

9point8

2015 Fall Line Wear Part Replacement Instructions

Sept 2015

Read Entire Instructions First

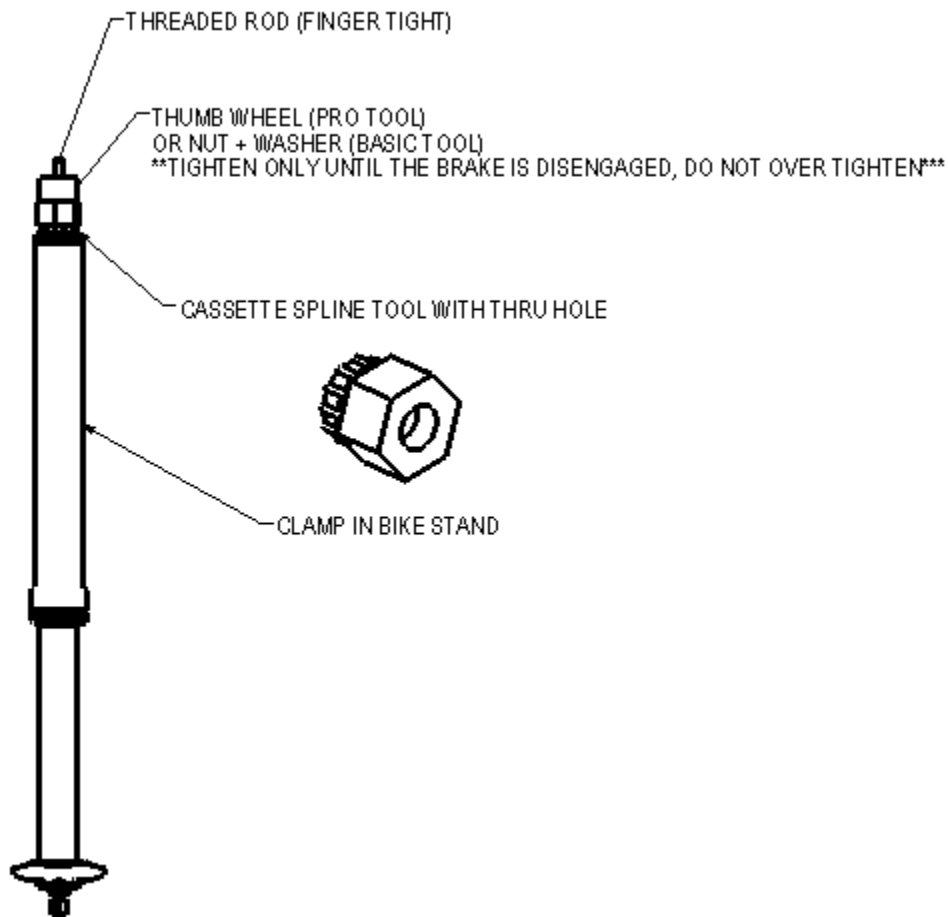
Disassembly-Reassembly procedure takes about 30-60 minutes for an experienced mechanic

Revision R02

Symptoms	<p>Air leak at nut, slow movement, wiper is torn, large amounts of grease coming from under the nut, feels 'gritty' when cycling up/down. Lubing the upper stanchion does not significantly improve performance.</p> <p>If you feel the post has developed significant play do this service right away to avoid damaging the stanchion</p> <p>If you damage a wiper it needs to be replaced right away to avoid contaminants getting inside the post.</p>
Maintenance Interval	Highly dependent on where and how often you ride. Typically a post will last several riding seasons with nothing more than a quick re-lubrication.
Tools Required	<ul style="list-style-type: none"> -A brake release tool (available from 9point8) -Cassette spline tool with a hole through the center and matching wrench (Park Tool FR-5 or similar) -Some small plastic tools, or small flat head screw driver -Combination jaw slip joint pliers -Torque wrench(s) able to read 4 and 14Nm -Bike work clamp -Low Strength Loctite (Pink # 222) [optional] -Some 400 grit sandpaper

