# 2015-2019 RS-1™

service manual

GEN.0000000005735 Rev A

# SRAM® LLC WARRANTY

## EXTENT OF LIMITED WARRANTY

**Except as otherwise set forth herein, 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. **Except as described herein, SRAM makes no other warranties, guaranties, or representations of any type (express or implied), and all warranties (including any implied warranties of reasonable care, merchantibility, or fitness for a particular purpose) are hereby disclaimed.**

## LOCAL LAW

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:

Preclude the disclaimers and limitations of this warranty statement from limiting the statutory rights of the consumer (e.g. United Kingdom).

Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations.

**For Australian customers:**

This SRAM limited warranty is provided in Australia by SRAM LLC, 1000 W. Fulton Market, 4th Floor, Chicago, IL, 60607, USA. To make a warranty claim please contact the retailer from whom you purchased this SRAM product. Alternatively, you may make a claim by contacting SRAM Australia, 6 Marco Court, Rowville 3178, Australia. For valid claims SRAM will, at its option, either repair or replace your SRAM product. Any expenses incurred in making the warranty claim are your responsibility. The benefits given by this warranty are additional to other rights and remedies that you may have under laws relating to our products. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## LIMITATIONS OF LIABILITY

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.

## LIMITATIONS OF WARRANTY

This warranty does not apply to products that have been incorrectly installed and/or adjusted according to the respective SRAM user manual. The SRAM user manuals can be found online at sram.com, rockshox.com, avidbike.com, truvativ.com, or zipp.com.

This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturers 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 when the product has been modified, including, but not limited to any attempt to open or repair any electronic and electronic related components, including the motor, controller, battery packs, wiring harnesses, switches, and chargers.

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 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.

**Wear and tear parts are identified as:**

- Dust seals
- Bushings
- Air sealing o-rings
- Glide rings
- Rubber moving parts
- Foam rings
- Rear shock mounting hardware and main seals
- Upper tubes (stanchions)
- Stripped threads/bolts (aluminium, titanium, magnesium or steel)
- 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
- Spokes
- Free hubs
- Aero bar pads
- Corrosion
- Tools
- Motors
- Batteries

**Notwithstanding anything else set forth herein**, the battery pack and charger warranty does not include damage from power surges, use of improper charger, improper maintenance, or such other misuse.

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 authorised by SRAM for use with SRAM components.

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

# SAFETY FIRST!

We care about YOU. Please, always wear your safety glasses and protective gloves when servicing RockShox® products. Protect yourself! Wear your safety gear!

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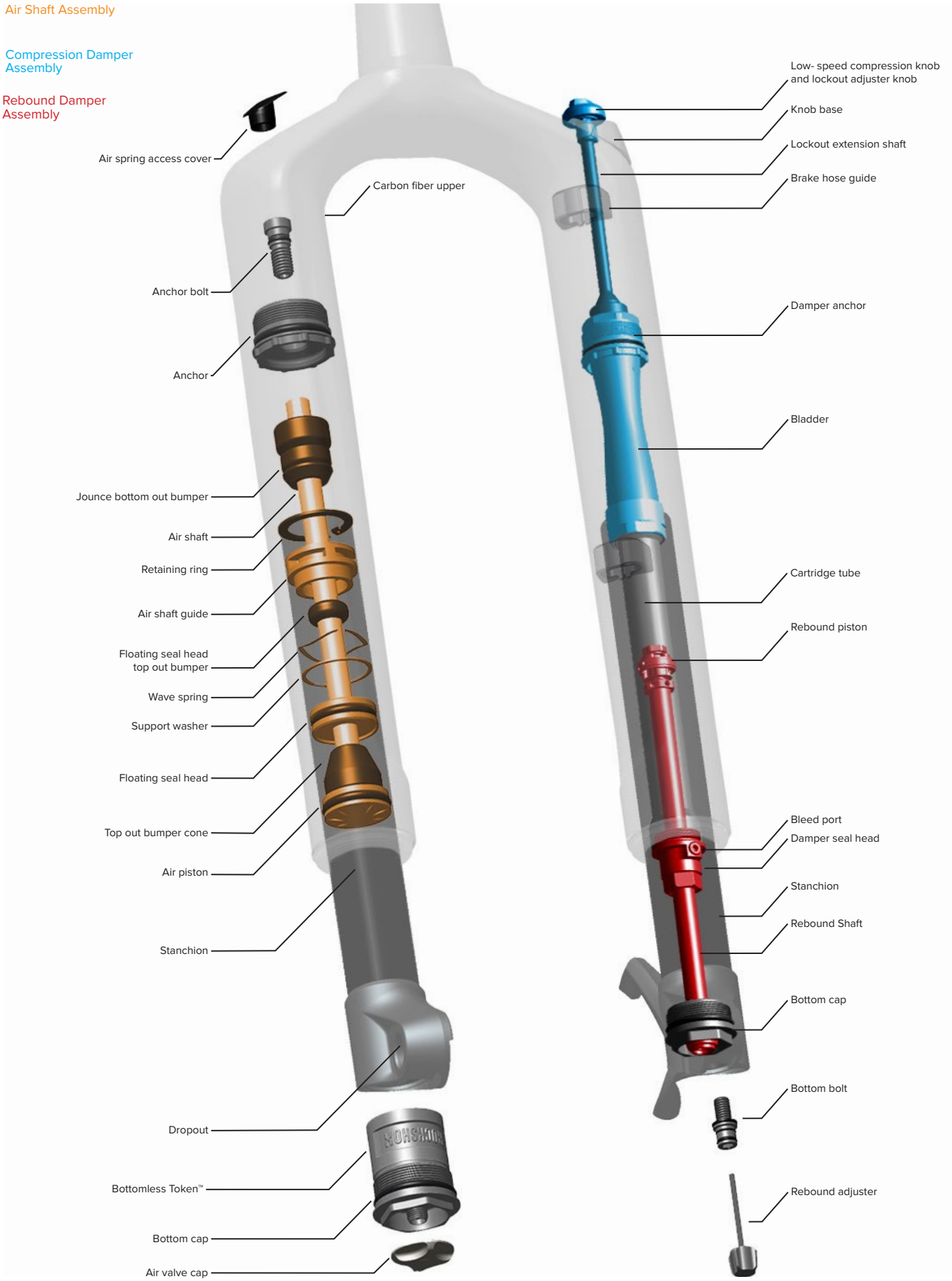
Air Shaft Assembly

