manitou

M3Z8R

SERVICE GUIDE 2020

Hayes Performance Systems
5800 W. Donges Bay Rd.
Mequon, WI 53092

Tel: 888.686.3472
Email: techsupport@hayesbicycle.com
Web: www.hayescomponents.com

Hayes Components Europe
Dirnismaning 20 a
85748 Garching (b. Munich)
Germany
ph: +49 (0)89 203237450

Email: techsupportEU@hayesbicycle.com
Web: www.hayescomponents.com

INTRODUCTION

This manual is intended to guide the user through the steps necessary to fully service and maintain the 2020 Mezzer 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:

Hayes Bicycle USA	5800 W Donges Bay Road Mequon WI 53092
	Phone: 888.686.3472
	Email: techsupport@hayesbicycle.com

Hayes Bicycle Europe	Dirnismaning 20 a 85748 Garching (b. Munich) Germany
	Phone: +49 89 203237450
	Email: techsupportEU@hayesbicycle.com

Hayes Bicycle Asia	16F, No. 37, Sec. 3 Mincyuan E. Rd. Zhongshan District Taipei City 10476 Taiwan ROC
	Phone: 886-2-2518-1108

TABLE OF CONTENTS

REQUIRED TOOLS

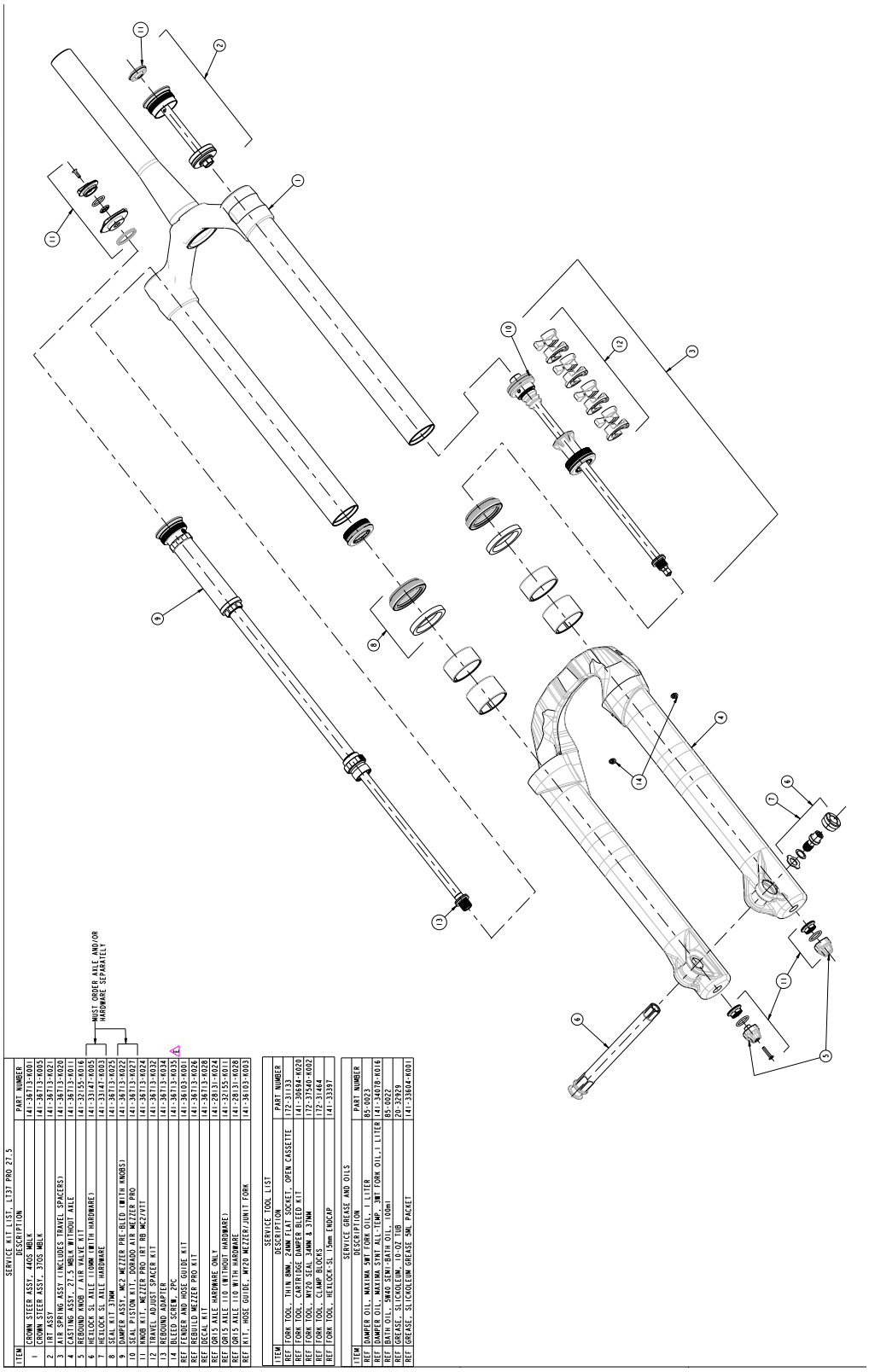
Below is a list of tools necessary for changing travel of the 2020 Mezzer Pro fork.

- 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)
- 1” socket
- 8mm Socket *
- 24mm Socket *
- (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 2020 Mezzer Pro fork.

- 11mm Socket
- Plastic or non-marring pick
- Downhill tire lever or flat blade screwdriver
- 5wt Maxima Fork oil - Manitou part number 85-0023
- Semi-bath Oil, 5/40w Synthetic - Manitou part number 85-0022
- Slickoleum™ Grease
- Isopropyl alcohol
- 37mm seal install tool 172-37540-K002
- Cartridge Damper Bleed Kit 141-30694-K020
- 37mm seal kit 141-36713-K025 and Air piston Seal Kit 141-36713-K027 or Rebuild kit 141-36713-K026

MEZZER PRO 110 27.5 EXPLODED VIEW



SERVICE KIT LIST, L137 PRO 27.5

ITEM	DESCRIPTION	PART NUMBER
1	CROWN STEER ASSY, 44OS MDL4	141-36713-4001
	CROWN STEER ASSY, 37OS MDL4	141-36713-4005
2	1RT ASSY	141-36713-4021
3	AIR SPRING ASSY (INCLUDES TRAVEL SPACERS)	141-36713-4020
4	REBOUND ASSY, 27.5 MDL4 W/ FRONT AXLE	141-36713-4016
5	REBOUND ASSY, 27.5 MDL4 W/ REAR AXLE	141-33147-4015
6	HEXLOCK SL AXLE (110MM WITH HARDWARE)	141-33147-4005
7	HEXLOCK SL AXLE HARDWARE	141-33147-4003
8	SEAL KIT 31MM	141-36713-4025
9	DAMPER ASSY, MC2 MEZZER PRE-BLED (WITH KNOBS)	141-36713-4022
10	SEAL PISTON KIT, DORADO AIR MEZZER PRO	141-36713-4027
11	KNOB KIT, MEZZER PRO 1RT RB MC2/4IT	141-36713-4024
12	TRAVEL ADJUST SPACER KIT	141-36713-4023
13	REBOUND ADAPTER	141-36713-4034
14	BLEED SCREW, 2PC	141-36713-4035
REF	FENDER AND HOSE GUIDE KIT	141-36103-4001
REF	REBUILD MEZZER PRO KIT	141-36713-4026
REF	DECAL KIT	141-36713-4028
REF	QR15 AXLE (HARDWARE ONLY	141-28131-4024
REF	QR15 AXLE (WITHOUT HARDWARE)	141-28131-4011
REF	QR15 AXLE 110 WITH HARDWARE	141-28131-4028
REF	KIT, HOSE GUIDE, M20 MEZZER/JUNIT FORK	141-36103-4003

