R8 PRO
SERVICE GUIDE

MANITOU



MANITOU

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Support: manitoumtb.com/support

WARRANTY

For full warranty information please visit
hayesbicycle.com/warranty

INTRODUCTION

This manual is intended to guide the user through the steps necessary to fully service and maintain the R8 Pro suspension fork.

⚠ WARNING ⚠

We highly recommend that service to this fork be performed by a certified bicycle mechanic. Failure to follow instructions presented in this manual could lead to serious injury or death. Any questions about the servicing of this fork or the manual itself should be directed to Hayes Customer Support at:

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REQUIRED TOOLS

Below is a list of tools necessary for changing the travel on the R8 Pro forks:

- Safety Glasses
- Nitrile Gloves
- Lint-Free Rags
- Torque Wrench (6-220 in-lb [0.7-25 Nm])
- 2mm Hex Wrench
- 8mm Hex Wrench
- 14mm Box End Wrench
- Shock Pump
- Cassette Lockring tool* (e.g. Park tool FR-5.2)
- 8mm Socket *
- 24mm Socket *
- 24mm Box End Wrench
- (Optional, replaces items above with*) Manitou Tool Kit - Manitou part number 172-31133 (This includes the Manitou Cassette Tool, 8mm thin wall socket, and flat ground 24mm socket)
- Travel Spacer Kit 141-36713-K032

Below is a list of additional tools necessary for a full service of the R8 Pro forks:

- 2.5mm Hex Wrench
- 5mm Hex Wrench
- 11mm Socket (Manual Knob Only)
- Plastic or non-marring pick
- Downhill tire lever or flat blade screwdriver
- 3wt Maxima Fork oil (141-34078-K016)
- Semi-bath Oil, 5/40w Synthetic - Manitou part number 85-0022
- Slickoleum™ Grease
- Isopropyl Alcohol
- 34mm Seal Install Tool 172-37540-K002
- Cartridge Damper Bleed Kit 141-30694-K020 (Pro Only)
- 34mm Seal Kit 141-39022-K020
- Air Piston Seal Kit 141-32155-K012

CASTING REMOVAL & SERVICE

Manitou recommends a full service anytime the casting is removed. If the fork is new and only a travel change is needed, follow instructions 1-4 then skip to page 27 for Travel change instructions.

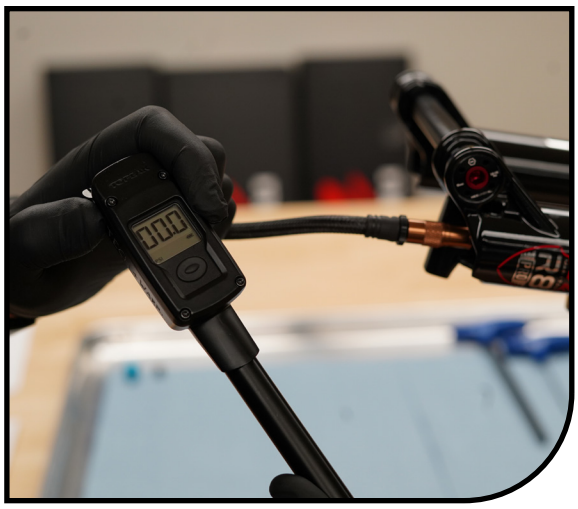


1 Remove rebound knob using a 2mm Hex wrench.

NOTE: Be sure to hold the knob still while removing the screw. The damper adjuster may be damaged if the knob is over torqued.



2 Hold lock-nut with 14mm end wrench. Insert a 8mm Hex wrench into the end of the rebound rod and loosen **clockwise** until rebound rod disengages from the lock-nut.



3 Unscrew air cap and attach shock pump. Depress pressure bleed button until pump reads “Zero”. Depress Schrader Valve a few times with 2mm hex wrench to ensure all air is released.

CASTING REMOVAL & SERVICE

4 Hold lock-nut with a 14mm box end wrench. Using 8mm Socket, turn the compression rod **clockwise** until compression rod is disengaged from the lock-nut.



5 Remove casting from fork. It is recommended this be done over a drain pan as the lower casting contains semi-bath oil. Allow oil in casting to drain out before continuing to next step.



6 Using a downhill tire lever or similar tool, gently pry the dust seals out of the casting.

NOTE: Do not damage the top of the casting when removing the wiper seal. Use rag or similar to protect from contact with tool.



CASTING REMOVAL & SERVICE

7 Remove old foam wiper rings. Thoroughly saturate new foam rings with semi-bath fluid, clean casting, and install into fork casting.



8 Remove springs from outer lip of new leg seals.



9 Using the Manitou 34/37mm Seal Press, press in the dust seals. Reinstall springs onto seals.

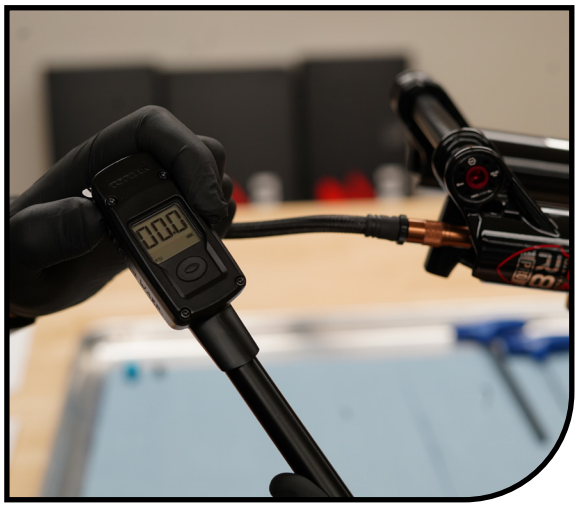


AIR SPRING SERVICE

1

WARNING

MAKE SURE THE AIR IS RELEASED FROM THE FORK.



2

Using a 24mm socket, loosen IVA or Top Cap until threads are free from leg.



