



# BOXER

WORLD CUP

## 2010 Technical Manual



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## SRAM LLC WARRANTY

SRAM warrants its products to be free from defects in materials or workmanship for a period of two years after original purchase. This warranty only applies to the original owner and is not transferable. Claims under this warranty must be made through the retailer where the bicycle or the SRAM component was purchased. Original proof of purchase is required.

This warranty statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state (USA), from province to province (Canada), and from country to country elsewhere in the world.

To the extent that this warranty statement is inconsistent with the local law, this warranty shall be deemed modified to be consistent with such law, under such local law, certain disclaimers and limitations of this warranty statement may apply to the customer. For example, some states in the United States of America, as well as some governments outside of the United States (including provinces in Canada) may:

- a. Preclude the disclaimers and limitations of this warranty statement from limiting the statutory rights of the consumer (e.g. United Kingdom).
- b. Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations.

To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event shall SRAM or its third-party suppliers be liable for direct, indirect, special, incidental, or consequential damages.

· This warranty does not apply to products that have been incorrectly installed and/or adjusted according to the respective SRAM technical installation manual. The SRAM installation manuals can be found online at [www.sram.com](http://www.sram.com), [www.rockshox.com](http://www.rockshox.com) or [www.avidbike.com](http://www.avidbike.com).

· This warranty does not apply when the product has been modified.

· This warranty does not apply when the serial number or production code has been deliberately altered, defaced or removed.

· This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturer's specifications of usage or any other circumstances in which the product has been subjected to forces or loads beyond its design.

· This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage as a result of normal use, failure to service according to SRAM recommendations and/or riding or installation in conditions or applications other than recommended.

Dust seals/Bushings/Air sealing o-rings/Glide rings/Rubber moving parts/Foam rings/Rear shock mounting hardware and main seals/Stripped threads and bolts (aluminum,titanium, magnesium or steel)/Upper tubes (stanchions)/Brake sleeves/Brake pads/Chains/Sprockets/Cassettes/Shifter and brake cables (inner and outer)/Handlebar grips/Shifter grips/Jockey wheels/Disc brake rotors/Wheel braking surfaces/Bottomout pads/Bearings/Bearing races/Pawls/Transmission gears/Tools

· This warranty shall not cover damages caused by the use of parts of different manufacturers.

· This warranty shall not cover damages caused by the use of parts that are not compatible, suitable and/or authorized by SRAM for use with SRAM components.

· This warranty shall not cover damages resulting from commercial (rental) use.

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## ROCKSHOX SUSPENSION SERVICE

We recommend that you have your RockShox suspension serviced by a qualified bicycle mechanic. Servicing RockShox suspension requires knowledge of suspension components as well as the special tools and fluids used for service.

Used suspension fluid should be recycled or disposed of in accordance to local and federal regulations.

NEVER pour suspension fluid down a sewage or drainage system or into the ground or a body of water.

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For exploded diagram and part number information, please refer to the Spare Parts Catalog available on our web site at [www.sram.com](http://www.sram.com).

For order information, please contact your local SRAM distributor or dealer.

Information contained in this publication is subject to change at any time without prior notice. For the latest technical information, please visit our website at [www.sram.com](http://www.sram.com).

Your product's appearance may differ from the pictures/diagrams contained in this catalog.

Product names used in this document may be trademarks or registered trademarks of others.

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## GETTING STARTED

This guide provides step-by-step instructions to assist in performing routine maintenance of your BoXXer front suspension fork.

### PARTS

Servicing your fork will require new replacement parts such as dust seals, o-rings, oil, etc. Make sure you have all the parts available before you begin service. Refer to the [RockShox Spare Parts Catalog](#) for a complete list of all service kits and corresponding part numbers for the 2010 BoXXer World Cup.

### TOOLS

The following chart is a list of the tools needed for service of your 2010 BoXXer World Cup. While this chart is intended to be comprehensive, it is still only a guide. The tools required for each step of service are detailed in the text of each service section.

TOOLS	LOWER LEG REMOVAL	OIL AND DUST SEAL SERVICE	DAMPER SERVICE	SPRING SERVICE	LOWER LEG INSTALLATION	FORK/WHEEL REMOVAL/ INSTALLATION
<b>SAFETY/STARTING EQUIPMENT</b>						
SAFETY GLASSES	X	X	X	X	X	X
APRON	X	X	X	X	X	X
RUBBER GLOVES	X	X	X	X	X	X
CLEAN RAGS (LINT FREE)	X	X	X	X	X	X
OIL PAN	X	X	X	X	X	X
CLEAN WORK AREA	X	X	X	X	X	X
BICYCLE STAND	X	X	X	X	X	X
<b>WRENCHES/PLIERS</b>						
1.5 mm HEX				X		
4 mm HEX						X
5 mm HEX	X				X	
6 mm HEX						X
12 mm SOCKET	X					
24 mm SOCKET			X	X		
24 mm FLAT WRENCH	X		X		X	
TORQUE WRENCH			X	X	X	X
SMALL SNAP RING PLIERS - EXTERNAL				X		
LARGE SNAP RING PLIERS - INTERNAL			X	X		
<b>MISCELLANEOUS TOOLS</b>						
SCHRADER VALVE CORE TOOL				X		
PLASTIC Mallet	X	X	X	X	X	
LONG DOWEL ROD (PLASTIC OR WOOD)		X			X	
SHARP PICK	X		X			
DOWNHILL TIRE LEVER OR LARGE FLAT HEAD SCREWDRIVER		X				
35 mm OIL SEAL/DUST WIPER INSTALLER		X				
SMALL FLAT HEAD SCREWDRIVER	X					
RULER				X		X
<b>OIL/LIQUIDS</b>						
PIT-STOP 5wt SUSPENSION OIL			X			
PIT-STOP 15wt SUSPENSION OIL					X	
GREASE (SUSPENSION OIL SOLUBLE)		X	X	X	X	
OIL MEASURING DEVICE		X	X	X	X	
ISOPROPYL ALCOHOL	X	X	X	X	X	X

