Rollik 150 Frame Assembly Instructions and Maintenance Manual





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Warning

Like any sport, bicycling involves risk of injury and damage. By choosing to ride a bicycle, you assume the responsibility for that risk, so you need to know—and to practice— the rules of safe and responsible riding and of proper use and maintenance. Proper use and maintenance of your bicycle reduces the risk of injury or death.

All bicycles should be assembled and maintained by an authorized bicycle mechanic. If you are not qualified to assemble, inspect, and maintain your bicycle, please visit your favorite local bike shop or contact Spot Brand for a referral to a qualified bicycle technician in your area.

This guide covers the details specific to working with your Living Link™ frame. It does not address complete bicycle assembly, fitting, inspection, maintenance, or riding techniques. Please refer to the Spot Brand Bicycle Owner's Manual for further details.

Under no circumstances shall Spot Brand LLC be held liable for direct, incidental, or consequential damages, including, without limitation, damages for personal injury, property damage, or economic losses, whether based on contract, warranty, negligence, product liability, or any other theory.

Rollik 150 Component Compatibility

Your Rollik 150 frame was designed to work with the following components. Other components may be compatible, but fitment is not guaranteed. For questions regarding component compatibility for parts not listed below please contact Spot.

COMPONENT	FIT/STANDARD		
HEADSET	UPPER: ZS44, LOWER: ZS56		
BOTTOM BRACKET	73mm THREADED		
SEATPOST	Ø31.6, INTERNAL DROPPER ROUTING		
1X DRIVETRAIN	52mm "BOOST" CHAINLINE REQUIRED, DIRECT MOUNT CHAINRING REQUIRED, 34t MAX		
REAR HUB	12 X 148mm, SRAM MAXLE REAR AXLE INCLUDED		
REAR BRAKE	Ø160 NATIVE POST MOUNT, Ø180mm MAX ROTOR DIAMETER		
REAR TIRE	29 X 2.6" / 66mm MAX WIDTH, Ø710mm MAX DIAMETER. NOTE THAT ACTUAL TIRE WIDTHS		
	CAN VARY FROM PRINTED SIZES		
REAR SHOCK	210 X 55, FRONT EYELET: Ø8 X 20, REAR EYELET OPEN Ø12.7 BUSHING		
SEATPOST COLLAR	Ø35.0mm		
FORK TRAVEL	RK TRAVEL 150-160mm		
WATER BOTTLE	ATER BOTTLE 2X BOTTLE MOUNTS, ONE ABOVE AND ONE BELOW THE DOWNTUBE		
CHAIN GUIDE	HAIN GUIDE ISCG-05 TABS, LARGE UPPER GUIDES MAY NOT FIT. CONTACT SPOT FOR RECOMMENDATIO		

Assembly

Tools Required:

- Hex wrenches / bits, sizes: 5mm, 6mm
- Torx wrenches / bits, sizes: T25, T30
- Torque wrench
- Headset Press
- Bottom Bracket Installation Tools—May vary by BB brand and model
- High-Lubricity Waterproof Grease—We recommend Slick Honey
- Isopropyl or denatured alcohol—90% or higher concentration
- Strong, thin adhesive tape—electrical tape, packaging tape, etc.

Geometry Adjustment

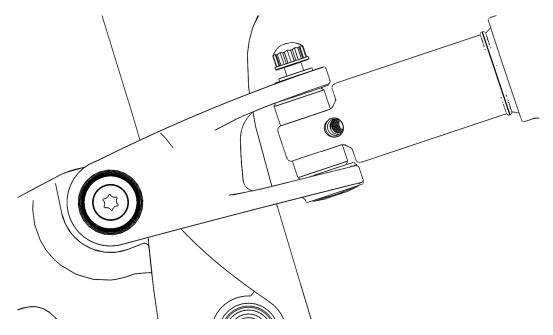
Tools Required:

- L or T-shaped T-25 Torx wrench
- 10mm box end (12-point) wrench

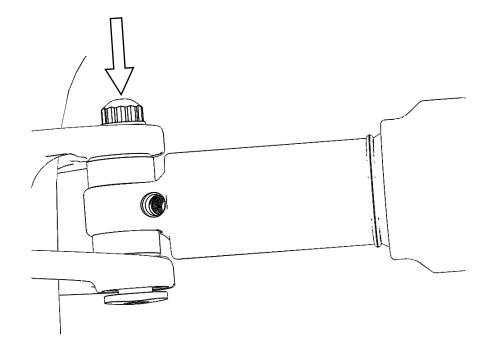
A. Geometry Adjustment

The Rollik 150 frame incorporates a novel system to quickly adjust the geometry between two different settings or modes. The normal mode is useful as an all-around trail setting, providing a useful amount of pedal clearance for rocky terrain and nimble steering at most climbing and descending speeds. The low mode sacrifices some pedal clearance for a lower center of gravity and more precise steering at high speeds. To switch between the two modes, follow these steps:

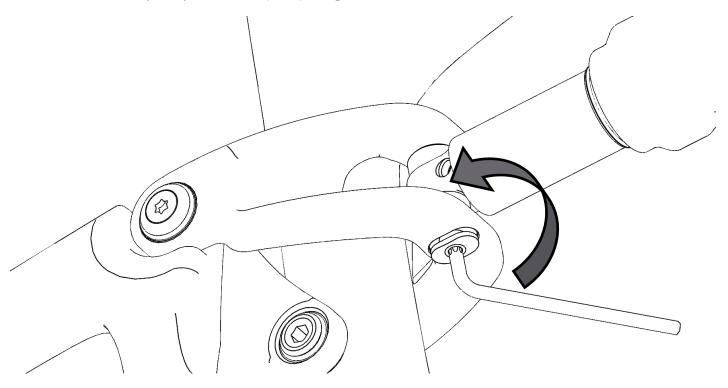
1. Unscrew the rear shock mount screw 3 full turns (1080°) using a 10mm box end wrench:



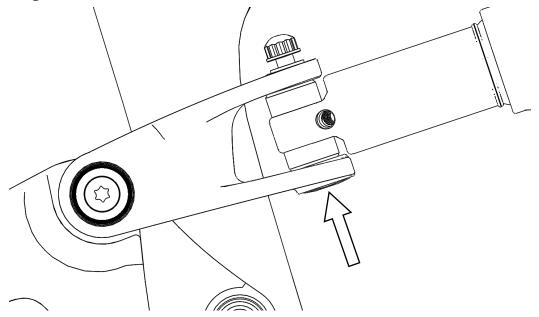
2. Push downward on the screw to free the oval shaped head of the shock pin from its recess on the shock yoke:



3. Turn the shock pivot pin 1/2 turn (180°) using a T25 Torx tool. Direction of rotation does not matter:



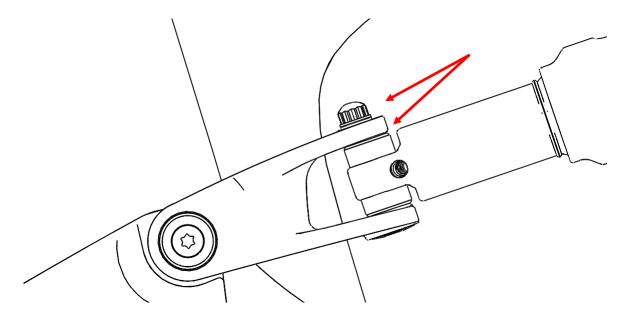
4. Push upward on the oval shaped head of the shock pin to return it to its recess in the shock yoke and tighten the shock mount screw using a 10mm box end wrench. Torque 10Nm (80in-lb). Do not overtighten:



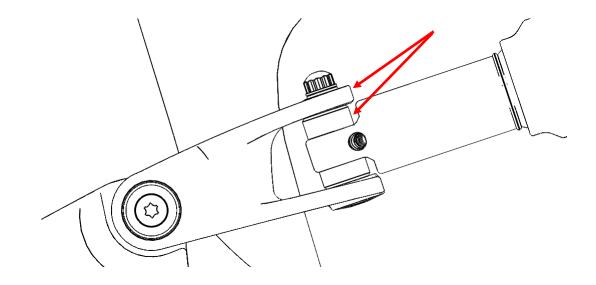
Mode Identification

Once familiar with the operation of the geometry adjuster, a visual check should be enough to determine the geometry mode. However, it may be necessary to perform the adjustment to confirm its position.

Normal mode—front edge of eyelet reducer lines up with front surface of yoke:



Low mode—front edge of eyelet reducer is set back away from front surface of yoke:



GEOMETRY ADJUSTMENT PARAMETERS			
MODE	HEAD TUBE ANGLE	BOTTOM BRACKET HEIGHT	
NORMAL	66.4°	343mm / 13.50in	
LOW	65.8°	336mm / 13.23in	

B. Internal Dropper Seatpost Routing

IMPORTANT:

Install your internal dropper seatpost cable/hose before installing the bottom bracket assembly. Your Rollik 150 frame is supplied with a lead tube installed in place of the dropper seatpost cable/hose to ease installation. Please do not remove the lead tube until the dropper seatpost cable is installed.



- 1. Make sure your seatpost collar is installed on the frame. The seatpost cable/hose is easiest to install by feeding from the seat tube to the head tube, but can be fed starting at the head tube if necessary. Tape the seatpost cable housing or hydraulic hose to the lead tube at the seat tube end. Make sure to clean the end of the cable/hose and the lead tube with alcohol before taping. Tape the two together in line, and wrap the tape several times around the junction for sufficient contact.
- 2. While feeding the seatpost cable/hose into the seat tube, gently pull the lead tube out of the port near the head tube. If excessive resistance is met, the tape joint may be too bulky and should be reduced. The cable/hose must curve around a relatively small radius between the seat tube and the down tube. It is recommended to help the seatpost cable/hose around this curve with a finger or two through the access port in the BB shell.

3. Continue to feed the seatpost cable/hose while gently pulling the lead tube from the port near the head tube. When the seatpost cable emerges from the port, remove the tape and store the lead tube in a safe place:



4. Proceed to install your dropper seatpost per the seatpost manufacturer's instructions. You may wish to install other components on the frame before completing the dropper post installation.

C. Rear Brake Hose Routing

- 1. Begin by installing the rear brake caliper and any applicable adapter if using a rotor larger than 160mm. Please note the Rollik 150 frame is not compatible with rotors larger than 180mm.
- 2. Route the rear brake line starting from the caliper- attaching it to the rear triangle using the supplied zip ties on the cable saddles, and the screw in the p-clip.
- 3. Leaving a small amount of slack between the p-clip and the front triangle, continue to route the line up the down tube using the supplied zip ties.

D. Rear Derailleur Cable Routing

1. Begin by feeding the rear derailleur cable housing into the rear port on the top of the drive side chainstay near the rear axle. It will emerge from the forward port on the chainstay yoke behind the bottom bracket:



2. Slip the supplied p-clip on the cable housing between the rear triangle and front triangle. Do not install the p-clip to the frame at this time:



3. Feed the cable housing into the port on the drive side of the down tube. It will emerge from the port on the non-drive side of the head tube:



4. Feed the cable housing though the headset until desired length is reached. Then secure p-clips to the frame as shown below.



E. Bottom Bracket Installation

IMPORTANT:

If using an internal dropper seatpost cable/hose, install the seatpost cable/hose before installing the bottom bracket assembly

- 1. Ensure that the bottom bracket shell threads are clean, and that any internal seatpost cable/ hose has already been routed.
- 2. Follow the bottom bracket manufacturer's requirements for internal dust sleeve and cup spacer orientations if required. Take care to observe the left/right orientation of each cup. The right/drive side cup is reverse threaded. Screw the bottom bracket cups in by hand.
- 3. Using the bottom bracket manufacturer's installation tools and an accurate torque wrench, torque the bottom bracket cups to the manufacturer's specification.

Maintenance

Tools Required For Rear Triangle Removal:

- Hex wrenches / bits, sizes: 5mm, 6mm
- Torx wrenches / bits, sizes: T25, T30
- Open ended wrench, Size: 19mm
- 12-point socket or box end wrench, Size: 10mm
- Torque wrench
- Round drift punches, flat tip, 5-6mm diameter and 8-10mm diameter
- Hammer
- Isopropyl or denatured alcohol—90% or higher concentration
- Medium strength (blue) thread locking compound, such as Loctite 243 (blue)

Tools Required For Pivot Bearing Replacement:

(In addition to the tools listed above)

- PVC, or other plastic tubes:
 - 27-30mm inner diameter, 45-55mm long
 - 23-25mm inner diameter, 25-30mm long
 - 23-25mm inner diameter, 95mm long
- An assortment of sockets and extensions for bearing removal, 20-22mm outer diameter for main pivot bearings, 13-14mm outer diameter for upper pivot bearings
- Arbor press or bench vise for bearing installation

For individual parts and a complete exploded assembly diagram, please see the last page of this manual.

Leaf Spring Related Precautions

The Living Link leaf spring, and its associated hardware, which include the 9 T30 Torx fasteners, main pivot clevis are to be treated as integral to the rear triangle of the frame.

Do not attempt to remove or modify the leaf spring!

Doing so is likely to damage the leaf spring, hardware, and possibly the rear triangle itself. Any questions or concerns regarding the leaf spring should be directed to Spot:

www.spotbrand.com

sales@spotbikes.com

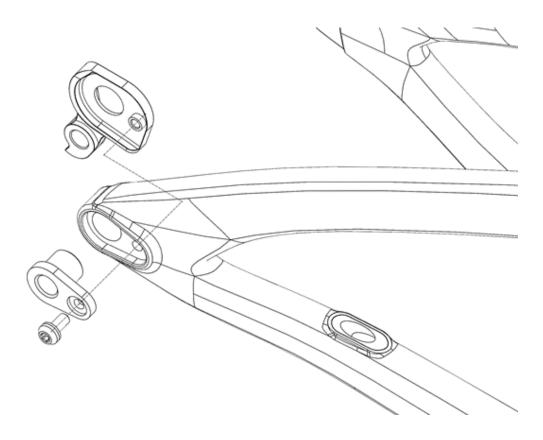
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It is recommended to periodically check the torque on the 9 leaf spring mounting fasteners. This should be done approximately every 100 hours of ride time, or once per year, depending on which occurs sooner.