MUST ORDER AXLE AND/OR HARDWARE SEPARATELY

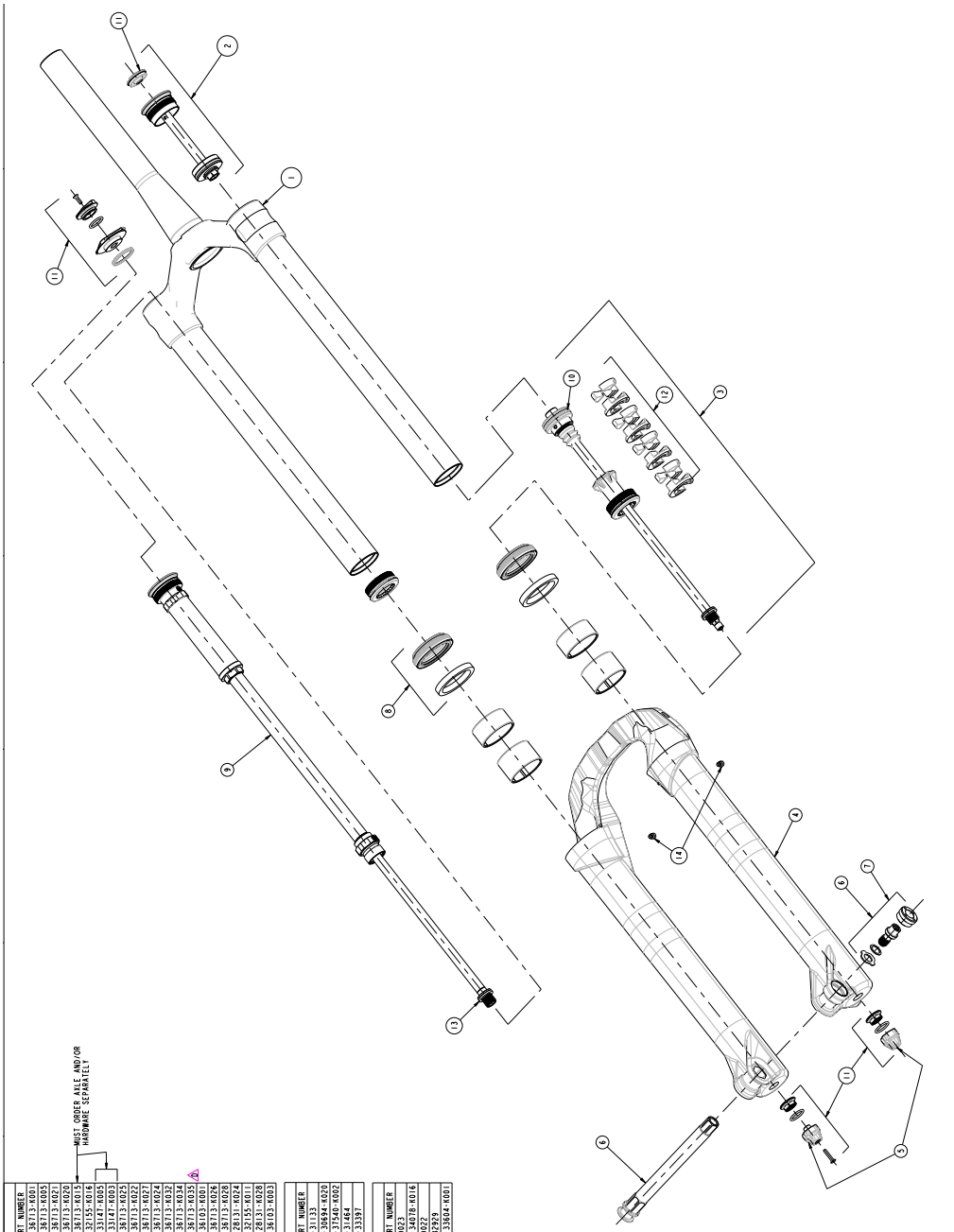
SERVICE TOOL LIST

ITEM	DESCRIPTION	PART NUMBER
REF	FORK TOOL, THIN 8MM, 22MM FLAT SOCKET, OPEN CASSETTE	172-31133
REF	FORK TOOL, CARTRIDGE DAMPER BLEED KIT	141-30694-4020
REF	FORK TOOL, M20 SEAL HEAD, 31MM	172-31464-4002
REF	FORK TOOL, CLAMP BLOCKS	172-31464
REF	FORK TOOL, HEXLOCK-SL, 15mm ENDCAP	141-33397

SERVICE GREASE AND OILS

ITEM	DESCRIPTION	PART NUMBER
REF	DAMPER OIL, MAXIMA, 5WT FORK OIL, 1 LITER	85-0023
REF	DAMPER OIL, MAXIMA, 5WT ALL-TEMP, 3MT FORK OIL,1 LITER	141-34078-4016
REF	BATH OIL, 5W40 SEMI-BATH OIL, 100ml	85-0022
REF	GREASE, SLICKOLEUM, 10-OZ TUB	20-32929
REF	GREASE, SLICKOLEUM GREASE 5ML PACKET	141-33604-4001

MEZZER PRO 110 29 EXPLODED VIEW



SERVICE KIT LIST, LIST PRO 29		
ITEM	DESCRIPTION	PART NUMBER
1	CROWN STEER ASSY, 51OS MBLK	141-38713-K001
	CROWN STEER ASSY, 44OS MBLK	141-38713-K005
2	FRT ASSY	141-38713-K021
3	FRT DAMPING ASSY (INCLUDES TRAVEL SPACERS)	141-38713-K020
4	CAST/MG ASSY, 29 MBLK WITHOUT AXLE	141-38713-K015
5	REBOUND KNOB / AIR CAP KIT	141-32155-K016
6	HEXLOCK SL AXLE 110X4 (WITH HARDWARE)	141-33147-K005
7	HEXLOCK SL AXLE HARDWARE	141-33147-K003
8	SEAL KIT 37MM	141-38713-K025
9	DAMPER ASSY, MC2 MEZZER PRE BLED (WITH KNOBS)	141-38713-K022
10	SEAL KIT, FRT DAMPER, MEZZER PRO	141-38713-K027
11	KNOB KIT, MEZZER PRO (RT RB MC2	141-38713-K024
12	TRAVEL ADJUST SPACER KIT	141-38713-K032
13	REBOUND ADAPTER	141-38713-K034
14	BLEED SCREW, 2PC	141-38713-K035
REF	FENDER AND HOSE GUIDE KIT	141-38103-K001
REF	REBUILD MEZZER PRO KIT	141-38713-K026
REF	DUST SEAL KIT	141-38713-K028
REF	QR15 AXLE HARDWARE ONLY	141-28131-K024
REF	QR15 AXLE 110 (WITHOUT HARDWARE)	141-32155-K011
REF	QR15 AXLE 110 WITH HARDWARE	141-28131-K028
REF	KIT, HOSE GUIDE, MY20 MEZZER/JUNIT FORK	141-38103-K003

