

ROCKSHOX

DELUXE

2018-2022 Deluxe



SERVICE MANUAL



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!

⚠ WARNING - PRESSURIZED DEVICE

Suspension products may contain pressurized air, nitrogen, springs, and oil.

Always wear certified safety glasses (ANSI Z87.1, EN166 EU) when performing any service on a suspension product (suspension fork, rear shock, seatpost).

Failure to wear proper safety glasses can result in **SERIOUS INJURY OR DEATH**.

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/en/company/about/environmental-policy-and-recycling.

Suspension Safety Precautions and Warnings

SAFETY INSTRUCTIONS

To avoid serious injury or death, you **MUST** understand and follow the safety information in this document.

WARNING - PRESSURIZED DEVICE

Suspension products may contain pressurized air, nitrogen, springs, and oil.

Always wear certified safety glasses (ANSI Z87.1, EN166 EU) when performing any service on a suspension product (suspension fork, rear shock, seatpost).

DO NOT attempt to disassemble a suspension product before the product is fully depressurized. Follow depressurization procedures and remove the air valve as instructed, before attempting disassembly of a suspension product.

When performing service on a suspension product, keep your eyes, face, and body away from any part or lubricant that can suddenly eject under high pressure. DO NOT direct any pressurized suspension part at a person.

DO NOT attempt to puncture, crush, or incinerate any assembled suspension product.

Failure to follow these preventative measures can result in SERIOUS INJURY OR DEATH.

WARNING - CRASH HAZARD

Parts must be tightened to the specified torque.

To avoid separation of parts, threadlocker must be applied as instructed. Failure to apply threadlocker could result in separation of the parts.

Retaining rings must be fully seated in the retaining ring groove. Confirm the retaining ring is fully seated in the retaining ring groove after installation.

Do not use vinegar of any type to clean any part of a RockShox suspension product. Vinegar can cause permanent damage to parts which can, over time, result in product structural failure.

Failure to follow these preventative measures can result in SERIOUS INJURY OR DEATH.

WARNING

Do not ingest oil, fluid, grease, lubricant, or cleaner. Ingestion could lead to SERIOUS INJURY OR DEATH. Seek immediate medical attention if any oil, fluid, grease, lubricant, or cleaner is ingested.

CAUTION

Suspension products may contain lubricants which can lead to skin irritation. Always wear nitrile gloves when servicing suspension products. Failure to properly protect your skin can result in irritation. Seek medical attention if your skin is adversely affected by any suspension oil, fluid, grease, lubricant, and/or cleaner.

Always wear safety glasses. Do not allow oil, fluid, grease, lubricant, or cleaner to contact your eyes or face. Seek immediate medical attention if irritation occurs.

Use care when working with sharp tools and parts. Never use sharp tools coated with oil and/or grease. Clean and remove all oil and/or grease from your hands and gloves, and tools before working with any sharp tool or part. Failure to do so can result in personal injury.

Place an oil pan on the floor underneath the product during service to catch any drained or spilled fluids. To avoid a slip and fall, and possible injury or harm, immediately clean any oil, fluid, grease, or lubricant from the floor in your work area.

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Part Preparation and Service Procedures

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 RockShox Suspension Cleaner or isopropyl alcohol and a clean, lint-free shop towel. For hard to reach places (e.g. upper tube, lower leg), wrap a clean, lint-free shop towel around a non-metallic dowel to clean the inside.

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

⚠ WARNING - CRASH HAZARD

DO NOT use vinegar of any type to clean any part of a RockShox suspension product. Vinegar can cause permanent damage to parts which can, over time, result in product structural failure, serious injury, and possibly death.



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 RockShox 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.

⚠ WARNING - CRASH HAZARD

Parts must be tightened to the specified torque. Failure to do so can result in SERIOUS INJURY OR DEATH.



Model Code Identification

Product model code and specification details can be identified with the serial number on the product. Model codes can be used to identify the product type, series name, model name, and product version associated with the production model year. Product details can be used to identify spare parts, service kit, and lubricant compatibility.

Model Code example: **RS-DLX-RL-B1**

RS = Product Type - **Rear Shock**

DLX = Platform/Series - **Deluxe**

RL = Model - **Rebound Lockout**

B1 = Version - (**B** - second generation, **1** - first iteration)

To identify the model code, locate the serial number on the product and enter it into the **Search by Model Name or Serial Number** field at www.sram.com/service.

Warranty and Trademark

For SRAM Warranty information, visit: www.sram.com/warranty.

For SRAM Trademark information, visit: www.sram.com/website-terms-of-use.

Getting Started

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 shock damper body	Extends wiper seal lifespan
		Minimizes damage to shock damper body
		Minimizes air can contamination
Every 50 Hours	Perform air can service	Reduces friction
		Restores small bump sensitivity
Every 200 Hours	Perform damper and spring service	Extends suspension lifespan
		Restores damping performance

Record Your Settings

Use the charts below to record your shock settings to return your shock 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.
50			
100			
150			
200			

Torque Values

Part	Tool	Torque
Air can (shaft eyelet)	13 mm crowfoot (standard eyelet)	10 N•m (90 in-lb)
	29 mm crowfoot (bearing eyelet)	
	54 mm crowfoot (trunnion mount)	
Bolt (x2) - damper body bearing eyelet assembly to damper body	3 mm bit socket	6.2 N•m (55 in-lb)
Piston nut	2018-2019 R/2020-2022 SELECT R: 10 mm socket 2018 RL/RT: 10 mm socket 2019 RL/RT: 12 mm socket 2020-2022 SELECT+ RL/RT: 12 mm socket 2018-2020 RT3: 12 mm socket 2020-2022 ULTIMATE RCT: 12 mm socket 2020-2021 NUDE RL3/RLC3: NUDE piston bolt socket 2022-2023 NUDE2 RL3/RLC3: NUDE piston bolt socket 2022-2023 SCOTT RL3: NUDE piston bolt socket 2018-2019 RLR: 10 mm socket 2020-2022 Ultimate Remote: 10 mm socket	RCT / NUDE / NUDE2 / SCOTT RL3: 6.2 N•m (55 in-lb) RT3 / RLR/Ultimate Remote / RL/RT / R: 4.5 N•m (40 in-lb)
Lock Piston (RCT/NUDE/NUDE2/RL3)	RCT/NUDE Lock Piston Tool	4.5 N•m (40 in-lb)
Seal head/air piston	17 mm crowfoot	28 N•m (248 in-lb)
Ferrule lock screw (RLR/Ultimate Remote only)	2 mm hex	0.9 N•m (7 in-lb)
Cable set screw (RLR/Ultimate Remote only)	2 mm hex	0.8 N•m (7 in-lb)
Cable spool cap (RLR/Ultimate Remote only)	T25 TORX	0.75 N•m (6-7 in-lb)

Comprehensive Parts, Tools, and Supplies List

Parts

- Deluxe Service Kit - 50 hours
- Deluxe Service Kit - 200 hours
- Deluxe Remote Service Kit - 200 hours
- Deluxe Remote Spring Service Kit
- Rear Shock Eyelet Bearing Kit - (includes eyelet bearings, 17 and 22mm dust covers, and spacer for integrated bearing eyelets) - Deluxe/Super Deluxe A1+ (2017+)
- Rear Shock Eyelet Bearing Dust Cover Kit - (includes 17 and 20mm dust covers for integrated bearing eyelets) - Deluxe/Super Deluxe A1+ (2017+)
- Rear Shock Bearing Kit - Deluxe/Super Deluxe
- Eyelet Bearing Deluxe/Super Deluxe (Damper body only)
- Shift cable and housing

Safety and Protection Supplies

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

Lubricants and Fluids

- Isopropyl alcohol or RockShox Suspension Cleaner
- Loctite Threadlocker Blue 242 (or equivalent)
- Maxima Extra 15w50 suspension oil or Maxima PLUSH Dynamic Suspension Lube Light
- Maxima PLUSH 7wt Suspension Oil
- RockShox Dynamic Seal Grease

Bicycle Tools

- High Pressure Shock Pump (600 psi)
- Schrader valve core tool

RockShox Tools

- RockShox 1/2" x 1/2" rear shock bushing removal/installation tool
- Rear Shock DU Bushing Sizing Tool 1/2"x1/2" (for sizing bushings and installing hardware) - RockShox
- RockShox Air Valve Adapter Tool - Rear Shock
- RockShox Monarch/Deluxe IFP Height Tool
- RockShox NUDE Piston Bolt Socket
- RockShox RCT / NUDE Lock Piston Tool
- RockShox Rear Shock Vise Blocks 3-hole
- RockShox Rear Shock Body Vise Block

Common Tools

- Adjustable wrench
- Bearing press tool: 22 mm (OD) x 10 mm (ID)
- Bench vise with aluminium soft jaws
- Cable and housing cutters
- Crowfoot socket wrenches: 13 mm, 17 mm, 29 mm, 54 mm
- Hammer
- Hex bit sockets: 1.5 mm, 2 mm, 3 mm
- Hex wrenches: 1.5 mm, 2 mm, 3 mm
- Metric caliper or small metric ruler
- Needle nose pliers
- Open end wrenches: 13 mm, 17 mm, 29 mm, 54 mm
- Pick
- Punch - small diameter
- Sockets: 10 mm, 12 mm
- Socket (outer diameter 14.5 mm - 16.25 mm) - Use with Rear Shock DU Bushing Sizing Tool
- Strap wrench
- Torque wrench
- TORX wrench: T25

Use ONLY RockShox, SRAM, and Maxima suspension oils/fluids and grease, unless otherwise specified. Use of any other lubricants can damage seals and decrease performance.

NOTICE

Use only 2018-2022 (Gen A-B) Deluxe spare parts and service kits for 2018-2022 (Gen A-B) Deluxe.

2023+ (Gen C) Deluxe spare parts and service kits are NOT compatible with 2018-2022 (Gen A-B) Deluxe.

⚠ WARNING

Before disassembly or service of any air system remove the air pressure from all air chambers and remove the air valve cores, unless otherwise instructed.

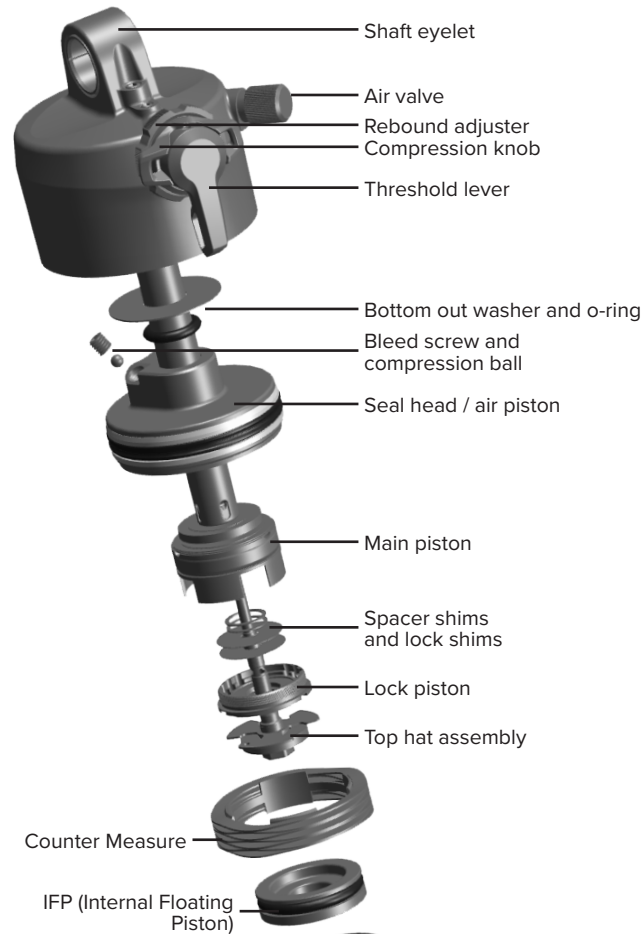
If your shock will not return to full extension, do not attempt to service or disassemble your shock. Attempting to service a shock that will not return to full extension can cause severe and/or fatal injuries.

