

ONYX DC Service Guide

Full Service

SERVICE OVERVIEW

This manual will guide you step by step performing a full service on an ONYX DC suspension fork. Please follow each instruction carefully to achieve the best and safest results.

***Always wear your safety gear while working on suspension products. We care about you, make sure you wear your safety glasses and protective gloves while servicing DVO Suspension Products.**



WEAR SAFETY GEAR!

WARNING: We recommend that you have your DVO suspension serviced by a qualified bicycle mechanic. Servicing DVO suspension requires knowledge of suspension components, as well as the use of specialized tools and lubricants/fluids. Failure to follow the procedures outlined in this service manual may cause damage to your component and void the warranty.

WARNING: Always use genuine DVO parts and proper service methods when maintaining your DVO Suspension product. Improper service, or use of after-market replacement parts with DVO Suspension may cause the product to malfunction, resulting in SERIOUS INJURY OR DEATH.

WARNING: Modification, improper service, or use of after-market replacement parts with DVO Suspension may cause the product to malfunction, resulting in SERIOUS INJURY OR DEATH. DO NOT modify any part of a fork or shock, including the fork brace (lower leg cross brace), crown, steerer, upper and lower leg tubes, or internal parts, except as instructed herein. Any unauthorized modification may void the warranty, and may cause failure or the fork or shock, resulting in SERIOUS INJURY OR DEATH.

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Tools Needed For Service:

- Oil Drain Pan
- 11mm, 18mm Wrench
- 32mm, 22mm, 14mm Socket
- Flathead Screwdriver
- Vice
- 25mm, 30mm shaft clamps
- Shock Pump
- 2mm, 4mm Allen Key
- Rubber Mallet
- 3mm Punch
- Pick
- Needle Nose Pliers

Fluids & Cleaner Needed For Service:

- Safety Glasses
- Clean, Lint Free Rag
- Suspension Cleaner or Alcohol
- Blue Loctite
- 2.5 & 7.5 wt oil. No Maxima
- Slickoleum Grease
- Graduated Cylinder

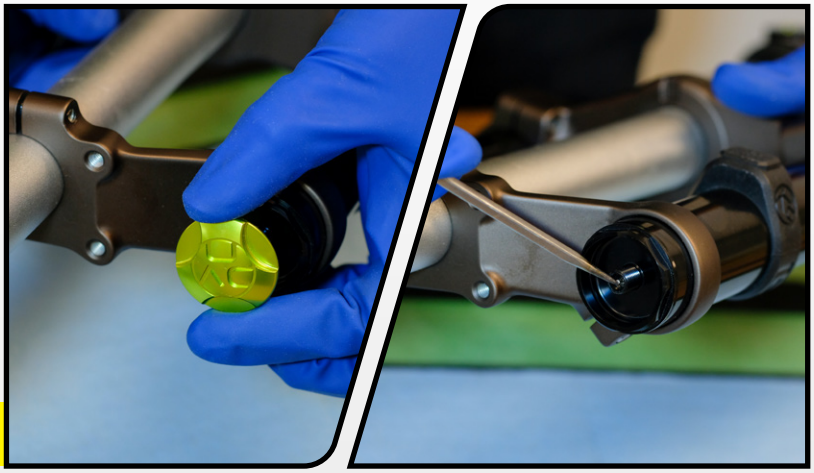
Recommended Service Interval:

- Full Service .....100 Hours of Ride Time

A Disassembly

1.

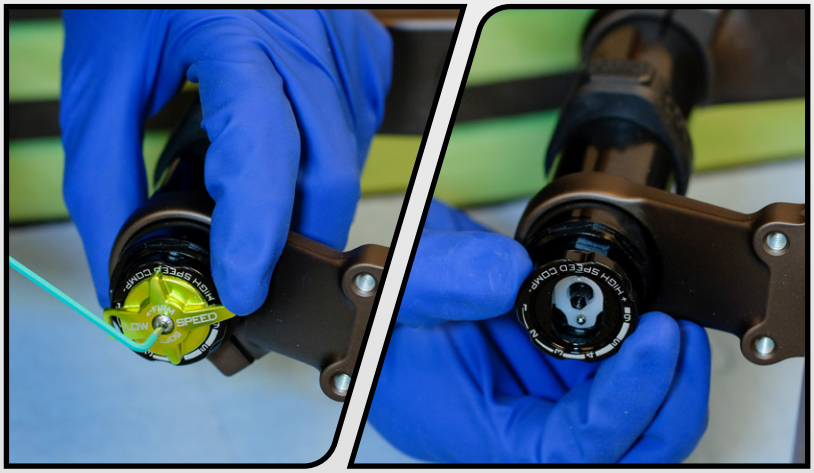
Remove the air cap. Depress the valve to release the air pressure.



⚠ CAUTION - EYE HAZARD

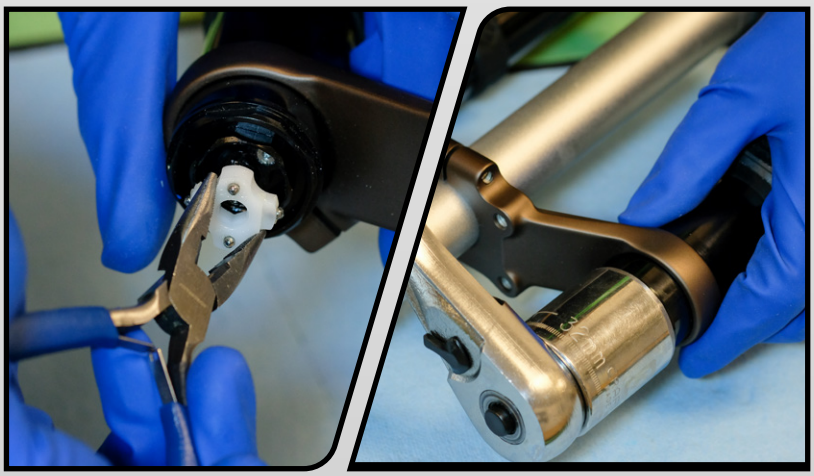
2.

Use a 2.5mm allen key to remove the low speed knob. Then lift off the high speed compression ring.



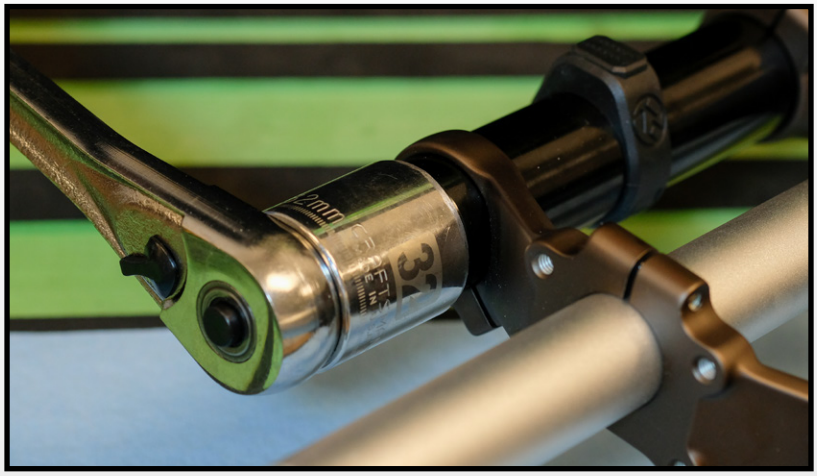
3.