# BOXXER WORLD CUP TECHNICAL MANUAL

## GETTING STARTED (CONTINUED)

### RECORD YOUR SETTINGS

Take a moment and record all of your BoXXer fork settings in the chart below. This will allow you to return your fork to its original settings after service. Be sure to record the service date as well, this will help you keep track of service intervals.

To determine your bottom out, compression, and rebound settings perform the following:

**Bottom Out** - Count the number of clicks while turning the bottom out adjuster ⤵ fully counter-clockwise.

**Rebound** - Count the number of clicks while turning the rebound adjuster ⤵ fully counter-clockwise.

**Compression** - Count the number of clicks while turning the compression adjuster ⤵ fully counter-clockwise.

MY SETTINGS	SERVICE DATE	LOWER CROWN HEIGHT	PRESSURE SETTING	BOTTOM OUT	LOW SPEED COMPRESSION	HIGH SPEED COMPRESSION	BEGINNING STROKE REBOUND	ENDING STROKE REBOUND

The following chart lists all of the oil volumes and weights for your BoXXer as well as tool sizes and torque values for all of the fasteners.

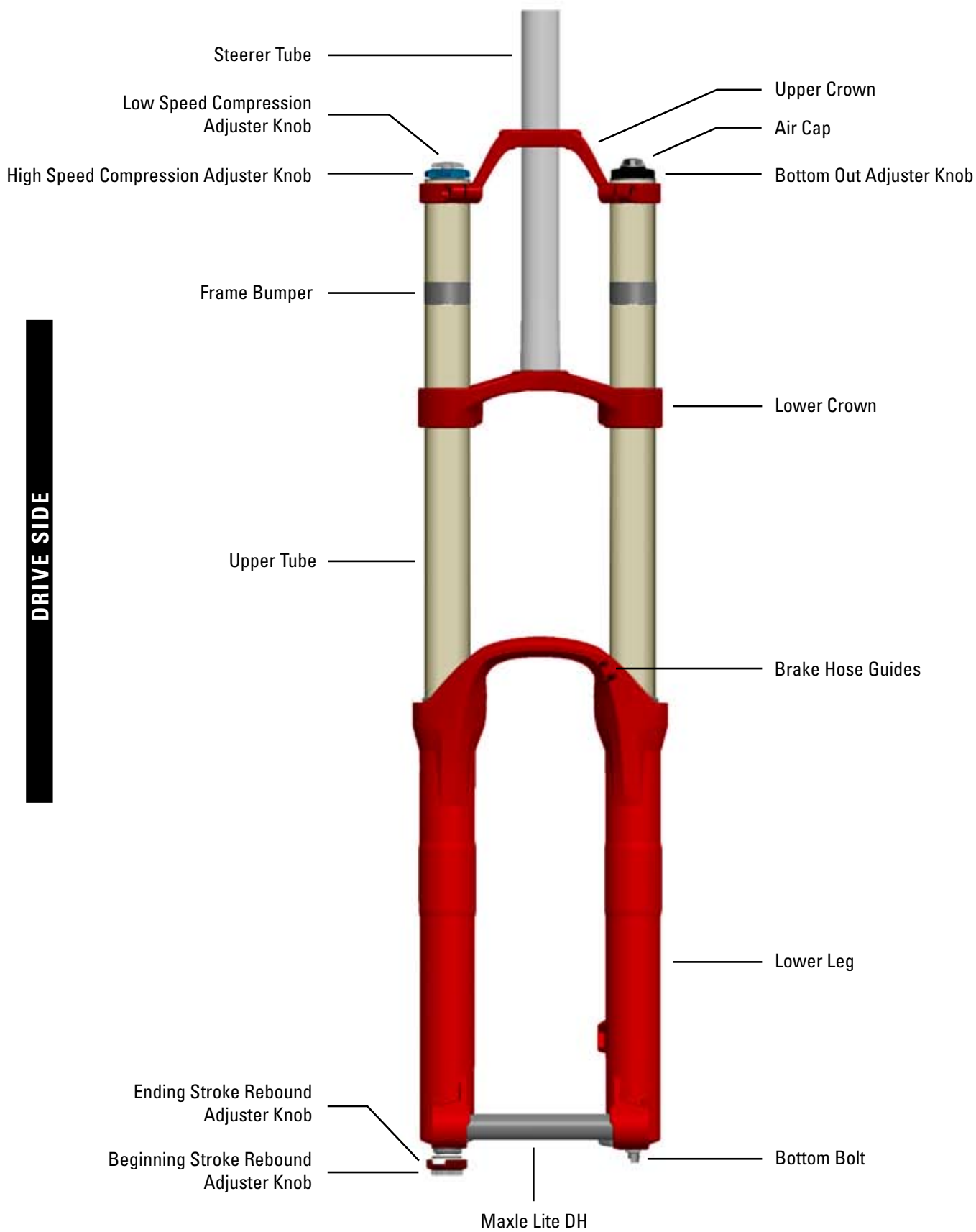
### OIL VOLUME CHART

	Damper technology (drive side)	Volume (mL)	Height (mm)	Oil wt	Volume (mL)	Oil wt	Spring technology (non-drive side)	Volume (mL)	Oil wt	Volume (mL)	Oil wt
		Upper leg			Lower leg			Upper leg		Lower leg	
		BoXXer World Cup	Mission Control DH	245	153	5		10	15	Solo Air with Volume Adjust	5