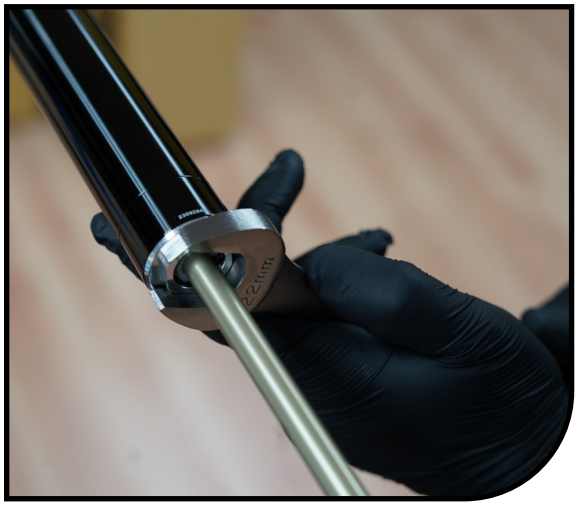
3

Pull IVA assembly or Pull IVA assembly or top cap straight out, Clean with isopropyl, Inspect seal for damage. If needed replace IVA piston seals.

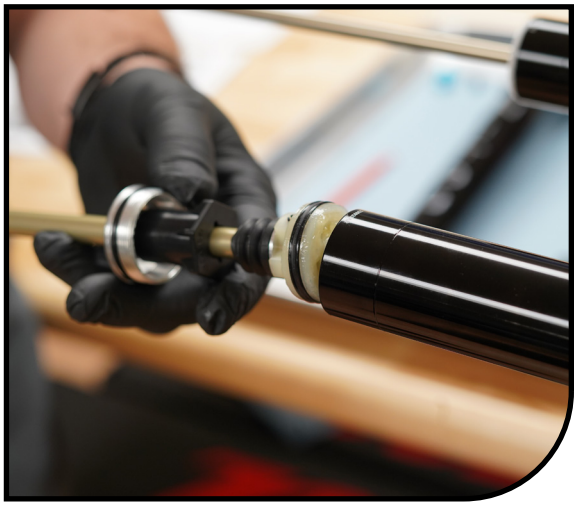


AIR SPRING SERVICE

4 Invert the fork and use 22mm box end wrench to unthread the air spring assembly from the stanchion.OR depress valve on end of comp-rod with 2mm hex and stroke rod to bottom. Slide 22mm deep-bore socket over threaded adapter and unthread the air spring assembly from the stanchion.



5 Remove Air Spring Assembly, clean with isopropyl, Inspect seal for damage. Replace air piston seal 141-32155-K012. **If Travel change is need see** page 27 **before moving on.**



AIR SPRING SERVICE

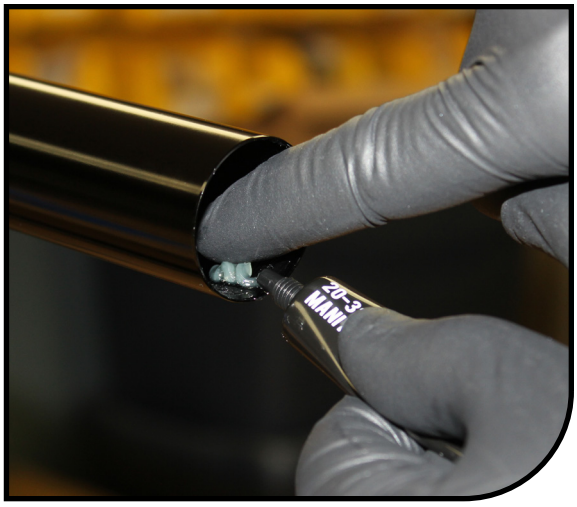
6 Once the air spring assembly is removed clean the inside of the stanchion with isopropyl alcohol and a lint free towel (Be careful to not scratch the inner surface of the stanchion). Inspect the inside and outside of the stanchion for scratches or other damage.



7 Liberally apply Slickoleum™ grease to the piston seal, outer piston surface, and spring shaft. Add 3cc's of Slickoleum™ grease to the top of the air piston.



8 Add Slickoleum™ grease to the stanchion threads before inserting the air spring assembly. Spread grease across entire thread surface.



AIR SPRING SERVICE

9 Install air spring assembly into stanchion. Using a 22mm Crows Foot **OR** 22mm deep-bore socket torque to 20-25 LB-IN [4.5-5.1 Nm]. If rod is bottomed, attach shock pump to valve and draw the rod out until fully extended.



10 Liberally apply Slickoleum™ grease to the IVA piston seal and outer piston surface. Apply Slickoleum™ grease to the threads of the stanchion.