- 1. Fit your torque wrench with a T30 Torx bit and the shortest extension required to reach the fasteners.
- 2. Clamp the bicycle securely in a work stand and remove the rear wheel.
- 3. Stuff a thick rag or towel between the upper link and the seat tube. The rear bridge of the link swings upward—it is important to protect the seat tube in the event that the link over-rotates in the next step.
- 4. Remove the front shock mount bolt and nut, and swing the shock upwards while very carefully compressing the rear suspension at the rear dropout area. The leaf spring will initially resist compression, but once past mid travel, it will tend to pull the rear swingarm upward. Let the suspension come to rest in the upward position to gain access to the leaf spring mounting screws.
- 5. Turning the torque wrench clockwise (as seen looking at the head of the fastener) and verify that all 9 fasteners are at or above 12N-m (106in-lb).

F. Rear Derailleur Hanger Removal/Replacement

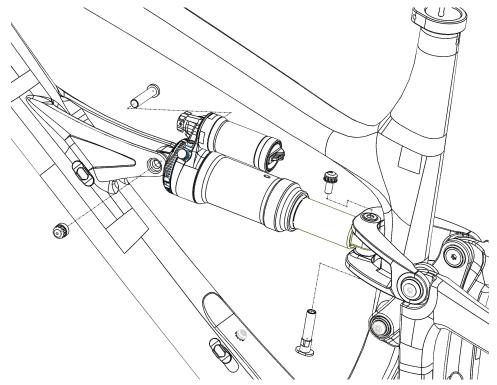
1. Remove the rear wheel and the rear derailleur from the frame. It should not be necessary to remove the chain or cable/housing from the derailleur:



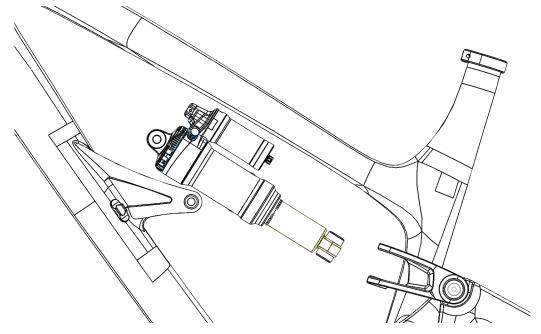
2. The derailleur hanger is removed using a T25 Torx tool on the external screw. When replacing the derailleur hanger, be sure to apply medium strength (blue) thread locking compound to the screw. Torque: 6.5Nm (57in-lb)

G. Rear Shock Removal/Replacement

1. Using a 10mm 12-point wrench and a T30 Torx tool remove the nut and screw from the forward and rear shock mountings respectively. Remove both shock pivot pins:



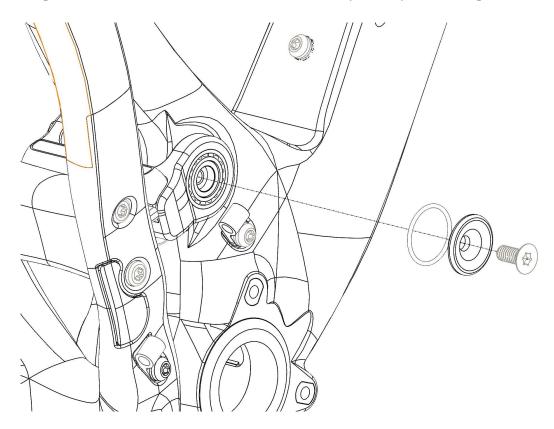
2. Lift the forward end of the shock and pull it towards the front of the bike to free the rear eyelet from the shock yoke:



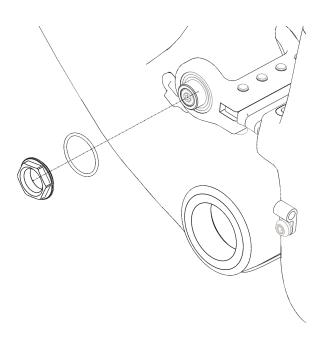
3. Installation is the reverse of removal. Shock fastener torque: 8.5Nm (75in-lb)

H. Rear Triangle Removal

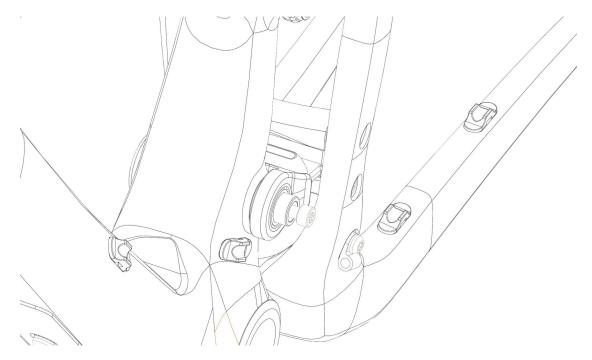
1. Using a T30 Torx tool, remove the screw, drive side pivot cap, and o-ring:



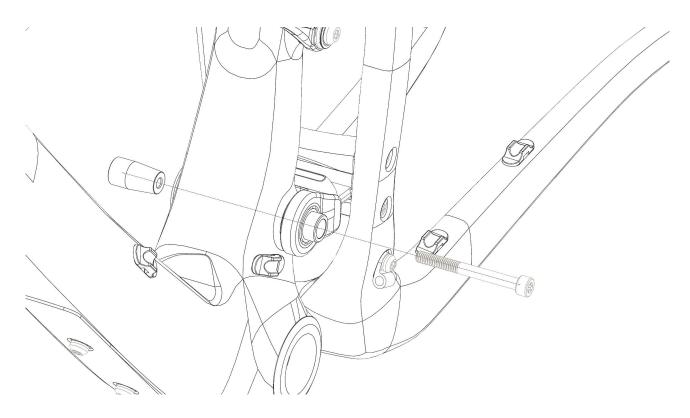
2. Using a 19mm open end wrench, remove the non-drive side pivot nut and o-ring:



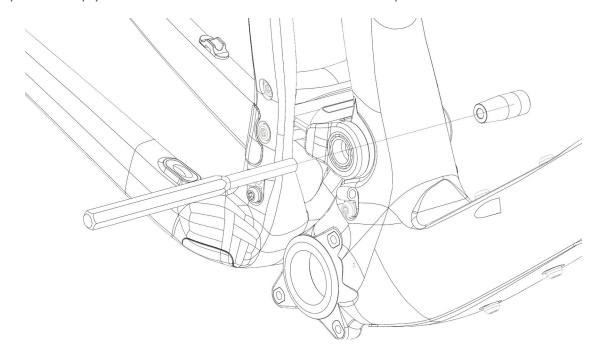
3. Using a T30 Torx tool, loosen the center screw until the head stands 10mm above the surface of the pivot axle:



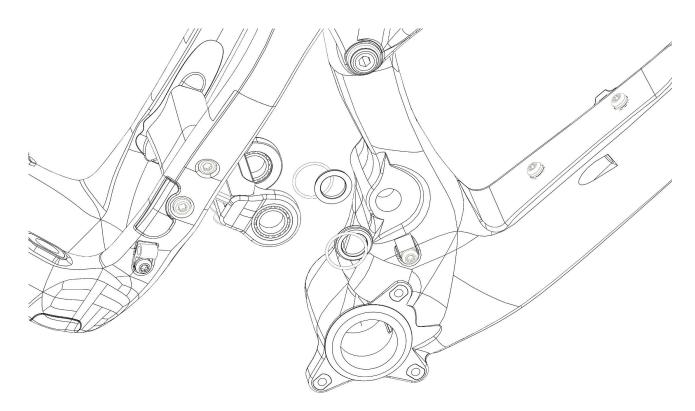
4. Sharply strike the head of the center screw with a hammer. A drift punch can be used here to improve hammer accuracy. This will unseat the pivot axle on the drive side from its taper. Remove the center screw and drive side pivot axle:



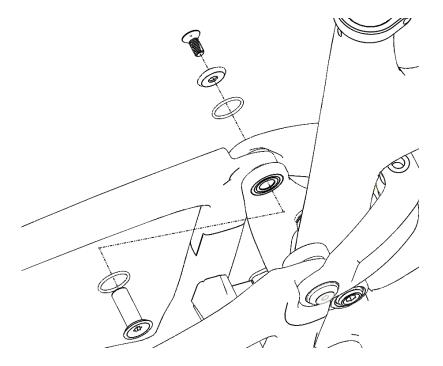
5. Insert an Ø8-10mm drift punch into the main pivot bore from where the drive side pivot axle was removed. Ensure firm, even contact with the inner face of the non-drive side pivot axle. Strike the drift punch sharply with a hammer to unseat the non-drive side pivot axle:



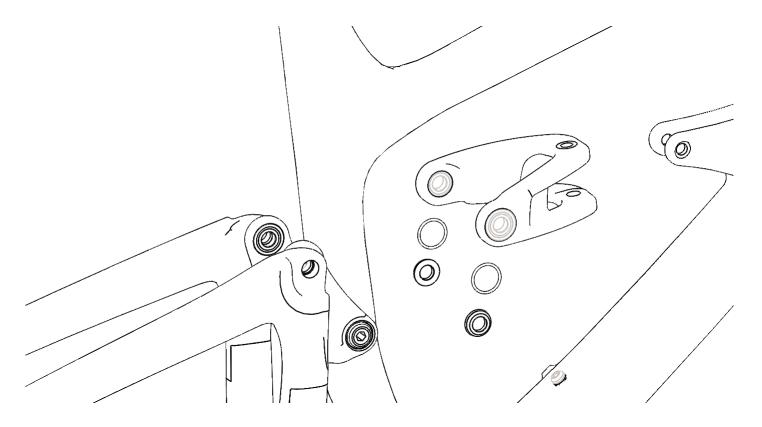
6. With the rear shock assembly removed from the frame, the rear triangle is now able to swing upward away from the front triangle. Place a hand under the main pivot yoke while slowly swinging the rear triangle up and rearward to catch the inner pivot washers and o-rings:



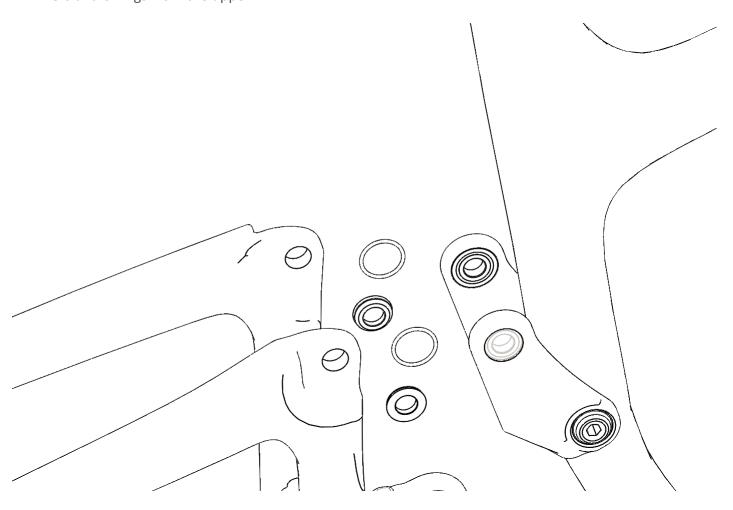
7. Remove the upper pivot bolt from inside of each shock stay at the upper link using a T30 Torx tool on both ends. The o-rings will come off with the upper pivot bolts:



8. Remove the shock yoke by sliding it forward away from the rear triangle. Place a hand underneath the shock yoke assembly to catch the pivot washers and o-rings from the inside of the yoke:

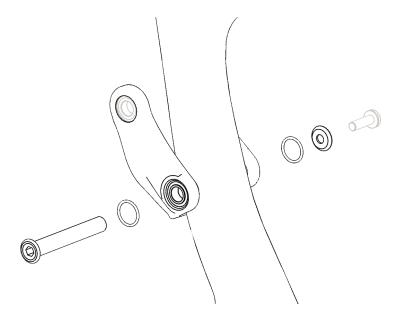


9. Once the shock yoke is removed, the rear triangle assembly can be separated from the frame. Place a hand under the upper link while pulling the rear triangle rearward to catch the inner washers and o-rings from the upper link:

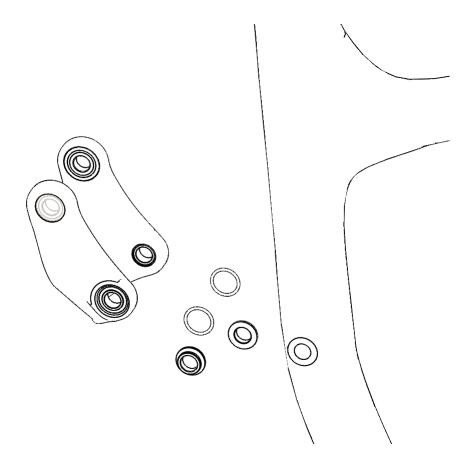


I. Upper Link Removal

1. Using a T25 torx tool and a 6mm hex tool, remove the screw, o-rings, and link axle from the upper link assembly:

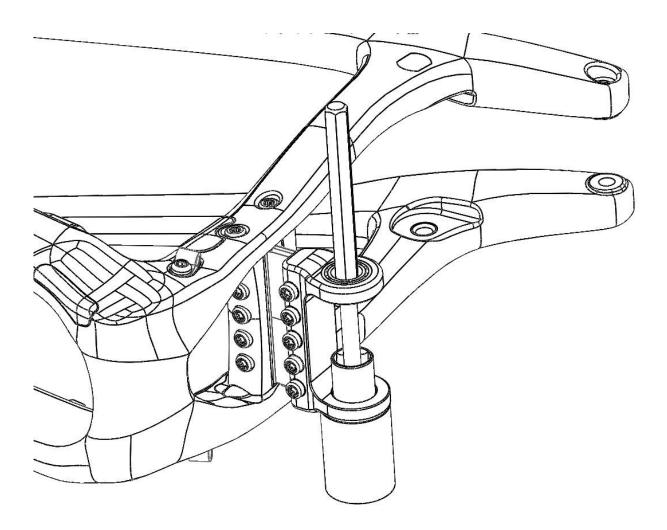


2. Gently slide the upper link assembly rearward, keep a hand beneath the link assembly to catch the inner washers and o-rings:



J. Main Pivot Bearing Replacement

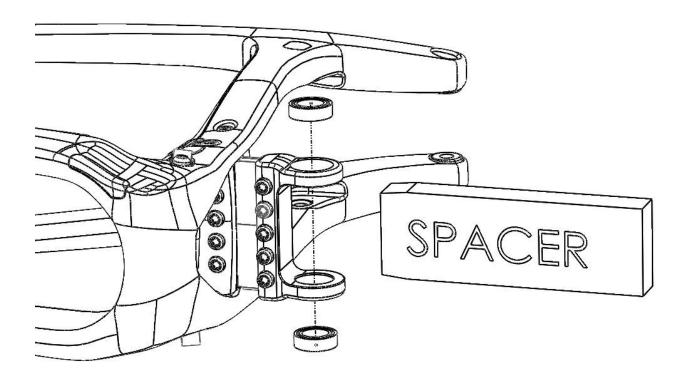
1. Set the rear triangle assembly on one side, on a work bench with a protective cloth to prevent scratching the frame finish. Support the pivot yoke as shown by your 27-30mm ID plastic tube. Combine your 20-22mm outer diameter socket with an extension, drift punch, or other implement as shown. Begin gently tapping with the hammer to push the bearing out of the frame and into the tube:



2. Remove the remaining main pivot bearing by flipping the rear triangle over and repeating.

3. Once the old bearings are removed, thoroughly clean the bearing bores in the pivot yoke with isopropyl alcohol. As with removal, there are a few different techniques that can be used to install the bearings. We recommend using an arbor press, but a bench vise, or even a piece of threaded rod with nuts and washers on either end will do the job. If using a press or a vise, It is *absolutely necessary* to support the yoke between the bearing hoops with a spacer. This can be another plastic tube, block of wood, or any non-marring solid piece that will support the hoops and keep them from bending as the bearings are pressed in. Press the bearings until they are flush with the outer surface of the yoke, taking care not to mar the finish of the yoke or frame.

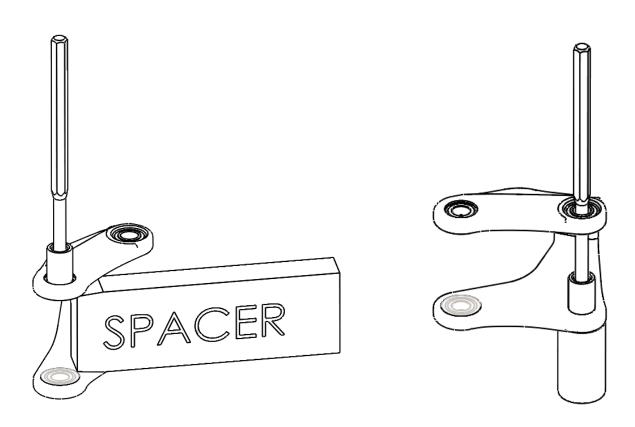
IMPORTANT: NEVER INSTALL BEARINGS USING A HAMMER OR ANY OTHER MEANS OF IMPACT!



K. Upper Link Bearing Replacement

1. The upper bearings in the link are removed by pressing them inboard, toward the centerline of the frame. A spacer of some type is required in the center of the link in order to prevent damage. Combine your 13-14mm outer diameter socket with an extension, drift punch, or other implement as shown.

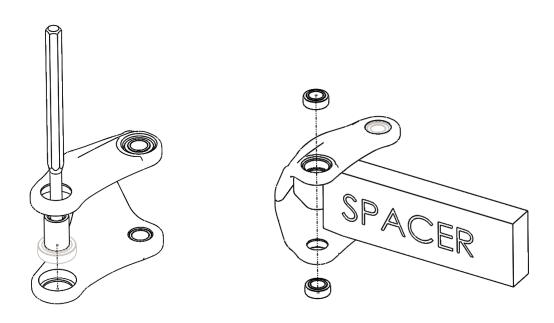
Begin gently tapping with the hammer to push the bearing out of the link:



2. The lower bearing in the link is removed in the same manner, but is pressed outward, away from the centerline of the frame. A PVC tube of 23-25mm inner diameter is ideal to support the link and contain the bearing.

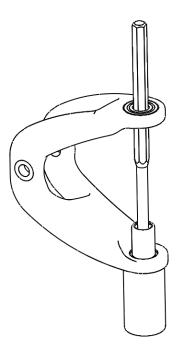
3. Once the old bearings are removed, thoroughly clean the bearing bores in the upper link halves with isopropyl alcohol. Similar to the main pivot bearings, there are a few different techniques that can be used for installation. We recommend using an arbor press, but a bench vise, or even a piece of threaded rod with nuts and washers on either end will do the job. Press the bearings until they reach the bottom of their bores, taking care not to mar the finish of the link:

IMPORTANT: NEVER INSTALL BEARINGS USING A HAMMER OR ANY OTHER MEANS OF IMPACT!

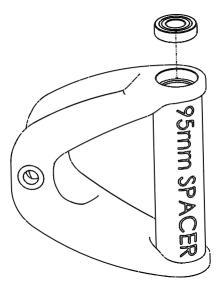


L. Shock Yoke Bearing Replacement

1. The bearings in the yoke are removed by pressing them outboard, away from the centerline of the frame. Combine your 13-14mm outer diameter socket with an extension, drift punch, or other implement as shown. Place the yoke on a short piece of PVC pipe or other means to support the bearing

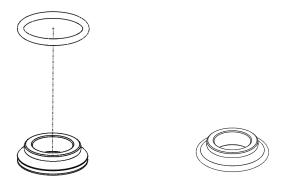


2. To reinstall the new bearings it is critical to use some type of spacer between the eyelets of the shock yoke. Omitting this spacer will cause damage to the yoke. As with the other bearings, an arbor press is recommended, but a vise, or other threaded rod apparatus may be used. Do not use a hammer or any other striking instrument to install bearings.