SAFETY INSTRUCTIONS

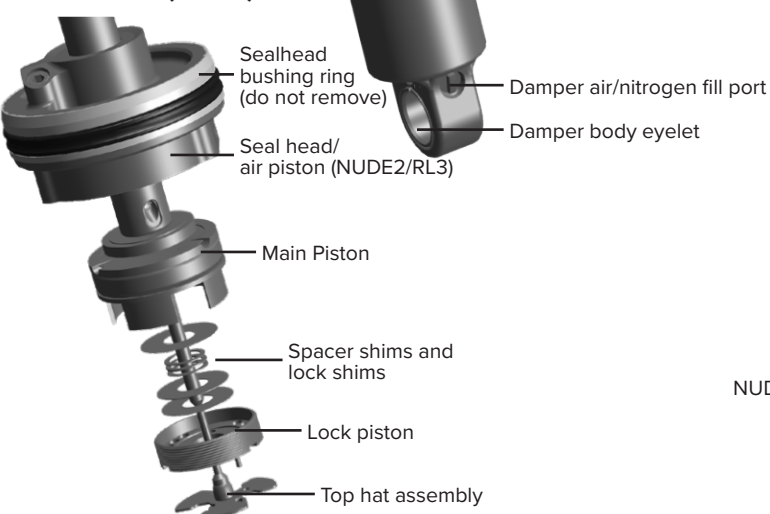
Always wear safety glasses and nitrile gloves when working with suspension grease and oil.

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

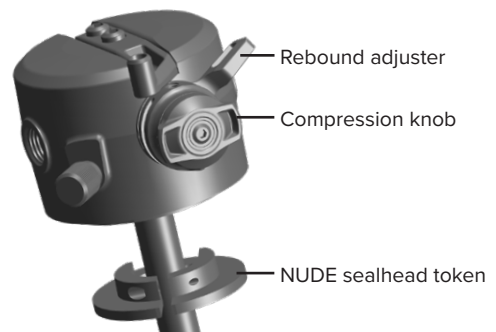
ULTIMATE RCT B2 (2020-2022)



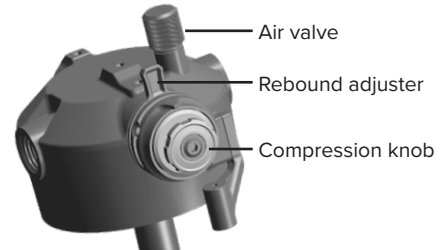
NUDE B1 (2020-2021) NUDE2 C1 (2022+) SCOTT RL3 C1 (2022+)



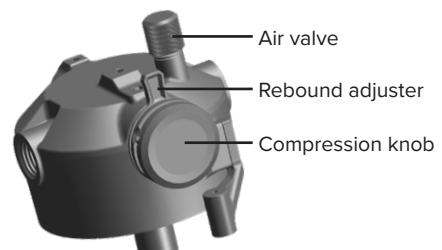
NUDE B1 (2020-2021)



NUDE2 RLC3 C1 (2022+)



NUDE2 RL3 C1 (2022+) SCOTT RL3 C1 (2022+)

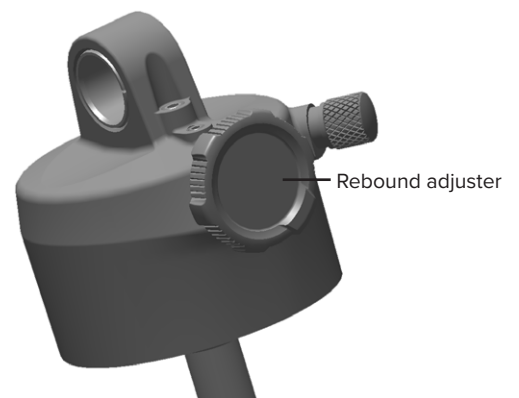
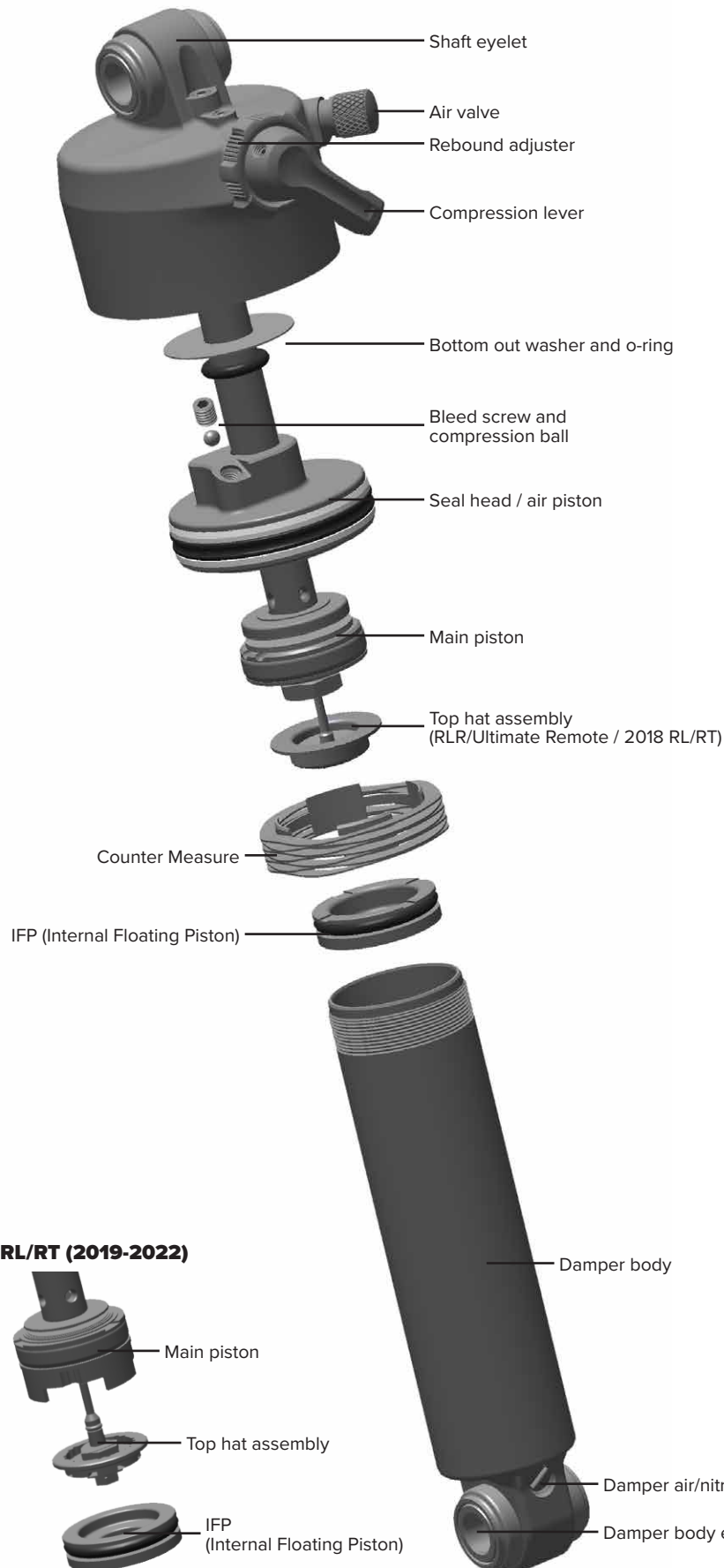


ULTIMATE RCT B2 (2020-2022) NUDE2 C1 (2022+) NUDE B1 (2020-2021) SCOTT RL3 C1 (2022+)

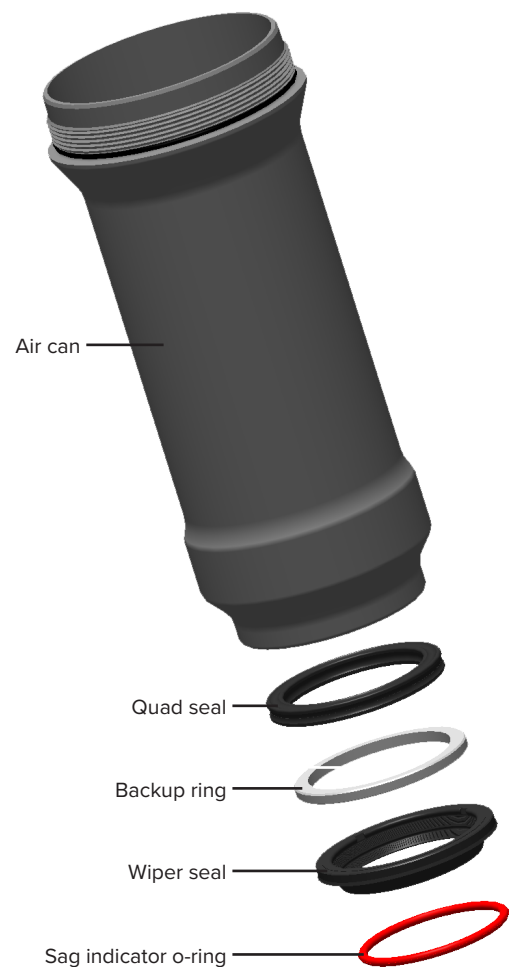


RT3 A2 (2018) / RT3 B1 (2019-2021)
RL/RT A2 (2018) / RL/RT B1 (2019)
SELECT+ RL/RT B2 (2020-2022)

R A2 (2018)
R B1 (2019)
SELECT R B2 (2020-2022)

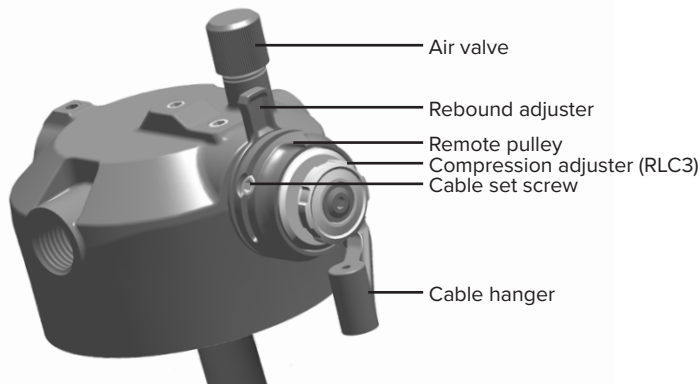
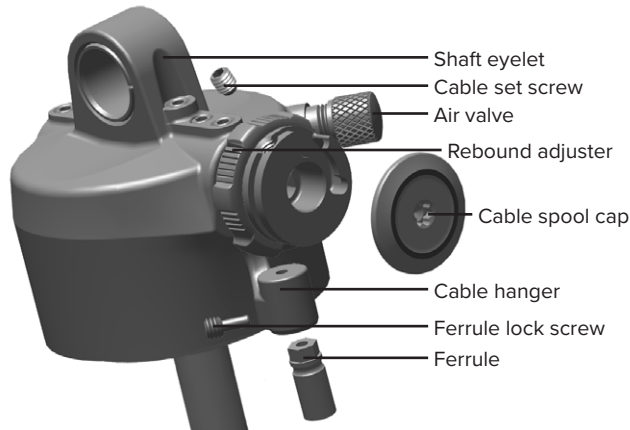


Air Can

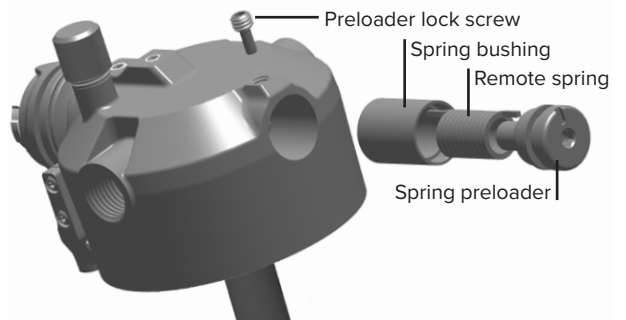
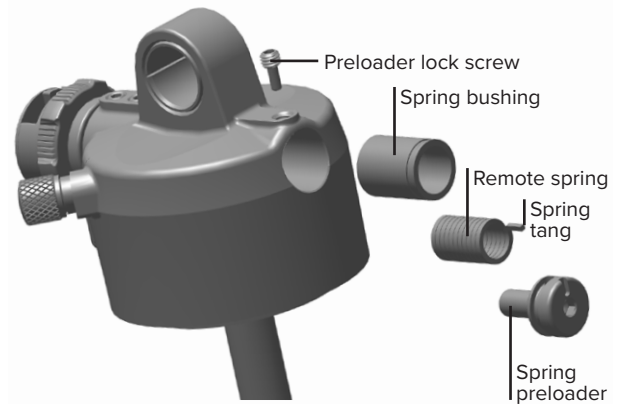


RL/RT (2019-2022)