Compression Damper Assembly

Rebound Damper Assembly

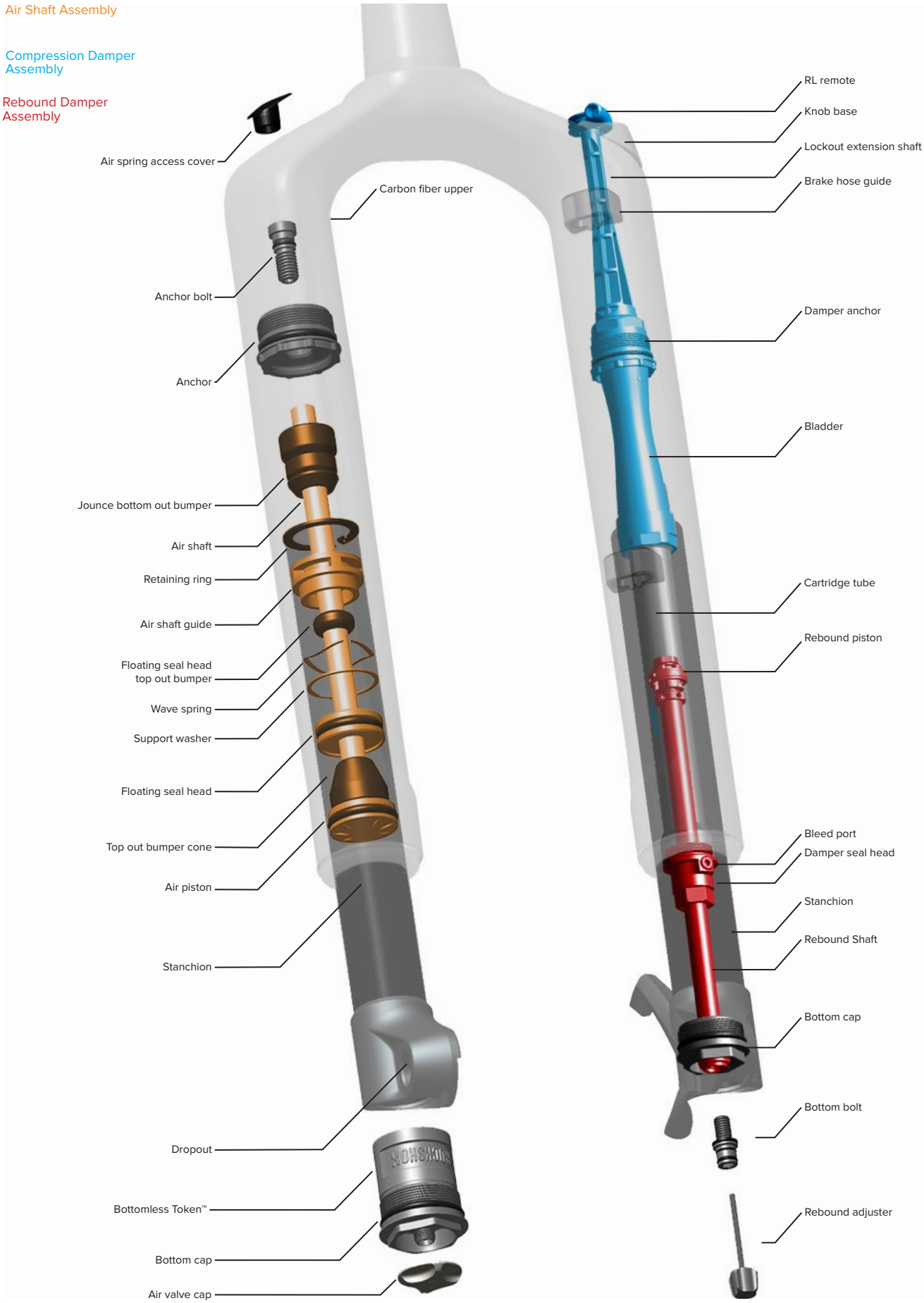


# RS-1™ RL Remote Exploded View

Air Shaft Assembly

Compression Damper Assembly

Rebound Damper Assembly

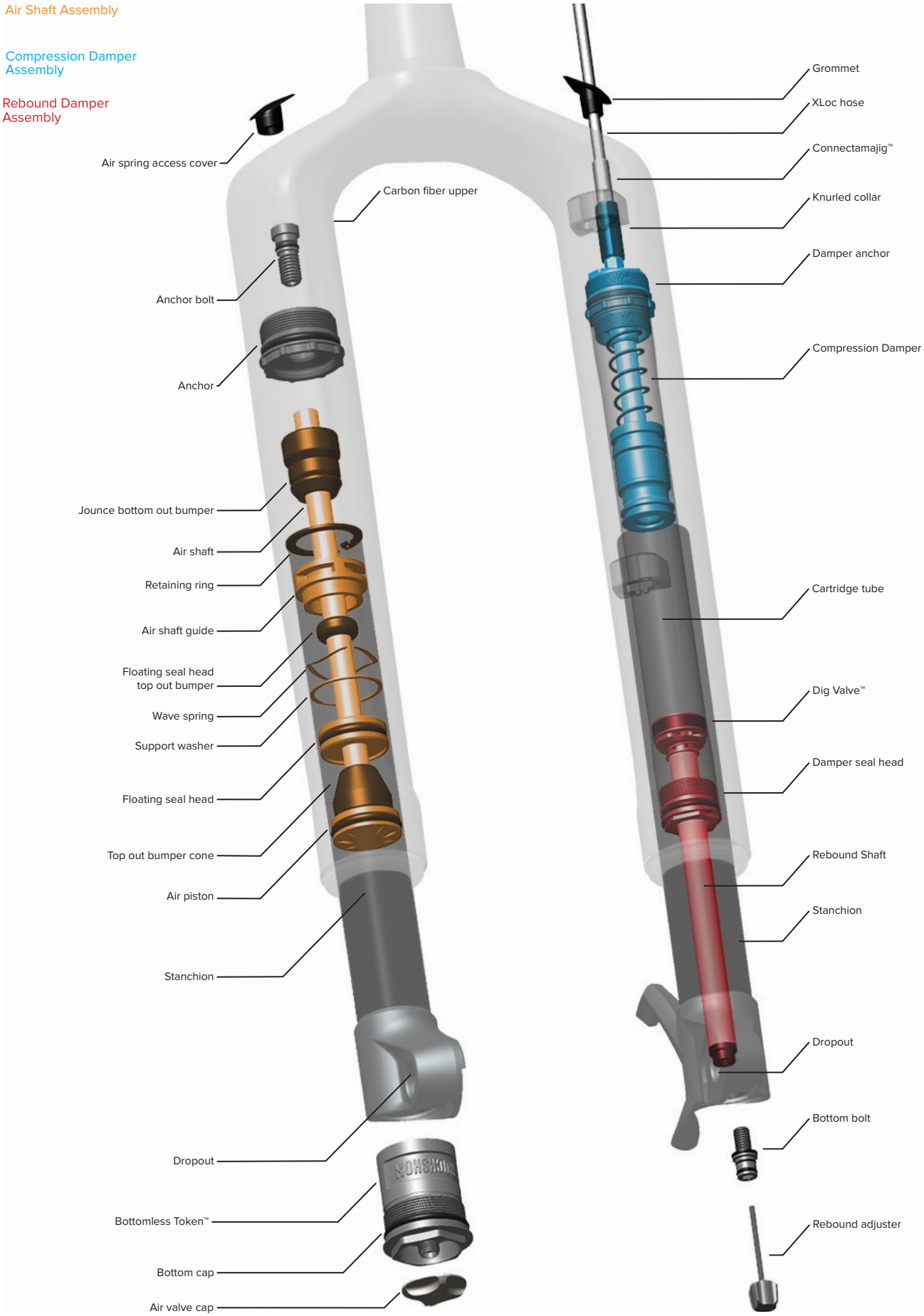


# RS-1™ Accelerator Damper™ Exploded View

Air Shaft Assembly

Compression Damper Assembly

Rebound Damper Assembly



## RockShox® 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 use of specialized tools and lubricants/fluids. Failure to follow the procedures outlined in this service manual may cause damage to your component and void the warranty.

Visit www.sram.com/service for the latest RockShox Spare Parts catalog and technical information. 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.

Your product's appearance may differ from the pictures contained in this publication.

For recycling and environmental compliance information, please visit www.sram.com/company/environment.

## Part Preparation

Remove the component from the bicycle before service.

Disconnect and remove the remote cable or hydraulic hose from the fork or rear shock, if applicable. For additional information about RockShox remotes, user manuals are available at www.sram.com/service.

Clean the exterior of the product with mild soap and water to avoid contamination of internal sealing part surfaces.

## Service Procedures

The following procedures should be performed throughout service, unless otherwise specified.

Clean the part with isopropyl alcohol and a clean, lint-free rag. For hard to reach places (e.g. upper tube, lower leg), wrap a clean, lint-free rag around a non-metallic dowel to clean the inside.

Clean the sealing surface on the part and inspect it for scratches.


Replace the o-ring or seal with a new one from the service kit. Use your fingers or a pick to pierce and remove the old seal or o-ring.

Apply grease to the new seal or o-ring.

**NOTICE**

Do not scratch any sealing surfaces when servicing the product. Scratches can cause leaks. Consult the spare parts catalog to replace the damaged part.

Use aluminum soft jaws when placing a part in a bench vise.

Tighten the part with a torque wrench to the torque value listed in the red bar. When using a crowfoot socket and torque wrench, install the crowfoot socket at 90 degrees to the torque wrench.

## Parts, Tools, and Supplies

**Parts**

- AM SVC KIT 200h/1yr RS-1™ ACS/ACFS A3
- AM SVC KIT 200h/1yr RS-1 RLC/RL CHGR2 A1
- Optional travel change Solo Air™ spring assembly

**Safety and Protection Supplies**

- Apron
- Clean, lint-free rags
- Nitrile gloves
- Oil pan
- Safety glasses

**RockShox® Tools**

- Dust seal install tool flangeless (32 mm)
- RS-1 anchor tool
- Charger bleed syringe
- Standard syringe

**Lubricants and Fluids**

- Isopropyl alcohol
- RockShox 15wt suspension oil
- RockShox 5wt suspension oil (Accelerator Damper™)
- RockShox 3wt suspension oil (Charger 2 Damper™)
- Liquid-O-Ring® PM600 military grease or SRAM® Butter grease

**Bicycle Tools**

- Bicycle stand
- Downhill tire lever
- Shock pump

**Common Tools**

- 1.3, 2, 2.5, 5, 8 mm hex wrench
- 5 mm, long hex bit socket
- 2, 2.5, and 5 mm hex bit socket
- 9, 12, 15, and 22 mm crowfoot
- 6, 9, 12, 15, and 22 mm open end wrenches
- 24 and 30 mm sockets
- T10 TORX®
- Adjustable wrench
- Air compressor and nozzle
- Bench vise and aluminum soft jaws
- Flat blade screwdriver
- Internal retaining ring pliers- large
- Long plastic or wooden dowel
- Pick
- Plastic or rubber mallet
- Schrader valve tool
- Socket wrench
- Torque wrench

## SAFETY INSTRUCTIONS

Always wear safety glasses and nitrile gloves when working with suspension oil and bicycle grease.

Place an oil pan on the floor underneath the area where you will be working on the fork.

## Recommended Service Intervals

Regular service is required to keep your RockShox® product working at peak performance. Follow this maintenance schedule and install the service parts included in each service kit that corresponds with the Service Hours Interval recommendation below. For spare part kit contents and details, refer to the RockShox Spare Parts Catalog at www.sram.com/service.

| Service Hours Interval | Maintenance | Benefit |
|---|---|---|
| Every ride | Clean dirt from upper tubes and wiper seals. | Extends wiper seal lifespan |
| | | Minimizes damage to upper tubes |
| | | Minimizes lower leg contamination |
| Every 50 Hours | Perform lower leg service | Restores small bump sensitivity |
| | | Reduces friction |
| | | Extends bushing lifespan |
| Every 200 Hours | Perform damper and spring service | Extends suspension lifespan |
| | | Restores small bump sensitivity |
| | | Restores damping performance |

## Record Your Settings

Use the charts below to record your settings to return your fork to its pre-service settings. Record your service date to track service intervals.

| Service Hours Interval | Date of Service | Air Pressure | Rebound setting - count the number of clicks while turning the rebound adjuster fully counter-clockwise. | Charger 2 Damper™ Only<br>Low-speed Compression setting - count the number of clicks while turning the compression adjuster fully counter-clockwise. |
|---|---|---|---|---|
| 200 | | | | |

## Torque Values

| Part | Tool | Torque |
|---|---|---|
| Bottom bolt(s) | 5 mm hex bit socket | 6.8 N·m (60 in-lb) |
| Anchor bolt | 5 mm, long hex bit socket | 8 N·m (70 in-lb) |
| Anchors | 30 mm socket, RS-1™ anchor tool | 12.4 N·m (110 in-lb) |
| Bottom caps | 24 mm socket | 12.4 N·m (110 in-lb) |

## Fluid Volume

| | | Damper Side | | | | | | Spring Side | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Upper Tube | | | Lower Leg | | | Upper Tube | Lower Leg | |
| Fork | Model | Damper Technology | Volume (mL) | Oil | Oil Height (mm) | Volume (mL) | Oil | Spring Technology | Lubricant | Volume (mL) | Oil |
| RS-1™ | RL<br>RLC | Charger 2 Damper | Bleed | 3wt | - | 5 | 15wt | Solo Air™ | Grease | 5 | 15wt |
| | XLoc™ | Accelerator Damper™ | 100 | 5wt | 71-77 | | | | | | |

## 200 Hour Service Air Spring Removal

**NOTICE**

Some of the fasteners in this fork are reverse threaded. To avoid damaging the fork when removing or installing a fastener, carefully read the instructions and follow directional arrows.