Use needle nose pliers to remove the detent fixture. Be cautious of the detent balls falling out. Then use a 32mm socket wrench to loosen the air side top cap. You do not need to completely un-thread the top caps.



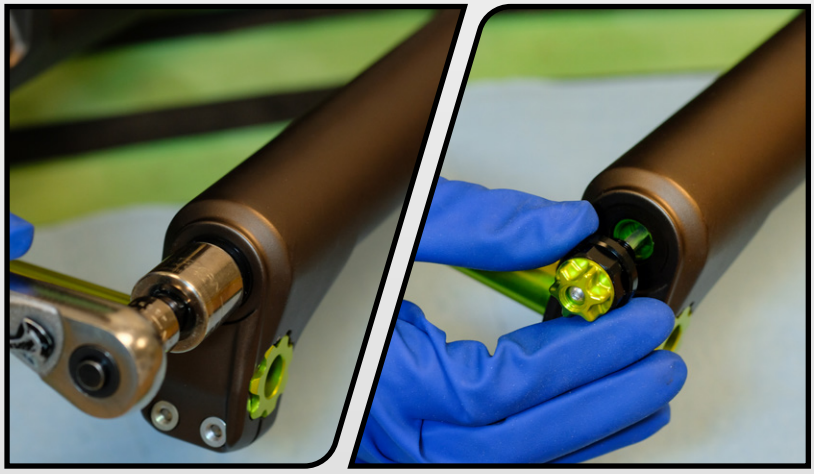
4.

Loosen the damper side top cap. You do not need to completely un-thread it.



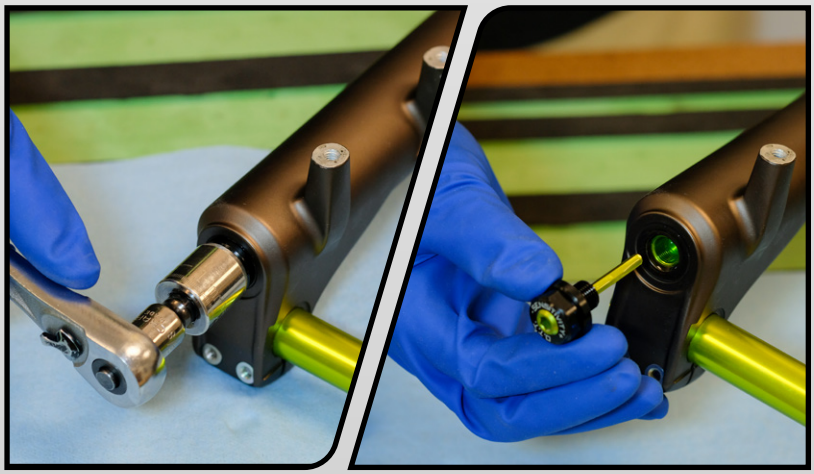
5.

With a 14mm socket wrench, loosen and remove the rebound foot-nut.



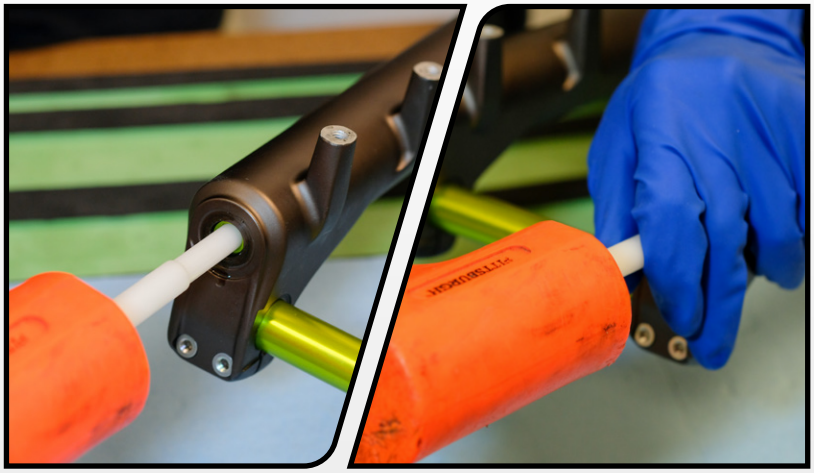
6.

With a 14mm socket wrench, loosen and remove the OTT foot-nut.



7.

Place a plastic punch in the in the casting and firmly tap with a rubber mallet to un-seat the cartridges from the casting.



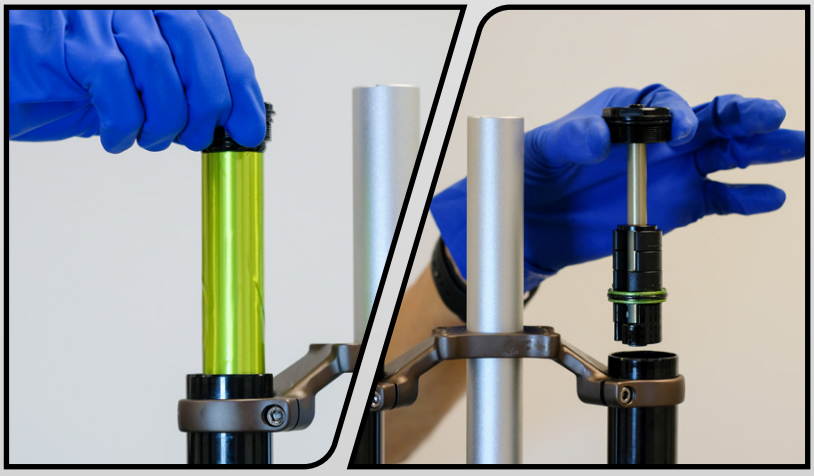
8.

Drain the oil in an oil catch pan.



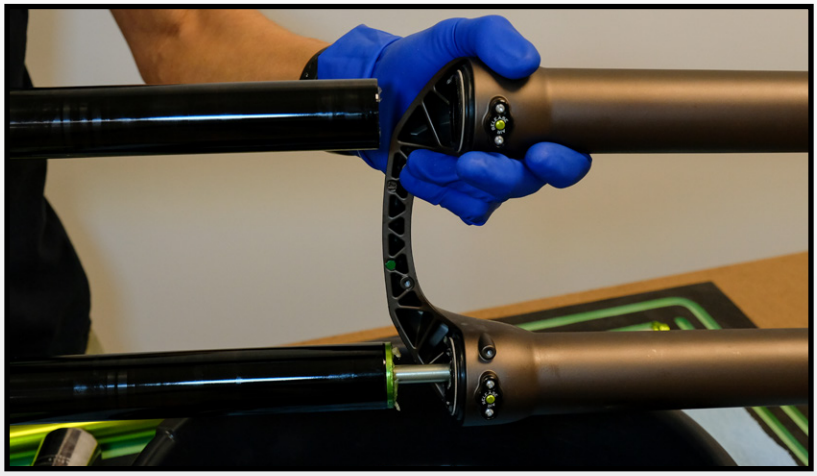
9.

Stand the fork up vertically and remove the damper cartridge and air volume unit.



10.

Now you can separate the upper assembly from the casting.



11.

Remove the foam ring from under the seal with a small pick. Then remove the pressure spring on the upper seal lips.



12.

Place a flathead screwdriver under the seal lip and pry the seal out of the casting.

NOTE: To prevent any damage to the casting, you can place a rag or towel under the screwdriver.



13.

Soak the new foam rings in 7.5 wt suspension oil. Place the new seals on a 36mm seal press.



