

2013 Monarch RL/RT Service Manual



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, merchantability, 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:

- 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.

For Australian customers:

This SRAM limited warranty is provided in Australia by SRAM LLC, 133 North Kingsbury, 4th floor, Chicago, Illinois, 60642, 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, this warranty is limited to one year for all electronic and electronic related components including motors, controllers, battery packs, wiring harnesses, switches, and chargers. 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.

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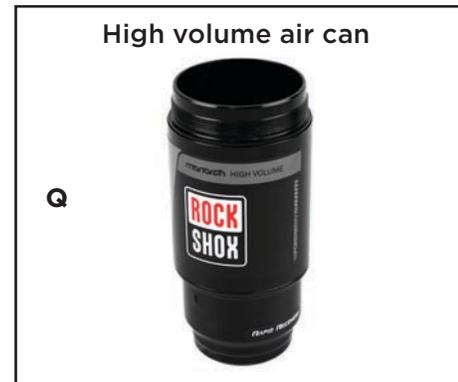
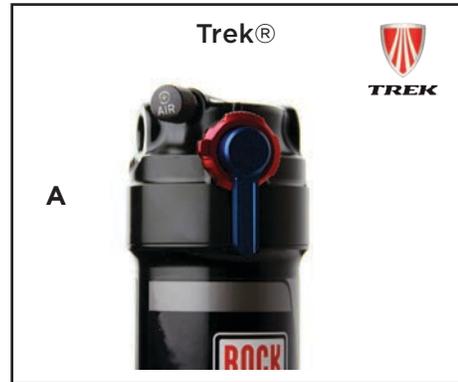
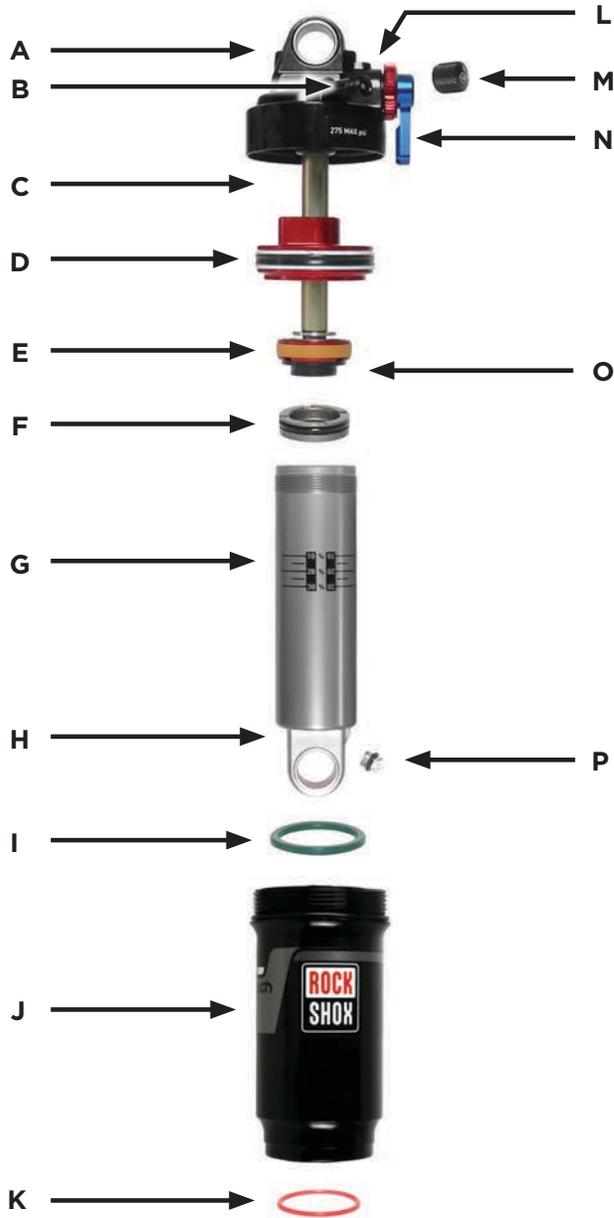


SAFETY FIRST!

We care about YOU. Please, always wear your safety glasses and protective gloves when servicing RockShox products.

Protect yourself! Wear your safety gear!

EXPLODED VIEW - MONARCH RL/RT REAR SHOCK



- A. Shaft eyelet
- B. Air can valve
- C. Shaft
- D. Seal head/air piston
- E. Main piston
- F. IFP (Internal Floating Piston)
- G. Damper body
- H. Damper body eyelet
- I. Top out bumper

- J. Air can
- K. Sag indicator o-ring
- L. Rebound adjuster
- M. Air can valve cap
- N. Compression lever
- O. Lock Out Plate
- P. Damper air fill port cap
- Q. High volume air can sleeve

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.

For exploded diagram and part number information, please refer to the [Spare Parts Catalog](#) available on our web site at 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.

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

MOUNTING HARDWARE AND BUSHING SERVICE

Prior to servicing the rear shock, remove it from the bicycle frame according to the bicycle manufacturer's instructions. Once the shock is removed from the bicycle, remove the mounting hardware before performing any service.

NOTICE

Use aluminum soft jaws to prevent damage to the rear shock eyelets when clamping into a vise.