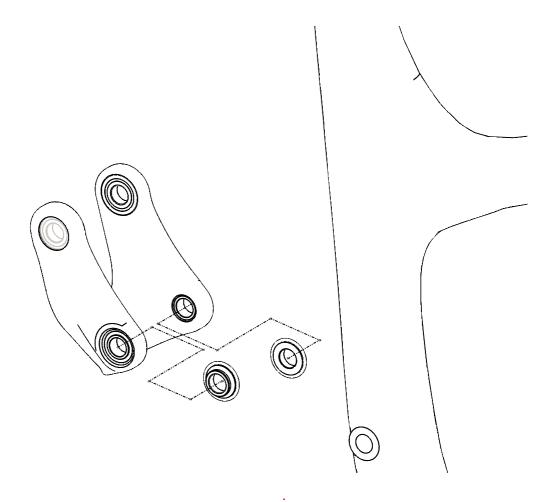


M. Reinstalling the Upper Link

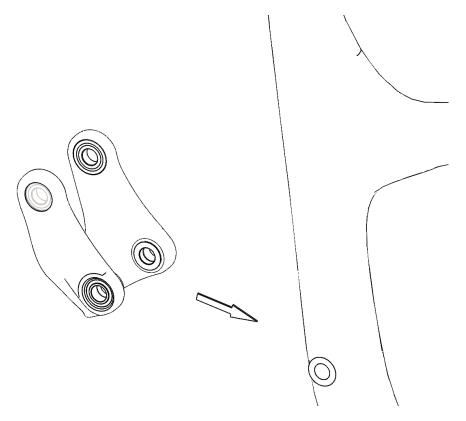
1. Prepare to reinstall the upper link by fitting new o-rings (1.5 X Ø13mm) to the washers to be installed between the link and the seat tube. The easiest way to do this is to lay the washer on a flat surface with the flat side down. Then push the o-ring down from the top until it sits in the installation groove:



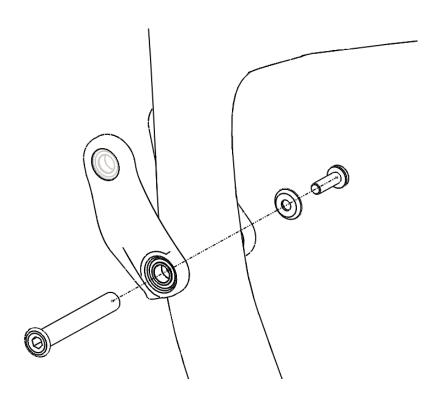
2. Insert the washers, with o-rings positioned in the installation grooves, into the inboard lower bearing recesses on the link assembly. A small application of grease can help to keep them in place for link installation:



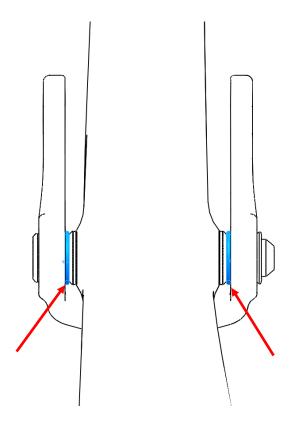
3. Being careful not to drop the washers/o-rings, and carefully slide the link assembly foreward onto the seat tube at the pivot boss:



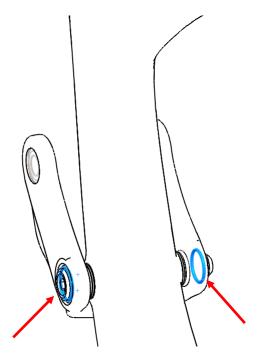
4. Reinstall the pivot axle, washer, and screw. Apply medium strength (blue) thread locker to the T25 Torx screw and torque to 8.5Nm (75in-lb):



5. Using a pick, small screwdriver, or even a fingernail, move the inner o-rings from the installation position outward into the sealing position as shown here:

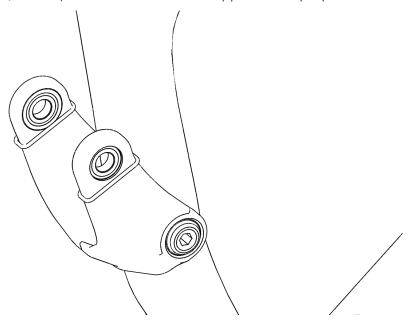


6. Install the outer pair of o-rings (1.5 X Ø13mm):

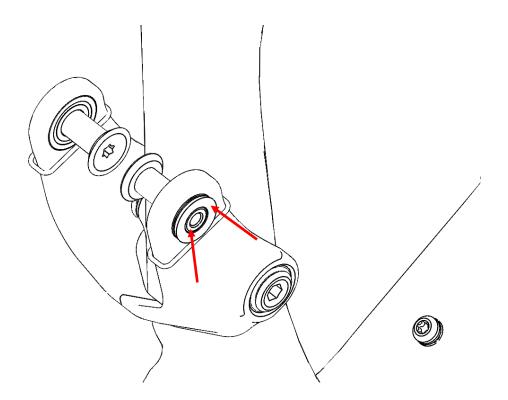


N. Reinstalling the Rear Triangle

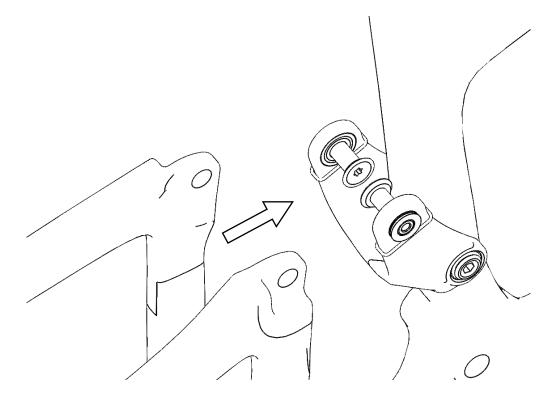
1. Stretch two upper o-rings (1.5 X Ø16mm) over the "ears" of the upper link to prepare for installation:



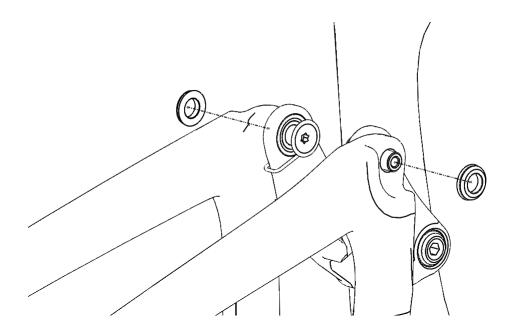
2. Install the upper pivot axles through the bearings from the inboard sides of the link. Position the pivot washers on the ends of them with the taper facing inward against the bearings. The two outer surfaces of the pivot axles and the washers (red arrows) should be kept flush to ease rear triangle engagement:



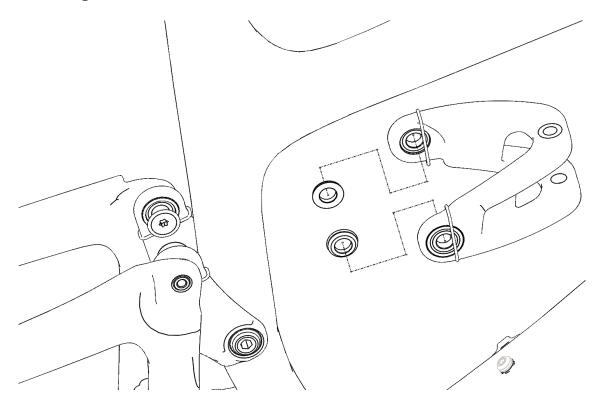
3. Slide the rear triangle assembly onto the upper pivot of the link:



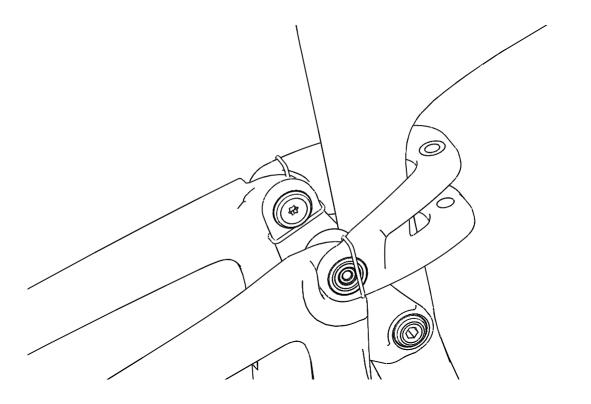
4. Push the upper pivot axles through the bores in the rear triangle until they protrude slightly. Install the upper pivot washers on the ends of the pivot axles with the taper facing outward:



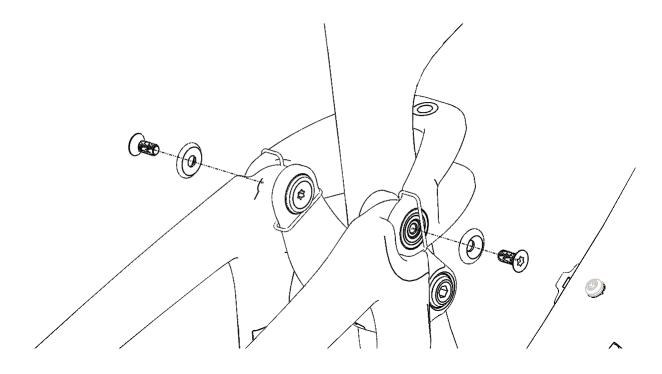
6. Install two new 1.5 X 19 o-rings around the eyelets of the yoke as shown, and insert the upper pivot washers into the bearing recesses from the inboard side. Note the washer orientation—the tapered end faces the bearing:



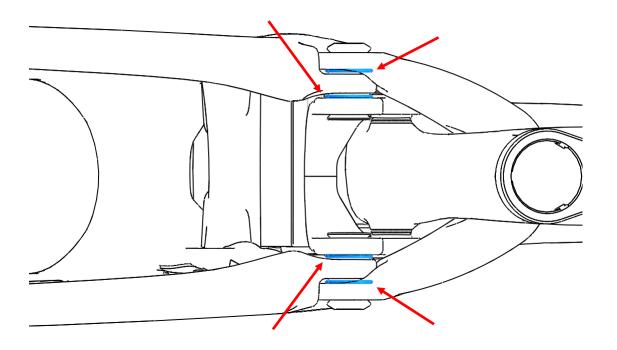
7. Carefully slide the yoke assembly rearward onto the rear triangle and link pivot area. Once aligned, push the upper pivot axles outward through the washers and yoke bearings to lock the assembly together:



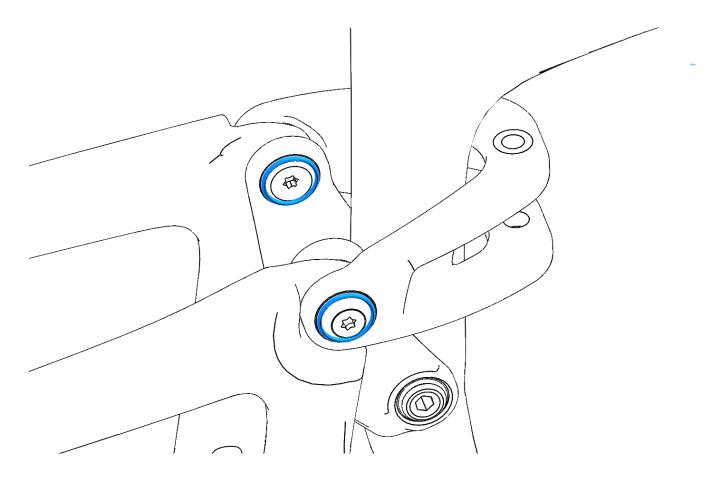
8. Install the outer pivot caps, apply medium strength thread locker to the M6 flathead screws and install using a T30 Torx tool. Be careful not to pinch the o-rings beneath the pivot caps. Torque: 11Nm (97in-lb)



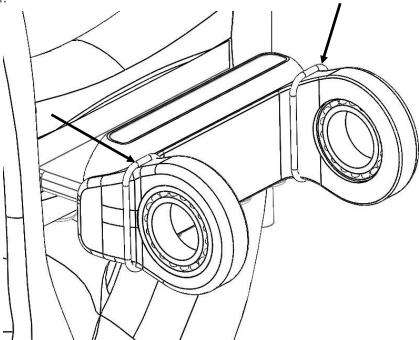
9: Using a fingernail or pick tool, pull the o-rings into position as shown:



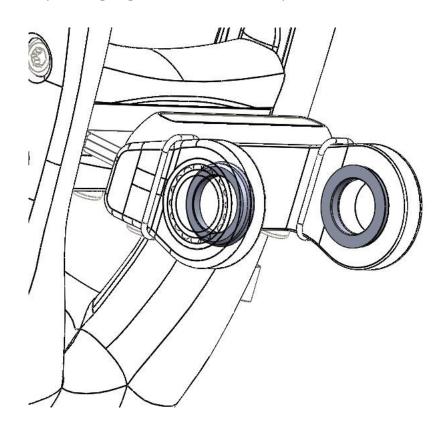
10. Install the remaining 1.5 x 19 o-ring pairs on the inside and outside of the upper pivot assemblies as shown:



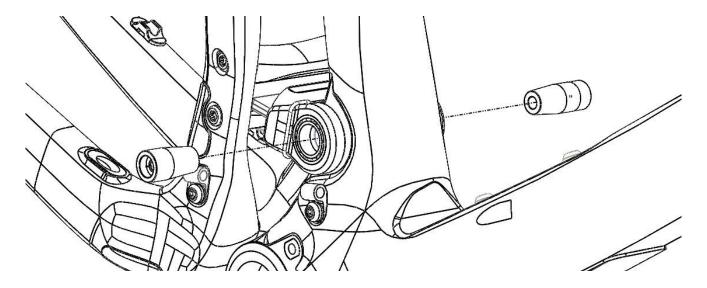
11. Stretch two lower o-rings (1.5 X Ø19mm) over the hoops of the main pivot bearings to prepare for installation:



12. Install the inner washers, with the conical faces outboard—flat faces inboard, into the inboard bearing recesses in the main pivot clevis. The o-rings will help hold the washers in position and vice versa. A small dab of grease on each washer can help it stay in place for installation. Swing the rear triangle into place aligning the clevis to the main pivot:

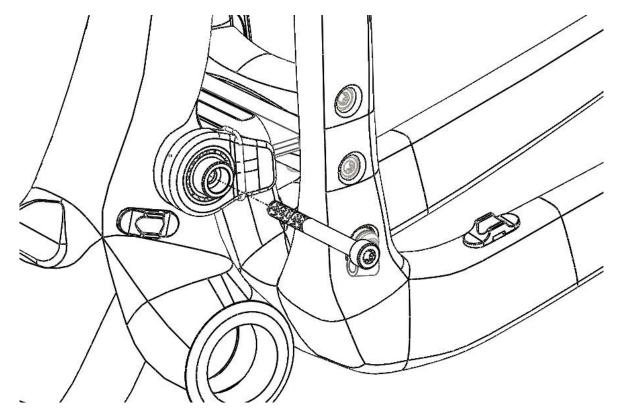


13. Clean the two conical main pivot axles with alcohol before inserting into their bores in the frame. The longer, externally threaded axle goes in the non-drive side, and the shorter, internally tapped axle goes into the drive side:

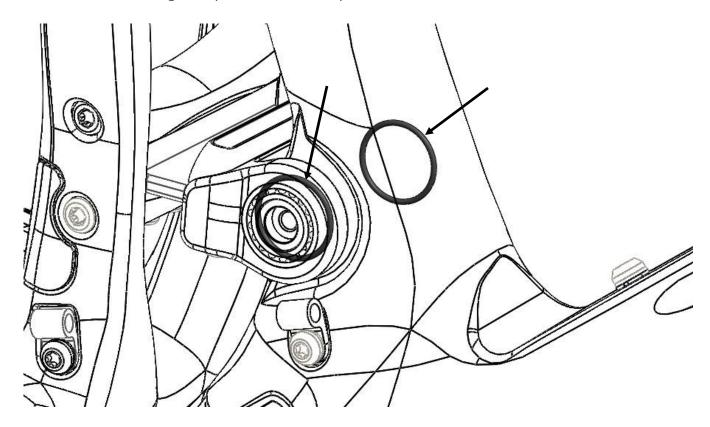


IMPORTANT: DO NOT GREASE CONICAL SURFACES OF PIVOT AXLES OR BORES IN FRAME! GREASE CAN ALLOW TOO MUCH FORCE IN THE FRAME FOR THE SPECIFIED TORQUE VALUE AND DAMAGE THE FRAME!

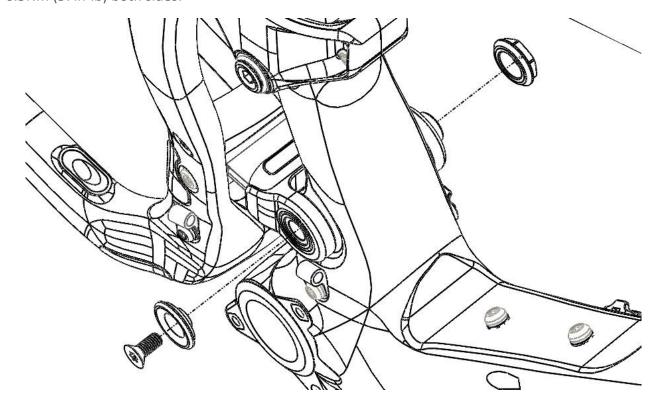
14. Install the main pivot screw (T30 X 45) and torque to 10Nm (98in-lb). It may be necessary to hold the drive side main pivot axle with a finger to keep it from turning. **Do not apply any thread locker**:



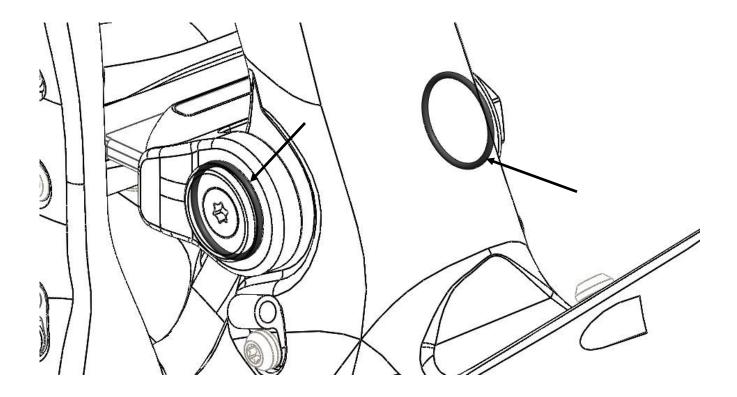
15. Pull the inboard o-rings into place between the pivot clevis and the frame:



16. Install the outer nut (19mm hex) on the non-drive side and pivot cap (T30 screw) on the drive side. Apply fresh medium strength (blue) thread locker to the nut and screw for installation. Torque: 6.5Nm (57in-lb) both sides:



17. Install the outboard o-rings (1.5 X Ø19mm):



Rollik 150 Frame Parts Reference FS90133 LEAF SPRING RECEIVER, 2020 FS90130 FS90122 UPPER LINK, 66MM FS90123 OFFSET REDUCER, 3MM FS90124 SHOCK PIVOT PIN, OFFSET FS90126 SHOCK REDUCER SPACER FS90015 PIVOT WASHER, ST FS90014 FS90132 FS90131 SS PIVOT CAP, ROLLIK 2020 M6 X 14 FH TORX SCREW FS90016 LINK AXLE, 69m FS90017 PIVOT CAP, ST FS90134 LEAF SPRING CAP. F. 2020 FS90010 AXLE NUT, MAXLE, CF SUSPENSION SHOCK PIVOT NU FS80000 SCREW, CASTELLO TORX, M5 X 20 CREW, CASTELLO TORX, M5 X 13 PIVOT WASHER, MAIN FS80007 FS90028 CONE, DS, MAIN PIVOT ONE, NDS, MAIN PIVO FS90024 PIVOT CAP DS PLATE SCREW, M6 X 25 FS90023 PLATE SCREW WASHER, 6MM M5 X 45 TORX CAP SCREW FS90134 FS90051 LEAF SPRING SCREW 24.0 FS90051 LEAF SPRING SCREW V2 DOWNTUBE PROTECT O-RING 1.5 X 19 FS80017 FS90135 FS90064 SCREW COVER, F, 2020 CHAINSUCK PROTECTOR 35 TORQUE: 11 Nm WITH ITEM 34 MED THREAD LOCK 4X TORQUE: 12Nm WITH ITEM 50 MED THREAD LOCK (53). ADHERE TO ITEM 1 PRESSURE SENSITIVE 51) 5X TORQUE: 12Nm WITH ITEM 31 MED THREAD LOCK

Now go shred!