14.

Place the new seal in the casting and press into place using the rubber mallet.



15.

Make sure the seal is pressed in evenly all around with no gaps. Re-install the foam rings under the seal.



16.

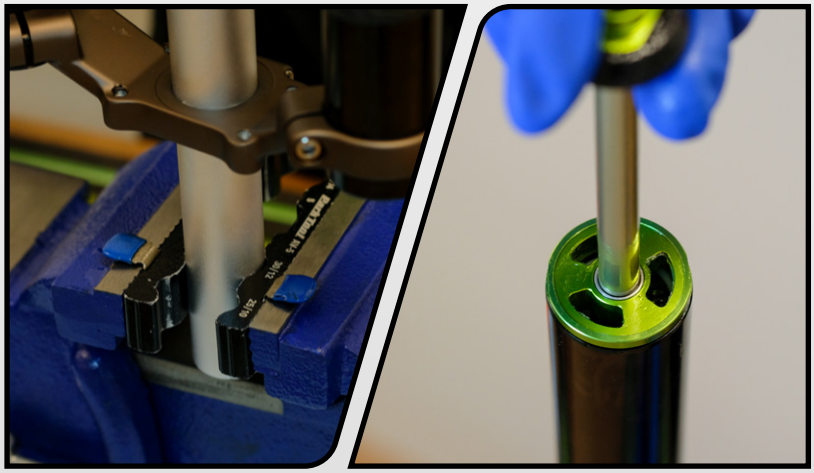
The foam rings should sit flush in the casting. Make sure there are no gaps. Apply a thin layer of grease to the inner lips of the seal.



C Air Service

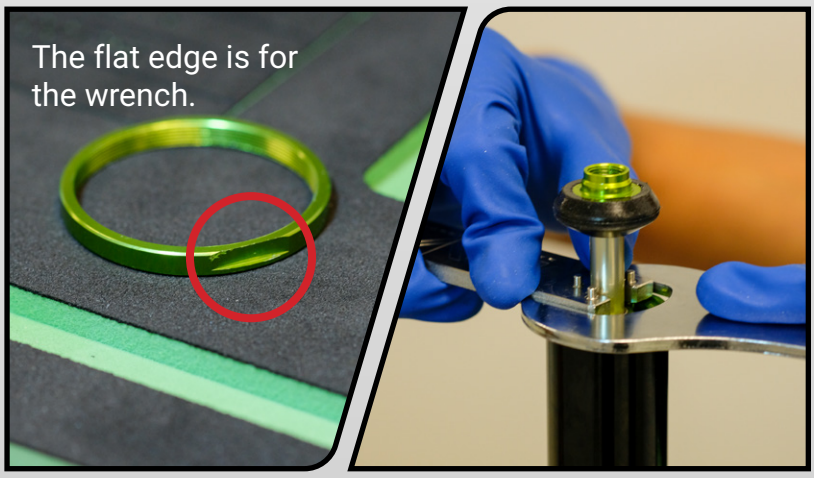
17.

Clamp the steer tube in the vice with 30mm shaft clamps. Pull the air shaft upward.



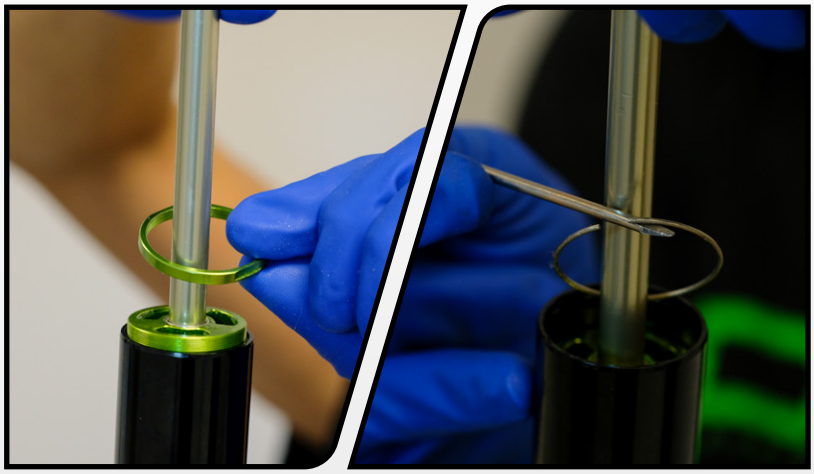
18.

To loosen the lock ring, use an 18mm wrench and a set of pin spanners. The wrench goes on the flat surface of the lock ring shown in the left image. Hold the lock ring with the wrench, then un-thread the plug with the pin spanners with counter-clockwise rotations.



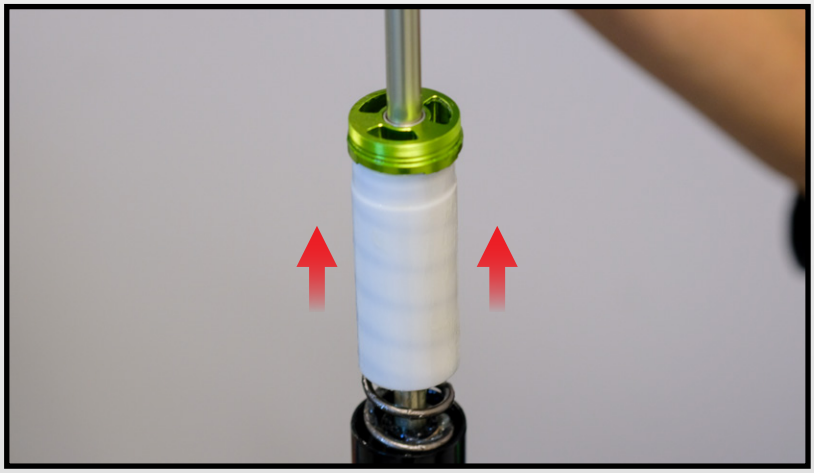
19.

Pull up the lock ring and shaft. Use a small flat-head screwdriver to remove the retainer clip in the stanchion.



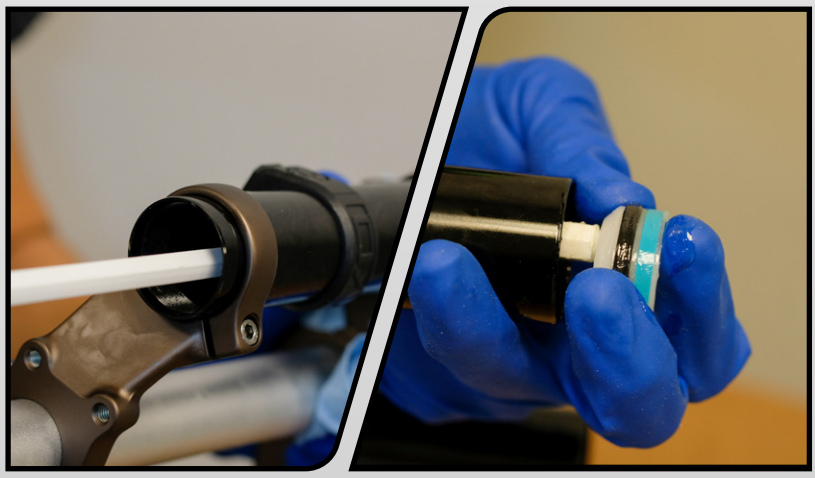
20.

Once the lock ring is removed, you can pull up and remove the entire OTT assembly.