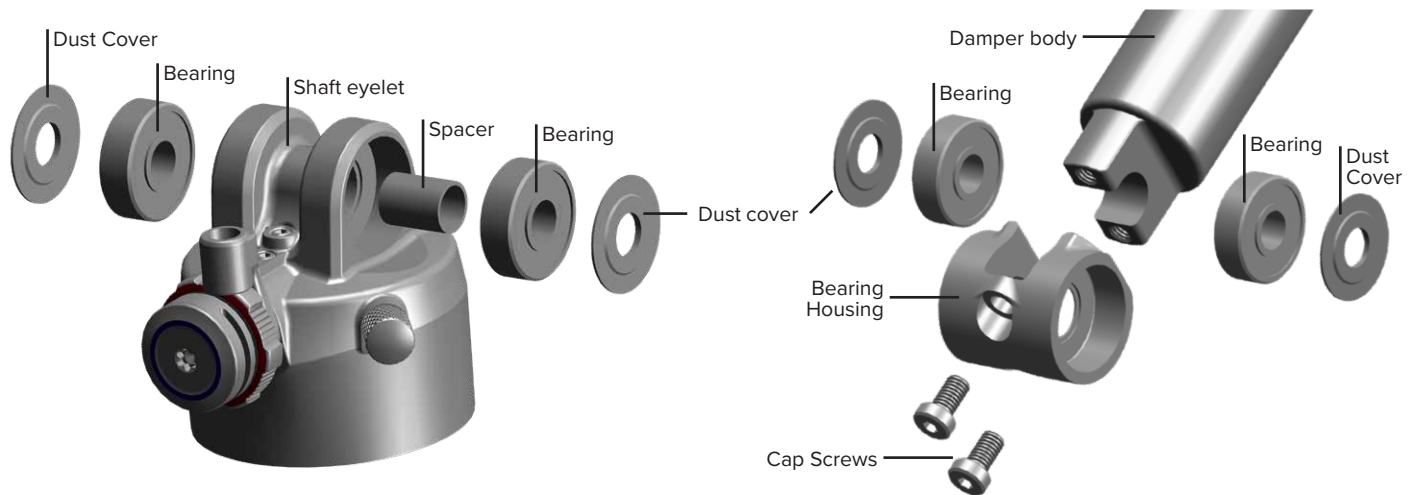
**RLR A1 (2018), RLR B1 (2019)
ULTIMATE REMOTE B2 (2020-2022)**



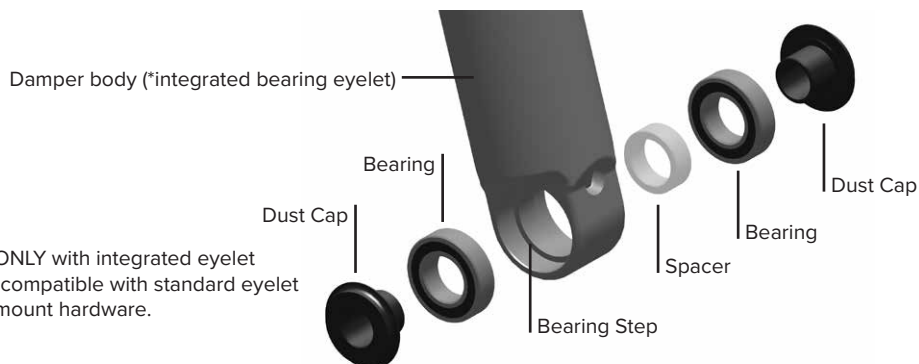
**NUDE B1 (2020-2021), NUDE2 C1 (2022+)
SCOTT RL3 C1 (2022+)**



Deluxe Bearing Mount



Integrated Bearing Eyelet



*Compatible ONLY with integrated eyelet bearings; not compatible with standard eyelet bushing and mount hardware.

Remote Cable and Housing Removal - RLR / Ultimate Remote / NUDE / NUDE2 / SCOTT RL3

Prior to servicing the rear shock, remove the remote cable and housing from the shock, then remove the shock from the bicycle frame according to the bicycle manufacturer's instructions. Replace the cable and housing after performing shock service (see the [Remote Cable and Housing Installation](#) section).

Parts, Tools, and Supplies

Safety and Protection Supplies

- Nitrile gloves
- Safety glasses

Common Tools

- Cable and housing cutters
- Hex wrench: 2 mm
- TORX wrench: T25

Remote Cable and Housing Removal

Deluxe RLR / Ultimate Remote is pictured. Procedures are the same for NUDE B1, NUDE2 C1, and SCOTT RL3.

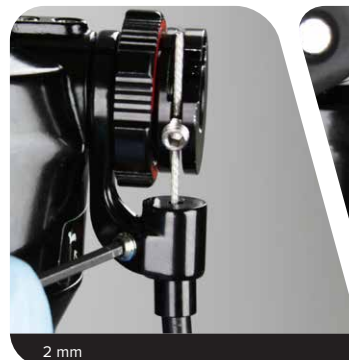
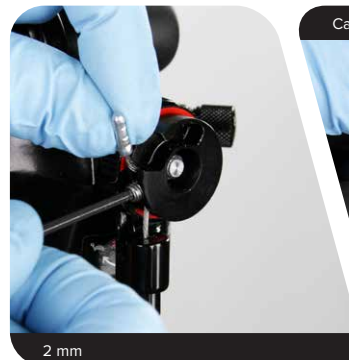
- 1** Use a T25 mm hex wrench to remove the cable spool cap.
The cable spool will rotate with the spool cap. Continue to rotate the spool cap counter-clockwise until it begins to loosen.



- 2** Use a 2 mm hex wrench to loosen the cable set screw, then use cable and housing cutters to cut the cable.

Use a 2 mm hex wrench to loosen the ferrule lock screw. Remove the ferrule, housing, and cable from the cable bracket.

Discard the cable, housing, and ferrule.



Shock Eyelet Service - Standard Eyelet

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.

Parts, Tools, and Supplies

Parts

- Deluxe Service Kit - 50 hours
- Deluxe Service Kit - 200 hours
- Deluxe Remote Service Kit - 200 hours

Safety and Protection Supplies

- Apron
- Clean, lint-free shop towels
- Nitrile gloves
- Safety glasses

RockShox Tools

- RockShox 1/2" x 1/2" rear shock bushing removal/installation tool
- Rear Shock DU Bushing Sizing Tool 1/2"x1/2" (for sizing bushings and installing hardware) - RockShox

Lubricants and Fluids

- RockShox Dynamic Seal Grease

Common Tools

- Bench vise with aluminium soft jaws
- Open end wrenches: 13 mm (2)
- Adjustable wrench

Mounting Hardware Removal

NOTICE

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

Some mounting hardware is easily removed using only your fingers. Try to remove the end spacers with your fingernail or small screwdriver, then push the bushing pin out of the bushing. If this works, continue to the next section.

If you are unable to remove the mounting hardware using your fingers, use the RockShox 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.



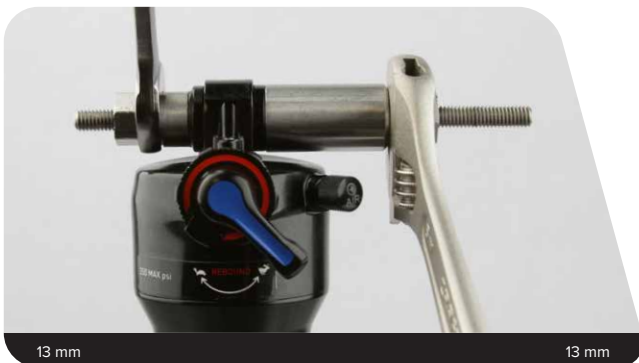
- 3 Clamp the catcher in a vise or hold it secure with a 13 mm open end or adjustable wrench.

NOTICE

Do not scratch the air can as you turn the 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 to remove the end spacer and the bushing pivot pin.



- 4** If the bushing pin does not remove easily, reinsert the threaded rod and push pin through the eyelet shaft.

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.

Repeat steps 2-4 for the damper eyelet.

Set the mounting hardware aside until you have finished servicing the shock.



Eyelet Bushing Removal

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.

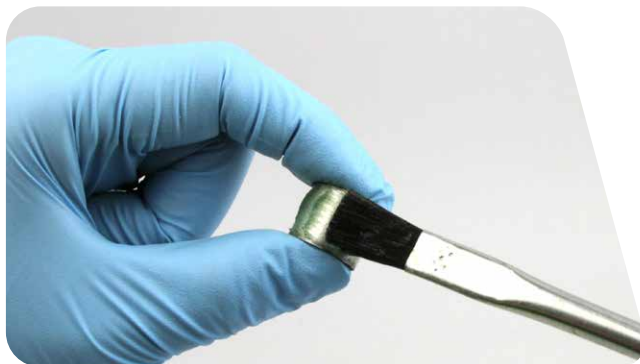


- 3** Unthread the catcher from the threaded rod. Remove the tool from the shaft eyelet and discard the old bushing.
Repeat steps 1-3 for the other eyelet.
Set the bushings aside until you have finished servicing your shock.



Eyelet Bushing Installation

- 1 Apply a light layer of grease to the outside of the new bushing.



- 2 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.

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.

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.



Eyelet Bushing Sizing

A new standard eyelet bushing can be sized before the mount hardware pin is installed to ensure optimal fit and function.

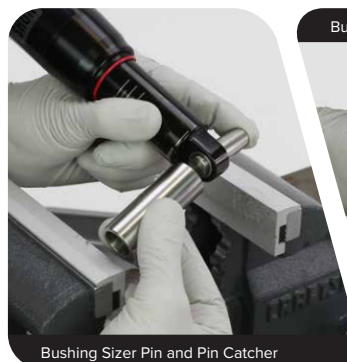
NOTICE

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

- 1 Insert the Bushing Sizer Pin into the eyelet bushing.



- 2 On the opposite side of the eyelet, position and hold the Bushing Sizer Pin Catcher against the eyelet.



- 3 Clamp the Bushing Sizer Pin and Pin Catcher in the vise.



- 4** Hold the shock and Bushing Sizer steady and slowly close the vise to drive the Bushing Sizer Pin through the bushing and into the Pin Catcher.



- 5** When the center of the Bushing Sizer Pin clears the bushing, the shock will no longer be supported by the vise. Hold the shock and Bushing Sizer Pin Catcher throughout the sizing procedure.



Shock Eyelet Service - Bearing Eyelet

Replace the bearings if they are not spinning freely, or if they are making a creaking noise.

NOTICE

Rear Shock with Bearing Mount: To avoid permanent damage, prior to rear shock disassembly and service, remove the bearing mount dust covers.

Parts, Tools, and Supplies

Parts

- Rear Shock Bearing Kit - Deluxe/Super Deluxe
- Eyelet Bearing Deluxe/Super Deluxe (Damper body only)

Safety and Protection Supplies

- Apron
- Clean, lint-free shop towels
- Nitrile gloves
- Safety glasses

Common Tools

- Bearing press tool: 22 mm (OD) x 10 mm (ID)
- Hammer
- Hex bit socket: 3 mm
- Small diameter bearing punch
- Torque Wrench
- Vise with soft jaws

Bearing Removal

- 1 Remove the dust cover.



- 2 To prevent damage to the air valve, remove the bearing on the side opposite of the air valve first. Place a punch against the back of the opposite bearing, and tap out the bearing.



- 3 Turn the shock over and place the punch against the back of the other bearing, and tap out the bearing.

NOTICE

Do not damage the air valve when tapping out the bearing.



- 4 Spray isopropyl alcohol in the bearing bores and clean them with a shop towel.



Bearing Installation

- 1 Install a new bearing into one bearing bore, then clamp the eyelet and bearing into a vise with soft jaws. Press the bearing into the bearing bore until it is flush with the eyelet.

Loosen the vise, and align the bearing press tool with the bearing, then tighten the vise. Press the bearing into the bearing bore until it stops.

NOTICE

Do not overtighten the bearing. Overtightening can damage the bearing and cause it to malfunction.

To prevent damage to the bearing, make sure that the bearing press tool contacts both the inner and outer races of the bearing.



22 mm (OD) x 10 mm (ID) bearing press tool



Bearing press tool

- 2 Insert a new spacer into the eyelet, then install a new bearing into the other bearing bore. Clamp the eyelet and bearing into a vise with soft jaws, then press the bearing into the bearing bore until it is flush with the eyelet.

Loosen the vise, and align the bearing press tool with the bearing, then tighten the vise. Press the bearing into the bearing bore until it stops.

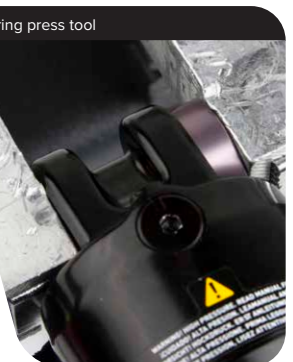
NOTICE

Do not overtighten the bearing. Overtightening can damage the bearing and cause it to malfunction.

To prevent damage to the bearing, make sure that the bearing press tool contacts both the inner and outer races of the bearing.