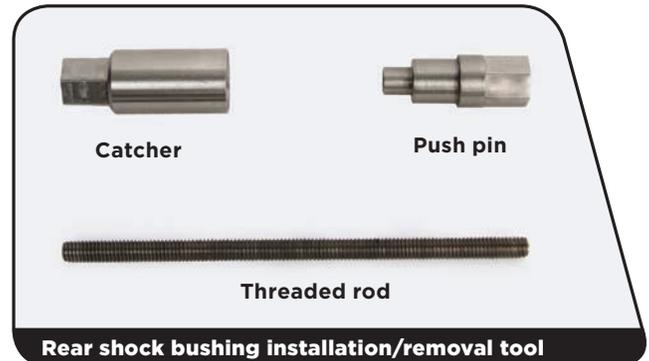
PARTS AND TOOLS FOR MOUNTING AND BUSHING SERVICE

- Safety glasses
- Nitrile gloves
- Apron
- Clean, lint-free rags
- Suspension specific grease
- Bench vise with aluminum soft jaws
- SRAM rear shock bushing removal/installation tool
- 13 mm open end wrench
- Adjustable wrench

MOUNTING HARDWARE REMOVAL

Some mounting hardware is easily removed using only your fingers. Try to remove the end spacers with your fingernail, then push the bushing pin out of the bushing. If this works, move on to the next section, [Eyelet Bushing Replacement](#).

If you are unable to remove the mounting hardware using your fingers, use the SRAM rear shock bushing removal/installation tool.



1 Thread the small end of the push pin onto the threaded rod until the rod is flush or slightly protrudes from the hex-shaped end of the push pin.



2 Insert the threaded rod through the shaft eyelet until the push pin rests against the bushing pin.
Thread the large, open end of the catcher along the rod until it rests on the end spacer.



3 Clamp the catcher in a vise or hold it secure with a 13 mm open end or adjustable wrench.

Use a second 13 mm wrench to thread the push pin along the rod until it stops against the end spacer.

Unthread the push pin from the threaded rod and remove the end spacer from that side.



- 4** Reinsert the threaded rod and push pin through the shaft eyelet.
Thread the large, open end of the catcher along the rod until it rests against the shaft eyelet.
Use a 13 mm wrench to thread the push pin along the rod until it stops against the end spacer.



- 5** Unthread the catcher from the threaded rod.
Remove the end spacer and bushing pin from the tool.
Set the mounting hardware aside until you have finished servicing your shock.
Repeat for the damper eyelet.



EYELET BUSHING REPLACEMENT

To replace damaged or worn out bushings, use the RockShox rear shock bushing removal/installation tool.

- 1** Insert the threaded rod through the shaft eyelet until the base of the push pin rests against the bushing.
Thread the large, open end of the catcher onto the rod until it rests on the eyelet.



- 2** Clamp the catcher in a vise or hold it secure with a 13 mm wrench. Use a second 13 mm wrench to thread the push pin along the rod until the push pin pushes the eyelet bushing out of the eyelet.



- 3** Unthread the catcher from the threaded rod. Remove the tool from the shaft eyelet and discard the old bushing.
Repeat for the other eyelet.

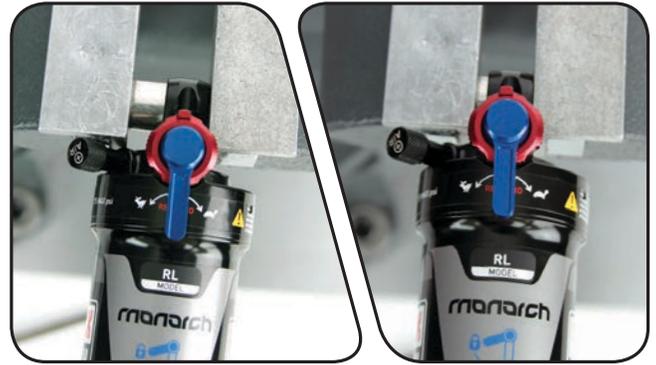
- 4** Apply a small amount of grease to the outside of the new bushing.



5 Position the shaft eyelet and eyelet bushing between the soft jaws of a vise. Slowly turn the vise handle to begin pressing the eyelet bushing into the shaft eyelet.

To prevent damage to the shock use aluminum vise soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws.

Check the alignment of the bushing as it enters the eyelet. If the bushing starts to enter the eyelet at an angle, remove the bushing from the eyelet, regrease the bushing, and repeat this step until the bushing enters the eyelet straight.



6 Continue to press the eyelet bushing until it is seated in the shaft eyelet.

Remove the shock from the vise and repeat the installation process for the other bushing and eyelet.



MOUNTING HARDWARE INSTALLATION

Some mounting hardware is easily installed using only your fingers. Press the bushing pin into the shock eyelet bushing until the pin protrudes from both sides of the eyelet an equal amount. Next, press an end spacer, large diameter side first, onto each end of the bushing pin. If this works, you have completed mounting hardware and bushing service.

If you are unable to install your mounting hardware using your fingers, use the SRAM rear shock bushing removal/installation tool.

- 1** Thread the small end of the push pin onto the threaded rod until the push pin is flush or slightly protrudes from the hex-shaped end of the push pin.



- 2** Insert the threaded rod through the bushing pin then through the shaft eyelet so that the bushing pin is positioned between the push pin and the eyelet.



- 3** Thread the large, open end of the catcher onto the rod until it rests on the eyelet.