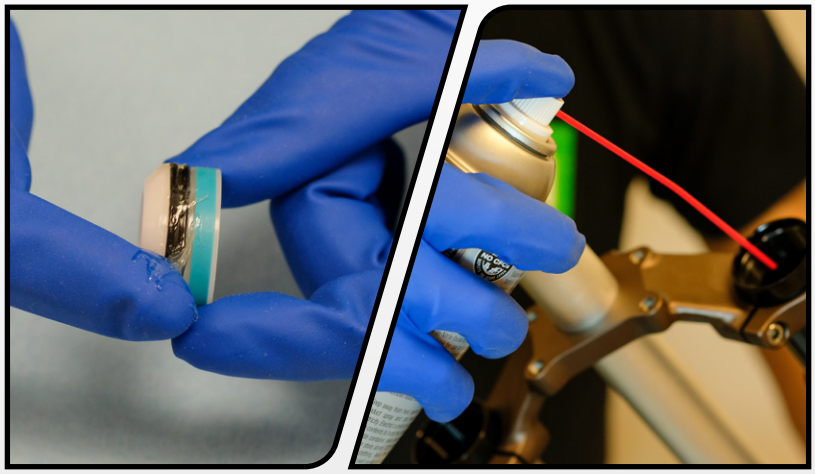
21.

Use a long shaft or stick to push the air piston out of the stanchion tube.



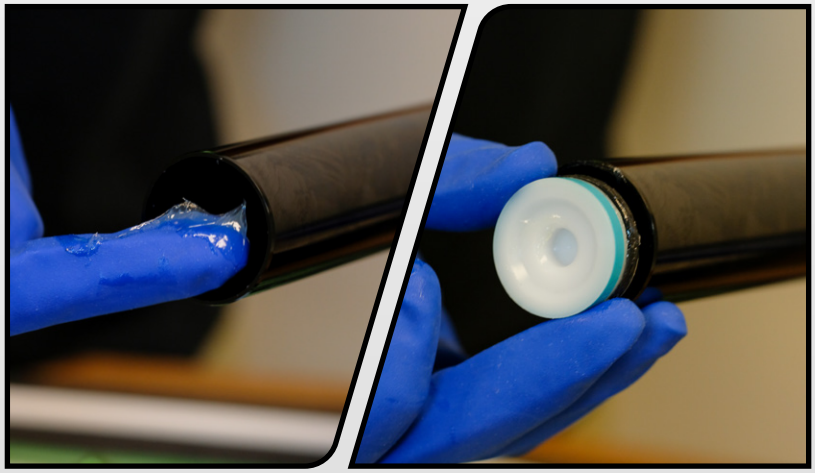
22.

Apply a thin layer of grease to the new air piston. Clean the inside of the stanchion tube with suspension clean. Wipe thoroughly with a clean rag.



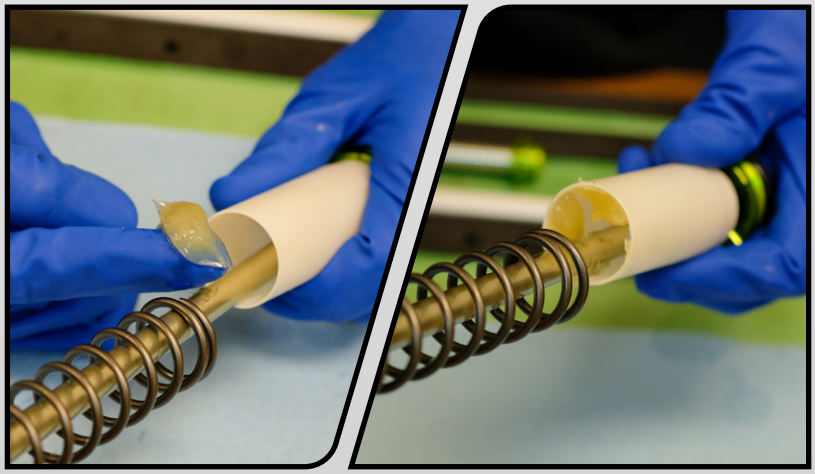
23.

Apply a thin layer of grease to the inside of the stanchion tube. Insert the new air piston in the direction shown with the recessed side facing away from the tube.



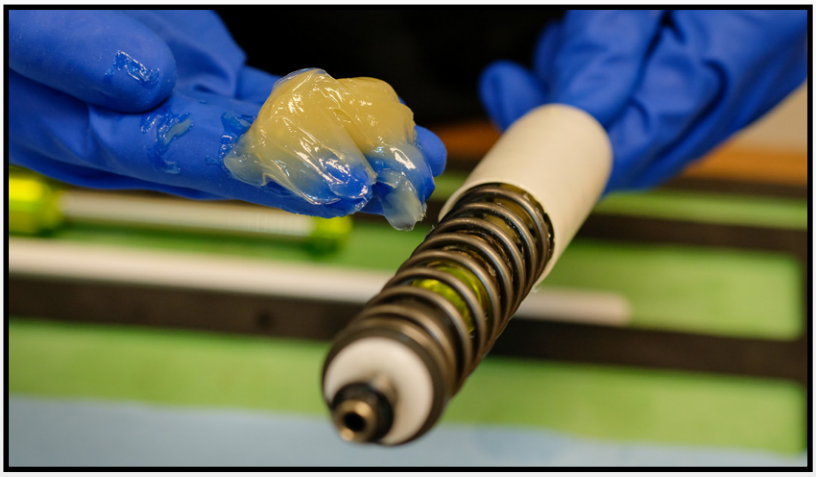
24.

Apply a generous amount of grease to the inside of the plastic spring guide.



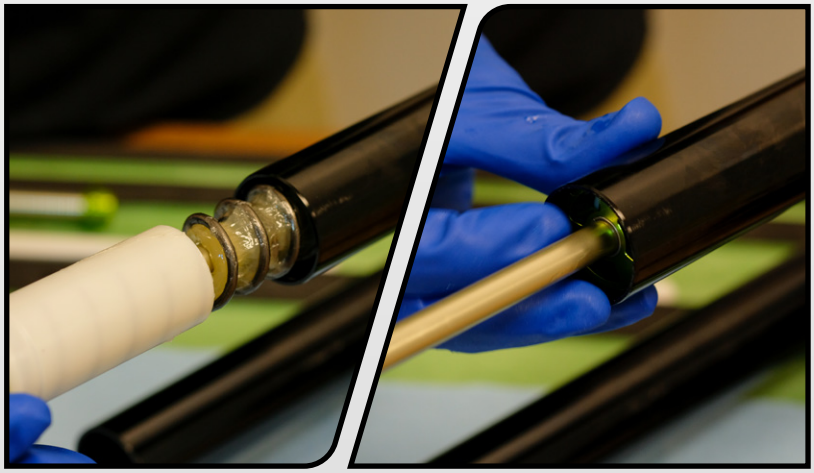
25.

Apply a generous amount of grease to the entire negative spring and spring guide.