11 Insert IVA Piston into the stanchion.



AIR SPRING SERVICE

12 Install IVA cap into stanchion. Torque to 200-220 LB-in [22.6-25 Nm] using a 24mm socket.

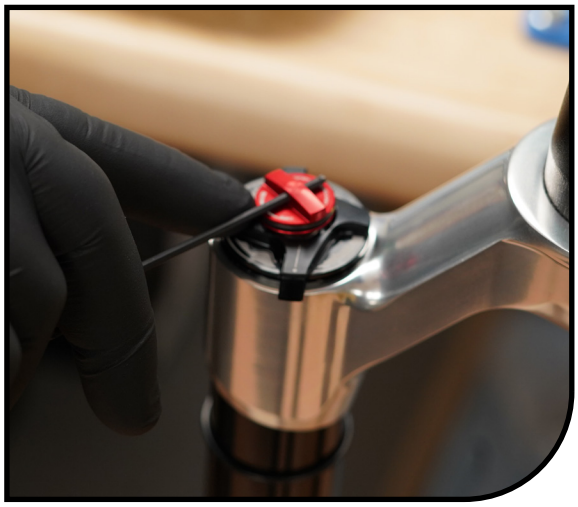


13 Attach a shock pump and inflate main air chamber to 30 PSI. This will aid in installing the casting later.



VTT PRO - X MANUAL KNOB REMOVAL

1 Insert the short end of a 2mm Hex into the cross-hole of the red “OPEN MODE ADJUST” knob.

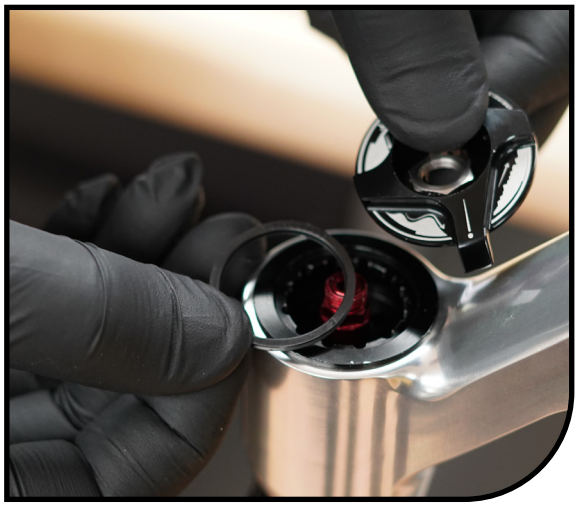


2 With a 11mm socket, unthread the exposed nut and remove the black “VTT” adjustment knob.

Note: Be sure to hold the knob still while removing the nut. The damper adjuster may be damaged if the knob is over torqued.



3 Lift the entire knob assembly out of the top-cap. Further disassembly of the knob assembly is not needed.



VTT PRO - X REMOTE KNOB REMOVAL

1

Be sure the remote lever is set to “OPEN” mode to eliminate tension in the cable. If the rubber weather plug or weather cap is installed, first remove it from remote knob assembly.

Remove remote cable using a 2mm hex loosen the two set screws on the remote knob.







VTT PRO - X REMOTE KNOB REMOVAL

2 With a 5mm socket, unthread the open mode adjuster and remove the black “VTT” adjustment knob.

Note: Be sure to hold the knob still while removing the nut. The damper adjuster may be damaged if the knob is over torqued.



3 Holding the outer surface of the cable stop, lift the entire remote knob assembly out of the top-cap. The remote knob may spin when it disengages from the adjuster; this is normal. Further disassembly of the knob assembly is not needed.



R8 SEALED DAMPER SERVICE

1 If present, remove the v-seal that was under the black manual “VTT” adjustment knob.



2 Use a standard cassette tool and 1” socket to unthread the damper top-cap from the stanchion. Remove damper assembly from the stanchion. Inspect damper shaft and bladder for any damage.

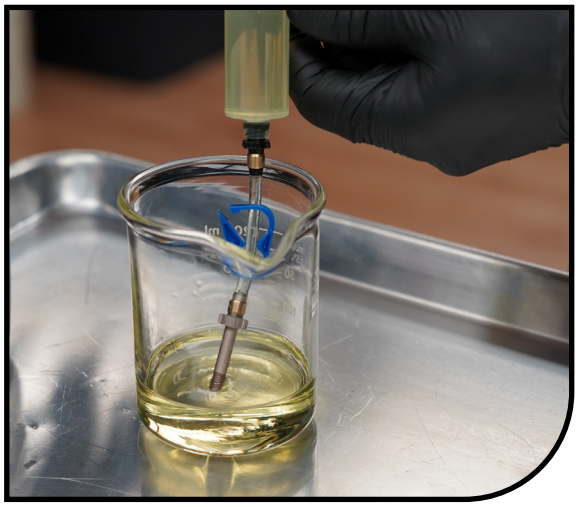


3 Pull damper shaft to full extension. Remove bleed-screw on side of top-cap. Place damper top-cap over catch pan. Cycle damper shaft several times to cycle out old oil from damper.



R8 SEALED DAMPER SERVICE

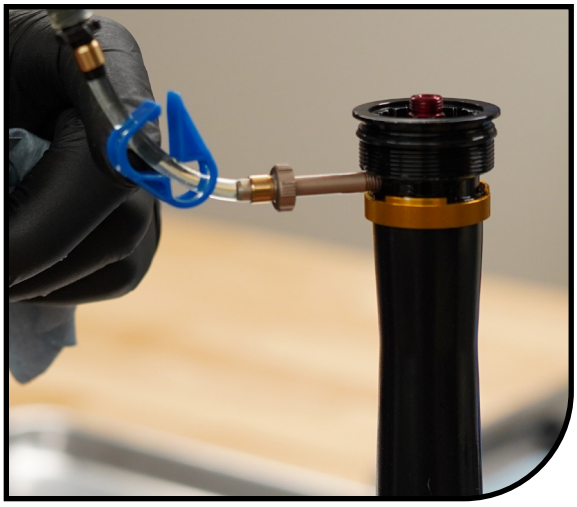
4 Attach M5x0.8 Luer lock fitting to a syringe (141-30695-K020). Fill the syringe with 3wt Damper oil (141-34078-K016).



5 **IMPORTANT:** The VTT adjuster should be set to "OPEN" position during the bleed process. With the shaft fully compressed, squeeze the bladder to expel any air ingested into the damper. With the bladder compressed attach the filled fyringe M5x.8 adapter to top-cap bleed port.

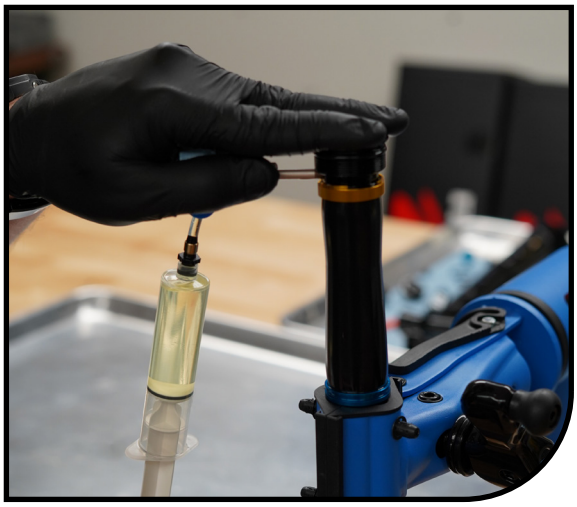


6 Holding the damper end-cap up-right in vise simultaneously compress the filled syringe SLOWLY to fill the damper with fresh oil. Refill the syring as needed until oil is drawn into the upper syringe.