### TORQUE CHART

Part/fastener	Tool size	Torque
Maxle DH (non drive-side)	6 mm	8 clicks
Maxle DH (drive-side)	6 mm	5.7 N·m (50 in-lb)
Crown bolts	4 mm	7.3 N·m (65 in-lb)
Bottom bolts	5 mm	7.3 N·m (65 in-lb)
Top caps	24 mm	7.3 N·m (65 in-lb)

## ANATOMY





# **SAFETY FIRST!**

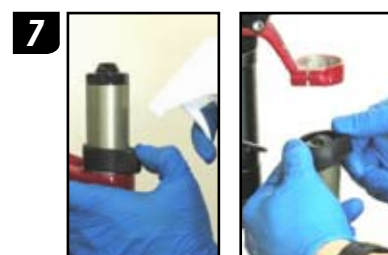
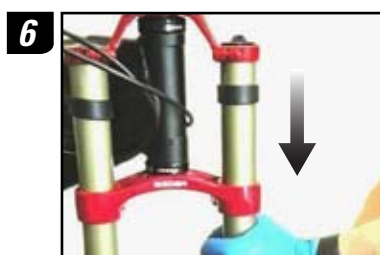
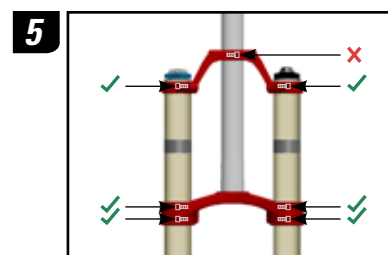
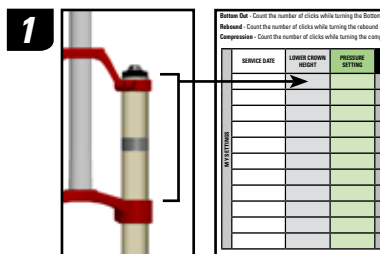
At SRAM, we care about YOU. Please, always wear your safety glasses and protective gloves when servicing your RockShox suspension. Protect yourself! Wear your safety gear!

## FORK REMOVAL

### INTRODUCTION

Removing your fork from the bike is the first step required in order to perform service. BoXXer's dual crown feature allows the fork to be easily disassembled and removed from the bike. This provides easy access to internal components and is more convenient than working around a complete bike.

1. If you haven't done so already, measure and record (in the "Record Your Settings" section) the distance between the top of the lower crown and the top of the upper tube just underneath the top cap. This will make re-installing your fork easier.
2. Use a 6 mm hex wrench to loosen the Maxle™ DH bolt on the non-drive-side until detent clicks are no longer felt.
3. Use a 6 mm hex wrench to unthread and completely remove the Maxle DH from the drive-side. Pull downward on the wheel to remove it from the fork.
4. Remove the brake caliper and disconnect the brake hose from the fork.
5. Use a 4 mm hex wrench to loosen the four lower crown and two upper crown bolts that clamp the crowns to the upper tubes. Do not loosen the steerer tube clamping bolt located on the upper crown.
6. Slide the upper tubes downward until they are clear of the upper crown enough to be able to remove the frame bumpers. Lightly re-tighten one of the lower crown bolts to temporarily hold the fork in place.
7. Use your thumb and pry the thickest section of each frame bumper away from the upper tube. Spray isopropyl alcohol or water between each bumper and upper tube. Twist each bumper back and forth until it is loose on the upper tube. Slide both bumpers up and off of the upper tubes.
8. Loosen the lower crown bolt and slide the fork down through the lower crown and completely remove it from the bike.
9. Use isopropyl alcohol and a lint free rag to clean the upper tubes and the crown clamping surfaces.
10. Remove the air cap. Take a moment to check and record the air spring pressure. Use a Schrader valve core tool to depress the Schrader valve and completely depressurize the air spring. Remove the Schrader valve core.





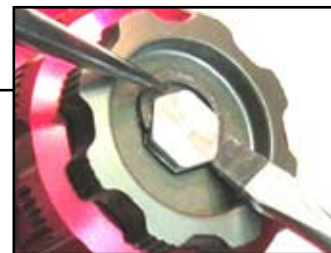
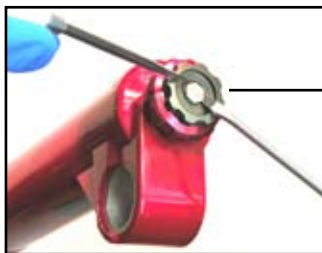
## LOWER LEG REMOVAL

1. Clamp one of the upper tubes, just below the top cap, in a bike stand and place an oil pan beneath the fork to catch any draining oil.