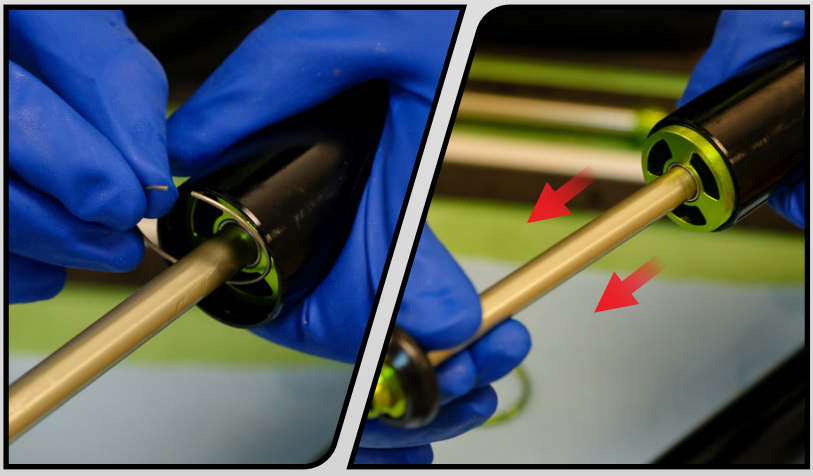
26.

Re-install the OTT unit into the stanchion tube until the green plug is inserted.



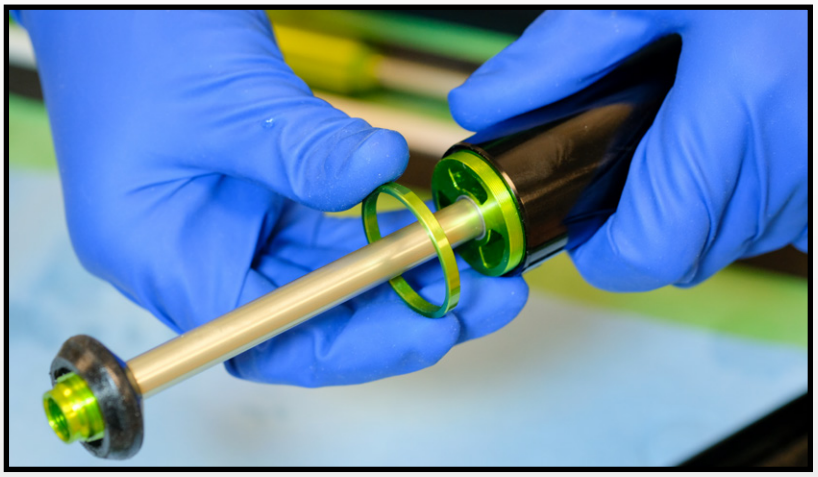
27.

Re-install the retainer clip into the tube, then pull the shaft downward to lock it in place.



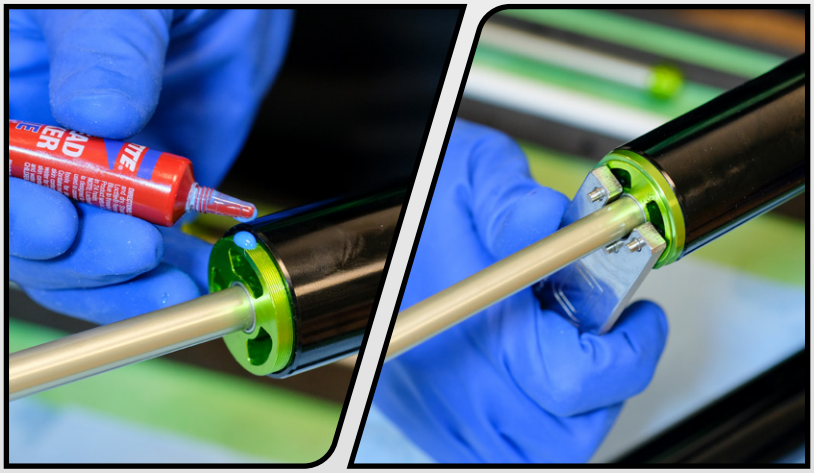
28.

Place the lock ring back onto the plug.



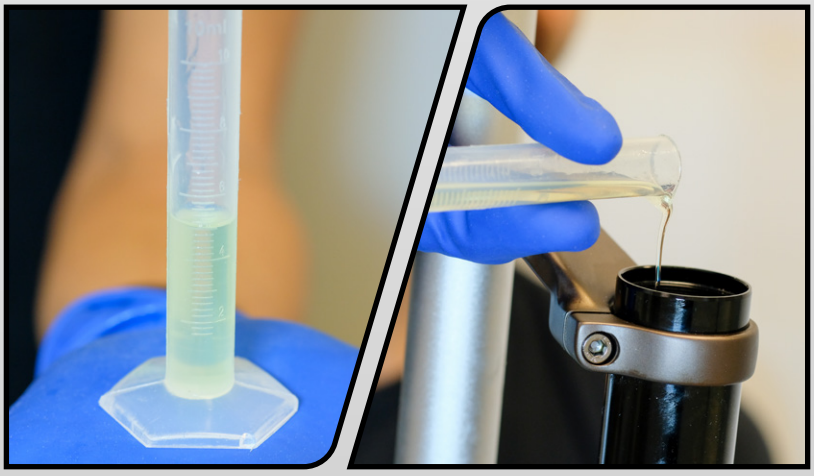
29.

Apply a thin layer of Loctite to the threads of the end plug. Tighten with the pin spanner wrench.



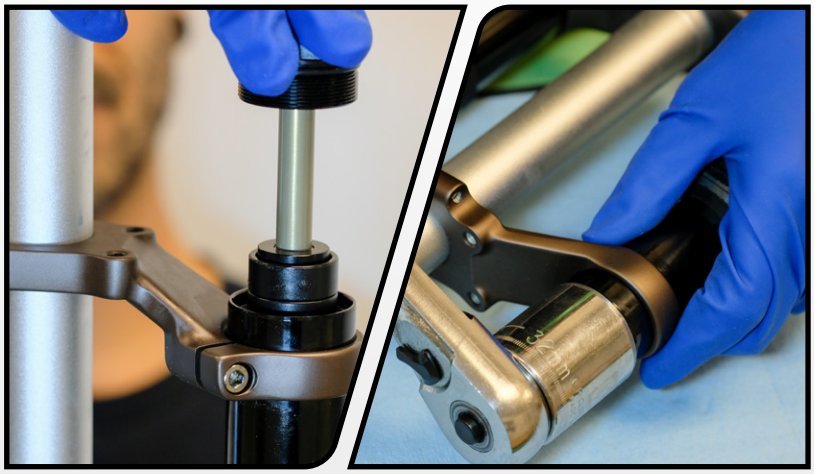
30.

Pour 5cc's of 7.5wt suspension fluid into the stanchion tube above the air piston.



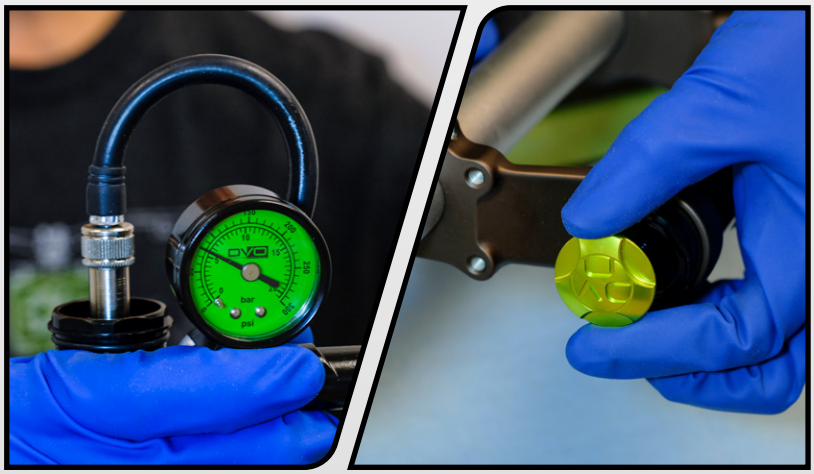
31.