Only use SRAM® Butter grease or Liquid O-Ring® PM600 military grease when servicing RS-1™ forks. No other grease is approved for use.

When replacing seals and o-rings, use your fingers or a pick to remove the seal or o-ring. Spray isopropyl alcohol on each part and clean with a rag.

Apply grease to the new seal or o-ring.

Inspect each part for scratches. Do not scratch any sealing surfaces when servicing your suspension. Scratches can cause leaks.


1 Remove the air spring access cover.

**NOTICE**

Do not pierce the air spring access cover.

2 Remove the air valve cap from the bottom cap. Depress the Schrader valve and release all air pressure.

**⚠WARNING- EYE HAZARD**

Verify all pressure is removed from the fork before proceeding. Depress the valve again to remove any remaining air pressure. Failure to do so can result in injury and/or damage to the fork.

3 Loosen the anchor bolt 3 to 4 turns.

**NOTICE**

Only loosen the anchor bolt, do not remove it from the air shaft. If the bolt is removed from the air shaft it can fall into the carbon fiber upper.

4 Remove the socket wrench and leave the hex bit socket engaged in the bolt. Strike the end of the hex bit socket to dislodge the air shaft from the carbon fiber upper.

Remove the hex bit socket from the carbon fiber upper.

Mallet & 5mm, long hex bit socket

5 Firmly pull the stanchion downward to remove the stanchion and spring assembly from the carbon fiber upper.

*If the stanchion does not slide out of the carbon fiber upper, then the press fit of the shaft may still be engaged. Reinsert the 5 mm, long hex bit socket and repeat the previous step.*

6 Insert the anchor tool into the bottom of the carbon fiber upper so that it engages the anchor.

Anchor tool

7 Rotate the anchor tool **clockwise** and unthread the anchor.

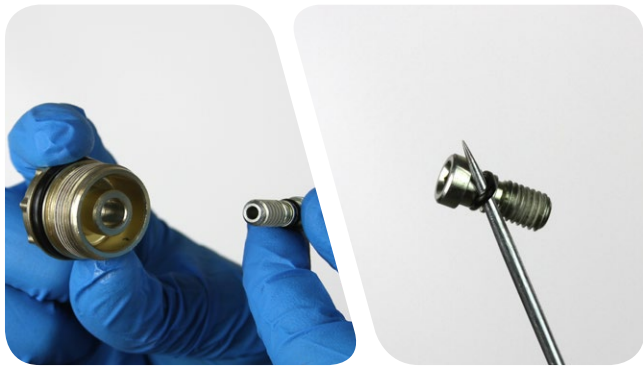
Remove the anchor tool, the anchor, and the anchor bolt.


30 mm & Anchor tool

Anchor tool

8 Remove the anchor bolt.

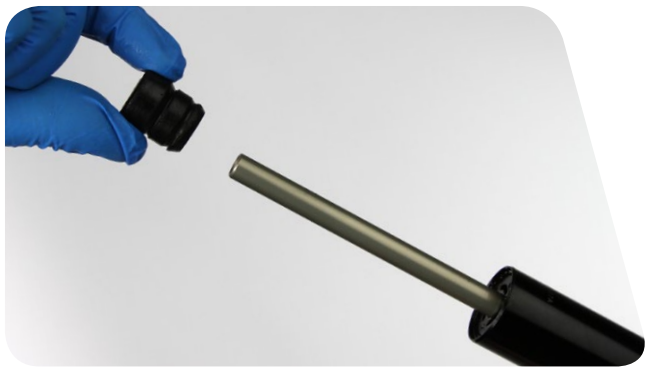
Apply grease and install a new o-ring.



9 Remove the anchor o-ring.

Apply grease and install a new o-ring.

10 Remove the jounce bottom out bumper from the air shaft.



11 Depress the Schrader valve in the air shaft and release the air pressure from the negative air chamber.

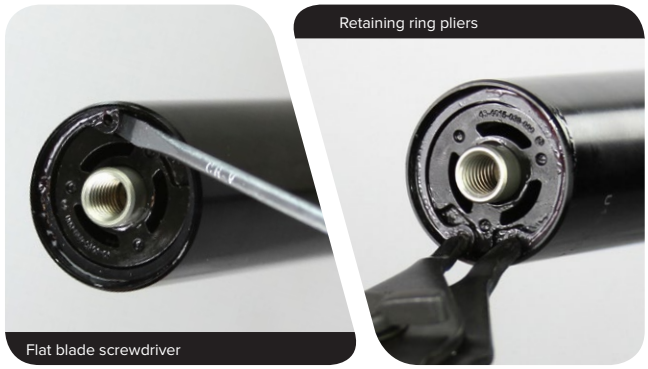
12 Push the air shaft into the spring assembly to prevent it from getting scratched when removing the retaining ring.

Use a flat blade screwdriver to push the air shaft guide tab under the retaining ring.

Place the tips of large internal retaining ring pliers into the eyelets of the retaining ring. Press firmly on the pliers to push the air shaft guide into the spring assembly enough to compress and remove the retaining ring.

**NOTICE**

Scratches on the air shaft will allow air to bypass the air shaft guide into the lower legs, resulting in reduced spring performance.




13 Thread the anchor bolt into the air shaft 3-4 turns.

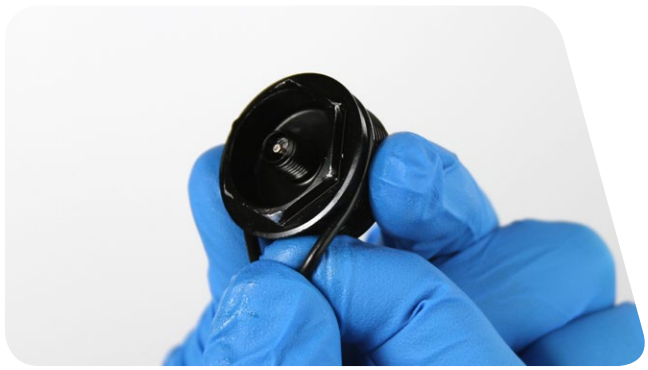
Firmly pull on the bolt to remove the air shaft assembly from the stanchion.

Remove the anchor bolt from the air shaft.

14 Insert the Maxle Ultimate™ through the dropout.

Leverage the Maxle Ultimate against a bench top, then unthread the bottom cap **counter-clockwise** to loosen and remove it from the stanchion.


15 Remove the bottom cap o-ring. Apply grease and install a new o-ring.

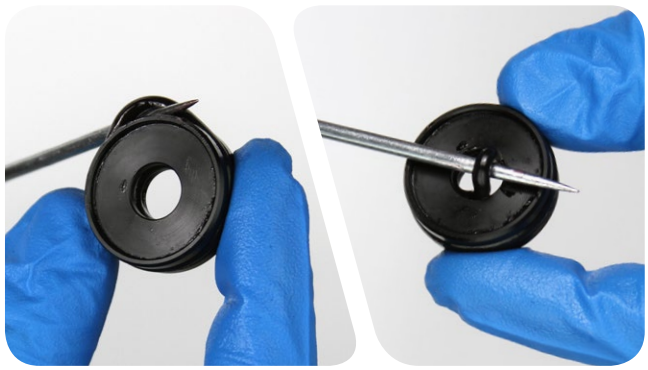


16 Clean the inside and outside of the stanchion.

17 Remove the seal head assembly from the air shaft.

Clean the air shaft assembly.

18 Remove the outer and inner o-rings on the floating seal head. Apply grease and install the new o-rings.



19 Remove the air piston outer o-ring. Apply grease and install a new o-ring.

20 Remove the top out bumper cone from the air piston. Clean the air piston. Install the top out bumper cone onto the air piston.

## Travel Change Adjustment - Optional

To increase or decrease the travel in your RS-1™ fork, the air spring must be replaced with the correct length air spring shaft assembly. Refer to the RockShox® Spare Parts Catalog available on our website at www.sram.com/service for spare part kit details.

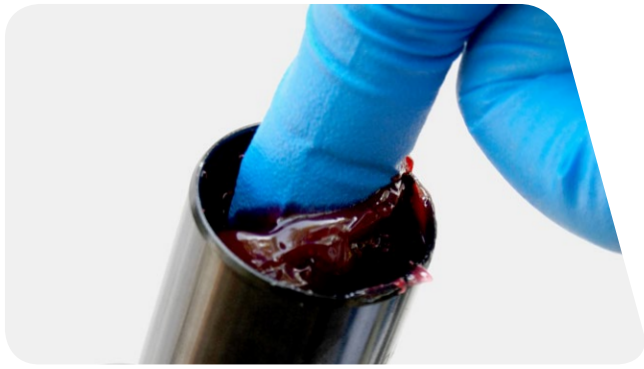
## Solo Air™ Bottomless Token™ - Optional Installation

Bottomless Tokens can be added to, or removed from, the air top cap to fine-tune the bottomout feel and spring curve. Bottomless Tokens reduce the air volume in your fork to create greater ramp at the end of the fork travel. Add tokens to maintain your fork's bottomless feel.