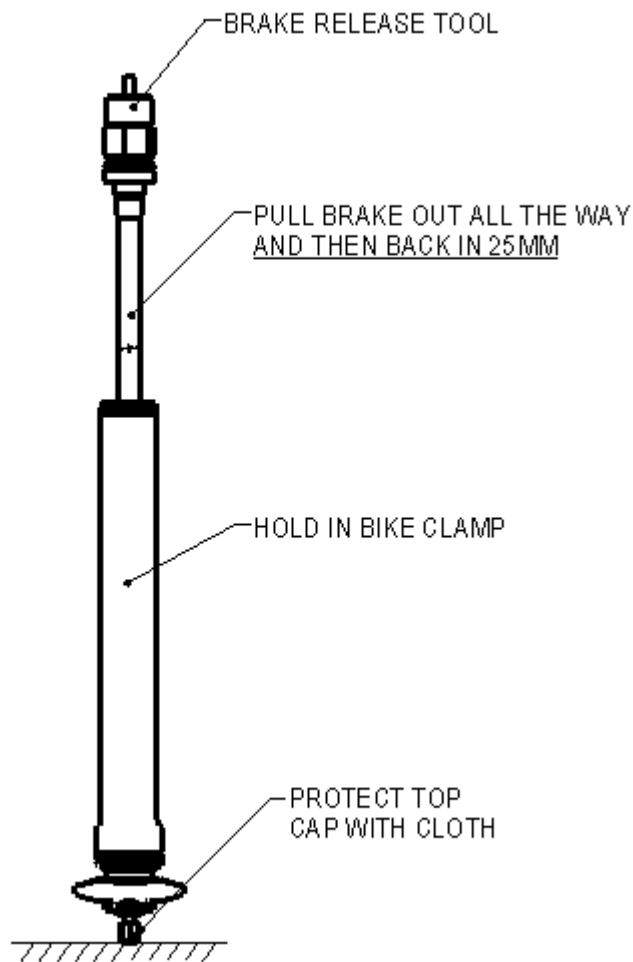
Install Brake Release

- 1) Vent the air pressure and remove the head components (to prevent them being damaged).
- 2) Place a cassette tool (with a hole through the centre) on the bottom of the post.
- 3) Insert the brake release rod through the cassette tool and thread into the bottom of the post. Do not overtighten, finger tight only!
- 4) Thread the Thumb Wheel on to the brake release rod. Tighten this against the cassette tool. Again do not overtighten! You will feel it backing off the brake, once it stops it is tight enough. Finger tight only.
- 5) At this point the post should be free to move up and down. If it is not, ensure the brake release is properly installed.
- 6) Clamp the post upside down in a bike stand. Ensure to clamp on the lower tube ONLY to avoid scratching the stanchion.