Re-install the volume adjuster and top cap unit into the stanchion. Tighten with a 32mm socket.



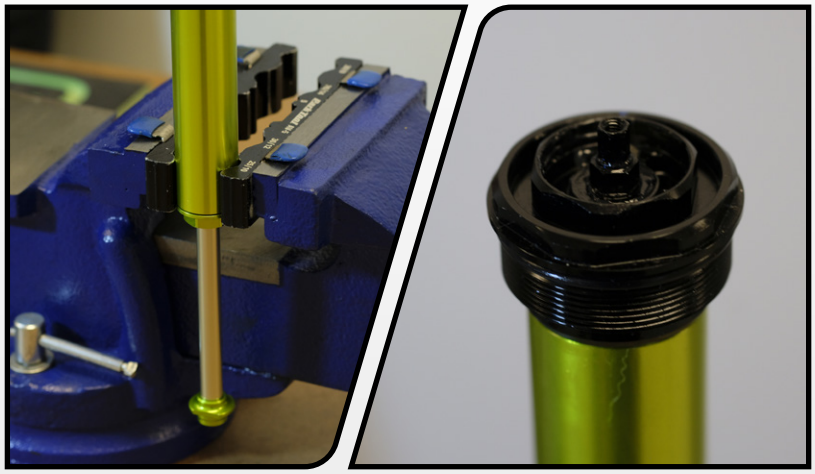
32.

Inflate to the desired PSI and re-install the air cap.



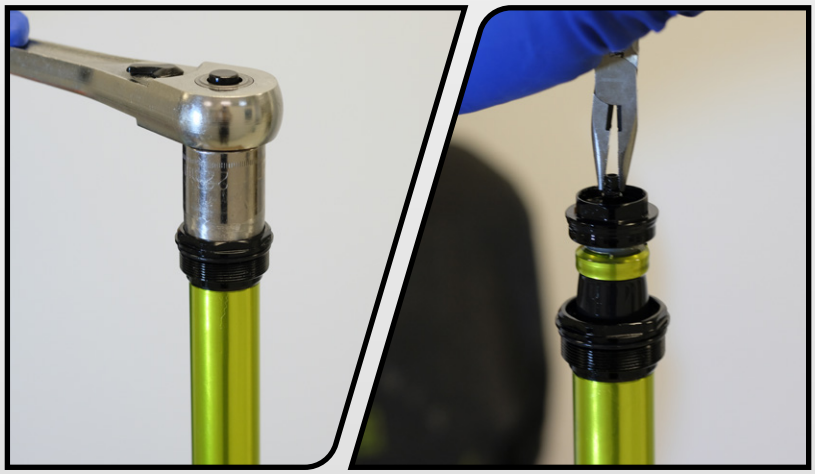
33.

Clamp the lower part of the damper cartridge in the 25mm shaft clamps.



34.

Use the 22mm socket to loosen the top of the cartridge. Un-thread completely and remove the bladder.



35.

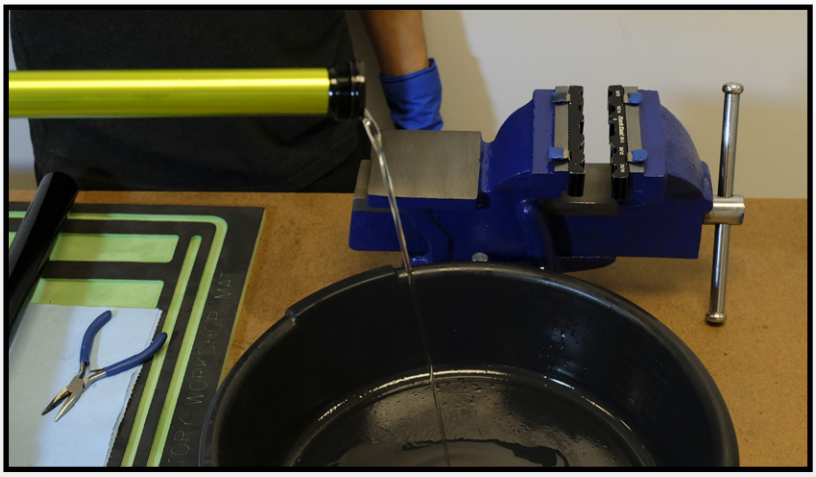
Remove the entire bladder and set aside.

Note: Oil will drip from the bladder so it's best to do this over a drain pan.



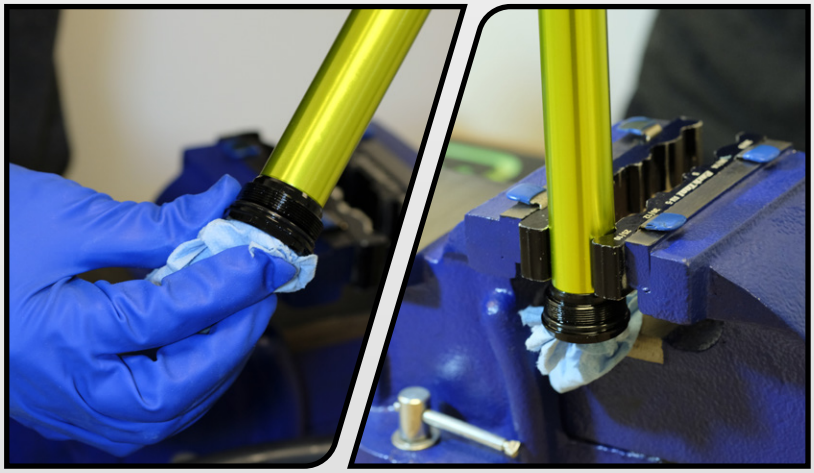
36.

Pour the oil out of the cartridge and into the drain pan.



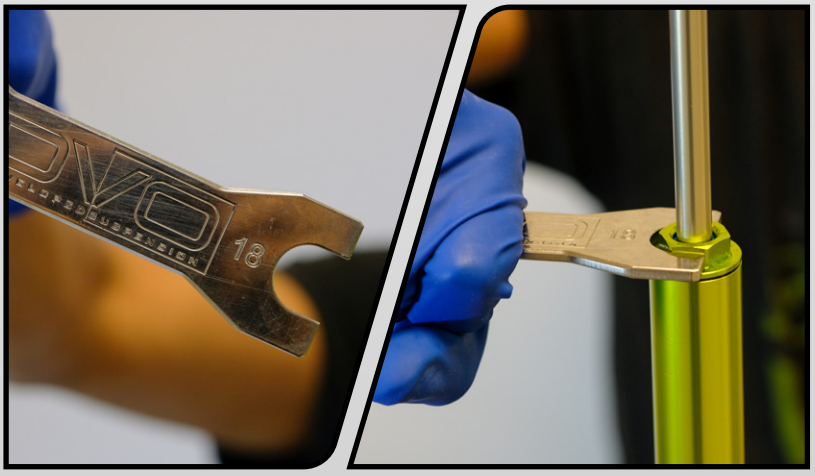
37.

Place a clean rag into the cartridge to catch any residual oil from pouring out. Then clamp the cartridge as shown with 25mm shaft clamps.



38.

Use an 18mm wrench to loosen the end plug of the cartridge.