- 4** Clamp the catcher in a vise or hold it secure with a 13 mm wrench. Use a second 13 mm wrench to thread the push pin along the rod until it pushes the bushing pin into the shock eyelet bushing. Continue to thread the push pin until the bushing pin protrudes from both sides of the eyelet an equal amount. *You may need to unthread the catcher slightly to check the bushing pin spacing.*



- 5** Unthread the catcher from the threaded rod and remove the tool from the shaft eyelet.

- 6** Position the end spacer with the large end facing the air can. Use your fingers to push the end spacer onto each end of the bushing pin.



MONARCH RL/RT SERVICE

Prior to servicing your rear shock, remove it from the bicycle frame according to the bicycle manufacturer's instructions. Once the shock is removed from the bicycle, remove the mounting hardware before performing any service (see the [Mounting Hardware And Bushing Service](#) section).

PARTS AND TOOLS NEEDED FOR SERVICE

- Safety glasses
- Nitrile gloves
- Apron
- Clean, lint-free rags
- Oil pan
- Isopropyl alcohol
- RockShox 3wt suspension fluid
- Suspension specific grease
- Parker® O-Lube
- Maxima® Maxum4 Extra 15w50 lube
- Bench vise with aluminum soft jaws
- SRAM Body Clamp
- Blue threadlock
- SRAM shaft clamp
- 13, 17 and 40 mm open end wrench
- Torque wrench
- 13, 17 and 40 mm crowfoot
- 1.5 and 2 mm hex wrenches
- Schrader valve core tool
- Strap wrench
- Needle nose pliers
- Pick
- Monarch air fill adapter
- Shock pump
- Metric caliper or small metric ruler

SAFETY INSTRUCTIONS

Always wear safety glasses and nitrile gloves when working with suspension fluid.

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

AIR CAN REMOVAL

- 1** Turn the rebound adjuster counter-clockwise (toward the rabbit) until it stops. Turn the compression lever to the unlocked position.

Count each detent click as you turn the adjuster and record the number of clicks to assist with post-service set up.



2 Check and record your current air pressure setting to assist with post-service set up.

Remove the air valve cap.

Use a small hex to depress the Schrader valve and release all air pressure from the air can.

Use a Schrader valve tool to remove the valve core from the valve body.



3 Use a Schrader valve tool to remove the air/nitrogen port cap.

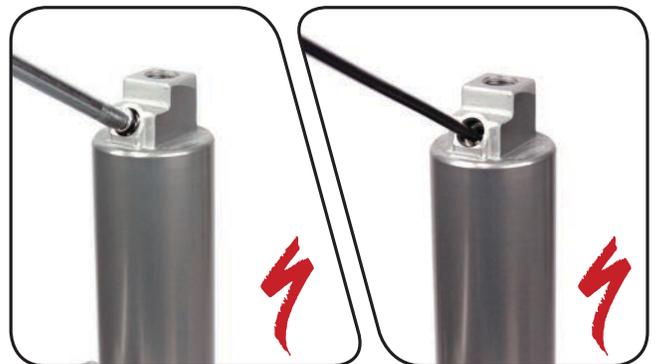
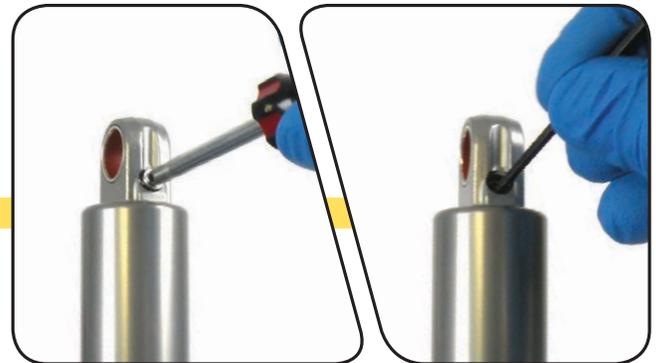
Use a small hex wrench or pick to depress the Schrader valve and release all air/nitrogen pressure from the damper.

Once the pressure has been released, depress the Schrader valve a second time. If the Schrader valve is able to move, the shock has been completely depressurized.

⚠ CAUTION - EYE HAZARD

Verify all pressure is removed from the shock before proceeding. Failure to do so can cause the damper body to separate from the air can eyelet at a high velocity. Wear safety glasses.

If the Schrader valve does not move at all, the shock is still pressurized and will need to be sent to an authorized RockShox service center for further service.



4 Use a Schrader valve tool to remove the valve core.



5 Clamp the shaft eyelet into a bench vise, with the shock positioned horizontally.

To prevent damage to the shock use aluminum vise soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws.



6 If the shock is collapsed so that a minimal amount of damper body is visible, there is still air pressure in the air can. Insert a rag through the damper body eyelet. This will prevent the air can from forcefully ejecting from the shock upon disassembly.

! CAUTION - EYE HAZARD

Disassembly of a pressurized air can may cause suspension fluid or debris to forcefully eject from the shock. Wear safety glasses.



7 Use a strap wrench to remove the air can. Wrap the strap around the section of the air can furthest from the air can eyelet. Turn the wrench counter-clockwise to loosen and unthread the air can.

Once it is completely unthreaded, slowly pull the air can along the shock damper body to remove it.

For high volume air cans: Grip the lower portion of the can; otherwise, the high volume sleeve will rotate independent of the air can preventing the air can from unthreading.

For autosag air cans: Use a pick to remove the retention o-ring on the autosag sleeve. Pull the autosag sleeve off the air can.