SERVICE TOOL LIST		
ITEM	DESCRIPTION	PART NUMBER
REF	FORK TOOL, THIN 8MM, 24MM FLAT SOCKET, OPEN CASSETTE	172-31133
REF	FORK TOOL, CARTRIDGE DAMPER BLEED KIT	141-36694-K020
REF	FORK TOOL, MY20 SEAL 34MM & 37MM	172-37540-K002
REF	FORK TOOL, CLAMP BLOCKS	172-31464
REF	FORK TOOL, HEXLOCK-SL 1.5mm ENDCAP	141-33397

SERVICE GREASE AND OILS		
ITEM	DESCRIPTION	PART NUMBER
REF	DAMPER OIL, MAXIMA 5WT FORK OIL, 1 LITER	85-0023
REF	DAMPER OIL, MAXIMA 5WT ALL-ITEM, 5WT FORK OIL, 1 LITER	141-34078-K016
REF	FORK OIL, MAXIMA 5WT FORK OIL, 120ml	85-0023
REF	GREASE, SILICKOLIUM, 10-OZ TUB	20-32929
REF	GREASE, SILICKOLIUM GREASE 5ML PACKET	141-33604-K001

MUST ORDER AXLE AND/OR HARDWARE SEPARATELY

HAYES PERFORMANCE SYSTEMS WARRANTY

Limited Warranty:
HAYES warrants its products to be free from defects in materials or workmanship under normal intended use for a period of one year (two years in European Union countries) from the date of purchase, subject to normal wear and tear. Unless otherwise prohibited by law, any such defective products will be repaired or replaced at the option of HAYES when received with proof of purchase, freight prepaid. This warranty does not cover breakage, bending, or damage that may result from crashes or falls. This warranty does not cover any defects or damage caused by alterations or modifications of HAYES products or by normal wear, accidents, improper maintenance, damages caused by the use of HAYES products with parts of different manufacturers, improper use or abuse of the product, application or uses other than those set forth in the HAYES instruction manual or failure to follow the instructions contained in the applicable HAYES instruction manual. Instruction manuals can be found on-line at www.hayescomponents.com. Any modifications made by the BUYER or any subsequent user will render the warranty null and void. This warranty does not apply when the serial number or production code has been deliberately altered, defaced or removed from the product. The cost of normal maintenance or replacement of service items, which are not defective, shall be the BUYER's responsibility. If permitted by local law, this warranty is expressly in lieu of all other warranties (except as to title), express or implied, and in particular and without limitation HAYES disclaims the implied warranties of merchantability or fitness for purpose If for any reason warranty work is necessary, return the component to the place of purchase or contact your dealer or local HAYES distributor. In the USA, contact HAYES for a return authorization number (RA#) at (888) 686-3472. At that time, instructions for repair, return, or replacement shall be given. Customers in countries other than the USA should contact their dealer or local HAYES distributor.

Limitation of Liability.
Unless required by mandatory law, HAYES shall not be liable for any incidental, indirect, special or consequential damages.

This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage through normal use, failure to service according to recommendations or riding in conditions other than recommended. The cost of normal maintenance or replacement of service items, which are not defective, shall be paid for by the original purchaser. Wear and tear parts that will not be replaced under warranty include but are not limited to the following:

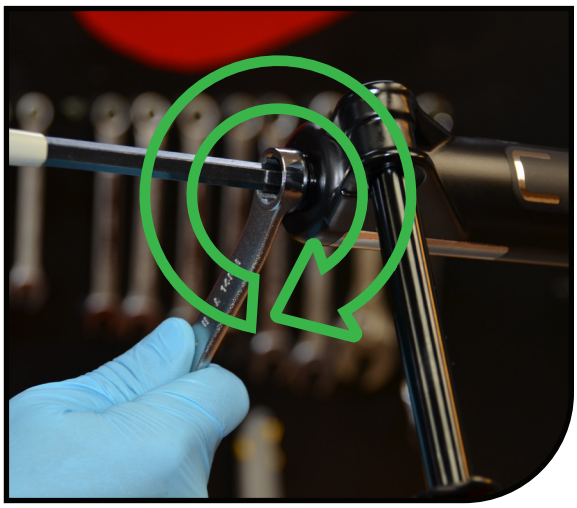
Bushings	Dust Seals	Stripped or Worn Bolts
Rear Shock	Fork/Shock Air Seals and/or O-rings	Remote Lockout Cable
Mount Hardware	Bearings	Gloves
Handlebar grips	Upper Stanchion Tubes	Lower Stanchion Tubes(Dorado)
Tubeless Valves		

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 26 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.



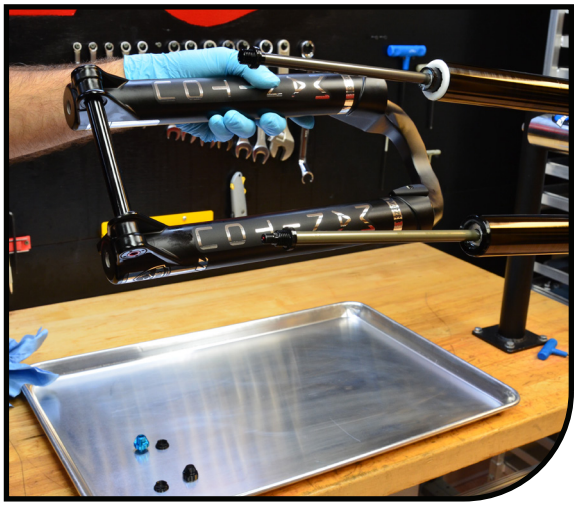
2 Hold lock-nut with 14mm box end wrench. Insert a 8mm Hex wrench into the end of the rebound rod and loosen **clockwise** until rebound rod disengages from the lock-nut.

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 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.

CASTING REMOVAL & SERVICE

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

8 Remove springs from outer lip of new leg seals. Clean casting seal press area with Isopropyl alcohol. Using the Manitou 37mm Seal Press press in the dust seals. Reinstall springs onto seals.

AIR SPRING SERVICE

1 Remove IRT air cap. Make sure the air is released from the fork. Depress IRT Schrader Valve and Compression Rod valves with a 2mm hex a few times to ensure all air is released.