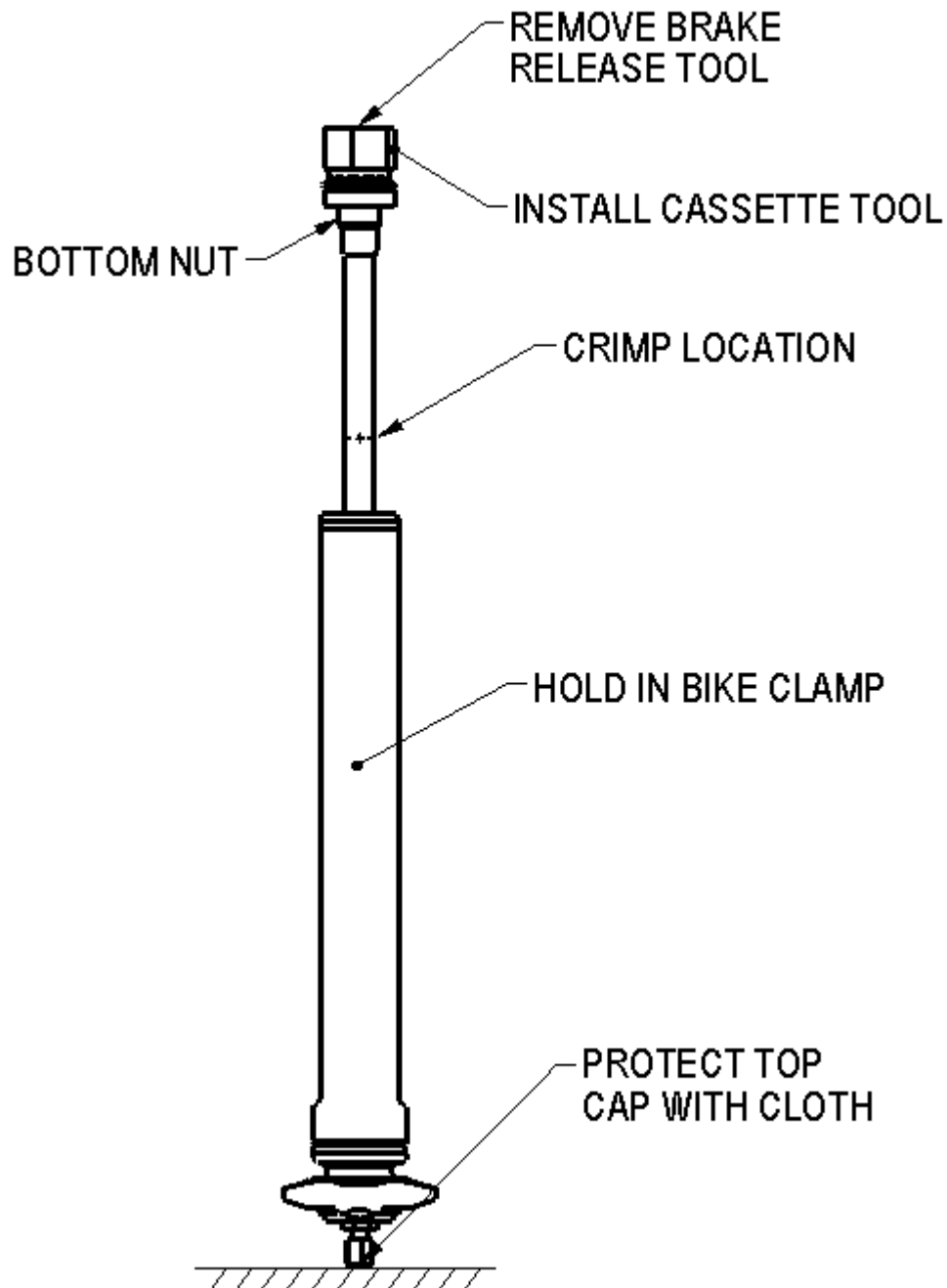
Open Post Up

- 1) Unscrew the bottom nut using a wrench on the cassette tool. It can be a bit tight. If the post spins in the clamp try adding an old inner tube around it for extra friction. A quick/jerking motion usually works best for cracking it loose. If all else fails you can clamp the post by the top cap/head, however, if you over do it and crack the top cap loose it will need to be re-installed and Loctited which is best to avoid if possible.
- 2) With the bottom nut fully unscrewed **fully** collapse the post. Set your work stand up such that the head of the post (which is still pointing down) is resting on a table. Put it on a cloth to prevent scratching it. This ensures the post does not try to extend while you are working on it.
- 3) Pull the brake assembly up as far as it will go and then **push it down about 1" (25mm)** to keep it out of harm's way, but still allowing you access to the guts of the post.
- 4) Clean off any grease at the bottom of the post.



Remove bottom nut

- 1) ***Remove the brake release tool if it is still installed.*** Failure to do so will catastrophically damage the brake!
- 2) Find the crimp location on the brake stand-off. You will see 6 small divots. This is the strongest part of the tube.
- 3) Use a pair of combination jaw slip joint pliers and grip the stand-off tube tightly, centred on the divots. A piece of cardboard or an old inner tube can help protect the standoff from getting scratched. Only grip the tube at this location, gripping anywhere else may crush the tube and impede smooth function. Only grip as tightly as required to unthread the bottom nut, **if you squeeze too tightly it will damage the mast!**
- 4) While holding the standoff from rotating with the pliers in one hand, use the cassette tool to unthread the bottom nut.