**Important: Do not scratch the upper tube while clamping it into the bike stand. Clean any debris from the stand clamping surface. A clean rag wrapped around the upper tube may be used to protect the tube surface.**

2. Use a pick and a small flat bladed screwdriver to push/pull the rebound adjuster retaining clip to the side and free from the beginning stroke rebound adjuster. Remove the beginning stroke rebound adjuster, washer, and ending stroke rebound adjuster.
3. Use a 24 mm flat wrench to loosen and remove the rebound shaft bolt. Remove the crush washer and retainer from the bottom bolt then re-install two to three turns.
4. Place a 12 mm socket over the rebound adjuster shaft, against the rebound bolt. Use a plastic mallet to firmly strike the socket to free the rebound shaft from its press-fit to the lower leg.

2



3



4



## LOWER LEG REMOVAL (CONTINUED)

5. Use a 5 mm hex wrench to loosen the spring shaft bolts three to four turns.
6. Use a plastic mallet to firmly strike the spring shaft bolt to free the spring shaft from its press-fit to the lower leg. Remove the spring shaft bolt and rebound bolt/adjuster assembly completely.
7. Position the fork upright in the stand and allow the oil to drain.

5



6



**Note: If oil doesn't drain from either side, the press fit may not be completely released. Re-install the shaft bolt two to three turns and strike it again.**

8. Remove the lower leg from the fork by firmly pulling each upper tube out of the lower leg assembly.  
**Important: Do not hit the brake arch with any tool when removing the lower leg as this could damage the fork. If an upper tube does not slide out of the lower leg, the press fit may not be completely released. Re-install the shaft bolt two to three turns and strike it again.**

8



9. Allow any remaining oil in the lower leg to drain into the oil pan.
10. Spray isopropyl alcohol onto the upper tubes and clean with a lint free rag.

**Note: Inspect the upper tubes for damage. Damage such as scratches, chips or wear marks on the surface of the upper tube can cause oil to leak during use and allow dirt and debris to contaminate the internals of the fork. Damaged upper tubes should be replaced.**

## SEAL SERVICE

### INTRODUCTION

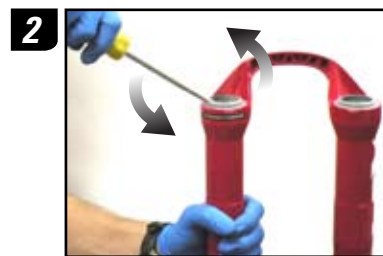
Suspension fork seals are considered "wear and tear" parts and require regular maintenance. The frequency of seal replacement will depend on the frequency of riding, riding terrain, rider body weight, and type of fork. The following chapter covers wiper and oil seal removal and installation.

### WIPER & OIL SEAL REMOVAL

1. Position the tip of a downhill tire lever or large, flat head screwdriver underneath the lip of the lower black oil seal, above the upper bushing.
2. Stabilize the lower leg upright on a bench top or on the floor. Hold the lower leg firmly and use downward force on the tool handle to leverage both seals out at the same time.

**Important: Be sure to stabilize the lower leg in order to prevent it from slipping while installing the seal. Do not allow the lower legs to twist in opposite directions, compress toward each other, or be pulled apart. This will damage the lower leg.**

3. Spray isopropyl alcohol on and into the lower leg. Wipe the lower legs clean, then wrap a clean, lint free rag around a dowel and clean the inside of each lower leg.



### WIPER & OIL SEAL INSTALLATION

1. Position the oil seal, with the grooved side visible, onto the stepped side of the 35 mm seal installation tool.
2. Hold one of the lower legs firmly and use the seal installation tool to push the oil seal evenly and completely into that leg. Repeat for the other leg.

**Important: Be sure to stabilize the lower leg in order to prevent it from slipping while installing the seal. Do not allow the lower legs to twist in opposite directions, compress toward each other, or be pulled apart. This will damage the lower leg.**

3. Position the dust wiper seal, with the grooved side visible, into the recessed side of the 35 mm seal installation tool.
4. Hold one of the lower legs firmly and use the seal installation tool to push the dust wiper evenly and completely into that leg. Repeat for the opposite leg.