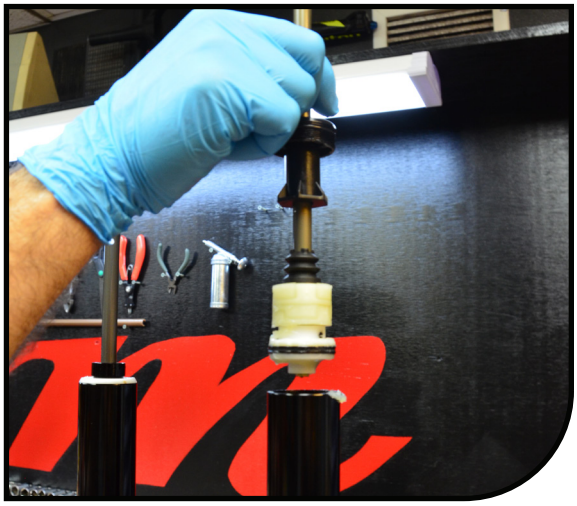
2 Using a standard cassette tool and 1” socket loosen IRT cap until threads are free from leg.

3 Pull IRT assembly straight out, Clean with isopropyl, Inspect seal for damage. If needed Replace IRT piston seals (141-36713-K026).

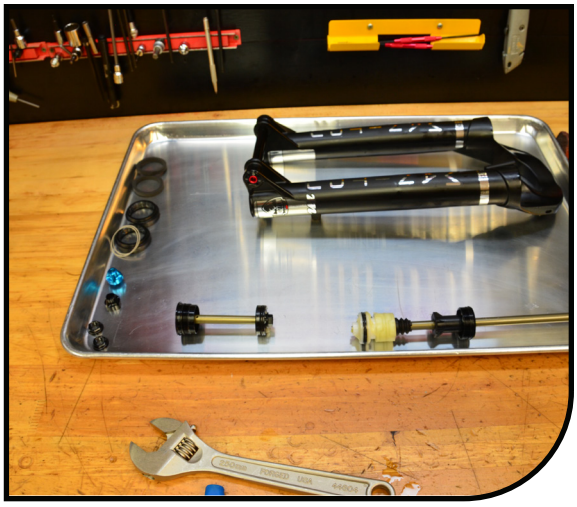
AIR SPRING SERVICE

4 Invert the fork and use Manitou cassette tool with adjustable 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 standard cassette lock-ring tool 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 (141-36713-K027). **If Travel change is need see page 26 before moving on.**



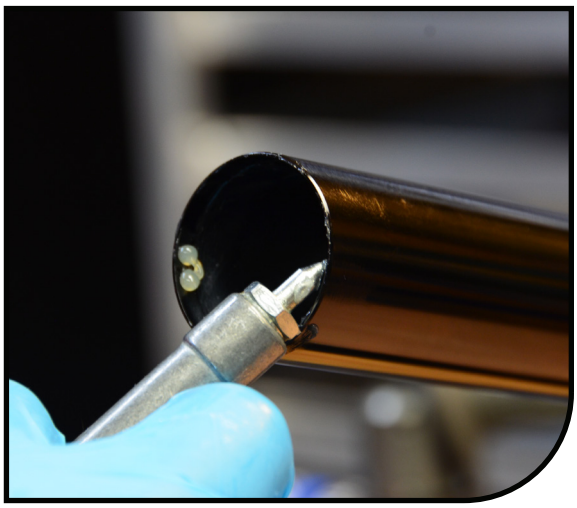
6 Once the air spring assembly is removed clean the inside of the stanchion with isopropyl alcohol and a lint free towel (Be careful to not scratch the inner surface of the stanchion). Inspect the inside and outside of the stanchion for scratches or other damage.



AIR SPRING SERVICE

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.

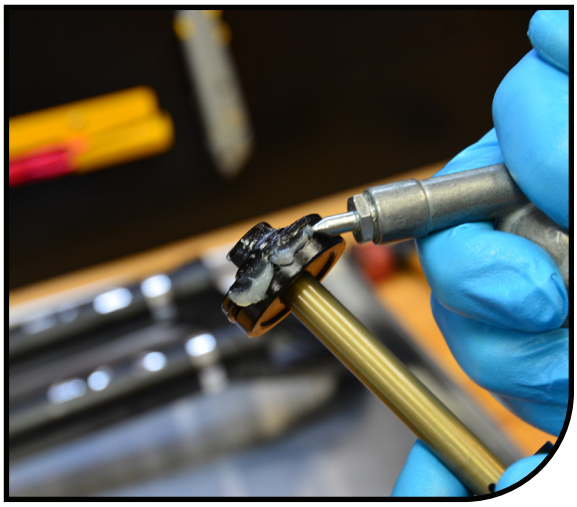
8 Add Slickoleum™ grease to the stanchion threads before inserting the air spring assembly. Spread grease across entire thread surface.



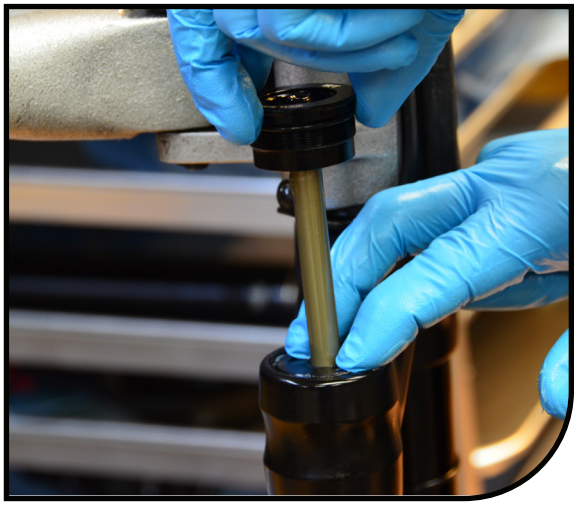
9 Install air spring assembly into stanchion. Using a 26mm crow's foot and Manitou cassette tool **OR** 1" Socket and Standard cassette tool torque to 20-25 in-lb [2.3-2.8 Nm]. If rod is bottomed attach shock pump to valve and draw the rod out until fully extended.

AIR SPRING SERVICE

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



11 Insert IRT piston into stanchion. Apply even pressure to piston surface as you work the piston seal past the stanchion threads.

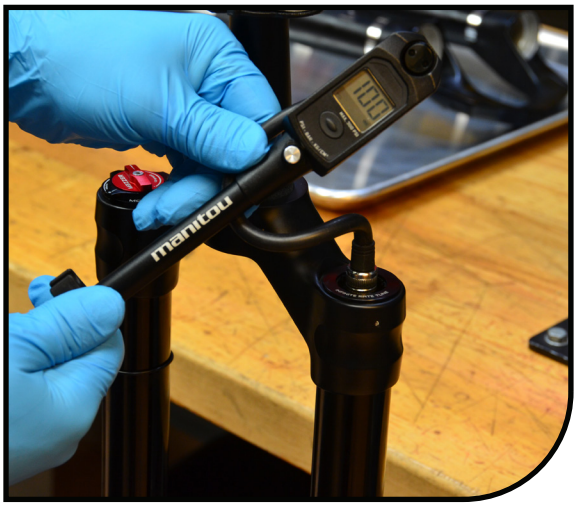


12 Install IRT cap into stanchion. Torque to 220-220 in-lb [20-25 Nm] using standard cassette lock-ring tool.

AIR SPRING SERVICE

13 Attach a shock pump and inflate IRT to 100PSI.

NOTE: ALWAYS SET IRT PRESSURE (TOP OF FORK) BEFORE DORADO AIR PRESSURE (BOTTOM OF FORK)