Bearing press tool



- 3** Remove the shock from the vise. The bearings should sit approximately 1 mm below the outer edge of the bearing bore.

Before shock disassembly and service, the bearing dust covers must be removed.

Install the dust covers after shock service and before installing the shock on the bicycle.



Shock Eyelet Service - Integrated Bearing

Replace the bearings if they are not spinning freely, or if they are making a creaking noise.

NOTICE

Integrated eyelet bearings are ONLY compatible with a damper body with an integrated bearing eyelet. Refer to the RockShox Spare Parts Catalog for available damper body kits.

Deluxe Integrated Eyelet Bearing Dust Covers are available in 17 mm and 20 mm width only, and are only compatible with frames with 17 mm and 20 mm shock mounts. Confirm frame compatibility with your frame manufacture before installation.

Deluxe Integrated Eyelet Bearing Dust Covers are NOT compatible with additional mount hardware spacers. Do NOT install additional spacers.

NOTICE

Integrated Bearings: To avoid permanent damage, prior to rear shock disassembly and service, remove the integrated bearing dust covers.

Parts, Tools and Supplies

Parts

- Rear Shock Eyelet Bearing Kit - (includes eyelet bearings, 17 and 20mm dust covers, and spacer for integrated bearing eyelets) - Deluxe/Super Deluxe A1+ (2017+)
- Rear Shock Eyelet Bearing Dust Cover Kit - (includes 17 and 20mm dust covers for integrated bearing eyelets) - Deluxe/Super Deluxe A1+ (2017+)

Safety and Protection Supplies

- Apron
- Clean, lint-free shop towels
- Nitrile gloves
- Safety glasses

Lubricants and Fluids

- RockShox Suspension Cleaner or isopropyl alcohol

Common Tools

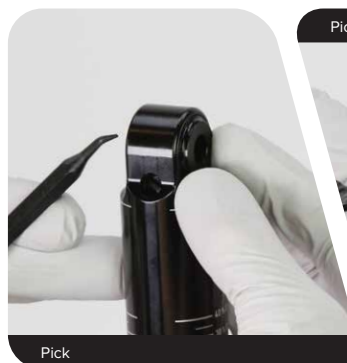
- Hammer
- Pick
- Small diameter bearing punch
- Socket (outer diameter 14.5 mm - 16.25 mm) - (for integrated bearing removal)
- Vise with soft jaws

Integrated Bearing Removal

NOTICE

To prevent damage to the shock, use aluminium soft jaws.

- 1 Remove the dust covers.
Push one dust cover out of the bearing with a pick.
Push the other dust cover out of the bearing with a pick.

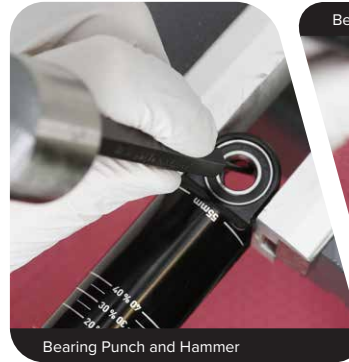


2 Position the eyelet flat in the vise.

Use a bearing punch to push the spacer to one side.

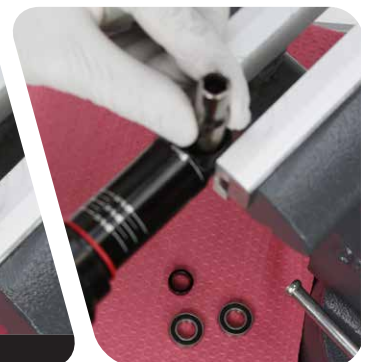
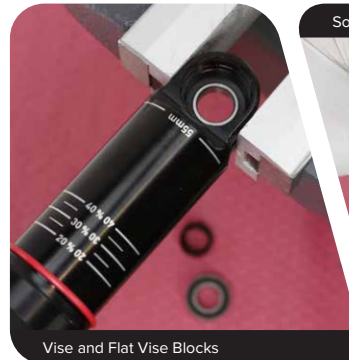
Place a bearing punch against the back of the opposite bearing, and tap out the bearing.

Discard the bearing and spacer.



3 Turn the shock over, place a socket (outer diameter 14.5 mm - 16.25 mm) against the back of the other bearing, and tap out the bearing.

Discard the bearing.



- 4 Clean the bearing bores with a shop towel.



Integrated Bearing Installation

- 1 Install a new bearing flat into one bearing bore, then clamp the eyelet and bearing into a vise with soft jaws. Press the bearing into the bearing bore until it is flush with the eyelet.



- 2 Loosen the vise, and align a socket (outer diameter: 17.5 mm - 18.4 mm) with the outer bearing race, then tighten the vise. Press the bearing into the bearing bore until it stops against the inner eyelet step.

NOTICE

Do not continue to press the bearing in after the stop point is felt. Continuing to press after the stop point is felt can permanently damage the eyelet integrated bearing step and the bearing. If the eyelet bearing step is damaged, the damper body must be replaced.

To prevent damage to the bearing, confirm the socket contacts the outer race of the bearing.

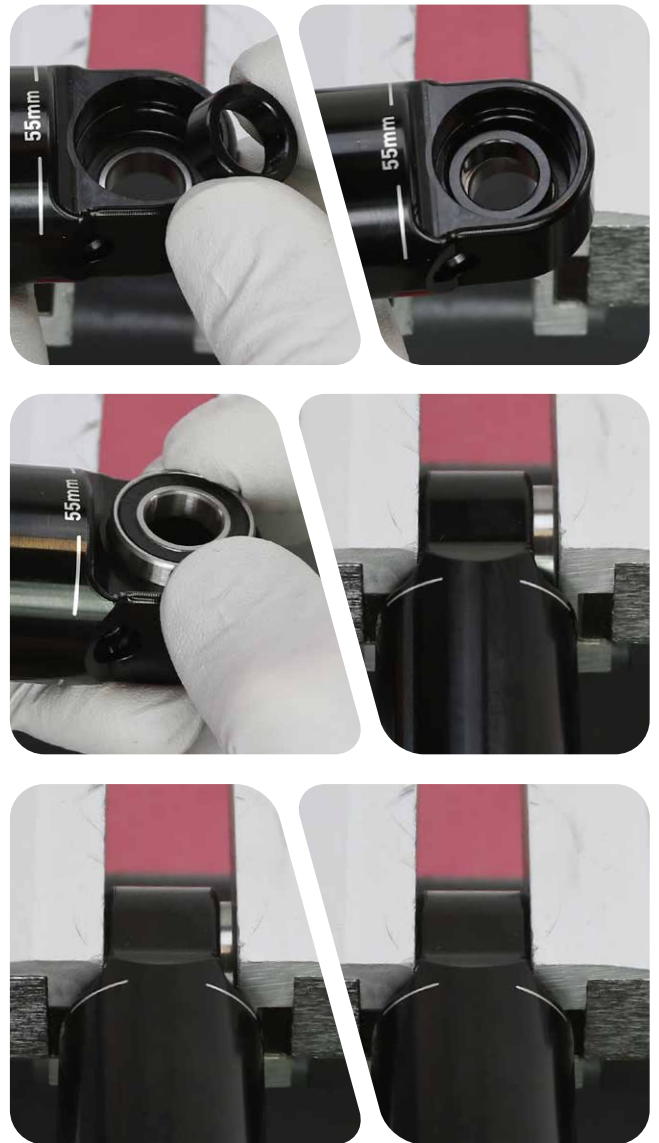


- 3 Remove the shock from the vise. The bearing should sit approximately 1 mm below the outer edge of the bearing bore.



- 4** Insert a new spacer into the eyelet, onto the bearing, then install a new bearing flat into the bearing bore.

Clamp the eyelet and bearing into a vise with soft jaws, then press the bearing into the bearing bore until it is flush with the eyelet.



- 5** Loosen the vise, align a socket (outer diameter: 17.5 mm - 18.4 mm) with the outer bearing race, then tighten the vise. Press the bearing into the bearing bore until it stops against the inner eyelet step.

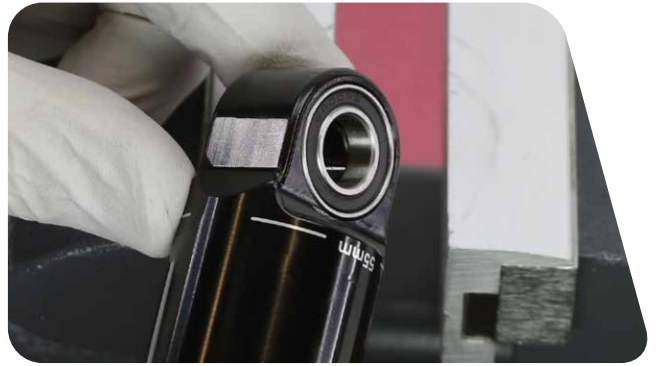
NOTICE

Do not continue to press the bearing in after the stop point is felt. Continuing to press after the stop point is felt can permanently damage the eyelet integrated bearing step and the bearing. If the eyelet bearing step is damaged, the damper body must be replaced.

To prevent damage to the bearing, confirm the socket contacts the outer race of the bearing.



- 6** Remove the shock from the vise. The bearing should sit approximately 1 mm below the outer edge of the bearing bore.



- 7** The spacer may be off-center. Push the spacer until it is centered in between both bearings.

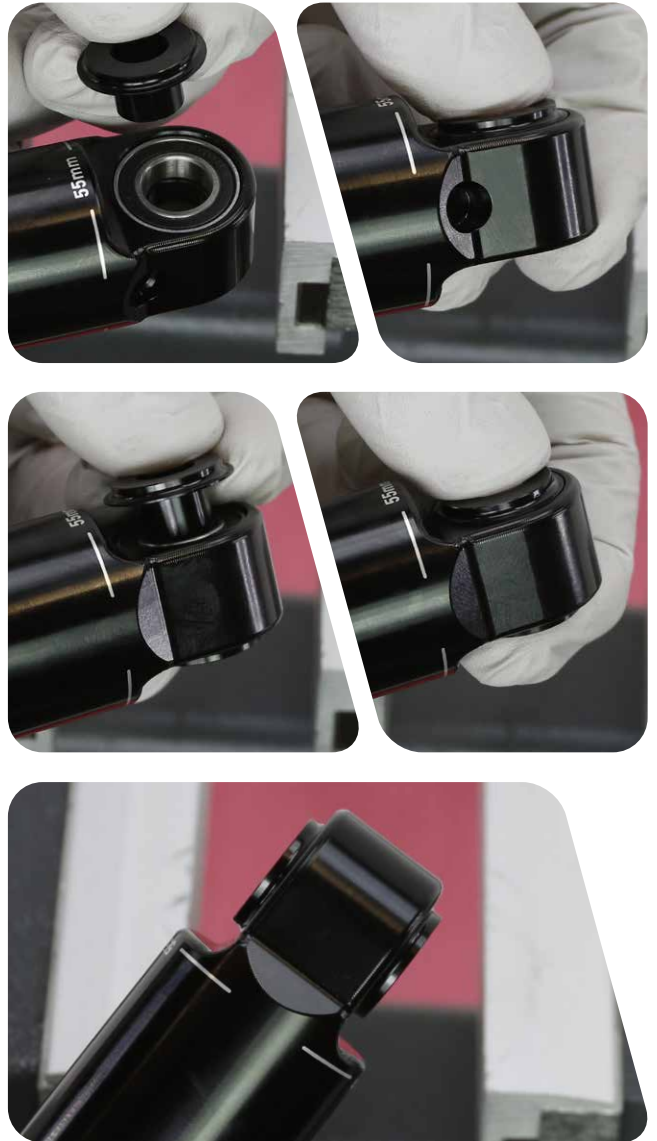


- 8 Install new dust covers if the original dust covers are worn or damaged.

NOTICE

Before shock disassembly and service, the bearing dust covers **MUST** be removed.

Install the dust covers only **AFTER** shock service is complete, and before installing the shock on the bicycle.