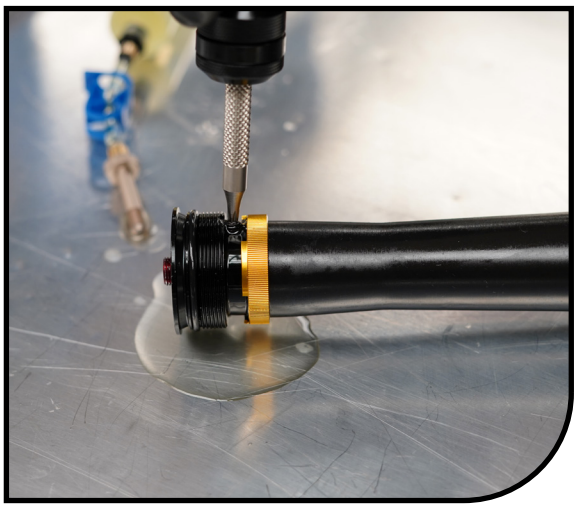


R8 SEALED DAMPER SERVICE

7 Closing the bleed hose clamp on the syringe, cycle the damper SLOWLY to draw air to the top of the damper. Open bleed hose clamp and draw oil into the syringe while compressing the shaft and squeezing the bladder. Repeat this unitl no air bubbles are present in the oil drawn into the syringe.



8 Fully extend damper shaft and add oil from the syringe until bladder is slightly expanded. Closing the bleed hose clamp on the syringe remove cartridge from vise. Lay cartridge flat on bench. Remove upper syringe and replace bleed screw. Some oil may discharge from the port when removing the syring. Do not cycle the shaft or squeeze the bladder until the bleed screw is torqued down. Rotate the VTT adjuster hex fully clockwise. Compress the damper shaft to ensure the lock-out is functioning correctly. If lock-out is not firm, repeat step 6-7 to remove any air in the damper.



9 Install Damper cartridge into stanchion. Using standard cassette lock-ring tool Torque to 200-220 LB-in [22.6-25 Nm].



R8 PRO CASTING INSTALLATION

1 Apply a light coating of Slikoleum grease and Semi-bath (85-0022) to the inner diameter of the oil seal/dust wiper.



2 Make sure the spring shaft is fully extended and air chamber is filled with air (30 PSI).



3 Fully extend the damper shaft.



R8 PRO CASTING INSTALLATION

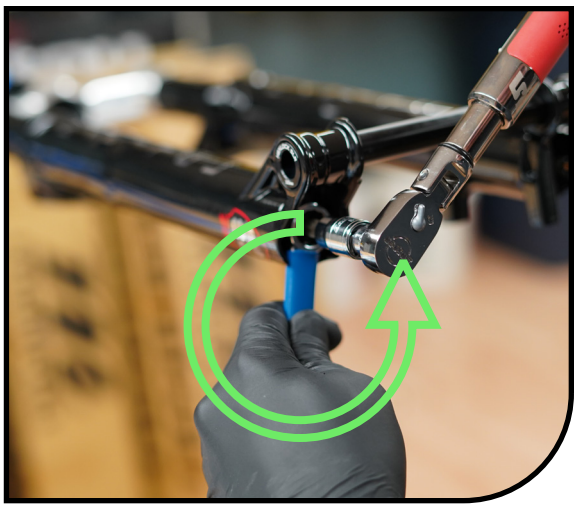
4 Slide casting onto the stanchion assembly. Only slide the casting down about halfway at this point. Take care that the seal lips do not fold over upon installation.



5 Insert 14cc of semi-bath (85-0022) into each casting leg. Once the semi-bath is in the legs slide the casting the rest of the way onto the stanchion assembly until the damper and spring shaft adapters pass thru the end of the casting. Some manual alignment may be needed.



6 Thread the lock-nut onto the damper shaft adapter. Holding the lock-nut with a 14mm box wrench, use an 8mm Hex wrench to tighten the rebound damper adapter to 5,7-6,4 N-M [50-57 LB-IN] by turning them **counter-clockwise.** Do not overtighten, doing so can damage the threads.



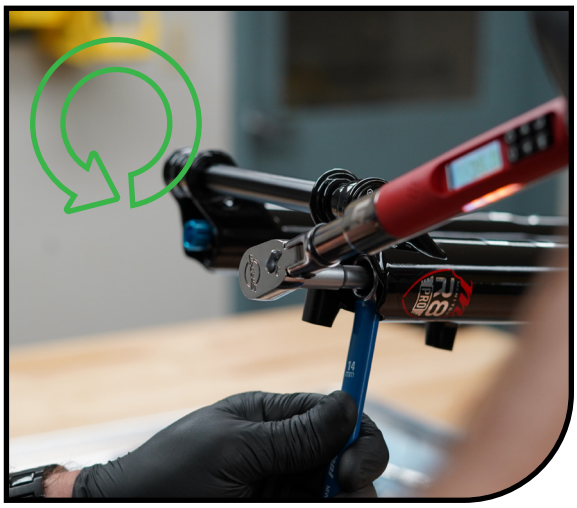
R8 PRO CASTING INSTALLATION

7 Install the rebound knob using a 2mm Hex wrench. Add a small drop of blue Loctite to the screw before installation to prevent the screw from backing out during riding.

Note: Be sure to hold the knob still while removing the screw. The damper adjuster may be damaged if the knob is over torqued.