Place a strap wrench on the air can where the autosag sleeve was located. Turn the strap wrench counter-clockwise to loosen and unthread the air can.

Do not place the strap wrench on the air can decal.

Vacuum pressure will increase as you pull the air can along the damper body, then suddenly release as the end of the can comes over the damper body eyelet.



AIR CAN SERVICE

- 1** Use your fingers to remove the outer o-ring located below the air can threads.

Use a rag to wipe the threads clean, apply a small amount of Parker® O-Lube grease to the new o-ring, and install it.



- 2** Use a pick to pierce the air can dust wiper seal and o-ring located inside the dust wiper seal gland. Push or pull to remove them, paying attention to the orientation of the dust wiper seal for reinstallation.

Do not scoop or dig the seals out as this may damage the seal gland.



- 3** Use your finger or a pick to pull or push the step bushing ring out of the air can.

Use a pick to remove the back-up ring from the air can.

Do not scoop or dig the seals out as this may damage the seal gland.



4 Spray isopropyl alcohol inside the air can and wipe it with a clean rag. Remove a glove and use your finger to inspect the inside and outside of the air can for scratches, dents, or other surface deformations. Replace the air can if it is scratched or damaged.

All air cans have a small dimple, as seen from the exterior of the can, that you should feel during inspection. This is normal.

In addition, high volume air cans have small port hole to the high volume sleeve that you should feel. This is normal.



5 Install the new step bushing ring, quad ring, back-up ring, and dust wiper seal.

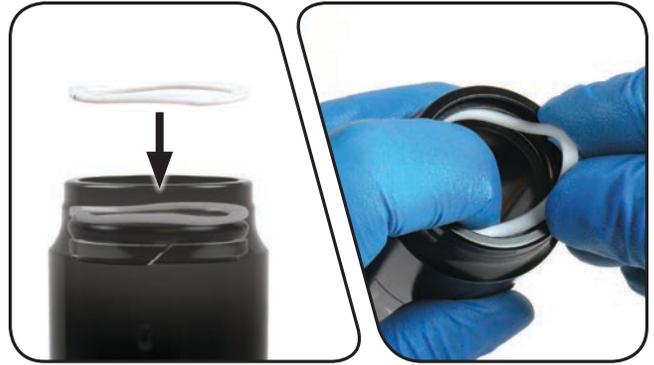
Orient the new step bushing ring, step side down. Install the step bushing ring by inserting one end into the air can, then pushing the remainder of the ring into the can, so that it rests on the bottom of the second deepest gland.



6 Replace the air can o-ring with the quad ring from the seal kit. Apply a small amount of Parker® O-Lube grease and install it into the second deepest gland, so that it rests on top of the step bushing.



7 Install the air can back-up ring into the same gland, so that it rests between the quad ring and the top of the gland.



8 Orient the new dust wiper seal step side up. Install it into the dust wiper seal gland at the top of the air can.



9 Spray isopropyl alcohol on the air can threads and eyelet body threads and wipe them with a clean rag.

10 Apply a small amount of Parker® O-Lube grease to the step bushing ring, quad ring, back-up ring, and dust wiper seal. Set the air can aside.



17 For High Volume Air Cans Only:

Remove the retention o-ring from the high volume sleeve.

Firmly grip the high volume sleeve and slide it off of the air can.

Use your fingers to remove the high volume sleeve o-rings, clean the seal glands, and apply Parker® O-Lube to the new seals, then reinstall.

Spray isopropyl alcohol inside the high volume sleeve and wipe it with a clean, lint-free rag.

Evenly spread just enough Parker O-Lube to make the inside of the sleeve slippery. This stops the o-rings from rolling as the sleeve slides over them.

Slide the air sleeve onto the air can.

Reinstall the high volume sleeve retention o-ring into the groove outside of the air can.



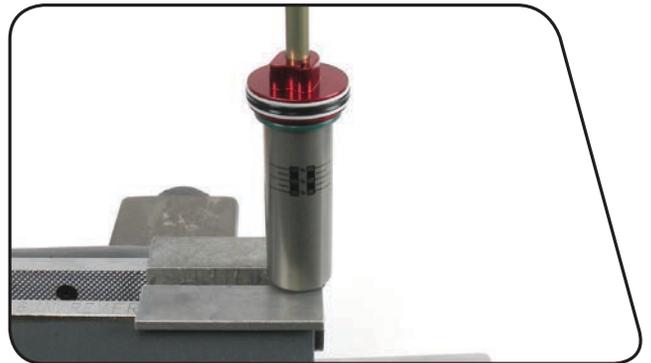
DAMPER BODY SERVICE

- 1** Remove the top out bumper from the damper body. Replace with a new top out bumper.

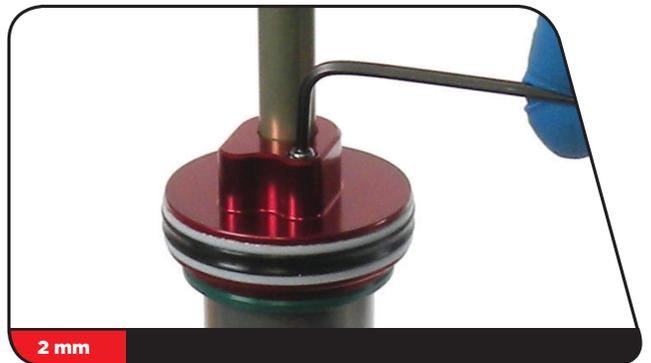


- 2** Remove the shock from the vise. Turn the shock over and clamp the damper eyelet into the vise, so the shock is vertical.