1 Thread a Bottomless Token into another token or into the bottom cap.

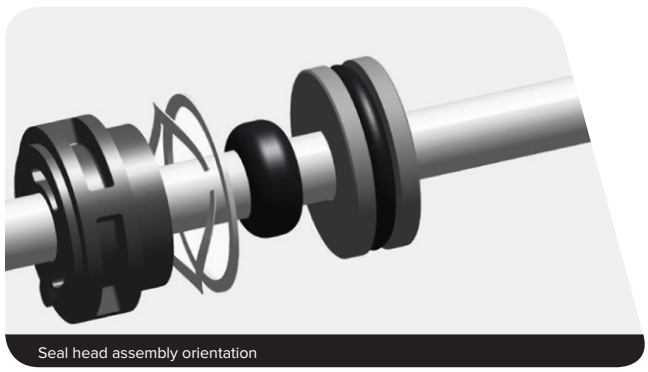
2 Tighten the token.


1 Apply a liberal amount of grease to the inside of the stanchion, from the unthreaded end of the tube to approximately 60 mm into the tube.



2 Apply a liberal amount of grease to the air piston and around the air shaft.

3 Install the floating seal head, floating seal head top out bumper, aluminum support washer, wavy washer, and air shaft guide, in that order, onto the air shaft.



Seal head assembly orientation

4 Push the air shaft and seal head assembly into the unthreaded end of the stanchion.

Orient the washers so that the aluminum support washer goes into the upper tube first, followed by the wavy washer.

Use your fingers to firmly press the air shaft guide into the stanchion until it snaps into place.

5 *Retaining rings have a sharper-edged side and a rounder-edged side. Install retaining rings with the sharper-edged side facing the tool to allow for easier installation and removal.*

Push the air shaft into the stanchion to prevent scratching the air shaft when installing the retaining ring.

Place the tips of the retaining ring pliers into the eyelets of the retaining ring, then use the pliers to push the air shaft guide into the stanchion while installing the retaining ring into the groove.

Hold the retaining ring in place and seat the retaining ring eyelets on either side of the air shaft guide tab. The tab of the air shaft guide should be positioned between the retaining ring eyelets .

Thread the anchor bolt into the air shaft 3-4 turns, then pull the air shaft out of the stanchion. Remove the anchor bolt.

**Confirm the retaining ring is properly seated in the retaining ring groove by using the retaining ring pliers to rotate the retaining ring and air shaft guide back and forth a few times.**


6 Install the Maxle Ultimate™ through the dropout. Thread the bottom cap into the bottom of the stanchion.

Leverage the Maxle Ultimate against a bench top, then tighten **clockwise**.


7 Pressurize the air spring to keep the air shaft extended during the air spring installation.


8 Install the jounce bottom out bumper onto the air shaft with the tapered side facing the base plate so that approximately 10 mm of the air shaft is visible above the bumper.

1 Stabilize the carbon fiber upper on a bench top or on the floor. Place the tip of a downhill tire lever under the wiper seal. Press down on the downhill tire lever handle to remove the wiper seal.

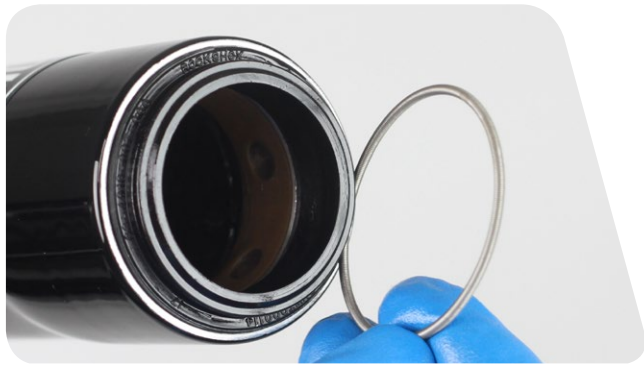
2 Clean the inside and outside of the carbon fiber upper.

3 Remove the wire spring from a new wiper seal. Insert the narrow end of the wiper seal into the recessed end of the flangeless seal installation tool.

Use a soft face mallet to gently tap the seal installation tool and push the wiper seal into the leg until the seal contacts the bottom of the leg bore.

Install the outer wire spring.





4 Apply grease to the inner surface of the wiper seal.

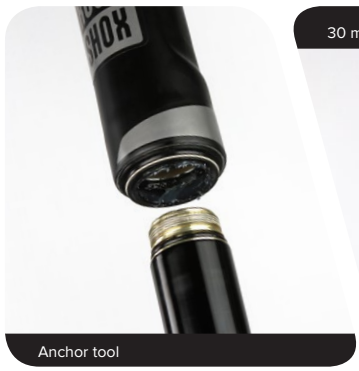

5 Clamp the carbon fiber upper into a bicycle stand and position it at an angle with the upper leg hole facing downward. Use the anchor tool to install the anchor into the carbon fiber upper.

**NOTICE**

Make sure the wiper seal slides onto the tool without folding the outer lip of the seal.

Tighten the anchor **counter-clockwise**. Remove the anchor tool from the carbon fiber upper.

*For easier installation, apply a thin layer of grease to the inside lip of the anchor tool.*





6 Position the carbon fiber upper at an angle with the upper leg hole facing upward. Angle a syringe fitting in the upper leg hole so the oil will only contact the inside of the leg.

Inject suspension oil into the carbon fiber upper leg.

**NOTICE**

Do not exceed the recommended oil volume as this can damage the fork.


7 Slide the stanchion with the spring assembly, air shaft first, into the carbon fiber upper until it stops.

**8** Position the fork horizontally in the bicycle stand.

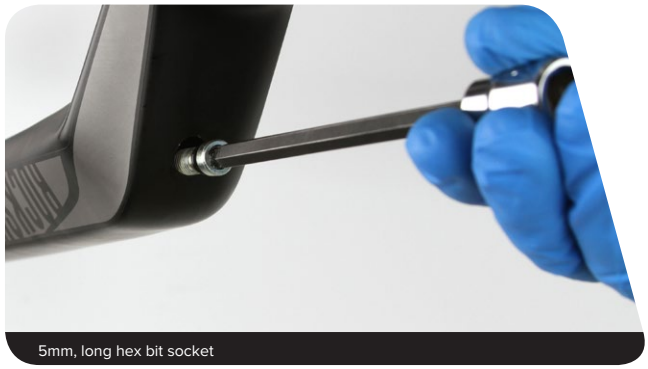
Thread the anchor bolt into the air shaft.

*For easier installation, apply a thin layer of grease to the hex wrench where it contacts the anchor bolt.*

**NOTICE**

Do not allow the bolt to fall off the hex wrench into the carbon fiber upper.

*If the bolt falls off the hex wrench, remove the carbon fiber upper from the bicycle stand and shake it to move the bolt close to the hole. Use a magnet to help remove the bolt, and repeat the step.*



5mm, long hex bit socket

**9** Tighten the anchor bolt.

5 mm, long hex bit socket | 8 N·m (70 in-lb)

**10** Install the access cover.

**11** Refer to your pre-service recorded settings to pressurize your air spring, or use the air chart on the fork's upper leg and pressurize the air spring.

You may see a drop in the indicated air pressure on the pump gauge while filling the air spring; this is normal. Continue to fill the air spring to the recommended air pressure.

**200 Hour Service** Continue the 200 Hour Service for a Charger 2 Damper™.

**200 Hour Service** Continue the 200 Hour Service for an Accelerator Damper™.

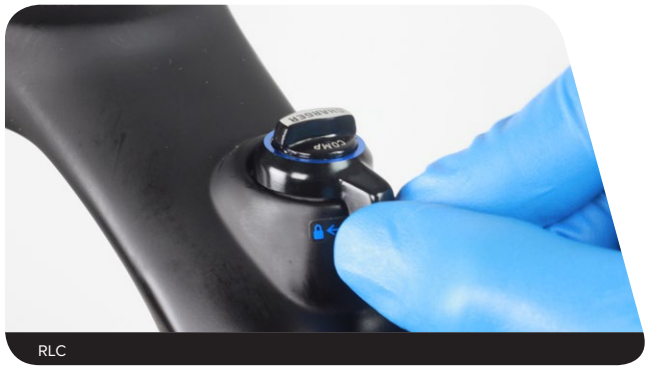
**NOTICE**

Use aluminum soft jaws to protect the Charger 2 Damper assembly when using a vise.

Inspect each part for scratches. Do not scratch any sealing surfaces when servicing your suspension. Scratches can cause leaks.

When replacing seals and o-rings, use your fingers or a pick to remove the seal or o-ring. Spray isopropyl alcohol on each part and clean with a rag. Apply grease to the new seal or o-ring.

1 **Crown Adjust**: Turn the lockout adjuster knob to the open, unlocked position.




2a **Crown Adjust:** Remove the low speed compression and lockout knob from the knob base.

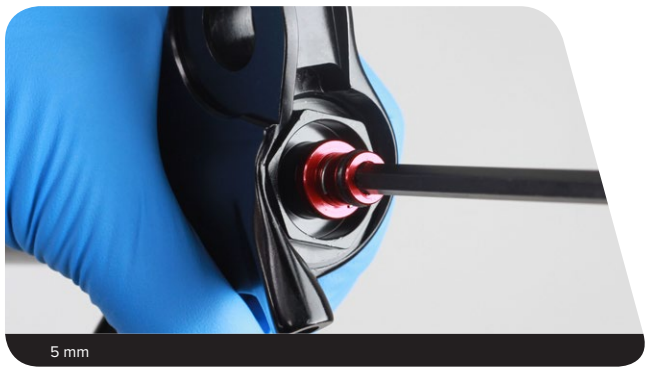

**2b** **Remote:** Remove the upper spool, retention screw, and bottom spool from the knob base.



**3** Position the fork horizontally in the bicycle stand. Remove the rebound adjuster knob.

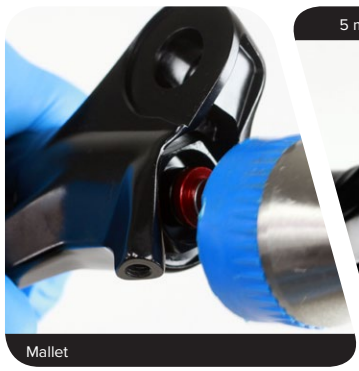

**4** Place an oil pan beneath the fork to catch the draining oil.

Loosen the damper side bottom bolt 3 to 4 turns.