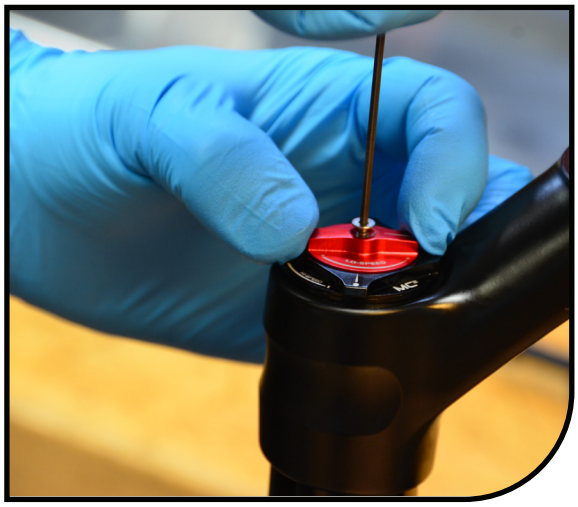


14 Attach a shock pump and inflate main air chamber to 60PSI. This will aid in installing the casting later.

DAMPER SERVICE

1 Using a 2mm Hex wrench remove the screw of the red "LO-SPEED" MC2 knob.

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 Use a non-marring pick or pliers with non-marring barrier to remove the red "LO-SPEED" compression knob by lifting straight up.

3 With a 11mm socket, unthread the exposed nut and remove the black "HI-SPEED" 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.

DAMPER SERVICE

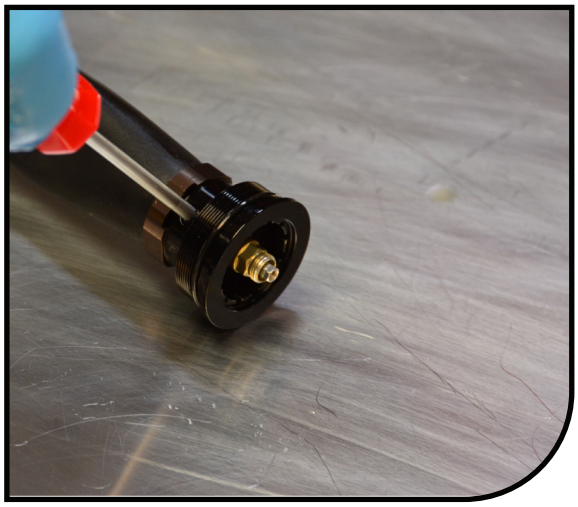
4 Remove the v-seal that was under the black "HI-SPEED" adjustment knob.

5 Use a standard cassette tool and 1" socket to unthread the damper top-cap from the stanchion.

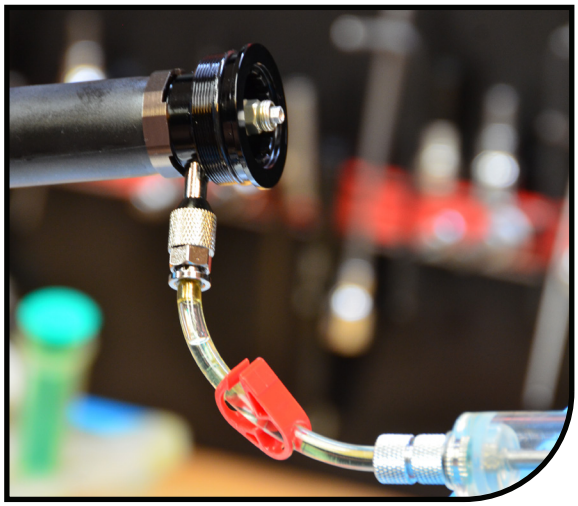
6 Remove damper assembly from the stanchion. Inspect damper shaft and bladder for any damage.

DAMPER SERVICE

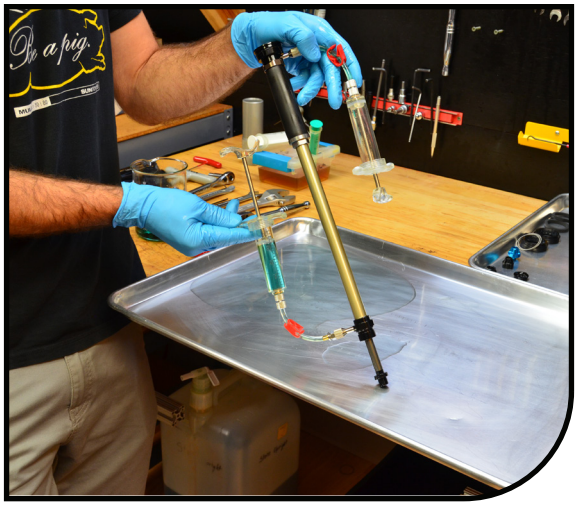
7 Pull damper shaft to full extension. Remove bleed-screw on side of top-cap. Place damper top-cap over catch pan. Cycle damper shaft several times to cycle out old oil from damper.



8 Attach M5x0.8 Luer lock fitting to both syringes (141-30695-K020). Fill one syringe with 5wt Damper oil (85-0023).



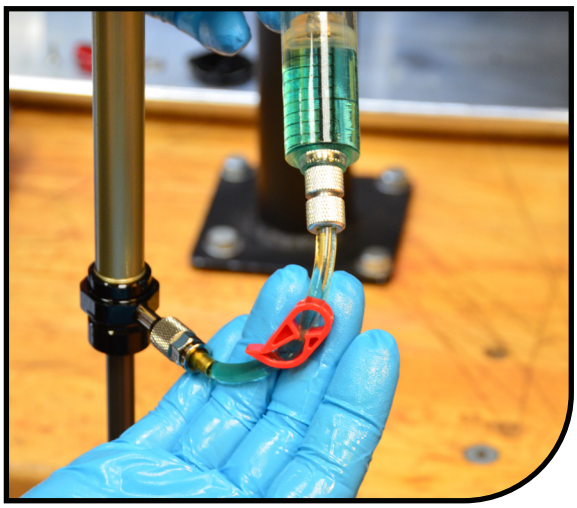
9 Attach the empty syringe M5x.8 adapter to top-cap bleed port. Remove bleed-screw from damper end-cap and attach the filled syringe M5x.8 adapter to end-cap bleed port.



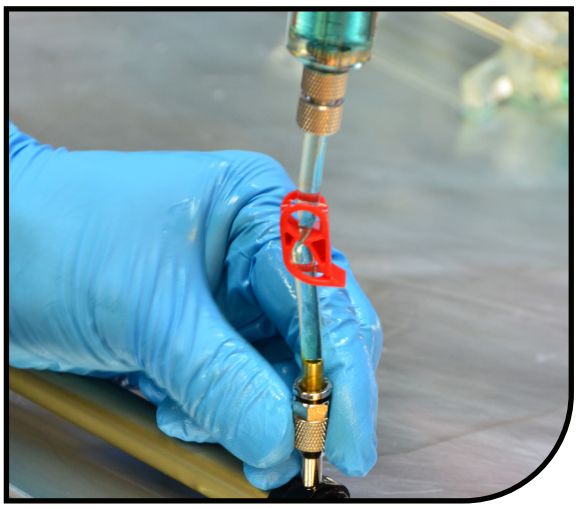
DAMPER SERVICE

10 Holding the damper end-cap up-right in vise simultaneously compress the filled syringe and retract the empty syringe to remove air from the damper. Refill the syring as needed until oil is drawn into the upper syringe.