Use aluminum vise soft jaws to protect the shock eyelet when clamped.



- 3** Use a 2 mm hex to unthread and remove the bleed screw, located in the seal head/air piston.



- 4** Use a 17 mm open end wrench to loosen and remove the seal head/ air piston assembly from the damper body.

Fluid will spill from the assembly.



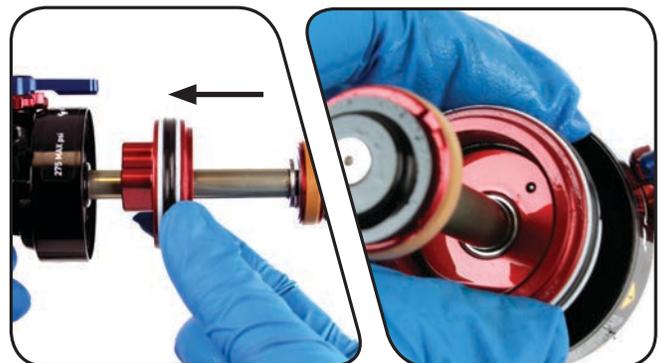
- 5** Remove the damper body from the vise and pour the fluid into an oil pan.



- 6** Hold the shaft eyelet with one hand, and push the seal head/air piston toward the shaft eyelet with your other hand to expose the bleed port on the underside of the seal head.

Keep the lock out plate against the main piston for the remainder of the service.

Be careful not to pinch your fingers as you slide the seal head/air piston.



7 Use a pick or 1.5 mm hex wrench to push and remove the compression ball out of the backside of the seal head through the bleed port.

Do not replace the compression ball at this time, you will do that later.

Do not reuse the compression ball.

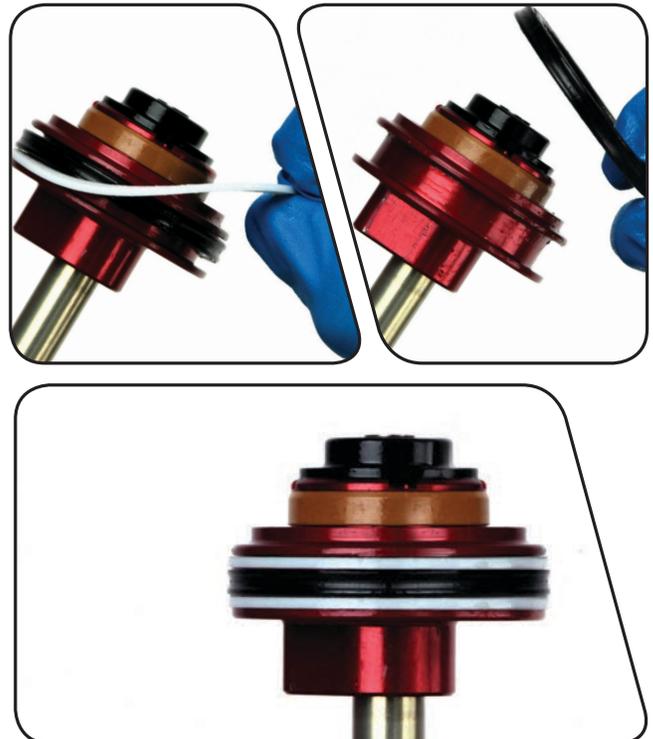


8 Spray the entire shaft and piston assembly with isopropyl alcohol and wipe it with a clean rag.

9 Use a pick to remove the seal head/air piston seal and glide rings.

Apply a small amount of Parker® O-Lube to the new seal head/air piston seal and glide rings, and install them.

Do not scoop or dig the seals out as this may damage the seal gland.



PISTON SERVICE

1 Spray isopropyl alcohol on the shaft assembly and shaft clamp, wipe it with a clean rag.

2 Use the SRAM shaft clamp tool to clamp the seal head/air piston into a vise with the eyelet positioned vertically.



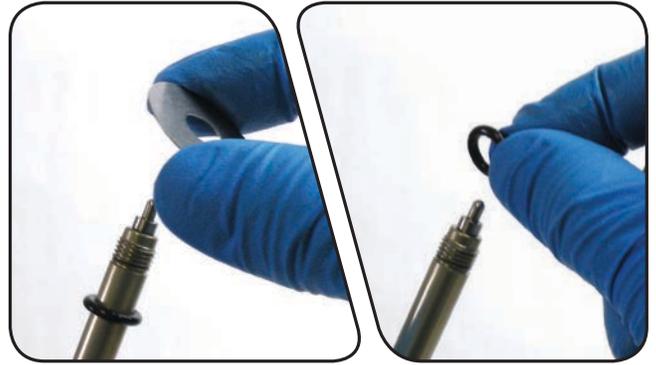
3 Use a 13 mm (Trek®: 40 mm) open end wrench to loosen the eyelet.



4 Remove the shaft assembly from the vise. Unthread the shaft from the eyelet by hand.



5 Remove the bottom out washers and o-ring from the shaft.



6 Pull on the seal head/air piston to remove it from the damper shaft.



7 Use a pick to remove the o-ring located in the interior of the seal head.

Apply a small amount of Parker® O-Lube to the new o-ring and install it.