8 Thread the other lock-nut onto the spring shaft adapter. Holding the lock-nut with a 14mm box wrench, use an 8mm socket tighten the compression rod adapter to 5,7-6,4 N-M [50-57 LB-IN] by turning them **counter-clockwise.** Do not overtighten, doing so can damage the threads.



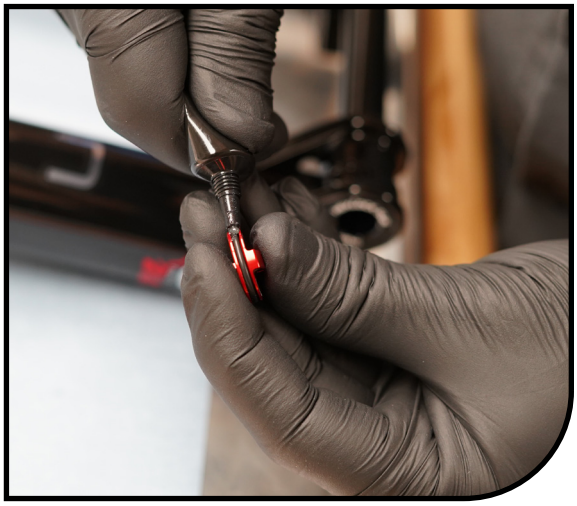
R8 PRO MANUAL KNOB INSTALLATION

1 Clean the adjuster knobs with isopropyl and replace v-seal into top-cap counter-bore.



2 Set the adjuster to “OPEN”. Install the black “VTT” adjustment knob onto adjuster hex so the tab is parallel to the crown. Check the knob rotates through all 3 positions. If needed, realign the knob on the adjuster hex to prevent contact with the crown. With a 11mm socket, thread on the lock nut and torque to 4-6 in-lb [0.5-0.7 Nm] Note: Be sure to hold the knob still while installing the nut. The damper adjuster may be damaged if the knob is over torqued.

3 Lubricate o-ring seal on red “OPEN MODE ADJUST” knob with Slickoleum™ Grease. Align the red “OPEN MODE ADJUST” knob in the center of the black “VTT” knob. Press down firmly on the red knob until the o-ring seal passes into the black “VTT” knob. Some rotation of the red “OPEN MODE ADJUST” knob may be needed to align the hex to fully insert the knob.



4 Clean fork and use a shock pump to set to desired pressure. Lightly pull the casting away from the CSA as you add air.



R8 PRO REMOTE KNOB INSTALL

1 If not already assembled, insert the torsion spring straight end into the small hole on the bottom of the remote knob. Insert the knob and torsion spring into the cable stop so that the set-screw threads are oriented on either side of the cable stop housing without tension on the torsion spring. Install the hooked end of the torsion spring into the closest corresponding slot on the bottom of the cable stop.



2 SET VTT adjuster to the “OPEN” position (Counter-Clockwise).

Align the knob assembly so the cable housing is oriented opposite of the crown beam. Partially insert the cable stop and knob into topcap, so cable stop spline is NOT engaged into the spline of the topcap. Insert a 3mm hex wrench into the first set-screw thread. Holding the knob steady relative to the fork, rotate the cable stop Counter-Clockwise 120-150 degrees.

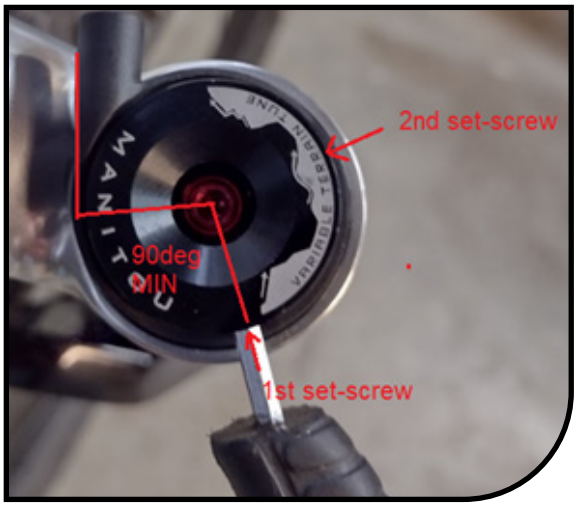


3 When the cable housing is aligned adjacent to the crown, push down on both the remote knob and the cable stop so the cable stop spline is engaged with top-cap and remote knob hex is engaged with adjuster hex. Some minor rotational adjustment may be needed to allow engagement between all components.



R8 PRO REMOTE KNOB INSTALL

4 Check that there is 90 degree MIN between 1st set screw and point perpendicular to the cable stop housing.
90 degrees is require for the knob to rotate MAX-to-MIN



5 Using 5mm hex wrench install and torque the retainer nut to 0.5-0.7 N-M [4-6 lb-in].

Before assembling the remote cable, rotate the knob fully CLOCKWISE using the 5mm hex wrench, compress the fork to ensure the lock-out is functioning correctly.



6 Insert the remote cable thru the cable stop housing and along the knob track. Using a 2mm hex partially insert a set-screw into the first threaded hole on the remote knob. Tension the cable then torque the set screw to 0.5-0.7 N-M [4-6 lb-in].