11 Closing the bleed hose clamp on both syringes cycle the damper SLOWLY to draw air to the top of the damper. Open bleed hose clamps and repeat step 10 until no air bubbles are present in oil drawn into upper syringe.

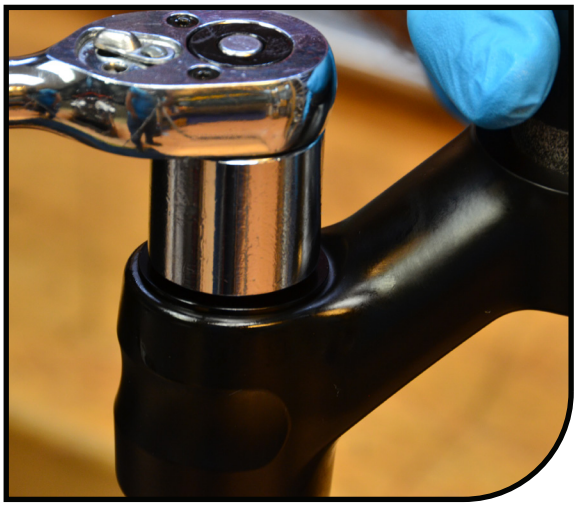


12 Fully extend damper shaft and add oil from bottom syringe until bladder is slightly expanded. Closing the bleed hose clamp on both syringes remove cartridge from vise. Lay cartridge flat on bench. Remove lower syringe and replace bleed screw. Some oil may discharge from bleed port when removing syring. Remove upper syringe and replace bleed screw.



DAMPER SERVICE

13 Install Damper cartridge into stanchion. Using standard cassette lock-ring tool Torque to 220-220 in-lb [20-25 Nm] .

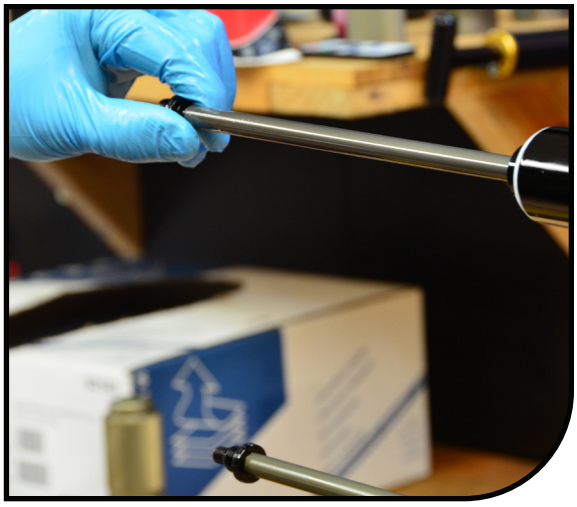


CASTING INSTALL

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

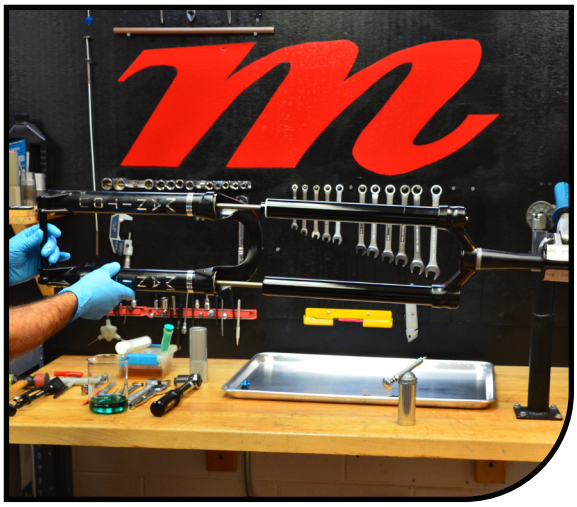
2 Make sure the spring shaft is fully extended and air chamber is filled with air (60PSI).

3 Fully extend the damper shaft.

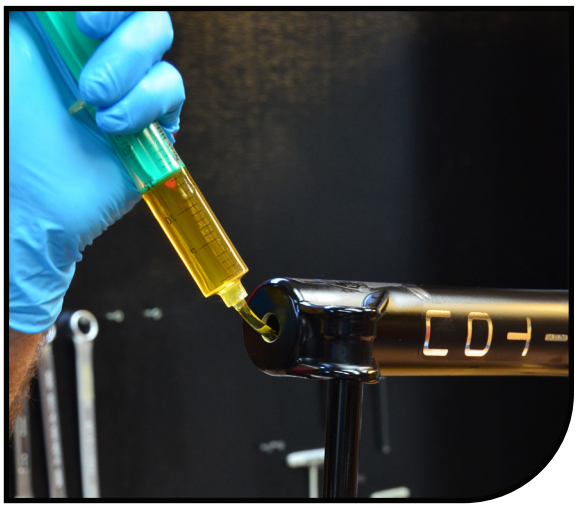


CASTING INSTALL

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 21cc 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.

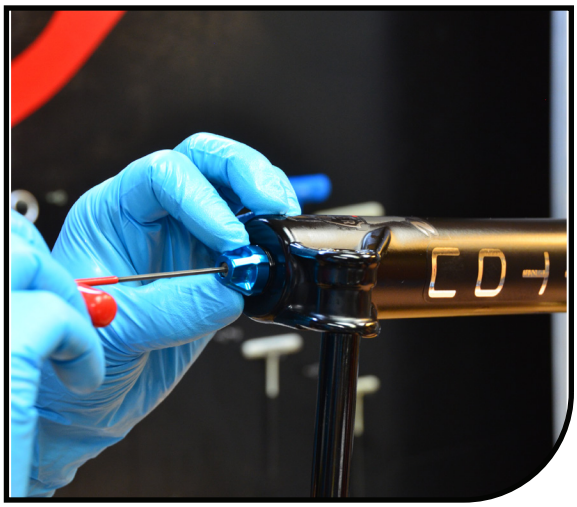


6 Thread the lock-nut onto the damper shaft adapter. Holding the lock-nut with a 14mm box wrench, use an 8mm Hex wrench to tighten the rebound damper adapter to 35–40 in-lb [3.95–4.5 Nm] by turning them **counter-clockwise.** Do not overtighten, doing so can damage the threads.

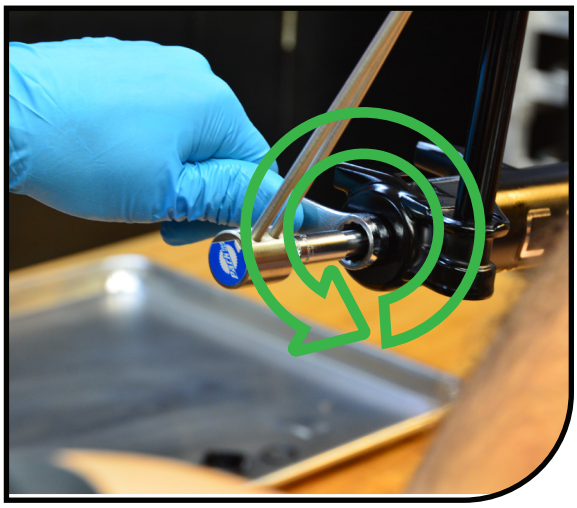
CASTING INSTALL

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.