**5** Strike the bottom bolt to dislodge the shaft from the stanchion.

Remove the bottom bolt.




6 Remove the stanchion from the carbon fiber upper.

*If the stanchion does not slide out of the carbon fiber upper, the press fit of the shaft may still be engaged. Reinstall the bottom bolt 2 to 3 turns and repeat the previous step.*

7 Insert the anchor tool into the bottom of the carbon fiber upper so that it engages the damper anchor on the Charger 2 Damper™.

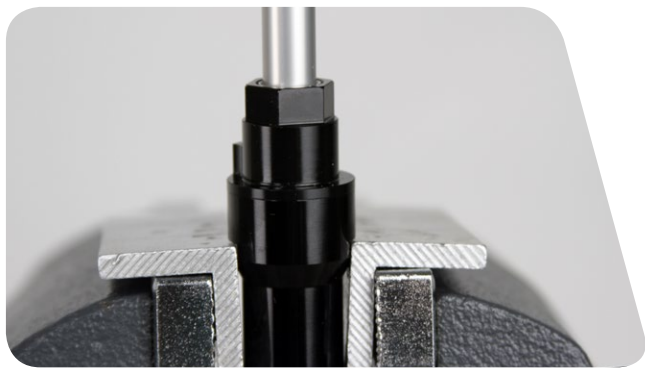
Anchor tool

8 Rotate the anchor tool **clockwise** and unthread the Charger 2 Damper assembly.

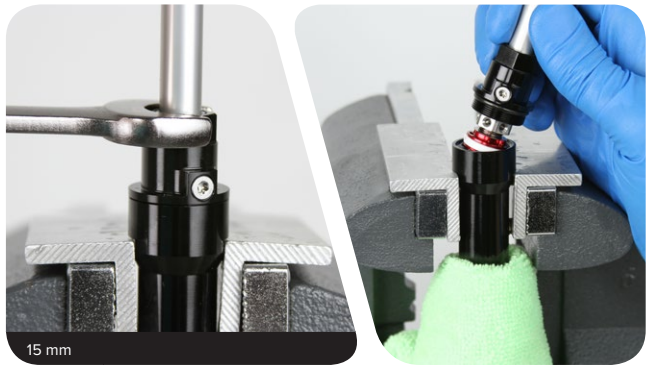
Remove the anchor tool and the Charger 2 Damper assembly from the carbon fiber upper.

30 mm socket & anchor tool

9 Clamp the wrench flats of the Charger 2 Damper assembly in a vise with the rebound shaft oriented upward.

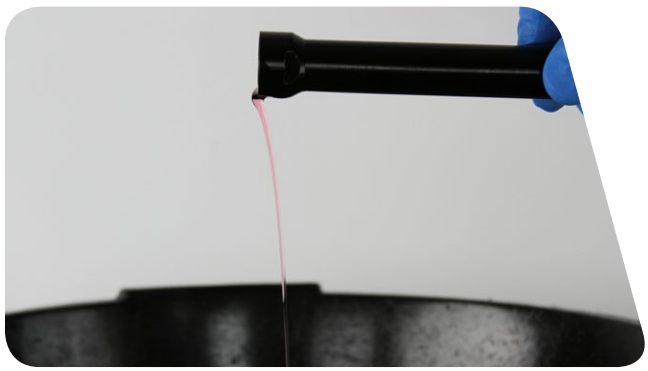


10 Use the seal head wrench flats and remove the rebound damper assembly. Wrap a rag around the cartridge tube to absorb oil.




11 Remove and discard the seal head on the rebound damper shaft.

12 Remove the cartridge tube from the vise and pour the oil into an oil pan.



13 Squeeze the bladder to drain the oil from the bladder assembly into an oil pan.

14 Clamp the wrench flats of the cartridge tube into a vise. With the cartridge tube facing upward, spray isopropyl alcohol into it. Squeeze the bladder 2-3 times to ingest alcohol into the bladder.

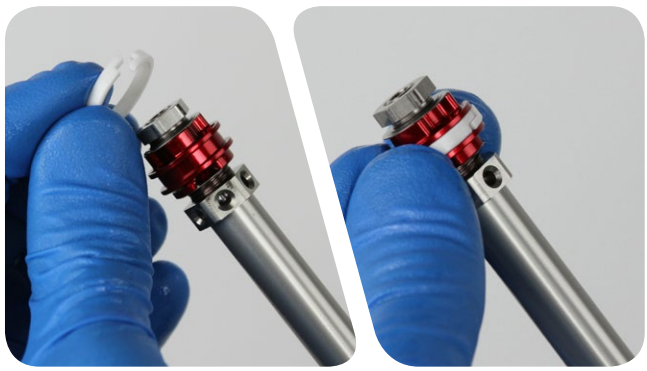
15 Remove the assembly from the vise. With the cartridge tube downward, squeeze the bladder until all of the isopropyl alcohol is drained into an oil pan. Use an air compressor nozzle to dry the assembly.

1 Clamp the wrench flats of the cartridge tube into a vise. Wrap a rag around the cartridge tube to absorb oil.

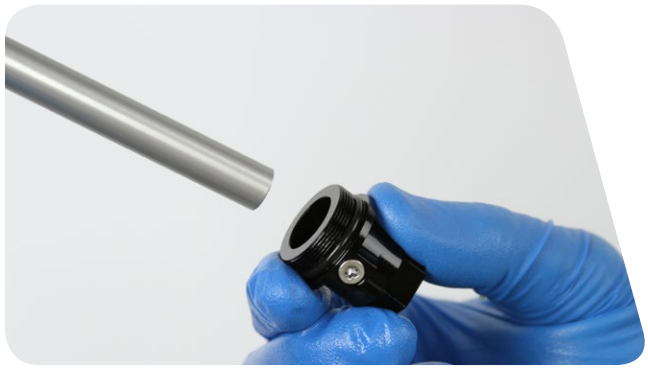

2 Pour 3wt RockShox® suspension oil into the cartridge tube.


3 Squeeze the bladder until trapped air bubbles stop purging. Pour additional oil into the cartridge tube to top it off.

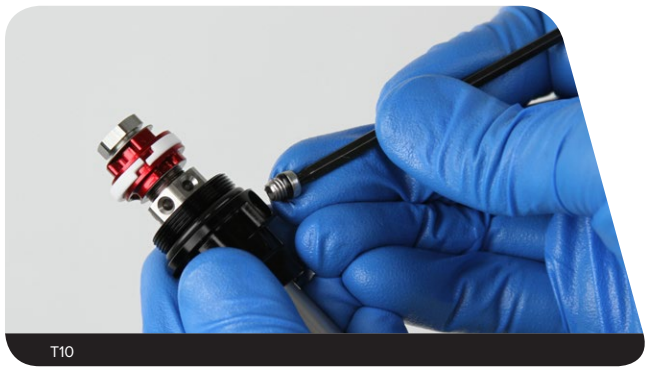
4 Replace the glide ring on the Dig Valve™ on the rebound damper.



5 Apply SRAM® Butter to a new inner seal head o-ring. Install the seal head on the rebound damper shaft.

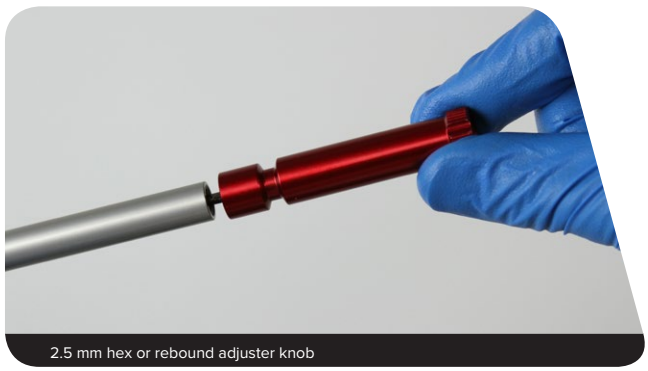


6 Remove the bleed screw from the rebound damper seal head.



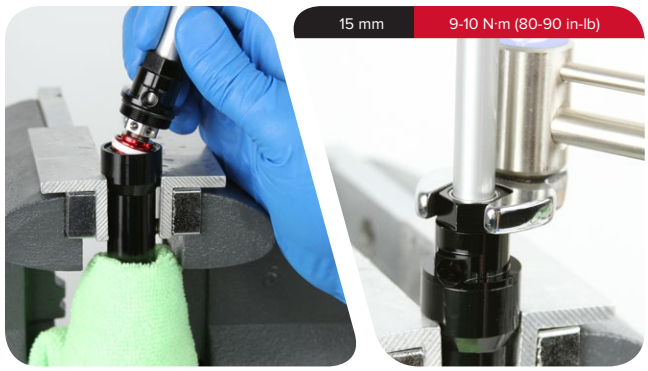

7 Insert the rebound adjuster knob into the rebound damper shaft until it contacts the rebound adjuster screw. Rotate the knob counter-clockwise until it stops to open the rebound.

Remove the rebound adjuster knob from the shaft.