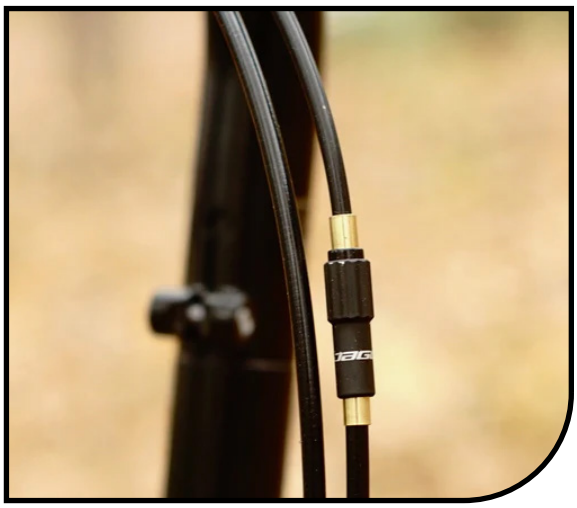


R8 PRO REMOTE KNOB INSTALL

7 If needed, trim the cable to a length needed to be 2-4mm past the location of the second set-screw threaded hole. Holding the end of the cable in the cable track use a 2mm hex to thread a set-screw into the second threaded hole on the remote knob. Torque the set screw to 0.5-0.7 N-M [4-6 lb-in].



8 Adjust cable tension as needed using the in-line barrel adjuster. Using the remote, set the VTT adjustment to “LOCK”, compress the fork to ensure the lock-out is functioning correctly. If desired, install rubber weather plug or weather cap by pushing down firmly onto the knob or cable stop.

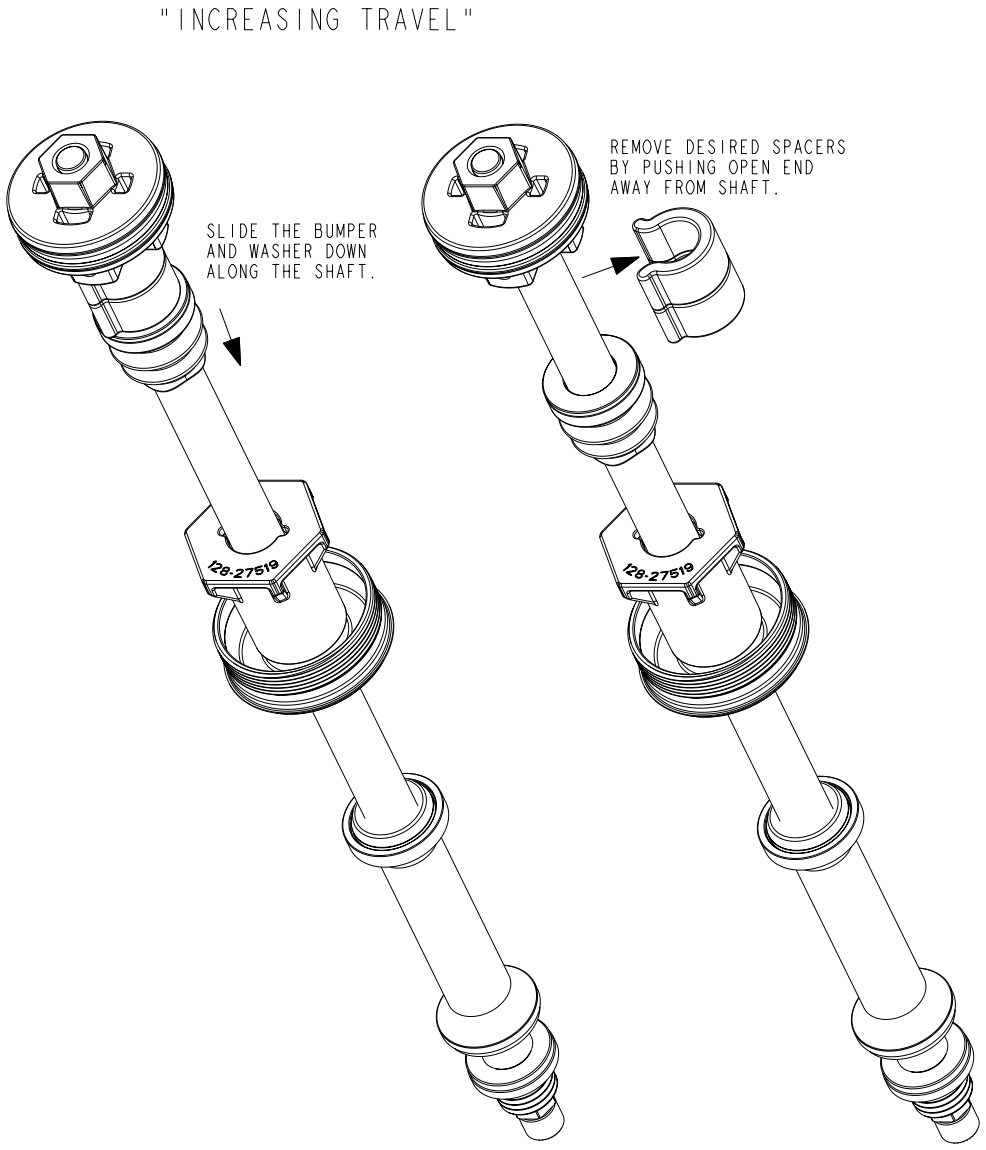


TRAVEL CHANGE

In order to change the travel of your R8 Pro, first remove the compression rod assembly. For travel change on new forks, bath oil may be preserved by removing stanchion assembly while fork is placed flat on benchtop. Once the assembly is removed arrange the travel spacers into the desired amount of travel using the charts on the following pages.