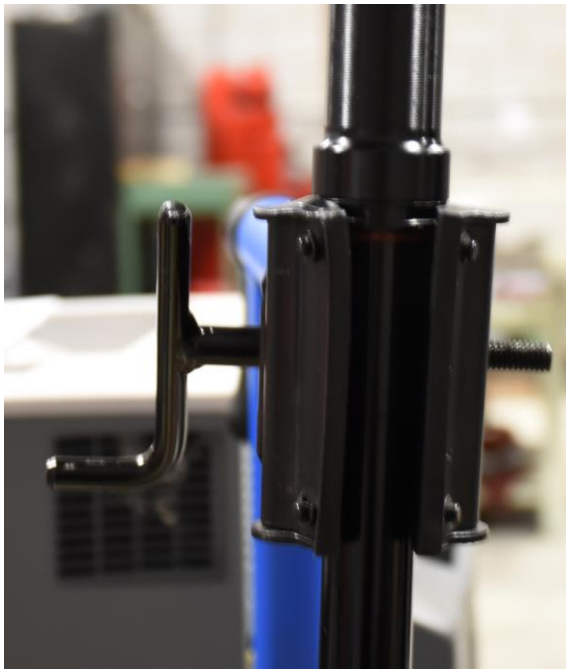


Remove the Bottom Tube:

- 1) Unclamp the post and turn it over, clamp the nut tightly in a bike clamp and unscrew all the way using two hands on the lower tube.
- 2) Slowly pull the stanchion tube out of the lower tube. Wrap your hands or a towel around the stanchion tube so that when it comes out of the lower tube you don't lose the keys, they are spring loaded and can tend to 'pop' out.
- 3) If it looks dirty, clean the lower tube thoroughly inside and out. WD40, degreaser, soap and water etc. are OK to use here. Ensure the tube is clean and dry before reassembly begins.