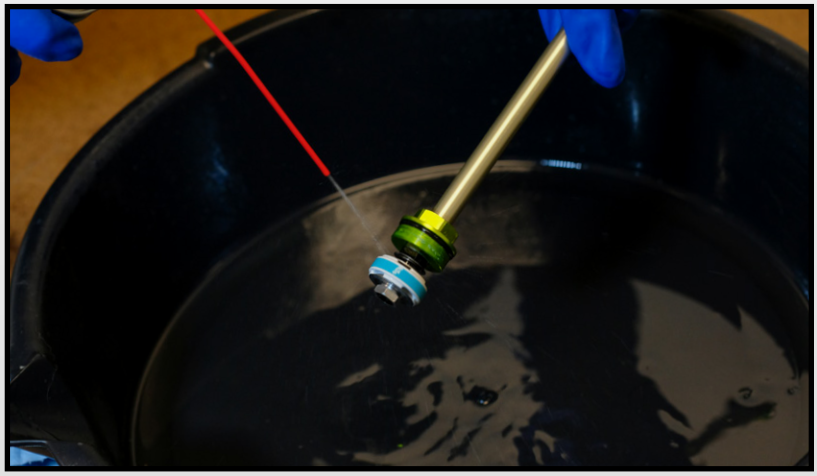
39.

Remove the shaft and mid-valve/rebound p from the cartridge body.



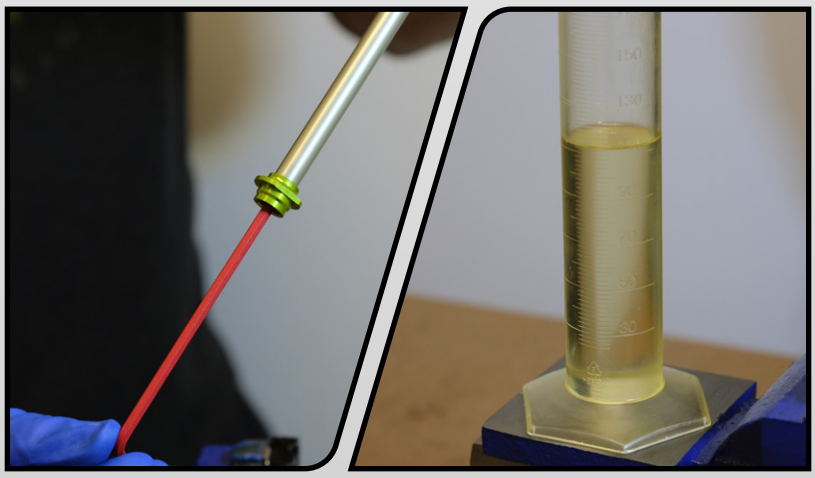
40.

Clean the mid-valve thoroughly with suspension cleaner.



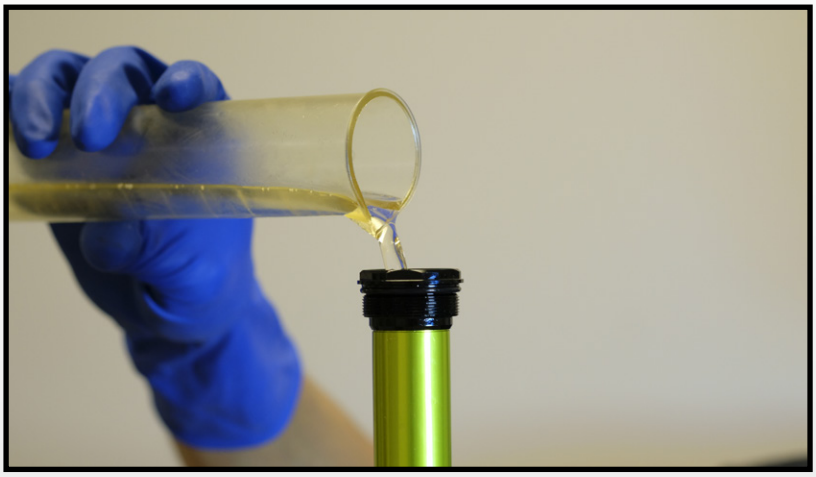
41.

Use a 4mm allen wrench to close the rebound. Pour **160cc's of 2.5wt** suspension oil into a graduated cylinder.



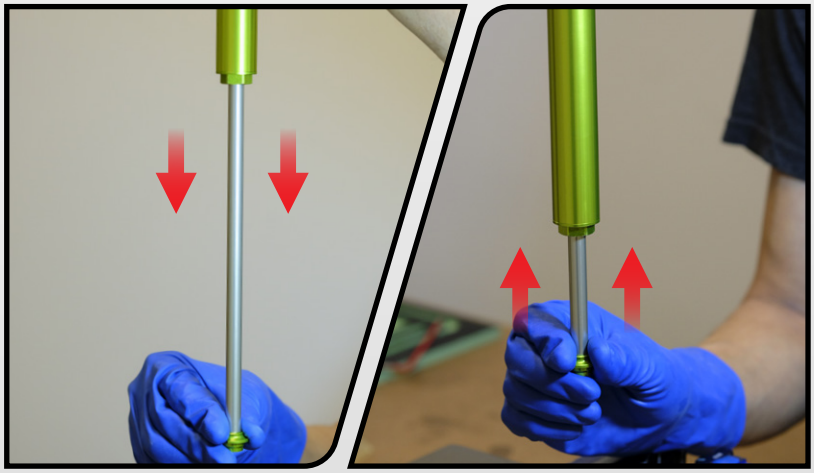
42.

Make sure the cartridge is at full extension. Pour the oil into through the top.



43.

Now you can cycle the shaft up and down to pull the oil through the system.



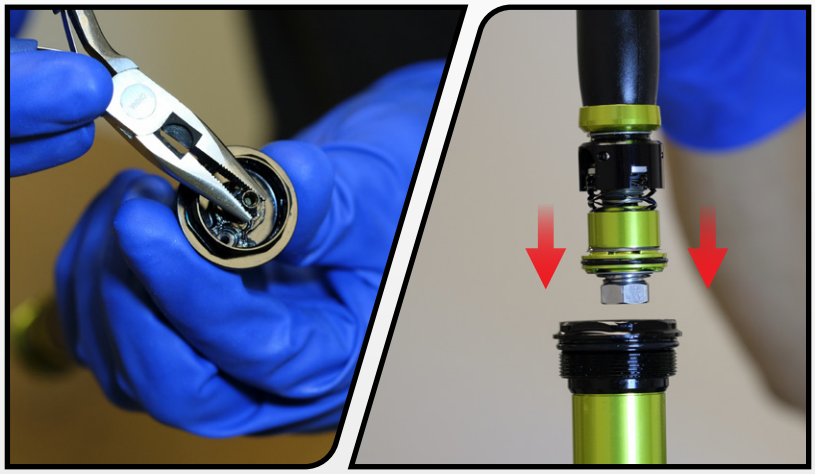
44.

Use a 2mm allen key to remove the bleed screw from the top of the bladder.



45.

Use the needle nose pliers to turn the low speed needle all the way counter-clockwise. Then place the bladder unit back into the cartridge body.



46.

