (The shaft should be pretty solid as it locked with the oil + pop-open-valve)

**RECOMMENDED: use blue loctite on the threads.**



You should feel some resistance before fully threading it (the piston + oil will resist), when this happens, press the remote and fully tighten the inner seal head