## AIR SPRING SERVICE

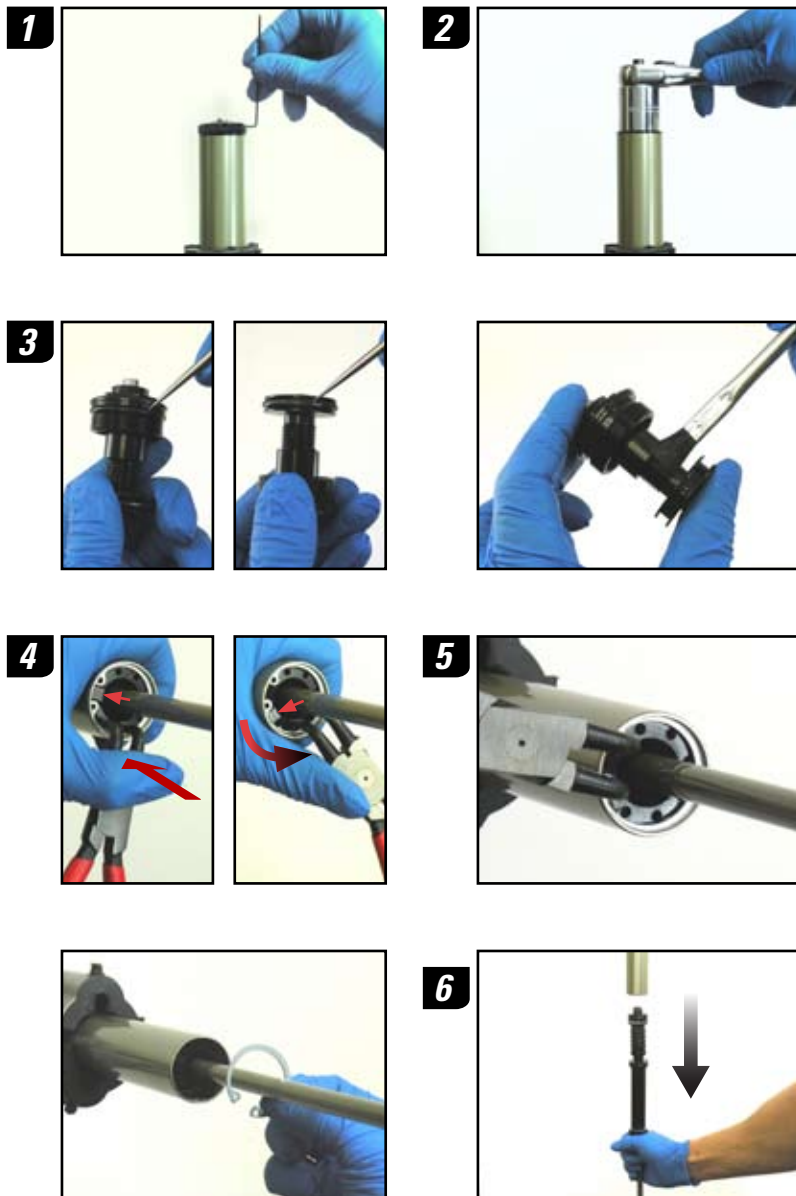
### AIR SPRING REMOVAL INSTRUCTIONS

**Important: Verify that all air pressure is removed from the Solo Air system before proceeding.**

1. Use a 1.5 mm hex wrench to loosen the bottom out adjuster pinch bolts 1 full turn each. Remove the adjuster cap.
2. Use a 24 mm socket wrench to unthread and remove the air spring top cap. Pour any oil from the upper tube into an oil pan.
3. Use a pick to remove the top cap o-ring and bottom out adjuster o-ring. Use isopropyl alcohol to clean the bottom out adjuster threads. Apply fresh grease to the bottom out adjuster threads. Apply a few drops of suspension oil to the new o-rings and install.
4. Place the tips of large internal snap ring pliers in two of the ports in the base plate. Use the snap ring pliers to firmly press the bottom of the base plate into the upper tube and rotate until the base plate tab is behind the snap ring, out of the way of the snap ring eyelets.
5. Use large internal snap ring pliers to remove the snap ring. Guide the snap ring off of the spring shaft by hand.

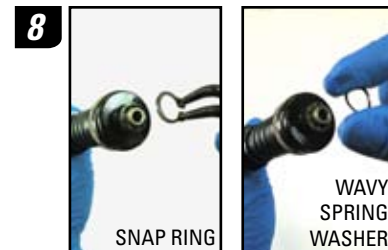
**Important: Do not scratch the air spring shaft surface while removing the snap ring. Scratches on the air spring shaft will allow air to bypass the seal head into the lower legs, resulting in reduced spring performance.**

6. Firmly pull down on the air shaft to remove the air spring assembly from the upper tube. Clean and inspect the assembly for damage.



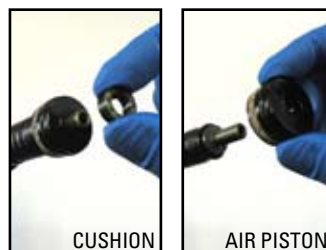
## AIR SPRING SERVICE INSTRUCTIONS

7. Spray isopropyl alcohol on the inside and outside of the upper tube. Wipe the outside of the upper tube with a clean rag. Wrap a clean rag around a long dowel and insert it into the upper tube to clean inside the upper tube.
8. Use small external snap ring pliers to remove the air piston snap ring. Remove the air piston wavy spring washer, cushion, and air piston from the air shaft.



**Important: Compress the snap ring just enough to disengage it from the air shaft. Over-extending the snap ring can permanently damage it and cause air spring assembly failure.**

9. Use a pick to remove the face seal o-ring from the underside of the air piston. Apply a few drops of suspension oil to the new o-ring and install.



**Note: Pierce the face seal o-ring with the pick and pull to remove it. Do not scoop or dig the o-ring out as this may damage the piston sealing surface.**

10. Install the air piston, cushion, and spring wavy washer onto the air shaft and use small external snap ring pliers to secure the air piston snap ring in the snap ring groove. Check the snap ring fit to make sure it secures the air piston and wavy washer to the air shaft head. The air piston should compress upward slightly with spring resistance from wavy spring washer and snap ring.



**Important: Compress the snap ring just enough to re-install it onto the air shaft. Over-extending the snap ring can permanently damage it and cause air spring assembly failure.**

11. Use a pick to remove the air piston outer o-ring and foam ring. Install the new o-ring and a new foam ring onto the air piston. Apply a few drops of suspension oil to the new o-ring then saturate the new foam ring with suspension oil.



## AIR SPRING INSTALLATION INSTRUCTIONS

12. Slide the base plate, wavy washer, aluminum support washer, negative piston top out bumper, negative piston, top out bumper, and kick plate from the air shaft. Spray the air shaft with isopropyl alcohol and wipe clean with a rag.