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, Tools and Supplies

Parts

- Deluxe Service Kit - 50 hours
- Deluxe Service Kit - 200 hours
- Deluxe Remote Service Kit - 200 hours
- Deluxe Remote Spring Service Kit

Safety and Protection Supplies

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

Lubricants and Fluids

- Isopropyl alcohol or RockShox Suspension Cleaner
- Loctite Threadlocker Blue 242
- Maxima Extra 15w50 suspension oil or Maxima PLUSH Dynamic Suspension Lube Light
- Maxima PLUSH 7wt Suspension Oil
- RockShox Dynamic Seal Grease

Bicycle Tools

- Schrader valve core tool
- High Pressure Shock Pump (600 psi)

RockShox Tools

- RockShox Air Valve Adapter Tool - Rear Shock
- RockShox Monarch/Deluxe IFP Height Tool
- RockShox NUDE Piston Bolt Socket
- RockShox RCT / NUDE Lock Piston Tool
- RockShox Rear Shock Vise Blocks 3-hole
- RockShox Rear Shock Body Vise Block

Common Tools

- Bench vise with aluminium soft jaws
- Crowfoot socket wrenches: 13 mm, 17 mm, 29 mm, 54 mm
- Hex wrenches: 1.5 mm, 2 mm, 3 mm
- Hex bit sockets: 1.5 mm, 2 mm, 3 mm
- Metric caliper or small metric ruler
- Open end wrenches: 13 mm, 17 mm, 29 mm, 54 mm
- Pick
- Sockets: 10 mm, 12 mm
- Strap wrench
- Torque wrench
- Needle nose pliers

Use ONLY RockShox, SRAM, and Maxima suspension oils/fluids and grease, unless otherwise specified. Use of any other lubricants can damage seals and decrease performance.

NOTICE

Use only 2018-2022 (Gen A-B) Deluxe spare parts and service kits for 2018-2022 (Gen A-B) Deluxe.
2023+ (Gen C) Deluxe spare parts and service kits are NOT compatible with 2018-2022 (Gen A-B) Deluxe.

⚠ WARNING

Before disassembly or service of any air system remove the air pressure from all air chambers and remove the air valve cores, unless otherwise instructed.

If your shock will not return to full extension, do not attempt to service or disassemble your shock. Attempting to service a shock that will not return to full extension can cause severe and/or fatal injuries.

SAFETY INSTRUCTIONS

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

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

NOTICE

When replacing seals and o-rings, use your fingers or a pick to remove the seal or o-ring. Spray RockShox Suspension Cleaner on each part and clean with a shop towel. Apply grease to the new seal or o-ring. Only use RockShox Dynamic Seal Grease when servicing RockShox shocks.

To prevent damage to the shock use soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws. For bearing mount shocks, wrap a shop towel around the shaft eyelet, then clamp the eyelet flat into the vise.

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



- 1** To record your adjustment settings, turn the rebound adjuster knob counter-clockwise until it stops, while counting the number of detent clicks. This will assist you with post-service set up.

RCT / NUDE / NUDE2 / SCOTT RL3: Rotate the compression knob to the minus position.

RT3 / RL/RT: Turn the compression lever to the unlocked position.

RLR / Ultimate Remote: The compression circuit is unlocked by default once the remote cable is removed.



2 Record your air pressure setting to assist with post-service set up.

⚠ WARNING - PRESSURIZED DEVICE

Always wear certified safety glasses (ANSI Z87.1, EN166 EU).

Verify all air pressure is removed from the suspension component. Failure to do so can result in **SERIOUS INJURY OR DEATH**. Refer to the Suspension Safety Precautions and Warnings section for detailed Pressurized Device warnings and instructions.

Remove the air valve cap by hand. Use a small hex wrench to lightly depress the Schrader valve and slowly release all air pressure from the air can.

⚠ CAUTION

Do not disassemble a pressurized shock, this can cause suspension fluid or debris to forcefully eject from the shock. Wear safety glasses.

Slowly release the air from the air can to make sure the air is removed from both chambers. Quickly releasing the air can trap air in the negative chamber and cause the air can to forcefully eject from the shock upon disassembly.

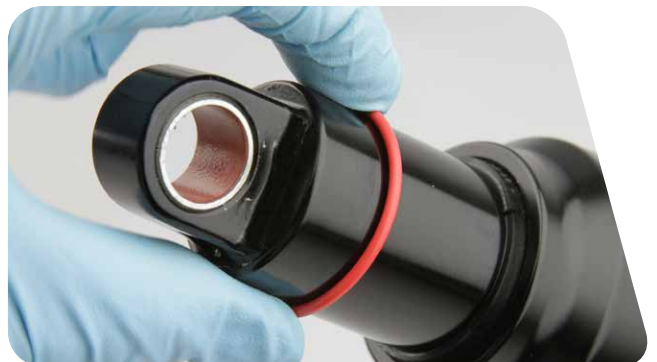
Use a Schrader valve tool to remove and reinstall the valve core from the valve body to make sure all air has been removed.



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



4 Remove the sag indicator.



- 5** Insert a shop towel through the damper body eyelet to prevent the air can from forcefully ejecting from the shock.



Bearing Mount: If previously removed, temporarily install the bearing eyelet assembly onto the damper body. Wrap a cloth towel around the bearing eyelet assembly to protect it.

⚠ CAUTION- EYE HAZARD

The air can may still have air pressure in the negative chamber, which may cause the air can to forcefully eject from the shock upon disassembly. Wear safety glasses.



- 6** Use a strap wrench to remove the air can. Wrap the strap around the section of the air can furthest from the shaft eyelet. Turn the wrench counter-clockwise to unthread the air can.

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

Standard Eyelet: Remove the shop towel from the damper body eyelet.

Bearing Mount: Remove the shop towel. Remove the bearing eyelet assembly from the damper body.

Vacuum pressure will increase as you pull the air can along the damper body, and will suddenly release when the air can is pulled over the air piston.

⚠ WARNING - PRESSURIZED DEVICE

Always wear certified safety glasses (ANSI Z87.1, EN166 EU).

Verify all air pressure is removed from the suspension component. Failure to do so can result in **SERIOUS INJURY OR DEATH**. Refer to the Suspension Safety Precautions and Warnings section for detailed Pressurized Device warnings and instructions.

NOTICE

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

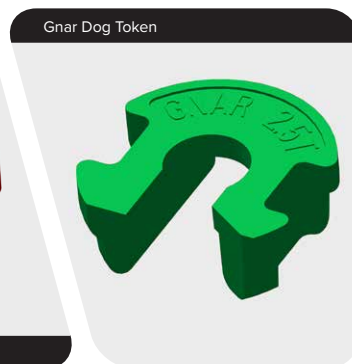
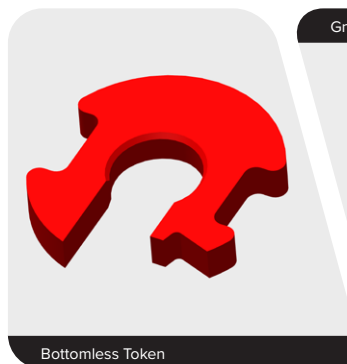


Counter Measure

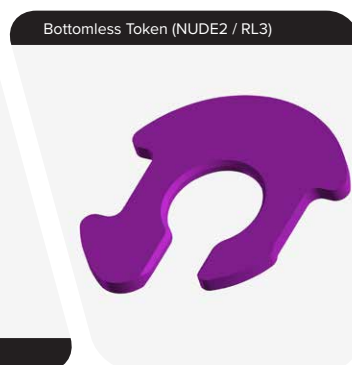
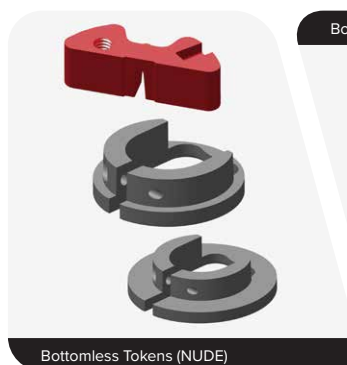
Bottomless Tuning

Bottomless Tokens and Gnar Dog Tokens reduce air volume in your rear shock and create greater progression at the end of the shock's travel. Add or remove tokens to tune your shock's bottomless feel. Gnar Dog Tokens are equivalent to 2.5 Bottomless Tokens.

Bottomless Tokens	3 Tokens Max
Gnar Dog Tokens	1 Gnar Dog Token + 2 Bottomless Tokens Max



NUDE / NUDE2 / SCOTT RL3: Do not remove Tokens.



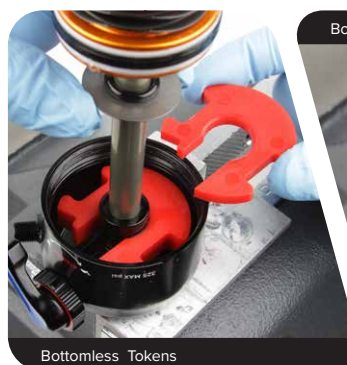
Sonar Token: Factory installed in certain Specialized shocks. Compatible with standard eyelet shocks only. Not sold separately.



Bottomless Tokens: Clamp the shaft eyelet into the vise.

Move the bottom out washer and o-ring away from the shaft eyelet, then snap the token onto the damper shaft with the tabbed side facing the air valve. Slide the token down the damper shaft until it contacts the other tokens or the eyelet. Slide the bottom out washer and o-ring onto the tokens.

Install up to three Bottomless Tokens.



Gnar Dog Token: Clamp the shaft eyelet into the vise.

Remove any existing tokens from the eyelet. Move the bottom out washer and o-ring away from the shaft eyelet, then snap the Gnar Dog Token onto the damper shaft with the flat side facing out of the eyelet. Slide the token down the damper shaft until it contacts the eyelet.

Only one Gnar Dog Token may be installed. If one Gnar Dog Token is installed, a maximum of two additional Bottomless Tokens can be installed. Slide the bottom out washer and o-ring onto the tokens.

NOTICE

The Gnar Dog Token must be the first token installed into the eyelet. Any additional Bottomless Tokens must be installed after the Gnar Dog Token is installed.



Bottomless Token Removal: Clamp the shaft eyelet into the vise.

Move the bottom out washer and o-ring away from the shaft eyelet. Use a pick to separate the token from the other tokens or the shaft eyelet, then remove the token from the shaft.

NOTICE

Do not scratch the damper shaft, shaft eyelet, or the eyelet o-ring. Scratches can cause leaks.



NOTICE

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 shop towel. Apply grease to the new seal or o-ring. Only use RockShox Dynamic Seal Grease when servicing RockShox shocks.

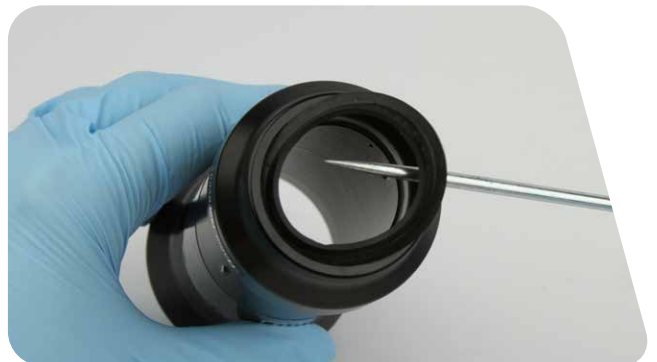
Inspect each part for scratches. Do not scratch any sealing surfaces when servicing your suspension. Scratches can cause leaks.



- 1 Use your fingers to remove the o-ring on the outside of the air can.
Spray isopropyl alcohol on the air can threads and eyelet body threads and clean them with a shop towel.
Install a new o-ring.



- 2 Use a pick to remove the air can wiper seal located in the top groove.



- 3** Use a pick to remove the backup ring from the second groove inside the air can.



NOTICE

NUDE2 / SCOTT RL3 only: Do not remove the white backup ring. The backup ring is factory fitted and installed and does not require service.



- 4** Use a pick to pierce and remove the quad seal from the bottom of the second groove in the air can.



- 5** Spray isopropyl alcohol inside the air can and clean it with a shop towel. 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.



- 6** Install the quad seal by inserting one end into the deepest groove in the air can, then push the remainder of the ring into the groove.

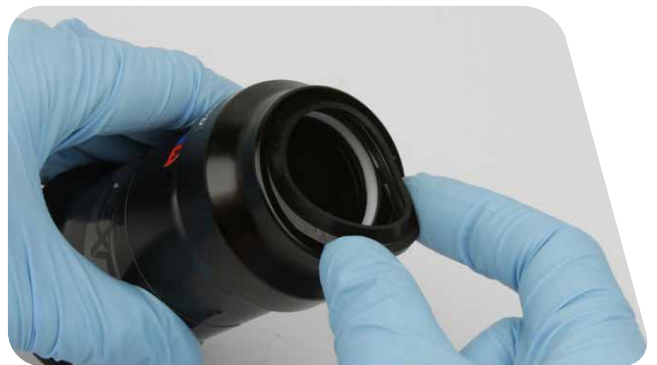


- 7** Install the backup ring by inserting one end into the air can, then push the remainder of the ring into the can, so that it rests on top of the quad seal.

NUDE2 / SCOTT RL3 only: The backup ring is factory fitted and installed and does not require service.



- 8** Orient the new wiper seal step side up. Install it into the wiper seal groove at the top of the air can.