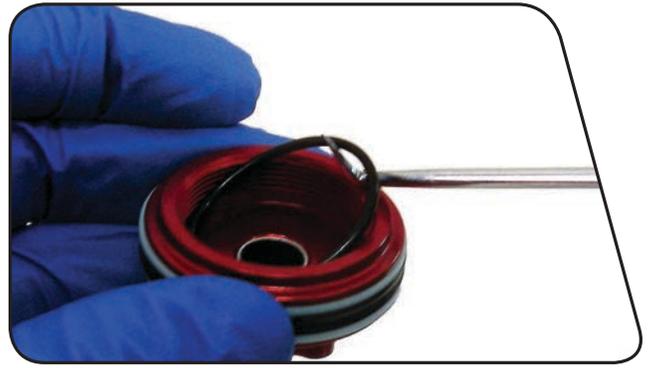
Do not scratch the seal head/air piston. Scratches may cause fluid to leak.



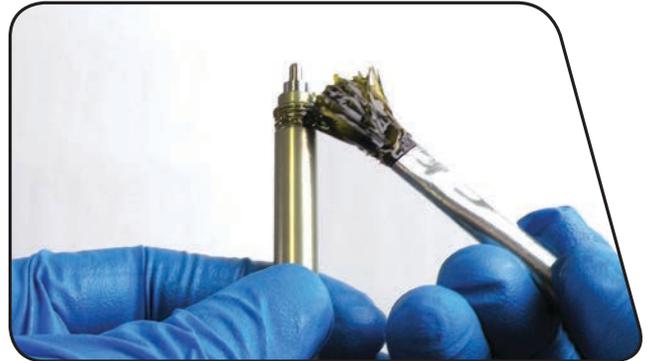
8 Use a pick to remove the inner o-ring, located at the base of the threads in the seal head/air piston.

Apply Parker O-Lube to the o-ring and install it.

Do not scratch the seal head/air piston. Scratches may cause fluid to leak.



9 Apply a liberal amount of Parker O-Lube® to the shaft threads.



10 Install the seal head/air piston onto the damper shaft with the seal head threads oriented downward.

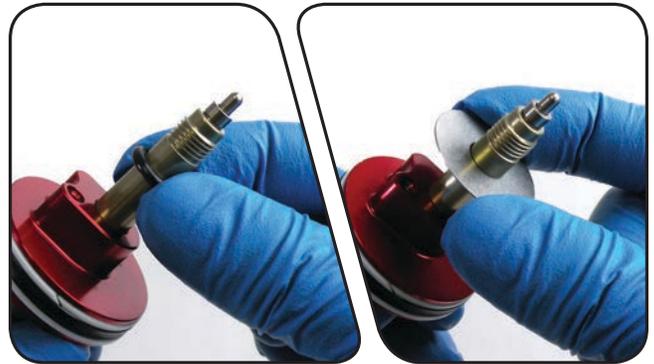
Gently rock the seal head back and forth in a circular motion as the inner o-ring moves over the shaft threads.



11 Use isopropyl alcohol and a rag to clean the grease from the shaft threads.



12 Install the bottom out o-ring and washer onto the shaft.



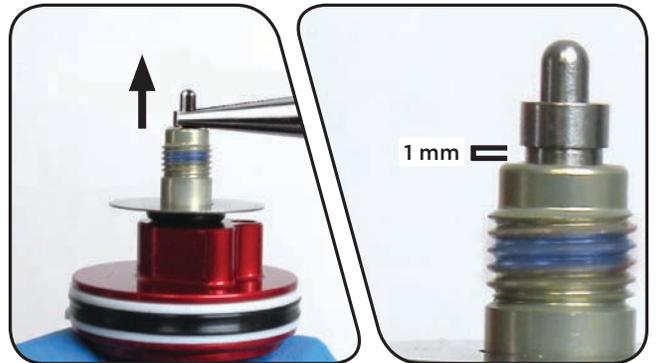
13 Apply a small amount of threadlock to the shaft threads.
Do not get threadlock on the adjuster needle.



14 Use isopropyl alcohol and a clean rag to clean the eyelet threads.



15 Turn the rebound adjuster counter-clockwise until it stops.
Use a pair of needle nose pliers to pull up on the rebound inner sleeve until 1 mm of the smaller diameter step is visible.



16 Thread the shaft into the eyelet by hand until it stops turning.



- 17** Use the SRAM shaft clamp tool to clamp the seal head/air piston into a vise with the eyelet positioned vertically.
Use a torque wrench with a 13 mm (Trek®: 40 mm) crowfoot socket to tighten the eyelet to 4.6 N·m (40 in-lb).

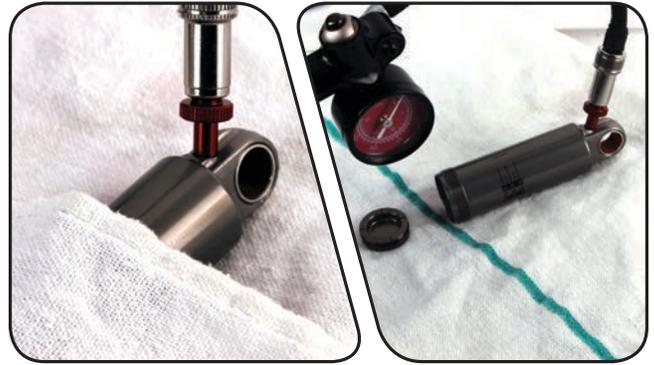


- 18** Remove the shaft assembly from the vise and set it aside.