INCREASING TRAVEL

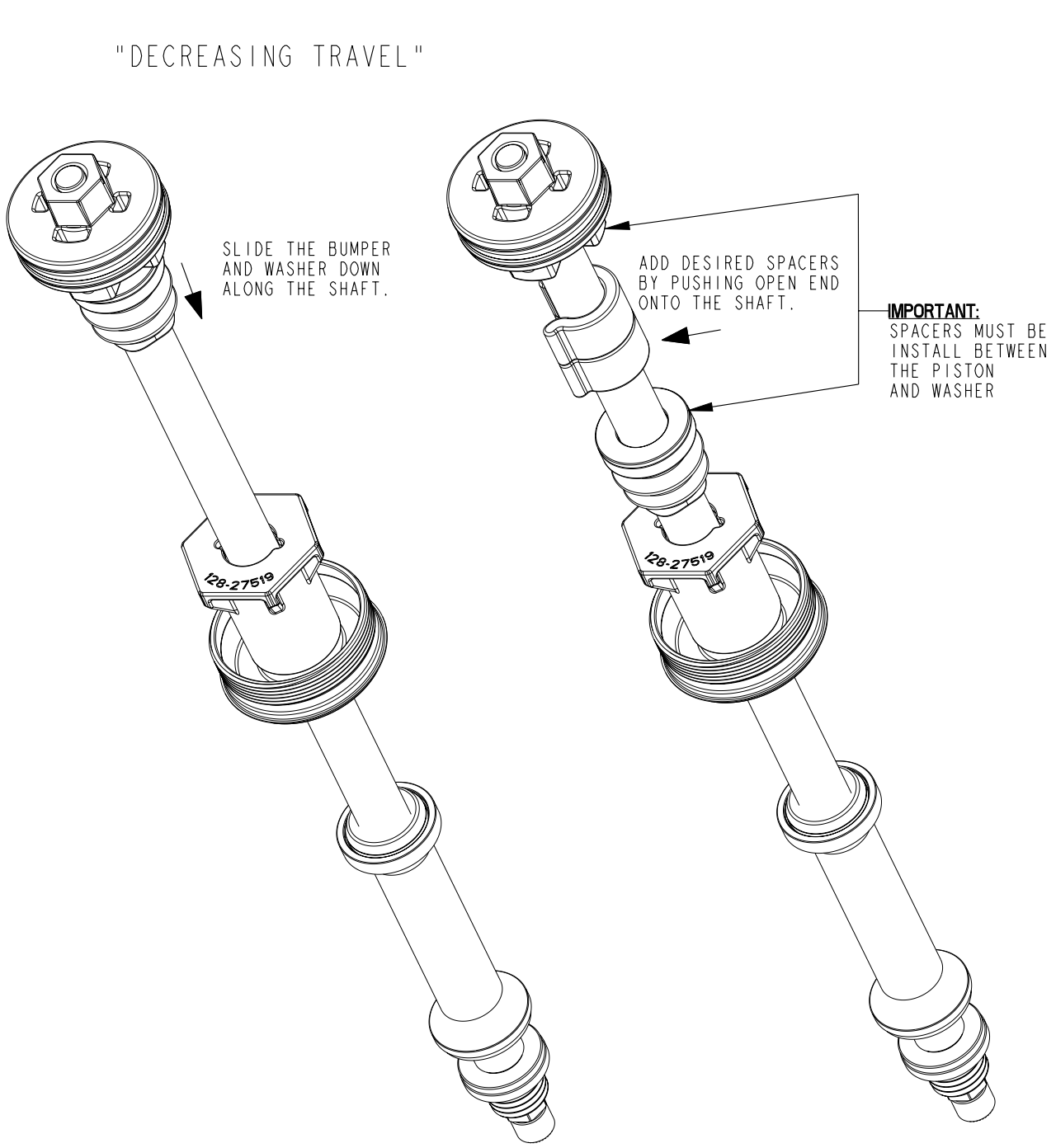
Increasing Travel: Each spacer removed increase travel & axel-to-crown by 10mm.



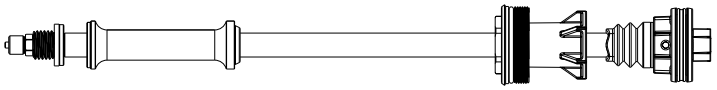
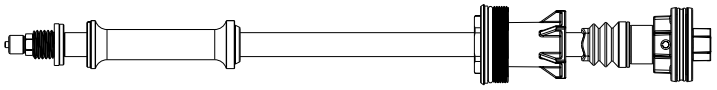
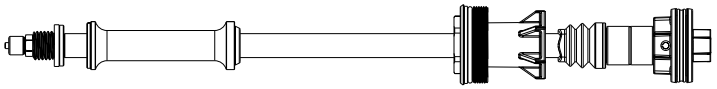
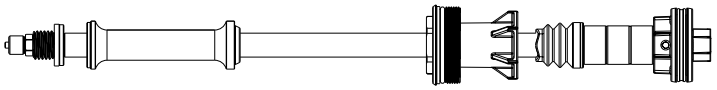
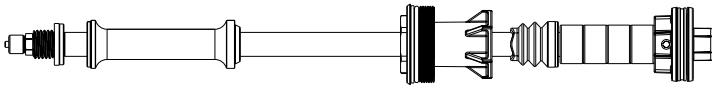
TRAVEL CHANGE

DECREASING TRAVEL

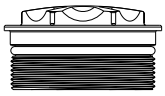
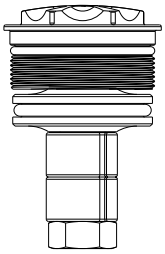
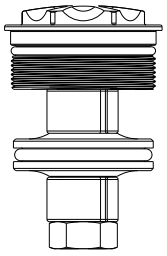
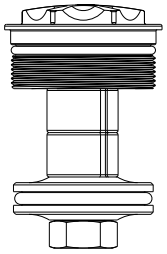
Decrease Travel: Each spacer added decreases travel & Axle-To-Crown by 10mm.