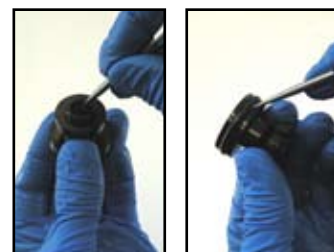


13. Remove the top out bumper from the negative piston. Use a pick to remove the inner and outer negative piston o-rings. Apply a few drops of suspension oil to the new o-rings and install.



**Important: When using a pick to remove o-rings, do not scratch the negative piston. Scratches may cause air to leak.**

14. Re-install the top out bumper and kick plate onto the negative piston.



15. Re-install the kick plate, top out bumper, and negative piston onto the air shaft with the kick plate oriented toward the air piston. Re-install the negative piston top out bumper, aluminum support washer, wavy washer, and base plate onto the air shaft with the small diameter side of the base plate oriented toward the negative piston.



**Note: If the aluminum support washer and wavy washer are separated from the base plate, install the wavy washer onto the base plate first, followed by the aluminum support washer.**

16. Apply grease to the air assembly outer o-rings. Insert the air assembly into the bottom of the upper tube by gently rocking the air shaft side to side while firmly pushing it into the upper tube.



17. Install the snap ring onto large internal snap ring pliers. Use the pliers to push the base plate into the upper tube while installing the snap ring into its groove. The base plate tab should be situated between the snap ring eyelets.



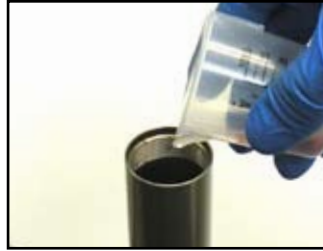
**Important: Make sure the snap ring is securely fastened in the snap ring groove. You can check this by using the snap ring pliers to rotate the snap ring back and forth a couple of times, then firmly pulling down on the damper shaft.**

**Note: Snap rings have a sharper-edged side and a rounder-edged side. Installing snap rings with the sharper-edged side facing the tool will allow for easier installation and removal.**

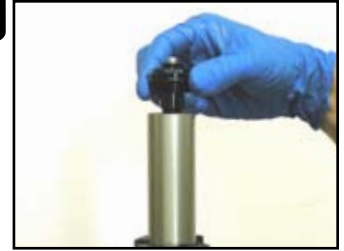
## AIR SPRING INSTALLATION INSTRUCTIONS (CONTINUED)

18. Position the upper tube at a 45 degree angle. Measure and pour 5 mL of 15wt suspension oil into the upper tube.  
**Note: Suspension oil in the air chamber lubricates the air seal o-ring and foam ring during use and maintains the air seal.**
19. Use isopropyl alcohol and a clean rag to clean the top cap, then apply a small amount of grease to the top cap threads and o-ring. Insert the top cap into the upper tube/crown and hand thread it into the upper tube. Be careful not to damage the top cap o-ring upon installation.
20. Use a 24 mm socket wrench to tighten the top cap to 7.3 N·m (65 in-lb).
21. Re-install the bottom out adjuster cap onto the top cap with the pinch bolts oriented toward the flat sections on the bottom out adjuster. Tighten the pinch bolts to 0.2-0.6 N·m (2-5 in-lb).
22. Lubricate the new Schrader valve with suspension oil and install it into the top cap. Torque to 1.0 N·m (10 in-lb).

18



19



20



21



22



## DAMPER SERVICE

### DAMPER REMOVAL/SERVICE

1. Turn the blue high speed compression knob clockwise, to set it to the maximum compression position. Record your setting by counting the number of clicks. This will make tuning your fork after service easier.



2. Use a 24 mm flat wrench to access the top cap under the blue high speed compression knob. Unthread and remove the top cap.



3. Remove the compression damper from the upper tube by pulling up and rocking it from side to side. Once removed, clean the upper tube threads with a lint free rag.



4. Use a pick to remove the top cap o-ring. Apply a few drops of suspension oil to a new o-ring and install. Remove the glide ring from the compression damper piston assembly. Apply a few drops of suspension oil to a new glide ring and install.

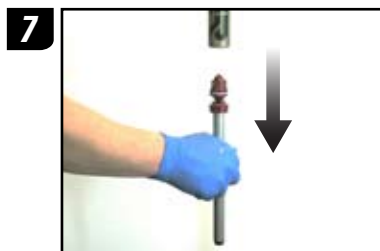
5. Pour any remaining oil from the upper tube into the oil pan.



6. Push the rebound damper shaft into the seal head, leaving just enough shaft exposed to hold onto with your fingers. Use large internal snap ring pliers to remove the seal head snap ring from the snap ring groove.

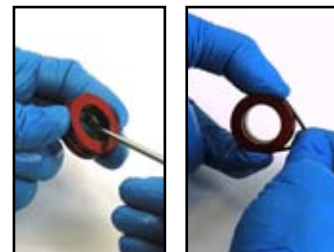
**Important: Do not scratch or damage the surface of the damper shaft during removal of the snap ring. Any damage will allow oil to bypass the inner o-ring during use, resulting in decreased damper performance and travel loss.**

7. Orient the upper tube upright in the bicycle stand. Firmly pull down on the damper shaft and remove the rebound damper and seal head assembly from the upper tube.



8. Slide the seal head off the damper shaft. Use a pick to remove the inner and outer seal head o-rings. Apply a few drops of suspension oil to the new o-rings and install.