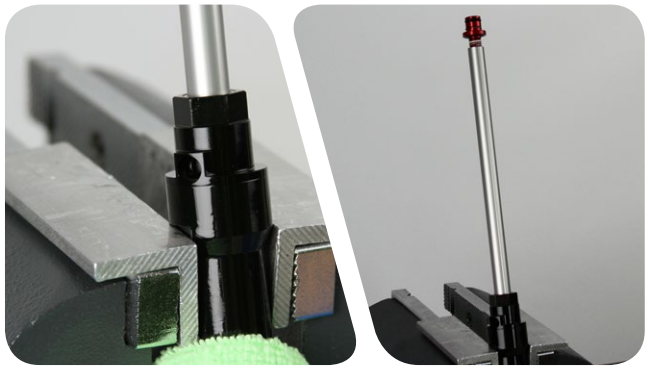

8 Wrap a rag around the cartridge tube to absorb oil.

Install the rebound assembly into the cartridge tube. Tighten the rebound seal head.



9 Reposition the Charger 2 Damper™ in the vise at an angle with the bleed port angled as upward as possible.

Install the bottom bolt into the rebound damper shaft 3-4 turns.



10 Fill a bleed syringe half full with suspension oil. Slowly depress the plunger to remove any air bubbles from the syringe.

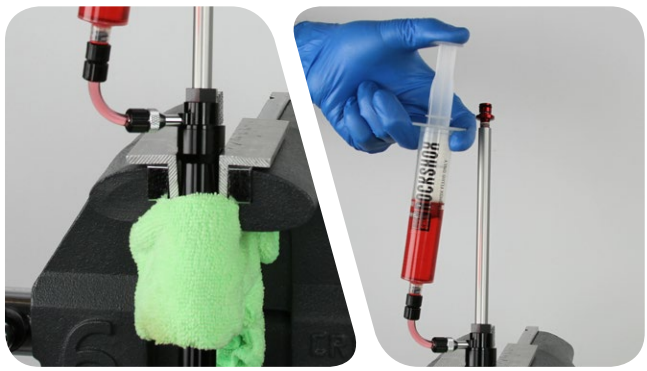
**NOTICE**

Only use the syringe included with the RockShox Standard or Charger Bleed kit. Do not use syringes that have been in contact with DOT brake fluid. DOT brake fluid will permanently damage the damper.

3wt RockShox® standard bleed syringe

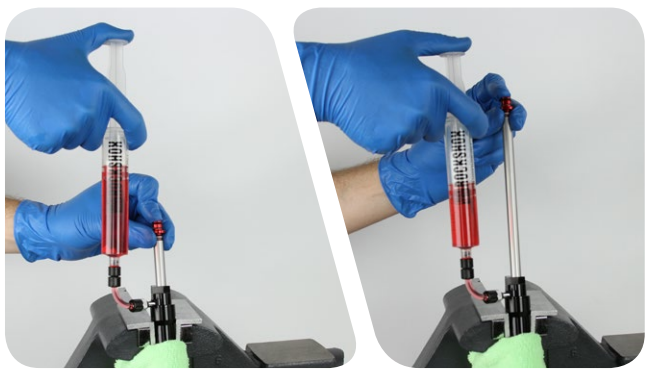
11 Thread the syringe into the seal head bleed port.

Depress the plunger to pressurize the damper assembly.



12 Push the rebound damper shaft down. Keep pressure on the plunger as the syringe fills with oil. Pull up slowly on the rebound damper shaft. Keep pressure on the syringe as oil fills the system.

Repeat pushing and pulling the rebound damper shaft, keeping pressure on the plunger, until only small bubbles emerge from the damper.

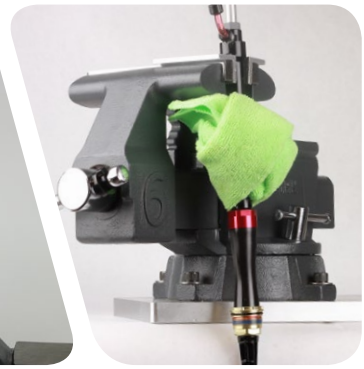


13 Fully extend the rebound damper shaft. Push the syringe handle down, then release the plunger. Allow the bladder to come to a natural resting position by waiting a few moments until the syringe stops filling.

Use a rag to cover the bleed tip and Charger bleed port, then unthread and remove the syringe.

**⚠CAUTION - EYE HAZARD**

Fluid may eject from the bladder assembly if the bladder is not in its resting position. Wear safety glasses.



14 Install the bleed screw.

Cycle the rebound damper shaft a few times.

Remove the bottom bolt from rebound damper shaft.


15 Clean the Charger 2 Damper™ assembly.

16 Remove the damper anchor o-ring. Apply grease and install a new o-ring.

1 Stabilize the carbon fiber upper on a bench top or on the floor. Place the tip of a downhill tire lever under the wiper seal. Press down on the downhill tire lever handle to remove the dust wiper seal.

2 Clean the inside and outside of the carbon fiber upper.

3 Remove the wire spring from a new wiper seal. Insert the narrow end of the wiper seal into the recessed end of the flangeless seal installation tool.

Use a soft face mallet to gently tap the seal installation tool and push the wiper seal into the leg until the seal contacts the bottom of the leg bore.

Install the outer wire spring.


4 Apply grease to the inner surface of the wiper seal.

SRAM® butter

5 Position the carbon fiber upper at an angle with the upper leg hole facing upward. Angle a syringe fitting in the upper leg hole so the oil will only contact the inside of the leg.

Inject suspension oil into the carbon fiber upper.

**NOTICE**

Do not exceed the recommended oil volume as this can damage the fork.

15wt RockShox® standard syringe 10mL

**1** Install the Charger 2 Damper into carbon fiber upper until the lockout extension shaft protrudes from the hole in the knob base.

**2** Insert the anchor tool into the carbon fiber upper.

**NOTICE**

Make sure the wiper seal slides onto the tool without folding the outer lip of the seal.

Tighten the anchor **counter-clockwise**. Remove the anchor tool from the carbon fiber upper.

*For easier installation, apply a thin layer of grease to the inside lip of the anchor tool.*


**3** Clean the inside and outside of the stanchion

**4** Slide the stanchion into the carbon fiber upper until it stops and the shaft is visible through the bottom bolt hole.

5 Use a pick and needle nose pliers to remove the old crush washer from the bottom bolt.

Hold the crush washer with needle nose pliers and unthread the crush washer from the bolt by turning the bolt counter-clockwise with a 5 mm hex wrench.

**NOTICE**

Dirty or damaged crush washers can cause oil to leak from the fork.


6 Install the bottom bolt and tighten.


7 Clean the entire fork.

**200 Hour Service** Continue the 200 Hour Service with Charger 2 Damper™ - Crown Installation.

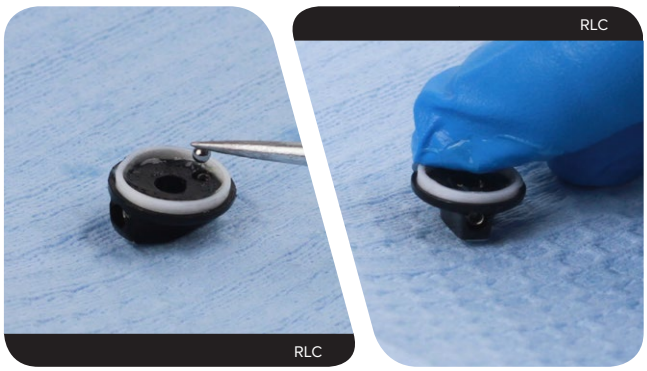
**200 Hour Service** Continue the 200 Hour Service with Charger 2 Damper - Remote Installation.

1 Clean the knob base.

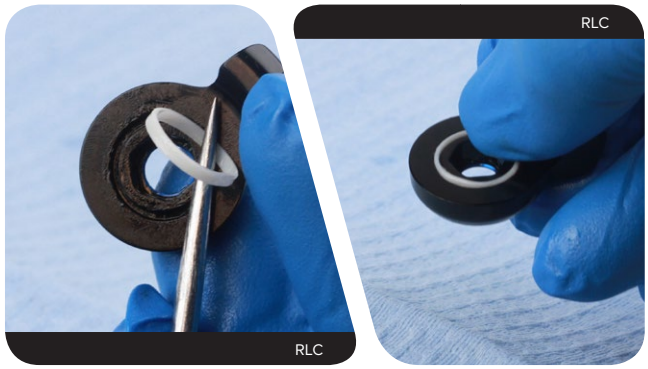

2 Remove the glide ring, springs, and detent balls from the underside of the low speed compression knob. Clean the knob.


3 Install a new glide ring into the groove. Install a spring into the hole on the underside of the low speed compression knob. Install a detent ball on top of the spring.

Apply grease to the underside of the low speed compression knob to hold the spring and ball in place.

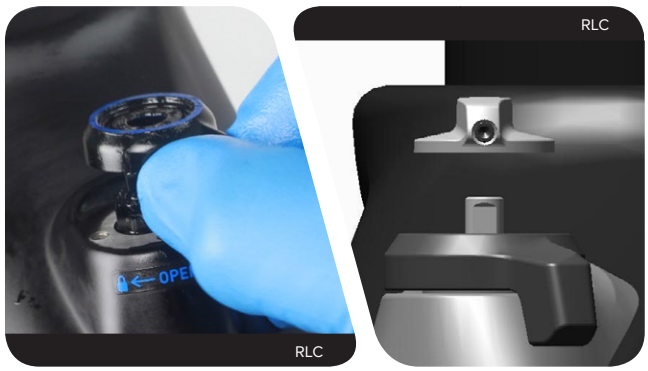



4 Remove the glide ring from the bottom of the lockout adjuster knob. Apply grease and install a new glide ring.




5 Install the lockout adjuster knob on the knob base so the knob rotates from open to closed. Install the low speed compression knob so the set screw in the knob is aligned with the flat part of the lockout extension shaft.

Tighten the set screw.