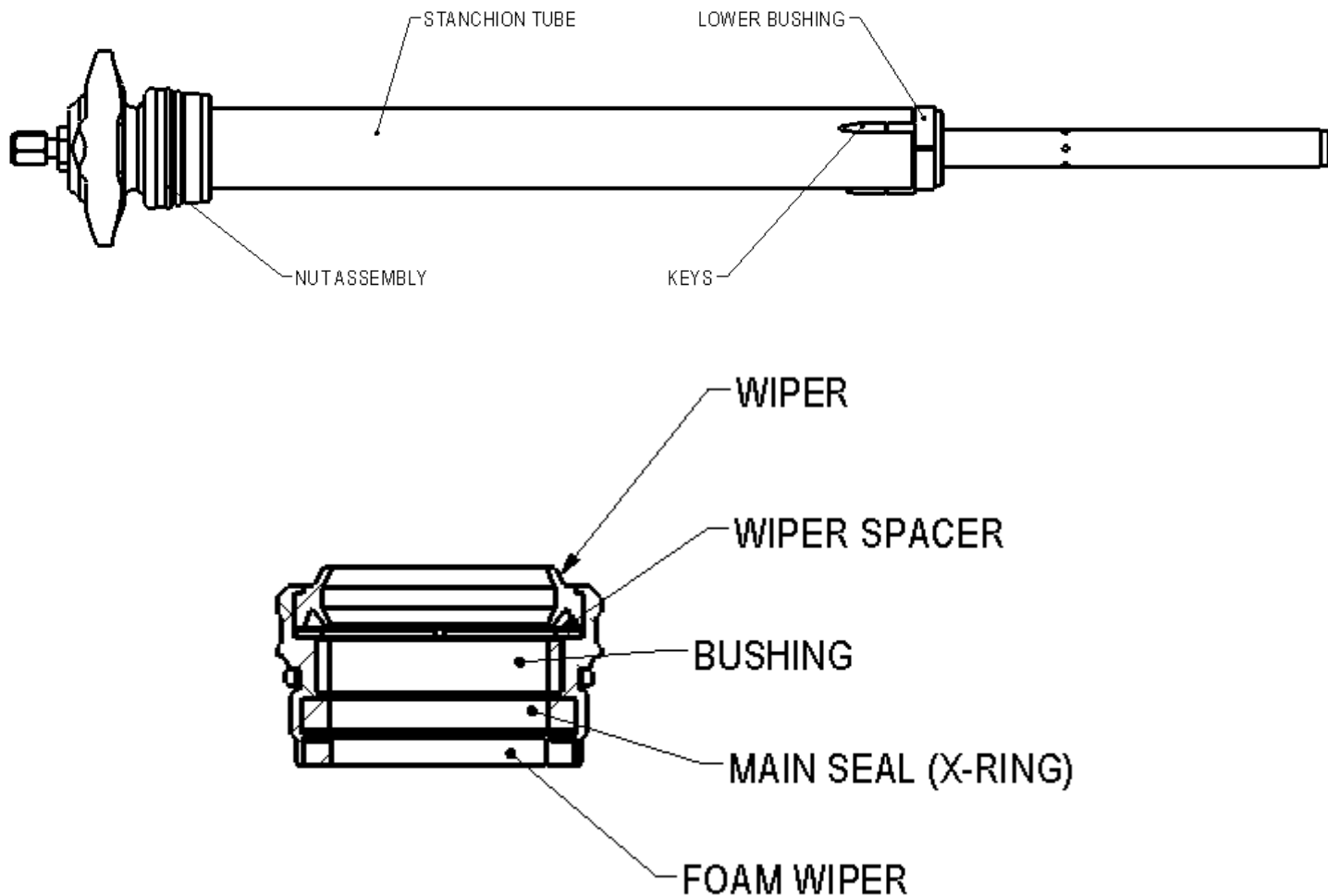
Remove the Nut

- 1) Remove the lower bushing off of the end of the stanchion tube using a flat bladed screw driver to gently pry it off. Don't put the new bushing on yet.
- 2) Slide the nut off of the bottom of the stanchion tube.
- 3) Wipe off the stanchion tube with a clean dry rag. Be careful not to get any grease or oil into the bottom of the tube. Don't submerge it or spray it with any cleaning fluid, including water. Fluids can work their way onto the braking surface. If this happens you will have to re-clean the surface.



Remove Old Parts and Put New Parts in Nut

- 1) Remove the old wiper. A small plastic tool can be used to pry it out of the groove, be careful not to scratch the nut.
- 2) Grab the end of the wiper spacer with a pair of needle nose pliers and pull it out of the nut.
- 3) Push the old bearing out of the nut from the bottom.
- 4) Use your plastic tool to remove the main seal from the nut. Be very careful not to scratch the groove or it will not seal properly.
- 5) Clean out the nut thoroughly with soap and water and allow to dry completely.
- 6) Re-install the bushing, wiper spacer and wiper (all pop in by hand). Make sure the wiper seats properly.
- 7) Lubricate the main seal on all sides with a liberal amount of P10L grease and install into the seal groove. Check and then double check that the seal is fully seated and is not rolled or otherwise damaged. Take a bit of P10L grease and rub some inside the nut to fill the grooves under the wiper and bushing. Don't over fill; it will make a mess during reassembly.



Re-Install Nut and Lower Bushing:

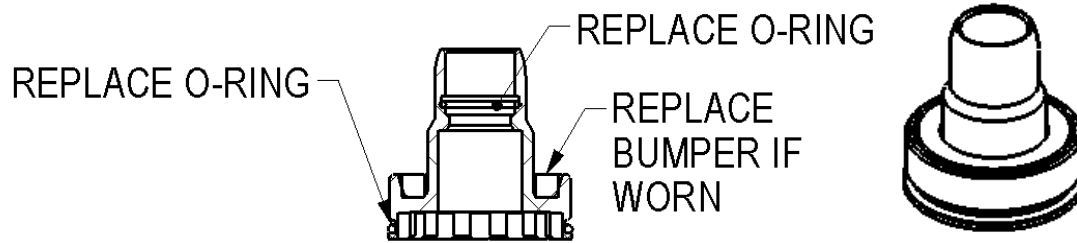
- 1) Smooth all edges of each keyway groove on the stanchion tube with the provided sandpaper. Check the key grooves to make sure there are no burrs or sharp edges remaining on them. This is vital to ensure your new seal is not damaged during assembly.
- 2) Clean all debris from the sanding off of the tube very thoroughly. Use a cloth with some WD-40 on it for the last wipe off to collect any remaining debris. If any debris from sanding remains it will damage the stanchion, bushings, and seals.
- 3) If you have one, install the conical nut install tool onto the end of the stanchion tube. This helps align the nut making the process a bit easier.
- 4) Install the nut onto the stanchion tube. Be gentle and do it slowly; remember the main seal is in there and you don't want to damage it. This can not be done with the bushing installed on the stanchion tube.
- 5) Install the new foam wiper onto the stanchion tube. Orient it with the glossy side away from the nut (open cell side towards the nut).
- 6) Remove the conical install tool
- 7) Install the new bushing onto the stanchion tube. It just snaps on. Try not to overstretch it or the post may not run smoothly.
- 8) Remove any grease that has ended up at the bottom of stanchion. Be careful not to push the grease into the stanchion. Also remove the tape and ensure all of the adhesive residue is removed.

Install Stanchion Tube and Lower Tube Together

- 1) Fill the key grooves on the bottom of the Stanchion Tube with P10L grease.
- 2) Clamp the lower tube in a bike clamp (right side up) and apply a small amount of P10L in the top of the tube. Use just enough to fill the keyways about 5/8-3/4" (15-20mm) deep as well as a thin layer on the bearing surface. Do not apply excessive amounts, it will be scraped away by the bushing and could contaminate the braking surface.
- 3) Assemble the new keys and put them in the key grooves of the stanchion tube. Each key assembly consists of a bullet nose, a spring, and a flat nose.
- 4) Pull the nut down and push it gently against the bull nose of the keys. The foam ring will lock the keys in place for assembly. Ensure all 3 keys are fully seated (push each one into the key groove). If any keys pop out, put them back and try again.
- 5) Install the stanchion tube into the lower tube, just up to the bushing.
- 6) Align the keys with the keyways in the lower tube.
- 7) Carefully push down on the nut, ensuring the keys engage with the key grooves. You may need to do a bit of poking with a plastic pick to get them to seat properly. Be gentle. When properly aligned they will slide in easily.
- 8) When the nut is all the way down cycle the stanchion a couple of times to make sure it moves freely. Also check under the nut to ensure all keys went in properly and none popped out.
- 9) Apply P10L grease between the foam wiper and the nut. Make sure to saturate the foam with grease. Apply additional grease on top of the foam ring, just enough to form a 1/8" fillet between the foam ring and the stanchion tube.
- 10) Gently push the foam ring back up into the nut. Be careful not to squeeze too much of the grease out. Wipe off any excess.
- 11) Screw the nut back down using your bike stand clamp. There will be a small gap left between the nut and the lower tube, this is OK, but it should be very small (about as thick as 2-6 pieces of paper). Don't over tighten or you'll have trouble getting it off next time.
- 12) Wipe off the nut and upper stanchion with a dry rag to remove any rubber deposited by the bike stand or inner tube.