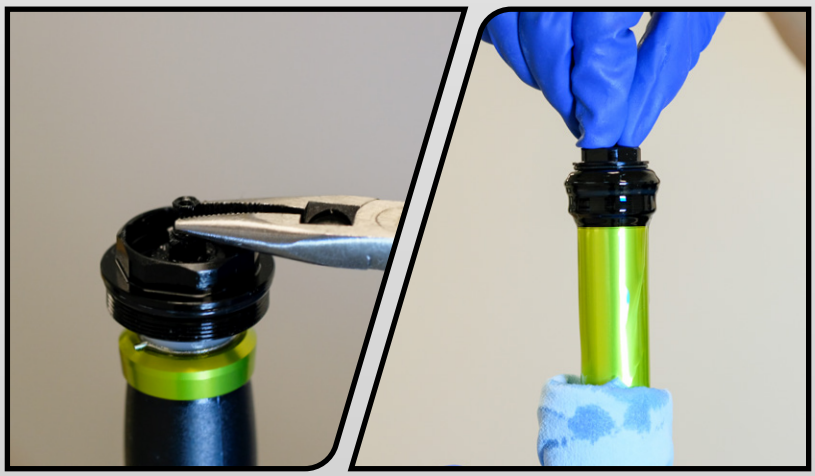
Push the bladder unit downward until you see the oil level get to the top. Once you get to this point, stop pushing down.



47.

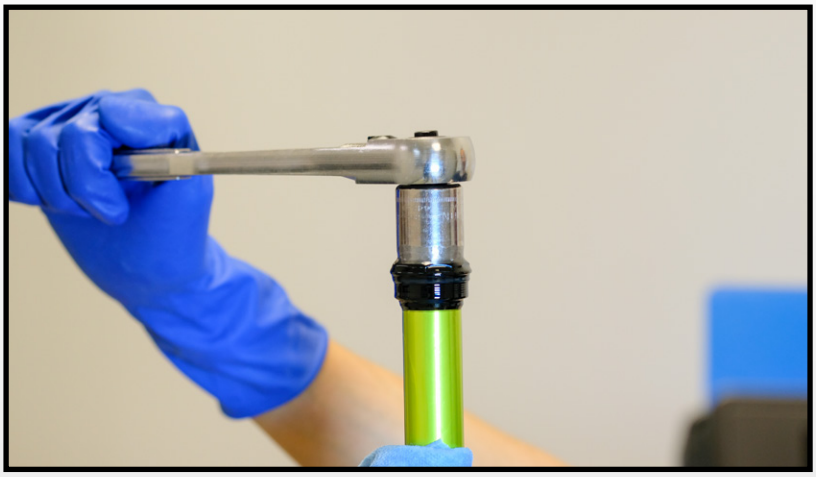
Use the needle nose pliers to turn the low speed needle all the way clock-wise. This is the open position. Then you can push the bladder unit all the way into the cartridge body.

Note: Oil will pour over the edge as you lower the bladder unit into the cartridge.



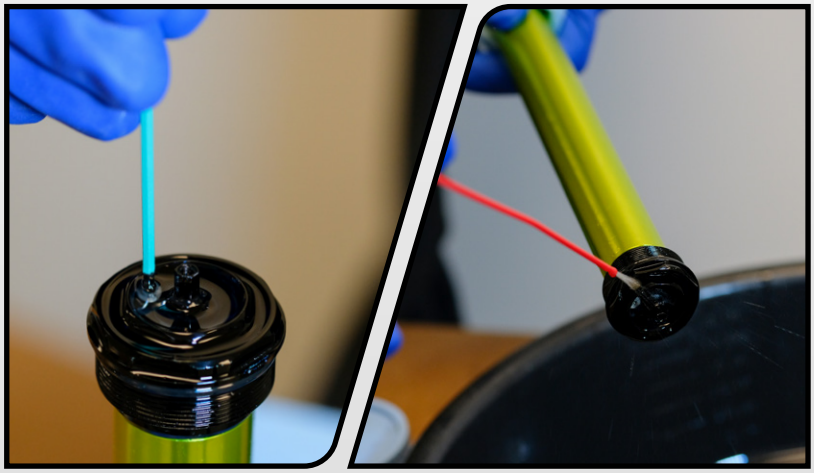
48.

Do not drain the oil from the top cap. Tighten the unit back into the cartridge with the 22mm socket.



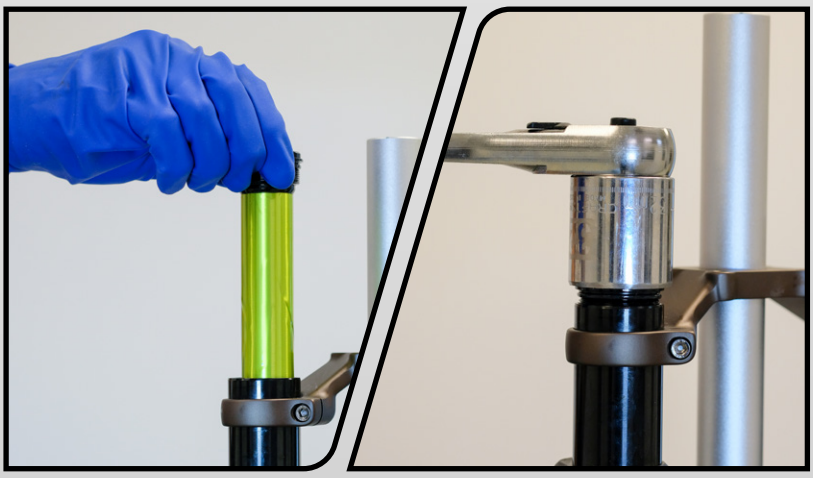
49.

Re-install the bleed screw with the 2mm allen key. Once the screw is tightened, you can drain the excess oil from the top cap. Clean thoroughly with the suspension cleaner.



50.

Re-install the cartridge into the damper side of the fork. Tighten with 32mm socket.



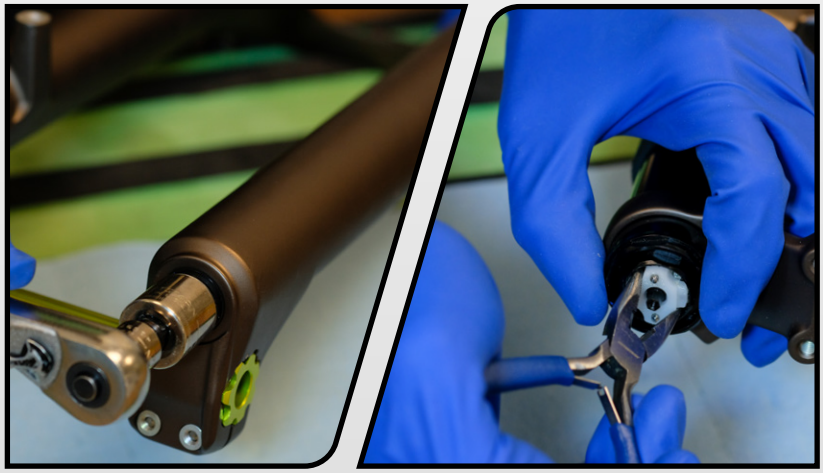
51.

Pour 25cc's of 7.5wt suspension oil into both sides of the casting. Re-install the rebound adjuster foot-nut.



52.

Tighten the foot-nut with an 18mm socket. Use needle nose pliers to re-install the detent fixture back into the top cap. Be cautious of the ball bear-ings.



53.

Place the high speed compression ring back onto the top cap. Then place the low speed knob over top. Make sure to clock the adjuster so the numbers line up with the rotation of the needle.

You're good to go!