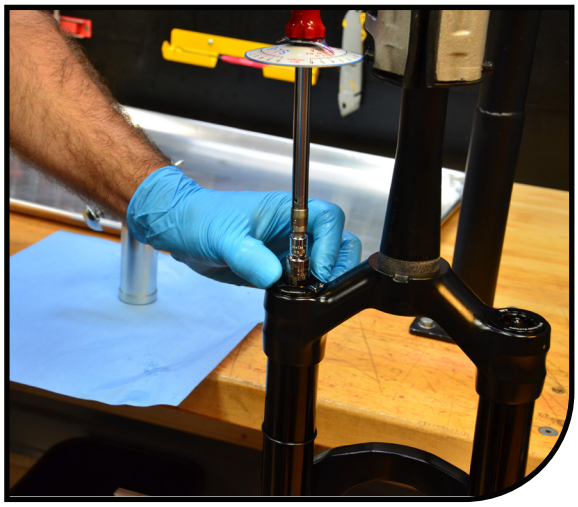


8 Thread the other lock-nut onto the spring shaft adapter. Holding the lock-nut with a 14mm box wrench, use an 8mm socket tighten the compression rod adapter to 35–40 in-lb [3.95–4.5 Nm] by turning them **counter-clockwise.** Do not overtighten, doing so can damage the threads.



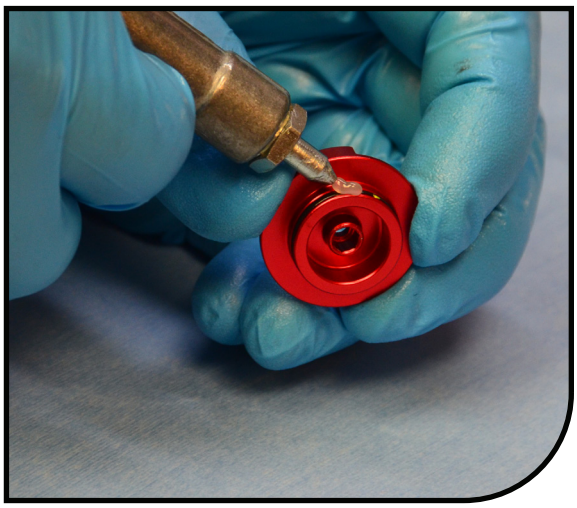
COMPRESSION KNOB INSTALLATION

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



2 Install the black "HI-SPEED" adjustment knob onto adjuster hex. 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 "LO-SPEED" adjustment knob with Slickoleum™ Grease an install onto adjuster hex. With a 2mm hex, thread on the screw and torque to 4-6 in-lb [0.5-0.7 Nm] Note: Be sure to hold the knob still while installing the screw. The damper adjuster may be damaged if the knob is over torqued.



4 Clean fork and use a shock pump to set to desired pressure. Lightly pull the casing away from the CSA as you add air. See set-up sheet 46-37659 for recommended air pressures.

manitou

M3Z3R

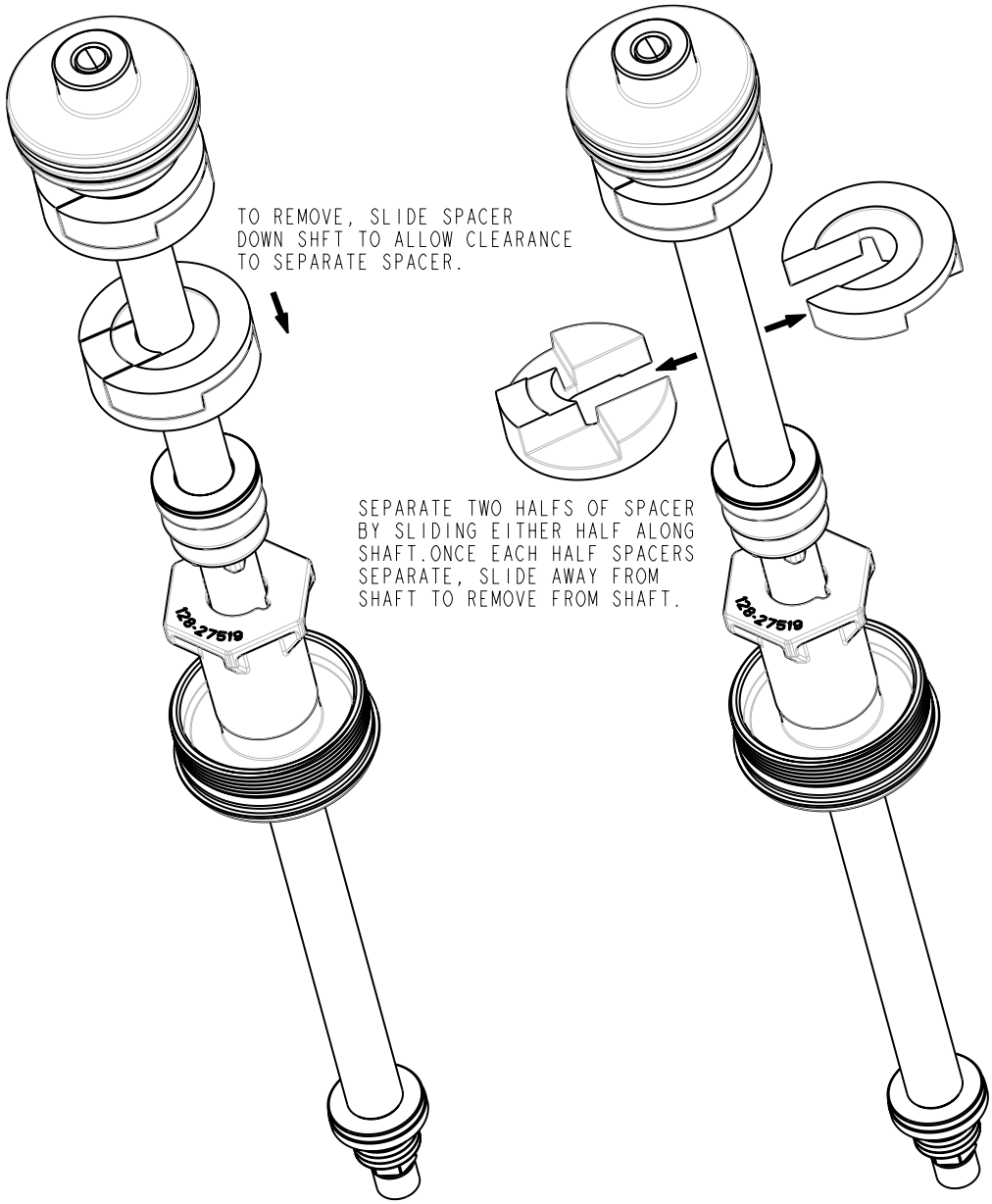
TRAVEL CHANGE GUIDE

MEZZER TRAVEL CHANGE

In order to change the travel of your Mezzer Pro (27.5 & 29), first remove the compression rod assembly. For instructions on how to do this refer to page 12-13. For travel change on new forks, bath oil may be preserved by removing stanchion assembly while fork is placed flat on benchtop. Once the rod is removed arrange the travel spacers into the desired amount of travel using the following charts.