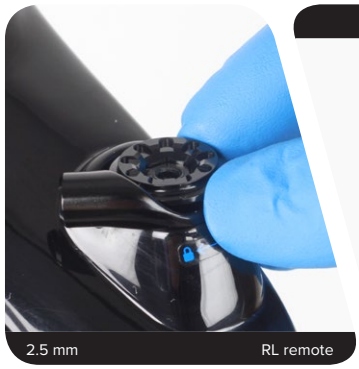




**This concludes the service of your RockShox® RS-1™ RLC suspension fork.**

1 Clean the knob base.

2 Install and seat the lower spool on the cable stop. Position the upper spool so the tab is 190° CCW from the cable stop. Install and tighten the retention screw.






**This concludes the service of your RockShox® RS-1™ RL remote suspension fork.**

**For Remote user manuals, please visit www.sram.com/service.**

## 200 Hour Service | Accelerator Damper Removal

**NOTICE**

Some of the fasteners in this fork are reverse threaded. To avoid damaging the fork when removing or installing a fastener, carefully read the instructions and follow directional arrows.

Only use SRAM® Butter grease or Liquid O-Ring® PM600 military grease when servicing RS-1™ forks. No other grease is approved for use.

When replacing seals and o-rings, use your fingers or a pick to remove the seal or o-ring. Spray isopropyl alcohol on each part and clean with a rag.

Apply grease to the new seal or o-ring.

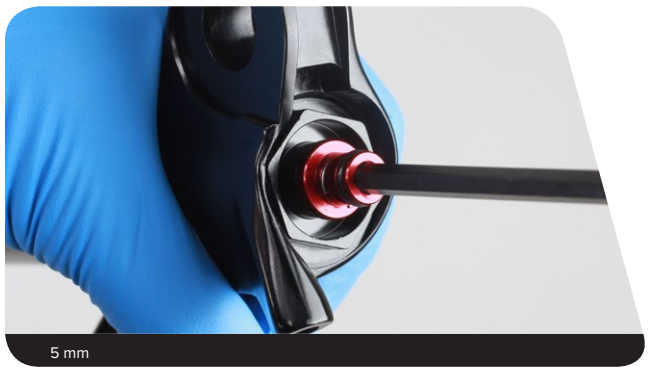
Inspect each part for scratches. Do not scratch any sealing surfaces when servicing your suspension. Scratches can cause leaks.

1 Push the XLoc™ button in to the compressed (unlocked) position.

Position the fork horizontally in the bicycle stand. Remove the rebound adjuster knob.


2 Place an oil pan beneath the fork to catch the draining oil.

Loosen the damper side bottom bolt 3 to 4 turns.




3 Strike the bottom bolt to dislodge the shaft from the stanchion.

Remove the bottom bolt.

4 Remove the stanchion from the carbon fiber upper.

*If the stanchion does not slide out of the carbon fiber upper, the press fit of the shaft may still be engaged. Reinstall the bottom bolt 2 to 3 turns and repeat the previous step.*

5 Insert the anchor tool into the bottom of the carbon fiber upper so that it engages the damper anchor on the Accelerator Damper.™

Anchor tool

6 Rotate the anchor tool **clockwise** and unthread the Accelerator Damper assembly.

Remove the anchor tool from the carbon fiber upper.

*The XLoc™ hose will spin as you loosen the anchor from the carbon fiber upper. This is normal.*

30 mm & anchor tool

7 Guide the XLoc hose through the grommet while pulling down on the anchor tool to reveal the Connectamajig.™

Remove the anchor tool.

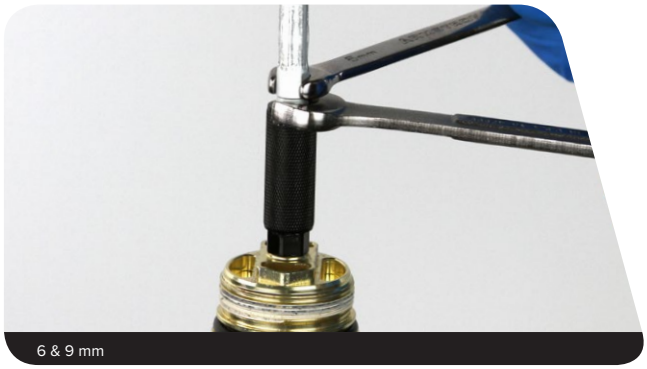
Anchor tool

8 Push the XLoc™ button to release it to the extended (locked) position. Rotate the XLoc gate adjuster **counter-clockwise,** in the direction of the arrow, until it stops.

Unthread and remove the knurled collar from the Connectamajig™.

**NOTICE**

Failure to lock the XLoc remote before disconnecting it will result in oil leaking from the XLoc. This will require a complete bleed of the system.



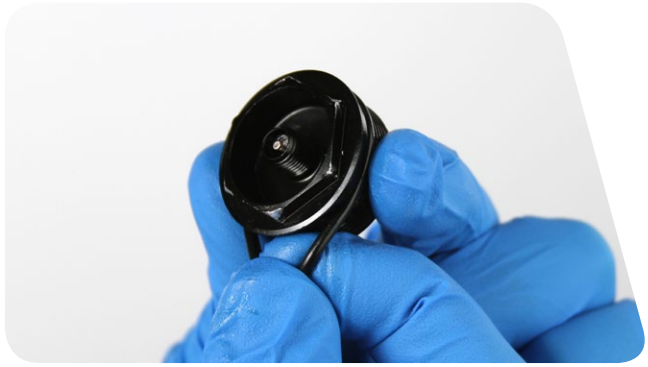

9 Loosen the grommet from the assembly hole. Remove the hose and grommet.

10 Insert the Maxle Ultimate™ through the dropout.

Leverage the Maxle Ultimate against a bench top, then use a wrench to unthread the bottom cap **counter-clockwise** to loosen and remove it from the stanchion.

11 Remove the bottom cap o-ring.

Apply grease and install a new o-ring.



1 Clamp the Accelerator Damper assembly into a bicycle stand with the rebound shaft oriented downward.

2 Unthread the damper anchor from the cartridge tube and remove the compression damper.

**NOTICE**

The components of this fork are made from lightweight materials and can be damaged by improper tool usage. Make sure the wrench does not slip off the wrench flats. This can cause damage by rounding the edges.


3 Clean the compression damper.

4 Remove both of the compression damper o-rings. Apply grease and install new o-rings.

5 Remove the damper anchor o-ring. Apply grease and install a new o-ring.

6 Remove the cartridge tube from the bicycle stand and pour the oil into an oil pan. Cycle the rebound shaft to make sure the oil has drained from the system.

7 Clamp the cartridge tube into a bicycle stand with the rebound shaft oriented upward.

8 Unthread the damper seal head from the cartridge tube and remove the rebound assembly.

**NOTICE**

The components of this fork are made from lightweight materials and can be damaged by improper tool usage. Do not allow the wrench to slip off the wrench flats. This can cause damage by rounding the edges.

9 Clean the inside and outside of the cartridge tube.

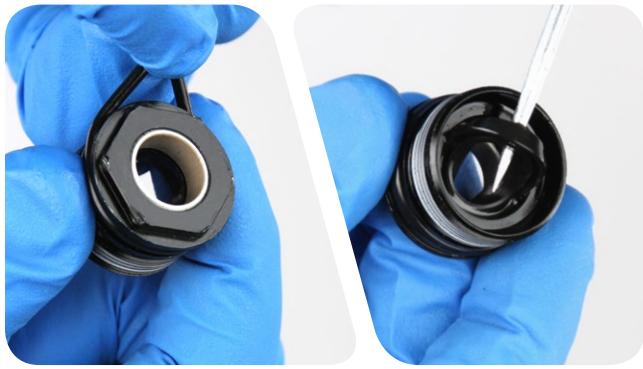
10 Clean the rebound assembly.

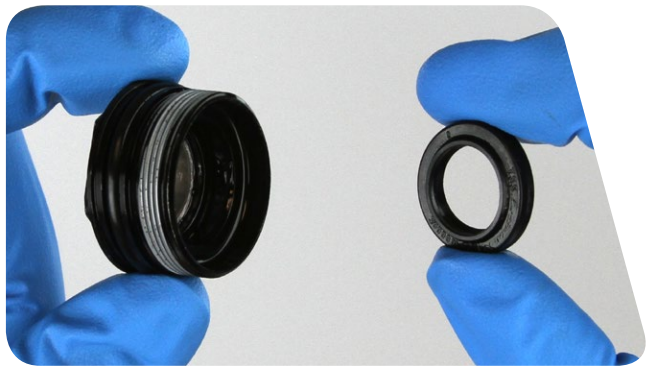
11 Remove the damper seal head from the rebound shaft.

12 Remove the damper seal head o-ring. Use a pick to pierce and remove the rod wiper seal.

Apply grease and install a new o-ring and rod wiper seal.

*Install the stepped face of the rod wiper seal into the threaded end of the seal head.*





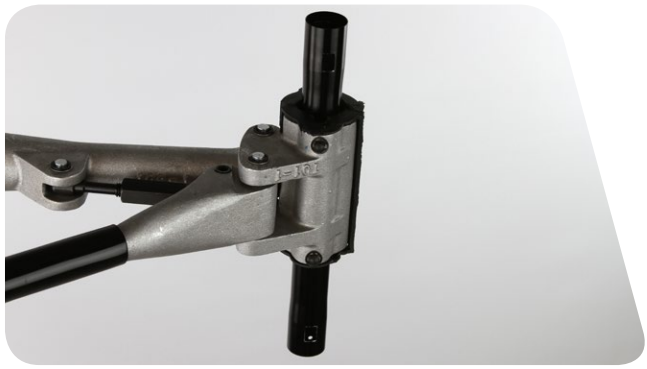
13 Remove the glide ring from the Dig Valve™. Install a new glide ring.