- 9** Spray isopropyl alcohol on the air can threads and eyelet body threads and clean them with a shop towel.

Apply a small amount of RockShox Dynamic Seal Grease to the quad seal, backup ring, and wiper seal.

Set the air can aside.



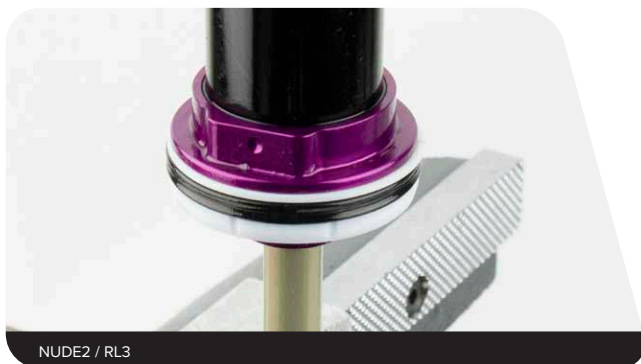
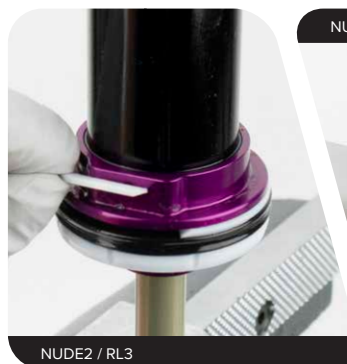
10 NUDE2 / SCOTT RL3 only: Clamp the shaft eyelet vertically in the vise.

Remove the split glide ring and the seal head/air piston seal.

Clean the seal head/air piston, then install a new split glide ring and new seal head/air piston seal.

NOTICE

Do not remove or replace the seal head bushing ring. The seal head bushing ring is sized at the factory and does not require service.

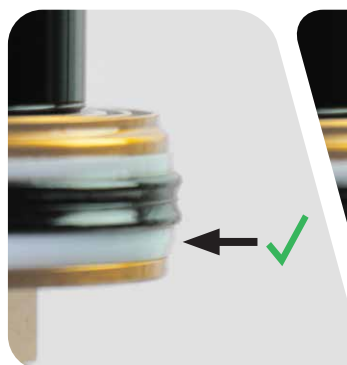
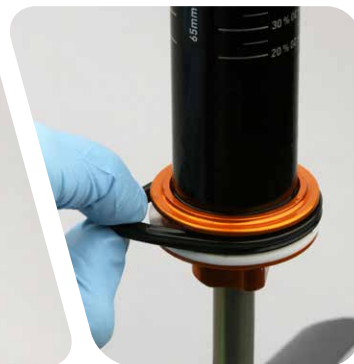


All other shocks models: Clamp the eyelet vertically in the vise.

Use your fingers to remove the seal head/air piston seal and glide rings.

Spray isopropyl alcohol on the seal head/air piston and clean it with a shop towel.

Install the thick glide ring onto the seal head/air piston, chamfered/tapered side oriented **away** from the quad ring seal. Install the thin glide ring above quad ring seal.



To continue with the **50 Hour Service** go to [Air Can Installation](#).

To continue with the **200 Hour Service** go to [Damper Body Service](#).

NOTICE

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 shop towel. Apply grease to the new seal or o-ring. Only use RockShox Dynamic Seal Grease when servicing RockShox shocks.

To prevent damage to the shock use aluminium soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws. For bearing mount shocks, wrap a shop towel around the eyelet, then clamp the eyelet flat into the vise.

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

**1****⚠ WARNING - PRESSURIZED DEVICE**

Always wear certified safety glasses (ANSI Z87.1, EN166 EU).

Verify all air pressure is removed from the suspension component. Failure to do so can result in **SERIOUS INJURY OR DEATH**. Refer to the Suspension Safety Precautions and Warnings section for detailed Pressurized Device warnings and instructions.

Use a Schrader valve tool to remove the damper air/nitrogen fill port cap. Use a small hex wrench or pick to depress the Schrader valve and release all air 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.

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

**⚠ 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 shaft eyelet at a high velocity. Wear safety glasses.

2

Use a Schrader valve tool to remove and reinstall the Schrader valve core from the damper air/nitrogen fill port to make sure all air has been removed.



- 3** Remove the shock from the vise. Turn the shock over and clamp the damper eyelet into the vise.



- 4** **NUDE only:** Use a 1.5 mm hex wrench to loosen the set screw and remove the NUDE Seal Head Token if installed.



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



6 Loosen the seal head/air piston assembly from the damper body.

⚠ WARNING - PRESSURIZED DEVICE

Always wear certified safety glasses (ANSI Z87.1, EN166 EU).

NOTICE

Do not scratch the damper shaft while removing the seal head/air piston. Scratches can cause leaks.

Remove the damper piston and damper assembly from the damper body and set it aside.

⚠ CAUTION - EYE HAZARD

If fluid is foaming from the damper body when the seal head/air piston is loosened, the IFP seal has failed and the fluid inside the damper is pressurized. This can cause the seal head/air piston assembly and damper fluid to forcefully eject from the damper body. Cover the seal head/air piston assembly with a shop towel and slowly loosen the assembly to allow the pressurized fluid to leak out between the damper body and seal head/air piston assembly.

Fluid will spill from the damper body.



7 Remove the damper body from the vise and pour the fluid into an oil pan.



NOTICE

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 shop towel. Apply grease to the new seal or o-ring. Only use RockShox Dynamic Seal Grease when servicing RockShox shocks.

To prevent damage to the shock use aluminium soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws. For bearing mount shocks, wrap a shop towel around the eyelet, then clamp the eyelet flat into the vise.

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



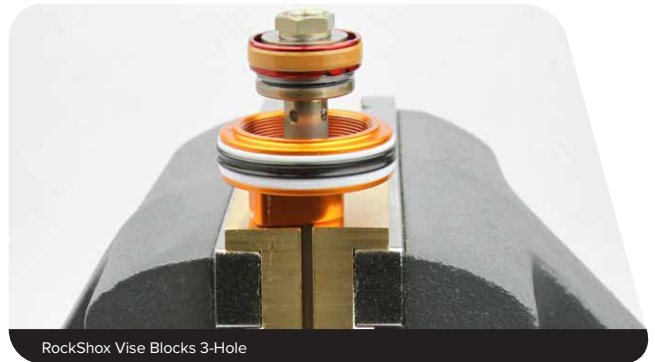
- 1 Spray isopropyl alcohol on the shaft assembly and vise blocks and clean them with a shop towel.

- 2 Use a vise block with the 10 mm shaft clamp to clamp the shaft into a vise.

Do not remove the shaft from the eyelet.

NOTICE

To prevent damage to the seal head/air piston, position the shaft in the vise so that the piston is clear of the vise jaws.

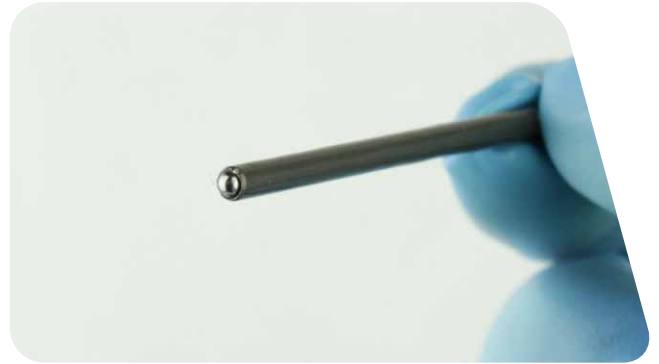


- 3 RCT / NUDE / NUDE2 / SCOTT RL3:** Use needle nose pliers to remove the compression rod and top cap assembly.



NOTICE

RCT / NUDE / NUDE2 / SCOTT RL3: Do not allow the detent ball to separate from the compression rod.



RLR/Ultimate Remote / RL/RT: Use your fingers to remove the compression rod and top cap assembly.

Keep all the parts together and set them aside.



- 4 RLR/Ultimate Remote / RL/RT:** Use a pick to remove the compression rod o-rings.

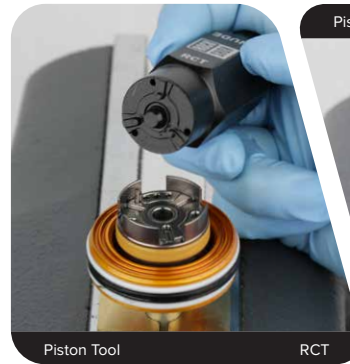
Install new o-rings onto the compression rod.



- 5 RCT / NUDE / NUDE2 / SCOTT RL3:** Align the guide pin on the piston with the guide hole in the RCT / NUDE Lock Piston Tool, then remove the lock piston from the piston assembly.

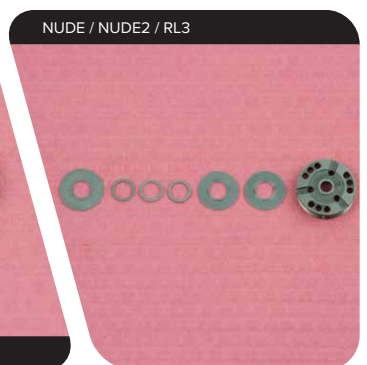
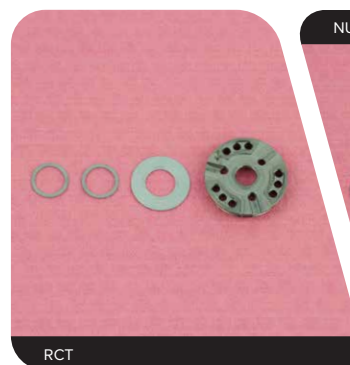
NOTICE

Apply pressure to the RCT / NUDE Lock Piston Tool when removing the lock piston to prevent the tool from slipping on the piston and damaging the guide pin.



- 6 RCT / NUDE / NUDE2 / SCOTT RL3:** Remove the spacer shims from the piston nut, then set the lock piston, lock shim(s), and spacer shims aside in the order they were removed from the piston.

The lock shim may stick to the underside of the lock piston. This is normal.



7 RCT / RT3 / 2019-2022 RL/RT: Use a 12 mm socket wrench to remove the piston nut.

RCT: Only loosen the piston bolt, do not remove it completely from the piston assembly.



NUDE / NUDE2 / SCOTT RL3: Use a NUDE Piston Bolt Socket to loosen the piston bolt.

Only loosen the piston bolt, do not remove it completely from the piston assembly.



RLR/Ultimate Remote / 2018 RL/RT / R: Use a 10 mm socket wrench to remove the piston nut.



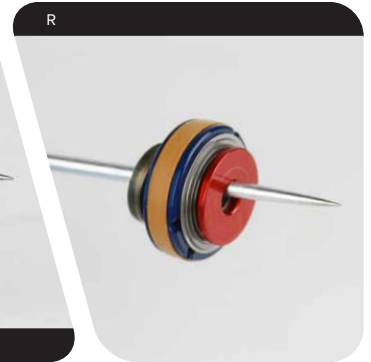
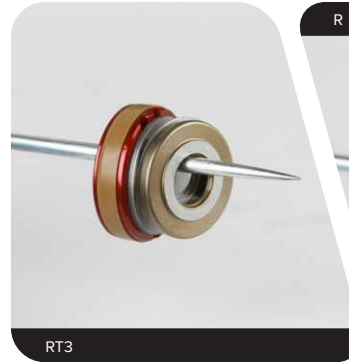
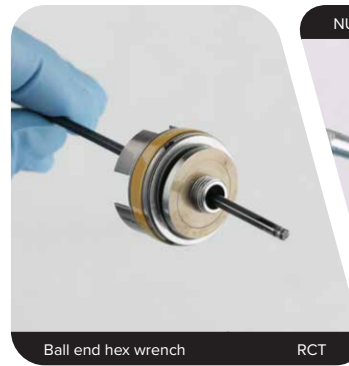
- 8 Use a small wrench or pick to slide the main piston assembly off the shaft and onto the tool.

RCT / NUDE / NUDE2 / SCOTT RL3: Keep the piston bolt with the piston assembly.

NOTICE

Keep all the parts together and set them aside. If the main piston assembly is disassembled, it will need to be replaced.

RCT: Only use a ball end wrench to remove the piston assembly. Use of a pick can cause damage to the o-ring inside the piston assembly.



- 9 Remove the seal head/air piston from the damper shaft.



- 10** Remove the bottom out o-ring from the damper shaft.
Install a new o-ring.



- 11** Use a pick to pierce and remove the internal seal o-ring located in the internal seal gland.
Install a new internal seal o-ring into the seal gland.



- 12** Use a pick to remove the inner o-ring, located at the base of the threads in the seal head/air piston.
Install a new inner o-ring into the seal head/air piston.