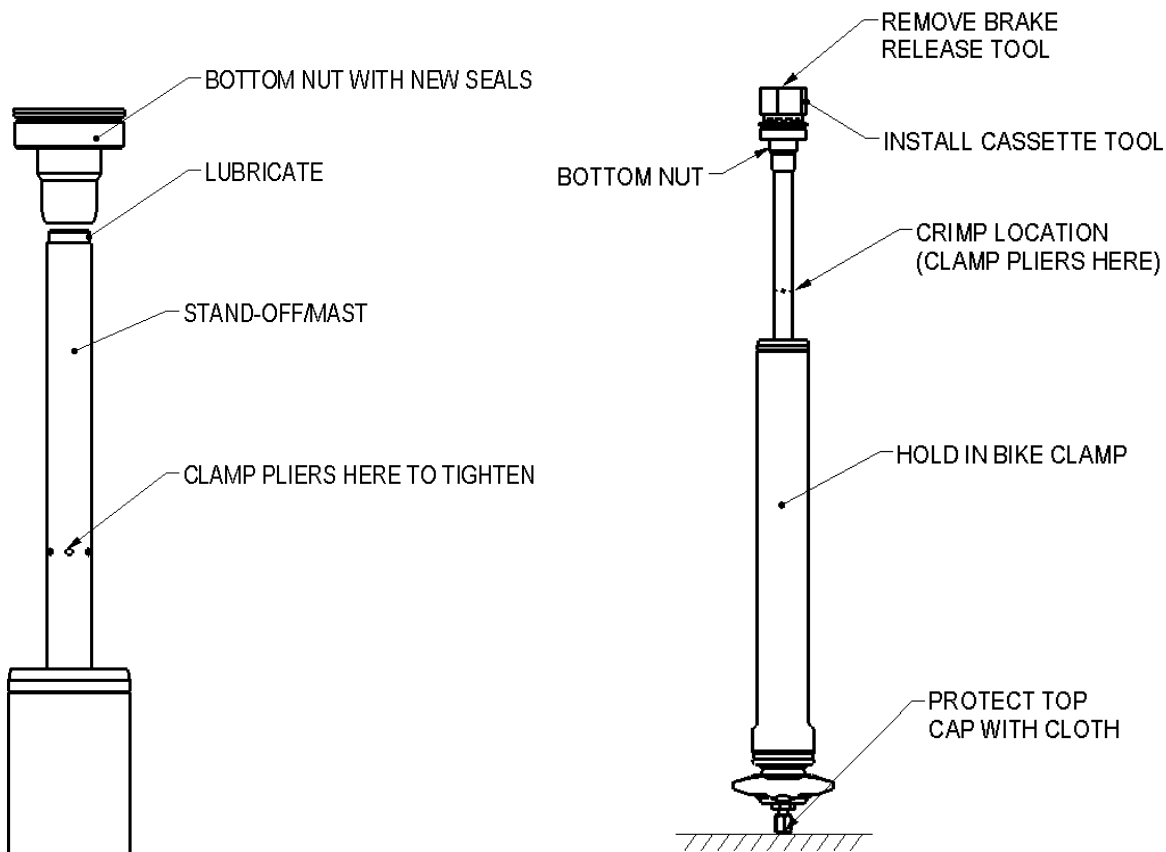
Refurbish Bottom Nut

- 1) Use a pair of tweezers or a small plastic pick to remove the 10mm diameter o-ring inside the bottom nut. Lubricate the new o-ring with grease and install it into the groove. Make sure the o-ring sits properly and fully in the groove.
- 2) Replace the o-ring on the outside diameter and square rubber bumper if they look damaged



Install Bottom Nut:

- 3) Turn the post upside down and clamp it in a bike stand. Fully collapse the post. Set your work stand up such that the head of the post (which is still pointing down) is resting on a table. This ensures the post does not try to extend while you are working on it.
- 4) Clean off any grease at the bottom of the post with a clean dry paper towel. Do not force any grease into the bottom of the stanchion tube.
- 5) Apply a small amount of grease on the centering boss on the stand-off.
- 6) Apply some pink Loctite to the threads on the stand-off. Do not use blue or red! If Pink Loctite (222) is not available it is better to use nothing than the wrong product.
- 7) Holding the stand-off at the dimples with your combination jaw slip joint pliers torque the bottom nut onto the stand-off to **4Nm** using a cassette spline tool. This is **NOT** very tight. If you over tighten it, it will damage the mast.



Final Assembly

- 1) Install the brake release tool as above to disengage the brake.
- 2) Push the brake into the stanchion tube and thread the bottom nut in the lower tube.
- 3) Torque the assembly to approximately **14Nm** using the cassette tool. (this is about as tight as you can get in a normal bike work stand clamp before it slips).
- 4) Fully extend the post and remove the brake release tool.
- 5) Pressurize the post. Now is a good time to check for leaks (see leak testing procedure).