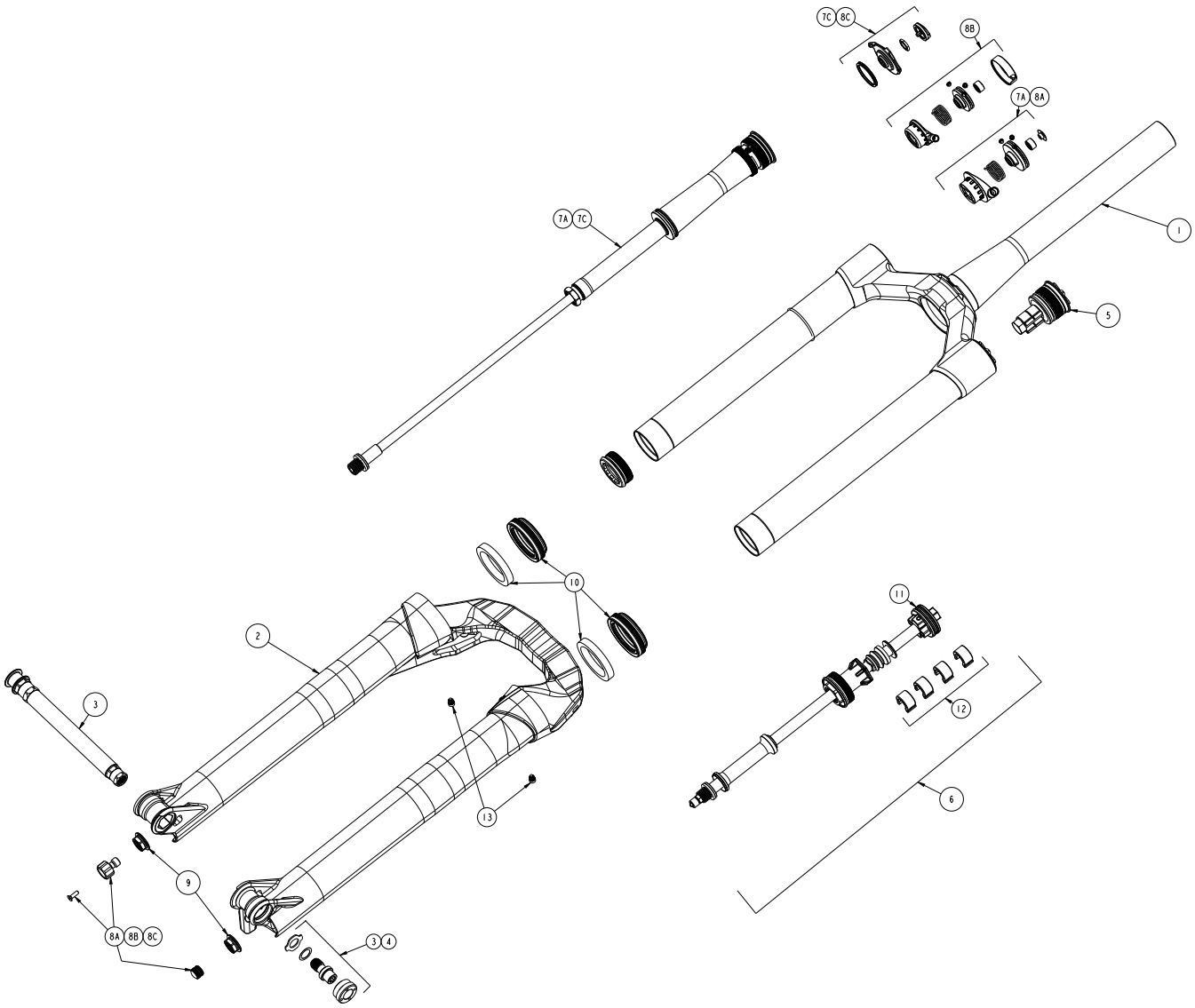
R8 PRO TRAVEL SPACERS

# OF SPACERS	TRAVEL	DEPICTION
0	120	
1	110	
2	100	
3	90	
4	80	

R8 PRO IVA SETTING

TRAVEL	IVA POSITION	DEPICTION
120	NO IVA OR 1	 
110	1	
100	2	
90	2	
80	3	

R8 PRO EXPLODED VIEW & PARTS



R8 PRO EXPLODED VIEW & PARTS

ITEM #	PART DESCRIPTION	KIT NUMBER
1	CROWN-STEER ASSY, 440S, M31X0.8, MY25 R8	141-41368-K001
2	CASTING, 29" MY25 R8 GLOSS BLACK	141-41368-K002
3	AXLE, HEXLOCK SLR, 110 (WITH HARDWARE)	141-33147-K008
4	AXLE HARDWARE, HEXLOCK SL2	141-33147-K006
5	IVA ASSY M31X0.8, 31.00 R8	141-32668-K014
6	DORADO AIR SPRING ASSY (INCLUDES TRAVEL SPACERS)	141-41368-K003
7A	DAMPER CARTRIDGE, VTT-PRO, 34MM M32X1, 18MM REMOTE KNOB	141-341368-K004
7C	DAMPER CARTRIDGE, VTT-PRO 34MM M32X1, MANUAL KNOB	141-41368-K009
8A	KNOBS, VTT-PRO, REMOTE 18MM PULL	141-41368-K005
8B	KNOBS, VTT-PRO, REMOTE 10MM/14MM PULL	141-41368-K006
8C	KNOBS, VTT-PRO, MANUAL 3-POSITION	141-41368-K010
9	FOOT-NUT, M12X1.5 SHAFT (2PC)	141-39022-K017
10	SEALS, 34MM, SKF W/ FOAM RINGS	141-39022-K020
11	AIR PISTON, SEAL ONLY QUAD-RING (31.00 LEG)	141-32155-K012
12	TRAVEL ADJUST SPACER KIT	141-30159-K012
13	TSR SCREW, PPC	141-36713-K035
REF	DECAL KIT, MY25 R8	141-41368-K008
REF	REBUILD KIT, MY25 R8	141-41368-K007
REF	BLADDER, CARTRIDGE, NBR MY25+	TBD
REF	FENDER & HOSE-GUIDE KIT	141-36103-K001
REF	FENDER KIT	141-36103-K002
REF	HOSE GUIDE KIT	141-36103-K003
REF	DEUCE LEVER + CABLE, 3P-18MM, 22.2MM AM	193-41336-A201
REF	ACE/DEUCE LEVER + CABLE, 3P-18MM, 22.2MM AM	193-41336-A001
REF	KIT, CABLE, DEUCE LEVER	361-41484

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