- 13** Use a 1.5 mm hex wrench to push 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 replace it later.

Do not reuse the compression ball.



- 14** Use your fingers to remove the o-ring located inside the shaft eyelet threads.

Install a new o-ring inside the shaft eyelet threads.



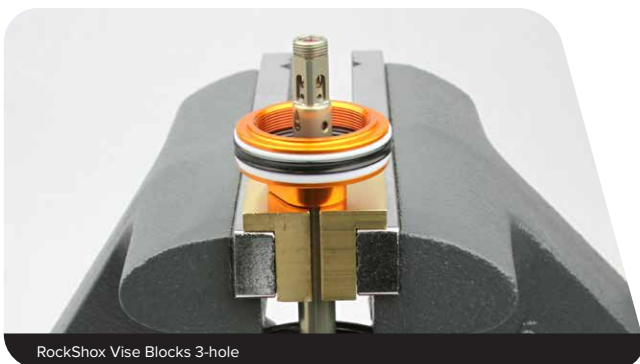
- 15** Install the seal head/air piston onto the damper shaft.



- 16** Use a vise block with the 10 mm shaft clamp to clamp the shaft into a vise.

NOTICE

To prevent damage to the seal head/air piston, position the shaft in the vise so that the piston is clear of the vise jaws.



- 17** Install the main piston assembly that was removed in step 8 onto the damper shaft. Use your fingers to squeeze the shims and center the shim stack under the main piston. Use a small pick to center the shim stack along the inside edge of the main piston.

Be sure to keep the main piston assembly parts in the same order.

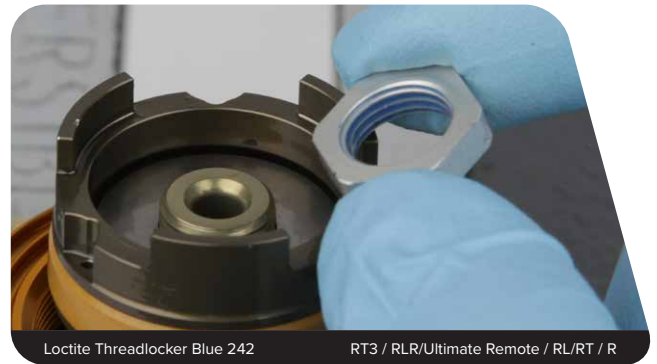
NOTICE

If the shims are not centered and in the correct order, the shock will not perform properly.



18 Spray isopropyl alcohol on the piston nut threads and clean it with a shop towel.

RT3 / RLR/Ultimate Remote / RL/RT / R: Apply a thin layer of Loctite Threadlocker Blue 242 (or equivalent) only on the threads of the piston nut, then thread the nut onto the damper shaft with the stepped side facing the shims.



RCT: Use a torque wrench with a 12 mm socket to tighten the bolt to 6.2 N·m (55 in-lb).

NUDE / NUDE2 / SCOTT RL3: Use a torque wrench with a NUDE Piston Bolt Socket to tighten the bolt to 6.2 N·m (55 in-lb).

⚠ WARNING - CRASH HAZARD

Parts must be tightened to the specified torque. Failure to do so can result in SERIOUS INJURY OR DEATH.



RT3, 2019-2022 RL/RT: Use a torque wrench with a 12 mm socket to tighten the nut to 4.5 N·m (40 in-lb).

RLR/Ultimate Remote / 2018 RL/RT / R: Use a torque wrench with a 10 mm socket to tighten the nut to 4.5 N·m (40 in-lb).

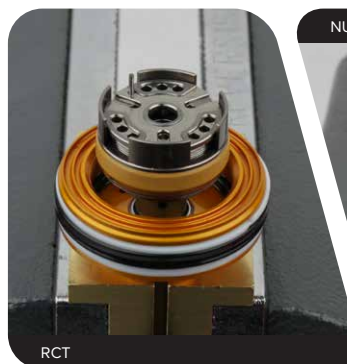
⚠ WARNING - CRASH HAZARD

Parts must be tightened to the specified torque. Failure to do so can result in SERIOUS INJURY OR DEATH.

Remove the assembly from the vise.



- 19 RCT / NUDE / NUDE2 / SCOTT RL3:** Install the spacer shims, lock shim(s), and lock piston, in that order, onto the piston assembly, making sure each item is centered on the piston bolt.



Align the guide pin on the piston with the guide hole in the RCT / NUDE Lock Piston Tool. Use your hand to start threading the lock piston on, then use a 24 mm open end wrench on the RCT / NUDE Lock Piston Tool to tighten the lock piston to 4.5 N·m (40 in-lb).

Apply pressure to the RCT / NUDE Lock Piston Tool when installing the lock piston to prevent the tool from slipping on the piston and damaging the guide pin.

⚠ WARNING - CRASH HAZARD

Parts must be tightened to the specified torque. Failure to do so can result in **SERIOUS INJURY OR DEATH**.

NOTICE

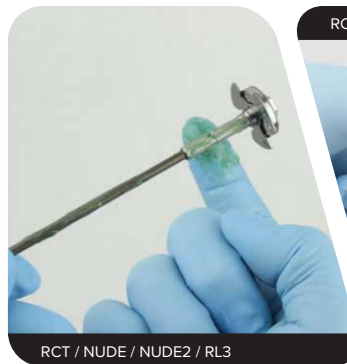
Do not bend the guide pin. Bending or breaking the guide pin will damage the piston assembly.



- 20 RCT / NUDE / NUDE2 / SCOTT RL3:** Apply a small amount of grease to the middle of the compression rod and below the top hat on the compression rod. Press on the top hat assembly nut to install the compression rod and top hat into the main piston assembly, then align the guide pin in the piston assembly with the guide pin hole in the top hat assembly.

NOTICE

Do not press the top hat assembly into the main piston assembly by the propellers as that can damage the propellers.



2019-2022 RL/RT: Apply a small amount of grease to the tip of the compression rod. Install the compression rod and top hat into the main piston assembly.

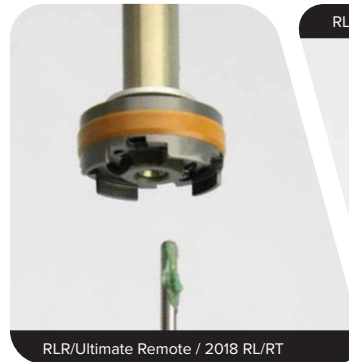
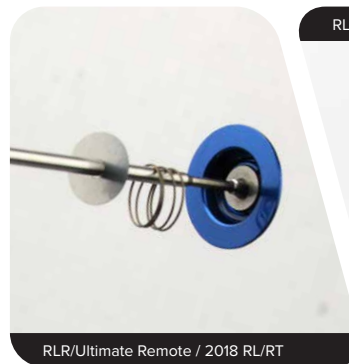


RLR/Ultimate Remote / 2018 RL/RT: Install the top hat spring and top hat washer onto the compression rod. Hold the compression rod vertically so the spring is seated in the groove inside the top hat.

NOTICE

If the top hat spring is not seated in the groove inside the top hat, the shock will not perform properly.

Apply a small amount of grease to the tip of the compression rod. Install the compression rod and top hat into the main piston assembly.



NOTICE

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 shop towel. Apply grease to the new seal or o-ring. Only use RockShox Dynamic Seal Grease when servicing RockShox shocks.

To prevent damage to the shock use aluminium soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws. For bearing mount shocks, wrap a shop towel around the eyelet, then clamp the eyelet flat into the vise.

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



- 1 Wrap a shop towel around the end of the damper body. Thread the air valve adapter tool into a shock pump. Thread the pump and adapter into the air fill port.

Pump air into the damper body to force the IFP out of the damper body, into the rag.



RockShox Air Valve Adapter Tool and shock pump

- 2 Spray isopropyl alcohol on the inside and outside of the damper body and clean it with a shop towel.

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 and replace the IFP o-ring. Apply RockShox Dynamic Seal Grease to the o-ring.



- 4 Install the IFP into the damper body with the stepped side visible. Use the Deluxe IFP Height Tool to push the IFP to the depth specified in the table below.

Measure the IFP depth from the green area highlighted in the photos.

2020-2022 ULTIMATE RCT 2020-2021 NUDE, 2022-2023 NUDE2, 2022-2023 SCOTT RL3 2019-2022 RL/RT	
Shock Stroke	IFP insertion Depth
35 mm	49.5 mm
37.5-45 mm	58 mm
47.5-55 mm	66.5 mm
57.5-65 mm	75 mm

2018-2019 RLR, 2020-2022 ULTIMATE REMOTE 2018-2020 RT3 2018 RL/RT 2018-2022 R	
Shock Stroke	IFP insertion Depth
35 mm	48.1 mm
37.5 mm	50.2 mm
40 mm	52.3 mm
42.5 mm	54.5 mm
45 mm	56.6 mm
47.5 mm	58.7 mm
50 mm	60.8 mm
 50 mm*	67.2 mm
52.5 mm	62.9 mm
55 mm	65 mm
57.5 mm	67.2 mm
60 mm	69.3 mm
62.5 mm	71.4 mm
65 mm	73.5 mm

*Trek PowerFly

**For model year 2020, RLR became Ultimate Remote, RL/RT became Select +, and R became Select. Refer to RLR for Ultimate Remote instructions, 2020 RL/RT for Select + instructions, and 2020 R for Select instructions. Ultimate RCT will be referred to as RCT.



NOTICE

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 shop towel. Apply grease to the new seal or o-ring. Only use RockShox Dynamic Seal Grease when servicing RockShox shocks.

To prevent damage to the shock use aluminium soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws. For bearing mount shocks, wrap a shop towel around the eyelet, then clamp the eyelet flat into the vise.

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



- 1** Clamp the damper body into the RockShox Rear Shock Body Vise Block.

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 the IFP does move, use a shock pump to push out the IFP, and then reset it to the depth specified in the table.

Wrap a clean shop towel around the damper body.

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

**NOTICE**

The RockShox Rear Shock Body Vise Block holds the IFP in place. Failure to use the vise block when clamping the damper body into the vise may result in improper IFP height. Improper IFP height can cause the damper to fail.



- 2** Pour new Maxima PLUSH 7wt Suspension Oil into the damper body until it is level with the top.

Maxima PLUSH 7wt Suspension Oil is backwards compatible with RockShox 7wt suspension oil.

⚠ CAUTION

Always wear safety glasses. Do not allow oil, fluid, grease, lubricant, or cleaner to contact your eyes or face. Seek immediate medical attention if irritation occurs.



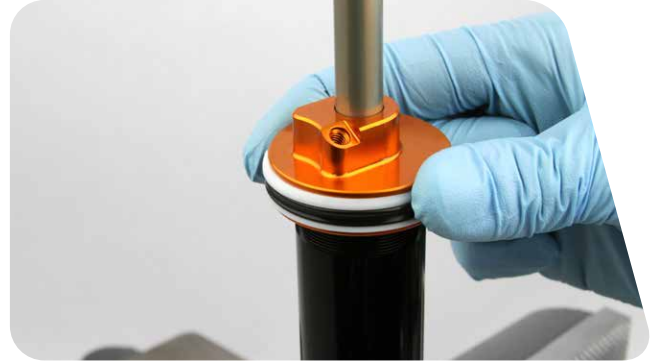
Maxima PLUSH 7wt Suspension Oil

- 3** Check that the rebound adjuster knob is set to the fastest rebound setting. Rotate the rebound adjuster counter-clockwise until it stops. Slide the seal head/air piston until it stops at the end of the damper shaft.



- 4** Use your hand to install the seal head/air piston onto the damper body.
- Do not hold on to the shaft eyelet or damper shaft while inserting the seal head. It will move the piston/shaft assembly, causing too much fluid to displace out of the damper body.**
- Check that the compression ball is removed from the seal head/air piston.**

Fluid will be displaced out of the bleed port.



- 5** Use a torque wrench with 17 mm crowfoot to tighten the seal head/air piston to 28 N·m (248 in-lb).
- Install the crowfoot onto the torque wrench at a 90° angle to the handle to ensure an accurate torque reading.**

⚠ WARNING - CRASH HAZARD

Parts must be tightened to the specified torque. Failure to do so can result in SERIOUS INJURY OR DEATH.