MEZZER PRO TRAVEL ADUSTMENT

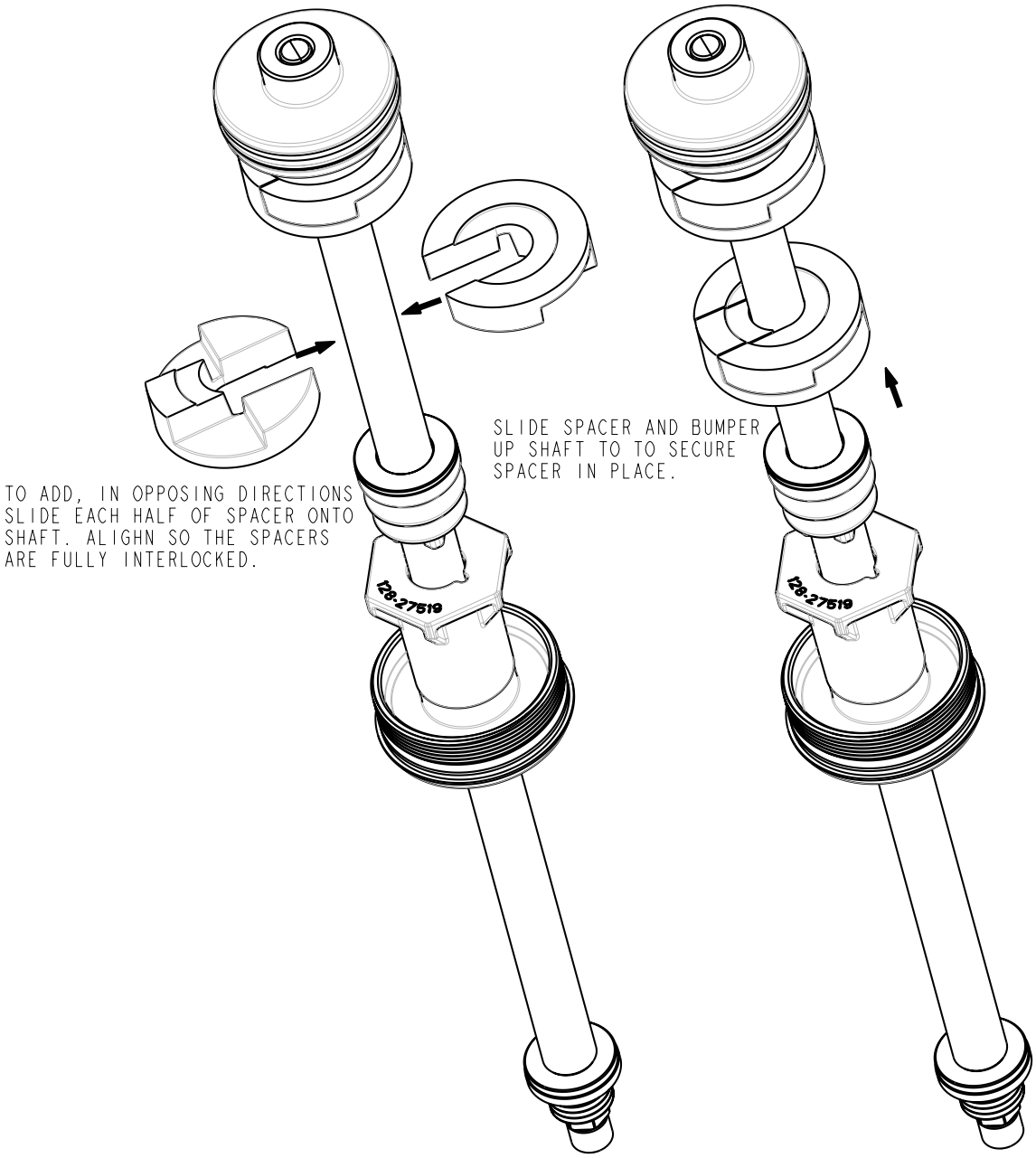
Increasing Travel: Each spacer pair (Two Halfs) removed Increase travel & Axel-To-Crown by 10mm



MEZZER TRAVEL CHANGE

MEZZER PRO TRAVEL ADUSTMENT

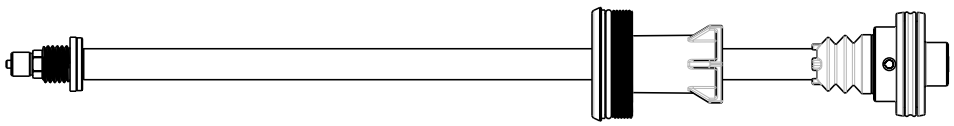
Decrease Travel: Each spacer pair (Two Halfs) added decreases travel & Axel-To-Crown by 10mm



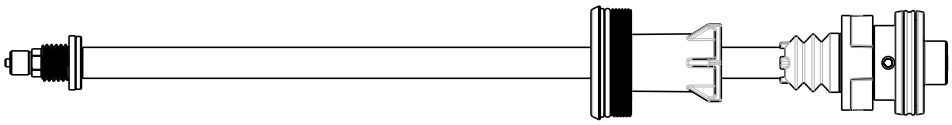
MEZZER TRAVEL CHANGE

Mezzer Pro, Dorado Air

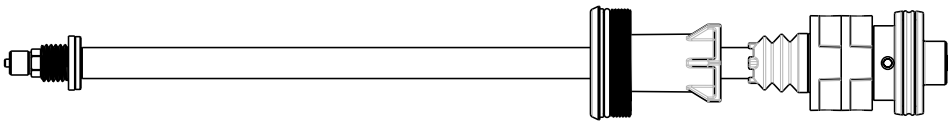
180MM



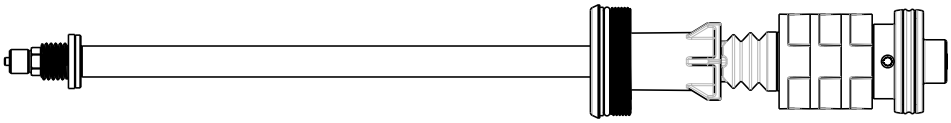
170MM



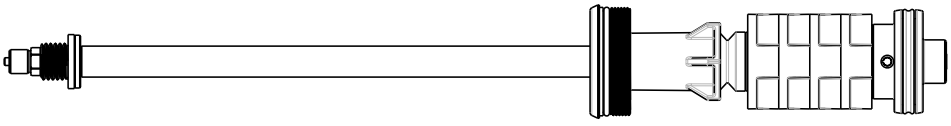
160MM



150MM



140MM



WWW. MANITOUMTB.COM WWW.HAYESCOMPONENTS.COM
5800 W DONGES BAY ROAD MEQUON WI 53092

46-38529 REV.A