**Important: Do not scratch or damage the seal head during removal of the o-rings. Any damage will allow oil to bypass the o-rings during use, resulting in decreased damper performance and travel loss.**



9. Spray isopropyl alcohol on the rebound damper shaft and clean with a lint free rag.



## DAMPER INSTALLATION

10. Remove the glide ring from the rebound shaft assembly. Apply a few drops of suspension oil to a new glide ring and install.

11. Apply a small amount of grease to the seal head inner o-ring. Slide the rebound seal head onto the rebound damper shaft with the flat side of the seal head facing away from the piston.

**Note: It is normal for some of the seal head bushing material to come off as the damper shaft is pushed through the seal head. Once the seal head is installed on the shaft, slide the seal head back and forth on the damper shaft three to four times to help clear bushing material from the seal head area. Remove any loose bushing material before re-installing the rebound assembly into the fork.**

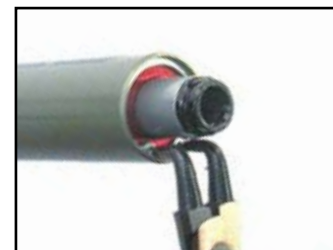
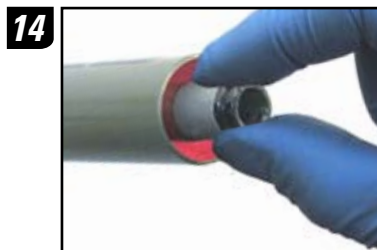
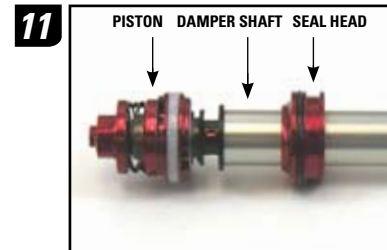
12. Spray isopropyl alcohol into the upper tube. Wrap a clean, lint free rag around a dowel and clean the inside of the upper tube.

13. Apply a small amount of grease to the seal head outer o-ring. Insert the rebound damper piston into the bottom of the upper tube at an angle, with the side of the glide ring opposite the split entering the upper tube first. Continue to angle and rotate until the glide ring is in the upper tube. Push the seal head firmly into the bottom of the upper tube until the retaining ring groove is visible.

14. Push the rebound damper shaft into the seal head, leaving just enough shaft exposed to hold onto with your fingers. Use large internal snap ring pliers to secure the snap ring into the snap ring groove.

**Important: Make sure the snap ring is securely fastened in the snap ring groove. You can check this by using the snap ring pliers to rotate the snap ring back and forth a couple of times, then firmly pulling down on the damper shaft.**

**Note: Snap rings have a sharper-edged side and a rounder-edged side. Installing snap rings with the sharper-edged side facing the tool will allow for easier installation and removal.**



## DAMPER INSTALLATION (CONTINUED)

15. Orient the fork upright in the bicycle stand. Pull the rebound damper shaft down to the fully extended position. Measure and slowly pour 245 mL of Pit-Stop 5wt suspension oil into the upper tube.

**Note: You can use oil height to measure oil fill. This method is recommended for use only when the lower leg is attached to the fork. Pour suspension oil into the upper tube. Compress the fork a few times to circulate the oil throughout the damping system. If the fork is still on the bike, you will need to unweight the front of the bike to allow the fork to fully extend. Measure from the top of the upper tube to the top of the oil level. The measurement should be 153 mm. Add or remove oil as necessary.**

16. Apply a small amount of grease to the compression damper top cap threads and top cap o-ring. Insert the compression damper into the top of the upper tube and push downward until the damper is fully seated in the upper tube.
17. Hand thread the compression damper clockwise into the upper tube. Use a 24 mm flat wrench to tighten the compression damper top cap to 7.3 N·m (65 in-lb). Reset the low speed compression adjuster knob to its original setting (documented in the table in the "Getting Started" section).



## LOWER LEG INSTALLATION

1. Spray the upper tubes with isopropyl alcohol and wipe with a clean rag.
2. Clean and inspect the shaft bolts, nylon crush washers, and crush washer retainers. Replace any crush washers and crush washer retainers if damaged.

**Important: You must clean dirty crush washers and replace damaged crush washers. Dirty or damaged crush washers can cause oil to leak from the fork.**

3. Apply a small amount of grease to the inner surfaces of the dust wiper and oil seal.
4. Gently slide the lower leg assembly onto the upper tubes. Be sure each upper tube is inserted into its corresponding side of the lower. Slide the upper tubes into the lower leg until you feel the spring and damper shafts make contact with the inside of the legs, then pull the upper tubes back out a few centimeters to provide clearance for oil lubrication installation.

**Important: Make sure both dust seals slide onto the tubes correctly without folding the seals' lip.**

5. Invert the fork to about 45 degrees, with the fork legs pointing upward. Measure and inject/pour 10 mL of Pit-Stop 15wt suspension oil into both sides of the lower leg through the shaft bolt holes.
6. Slowly slide each upper tube completely into the lower leg until the shaft threads are visible through the shaft bolt holes.