IFP AND DAMPER BODY SERVICE

- 1** Wrap a rag around the end of the damper body. Thread a shock pump with the Monarch air fill adapter installed onto it into the air fill port.

Pump air into the damper body to force the IFP (Internal Floating Piston) out of the damper body, into the rag.



- 2** Spray isopropyl alcohol on the inside and outside of the damper body and wipe it with a clean rag.

Remove a glove and use your finger to inspect the inside and outside of the damper body for scratches, dents, or other surface deformations. If any deformations are found, the damper body will need to be replaced.



- 3** Remove the IFP o-ring. Spray the IFP with isopropyl alcohol and wipe it with a clean rag.

Apply a small amount of grease to the new o-ring and install it.



4 Insert the IFP into the damper body with the stepped side visible. Use a metric caliper or ruler to push the IFP to the depth specified in the table below

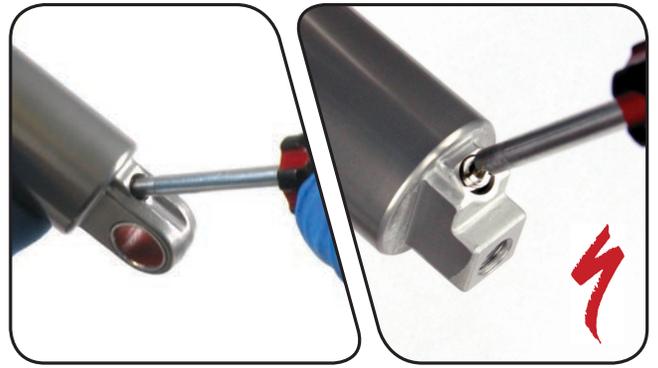
Measure the IFP depth from the lowest part of the IFP.

Shock dimensions	IFP insertion depth
152 x 31	45 mm
165 x 38	50.6 mm
 171 x 44	56.1 mm
184 x 44	56.1 mm
 184 x 51	61.7 mm
190 x 51	61.7 mm
200 x 51	61.7 mm
	61.7 mm
200 x 57	67.2 mm
216 x 63	72.8 mm
222 x 66	75 mm



SHOCK ASSEMBLY AND BLEED

- 1** Use a Schrader valve core tool to install the new Schrader valve into the damper body air fill port.



- 2** Place the damper body into the SRAM body clamp in the vise so the damper body is positioned vertically.

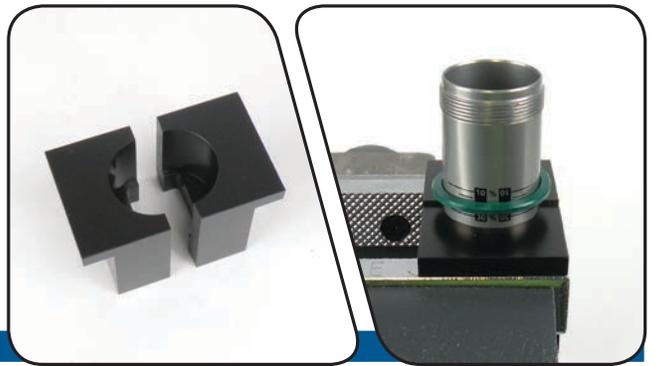
Tighten the vise firmly enough so that the IFP cannot move in the damper body. Check this by using your finger to push on the IFP. If it does not move, the vise is tight enough. If it does move, remove the damper body from the vise, reset the IFP to the proper depth, then reinstall it into the body clamp and vise tight enough that the IFP cannot move.

Wrap a clean rag around the damper body.

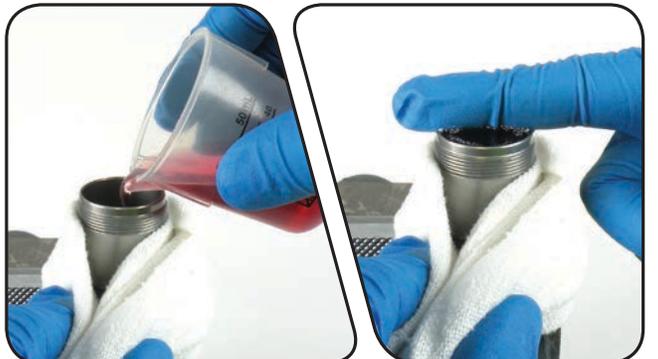
Do not overtighten the vise so that the damper body gets crushed.

NOTICE

The SRAM body clamp holds the IFP in place. Failure to use the SRAM body clamp when clamping the damper body into the vise may result in improper IFP height. Improper IFP height can damage the shock.



- 3** Pour new RockShox 3wt suspension fluid into the the damper body until it is level with the top of the damper body. Use your finger to remove any bubbles from the surface of the fluid.



- 4** Check that the rebound adjuster is set to the minimum setting (toward the rabbit).

Slide the seal head/air piston until it stops at the end of the damper shaft.



- 5** Install the seal head/air piston onto the damper body and thread it completely onto the damper body.

Fluid will be displaced out of the bleed port.

Check that the compression ball is removed from the seal head/air piston.

Do not hold on to the shaft eyelet or damper shaft while inserting. It will move the piston/shaft assembly, causing too much fluid to displace out of the damper body.



- 6** Use a torque wrench with 17 mm crow foot to tighten the seal head/air piston to 28 N·m (250 in-lb).

Install the crow foot onto the torque wrench at a 90° angle to the handle to ensure an accurate torque reading.