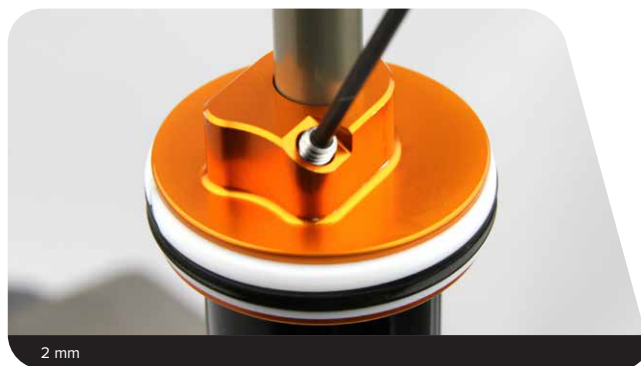
- 6** Allow air bubbles to escape from the bleed port in the seal head. Insert the new compression ball into the bleed port.



- 7 Use a 2 mm hex wrench to thread the bleed screw into the bleed port until you feel it touch the compression ball, then tighten the bleed screw an additional ½ turn.

NOTICE

Overtightening the bleed screw can damage the compression ball.

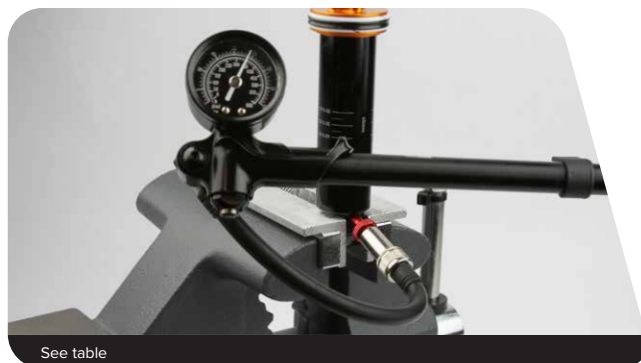


- 8 Use a shock pump with the air valve adapter tool to pressurize the damper body to the correct psi for your shock:

Model	Pressure
RCT	400 psi
RT3	350 psi
NUDE/NUDE2/RL3/RLR/ULTIMATE REMOTE 2018 RL/RT	500 psi
2019-2022 RL/RT	420 psi
R	350 psi

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

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



- 9 Use a Schrader valve tool to install the damper air/nitrogen fill port cap.



- 10 Remove the shock from the vise.
Spray the damper assembly with isopropyl alcohol and clean it with a shop towel.

The remote spring can be serviced on its own without completing air can or damper service.

- 1 Use a vise block with the 10 mm shaft clamp to clamp the shaft into a vise.

NOTICE

To prevent damage to the seal head/air piston, position the shaft in the vise so that the piston is clear of the vise jaws.



- 2 While holding the spring preloader in place, remove the preloader lock screw from the eyelet.

Remove the spring preloader, spring bushing, and remote spring from the eyelet. Discard the spring and bushing.

⚠ CAUTION - EYE HAZARD

The preloader lock screw is spring loaded and can eject rapidly from the eyelet if the spring preloader is not held in place.



- 3 Apply a thick layer of grease to the inside and outside of a new remote spring.



- 4 Install the spring into the eyelet with the spring tang in the spring tang hole.

Install a new bushing into the eyelet, with the grooved edge (A) facing out of the eyelet.



- 5 Install the spring preloader so that the spring tang slides into the spring tang hole in the preloader.

Use a 3 mm hex wrench to preload the spring counter-clockwise until the notch in the spring preloader lines up with the set screw hole, then tighten the set screw to 0.8 N·m (7 in-lb).

Use a T25 TORX wrench to rotate the remote spool to test the spring tension.

NOTICE

The spring preloader must be rotated counter-clockwise to preload the spring.



The remote spring can be serviced on its own without completing air can or damper service.

- 1 Use a vise block with the 10 mm shaft clamp to clamp the shaft into a vise.

NOTICE

To prevent damage to the seal head/air piston, position the shaft in the vise so that the piston is clear of the vise jaws.



- 2 While holding the spring preloader in place, remove the preloader lock screw from the eyelet.

Remove the spring preloader, spring bushing, and remote spring from the eyelet.

Remove the spring from the bushing; discard the spring.

Remove the bushing from the spring preloader; discard the bushing.

CAUTION - EYE HAZARD

The preloader lock screw is spring loaded and can eject rapidly from the eyelet if the spring preloader is not held in place.



- 3 Apply a thick layer of grease to the inside and outside of a new remote spring.



Grease

4 Install a new bushing onto the spring preloader.



5 Install the spring into the bushing and insert the spring tang into the hole in the spring preloader.



The spring tang should be visible through the preloader when installed correctly.



Insert the preloader, bushing, and spring into the eyelet and insert the spring tang into the spring tang hole in the eyelet.



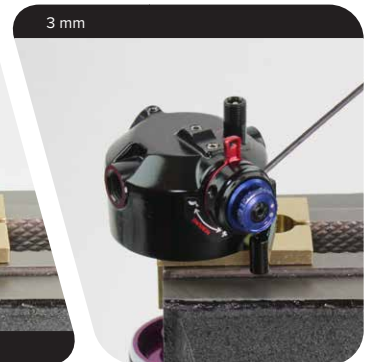
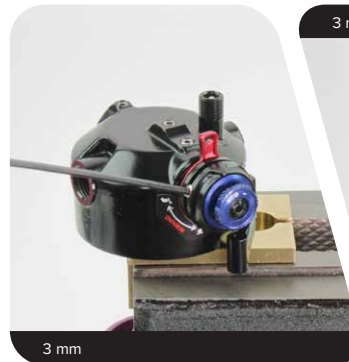
- 6** Use a 3 mm hex wrench to push the preloader in. Preload the spring clockwise until the notch in the spring preloader lines up with the set screw hole, then install and tighten the set screw to 0.8 N·m (7 in-lb).

NOTICE

The spring preloader must be rotated clockwise to preload the spring.



Rotate the remote spool to test the spring tension.



NOTICE

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 shop towel. Apply grease to the new seal or o-ring. Only use RockShox Dynamic Seal Grease when servicing RockShox shocks.

To prevent damage to the shock use aluminium soft jaws and position the eyelet in the vise so that the adjustment knobs are clear of the vise jaws. For bearing mount shocks, wrap a shop towel around the eyelet, then clamp the eyelet flat into the vise.

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



1 Clamp the shaft eyelet in the vise with soft jaws.

Install the Counter Measure onto the damper body. Apply RockShox Dynamic Seal Grease to the seal head/air piston seals.



2 Inject 1 mL of Maxima Extra 15w50 suspension oil or Maxima PLUSH Dynamic Suspension Lube Light (or half of included pillow pack; 1 pillow pack = 2 mL) into the air can before installing the air can onto the damper. Firmly press the air can down until the sealhead/air piston is inserted into the air can.

⚠ CAUTION- EYE HAZARD

Fluid will eject out of the holes as you install the air can onto the damper. Wear safety glasses.



- 3** Remove the shock from the vise, turn it over and clamp the damper body eyelet in the soft jaws.

Inject another 1 mL of Maxima Extra 15w50 suspension oil or Maxima PLUSH Dynamic Suspension Lube Light (or half of included pillow pack; 1 pillow pack = 2 mL) into the air can.



- 4** Clamp the air shaft eyelet into the vise. Press the air can onto the damper then thread it onto the shaft eyelet until it is hand tight.

Spray isopropyl alcohol on the outside of the air can and clean it with a shop towel.



- 5** Remove the shock from the vise. Turn it over and clamp the damper body eyelet in the vise.

While holding the strap wrench firmly to stabilize the shock, tighten the eyelet assembly into the air can. Use the appropriately sized crowfoot for the shock eyelet type.

Eyelet Type	Width (mm)
Standard	13
Bearing	29
Trunnion	54

⚠ WARNING - CRASH HAZARD

Parts must be tightened to the specified torque. Failure to do so can result in **SERIOUS INJURY OR DEATH**.



- 6** Remove the shock from the vise. Spray isopropyl alcohol on the shock and clean it with a shop towel.

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



Shock Eyelet Assembly - Standard Eyelet

Parts, Tools, and Supplies

Safety and Protection Supplies

- Apron
- Clean, lint-free shop towels
- Nitrile gloves
- Safety glasses

RockShox Tools

- RockShox 1/2" x 1/2" Rear Shock Bushing Tool

Common Tools

- Open end wrench 13 mm (x2) or adjustable open end wrench (2)
- Bench vise with aluminum soft jaws

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 RockShox 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** Press an end spacer, large diameter side first, onto each end of the bushing pin.



- 6** Reinstall the shock to your bicycle frame according to the bicycle manufacturer's instructions.

- 7** Use a shock pump to pressurize the shock to the recorded air pressure plus 20%. After adding air to the shock, the pressure will need to be equalized between the shock chambers.

Record the air pressure value on the pump, then unthread it from the shock. Slowly but firmly press or sit on the saddle to compress the shock until there is a hissing sound. This sound indicates air transfer between chambers.

Reinstall the pump and pressurize the shock to the desired air pressure. Record the air pressure, then unthread it from the shock. Repeat this process until you reach the desired amount of sag, then install the valve cap.

NOTICE

When pressurizing the shock, do not exceed maximum pressure rating.

The pump must be removed from the shock prior to checking sag to avoid damage to the pump.

Shock Eyelet Service - Bearing Mount

Replace the bearings if they are not spinning freely, or if they are making a creaking noise.

Parts, Tools, and Supplies

Parts

- Rear Shock Damper Body Bearing Eyelet Assembly Kit (includes bearings)

Safety and Protection Supplies

- Apron
- Clean, lint-free shop towels
- Nitrile gloves
- Safety glasses

Common Tools

- Bench vise with aluminum soft jaws
- Hex bit sockets: 3 mm
- Hex wrench: 3 mm
- Torque wrench

Bearing Mount Replacement

Install the bearing eyelet mount assembly back onto the damper body after service is complete.

NOTICE

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

- 1 Loosen the cap screws and remove the bearing assembly from the shock.

The dust covers may fall off. This is normal.



- 2 Install the new bearing assembly and screws onto the shock. Tighten the cap screws to 6.2 N·m (55 in-lb).

⚠ WARNING - CRASH HAZARD

Parts must be tightened to the specified torque. Failure to do so can result in SERIOUS INJURY OR DEATH.



To install new cable and housing into the remote, consult the appropriate Remote User Manual at www.sram.com/service.

Parts, Tools, and Supplies

Parts

- Deluxe Remote Service Kit - 200 hours
- Deluxe Remote Spring Service Kit
- Shift cable and housing

Safety and Protection Supplies

- Safety glasses
- Nitrile gloves

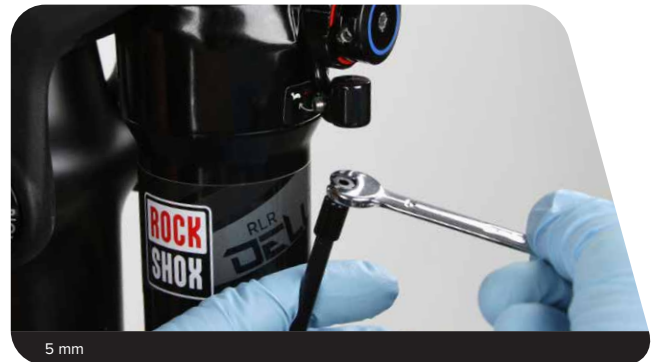
Common Tools

- 2 mm hex wrench
- 2 mm hex bit socket
- T25 TORX wrench
- 5 mm open end wrench
- Torque wrench
- Cable and housing cutters

Remote Cable and Housing Installation

Deluxe RLR is pictured. Procedures are similar for Deluxe Ultimate Remote, NUDE, NUDE2, and SCOTT RL3.

- 1 After the housing has been routed and installed on the bicycle, use a 5 mm open end wrench to thread a new ferrule onto the housing.
Do not push the housing into the ferrule.



- 2 Install the ferrule and housing into the reservoir, then use a 2 mm hex bit socket to tighten the ferrule lock screw to 0.9 N·m (8 in-lb).



- 3** Thread the cable through the housing, spool, and under the cable set screw. Pull the cable tight and use a torque wrench with a 2 mm hex bit socket to tighten the cable set screw to 0.9 N·m (8 in-lb).



- 4** Use cable and housing cutters to trim the cable, then install an end cap. Tuck the cable into the pocket.



- 5** Install the spool cap, then use a torque wrench with a T25 TORX bit socket to tighten the spool cap to 0.9 N·m (8 in-lb).



Shock Installation and Setup

- 1** Reinstall the rear shock as instructed by your frame manufacturer.
- 2** Pressurize the rear shock to the pre-service air pressure written down in the [Record Your Settings](#) table. Refer to the appropriate suspension user manual or the *RockShox Suspension Tuning Guide* for procedures on setting rear shock air pressure and spring sag.
- 3** Adjust the rebound and compression settings to the pre-service settings written down in the [Record Your Settings](#) table.

This concludes service for RockShox Deluxe.



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