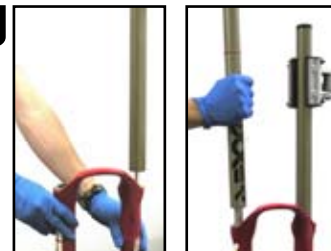
**Note: Sliding the upper tubes and lower legs together too quickly will cause oil to spray out of the shaft bolt holes.**

7. Check for oil in the shaft threads. If there is oil in this area, use the corner of a rag to clean and dry the threads.
8. Thread the rebound damper and coil spring shaft bolts into the threaded shaft ends, through the lower leg holes. Use a 5 mm hex to tighten the spring shaft bolt to 7.3 N·m (65 in·lb). Use a 24 mm flat wrench to tighten the rebound damper shaft bolt to 7.3 N·m (65 in·lb).

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## LOWER LEG INSTALLATION (CONTINUED)

9. Install the ending stroke rebound knob, washer, and beginning stroke rebound knob onto the rebound adjuster shaft.
10. Lightly push on the rebound adjusters to access the retaining clip groove. Place the retaining clip into the groove then push into place around the adjuster shaft using a small flat head screwdriver.
11. Spray isopropyl alcohol on entire fork and wipe with a clean rag.

**9**



**10**



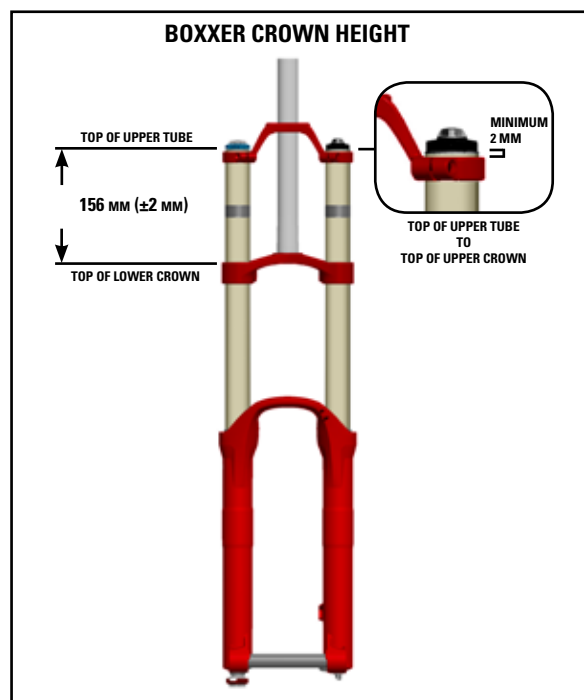
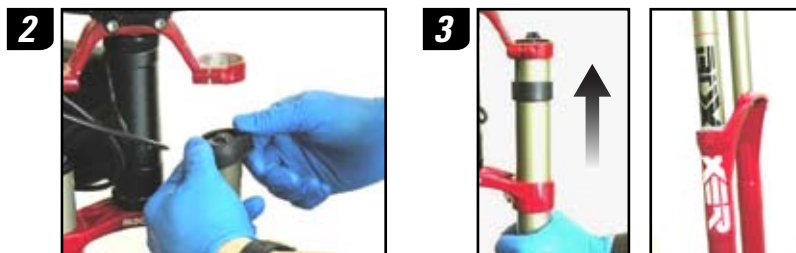
## FORK INSTALLATION

### INTRODUCTION

Re-installing the fork onto the bike is the final step in servicing your BoXXer fork. Once you have installed the fork onto the bike, you'll be ready to ride!

1. Slide each upper tube through the lower crown, leaving enough clearance to install the frame bumpers.
2. Spray a liberal amount of isopropyl alcohol or water on the inner surfaces of the frame bumpers and re-install the bumpers onto the upper tubes.
3. Gently push and twist the upper tubes through the upper crown. With a minimum extension of 2 mm, position both upper tubes to extend past the top of the upper crown by an equal amount. Measure the distance from the top of the upper tube to the top of lower crown. This distance must be 156 mm (+/- 2 mm). Align the logo on the drive side upper tube with the logo on the lower leg.

**Important: Refer to the BoXXer crown heights diagram for proper crown height dimensions. Improper crown height placement can cause a reduction in handling performance, travel, and/or cause fork damage.**



## FORK INSTALLATION (CONTINUED)

4. Use a 4 mm hex wrench to torque the four lower crown bolts in an alternating fashion to 7.3 N·m (65 in-lb). Torque the two upper crown bolts to 7.3 N·m (65 in-lb).
5. Re-install the brake according to the brake manufacturer's instructions. Fasten the brake hose to the brake hose guides on the fork's lower leg.
6. Position your wheel in the lower leg dropouts. The hub should seat firmly in the dropouts. Be sure to position the disc brake rotor in the caliper. Verify that neither the rotor, hub, nor rotor bolts interfere with the lower legs. If you are unfamiliar with adjusting your disc brakes, see your brake manufacturer's instructions.
7. Slide the externally threaded end of the Maxle DH through the drive side of the hub, until it engages the threads of the lower leg dropout. Use a 6 mm hex wrench to turn the drive side axle bolt and tighten the axle into the dropout. Torque to 5.7 N·m (50 in-lb).
8. Use a 6 mm hex wrench to turn the non-drive side axle bolt clockwise until you hear or feel 8 clicks or you reach a torque value of 3.4 N·m (30 in-lb).
9. Inflate the Solo Air system to the pressure recorded prior to service. Re-check that the bottom out adjuster and all damping adjusters are at their original settings (documented in the table in the "Getting Started" section), or refer to the [BoXXer World Cup Tuning Guide](#) to aid in tuning adjustments for the rider.
10. Re-install the air valve cap.



**This concludes the service for your fork. You did a great job! You are now ready to go for a ride!**

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