14 Install the damper seal head onto the rebound shaft with the threads oriented toward the piston.

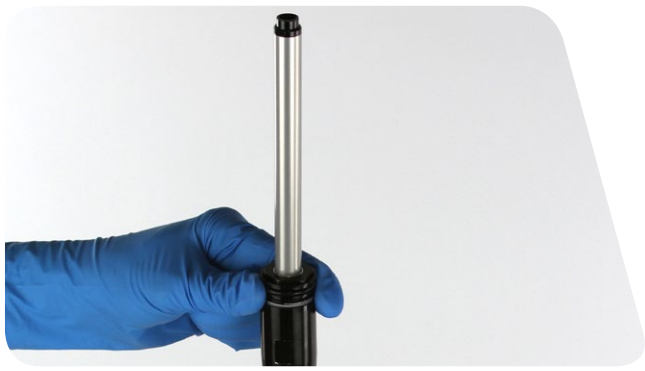
**NOTICE**

Do not allow the outer lip of the rod wiper seal to fold over when installing the damper seal head onto the rebound shaft.

15 Clamp the cartridge tube into a bicycle stand with the bypass hole oriented downward.



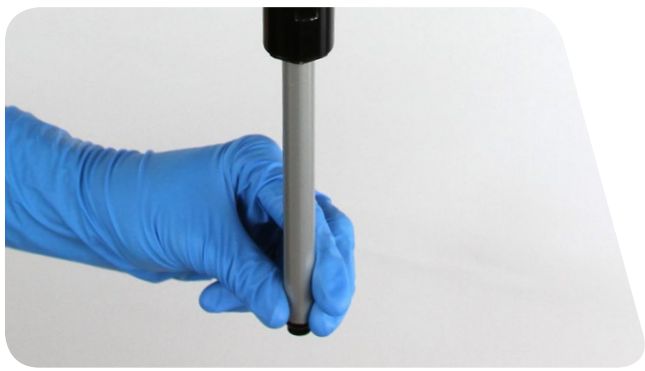
16 Pinch the glide ring closed against the piston, then thread the seal head and rebound assembly into the cartridge tube.



17 While holding the cartridge tube in place, thread the damper seal head into the cartridge tube and tighten the rebound assembly.

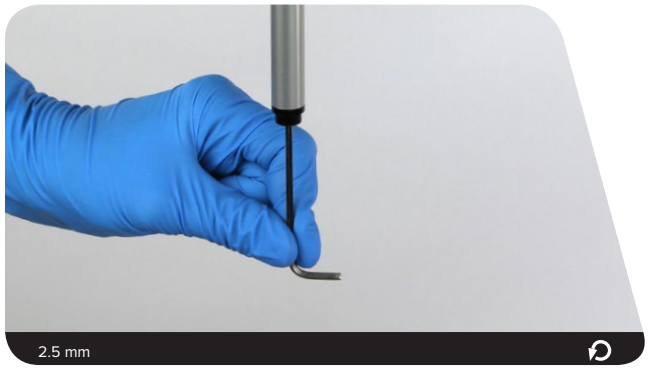

18 Remove the cartridge tube assembly from the bicycle stand, turn it over, and clamp the cartridge tube assembly into the bicycle stand so the rebound shaft is oriented downward.

Pull down on the rebound shaft.



19 Rotate the rebound adjuster **counter-clockwise** to the open position.

*The rebound adjuster screw will click as it is adjusted.*



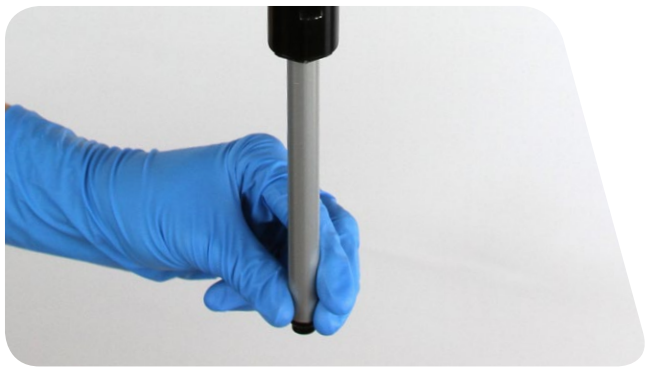

20 Pour suspension fluid into the cartridge tube.

*Pour the fluid slowly to avoid introducing air into the fluid.*


21 Slowly cycle the rebound shaft a few times to bleed the system.

**⚠CAUTION- EYE HAZARD**

Pull the rebound shaft down slowly. Failure to do so can result in fluid ejecting from the cartridge tube. Wear safety glasses.



22 Thread the knurled collar onto the Connectamajig™ until it is finger tight.

Push the XLoc™ button in to the compressed (unlocked) position.

23 Slowly push the rebound shaft into the cartridge tube until there is about 50 mm of shaft exposed.

24 Slowly insert the compression damper into the cartridge tube while gently rocking the compression damper side to side.

Thread the compression damper into the cartridge tube.

The rebound shaft will extend downward as you insert the compression damper.

25 Thread the damper anchor into the cartridge tube and tighten.


26 Wrap a rag around the bleed hole and firmly grasp the cartridge tube to prevent fluid from ejecting from the bleed hole.

Slowly push the rebound shaft into the cartridge tube until there is about 30 mm of shaft exposed, and then fully extend again. Cycle the rebound shaft a few times, always leaving 30 mm of shaft exposed, to purge the system of excess fluid and air bubbles.

**NOTICE**

Do not push the rebound shaft all the way into the cartridge tube as this will purge too much fluid. Always leave about 30 mm of shaft exposed.

**⚠CAUTION- EYE HAZARD**

Cycle the rebound shaft slowly. Failure to do so can result in fluid ejecting from the cartridge tube. Wear safety glasses.

27 Push the XLoc™ button to release it to the extended (locked) position.

Unthread the Connectamajig™ from the knurled collar.

**NOTICE**

Failure to lock the XLoc remote before disconnecting it will result in fluid leaking from the XLoc. This will require a complete bleed of the system.

1 Stabilize the carbon fiber upper on a bench top or on the floor. Place the tip of a downhill tire lever under the wiper seal. Press down on the downhill tire lever handle to remove the dust wiper seal.

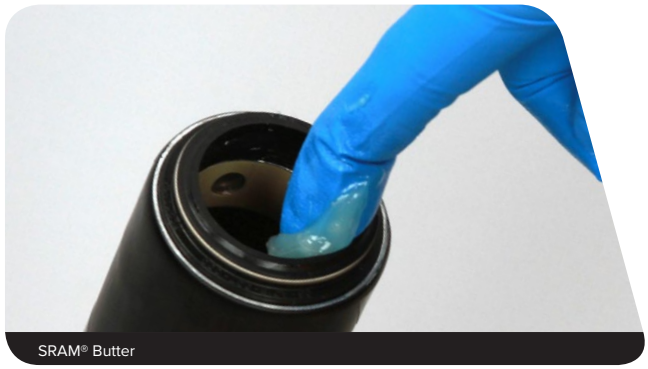
2 Clean the inside and outside of the carbon fiber upper.

3 Remove the wire spring from a new wiper seal. Insert the narrow end of the wiper seal into the recessed end of the flangeless seal installation tool.

Use a soft face mallet to gently tap the seal installation tool and push the wiper seal into the leg until the seal contacts the bottom of the leg bore.

Install the outer wire spring.


4 Apply grease to the inner surface of the wiper seal.



SRAM® Butter

5 Position the carbon fiber upper at an angle with the upper leg hole facing upward. Angle a syringe fitting in the upper leg hole so the oil will only contact the inside of the leg.

Inject 10 mL suspension oil into the carbon fiber upper.

**NOTICE**

Do not exceed the recommended oil volume as this can damage the fork.

15wt RockShox® standard syringe 10mL

1 Insert the anchor tool into the leg.

**NOTICE**

Make sure the wiper seal slides onto the tool without folding the outer lip of the seal.

Feed the hose through the carbon fiber upper until it comes through the inside of the tool.

Remove the anchor tool.



2 Thread the Connectamajig™ into the knurled collar and tighten.

Push the XLoc™ button in to the compressed (unlocked) position.


3 Install the anchor tool onto the Accelerator Damper™.

Insert the anchor tool and Accelerator Damper into the carbon fiber upper while simultaneously pulling the XLoc™ hose through the leg.

**NOTICE**

Make sure the wiper seal slides onto the tool without folding the outer lip of the seal.


4 Tighten the anchor **counter-clockwise**.

*The XLoc hose will spin as you tighten the anchor. This is normal.*

Remove the anchor tool.

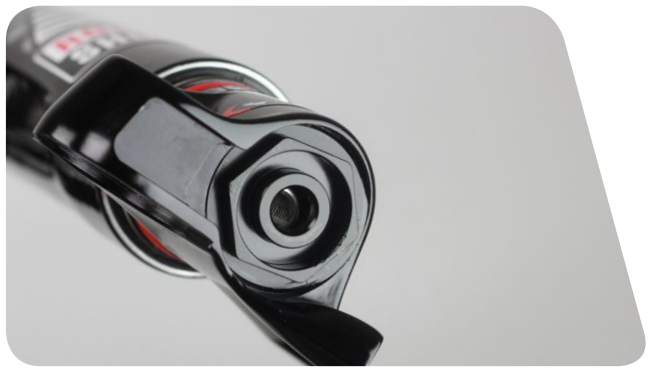

5 Clean the inside and outside of the stanchion

6 Install the Maxle Ultimate™ through the dropout. Thread the bottom cap into the bottom of the stanchion.

Leverage the Maxle Ultimate against a bench top, then tighten **clockwise.**

7 Push the XLoc™ button to release it to the extended (locked) position.

Slide the stanchion into the carbon fiber upper until it stops and the shaft is visible through the bottom bolt hole.



8 Install the bottom bolt and tighten.


9 Install the rebound adjuster knob.

10 Press the grommet into the assembly hole.

11 Clean the entire fork.

**This concludes the service of your RockShox® RS-1™ Accelerator Damper™ suspension fork.**

**For Remote bleed and user manuals, please visit www.sram.com/service.**

SRAM®

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