- 7** Allow air bubbles to escape from the bleed port in the seal head.
Insert the new compression ball into the bleed port.



- 8** Use a 2 mm hex to gently thread the bleed screw into the bleed port until you feel it touch the compression ball.
Tighten the bleed screw an additional ½ turn.

NOTICE

Tightening the bleed screw more than ½ turn can damage the compression ball.



- 9** Use a shock pump with the Monarch air fill adapter to pressurize the damper body to 500 psi or 34.4 bar for RL and 350 psi or 24 bar for RT.

Once you have pressurized the shock, remove the Monarch air fill adapter from the air fill port before removing it from the shock pump. Separating the pump from the adapter first will allow all of the air to escape from the shock.

If you have the proper fill equipment, you may substitute air with nitrogen.



10 Use a Schrader valve tool to install the air fill port cap.



11 Remove the shock from the vise.
Spray the damper assembly with isopropyl alcohol and wipe it with a clean rag.

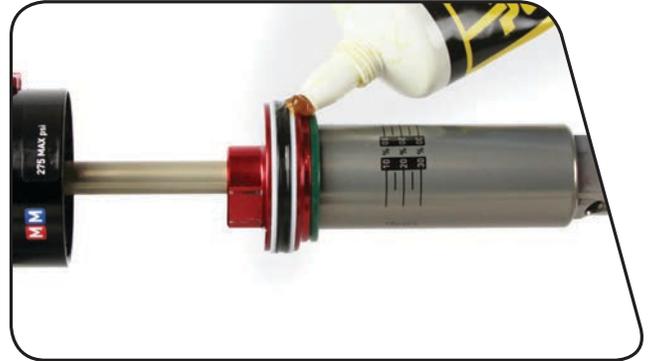
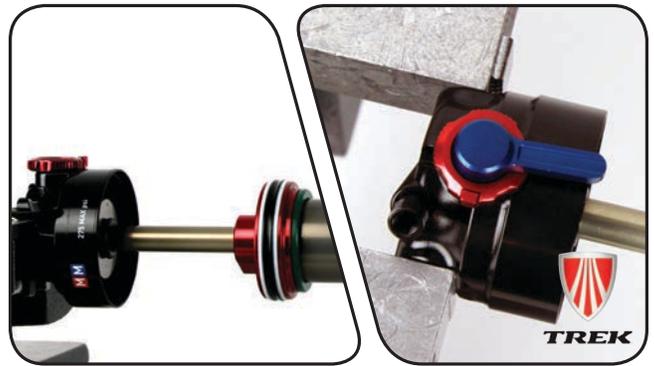
AIR CAN INSTALLATION

- 1** Clamp the shaft eyelet into a bench vise, so that the shock is horizontal.

Apply Parker® O-Lube to the seal head/air piston seals.

Ensure that the top out bumper is installed.

Use aluminum vise soft jaws to protect the damper eyelet when clamped.



- 2** Apply a small amount of blue threadlock to the air can threads.

Do not get any threadlock on the o-ring; it will prevent the o-ring from sealing properly.



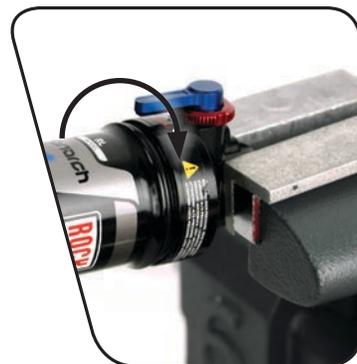
3 Position the threaded side of the air can over the damper body eyelet. Firmly press the air can onto the air piston and damper body until the air can is approximately 30 mm from the shaft eyelet threads. Pour/inject 0.3 mL of Maxima® Maxum4 Extra 15w 50 into the air can.



4 Continue to press the air can onto the damper body until the air can threads and shaft eyelet threads make contact. Thread the air can clockwise into the shaft eyelet. Tighten the air can, by hand, into the shaft eyelet.

Do not allow the air can outer o-ring to get pinched between the eyelet body and the air can.

High volume air cans only: Grip the lower portion of the can. Otherwise the high volume sleeve will rotate independent of the air can preventing tightening of the air can.



5 Remove the shock from the vise. Turn it over and clamp the damper eyelet into the vise, so the shock is vertical.

Use isopropyl alcohol and a clean rag to clean the outside of the air can.

Use aluminum vise soft jaws to protect the damper eyelet when clamped.



6 Stabilize the air can with a strap wrench to prevent it from rotating. Use a torque wrench with a 13 mm (Trek®: 40mm) crowfoot socket to tighten the air can to 17 N·m (150 in-lb).

Autosag air cans only: Reinstall the autosag sleeve and retaining o-ring. Clock the autosag sleeve so the knob is between 7 and 8 o'clock when the rebound knob is at 12 o'clock.



7 Use a Schrader valve tool to install a new Schrader valve into the air can valve.



- 8** Use a shock pump to inflate the shock to the desired air pressure, then install the valve cap.



- 9** Remove the shock from the vise. Spray isopropyl alcohol on the entire shock and wipe it with a clean rag.

- 10** Install the sag indicator o-ring.



- 11** Reinstall the shock mounting hardware (see the [Mounting Hardware And Bushing Service](#) section).

This concludes the service for the Monarch RL/RT rear shock. Reinstall the shock to the bicycle frame according to the bicycle manufacturer's instructions.

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